

Working Draft of AICPA Accounting and Valuation Guide

***Valuation of Portfolio Company Investments of Venture
Capital and Private Equity Funds and Other Investment
Companies***

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Part I: Chapters 1-14

Prepared by the PE/VC Task Force

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Preface

About This AICPA Accounting and Valuation Guide

This AICPA Accounting and Valuation Guide has been developed by the AICPA PE/VC Task Force (task force) and AICPA staff. This guide provides guidance and illustrations for preparers of financial statements, independent auditors, and *valuation specialists*^{1, 2} regarding the accounting for and valuation of portfolio company investments of venture capital and private equity funds and other investment companies. The valuation guidance in this guide is focused on measuring *fair value* for financial reporting purposes.

The financial accounting and reporting guidance contained in this guide has been reviewed and approved by the affirmative vote of at least two-thirds of the members of the Financial Reporting Executive Committee (FinREC), which is the designated senior committee of the AICPA authorized to speak for the AICPA in the areas of financial accounting and reporting. Conforming changes made to the financial accounting and reporting guidance contained in this guide will be approved by the FinREC Chair (or his or her designee). Updates made to the financial accounting and reporting guidance in this guide exceeding that of conforming changes will be approved by the affirmative vote of at least two-thirds of the members of FinREC.

This guide does the following:

- Identifies certain requirements set forth in the Financial Accounting Standards Board (FASB) *Accounting Standards Codification*® (ASC).
- Describes FinREC's understanding of prevalent or sole practice concerning certain issues. In addition, this guide may indicate that FinREC expresses a preference for the prevalent or sole practice, or it may indicate that FinREC expresses a preference for another practice that is not the prevalent or sole practice; alternatively, FinREC may express no view on the matter.

¹ Words or terms defined in the glossary are set in italicized type the first time they appear in this guide.

² Although this guide uses the term *valuation specialist*, Statement on Standards for Valuation Services No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), which is a part of AICPA *Professional Standards*, defines a member who performs valuation services as a *valuation analyst*. Furthermore, the Mandatory Performance Framework (MPF) and Application of the MPF (collectively referred to as *MPF documents*), that were jointly developed by AICPA, RICS, and ASA in conjunction with the Certified in Entity and Intangible Valuations (CEIV) credential, define an individual who conducts valuation services for financial reporting purposes as a *valuation professional*. The term *valuation specialist*, as used in this guide, is synonymous to the term *valuation analyst*, as used in AICPA *Professional Standards*, and the term *valuation professional*, as used in MPF documents.

Many private equity and venture capital funds employ professionals to perform valuations for the fund's investments and, thus, the fund may produce valuations internally rather than engaging an external party. Other funds may engage an external third party to perform valuations or to corroborate the fund's valuations. When referring to the valuation specialist within this guide, it is generally presumed that the valuation specialist may be either an external party or the individual(s) within the entity who possess the abilities, skills, and experience to perform valuations.

- Identifies certain other, but not necessarily all, practices concerning certain accounting issues without expressing FinREC's views on them.
- Provides guidance that has been supported by FinREC on the accounting, reporting, or disclosure treatment of transactions or events that are not set forth in FASB ASC.

Accounting guidance for nongovernmental entities included in this AICPA Accounting and Valuation Guide is a source of nonauthoritative accounting guidance. FASB ASC is the authoritative source of U.S. accounting and reporting standards for nongovernmental entities, in addition to guidance issued by the SEC. AICPA members should be prepared to justify departures from U.S. generally accepted accounting principles, as discussed in Rule 203, *Accounting Principles* (AICPA, *Professional Standards*, ET sec. 203 par. .01).

This guide is considered to be *technical literature* for purposes of the Mandatory Performance Framework (MPF) and Application of the MPF (collectively referred to as *MPF documents*), that were developed in conjunction with the Certified in Entity and Intangible Valuations (CEIV) credential.³ In addition, AICPA members who perform engagements to estimate value that culminate in the expression of a conclusion of value or a calculated value are subject to the requirements of the AICPA's Statement on Standards for Valuation Services.

This guide does not include auditing guidance;⁴ however, auditors may use it to obtain an understanding of the accounting requirements and the valuation process applicable to portfolio company investments of venture capital and private equity funds and other investment companies.

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³ Additional information about the CEIV credential and MPF documents is available at <https://www.aicpa.org/interestareas/fairvaluemeasurement/resources/mandatory-performance-framework.html>.

⁴ AU-C section 540, *Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures* (AICPA, *Professional Standards*), addresses the auditor's responsibilities relating to accounting estimates, including fair value accounting estimates and related disclosures, in an audit of financial statements.

Auditors may also find it helpful to refer to the AICPA Audit Guide, *Special Considerations in Auditing Financial Instruments*, which, among other things, addresses the auditor's responsibilities relating to auditing accounting estimates, including fair value accounting estimates, and related disclosures.

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Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and Other Investment Companies

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Introduction

- .01** The purpose of this guide is to provide guidance to investment companies and their advisers¹ regarding the valuation of, and certain aspects of the accounting related to, their investments in both equity and debt instruments of privately-held enterprises² and certain enterprises with traded instruments. Such investments are subsequently collectively referred to as *portfolio company investments*. The guidance is intended to provide assistance to management and boards of directors of investment companies; valuation specialists; auditors; and other interested parties, such as limited partners. This guide is not intended to serve as a detailed "how to" guide but, rather, to provide investment companies that invest in equity and debt instruments of portfolio companies with (a) an overview and understanding of the valuation process and the roles and responsibilities of the parties to the process and (b) best practice recommendations for complying with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 946, *Financial Services—Investment Companies*, and applying FASB ASC 820, *Fair Value Measurement*.

Background

- .02** This guide is intended to assist various parties involved with investment company financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP) in understanding and applying the principles of FASB ASC 820 to portfolio company investments. This guidance is intended to address the illiquid nature of the market for such investments and the significant subjectivity associated with determining their fair values.
- .03** Throughout this guide, estimating fair value is discussed in two different contexts: valuation of investments in the equity and debt instruments of an enterprise and valuation of an enterprise. The ultimate objective of this guide is to provide guidance on valuation of investments in equity and debt instruments. However, many valuation methods (often referred to as *top-down methods*) involve first valuing the enterprise and then using that enterprise value as a basis for allocating the enterprise value among the enterprise's classes of equity and debt instruments. Wherever valuation techniques³ for enterprise

¹ For the purpose of this guide, *investment company* is defined as an entity that meets the assessment described in paragraphs 4-9 of Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 946-10-15. The investment company (a "fund") may manage its investments using one or more *investment advisers*, who make investment decisions on behalf of the fund in exchange for a fee. The investment adviser in turn may be employed by multiple funds and thus, may make the same investment decision for multiple funds. This guide uses the term *fund* to refer to an individual reporting entity. Each fund in turn will hold investments in one or more *portfolio companies* or *other investment companies*, which may be privately-held or may have traded securities.

² This guide uses the terms *enterprise* and *company* interchangeably.

³ FASB ASC 820, *Fair Value Measurement*, refers to valuation approaches and valuation techniques; however, Statement on Standards for Valuation Services (SSVS) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), refers to valuation approaches and methods (not techniques). SSVS No. 1 defines *valuation method* as "[w]ithin approaches, a specific way to determine value." This definition is consistent with the use of the term *valuation technique* in FASB ASC 820. Also, in practice,

valuation are discussed in this guide, it is important to understand that those valuation techniques are presented solely for the ultimate purpose of valuing investments in the enterprise's equity and debt instruments consistent with market participant assumptions.

- .04** This guide identifies what the PE/VC Task Force (task force) perceives as best practices for the valuation of, and certain aspects of the accounting related to, investments in equity and debt instruments.
- .05** In the context of discussing accounting issues or concepts, the word *should* is used in this guide only if a particular statement is in accordance with accounting principles generally accepted in the United States of America (GAAP). Phrases such as *the task force believes* or *the task force recommends* are used to indicate the task force's opinion if a particular statement in this guide, although not in conflict with GAAP, relates to an issue for which guidance is not specifically prescribed by GAAP or if there are alternative treatments of the particular issue. In the context of discussing valuation issues or concepts, no specific valuation standards exist that address detailed aspects when valuing portfolio company investments of venture capital and private equity funds and other investment companies. (The concept of accepted valuation standards is discussed in paragraph 5.05.) As a result, in this context, the word *should* is generally used in this guide to indicate the task force's opinion as a whole, although individual or firm positions may differ. This guide is not intended to set valuation standards or interpret any other valuation standards that exist in practice.

Scope

- .06** The scope of this guide is limited to valuations and certain accounting matters associated with portfolio company investments held by investment companies within the scope of FASB ASC 946 (including private equity [PE] funds, venture capital [VC] funds, hedge funds, and business development companies [BDCs]). Entities that do not meet the definition of an investment company in FASB ASC 946, such as corporate venture capital groups or pension funds, may also make investments in similar types of portfolio companies and pursue similar strategies. Although this guide may contain some useful information, such as valuation techniques and best practices relevant to valuations of portfolio company investments held by non-investment companies, the numerous and varied aspects of these other entities were not considered or contemplated in the preparation of this guide. This scope of this guide also does not address the value of investment company assets when the investment company is using the liquidation basis of accounting as described in FASB ASC 205. Furthermore, this guide does not address

many valuation techniques are referred to as *methods* (for example, guideline public company method, guideline company transactions method, and discounted cash flow method). As a result, this guide uses the terms technique and method interchangeably to refer to a specific way of determining value within an approach.

fair value disclosure considerations related to portfolio company investments held by investment companies.⁴

- .07** Some funds that invest in industries such as real estate, oil and gas, infrastructure, and other specialized areas using investment vehicles such as master limited partnerships, private equity limited partnerships, and so on, meet the definition of an investment company under FASB ASC 946, and the valuation of their portfolio company investments is included within the scope of this guide. Other funds, such as those investing in income producing assets, may not meet the definition of an investment company under FASB ASC 946.
- .08** Private equity funds investing in the real estate sector (sometimes referred to as *real estate funds* or *opportunity funds*) may invest in active real estate-oriented businesses in a form similar to other private equity or venture capital funds, but they may also invest in real estate development projects or income producing real estate assets, or both. If these funds meet the definition of an investment company under FASB ASC 946, the concepts discussed in this guide would be applicable to their investments in real-estate oriented businesses or projects – that is, to their investments in real-estate businesses that act as portfolio companies. Some actively traded real estate investment trusts (REITs) and some non-traded REITs which are not deemed investment companies under FASB ASC 946 are not within the scope of this guide, however, such entities may find certain aspects of this guide to be helpful in estimating fair value for disclosure and other purposes.

Information Included in This Guide

- .09** This guide provides the task force’s views regarding best practice considerations by investment companies and their advisers regarding the valuation of, and certain aspects of the accounting related to, their investments in both equity and debt instruments of privately-held enterprises and certain enterprises with traded securities. The guidance within this guide is not meant to be absolute but rather based on the specific facts and circumstances noted and should be considered within the confines of materiality.
- Private equity and venture capital funds typically seek to generate returns through longer term appreciation from equity or debt investments in privately held and non-listed publicly traded companies or both. Private equity and venture capital funds often obtain majority controlling interests or significant noncontrolling interests (a.k.a. minority interests) that allow for active involvement in investee operations, restructuring, and merger and acquisition activity, through board oversight positions.

⁴ FASB ASC 820-10-50 provides extensive guidance regarding disclosure requirements on fair value measurements. As indicated in FASB ASC 820-10-50-2F, the disclosure requirements vary depending on whether the reporting entity is public business entity or nonpublic entity.

In December 2015, FASB issued a proposed Accounting Standards Update (ASU), “*Fair Value Measurement (Topic 820) - Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*,” which would modify the disclosure requirements on fair value measurements. As of the writing of this guide, the proposed ASU has not been finalized. Please see [FASB website](#) for the latest information about the status of this project.

There is generally a discrete period of time over which the funds invest and a realization period which can often be extended as the funds' investment strategy is to hold their investments long enough to allow management to execute on a business plan sufficient to capture value from the investment. Once it is accomplished, the fund generally exits the investment either by selling it to another company, another fund or through a public offering. See chapter 1, "Overview of the Private Equity and Venture Capital Industry and Its Investment Strategies."

- Pursuant to FASB ASC 946-320-35-1, "An investment company shall measure investments in debt and equity securities subsequently at fair value." FASB ASC 820 establishes a framework for measuring fair value and requires disclosures about fair value measurements. FASB ASC 820 is broad principles-based guidance that applies to all entities, transactions, and instruments that require or permit fair value measurements. See chapter 2, "Fair Value and Related Concepts."
- According to FASB ASC 820-10-35-9, fair value should be estimated "using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest." Market participants are defined in FASB ASC master glossary as

Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

- a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms
- b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary
- c. They are able to enter into a transaction for the asset or liability
- d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

The market participants that are relevant for portfolio company investments and the way that those market participants would evaluate portfolio company investments together establish a framework for fair value measurement. See chapter 3, "Market Participant Assumptions."

- Generally, investment companies or other market participants for similar assets do not exit a position before they have had time for their investment strategies to resolve. Under FASB ASC 820, however, the basis for estimating fair value is an assumed transaction for the asset on the measurement date. This discrepancy can create unique challenges for measuring fair value by such investment companies.

FASB ASC master glossary defines the unit of account as “[t]he level at which an asset or a liability is aggregated or disaggregated in a Topic for recognition purposes.” For purposes of identifying what to measure at fair value, FASB ASC 820-10-35-2E states that “The unit of account for the asset or liability shall be determined in accordance with the Topic that requires or permits the fair value measurement, except as provided in this Topic.”

Defining the unit of account for investment companies is challenging. FASB ASC 946 does not provide explicit unit of account guidance. Further, many investment companies hold significant positions in the companies in their portfolios, giving them the ability to influence the direction of these companies. In addition, an investment company may hold multiple types of investments within an entity (e.g., common stock, various classes of preferred stock, or various classes of debt in a private entity).

In defining the unit of account for investment companies, this guide attempts to answer the following questions, as discussed in chapter 4, “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments”:

- Does the assumed transaction for FASB ASC 820, considering market participant perspectives, contemplate only the sale or transfer of the specific investment held by the fund in a given portfolio company, or the sale or transfer of a larger grouping of assets?
 - Is it appropriate for investment companies to group assets (e.g. equity and debt investments held in the same fund) for the purpose of measuring fair value considering their economic best interest, and, if so, how?
 - How does the requirement under FASB ASC 820 to measure fair value based on an assumed sale or transfer of the fund’s investment on the measurement date consider market participant assumptions regarding the investment strategy and the way that value is expected to be realized from the investment?
- The three approaches to estimating the value of an enterprise and interests in the enterprise are the market, income, and asset approaches,⁵ as discussed in chapter 5, “Overview of Valuation Approaches.” A valuation analysis will generally consider more than one valuation technique, relying on the technique or techniques that are appropriate for the circumstances. It is common for the results of one valuation

⁵ FASB ASC 820 describes three valuation approaches: market, income, and cost. The concepts underlying FASB market, income, and cost approaches apply broadly to the valuation of discrete assets and business enterprises. Within FASB’s cost approach concept, practitioners distinguish valuations of individual assets and business enterprises by using different terminology. The cost approach is said to have been applied when valuing individual assets, and the asset approach is said to have been applied when valuing business enterprises. The *International Glossary of Business Valuation Terms*, which has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of SSVS No. 1, defines *asset approach* as “[a] general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities.” This guide addresses valuation of portfolio company investments. As a result, this guide focuses on the three approaches that can be used to value an enterprise (market, income, and asset) and only briefly describes the cost approach in the context of valuing individual assets.

technique to be used to corroborate or otherwise be used in conjunction with one or more other valuation techniques:

- The market approach bases the value measurement on market data (for example, valuing an enterprise based on values for comparable public companies or similar transactions or valuing interests based on transactions in similar instruments). Another method for valuing an enterprise within the market approach is to derive an indication of the total equity value from a recent transaction involving the company's own instruments (for example, a recent financing round).
- The income approach seeks to convert future economic benefits into a present value for the enterprise or the interests in the enterprise.
- The asset approach estimates the value of an enterprise or the interests in the enterprise based on the principle that the equity value is equivalent to the values of its individual assets net of its liabilities.

Chapters 6 – 8 explore the application of these broad techniques in greater detail as it pertains to the valuation of debt instruments as well as equity interests in the context of both simple and complex capital structures, while chapter 13, “Special Topics,” addresses special topics relevant to specific valuation matters.

- In standard valuation theory, value may be measured on a controlling or minority-interest basis and a marketable or nonmarketable basis. Adjustments to the value may be needed when estimating the fair value of an interest on a specified basis. The appropriate basis of valuation varies depending on the objective of the analysis. See chapter 9, “Control and Marketability.”
- Many of the valuation techniques that are used to estimate the fair value of portfolio company investments require significant unobservable inputs (Level 3 inputs). Although it is possible to use market data from similar traded securities to provide an indication of the range that might apply for each input, selecting specific reasonable assumptions for valuing an investment can be challenging. Therefore, when using a valuation technique that requires unobservable inputs, it is important to calibrate these inputs to any observed transactions in the investment itself, providing an initial set of assumptions that are consistent with the transaction price when the transaction price represents fair value.

Calibration is required when the initial transaction is at fair value. As indicated in FASB ASC 820-10-35-24C

If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps a reporting entity to determine

whether an adjustment to the valuation technique is necessary (for example, there might be a characteristic of the asset or liability that is not captured by the valuation technique). After initial recognition, when measuring fair value using a valuation technique or techniques that use unobservable inputs, a reporting entity shall ensure that those valuation techniques reflect observable market data (for example, the price for a similar asset or liability) at the measurement date.

See chapter 10, “Calibration.”

- Investment companies often find it beneficial to perform periodic (e.g., quarterly) backtesting on investments which have had subsequent realizations or liquidity events, comparing the implied value from the transaction to the fair value estimate from the most recent analysis as well as valuations from other prior periods that may be deemed relevant. Backtesting provides an ongoing feedback that could enhance the rigor and controls around the valuation processes for periodic fair value estimates. Chapter 11, “Backtesting,” discusses the benefits and limitations of backtesting.
- When a transaction has recently been completed or is expected to close within a short timeframe, consideration of uncertainties and contingencies surrounding the transaction can provide meaningful information in estimating fair value. Furthermore, there is specific guidance under US GAAP regarding the treatment of transaction costs. These concepts are discussed in chapter 12, “Factors to Consider At or Near a Transaction Date.”
- The guide also includes the following other information that is designed to provide insights and tools that will be of benefit to the various users of this guide, including financial statement preparers, auditors, and investors:
 - Chapter 14 includes “Frequently Asked Questions,” providing additional discussion of certain issues in a question and answer format.
 - The Appendices include information on best practices pertaining to the valuation process, a valuation toolkit providing certain calculations and research that may be useful in estimating fair values, and several case studies illustrating different investment situations, the way these situations evolved over time, and what factors may be considered in arriving at a fair value measurement at each measurement date consistent with the guidance in FASB ASC 820.

Guide to the Guide

- .10** The task force has organized the guide with chapters, topics and case studies identified to help direct users of the guide to areas that might be of most interest to them. Given the broad scope of the guide, some users may be more interested in some sections than others. The following discussion highlights the sections that may be most relevant as a resource for various users. To derive the most benefit from this guide, users are

encouraged to read this guide in its entirety for an overview of the key concepts, before reviewing specific areas of interest in more detail.

- Investment company managers may wish to focus on the case studies, reviewing the list in appendix C to identify the situations that are most similar to their funds' investment styles. They may also wish to consider the implications for their funds of the guidance in chapter 10, "Calibration," chapter 11, "Backtesting," chapter 12, "Factors to Consider At or Near a Transaction Date," and appendix A, "Valuation Process and Documentation Considerations."
- Venture capital fund managers may wish to focus on case studies 8–12 in appendix C, which present examples of investments in early-stage companies and companies with complex capital structures. They may also wish to consider the guidance in chapter 8, "Valuation of Equity Interests in Complex Capital Structures," and paragraphs 13.39–.43 regarding the valuation of early-stage company investments when there has been no recent round of financing.
- In addition to the suggested points of focus noted previously for investment company managers, accountants and auditors may also wish to focus on chapter 4, "Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments," as well as reviewing the background on the industry in chapter 1, "Overview of the Private Equity and Venture Capital Industry and Its Investment Strategies," chapter 2, "Fair Value and Related Concepts" and chapter 3, "Market Participant Assumptions."
- Valuation specialists may benefit from the background on the industry in chapter 1, and may also want to consider the valuation chapters 5 – 9 (especially the discussion on premiums and discounts and calibration in chapter 9, "Control and Marketability") and chapter 10, "Calibration." In addition, the material in chapter 4, "Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments," sets the context for the valuation and provides examples.
- All users of the guide may want to review chapter 13, which addresses special topics, and frequently asked questions in chapter 14 to identify those topics and responses that are applicable to their situations.

Chapter 1

Overview of the Private Equity and Venture Capital Industry and Its Investment Strategies

Introduction

- 1.01** This chapter provides an overview of the private equity and venture capital industry, common strategies, structures and terms of its investment funds, and is intended to provide context for other chapters in this guide. Other investment companies, such as certain BDCs, real estate funds and hedge funds, and other non-investment companies, such as corporate venture capital groups or pension funds, make investments in similar types of portfolio companies and pursue strategies consistent with those described in this chapter. When making these types of investments, these other investment companies and non-investment companies employ similar strategies as the more typical private equity and venture capital companies. As a result, while the legal structures of these companies may differ from private equity and venture capital fund structures, the background presented in this chapter may have relevance for these other companies in the subset of their portfolio that pursues similar strategies. The private equity and venture capital business model is particularly illustrative of the motivations of investors in these types of interests and the types of strategies these investors pursue. These funds and other investment companies and other non-investment companies (when required to report investments at fair value) face similar issues in valuing long-term investments in accordance with FASB ASC 820.
- 1.02** *Private equity* is a term often used to refer to illiquid closed end investment funds which are offered only to sophisticated investors (for example, “accredited” or “qualified” investors, which are terms defined in SEC regulations; see the “Investor Base” section in paragraphs 1.28–.37 of this chapter for further discussion). *Venture capital* generally refers to a form of private equity investing focused on early stage and start-up companies, with early investments in these companies often occurring before they have revenues. Later stage private equity investing would include *growth investing*, *roll-up strategies*, or *leveraged buyouts* of more mature companies.
- 1.03** Funds are often classified based upon their typical investment strategy or sector focus. In general, the only limitation on the types of investments a private equity and venture capital fund can make would be in the fund’s organizational documents (most likely in the limited partnership agreement for the fund). As a result, a fund could have a narrow mandate (such as early stage North American healthcare opportunities) or it could have a broad mandate (such as global private equity and special situations). In the former category, the fund might invest in early stage medical device or biotechnology companies. In the latter category, the fund might enter into a negotiated transaction to buy a 10% interest in a large, publicly traded US company (a so-called private investment in public equity [PIPE] transaction) and, at the same time, it might invest in a technology start-up in a developing country.

- 1.04** For the most part, private equity and venture capital funds invest in equity and debt instruments of portfolio companies. The fund's investment adviser or sponsor often provides Board level oversight but is unlikely to be actively engaged in day-to-day operations.
- 1.05** As private equity and venture capital funds often have terms that last for ten to twelve years or longer, and the development of the fund's investments may take an extended period before they can be sold or distributed, the profile of the fund and its investments may change over time. Some companies in the portfolio may have gone public or merged into other companies, and the fund may continue to hold shares of publicly traded companies for an extended period. Alternatively, what was originally acquired as a start-up company in a unique sector may over time become a more mature company in a crowded sector. Similarly, a fund investing in mezzanine debt may end up owning a significant portion of a portfolio company's equity following a debt restructuring. Therefore, from the perspective of valuation, it is important to employ valuation approaches and techniques that are appropriate and consistent with market participant assumptions for each specific investment and not presume that the type of fund or its mandate should restrict the types of valuation approaches or techniques to be used.
- 1.06** Regardless of strategy, the objective that private equity and venture capital funds generally have in common is to obtain a high rate of return over what might be an extended but finite period of time. While certain types of instruments may provide for an interest rate or a dividend rate, rarely is a fund seeking to monetize its investment solely through the receipt of periodic interest or dividends. Ultimately, the fund will typically monetize an equity investment through a liquidity event for the business (sale of the whole business or sale of the shares held over the period following an IPO), and will typically monetize a debt investment either through repayment upon maturity or via acceleration upon a change of control for the business.
- 1.07** Unlike corporate conglomerates that may operate several related or unrelated businesses, private equity and venture capital funds are unlikely to manage a portfolio company on an integrated basis with other companies in its portfolio. Although there may be some opportunities to cross sell or collaborate within the network of the fund sponsor,¹ since each portfolio company is likely to be positioned for sale during the investment period, each portfolio company is generally a freestanding entity with a management team that operates independently of the fund and other portfolio companies.
- 1.08** Because the fair value of many private equity and venture capital fund investments depends on Level 2 or Level 3 inputs, where market information is limited, valuation of investments held by these funds generally presents significantly more challenges than valuation of investments held by mutual funds, hedge funds and other types of investment companies that invest principally in publicly traded securities. Furthermore, even though investors in private equity and venture capital funds may ultimately be more focused on

¹ Frequently, terms like *fund sponsor* are used in a non-legal sense to be synonymous with a collection of entities that include general partner, fund manager, management company, private equity firm, venture capital firm, and their various affiliates.

overall fund performance (particularly in the case of a well-diversified portfolio), each of the investments that make up the fund's net asset value is required to be measured at fair value separately.² As a result, it is important to consider specific relevant facts and circumstances that have a bearing on each portfolio company's valuation and the value of the specific interests held by the fund.

- 1.09** FASB ASC 820-10-05-1B states that “the objective of a fair value measurement ... is ... to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions.” Therefore, it is essential to understand the perspective of potential market participants (both buyers and sellers) for the portfolio company investment held by the fund to determine the fair value. However, the specific interests held by the fund and the rights associated with them are often integrally tied to the fund's strategy for the portfolio company. As such, it is helpful to gain perspective on private equity and venture capital funds and their strategies in order to provide context for the valuation.
- 1.10** In practice, many private equity and venture capital funds determine fair value of their portfolio company investments internally. Regardless of whether fair value measurements are estimated internally by fund management or with the assistance of an external third party, fund management is ultimately responsible for the fair value measurements that are used to prepare the fund's financial statements and for the underlying assumptions used in developing these fair value measurements. Practitioners are expected to understand how the valuation techniques used for measuring fair value comply with the requirements of FASB ASC 820, *Fair Value Measurement*, assess reasonableness of the inputs, assumptions and valuations, and evaluate adequateness of the related disclosures.
- 1.11** The ability to assess the valuation of a fund's portfolio company investments can be enhanced by understanding the perspective of the current investor (that is, the fund) because it would allow one to: *a*) gain insight into the strategic outlook and prospects for the portfolio company; *b*) understand the fund's internal processes and assess how it underwrote the initial investment; *c*) leverage the fund's monitoring and technical capabilities, capital markets expertise, and track the progress from the initial underwriting; and *d*) better understand the motivations behind development of the portfolio company's capital structure. By understanding the fund manager's strategies, outlook and motivations, one can better assess the fund manager's perspective as well as gather data from a perspective that is independent from the portfolio company's management. Understanding the fund's perspective would also allow one to evaluate the extent to which business performance and future strategic value are dependent upon performance of current portfolio company management as well as to assess the strategic value to a potential buyer of retaining the existing management team in the context of a change in control transaction.

² See chapter 4, “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments,” which addresses unit of account and the methods for aggregating and grouping individual debt or equity instruments in the context of determining the fair value of the portfolio company investments.

- 1.12** In addition, private equity and venture capital funds are market participants for other investments in private company interests. As a result, when reviewing valuations of one private equity or venture capital fund, it is helpful to be knowledgeable about the private equity and venture capital industry, how it operates and what types of strategies are typically employed. If, for example, a venture capital fund has an early stage company in its portfolio that has had a successful product introduction but has reached the point where it needs a large amount of additional capital to build out its production, sales and distribution functions, such portfolio company may be of interest to a growth-oriented private equity fund. Understanding the perspective of a private equity firm that may actually invest in such a portfolio company may help to value it.
- 1.13** The remainder of this chapter is devoted to providing a background on the private equity and venture capital industry, its structure, strategies and objectives. Specific attention is given to those aspects that are most relevant for valuations of portfolio company investments.

Investment Strategies and Portfolio Company Lifecycle

- 1.14** A helpful framework for evaluating private equity and venture capital fund investment strategies is the stage of development of the portfolio company. While there may be multiple dimensions to the investment strategy, stage of development is a key differentiator between the private equity fund and venture capital fund investment strategies. Venture capital funds generally pursue an investment strategy of investing in earlier stage enterprises. Other funds often pursue an investment strategy of investing in expansion and later stage enterprises.
- 1.15** The typical stages of development for many portfolio companies are characterized in the following table.

Table 1-1³

<i>Stage</i>	<i>Description</i>
1	Portfolio company has no product or service revenue to date and limited expense history and, typically, an incomplete management team with an idea, a plan, and possibly some initial product development. Typically, <i>seed capital</i> , or first round financing, is provided during this stage by friends and family, <i>angels</i> , or venture capital firms focusing on early-stage portfolio companies, and the interests issued to those investors are occasionally in the form of common stock but are more commonly in the form of preferred stock.
2	Portfolio company has no product or service revenue but substantive expense history because product development is under way, and business challenges are thought to be understood. Typically, a second or third round of financing occurs during this stage. Representative investors are venture capital firms, which may provide additional management or board of directors' expertise. The typical interests issued to those investors are in the form of preferred stock.
3	Portfolio company has made significant progress in product development; key development milestones have been met (for example, hiring of a management team); and development is near

³ This table is consistent with table 2-1 in the AICPA Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, except for minor editorial differences.

This table present six stages of development. Other sources may indicate different numbers of stages.

Stage	Description
	completion (for example, <i>alpha</i> and <i>beta testing</i>), but generally, there is no product revenue. Typically, later rounds of financing occur during this stage. Representative investors are venture capital firms and strategic business partners. The typical interests issued to those investors are in the form of preferred stock.
4	Portfolio company has met additional key development milestones (for example, first customer orders or first revenue shipments) and has some product or service revenue, but it is still operating at a loss. Typically, <i>mezzanine financing</i> rounds occur during this stage. Also, it is frequently in this stage that discussions would start with investment banks for an initial public offering (IPO). ¹
5	Portfolio company has product or service revenue and has recently achieved breakthrough measures of financial success, such as operating profitability or break-even or positive cash flows. A <i>liquidity event</i> of some sort, such as an IPO or a sale of the portfolio company, could occur in this stage. The form of securities issued is typically all common stock, with any outstanding preferred converting to common upon an IPO (and perhaps also upon other liquidity events). ²
6	Portfolio company has an established financial history of profitable operations or generation of positive cash flows. Some portfolio companies may remain private for a substantial period in this stage. ³ An IPO could also occur during this stage. ⁴
¹ The actual stages during which liquidity events occur or discussions with investment bankers for an IPO take place depend upon several factors. Those factors include, for example, the state of the economy, investor sentiment, and the state of the IPO market. ² See table note 1. ³ Almost all venture capital- and private equity-backed companies will ultimately seek liquidity through an IPO or sale of the company. Some portfolio companies (for example, family-owned or other closely held companies) may intend to remain private indefinitely. Such portfolio companies typically have simpler capital structures, and their interests may be valued using simpler methodologies. See chapter 7, "Valuation of Equity Interests in Simple Capital Structures." ⁴ See table note 1.	

Portfolio companies in the life science industries (e.g., biotech, medical devices, etc.) have certain differences in their stages of development illustrated in the following table:

Table 1-2⁴

<i>Stage</i>	<i>Description</i>
1. Discovery	Portfolio companies that are involved in basic research. The result is a basic discovery, which may have commercial viability. An example of a basic discovery for a biotech venture would be achieving an understanding of the mechanism of action for a disease, a “drugable” target inside the body that might be able to affect that mechanism of action, and/or a class of molecules that might be able to affect that target.
2. Preclinical Development	The portfolio company starts commercialization, when a compound or device is advanced to a state where it is ready to test with humans or, in the case of medical devices, with animals.
3. Clinical Testing	The portfolio company is testing the substance or device in humans. This typically happens in four clinical phases. There are significant regulatory hurdles to overcome before entering each new phase. Phase I generally tests for the safety of the drug/device by evaluating pharmacokinetic parameters and tolerance, generally in volunteers who are often times already ill. Phase II tests for efficacy and side effects in a small sample population. Phase III tests for safety and efficacy in larger populations. At this point, if safety and efficacy have been shown to meet certain standards, the regulatory agencies will approve the drug or device for sale and general use. The final phase—phase IV—monitors the real-world effectiveness of a drug during an observational, non-interventional trial in a naturalistic setting.
4. Post-clinical marketing	The portfolio company’s activities here will focus on marketing the drug or device to patients and clinicians.

Stages 5-6 are similar to those described in table 1-1.

The preceding tables are illustrative of stages of development. It is very common for investors to use their own tailored versions of portfolio company stages of development that are consistent with their investment philosophy.

- 1.16** A portfolio company may go through other stages that are not mentioned in tables 1-1 or 1-2. Some product development cycles include extensive prototyping during development and may have more than the six stages described in the tables. Moreover, not every portfolio company will necessarily go through every stage. For example, a portfolio company may develop a software product very quickly and proceed directly to production rather than subjecting the product to extensive testing, or a portfolio company may remain private for a substantial period in stage 6, establishing operating and financial stability. Many such portfolio companies, however, eventually undergo an initial public offering (IPO).
- 1.17** As noted previously, venture capital funds typically pursue a strategy of investing in earlier stage enterprises (stages 1, 2, and 3). Early stage enterprises often invest heavily in product development with little to no offsetting revenue and, as a result, may generate significant negative cash flow (often referred to as *cash burn*). Early stage enterprises

⁴ Source: “Entering the Life Science Market – Part 1: Eight Things You Should Know” by David Chapin.

may also be subject to high risk of failure because the product or service is often unproven and subject to risk of successful development, regulatory approval, commercialization, and financial feasibility. A venture capital fund will often manage the risk of cash burn and high risk of failure by making investments in a particular portfolio company through multiple rounds of financing and investing along with several participants.

- 1.18** Investing through multiple rounds allows the venture capital fund to manage the cash burn risk by ideally providing just enough funds to allow the portfolio company to operate through a targeted milestone or stage of development. The portfolio company will seek to invest these funds in product development, marketing or other activities, such that value will be created equal to or in excess of the investment. The venture capital fund will monitor the portfolio company's progress. At the time of the next financing round, the venture capital fund is able to reassess the portfolio company's progress, the feasibility of the business plan, and the prospects for successful exit. Based on this assessment, the venture capital fund can then decide whether to continue investing. Managing the cash burn is important because the venture capital fund will want to avoid a situation in which the portfolio company runs out of cash before achieving the targeted milestones or stage of development and next round of financing. In addition, the venture capital fund will have the opportunity to negotiate terms based on the perceived change in value since the last round. Often the investors in each round will be different and the rounds will be negotiated independently.
- 1.19** Venture capital funds will normally seek to invest in portfolio companies that, if successful, have the opportunity to provide significant returns but, as mentioned previously, may also be subject to a high risk of failure. The high risk of failure can be managed through diversification which, given a particular venture capital fund's finite amount of investable capital, is achieved by making multiple investments in numerous portfolio companies. These investments are enabled by investing alongside other participants. Due to the possibility of significant returns if successful and the high risk of failure, venture capital funds may experience losses on a majority of their portfolio company investments, but still provide positive overall returns as a result of extraordinary returns on a small number of investments. Although diversification is a key factor in managing risk, venture capital funds may focus on investing in portfolio companies in a particular industry (for example, biotech) or with another similar theme, providing the opportunity for the limited partners to focus their investments and leveraging the strengths of each specific fund manager.
- 1.20** As a portfolio company progresses through stages 4 and 5, the focus changes from cash burn to revenue growth and investments often occur in the form of mezzanine financing or buyouts by private equity funds. Funds focusing on later stage investments (stages 5 and 6), may consider investment strategies such as the following:
- Identifying undervalued companies or capitalizing on market dislocation (capitalizing on information advantage or asymmetry)

- Roll-up or acquisition strategies (building economies of scale, consolidating fragmented markets, vertical integration, adding complimentary products or services, and so on; private equity fund will invest with the intent of making additional equity investments to fund acquisitions)
- Management improvement or cost savings (focusing on operational effectiveness, revenue growth, refocusing the company's strategy)
- Turn-arounds (acquiring underperforming businesses)
- Corporate carve-outs (buying businesses divested from a corporation; these funds need to be prepared to develop the infrastructure necessary for the carved-out entity to operate independently)

1.21 A common general theme in the investment strategies described in the preceding paragraph is that the fund will seek higher returns through a combination of portfolio company growth and profitability improvement. The fund will focus on investing in portfolio companies that have a path toward a successful exit. In contrast to venture capital funds, a private equity fund investing in later stage companies may be the sole or at least the majority investor in most of its portfolio company investments, and may use debt to finance a significant portion of the acquisition. Funds that have a significant stake in a given portfolio company will often actively work with the portfolio company management team and co-investors to develop the strategic plan and monitor performance at any stage of the portfolio company's life cycle.

Typical Fund Structures and Role of Fund Manager

Fund Entity (Limited Partnership) – The Investment Company

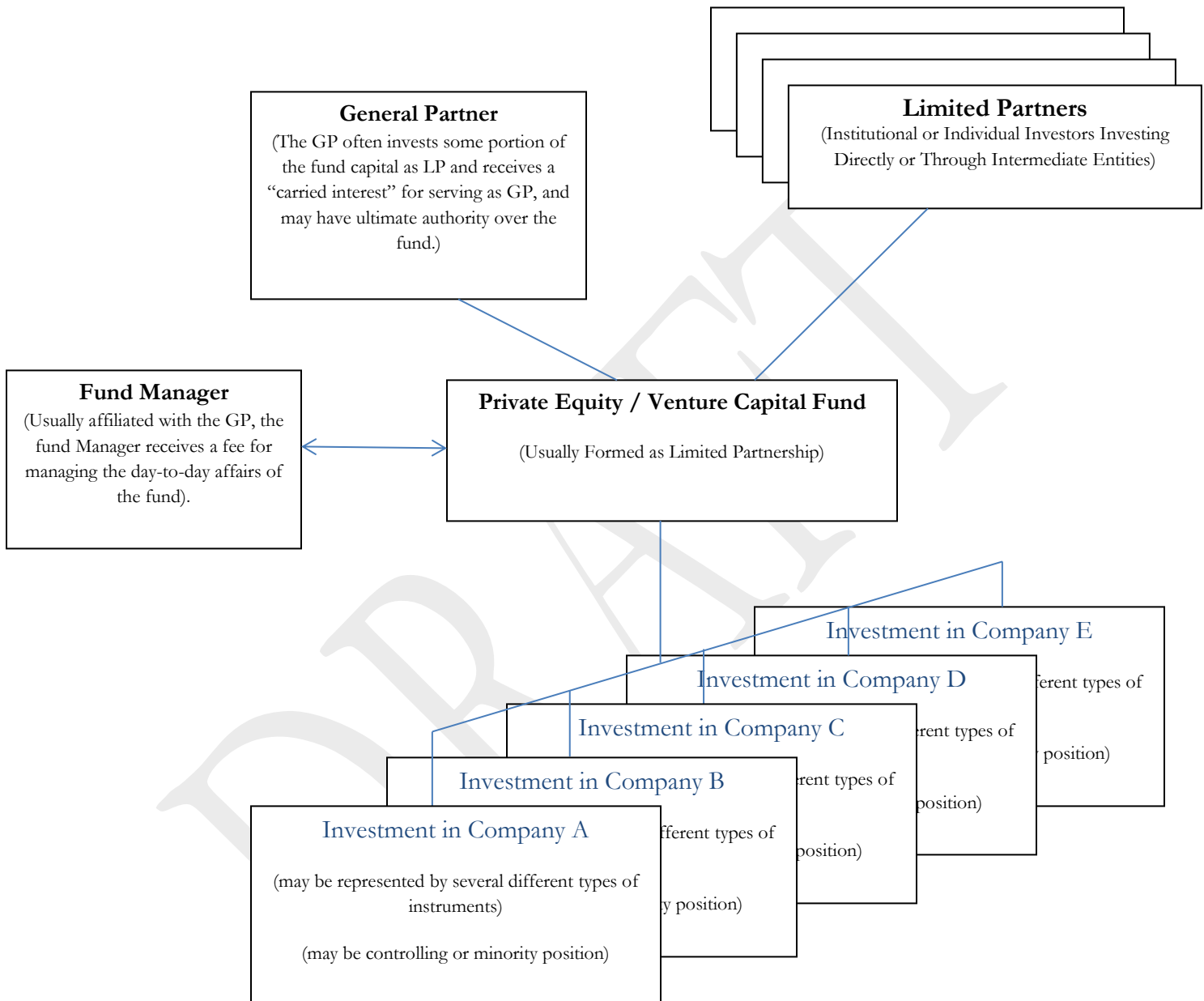
1.22 A private equity or venture capital fund is typically formed as a limited partnership (or family of limited partnerships) with the general partner (which has investment discretion over the fund assets) being an *affiliate* of the fund manager and the limited partners principally including sophisticated investors who, in their capacity as limited partners, take no part in the active management of the fund. Limited partners generally make capital commitments to fund their investment amounts over time as needed, to be drawn over the fund's investment period (typically four to six years). The fund life is generally ten to twelve years but can be extended for an additional year or more if necessary for an orderly wind-down of the fund.

1.23 The fund itself typically has no employees. The fund manager is generally charged with identifying investment opportunities, structuring and negotiating transactions, monitoring the investments, providing ongoing oversight and strategic direction to each portfolio company (which often includes serving on the portfolio company's board of directors), consulting on operational matters, making introductions across the fund manager's network, advising on capital markets and debt capital considerations, and planning and executing appropriate exit transaction strategies for the fund. The fund manager is usually responsible for performing (or managing) all administrative functions for the fund (accounting, cash management, custody, investor reporting, risk management, and so on.). In some circumstances, the fund manager or an affiliate may provide additional

services directly to the portfolio company. These services may be provided pursuant to a separate service arrangement for which fees are charged to the portfolio company, or the arrangement may be less formal or without compensation.

- 1.24** The following diagram depicts a common simplified structure for a private equity or venture capital fund, its investors and fund management. There may be many variations on this structure. Frequently, what is referred to commercially as a *fund* may actually be a grouping of a number of separate limited partnerships that generally invest together on a pro rata basis. Each separate limited partnership in such a structure may have been formed to address specific relatively minor legal, regulatory or commercial distinctions between investors or groups of investors, but they generally maintain a relatively consistent allocation of investment opportunities between the entities that collectively comprise the “fund”. In addition, some larger investors negotiate with certain fund sponsors to create a managed account. A managed account allows the investor to customize fee structures and investment strategies. For practical purposes, a managed account that has a single limited partner investor can be viewed as a “fund”.

SIMPLIFIED FUND STRUCTURE CHART



Compensation, Fund Management Fees, and Carried Interest

- 1.25** The fund manager usually receives a management fee for its administrative responsibilities associated with investing and monitoring fund activities. Commonly, the fee is based upon a percentage of capital commitments or investment cost, typically measured based on the committed capital during the period that the fund is investing and based on the fund's remaining invested capital following the investment period (e.g. the cost basis for the investments still outstanding). The actual percentages and basis for calculating the fee are among the terms negotiated during the process of raising the fund; these terms are set out in the initial organizational documents of the fund and the fund management agreement. In situations in which the fund manager or an affiliate receives additional fee income from portfolio companies, the organizational documents often set out whether and to what extent a portion of the fee income is applied to reduce the management fee during the fund's life.
- 1.26** The general partner usually receives a share of the profits (most commonly determined after expenses and, in some cases, subject to a *hurdle rate* or *preferred return*). These payments may be subject to a "waterfall" which represents a priority of distributions between the general partner and the limited partners. These payments are commonly referred to as the *carried interest* in most private equity and venture capital funds and as *performance fees* in most hedge funds.
- 1.27** Understanding the terms of the fund and the relative performance of the fund can be helpful in understanding the financial incentives of the fund manager and general partner. The fund manager's revenues usually depend on its success in raising capital, and the fund manager will typically invite the limited partners in the current fund to participate in the next fund. In many cases, limited partners evaluate the fund manager based on the internal rate of return (IRR) of the fund manager's prior funds, as well as the multiples of invested capital generated by the fund. The IRR calculation for unrealized investments would generally assume that the remaining investments were sold at fair value on the date through which the IRR is calculated. The general partner's distributions usually depend directly on the performance of the fund. For funds with a hurdle rate or a preferred return, the IRR calculation against which the fund is measured usually is also used to determine whether the general partner has satisfied the fund's waterfall criteria in order to receive carried interest distributions.

Investor Base

- 1.28** As discussed further in chapter 3, "Market Participant Assumptions," private equity and venture capital funds generally target rates of return that exceed the public equity market benchmarks. Higher rates of return are required to compensate investors for the lack of liquidity and the generally greater risk profile of investments these funds make.
- 1.29** As a result of the illiquidity and the perceived additional risk of private equity and venture capital, there are regulatory restrictions which limit investors in private unregistered funds to sophisticated investors. Accordingly, most investors in private equity and venture capital funds are institutional investors, such as corporate and public

pension funds, insurance companies, sovereign wealth funds, and endowment funds. Family offices and high-net-worth individuals also frequently invest in private equity and venture capital funds.

Defined Benefit Pension Plans

- 1.30** Some corporate employers and numerous public entities (such as state and local governments) provide defined pension benefits to their employees. Defined benefit plans provide a guaranteed fixed payment to retirees who are vested in the plan. The amount of guaranteed benefit for each vested employee is typically determined based on the employee's highest or most recent level of compensation, age at retirement and years of service. The employer, not the employee, makes the investment decisions and bears the investment risk. Making decisions for a large pool of employees, however, gives the employer more flexibility when deciding what types of investments to choose and how to allocate them in order to meet the plan's short- and long-term payment obligations. Larger defined benefit plans with significant long-term payment obligations may look to private equity and possibly venture capital funds to be a part of a diversified portfolio, with the goal of achieving overall long-term returns sufficient to meet the plan's obligations. Because of the need to diversify and manage risk, defined pension plans typically allocate only a portion of their assets to private equity and venture capital funds.
- 1.31** The largest investors in private equity and venture capital funds are state and municipal pension plans and non-US governmental pension plans that benefit public employees. In the private sector, given the continued shift away from defined benefit plans in favor of defined contribution plans, corporate pension funds are becoming a smaller portion of the investor base for private equity and venture capital funds.

Sovereign Wealth Funds

- 1.32** Global sovereign wealth funds are also significant investors in private equity and venture capital funds. These investors have capital from reserves and government surpluses that government agencies have set aside to meet future governmental obligations. Sovereign wealth fund assets and total investments in the private equity and venture capital asset class have been increasing rapidly; therefore, these investors represent an increasing share of the capital raised by many fund managers. Many sovereign wealth funds also have dedicated teams devoted to private equity and venture capital investment and several have developed their programs to the point of making direct investments in private equity and venture capital portfolio companies or have become directly competitive within the private equity and venture capital landscape.

Endowment Funds

- 1.33** Endowment funds established by universities or charitable entities are principally concerned with providing the institution with a source of stability and long-term financial strength in order to meet the institution's obligations well into the future. Given their long-term investment horizon, these investors also often find the private equity industry attractive.

High Net-Worth Individuals and Family Offices

- 1.34** As a result of the regulatory restrictions requiring private placements of private equity and venture capital funds to be made only to sophisticated investors (see the “Investor Base” section of this chapter for further discussion), individuals who invest in private equity and venture capital funds generally need to have substantial net worth and sufficient liquid net worth. These restrictions are intended to protect investors who might be unable to withstand a loss from a potentially high-risk investment or the lack of liquidity that is inherent in a private equity or venture capital fund investment.
- 1.35** Even with these restrictions, however, there are large numbers of individuals and families who have substantial resources available to invest in illiquid private equity and venture capital funds. In general, only the wealthiest individual investors are likely to invest directly in a private equity or venture capital funds, given the relatively high minimum investments levels (which can be up to \$25 million for some funds). In many cases, the largest individual investors might have professionally run family offices that look after their investment portfolios and strategies.
- 1.36** Similar to other investors, these individuals will usually seek a balanced portfolio comprised of various asset classes, with some portion of their investments in fixed income, in domestic and international equities, in hedge funds or other managed accounts, as well as in less liquid investments such as real estate, private equity or venture capital. Some of these individuals or family offices may also be “angel” investors in early-stage companies, which provide funding to a company before it seeks venture capital financing. These investors may make direct investments in private equity or venture capital funds but they may also invest through intermediate funds known as funds of funds.

Funds of Funds

- 1.37** Funds of funds are investment companies that invest in other investment companies. A fund of funds manager raises capital from investors to invest in one or more underlying funds. These investments provide a vehicle for investors who are looking for exposure to private equity and venture capital funds but might otherwise be unable to access some managers (who might be quite selective in who they allow to participate in their funds). In addition, investors can rely on the fund of funds manager to identify and select managers and provide diversification to their portfolio, which would not be as readily attainable from a direct investment in private equity and venture capital funds due to the high minimum investment level. The fund of funds managers also tend to have well established due diligence procedures and portfolio monitoring processes, and handle the negotiations with the private equity or venture capital fund manager over fund terms, rights to information and reporting and so on. Some fund of funds managers may have related businesses that invest in private equity and venture capital “secondary fund” interests, which are existing fund interests acquired from other limited partners. Some funds of funds may also co-invest (invest directly in an underlying portfolio company) side by side with the fund making a direct investment.

Investment Horizon and Return Considerations

Long-Term Orientation

- 1.38** There is some criticism of business managers, equity market analysts and markets in general that the focus on the next quarter's earnings, sales or volume targets is counter to the long-term interests of a portfolio company or its current or future customers. This short-term pressure can prevent managers from investing in research and development or new products or features because such investments might cause the portfolio company to fall short of its near-term financial expectations, even though they could significantly enhance the portfolio company's performance and its products in the long term.
- 1.39** Private equity and venture capital investing is characterized by long time horizons that allow fund managers the flexibility to work with portfolio companies to develop plans that can take several years to execute. Funds are generally structured with a duration of 10 years or longer and limited partners generally do not have the opportunity to withdraw their capital. This long-term horizon allows a fund manager to focus primarily on the magnitude and timing of the returns. Thus, when working with private companies in their portfolios, fund managers are able to look several years into the future as being a relevant investment timeframe to demonstrate meaningful value creation. In early stage portfolio companies, this long-term focus can mean that a portfolio company that does not generate revenue for several years and does not expect to have profits for several years thereafter can still raise capital. For more mature portfolio companies, a long-term focus provides opportunities for transformation without the short-term scrutiny public markets impose on drastic changes.
- 1.40** The economic incentives in a private equity or venture capital fund structure can often favor the long-term view. In a successful fund, the amount of the carried interest, or incentive fee, the general partner receives can depend more on the multiple realized (multiple of invested capital) than on rate of return. This focus is also consistent with limited partners looking to achieve higher levels of profits and greater multiples on invested capital from private equity or venture capital than would typically be generated in the public markets. High rates of return over short periods of time do not fully achieve the limited partners' goal of growing their portfolio over long periods of time. Similarly, the typical compensation arrangements with portfolio company executives seek to align the interests of the executives with those of the shareholders. Therefore, both the fund manager and the portfolio company executives are likely to focus more on what the portfolio company will be worth at exit rather than on the impact of short-term decisions.

Risk Tolerance

- 1.41** Since venture capital and private equity investments are held for relatively long periods, these portfolios can face significant uncertainties as various factors (such as markets, technologies, key personnel, and the macroeconomic environment) can change significantly before the portfolio company has an opportunity to position itself for an exit. For example, some of the most successful investments by the industry have been realized by taking portfolio companies public through an IPO. In times when the macroeconomic

environment is strong and investors are interested in new issuances, gaining liquidity through an IPO can be quite attractive, often yielding returns far exceeding what might be available in a sale to a strategic buyer. However, if there is a market disruption, a significant regulatory change or a recession in the economy, it can take years for a favorable IPO climate to return. In fact, even in a relatively good market, some types of portfolio companies may be viewed more favorably and attract higher valuations than others, leading out-of-favor portfolio companies to delay their execution of a planned IPO or receive a lower than expected valuation. Therefore, even if a portfolio company is otherwise ready to go public, a fund manager may need to be prepared to hold an investment through an entire business cycle in order to achieve a successful exit. This risk is an important consideration for fund managers, especially those who invest in cyclical or more speculative businesses.

- 1.42** One way fund managers and their limited partners can manage the risks associated with such long-term investments and market cyclicalities is through diversification. Diversification can be achieved through, for example, investing in different industries, technologies, business models, end markets, or geographies. In addition, because many funds tend to have an *investment period* of up to six years, investments made early in a fund's investment period may be based upon different investment theses than those made toward the end of the fund's investment period. By staggering the fund's investments over a longer investment period, the fund reduces the "vintage" risk that might otherwise be associated with making similar investments at the same point in time. As capital market conditions and their impact on exit options tend to vary over time, the staggered maturity of the investments has the further benefit of exposing the fund to differing market cycles during the fund's life.
- 1.43** Whatever strategies a fund manager uses to diversify and manage risks, investors in earlier stage or illiquid private companies approach each investment knowing that mistakes can be costly. Unlike investors in public markets, who may decide shortly after making the investment that their strategy is wrong or their portfolio is out of balance and can sell part or all of their investment, private company investors are locked into their investments and strategy until there is an exit opportunity. As a result, it is important for private equity and venture capital fund managers to be disciplined in their investment processes, to have a vision for how markets develop, to assess the potential impact of innovation and technological advancements, and to evaluate the quality and experience of the portfolio company's management team and make adjustments as needed. Fund managers may also need to be patient with portfolio companies and their management teams as they develop and adapt new processes and technologies, and may need to be prepared for delays and setbacks when markets develop more slowly or customer or investor acceptance of a portfolio company's products or business model takes longer than envisioned.
- 1.44** Private equity and venture capital investment managers focus on choosing portfolio companies that they expect to be truly successful, approaching each investment with the goal of navigating the risks to achieve a high value exit. However, in practice, fund managers know that not all of the investments are likely to work out as expected. Therefore, in order to reach an acceptable target rate of return across a portfolio of

investments, a fund manager generally needs to target a rate of return for each individual investment that exceeds the expected rate of return on the portfolio as a whole. Inevitably, there will be circumstances where one or more portfolio investments significantly underperform expectations. As a result, when making individual investment decisions as part of building a portfolio, a fund manager will generally look to higher rates of return than the target rate of return for the fund, so that the successful investments will be able to offset losses elsewhere in the portfolio. Thus, the greater the expected loss ratio of a portfolio (those investments which might be expected to return less than cost) or, in other words, the riskier a portfolio of similar investments, the more the target rate of return for each individual investment needs to exceed the expected average return for all investments.

Impact on Portfolio Company Valuations

Planning for “Exits”

- 1.45** Before making an investment, the fund manager develops an investment thesis, which, among other things, identifies the key aspects of the business that might lead to its success, as well as the risks that could lead to setbacks. The fund manager also assesses how to gain liquidity from the investment. In fact, the investment documentation (often in a shareholders’ agreement) will frequently include terms that give the fund (or other shareholders) the right to cause a portfolio company to be sold or to “drag along” certain other shareholders into a transaction that might give a buyer control of the portfolio company. Terms might also include a right to cause the portfolio company to file for an IPO or include contingencies that are triggered if the portfolio company fails to file for an IPO during a specified timeframe.
- 1.46** As a private equity or venture capital fund typically has a pre-defined life and its limited partners generally expect to receive liquidity from portfolio investments during the fund’s life, it is important for the fund manager to think about the potential liquidity strategies for the portfolio company once it executes its business plan. In many ways, this exercise involves assessing the potential market participants and at what point and value, various market participants would have an interest in investing in a portfolio company.⁵
- 1.47** In some cases, it is difficult to predict the ultimate outcome, particularly when the exit plan is far out in the future. Portfolio companies may pursue numerous alternative paths to exit, including going public, divestitures or spin offs, recapitalization, merging with other companies, or downsizing in an attempt to transform, all of which can happen within the span of one fund’s ownership. However, at every stage in the process, the fund manager must continue to focus on an ultimate exit strategy, despite the potential for that strategy to change based on dynamic market conditions.

⁵ See chapter 3, “Market Participant Assumptions,” which discusses market participants and evaluating their perspective on valuation.

Strategic Buyers

- 1.48** If a portfolio company has begun generating meaningful revenue and profit growth, it may generate interest from strategic buyers because the acquisition can often improve the buyer's revenue growth rate. The buyer has the added benefit of not having had to incur the risks or the accounting losses during the development phase of target's business. Therefore, when considering possible exit options, it may be helpful for fund managers to identify strategic buyers (such as large corporations) that may potentially be interested in acquiring the portfolio company. On the other hand, large corporations can, and often do, change their strategic direction, as their circumstances and financial position change. As a result, a portfolio company with a durable business plan that can weather a business cycle and that offers multiple paths to liquidity is likely to be more attractive to a fund manager than one with a limited universe of potential buyers.
- 1.49** When evaluating the exit opportunities that might be available to a portfolio company, a fund manager may consider a number of factors, including the following:
- The number of larger companies for which the portfolio company's products or services would be complementary to their existing business
 - The extent that the portfolio company's products or services are a "need to have" or "nice to have", either to the end user or to the potential acquirer, to round out their product portfolio
 - The strategic positioning of potential buyers and their perception of need to diversify in one direction or another
 - The regulatory impediments to a strategic buyer's ability to acquire the portfolio company (e.g., anti-trust/anti-competition concerns)
 - The strategic buyers' financial condition and their ability to finance an acquisition of the portfolio company.
- 1.50** In some circumstances, portfolio companies can be attractive acquisition targets for financial buyers. These buyers are not looking at the portfolio company for its strategic value relative to their existing portfolio, but rather might be looking to help the portfolio company continue to grow as an independent company or as a platform for future acquisitions. There may be situations in which, given the availability of affordable debt financing, a leveraged buyout may offer a higher price than the price the portfolio company would receive from the public markets in an IPO. A portfolio company might also prefer to remain private if it has proprietary technology or favorable economics, where disclosing these advantages through public market filings would erode value. In these kinds of situations, the potential buyers could be other private equity or venture capital firms which specialize in later stage investments (a so-called "sponsor-to-sponsor")

transaction) or insurance companies or sovereign wealth funds (particularly, if the portfolio company offers attractive cash flow attributes).⁶

Public Equity Markets and IPO

- 1.51** IPOs can provide a path to liquidity for private equity or venture capital fund investments, though they can be difficult to accomplish, even for portfolio companies that have operational success and a history of sustained performance. Typically, portfolio companies will be expected to reach a minimum scale and performance metrics to show prospective investors a path toward long-term success before public market participants will be receptive to a new issuance. Certain sectors or business models may be viewed favorably at a given time, but such sentiments can change rapidly. As a result, most fund managers pay attention to capital market activity and only prepare those portfolio companies for an IPO whose business profile has the characteristics that public market participants will find attractive.
- 1.52** An IPO process can involve an extended period of preparation by the portfolio company and its outside advisers.⁷ As a result, significant advance planning and good insight into market expectations and the macroeconomic backdrop can be of great value in assessing a portfolio company's prospects for a successful IPO. Given the length of time it takes to complete an IPO, the risks associated with rapidly changing investor sentiment and often volatile macroeconomic conditions, it may be difficult to be certain of the timing or potential pricing of an IPO, even within a short time before the target listing date.
- 1.53** Although many people consider an IPO of a portfolio company as an exit, it is often more appropriate to view it as a financing event for the portfolio company which may provide little, if any, proceeds to the private equity or venture capital funds. Particularly for less mature portfolio companies, new investors (including public shareholders) often prefer the proceeds of an IPO to go directly to the portfolio company for use in furthering its growth plans or to pay down debt, instead of paying out existing shareholders. Typically, upon completion of the IPO, all of the existing equity capital of the portfolio company is converted to a single class of common equity. Shares not sold by the fund in an IPO may be subject to a contractual "lock-up" with the underwriter of the offering that restricts the fund's ability to sell or distribute its shares before the expiration of a lock-up period.⁸
- 1.54** Following an IPO, private equity and venture capital funds may continue to hold shares for an extended period. In some cases, the fund might look to participate in a later offering, particularly if it has registration rights in its original investment documents. In

⁶ These types of transactions are sometimes described as "secondary sales," meaning the proceeds from the sale would go to the existing owners, rather than adding capital to the company. The term "secondary sales" is also sometimes used to describe transfers of limited partnership interests in a venture capital or private equity fund as a whole, or a secondary offering where shares of a public company are sold to public shareholders following an IPO. As the term "secondary" may have a number of meanings when used by venture capitalists and private equity firms, it is important to understand the context in which the term is being used.

⁷ For a further discussion of the IPO process, see appendix B, paragraphs B.02.01–.02.12, "The Initial Public Offering Process."

⁸ See paragraphs 13.08–.14 for a discussion of contractual restrictions on sale.

other cases, the fund may look to “dribble” its shares into the market through open market sales, while yet in other situations, it may prefer to make in-kind distributions to its partners to allow partners to make independent decisions regarding whether to hold or dispose of their shares.

1.55 Factors that may lead a fund to hold a significant number of a portfolio company’s shares well past the expiration of the lock-up period can include:

- The fund manager’s perception of the trading value of the portfolio company’s shares relative to the expected value in the future.
- The possibility of a future M&A transaction involving the portfolio company.
- Total size of the fund’s holdings as compared to the total percentage of the portfolio company in public hands or the volume of shares that trade in a given period.
- The desire to manage the public perception of the fund manager as being supportive of the portfolio company it has sponsored.
- Possession by the fund manager of material non-public information regarding the portfolio company or other regulatory factors that may affect whether the shares are salable.⁹

1.56 Even after a portfolio company is public, the fund manager may still face further challenges in managing the fund’s path to ultimate liquidity well beyond the IPO date. For example, shares may be thinly traded relative to the size of the fund’s holdings. In addition, most fund sponsors are protective of their reputation and desire to remain involved as active members of the board of directors well beyond the IPO date so they can help portfolio company management succeed in the transition from a private to public company.

Considerations for Early Stage Portfolio Companies

1.57 Investors in early stage portfolio companies face the challenge of envisioning new services, technologies, business processes and models, and deciding what they are worth before knowing whether: a market will exist, the technology will work, the competitive landscape will shift, or management can execute on a business plan sufficient to be able to capture value from the investment. Since early stage portfolio companies often do not have revenues or profits, it may be difficult to apply the valuation models typically used to value more mature businesses.

1.58 Most venture capital or start-up opportunities exist outside the typical large corporate environment because they involve significant investment of time, effort, financial and managerial resources; they have high degrees of risk and can take many years to provide a meaningful financial return, if at all. In addition, early stage businesses often require employees with an entrepreneurial style that may be difficult to attract, retain and reward within large enterprises.

⁹ A discussion of insider trading rules, SEC Rule 144, or other regulatory matters is outside the scope of this guide.

- 1.59** For early stage portfolio companies, which do not yet generate revenues or profits, there is often limited visibility on how the business will develop over time and the risk of business failure is generally very high. Their business plans may go through numerous changes as the portfolio company evolves and the market for the product or service could change dramatically over the time that it takes to get the product to market. Also, the portfolio company may get the product right but the marketing and distribution wrong, or vice versa. Alternatively, the portfolio company may misjudge the size of the market or the length of the sales cycle for a product or service so that the level of investment in a sales infrastructure significantly dilutes its profitability or growth trajectory. The pricing model or terms may not meet expectations and margins may fall short of what is required to produce the product or service profitably. Other technologies or service delivery models may take hold before the portfolio company is able to capitalize on a perceived market need. Then again, the portfolio company may succeed in developing a product but the new product may not be sufficiently superior to an existing product to prompt customers to change their buying patterns to adopt the portfolio company's product.
- 1.60** As a result, the venture capital funding model rarely involves a portfolio company raising enough money in the very early stages to fund the business fully until profitability. Instead, venture capital funding typically involves several rounds of financing, providing the portfolio company with enough money to reach another milestone and giving investors the opportunity to see how the portfolio company and the related market develop over time. This approach helps to minimize the amount of money investors stand to lose if the portfolio company does not make sufficient progress or the market develops differently from initial expectations. The ultimate decision regarding whether to invest is based on assessing the portfolio company's development prospects over a long period of time and what it may ultimately be worth. The more immediate assessment is to identify the portfolio company's future milestones and determine the probabilities of it achieving these milestones. The achievement of past milestones, probabilities of meeting future milestones, and cash needs are key factors that investors evaluate in combination with the overall outlook for the portfolio company in negotiating the pricing and aggregate level of investment for each round of financing.
- 1.61** Many companies that are now household names were initially start-ups funded by venture capital funds. However, for every early stage company that ultimately succeeds to the level of becoming well known, there are hundreds, if not thousands, of companies that fall short of achieving such success. Not all of these less known, or unknown, companies fail. In many cases, they succeed, or only partially succeed, and are either acquired by another company or their technology or know-how is sold. Many companies succeed as independent companies and may even go public before being acquired by a larger competitor or a business looking to expand into the company's market.
- 1.62** From a valuation perspective, early stage portfolio companies present a number of challenges because there may be few or no publicly traded comparable companies that can be used as benchmarks due to differences in both the expected future growth and the level of risk. To the extent that valuation metrics exist in a given sector, they may be based on revenue multiples (which may not be present in early stage portfolio companies) or some non-financial criteria (for example, the number of users, which is commonly

used in the internet sector). When using metrics for portfolio companies that have not yet developed a way to monetize their services, significant judgment is needed to assess how the metric (such as user traffic) will be affected when the services are monetized. For example, evaluating the nature of a service and how essential it may become to users may help predict when and how much a portfolio company can charge for its service. In addition, the extent to which the users will continue to use the service if presented with advertising or if the portfolio company were to monitor and share user information with other companies for a fee would also impact user traffic and, ultimately, the value.

- 1.63** As a result, even though valuation metrics may exist, they need to be assessed against the portfolio company's relative market position, its competitive landscape and its overall chance of success. In some cases, there are observable inputs that can be used to determine the portfolio company's value. However, in many cases, traditional valuation methodologies may fall short of providing reliable indications of value and the valuation will require significant judgment.
- 1.64** While most investors in early stage portfolio companies monitor factors that influence the probability of success and the value that may ultimately be achieved, they usually do not continually update models and assumptions. As a result, various parties that are involved with determining and reviewing the fair value of an early stage portfolio company, or the investments in that company, will need to consider numerous subjective inputs and assumptions to gain perspective about the reasonableness of any valuation. Some of the subjective factors that need to be considered when valuing an early stage portfolio company are discussed in the subsequent sections.

The Portfolio Company's Strategy and Positioning

- 1.65** It is important to understand the portfolio company's strategy and positioning. An investor might start with understanding the portfolio company's mission and the details of its business plan, the metrics it will use to measure its own success and the progress it is making towards achieving its goals. The investor may also assess the technological feasibility and the uniqueness of the portfolio company's planned solution, as well as the potential size of the market and the portfolio company's strategy to penetrate the market. Finally, the investor would consider how much money the portfolio company would need to spend to develop and commercialize the product or service. That is, how much investment will be required to develop a viable solution and then to reach the market – for example, will the product ultimately be licensed or sold through independent distributors or is the portfolio company planning to build its own sales organization? Taken together, these factors determine the potential return on the investment.

Market Opportunity

- 1.66** A key element of a portfolio company's strategy is identifying the market opportunity. Starting with an assessment of the current marketplace and the solutions available, a new business needs to develop a point of differentiation or core competence that can be the basis for its growth and development. When an analogous product or service is currently hard to find, businesses, venture capital firms or individuals performing valuations often

try to develop possible pricing models by determining how much time or money one would save by using the product or service. In the case of a biotechnology portfolio company, one could consider how many people suffer from the current disease that the proposed product intends to treat and how likely it is to improve the quality of life, their life expectancy or both. In other words, having some way to gauge the size of the market opportunity and the potential for the portfolio company to capture some or all of that market potential is important.

Product Adoption and Customer Behavior

- 1.67** In order to understand the portfolio company's market, one needs to identify the buyer for the product and the decision makers. In consumer-oriented businesses ("B2C" businesses) identifying the buyer often means assessing the purchasing power of the targeted demographic and its willingness to spend on similar products or services. In business- or government-oriented businesses ("B2B" businesses) identifying the buyer often means assessing how the business will benefit from the product or service and what other products or services it would replace. Selling to consumers generally involves a shorter sales cycle because consumers' tastes are subject to trends and fads, whereas selling to businesses, governments or other institutions can generally result in a longer sales cycle and slower product adoption, but a greater chance of renewal or repeat business.

Competitive Landscape and Presence of a First-to-Market Advantage

- 1.68** For some new products and services, it can be more important to be the first to introduce the product than to have the best product. When customers associate a brand with a leading edge product or service, the next company to the market with a similar product or service can have a hard time breaking through the market with their product. The next company to the market would generally need to demonstrate that their product or service is differentiated in some way in order to gain market share. Differentiation could be achieved through technological superiority, better pricing, service, reliability, and so on. When evaluating a business that is developing a new product or service, market intelligence about other products or services under development will help to assess how much of a head start the portfolio company may have, how far behind they are, or what barriers to entry might exist for competitors in introducing similar products or services.

Regulatory Approval and Other Gating Factors to Market Access

- 1.69** Some industries have more regulatory oversight or licensing requirements than others. For example, in financial services and medical devices sectors, the US federal government has industry-specific regulatory agencies. However, businesses in other industries may also face import or export regulations or local licensing and registration requirements. In some cases, these regulations may present challenges to getting a product manufactured or service delivered. However, in other situations, regulatory complexity can be a source of competitive advantage, because regulation is generally more manageable for companies that have already achieved scale while making the industry less attractive to new competitors.

Use of Subject Matter Experts and Advisers

- 1.70** When reviewing a business plan for a pre-revenue portfolio company, it may be difficult to evaluate the probability that the product will ultimately succeed. Using a scientific or technology expert to validate the feasibility of the proposed product's functionality or probability of success can provide investors with greater confidence in some circumstances. For example, in a biotechnology portfolio company, although a scientist will not necessarily know whether a particular compound will prove to be effective in a clinical trial at treating a particular disease, the scientist may be able to express a view on the likelihood of success based on what is known about reactions to similar compounds. This information could be helpful in forming a view of what the portfolio company might be worth in the future. Therefore, when investing in early stage portfolio companies with a high degree of technical complexity, many investors will engage scientific or technology experts to help them evaluate these kinds of issues. Nevertheless, there will always be an element of uncertainty, and significant judgment will be required to determine the impact of the risk of failure versus potential reward from a successful launch of a product or service.

Executive Management and Their Track Records

- 1.71** Talented founders and entrepreneurs, particularly those with a history of successfully managing previous enterprises, can sometimes increase a business' chance of success enough to make a significant difference in the initial valuation and improve the chances of getting initial and subsequent funding. Exceptional entrepreneurs, technologists or scientists also may attract the caliber of a management team that also warrants a high valuation. Nevertheless, previous success should not be viewed in isolation. In some cases, first time entrepreneurs have spectacular success that is followed by a series of failures, while in other cases, entrepreneurs go through a series of setbacks before they succeed.

Macro Investment Environment for the Particular Early Stage Portfolio Company

- 1.72** In addition to evaluating the subjective factors described previously, investors in early stage portfolio companies will typically also perform an overall assessment of the potential IPO or strategic exit market for that particular company. The potential exit market for early stage portfolio companies differs by sector and strategy. For example, consider an early stage, pre-revenue company developing a drug that may have a very large potential market. Even though the potential market is large, the high failure rate of companies developing and commercializing new drugs may have a significant negative effect on this company's value. Therefore, the IPO or strategic investors may place a judgmental cap on this company's value at a level significantly below the ultimate value that may be realized.

Regulatory Environment

- 1.73** As described in the "Typical Fund Structures and Role of Fund Manager" section earlier in this chapter, funds are generally established as limited partnerships through a Limited

Partnership Agreement (LPA). The LPA defines the responsibilities of the general partner (GP), limited partners (LPs), and management company along with outlining investment strategy, fees, allocation of gains, and so on. The LPA may also describe mechanisms for addressing potential conflicts of interest (for example, when a management company or investment professionals are responsible for investing or divesting from two or more funds). Regardless of whether GPs, management companies, and investment professionals are required to register as investment advisers, as described subsequently, they generally accept the fiduciary duty to prevent conflicts of interests, insider trading, self-dealing, and so on. Investors and LPs have become increasingly sensitive to interpretations of LPAs with respect to fees, conflicts, and appropriate governance, irrespective of whether the manager is a registered investment adviser.

U.S. Securities and Other Regulation

- 1.74** Historically, advisers to private equity and venture capital funds were generally exempt from registration with the U.S. Securities and Exchange Commission (SEC) because the funds typically were formed with limited numbers of investors, including only sophisticated investors. However, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) enacted in 2010, altered the requirements as to which investment advisers are required to register with the SEC as an Investment Adviser under the Investment Advisers Act of 1940 (Advisers Act). Exemptions for registration under the Advisers Act are available to investment advisers that advise solely venture capital funds, private fund advisers with less than \$150 million in assets under management, and foreign private advisers. It is common for advisers with the available exemption to choose not to register with the SEC. Even though exempt advisers are not required to register with the SEC, they are subject to informational reporting requirements, general securities laws and fiduciary obligations to their clients that the SEC regulates.
- 1.75** Privately offered funds themselves are not generally registered under the Investment Company Act of 1940 (Investment Company Act), but are subject to oversight and inspection by the SEC because the fund manager is subject to inspection as a Registered Investment Adviser (RIA). Certain investment companies which hold investments in private equity, private debt and venture capital are registered under the Investment Company Act. Therefore, the SEC staff's views with respect to valuation have an influence on the industry.
- 1.76** The Dodd-Frank legislation also mandated that the Public Company Accounting Oversight Board (PCAOB¹⁰) expand its regulatory authority over auditors of broker-dealers. While the PCAOB does not directly inspect the auditors of privately-offered private equity funds, the PCAOB does inspect the audits of public entities, including investment companies, that hold investments in private companies. Thus, the PCAOB's

¹⁰ The PCAOB is a nonprofit corporation established by Congress to oversee the audits of public companies in order to protect the interests of investors and further the public interest in the preparation of informative, accurate and independent audit reports. The PCAOB also oversees the audits of broker-dealers, including compliance reports filed pursuant to federal securities laws, to promote investor protection.

views with respect to the audits of valuation estimates may influence certain entities that report such investments at fair value.

Business Development Companies and Small Business Investment Companies

Business Development Companies

- 1.77** A Business Development Company ("BDC") is a form of publicly registered company in the United States that invests in small and mid-sized businesses. This form of company was created by Congress in 1980 using amendments to the Investment Company Act. Publicly filing firms may elect regulation as BDCs if they meet certain requirements of the Investment Company Act. The election to become a BDC means the BDC must subject itself to all relevant provisions of the Investment Company Act, which, among other things, (a) limits how much debt a BDC may incur, (b) prohibits certain affiliated transactions, (c) requires a code of ethics and a comprehensive compliance program, and (d) requires regulation by the SEC. BDCs are also required to file quarterly reports, annual reports, and proxy statements with the SEC. Some BDCs are publicly traded, while others are not.

Small Business Investment Companies

- 1.78** In 1958, Congress created the Small Business Investment Company (SBIC) program to facilitate the flow of long-term capital to America's small businesses. The structure of the program is unique in that SBICs are privately-owned and managed investment funds, licensed and regulated by the Small Business Administration (SBA), that use their own capital plus funds borrowed with an SBA guarantee to make equity and debt investments in qualifying small businesses.
- 1.79** SBICs are regulated by the SBA and, accordingly, are required to comply with Part 107 of the SBA rules and regulations. Part 107 deals with specific aspects of SBA regulation, such as the relevant audit procedures and reporting requirements of the SBA for SBICs; the system of account classification; and guidance on proper techniques and standards to be followed in valuing portfolios. SBA guidelines on valuing portfolio investments may not be fully consistent with FASB ASC 820.
- 1.80** The format for reporting the results of SBIC operations varies from the format used by other types of investment companies because the financial statements for SBICs are presented based on regulations promulgated by the SBA, which is a comprehensive basis of accounting other than GAAP. In addition to financial statements presented on this other comprehensive basis of accounting, certain SBICs also have financial statements prepared in accordance with GAAP.

Chapter 2

Fair Value and Related Concepts

Definitions of Value

- 2.01** Pursuant to FASB ASC 946-320-35-1, investment companies are required to measure and report their investments in debt and equity instruments subsequently at *fair value*. FASB ASC 820, *Fair Value Measurement*, establishes a framework for measuring fair value and requires disclosures about fair value measurements. FASB ASC 820 is a broad principles-based standard that applies to all entities, transactions, and instruments that require or permit fair value measurements.
- 2.02** Fair value is defined in FASB ASC 820 as “[t]he price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” International Financial Reporting Standard (IFRS) 13, *Fair Value Measurement*, uses an identical definition of fair value. The definition of fair value used in FASB ASC 820 and IFRS 13 have certain similarities to the definitions of *fair market value* in the *International Glossary of Business Valuation Terms* (IGBVT)¹ and IRS Revenue Ruling 59-60, but are used for different purposes.
- 2.03** The IGBVT defines *fair market value* as
- the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm’s length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.
- 2.04** IRS Revenue Ruling 59-60 defines *fair market value* as “the price at which property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.”
- 2.05** When deliberating FASB Statement No. 157, *Fair Value Measurements*, (the precursor to FASB ASC 820) FASB agreed that the measurement objective encompassed in the definition of fair value used for financial reporting purposes is generally consistent with similar definitions of fair market value used for other valuation purposes. However, FASB observed that the definition of fair market value relates principally to assets (property). Further, the fair market value definition has a significant body of interpretive

¹ The *International Glossary of Business Valuation Terms* (IGBVT) has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of AICPA’s Statement on Standards for Valuation Services (SSVS) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, Professional Standards, VS sec. 100).

case law developed in the context of tax regulation. Because such interpretive case law, in the context of financial reporting, may not be relevant, FASB chose not to adopt the definition of fair market value and its interpretive case law for financial reporting purposes.²

- 2.06** This guide focuses on determining fair value of investments made by investment companies (that is, entities that report their investments in accordance with FASB ASC 946, *Financial Services—Investment Companies*, using the fair value principles in FASB ASC 820). Determinations of value for other purposes may have similar underpinnings as determinations of value for FASB ASC 946 and FASB ASC 820 purposes; however, the unit of account and other considerations specific to the measurement may be different and, therefore, the valuations performed for these different purposes may not necessarily result in the same value.

Why Do Financial Reporting Standards Require Fair Value?

- 2.07** Before delving into a discussion of the application of fair value principles for investment companies, a critical question to consider is why investment companies report at fair value. Many investment company managers maintain that alternative investments (generally investments made by hedge funds, private equity funds, certain real estate funds, venture capital funds, commodity funds, offshore fund vehicles and funds of funds, as well as some collective trust and other funds) are made with a long-term view and, therefore, all that matters is the ultimate return. While certain alternative investments are generally deemed long-term assets and ultimate returns are critically important, periodic assessment and reporting of fair value is more useful to the investors in private equity and venture capital funds. Industry participants have cited some of the following benefits of fair value reporting:

- Fair value is the best basis for fund investors (such as limited partners [LPs]) to make “apples to apples” asset allocation decisions. That is, using fair value reporting allows investors to allocate their portfolio across different classes of assets, including fixed income, public equities, private equity, real estate, other alternative investments, etc., based on an understanding of what each component of their portfolio is currently worth.
- Fair value is an important data point in making manager selection decisions, monitoring interim investment performance, and overall performance of an investor’s portfolio on a reasonably comparable basis.
- Some investment company managers use fair value information as a basis for incentive compensation decisions, paying their personnel based on the interim performance of their portfolios, including unrealized gains.

² The explanation in this paragraph is based on paragraph C50 of FASB Statement No. 157, which was not codified in FASB ASC. However, the task force believes that paragraph C50 provides helpful guidance and, therefore, decided to incorporate it in this guide.

- Fund investors rely on fair value information to help with exercising their fiduciary duty.
- A historical reporting basis, such as cost, does not provide meaningful comparability across investments.
- Fair value is the basis that fund investors use to report periodic (quarterly/yearly) performance to their ultimate investors, beneficiaries, boards, etc.
- Standard setters of U.S. generally accepted accounting principles have found, based on their interaction with fund investors, that for many of the preceding and other reasons having these investments measured at fair value provides a more meaningful presentation than other potential presentation alternatives, including consolidation, equity method reporting or reporting at cost less impairment. Consolidated, equity or cost basis information of the underlying portfolio companies would not be as useful or meaningful to the users of the fund financial statements.

Fair Value Concepts – FASB ASC 820

Fair Value and Exit Price

- 2.08** As indicated in FASB ASC 820-10-35-9A, “[f]air value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (that is, an exit price) regardless of whether that price is directly observable or estimated using another valuation technique.”
- 2.09** FASB ASC 820-10-05-1B states that
- Fair value is a market-based measurement, not an entity-specific measurement. For some assets and liabilities, observable market transactions or market information might be available. For other assets and liabilities, observable market transactions and market information might not be available. However, the objective of a fair value measurement in both cases is the same—to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (that is, an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability).
- 2.10** FASB ASC 820-10-35-41 indicates that “[a] quoted price in an active market provides the most reliable evidence of fair value and shall be used without adjustment to measure fair value whenever available, except as specified in paragraph 820-10-35-41C.”

Entry or Transaction Price

- 2.11** FASB ASC 820-10-30-2 provides that “[w]hen an asset is acquired or a liability is assumed in an exchange transaction for that asset or liability, the transaction price is the price paid to acquire the asset or received to assume the liability (an entry price). In contrast, the fair value of the asset or liability is the price that would be received to sell the asset or paid to transfer the liability (an exit price).” However, FASB ASC 820-10-30-3 states that “[i]n many cases, the transaction price will equal the fair value (for example, that might be the case when on the transaction date the transaction to buy an asset takes place in the market in which the asset would be sold).” FASB ASC 820-10-30-3A provides further discussion about factors to consider when determining whether fair value at initial recognition equals the transaction price.

Transaction Costs

- 2.12** As explained in FASB ASC 820-10-35-9B, the price in the principal (or most advantageous) market used to measure the fair value of the asset or liability should not be adjusted for transaction costs, which should be accounted for in accordance with the provisions of other accounting guidance. The FASB ASC Master Glossary defines *transaction costs* as

The costs to sell an asset or transfer a liability in the principal (or most advantageous) market for the asset or liability that are directly attributable to the disposal of the asset or the transfer of the liability and meet both of the following criteria:

- a. They result directly from and are essential to that transaction.
- b. They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made (similar to costs to sell, as defined in paragraph 360-10-35-38).

Chapter 12, “Factors to Consider At or Near a Transaction Date,” provides a further discussion of transaction costs.

Unit of Account

- 2.13** The unit of account refers to the specific item (of asset or liability) for which fair value is being measured. The FASB ASC Master Glossary defines unit of account as “[t]he level at which an asset or a liability is aggregated or disaggregated in a Topic for recognition purposes.” Although the unit of account is generally determined in accordance with other FASB ASC Topics, FASB ASC 820 addresses the unit of account for investments with Level 1 inputs. FASB ASC 820-10-35-44 states that “[i]f a reporting entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be

measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the reporting entity.” By dictating that fair value be determined based on price times quantity, FASB ASC 820 effectively prescribes the unit of account as the individual instrument in these situations. However, in other situations, FASB ASC 820 does not prescribe the unit of account. See chapter 4, “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments,” for further discussion with respect to understanding and determining the unit of account.

Measurement Date

- 2.14** According to FASB ASC 820-10-05-1B, the objective of a fair value measurement is “to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions.” Therefore, a fair value measurement considers market conditions as they exist at the measurement date (not at some point in the future), information which is known or knowable at the measurement date, and is intended to represent the current value of the asset or liability, not the potential value of the asset or liability at some future date. Furthermore, as indicated in FASB ASC 820-10-35-54H, “[a] reporting entity’s intention to hold the asset or to settle or otherwise fulfill the liability is not relevant when measuring fair value because fair value is a market-based measurement, not an entity-specific measurement.”

Principal (or Most Advantageous) Market

- 2.15** FASB ASC 820-10-35-5 states that

A fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either:

- a. In the principal market for the asset or liability
- b. In the absence of a principal market, in the most advantageous market for the asset or liability.

As defined in the FASB ASC Master Glossary, the *principal market* is “[t]he market with the greatest volume and level of activity for the asset or liability.” Also, as defined in the FASB ASC Master Glossary, the *most advantageous market* is “[t]he market that maximizes the amount that would be received to sell the asset or minimizes the amount that would be paid to transfer the liability, after taking into account transaction costs and transportation costs.”

- 2.16** FASB ASC 820-10-35-6A states that

The reporting entity must have access to the principal (or most advantageous) market at the measurement date. Because different entities (and businesses within those entities) with different activities may have access to different markets, the

principal (or most advantageous) market for the same asset or liability might be different for different entities (and businesses within those entities). Therefore, the principal (or most advantageous) market (and thus, market participants) shall be considered from the perspective of the reporting entity, thereby allowing for differences between and among entities with different activities.

In other words, FASB ASC 820 makes it clear that the principal market for an asset or liability should be determined based on the market with the greatest volume and level of activity that the reporting entity can access. FASB ASC 820-10-35-5A states that “[i]n the absence of evidence to the contrary, the market in which the reporting entity normally would enter into a transaction to sell the asset or to transfer the liability is presumed to be the principal market or, in the absence of a principal market, the most advantageous market.”

- 2.17** In evaluating the principal market for portfolio company investments at interim measurement dates when it would not be optimal for the investment company to be actively marketing the investment, the principal market is often a hypothetical sponsor-to-sponsor market, that is, the market comprising sales to other investment companies. At dates when it would be optimal for the investment company to seek an exit for the investment, the principal market would be assessed considering the markets in which the investment company is marketing the investment. The principal market would be reevaluated at every measurement date, considering the facts and circumstances as of the measurement date. Note that even at interim measurement dates, it would be important to consider the ultimate exit strategy for the investment, as market participants in the sponsor-to-sponsor market would consider their expected exit strategy when evaluating the position. Please see chapter 3, “Market Participant Assumptions,” for further discussion.
- 2.18** According to FASB ASC 820-10-35-6A, the principal (or most advantageous) market is a market that the fund can access. Some common characteristics that may prevent an entity from accessing a particular market include, but are not limited to, the following:
- a reporting entity’s need to transform the asset or liability in some way to match the asset or liability in the observable market;
 - restrictions that may be unique to the reporting entity’s asset or liability that are not embedded in the asset or liability in the observable market; or
 - marketability or liquidity differences between the asset or liability in the observable market relative to the reporting entity’s asset or liability.
- 2.19** FASB ASC 820-10-35-6C provides that “[e]ven when there is no observable market to provide pricing information about the sale of an asset or the transfer of a liability at the measurement date, a fair value measurement shall assume that a transaction takes place at that date, considered from the perspective of a market participant that holds the asset or owes the liability.”

Active Market

- 2.20** As stated in FASB ASC 820-10-35-41, “[a] quoted price in an active market provides the most reliable evidence of fair value and shall be used without adjustment to measure fair value whenever available, except as specified in paragraph 820-10-35-41C.” An *active market* is defined by the FASB ASC Master Glossary as “[a] market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.” Please see paragraphs 13.02–.24 for further discussion on valuing investments in which the enterprise has traded securities. Because generally there is no active market for most portfolio company investments of venture capital and private equity firms, determining the fair value of such investments will depend on specific facts and circumstances and will require significant judgment.

The Fair Value Hierarchy

- 2.21** As indicated in FASB ASC 820-10-35-37, “[t]o increase consistency and comparability in fair value measurements and related disclosures, [FASB ASC 820] establishes a fair value hierarchy that categorizes into three levels ... the inputs to valuation techniques used to measure fair value. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1 inputs) and the lowest priority to unobservable inputs (Level 3 inputs).” FASB ASC 820-10-05-1C requires that valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs. As such, even in situations in which the market for a particular asset is deemed not to be active, relevant prices or inputs from this market would still need to be considered in the determination of fair value. It would not be appropriate to default solely to a model’s value based on unobservable inputs (a Level 3 measurement), when observable inputs other than quoted prices (Level 2 information) is available. However, being able to transact in a particular market (as earlier discussed in paragraphs 2.17–.18) is a key consideration in identifying the appropriate inputs used to estimate fair value.

- 2.22** The FASB ASC Master Glossary defines *inputs* as

The assumptions that market participants would use when pricing the asset or liability, including assumptions about risk, such as the following:

- a. The risk inherent in a particular valuation technique used to measure fair value (such as a pricing model)
- b. The risk inherent in the inputs to the valuation technique.

Inputs may be observable or unobservable.

2.23 The FASB ASC Master Glossary defines observable and unobservable inputs as follows:

Observable Inputs. Inputs that are developed using market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that market participants would use when pricing the asset or liability.

Unobservable Inputs. Inputs for which market data are not available and that are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability.

Market Participants

2.24 The FASB ASC Master Glossary defines market participants as

Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

- a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms
- b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary
- c. They are able to enter into a transaction for the asset or liability
- d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

2.25 The underlying assumptions used in a fair value measurement are driven by the characteristics of the market participants that would transact for the item being measured and the factors those market participants would consider when pricing the asset or liability. Importantly, FASB ASC 820-10-35-9 indicates that “[a] reporting entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest.” See chapter 3, “Market Participant Assumptions,” for further discussion.

2.26 For venture capital and private equity investments, the purpose of the valuation is to value the investment, not the portfolio company itself. Therefore, it is appropriate to consider the assumptions that market participants investing in the interest would make, rather than considering the assumptions that market participants acquiring the entire portfolio company would make. Please see Q&A 14.33 and 14.60–.66, as well as paragraphs 3.17, 3.22, 4.16, 5.42, 5.51, 7.02–.09, 9.01–.17, and 10.28–.30, for a discussion of these concepts.

Fair Value Concepts–SEC Matters

- 2.27** Investment companies that invest in private equity, private debt and venture capital investments include investment companies registered under the Investment Company Act of 1940 (the 1940 Act), as well as those that are not registered. Often, the investment advisers to both registered and unregistered investment companies are regulated by the SEC under the Investment Advisers Act of 1940, the 2012 Dodd-Frank Act and other applicable securities laws and regulations. In addition, most private funds offered in the U.S. use audited U.S. GAAP financial statements to satisfy rule 206(4)-2 under the Investment Advisers Act of 1940, which is commonly referred to as the *Custody Rule*. Thus, SEC views on valuation of investments directed to registered investment companies and other registrants are relevant to both registered and unregistered funds.
- 2.28** For registered investment companies, the 1940 Act sets forth the legal framework for valuation.
- 2.29** Registered investment companies are governed by the definition of *value* found in Section 2(a)(41) of the 1940 Act and further interpreted in section 404.03 of the SEC’s *Codification of Financial Reporting Policies*. With respect to securities for which market quotations are readily available, Section 2(a)(41) defines value as the market value of such securities. With respect to other securities and assets, Section 2(a)(41) defines value as the fair value determined in good faith by the board of directors.

Securities Valued “in Good Faith”

- 2.30** The “good faith” requirement is addressed in SEC Accounting Series Release (ASR) No. 118,³ and in the December 1999⁴ and April 2001⁵ letters of the SEC Division of Investment Management to the ICI regarding valuation issues. ASR No. 118 recognizes that no single method exists for estimating fair value in good faith because fair value depends on the facts and circumstances of each individual case. The April 2001 letter indicates that “the good faith requirement is a flexible concept that can accommodate many different considerations, and that the specific actions that a board must take will vary, depending on the nature of the particular fund, the context in which the board must fair value price, and the pricing procedures adopted by the board.”

What is Meant to be Acting “in Good Faith”

- 2.31** As stated in its April 2001 letter, the SEC staff believes that “a board acts in good faith when it “continuously review[s] the appropriateness of the method used” in determining the fair value of the fund’s portfolio securities. Compliance with the good faith standard generally reflects the directors’ faithfulness to the duties of care and loyalty that they owe to the fund.”

³ SEC Accounting Series Release No. 118 can be found at <https://www.sec.gov/rules/interp/1970/ic-6295.pdf>.

⁴ December 1999 letter can be found at <https://www.sec.gov/divisions/investment/guidance/tyl120899.htm>.

⁵ April 2001 letter can be found at <https://www.sec.gov/divisions/investment/guidance/tyl043001.htm>.

- 2.32** There have been enforcement actions against fund directors who act with “reckless disregard for whether [the fund’s] fair value determination reflects the amount that the fund might reasonably expect to receive for the security upon its current sale.” Nevertheless, in its December 1999 letter, the SEC staff acknowledges that “different fund boards, or funds in the same complex with different boards, when fair value pricing identical securities, could reasonably arrive at prices that were not the same, consistent with the boards’ obligation to fair value price in good faith.”
- 2.33** Also, as indicated in its April 2001 letter, the SEC staff believes that “a board acts in good faith when its fair value determination is the result of a sincere and honest assessment of the amount that the fund might reasonably expect to receive for a security upon its current sale, based upon all of the appropriate factors that are available to the fund.”

Other Relevant Non-Authoritative Guidance

AICPA Accounting and Valuation Guide: *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*

- 2.34** The AICPA published an Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, to provide guidance to privately held enterprises at all stages of development regarding the valuation of their equity securities issued as compensation. That guide is not intended to focus on estimating the value of an enterprise as a whole or to focus on determining value from the perspective of an investment company. While that guide may have some use in valuations of portfolio company investments of investment companies, it was not written intending to address those valuations. This guide, *Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and Other Investment Companies*, expressly provides guidance on such valuations.

AICPA Technical Practice Aids

- 2.35** TIS Sections 2220.18-28 are intended to assist reporting entities when implementing FASB ASC 820 with respect to estimating the fair value of an interest in a fund that reports net asset value. In certain circumstances, a reporting entity may use net asset value as a practical expedient when determining fair value for a fund interest.
- 2.36** TIS Section 6910.34, *Application of the Notion of Value Maximization for Measuring Fair Value of Debt and Controlling Equity Positions*, assists reporting entities in determining the fair value of debt when combined with a controlling equity position.
- 2.37** TIS Section 6910.35, *Assessing Control When Measuring Fair Value*, assists reporting entities in assessing the impact on value of control when investing across funds.

Other Industry Guidance

- 2.38** The International Private Equity and Venture Capital Valuation (IPEV) Board was established in 2005 to provide high quality, uniform, globally acceptable, best practice guidance for private equity and venture capital valuation purposes. The IPEV Valuation Guidelines, first issued in 2005, are updated periodically to provide best practice valuation guidance for the private equity and venture capital industry. The Guidelines are used by a number of fund managers around the globe and are required by numerous fund formation or limited partner agreements, especially outside the United States.
- 2.39** The IPEV Board monitors market practices in the use of the IPEV Guidelines. It also proposes amendments to the Guidelines following any relevant changes to accounting standards and market practices and formally reviews the Guidelines every three years.
- 2.40** The IPEV Valuation Guidelines set out recommendations, intended to represent current best practice, on the valuation of private equity investments. The Guidelines are available at www.privateequityvaluation.com.
- 2.41** The Private Equity Industry Guidelines Group (PEIGG), a self-appointed group of private equity practitioners, fund managers, LPs and others, issued U.S. Private Equity Valuation Guidelines in 2003 which were subsequently updated in 2007. The Guidelines were issued after extensive input and review soliciting feedback and input from a number of industry groups. PEIGG has not updated its guidelines in recent years as its activities have effectively been subsumed by IPEV.

Chapter 3

Market Participant Assumptions

Introduction

3.01 FASB ASC 820-10-35-9 states:

A reporting entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest. In developing those assumptions, a reporting entity need not identify specific market participants. Rather, the reporting entity shall identify characteristics that distinguish market participants generally, considering factors specific to all of the following:

- a. The asset or liability
- b. The principal (or most advantageous) market for the asset or liability
- c. Market participants with whom the reporting entity would enter into a transaction in that market.

In the context of this Guide, the asset to be measured is the investment in a portfolio company, and the relevant market participants are other investors who might in the ordinary course of business seek such an investment, given the characteristics of the portfolio company and of the specific position being valued.

3.02 Market participants are defined in FASB ASC Master Glossary as

Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

- a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms;
- b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary;
- c. They are able to enter into a transaction for the asset or liability
- d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

3.03 The market participants that are relevant for portfolio company investments and the way that those market participants would evaluate portfolio company investments together establish a

framework for fair value measurement. In particular, the framework and examples below address the following key questions:

- What characteristics do market participants consider when evaluating portfolio company investments? How do those characteristics vary depending on the nature of the investment and the various possible investment strategies that market participants in this industry may pursue?
- How do market participants establish their required rate of return for the interest in the portfolio company, considering the risks and illiquidity of the investment?
- What factors should be considered in evaluating the relevance of observable transactions in developing market participant assumptions?
- How do market participants consider the expected holding period and the possible ultimate exit strategies for the investment?
- What information do market participants require when evaluating an investment? How do market participants make decisions when less than perfect information is available?

Market Participant Considerations

3.04 Market participants and the information that they would evaluate will likely be different depending on the characteristics of 1) the portfolio company, 2) the specific position being valued, and 3) the industry and overall market conditions. Note that market participants would necessarily consider information specific to the company, including information about the company's plans under current ownership, as modified by the degree of influence associated with the interest being acquired, when valuing an interest in a given company. For example:

- Characteristics of the portfolio company might include the company's industry, stage of development, the depth and demand profile of its product pipeline or availability of new market opportunities, financial performance and expectations, the quality, depth and track record of the company's management team, the company's intellectual property, the extent of vertical integration or dependencies, and the company's strategic market positioning or pricing profile, in addition to other unique attributes of the company.

- Characteristics of the specific position being valued might include economic rights such as downside protection,¹ interest or dividends² and upside participation,³ as well as non-economic rights such as information rights and other features or protections.⁴
- Characteristics of the industry and overall market conditions might include expected growth and profitability in the industry, level of competition (quality of competitors and degree of consolidation or fragmentation), the degree of market optimism or pessimism, and the required rates of return and market multiples for similar investments.

The combination of these characteristics, considered in light of relevant macroeconomic trends and expectations about the future, may fit the particular investment strategies and objectives of certain types of investors, which will likely help to define the most relevant market participants for the investment.

3.05 The investors' strategies and objectives will influence the information that is deemed most relevant. Thus, in evaluating the characteristics of market participants for a particular investment and the information that would be most relevant to those market participants, it is important to understand both the characteristics of the portfolio company and position being valued and how those characteristics align with the strategies and objectives of various types of investors. While risk and growth may be fundamental considerations for any investment, the market participants' investment strategies and objectives may dictate that more or less consideration be given to specific factors, such as products and markets, financial metrics, execution, and the quality of leadership and management team. For example:

¹ Downside protection includes rights that may provide a preferential return to certain instruments when the value of the company declines – for example, the debt principal and liquidation preferences for preferred investments give seniority to these instruments over the junior classes of equity. In addition, some equity investments have down-round protection features that reduce the conversion per share and typically also increase the number of shares (maintaining the same aggregate strike price) if the portfolio company raises additional funds at a lower price. This type of anti-dilution protection also may be implemented through other structures. Put provisions may also provide investors with protection on the downside, allowing the investor to demand early repayment in certain circumstances.

² Interest or dividends may include cash or pay-in-kind ("PIK") debt interest, or both, and cash or PIK preferred dividends or both. These payments typically provide an expected rate of return on the investment corresponding to the timing and risk of repayment.

³ Upside participation features include conversion rights, participation rights, common equity, warrants or options, which provide the ability for the investors to participate in the growth in value of the company beyond the invested capital and any required interest or dividends. Put provisions may also provide investors with additional returns on the upside, for example, if the investor can demand early repayment at a premium upon a change in control.

⁴ Non-economic rights may include features such as debt (positive and negative) covenants, contractual rights to board seats, rights of first refusal, drag-along rights, tag-along rights, and redemption features or put rights, that provide protections for the investors possessing those rights and allow them to control or manage the timing of liquidity events and to facilitate an exit.

- The market participants who might be relevant for a preferred equity investment in an early-stage biotechnology company may be venture capital firms whose investment strategy is to accept the high degree of risk associated with early-stage life sciences companies with the objective of generating higher rates of return. Such investors would typically expect to make subsequent investments to fund the company through certain phases of research and development and regulatory approval, with the ultimate goal of an exit through a sale to a strategic investor or an IPO as a path to liquidity. As a result, these market participants will likely place more emphasis on considerations such as the quality of the management team and ability to navigate and efficiently execute on the R&D and regulatory process, future capital requirements, the potential market share for the product(s) once developed, competing products being concurrently developed and the exit market(s) for the company or its intellectual property, or both.
- In contrast, the market participants who might be relevant for an equity investment in a mature manufacturing company in a fragmented market may include several different potential types of market participants, such as leveraged buyout firms or strategic investors.
 - A typical investment strategy for a leveraged buyout firm is to acquire platform companies via a cash investment funded with a substantial amount of third-party debt, then subsequently acquire additional companies in similar or complimentary markets, with a primary objective of generating returns through financial leverage, improvements in operating effectiveness, market positioning, executing on accretive add-on acquisitions and the reduction of the acquisition debt.

These investors' exit strategy may include the possibility of a sale to a strategic investor, an IPO or sale to another private equity investor. Based on the investment strategy and objectives, these market participants might place more emphasis on the company's financial metrics, market leadership, competitive advantages, customer relationships, opportunities to improve operational effectiveness, and acquisition opportunities, among other factors. In the context of a leveraged buyout firm planning an acquisition strategy, the existence or availability of a strong management team would be key to executing their strategy. It would also likely need to, either initially or over time, be able to access the debt capital markets in order to fund its acquisition strategy.

- Alternatively, the same manufacturing company in a fragmented market may be a good target as an acquisition candidate by another strategic investor (a company in the same or related industry). In this case, this type of market participant may be less focused on the strength of the company's existing management team or its overhead structure, since the target company's operations could be folded into the buyer's operations. In addition, a strategic buyer may be less focused on the ability to obtain debt financing on the basis of the target company's standalone operations, since the buyer may have adequate access to debt capital on the basis of its own activities. Primary focus for this type of market participant may include products and services offered, customer relationships, geographical penetration, patents and other IP rights.

See chapter 1, "Overview of the Private Equity and Venture Capital Industry and Its Investment Strategies," for a more detailed discussion of the different types of investors and corresponding investment strategies and objectives, as well as paragraph 3.23 for further discussion of the types of information a market participant may require.

3.06 A key aspect inherent in estimating fair value is the presumption of “informed judgment.” As stated in FASB ASC 820-10-05-1C, “Because fair value is a market-based measurement, it is measured using the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. As a result, a reporting entity’s intention to hold an asset or to settle or otherwise fulfill a liability is not relevant when measuring fair value.” Therefore, the fair value of an investment is measured based on an assumed hypothetical transaction in the investment on the measurement date, irrespective of whether any such transaction is planned. Depending on the investment being valued and the stage of development, assessing the market participant assumptions for a current transaction may require significant judgment. For example:

- Suppose the investment consists of 30% of the Series B preferred stock in a company. It may be difficult to find observable transactions in Series B shares one year after the Series B investment was made, as these shares are typically held by investors through a liquidity event for the company as a whole (e.g. sale or IPO). Thus, understanding the nature of potential market participants and the information that they would evaluate might be challenging.
- Instead, it may be possible to measure fair value in a hypothetical transaction, using the market participants for the original Series B investment as a proxy, and considering the price at which such market participants would transact on the measurement date, given the changes that have occurred for the company and the overall market environment since the original transaction date. In addition, the valuation analysis would consider whether any additional market participants might be interested in the Series B shares given the changes that have occurred since the previous measurement date. See chapters 5-9 for a discussion of the specific valuation techniques that might be applied in making this assessment, and chapter 10, “Calibration,” for further discussion of the process of calibrating to a recent transaction to determine the market participant assumptions to be used in each technique.

Required Rate of Return

3.07 In many cases, especially when considering measurement dates prior to an IPO or sale of the portfolio company as a whole to a strategic investor, market participants in an assumed transaction for the investment may also include other investment companies. These market participants often evaluate potential investments considering a target or required rate of return given the risk of the investment: that is, what rate of return on their money will they achieve if they invest in a given position at a particular price based upon a given set of performance criteria and a given market outlook? Thus, when making valuation estimates where market participants for a given position would be other fund managers, it is helpful to view the valuation from the perspective of the market participants’ required rate of return on a hypothetical investment in the position being valued.

3.08 Private equity and venture capital fund managers typically target higher returns than public markets in order to attract capital from limited partners, who accept limited liquidity and pay fees to the fund manager in hopes of outperforming the public market. In addition, these investments provide high returns due to the risk profile. For example, many venture capital investments are risky because of the nature of early-stage companies and the relatively high rate of failure or risk that future funding is unattainable before the company can reach breakeven. The greater the expected probability of loss for the investment (the probability that the investment might return

less than cost) or, in other words, the riskier the investment, the more the market participant's target rate of return for each individual investment needs to exceed the expected average return for all similar investments. Therefore, when valuing interests where the market participants would include other venture capital or private equity fund manager(s), it is important to consider the rate of return these market participants may derive from the investment and how that return would compare to the target rate of return for individual investments in their sector or fund category.

- 3.09** In addition to assessing potential investment opportunities from the perspective of the potential rate of return that the investment may achieve, fund managers will also evaluate potential investments from the perspective of the potential multiple of invested capital (MOIC) that would likely be generated. In many cases, a high rate of return on an investment will be consistent with a relatively high MOIC. However, if the time horizon is short, a high rate of return may still result in a fairly low MOIC – for example, with a one year time horizon, if a \$50 million investment generates a 20% rate of return, the fund would only realize a \$10 million profit, representing a 1.2 MOIC. Many fund managers are evaluated by prospective fund investors on the basis not just of the net internal rate of return (IRR) that they produce, but also on the MOIC they provide back to their limited partners. As such, most fund managers will look to obtain a multiple of their invested capital as their return from their portfolio. For example, a 2X multiple would mean that \$50 million investment would be expected to produce at least \$100 million in proceeds, or a profit of at least \$50 million. Clearly, these expectations would need to be higher in the context of an investment with a higher risk profile.
- 3.10** At the initial transaction, private equity must pay a competitive price for the investment. For example, when acquiring a public company, the transaction price will typically be higher than the aggregate invested capital (market capitalization plus debt) of the public company prior to the transaction. Thus, to generate expected returns, the fund needs to capitalize on the advantages that private capital affords. For example, the acquisition price paid in taking a company private may reflect the improvements to the business that the enterprise is expected to make under the new ownership, including improvements to the cash flows (through enhanced revenues or cost savings) or improvements in the total cost of capital (through higher leverage). It may be, for example, that certain long term enhancements to the business can be made more easily during the time after a company is taken private, outside of the pressure that public companies have to maintain reported profitability levels from quarter to quarter. In addition, the degree of leverage used in a leveraged buyout strategy is not typically tolerated in the public markets. While the existence of greater leverage can increase risk to the equity if the value of the enterprise does not grow, it provides greater return potential to the equity as the enterprise value does increase. These factors generally afford private equity funds the opportunity to invest in potentially slower growth or troubled companies with the potential to still exceed public market returns.
- 3.11** Like private equity funds, venture capital funds must pay a competitive price for their investments. Venture capital firms typically create a portfolio of early stage, private companies when their products or business models are unproven and significant additional capital may be required to bring their strategies to fruition. Public markets typically are not willing to fund early-stage companies before the companies have demonstrated significant product progress and market acceptance. The required rates of return for market participants investing in venture capital-backed enterprises are commensurate with these higher risks. In addition, while a high failure rate with early stage enterprises is well documented, venture capital investors do not invest in businesses that they believe will be failures, and they typically evaluate their target

returns considering only the success scenarios while understanding that it is not likely that all investments in a portfolio will return their investment or provide for a return on investment. In fact, it is not unusual for an early stage venture capital fund to lose most of its investment in over half of its investments. It usually must rely on a relatively small percentage of its investments to be very successful and generate a satisfactory return for the overall fund. Of course, there is no guarantee that a fund will have these successful investments in its portfolio.

- 3.12** The required rate of return for market participants investing in private equity and venture capital-backed enterprises or the corresponding multiples that market participants investing in an interest in a portfolio company are willing to pay are inputs into many of the models commonly used to value portfolio company investments. Because of the differences between the strategies employed by private equity and venture capital funds and the risk profile associated with these investments, when compared with the narrower range of observable data from the public markets, it can be challenging to assess the unobservable inputs required in these models. One approach to address this issue is to estimate the required rate of return or the market multiples for the investment as of the initial recognition date by calibrating to the transaction price, adjusting for factors that have changed in the interim. See chapter 10, “Calibration,” for further discussion.

Relevance of observable transactions in developing market participant assumptions

- 3.13** For many private equity and venture capital investments, the only observable transactions will be the initial investment and possibly subsequent investments (e.g. if additional capital is required). In other cases, there may be public market or secondary market transactions in the securities of the portfolio company, which may provide additional insight into the value of these securities and the corresponding value of other interests in the enterprise (e.g., other different classes of stock in the same company). In assessing the relevance of these transactions for developing market participant assumptions, it is important to consider factors such as whether the transaction price reflects a negotiated price for the interest, whether the transaction price includes additional value elements or strategic benefits (investor specific benefits), and whether the information available to the parties in the observable transaction(s) is consistent with the information that would be available to a market participant transacting in the portfolio company investment. See the “Inferring Value From Transactions in a Portfolio Company’s Instruments” section (in paragraphs 10.31–.43) for further discussion.

Consideration of Future Conditions

- 3.14** Valuation is fundamentally a forward-looking exercise; thus, the information relevant to market participants will include assumptions about the future. As a result, it may be necessary to consider not only the current conditions, but also how the characteristics of the portfolio company may evolve over time and the impact on market participants’ available strategies for realizing value from the investment. In many cases, market participants’ strategies for realizing value from an investment depend on making improvements to the portfolio company to expand the types of investors that will be attracted to the company as possible future market participants (public markets, strategic investors, private equity firms, etc.). Therefore, it is essential to consider expected or possible future market conditions, such as the company’s expected access to future debt and equity capital either through the public or private markets, and the expected pricing and dilution that may be associated with each; the macroeconomic environment; demographic trends; future demand for the product or service; future competitive landscape for products or services; among other factors. These expectations regarding the future can impact the

way that market participants will perceive the current value of an investment. Some of these factors may be captured within the context of a financial model or set of projected outcomes. However, many of these factors are more subjective and need to be incorporated, based upon the judgment and risk appetite of the market participant, into their qualitative assessment of what they might be prepared to pay for a given company, asset or interest in the company. While this process may consider the buyer's required rate of return, as discussed previously, the required rate of return may vary significantly depending on the specific facts and circumstances.

- 3.15** A market participant's expectations about the outlook and risks of a particular investment need to be balanced against that market participant's expectations regarding those same factors associated with all competing opportunities. For example, in a market where competing alternatives (with similar or analogous risk profiles) are expected to yield relatively low rates of return, the required rate of return for a particular investment could be lowered, thus increasing its valuation. And clearly, the converse can be true. In addition, risk factors associated with an investment are likely to carry more weight in the context of an illiquid investment, versus one for which there is a liquid market. In particular, if there is a liquid market, investors have the option to sell their investment in the market (for whatever the market will bear at that time) at the first sign of trouble. While the sale under those conditions does not necessarily insulate the buyer from some or all of the associated loss, it does mean that the investor can monetize the investment and can redirect the capital to other investments with higher expected returns. In the absence of a liquid market and a tradable position, the holder must take ownership of the problem and see it through to resolution. Although these factors are often characterized as liquidity risk, as a practical matter, the lack of liquidity may also impact the lens through which other risk factors are considered and evaluated. For example, the cost of illiquidity for an AAA-rated debt investment would typically be much lower than the cost of illiquidity for an equity investment in a development-stage company.
- 3.16** The fair value estimate will almost always be based on less than perfect information. Such is the reality of investing in businesses and estimating the value of portfolio company investments. For instance, a situation might arise where certain information is available regarding a potential liquidity event which requires an estimate of the weight that market participants would place on this information. For example, suppose a private equity firm owns Prinden, a software company in a nascent market segment where the two leading software firms, Rosencrantz and Guildenstern want to establish a presence. The private equity firm observes that a high multiple was just paid by Rosencrantz for a competing software company, and thus, it appears likely that Guildenstern will also acquire a company with similar technology. However, the private equity firm may not know what multiple Guildenstern would pay, or whether there may be market participants other than Rosencrantz and Guildenstern who might pay a comparable price. In addition, the private equity firm may have imperfect information regarding the number of other companies (competitors) that Guildenstern might consider acquiring, given the nascence of the market. In such a situation, the fair value measurement would take into account the information that was known or knowable as of the measurement date, considering how market participants would price the investment given an assumption about the likelihood of the high multiple being realized and adjusting for risk. These types of situations will present challenges.

Considering whether investors' interests are aligned

- 3.17** Another consideration in estimating the fair value of investments when more than one fund holds interests in the same portfolio company is the degree to which the investors' interests are aligned.

An investment company may invest in a given entity through multiple funds that it manages (e.g., via sister funds), or may invest in tandem with other unaffiliated investment companies (e.g., in a *club deal*). In these situations, investors frequently structure agreements to encourage the funds participating in the transaction to make decisions together and to keep investors from selling their positions unilaterally. These provisions help ensure that the investors' interests remain aligned as the company progresses toward a liquidity event.

- 3.18** Most agreements have provisions such as “tag-along” rights that allow the investors to participate pro-rata in any sale of the shares that another investor negotiates, or “drag-along” rights that provide the controlling investor(s) with the right to force other investors to sell at the same time (e.g. forcing a sale of the entire company). Market participants would consider these rights when assessing the degree to which the investors' interests are aligned, or whether certain investors might receive disproportionate returns.
- 3.19** If the investors all hold positions in the same class of instrument (e.g. common stock or Class A units), then they will all receive the same pro-rata value upon a sale of the business, and therefore it is likely that their interests will remain aligned to a greater extent. Tag-along rights increase alignment by preventing separate transactions prior to a liquidity event, but since such transactions are not likely in any case, market participants may still consider the investors' interests to be aligned even when they do not have tag-along rights. Drag-along rights increase alignment with the controlling investor(s), allowing the controlling investor(s) to unilaterally determine the timing of a liquidity event.
- 3.20** If the investors hold positions in different classes of instruments (e.g. debt and equity, or different classes of equity or warrants with different economic features or other rights), then it is likely that their interests will be less aligned. For example, in a company with both debt and equity, if the debt coupon is lower than the current market yield, then it would be advantageous for the debt holders to demand repayment immediately, but it would be advantageous for the equity holders to pay the below-market coupon through maturity. Therefore, market participants transacting in the debt or the equity would consider the debt covenants to determine whether the debt would have the right to demand repayment or renegotiate more favorable terms. As another example, investors with junior classes of equity such as standalone warrants or a carried interest have an incentive to take more risks, since these investors benefit from high returns but are not penalized for losses. Market participants would consider which class or classes of equity in aggregate have control in assessing the expected time horizon for the investment, considering their own expected time horizon to the extent that they would have influence over the decision of when to exit.
- 3.21** Even when the investors all hold the same class of instrument, investors may make different decisions over time, causing their interests to become less aligned. For example, if the business needs to raise additional capital, some investors may want to participate while others do not, which may lead to the creation of a new class of instrument whose investors' interests would be less aligned with the interests of the investors who hold only the original instrument. As another example, some investors may have a shorter remaining investment horizon than others, and therefore, may be under pressure to sell a business even if other investors would prefer to wait. In this situation, market participants would consider which investors have control, and assess the expected time horizon for the investment consistent with the controlling investor(s)' interests. If an investor with a short investment horizon does not have control, that investor may be forced to sell its interests separately.

3.22 For the purpose of estimating the value of an interest in a business, it is appropriate to consider the value of the business from the perspective of the investors who in aggregate have control of the business. This value may reflect the benefits of control as well as cost of illiquidity. Contrary to conventional wisdom, in the context of transactions in venture capital and private equity-backed companies, the value associated with control and the cost of illiquidity are both embedded in the price paid. Furthermore, all investors in a given financing round will typically pay the same price per share, irrespective of the degree of control associated with the position. As such, for the purpose of valuing an interest in a business, the task force recommends considering the assumptions that market participants investing in the interest would make regarding the cash flows and their required rate of return, and calibrating to the latest transaction price, rather than applying premia or discounts to some arbitrary or formulaic starting point. Please see Q&A 14.33 and 14.60–.66, as well as paragraphs 2.26, 3.17, 4.16, 5.42, 5.51, 7.02–.09, 9.01–.17, and 10.28–.30, for a discussion of these concepts.

Types of information typically considered

3.23 As discussed previously, the types of information that market participants consider most relevant will depend, in part, on the company characteristics and the market participants' strategy and objectives. The considerations may also be at both the enterprise level and at the instrument level. The following table presents a list of broad categories of information that might be relevant to market participants. Please note that the following list is not intended to be all-inclusive, nor is it presented in any particular order.

Table 3-1

Company Factors				Investment Factors
Market position	Execution	Financial	Leadership	
Product Portfolio	Operational Effectiveness	Revenue growth	Experience and Composition of Board	Rights and Preferences
Markets for Products or services	Lean Manufacturing	Gross Margin	Effectiveness of Board	Liquidity
Market and Industry Trends	Quality	Availability of capital	Strength of Senior Management team – (experience, industry expertise, respect, track record of success)	Level of influence
Competitive Advantages	Working Capital Efficiency	Financial Ratios	Long term strategic plan	Information rights
Barriers to Entry	Corporate structure	Leverage	Ability and willingness to execute	Investor mix
Threats or opportunities (regulatory, industry, etc.)	Build vs buy	Future capital requirements - Investment terms	Economic incentives	Leverage and investment position in capital structure
Customer concentration	Onshore or offshore production opportunities	Synergies – operational, new products, markets	Succession plan	Put or Call provisions
New or emerging technologies	Labor negotiations	EBITDA margins	Management reporting structure	Prepayment risk

Company Factors				Investment Factors
Market position	Execution	Financial	Leadership	
Market share	IPO considerations	Capital expenditures	Non-compete agreements	Covenants (positive and negative)
Geographic coverage and country risk	Sale strategy	Litigation	Composition and expertise of marketing team	Board representation
Customer perception	Production capacity	Taxes	Training and recruitment	Dividends (cash and pay in kind)
Suppliers	Acquisition opportunities	Hedging – commodities, interest rates	HR policies	Performance risk
Value proposition and product differentiation	Economic environment	IRR on investment in the company, its products and segments	Corporate culture	Financial ratios – interest coverage, debt to total capital, debt to total assets, MOIC, etc.

3.24 For additional discussion, refer to appendix C, “Valuation Case Studies,” which presents detailed investment summaries for a number of different investments, discussing the original investment thesis and the information that market participants would consider in evaluating the investment at various points in time.

Chapter 4

Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments

Introduction

- 4.01** As discussed in chapter 1, “Overview of the Private Equity and Venture Capital Industry and Its Investment Strategies,” private equity funds, venture capital funds and other investment companies follow a variety of investment strategies, identifying opportunities where they expect to be able to realize returns on an investment position over a specified time horizon. Generally, investment companies or other market participants for similar assets do not exit a position before they have had time for their investment strategies to resolve, and therefore may be willing to accept limitations on liquidity when making their investments. Under FASB ASC 820, *Fair Value Measurement*, the basis for estimating fair value is an assumed transaction for the asset on the measurement date. Therefore, applying FASB ASC 820 in this industry requires considering the factors that market participants transacting in an interest in a portfolio company would consider, given the time horizon that the market participants would assume for the investment. The need to consider an assumed transaction can create unique challenges for measuring the fair values of such investments.
- 4.02** Defining the unit of account for investment companies is also challenging. FASB ASC 946, *Financial Services—Investment Companies*, as described below, does not provide explicit unit of account guidance. Further, many investment companies hold significant positions in the companies in their portfolios, giving them the ability to establish strategy or influence the direction of these companies. In addition, an investment company may hold multiple types of investments within an entity (e.g., common stock, various classes of preferred stock, or various classes of debt in a given entity, or any combination). Finally, an investment company may invest in a given entity through multiple funds that it manages (e.g., via sister funds), or may invest in tandem with other unaffiliated investment companies (e.g., in a club deal). The reporting entity for investment companies is typically a fund – that is, a single entity that holds investments and prepares financial statements for its investors. The reporting entity may include more than one fund or related entities when consolidated or combined financial statements are presented.
- 4.03** This chapter presents a framework for evaluating the unit of account and the assumed transaction for purposes of measuring the fair value of investments in accordance with the principles in FASB ASC 820. In particular, the framework and examples below address the following key questions:
- Does the assumed transaction for FASB ASC 820, considering market participant perspectives, contemplate only the sale or transfer of the specific investment held by the fund in a given portfolio company, or the sale or transfer of a larger grouping of assets?
 - Is it appropriate for investment companies to group assets (e.g. equity and debt investments held in the same fund) for the purpose of measuring fair value considering their economic best interest, and, if so, how?

- How does the requirement under FASB ASC 820 to measure fair value based on an assumed sale or transfer of the fund's investment on the measurement date consider market participant assumptions regarding the investment strategy and the way that value is expected to be realized from the investment?

Relevant Technical Guidance

4.04 As indicated in FASB ASC 820-10-55-1

The objective of a fair value measurement is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. A fair value measurement requires a reporting entity to determine all of the following:

- a. The particular asset or liability that is the subject of the measurement (consistent with its unit of account)
- b. For a nonfinancial asset, the valuation premise that is appropriate for the measurement (consistent with its highest and best use)^[1]
- c. The principal (or most advantageous) market for the asset or liability
- d. The valuation technique(s) appropriate for the measurement, considering the availability of data with which to develop inputs that represent the assumptions that market participants would use when pricing the asset or liability and the level of the fair value hierarchy within which the inputs are categorized.

4.05 As indicated in FASB ASC 820-10-20, the unit of account is “[t]he level at which an asset or liability is aggregated or disaggregated in a [FASB ASC] Topic for recognition purposes.” Thus, the asset being measured at fair value might be a single asset or a group of assets. Based on this definition, the unit of account is also what is being measured for purposes of the fair value measurement. The assumed transaction for measuring fair value may consider multiple units of account within the reporting entity (for example, an equity and debt investment in a given portfolio company transacting together, rather than separately), or a single unit of account within the reporting entity, depending on how market participants would transact.

4.06 FASB ASC 820 establishes a framework for measuring fair value for financial reporting. However, *what* needs to be measured at fair value in accordance with US GAAP is dictated by other FASB ASC Topics. For purposes of identifying what to measure at fair value, FASB ASC 820-10-35-2E states that “The unit of account for the asset or liability shall be determined in accordance with the Topic that requires or permits the fair value measurement, except as provided in this Topic.”

¹ Most investment companies hold financial assets and liabilities rather than nonfinancial assets and liabilities and, therefore, the concept of “highest and best use” does not apply. However, for any fair value measurement (whether for financial or nonfinancial items) FASB ASC 820 indicates the reporting entity should measure fair value using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest. Please see paragraph 4.10.

- 4.07** Although the unit of account is generally defined by other FASB ASC Topics, FASB ASC 820 specifies the unit of account for instruments that are traded in an active market (that is, for Level 1 instruments). In particular, FASB ASC 820-10-35-44 states that

If a reporting entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the reporting entity [that is, $P \times Q$].

By stating that fair value should be determined as $P \times Q$, FASB ASC 820 in effect prescribes the unit of account as the individual instrument (e.g. a single share) for instruments that are traded in an active market. For instruments that are not traded in an active market, the unit of account and the assumed transaction would need to be determined in accordance with other FASB ASC Topics.

- 4.08** FASB ASC 946, *Financial Services—Investment Companies*, provides guidance on the accounting for the assets held by investment companies. In particular, FASB ASC 946-320-35-1 states that “[a]n investment company shall measure investments in debt and equity securities subsequently at fair value,” without establishing specific guidance as to the level of aggregation or disaggregation at which these securities should be considered for fair value measurement purposes.
- 4.09** FASB ASC 946 does not prescribe the unit of account to be the individual debt or equity instrument (or instruments), nor does it prohibit the grouping of the instruments held by the reporting entity when considering the unit of account. In particular, on their Schedule of Investments or Condensed Schedule of Investments (hereinafter referred to as the *Schedule of Investments*), many investment companies, especially private equity and venture capital funds, report the total value of their aggregate capital position in a portfolio company, and then identify each instrument and its allocated value, rather than separately reporting values for the smallest unit that could theoretically be sold as an unrelated investment. As will be described later, this approach reflects the fact that in many cases, market participants would transact in the various classes of debt and equity as a group of assets, rather than individually. Furthermore, in these cases, investment companies typically focus on their return expectation for the entire group of assets held in each portfolio company, rather than developing return expectations for each individual class of debt, equity, or both purchased as part of the group.
- 4.10** As indicated in FASB ASC 820-10-35-9, “A reporting entity shall measure the fair value of an asset or a liability using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest.” Furthermore, paragraph BC49 of FASB Accounting Standards Update (ASU) No. 2011-04, *Fair Value Measurement (Topic 820) – Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs*,² clarifies that

a fair value measurement assumes that market participants seek to maximize the fair value of a financial or nonfinancial asset or to minimize the fair value of a financial or nonfinancial liability by acting in their economic best interest in a transaction to sell the

² This and other paragraphs from the “Background Information and Basis for Conclusions” section of Accounting Standards Update (ASU) No. 2011-04, *Fair Value Measurement (Topic 820) - Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs*, were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

asset or to transfer the liability in the principal (or most advantageous) market for the asset or liability. Such a transaction might involve grouping assets and liabilities in a way in which market participants would enter into a transaction, if the unit of account specified in other [FASB ASC] Topics does not prohibit that grouping.

- 4.11** When estimating the fair value of the fund's position in a given portfolio company, the concept of "economic best interest" is relevant to the determination of the nature of the assumed transaction and what grouping of assets may be appropriate. Therefore, the task force believes that it is appropriate to consider the unit of account for investments reported under FASB ASC 946 to be the individual instruments to the extent that is how market participants would transact, or the entire position in each type of instrument in a given portfolio company held by the fund (e.g. the entire senior debt position, the entire mezzanine debt position, the entire senior equity position, the entire warrant position, and so on) to the extent that is how market participants would transact. Similarly, the task force believes that the assumed transaction for purposes of valuing the investments may consider a grouping of assets in a given portfolio company held within the fund (e.g. the debt and equity together) to the extent that is how market participants would transact.
- 4.12** Note that there may be unit of account or disclosure requirements in other FASB ASC Topics; for example, certain investments may be considered derivatives in accordance with FASB ASC 815. It would be appropriate to consider guidance in other relevant FASB ASC Topics when allocating fair value to the various fund investments in a given portfolio company.

Grouping Assets for Measuring Fair Value

- 4.13** Since the unit of account is defined in the context of the reporting entity's financial statements, it cannot include interests that are not owned by the reporting entity. If the reporting entity holds multiple instruments within a given portfolio company, however, the assumed transaction may consider how fair value would be maximized. Thus, the assumed transaction might be a transaction that involves the aggregate position held by the reporting entity if this is how market participants would transact, acting in their economic best interest.
- 4.14** When this approach results in a fair value for the entire capital position in a given portfolio company, it would also be necessary to allocate the aggregate value to the individual asset classes reported separately on the Schedule of Investments (e.g., debt and equity within the same portfolio company). As discussed in TIS Section 6910.34, *Application of the Notion of Value Maximization for Measuring Fair Value of Debt and Controlling Equity Positions*:

Because the enterprise value approach results in a fair value for the entire capital position (that is, both debt and equity), an allocation to the individual units of account would be necessary. FASB ASC 820 does not prescribe an allocation approach, but FASB ASC 820-10-35-18F discusses that a "reporting entity shall perform such allocations on a reasonable and consistent basis using a methodology appropriate in the circumstances." Facts and circumstances, such as relevant characteristics of the debt and equity instruments, must be considered when making this allocation. Generally, the allocation method should be consistent with the overall valuation premise used to measure fair value.

- 4.15** When the assumed transaction is based on value being maximized through a transaction in the investment company's entire interest in the portfolio company, then the investment company's Schedule of Investments will generally present the aggregate fair value of the investment in each

portfolio company along with each class of debt and equity owned in that portfolio company at its allocated value. One reasonable basis for allocating value amongst the instruments could be to estimate the fair value of each instrument independently, considering the assumptions that market participants would use in pricing each instrument, and then to allocate the aggregate fair value considering either the relative fair value of all the instruments (e.g. fair value of equity or warrants vs. fair value of debt), or the residual fair value for one of the instruments after subtracting the fair value of the other instruments (e.g. residual fair value of debt after subtracting the fair value of equity or warrants, or vice versa³). It may be appropriate to apply the residual value approach to allocating fair value when one or more of the instruments in the aggregate position have observable prices, but another instrument in the aggregate position does not have an observable price, or when one of the instruments may need to be reported at a specified fair value under another FASB ASC Topic, provided that this approach results in reasonable allocation of value among the instruments. The total fair value for the investment company's entire interest in the portfolio company would be the same either way, but the fund has a choice about what consistent approach to apply for allocating that value for disclosure on the Schedule of Investments.

- 4.16** In situations in which the investors hold the same instruments and the investors' interests are aligned, it may be reasonable to value an equity investment based on its pro-rata interest in the total equity of the company, even though the units of account cannot include interests that are not held within the specific fund (the reporting entity). The assumed transaction would still be a sale of the interest in the portfolio company to another market participant who would realize value over the time horizon that the market participant would assume for the investment; however, for valuation purposes, market participants typically would consider the value of the portfolio company in aggregate and then allocate that value to the various interests. Therefore, even though it would not be appropriate to aggregate positions across reporting entities in defining the unit of account or the assumed transaction, in situations where the investors hold the same instruments and the investors' interests are aligned, the degree of aggregation will not result in a different fair value measurement. Please see Q&A 14.33 and 14.60–.66, as well as paragraphs 2.26, 3.17, 3.22, 5.42, 5.51, 7.02–.09, 9.01–.17, and 10.28–.30, for a discussion of these concepts.

Time Horizon for the Investment

- 4.17** When an investment company initially makes an investment into the debt or equity or both of a private company, it considers the expected cash flows it will receive over an expected time horizon through the ultimate exit from the investment. Equally, for purposes of determining fair value at subsequent measurement dates, market participants (buyers and sellers) would typically consider the cash flows for the investment under current ownership through a liquidity event and the market participants' required rate of return, consistent with the economic best interest of the investors who in aggregate have control of the business. Accordingly, while FASB ASC 820 contemplates a transaction at the measurement date (as discussed in FASB ASC 820-10-35-6C), in determining the assumptions that market participants would use to value these investments on the measurement date, it would be appropriate to include the time horizon that market participants would expect for the investment, the strategies available to maximize value for the investment, and liquidity considerations.

³ The residual fair value approach may be more appropriate when there are observable prices for one or more of the instruments, but not for others. Please see paragraph 4.109 for an example.

- 4.18** When entering an investment, private equity and venture capital investors typically expect to hold a position in a given portfolio company for several years. Therefore, these investors are often willing to negotiate provisions that further restrict liquidity in exchange for other benefits. For example, when raising debt to fund an acquisition, private equity investors may accept a requirement to repay the debt at a premium if a change of control is completed within the first few years, allowing the debt holders to be compensated for the early repayment in light of the equity holders' decision to exit the position earlier than anticipated. In such cases, the transaction price for the debt is typically still at or near par at issuance, implying that market participants expect a low probability of a near-term change of control.⁴
- 4.19** FASB ASC 820-10-20 defines fair value measurement for financial reporting as "the price that would be received to sell an asset or to transfer a liability in an orderly transaction between market participants at the measurement date." If the actual sale of the investment on a given measurement date would trigger a change of control, but the company would have to repay outstanding debt at a premium or has other advantageous structural elements that would be lost upon a change of control, then such a sale would result in significantly diminished value. That is, including the negative ramifications that would result from an actual sale of the specific investment on the measurement date effectively results in placing 100% probability on the occurrence of a contingent event (that is, the change in control) occurring on the measurement date, despite evidence that indicates the actual probability and the corresponding value that market participants would place on this event would be much lower. Thus, even when valuing a controlling position, the task force recommends considering market participants' view of the expected probability, timing and impact of a change of control, rather than assuming the adverse impacts of a change of control on the measurement date.
- 4.20** The approach of considering market participant assumptions regarding the expected time horizon of the investment prevents the counterintuitive result where the fair value of a controlling interest in a portfolio company could be less (on pro-rata basis) than a non-controlling interest in the same entity. For example, consider a situation where the lead investor invites two co-investors to invest 20% each, while the lead investor has a 60% interest, and all investors pay the same pro rata price. Since the unit of account for each co-investor is a 20% interest, the sale of that interest would not trigger a change of control and a market participant transacting in that interest would consider the cash flows given the expected time horizon for the investment and their required rate of return. Furthermore, the market participant transacting in the 20% interest would consider the value of the debt for the purpose of valuing equity based on the agreed on debt terms (rather than assuming an immediate repayment at the payoff amount), and would consider the fair value of any other structural elements of the investment that add value over the expected time horizon. If the assumed transaction for the controlling position required an assumption that any pre-payment penalties on the debt are triggered and any other structural value drivers are lost, the controlling position would have a lower pro-rata value than the minority interests, which would be inconsistent with the fact that all three investors just paid the same pro-rata price for their interests, and would also most likely realize their pro-rata share of the equity value at the ultimate liquidity event.

⁴ The fair value of the debt typically can be measured at inception based on the transaction price, where the debt investors usually fund par or possibly par less an original issue discount (OID), in exchange for the contractual rights associated with the debt, including the rights to payment of principal and interest as well as any premium due upon a change of control. These transactions make it clear that market participants do not expect an immediate change of control, because if they did, the debt would reflect this premium. Similarly, at subsequent measurement dates, it is often possible to observe traded debt prices that reflect the same dynamic. In situations when an acquisition is imminent, the debt typically trades up toward the payoff level.

- 4.21** Considering the expected time horizon for the investment, rather than assuming 100% probability of a change of control on the measurement date, can be considered analogous to the treatment of restrictions under FASB ASC 820. When it is not permissible to transfer an asset at all for a given period of time (that is, there is a restriction on the sale of the asset that is deemed to be an attribute of the asset, rather than being entity-specific), the fair value of this asset is not zero. Instead, FASB ASC 820 indicates that fair value for an asset with a restriction that is an attribute of the asset would equal the price that would be received in a transaction for the unrestricted asset, adjusted for the effects of the restriction. When the unit of account is a controlling equity interest, the negative ramifications of a change of control on the measurement date can be seen as analogous to implicit restrictions that do not completely prevent the sale of the asset, but rather diminish value upon a sale. The impact of these implicit restrictions would be measured considering market participants' assumptions regarding the expected time horizon of the investment and market participants' required rate of return under current market conditions, considering all the characteristics of the investment.
- 4.22** The approach of considering market participant assumptions regarding the expected time horizon of the investment is also consistent with the calibration principle in FASB ASC 820, as discussed in paragraphs 4.25–.30, and avoids double-counting the impact of any change of control ramifications. For example, FASB ASC 820 indicates that explicitly including a separate adjustment for restrictions on transfer for valuing a liability would not be appropriate because the effect of the restriction already would have been captured in the transaction price. Specifically, paragraphs 18B–18C of FASB ASC 820-10-35 state:
- 35-18B** When measuring the fair value of a liability or an instrument classified in a reporting entity's shareholders' equity, a reporting entity shall not include a separate input or an adjustment to other inputs relating to the existence of a restriction that prevents the transfer of the item. The effect of a restriction that prevents the transfer of a liability or an instrument classified in a reporting entity's shareholders' equity is either implicitly or explicitly included in the other inputs to the fair value measurement.
- 35-18C** For example, at the transaction date, both the creditor and the obligor accepted the transaction price for the liability with the full knowledge that the obligation includes a restriction that prevents the transfer. As a result of the restriction being included in the transaction price, a separate input or an adjustment to an existing input is not required at the transaction date to reflect the effect of the restriction on transfer...
- 4.23** By analogy to paragraphs 18B–18C of FASB ASC 820-10-35, when investors acquire a company using a combination of equity and debt that includes a change of control premium, at the transaction date, both the equity investors and the debt investors accepted the transaction price with the full knowledge that the obligation includes a requirement to pay off the debt with a premium upon a change of control. The valuation analysis is generally calibrated to the transaction price by incorporating the impact of these provisions using market participant assumptions regarding the expected probability and timing of a change of control, and considering market participants' required rate of return given these provisions. At subsequent measurement dates, the valuation analysis would consider updated market participant assumptions for both these factors, incorporating the impact of these provisions based on expectations as of each measurement date.
- 4.24** The assumptions used in estimating fair value are based on the circumstances relevant to market participants at the measurement date and are considered within the context of current market

conditions applicable to the investment. Thus, if on the measurement date, the market was in distress for private company equity interests, the fair value measurement would consider how market participants would transact on the measurement date during a period of market distress for the asset being measured. Such considerations would include factors such as a longer expected time to exit or a higher required rate of return, among others. That is, the fair value measurement would still consider market participants' required rate of return under current market conditions, irrespective of the asset holder's intent to sell.⁵

Implications of the Initial Transaction for Determining the Grouping of Assets in the Assumed Exit Transaction

- 4.25** Although it is unusual for an investment company to sell a position at an interim date (that is, prior to the liquidity event for the portfolio company), it is possible to observe the pricing in the initial transaction (that is, an entry price). Unless prohibited by other guidance or otherwise precluded by the nature of the transaction, the task force believes that the grouping of assets assumed in measuring the fair value of investments at subsequent measurement dates in most cases will be consistent with the initial transaction.
- 4.26** In determining whether a transaction price (an entry price) represents fair value at initial recognition, it is important to consider the characteristics of the transaction and the unit of account. As indicated in FASB ASC 820-10-30-3A

When determining whether fair value at initial recognition equals the transaction price, a reporting entity shall take into account factors specific to the transaction and to the asset or liability. For example, the transaction price might not represent the fair value of an asset or a liability at initial recognition if any of the following conditions exist:

- a. The transaction is between related parties, although the price in a related party transaction may be used as an input into a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms.
- b. The transaction takes place under duress or the seller is forced to accept the price in the transaction. For example, that might be the case if the seller is experiencing financial difficulty.
- c. The unit of account represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. For example, that might be the case if the asset or liability measured at fair value is only one of the elements in the transaction (for example, in a business combination), the transaction includes unstated rights and privileges that are

⁵ Note that the approach of considering market participant assumptions regarding the expected time horizon of the investment in performing the fair value measurement should not be used to argue that the fair value for an asset is higher because it would not be optimal to sell given current market conditions. In particular, even under this approach, the fair value measurement considers current market conditions – the difference is that for certain private equity and venture capital investments, an assumed sale of the entire company on the measurement date could diminish value due to the specific change of control impacts. For assets that do not include specific features that effectively restrict a sale, the value that would be realized in an orderly sale on the measurement date would be the same as the value indicated by the cash flows that market participants expect to realize over the time horizon for the investment, discounted at the market participant required rate of return.

measured separately in accordance with another Topic, or the transaction price includes transaction costs.

- d. The market in which the transaction takes place is different from the principal market (or most advantageous market). For example, those markets might be different if the reporting entity is a dealer that enters into transactions with customers in the retail market, but the principal (or most advantageous) market for the exit transaction is with other dealers in the dealer market.

4.27 Using a consistent grouping of assets in measuring the fair value of investments at subsequent measurement dates facilitates *calibration*. As indicated in FASB ASC 820-10-35-24C

If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps a reporting entity to determine whether an adjustment to the valuation technique is necessary (for example, there might be a characteristic of the asset or liability that is not captured by the valuation technique). After initial recognition, when measuring fair value using a valuation technique or techniques that use unobservable inputs, a reporting entity shall ensure that those valuation techniques reflect observable market data (for example, the price for a similar asset or liability) at the measurement date.

4.28 Calibration is required when the transaction is at fair value at initial recognition. The goal of calibration in this context is to ensure that at subsequent periods, valuation techniques use assumptions that are consistent with the observed transaction, updated to take into account any changes in company-specific factors as well as current market conditions. For example, in the market approach:

- Suppose that a company is acquired for 10 times the last 12 month (LTM) earnings before interest, taxes, depreciation, and amortization (EBITDA).⁶
- Further, suppose that the median multiple observed for the selected guideline public companies in the guideline public company method is 8 times the LTM EBITDA.
- The difference in this example was due to the market participants' assessment that the near term financial performance for the company was likely to exceed that of its peers.

In the next measurement period, it typically would not be appropriate to ignore the multiple implied by the transaction and assume that the multiple used to estimate the company's value would suddenly fall to be consistent with the median of the guideline public companies. Instead, at subsequent measurement dates, the valuation would consider the company's progress and changes in observable market data to estimate the fair value under current market conditions. For example:

- Suppose that after considering the company's recent performance and positioning, market participants would still expect the company to outperform the guideline public companies.

⁶ Note that, for simplicity, this example refers only to last 12 month multiples of earnings before interest, taxes, depreciation, and amortization (EBITDA). In practice, a valuation would need to consider other relevant indications of value (for example, forward multiples, multiples of other metrics, and the income approach).

- Further, suppose that the median multiple for the guideline public companies has improved to 9 times the LTM EBITDA instead of 8 times.
- Then, when calibrating the model, it might be appropriate to select a multiple higher than the 10 times LTM EBITDA implied in the initial transaction.

See chapter 10, “Calibration,” for further discussion.

4.29 Calibration also resolves one of the significant challenges faced in valuing private equity and venture capital investments – namely, assessing the valuation impact of the level of control and illiquidity associated with an investment. For example, under the income approach, the fund would initially estimate the expected cash flows for the investment under current ownership through a liquidity event or through the maturity of the instrument, and then calibrate to calculate the required rate of return for the investment on the initial investment date. Since the transaction price already incorporates market participants’ required rate of return, no additional discount for lack of control or discount for illiquidity would apply. For subsequent measurement dates, the fund would consider the updated expected cash flows and the updated market participants’ return assumptions given current market conditions. A similar thought process would be used under the market approach. See chapter 9, “Control and Marketability,” for further discussion.

4.30 When measuring fair value, it is important to recognize that the assumptions used in the measurement should reflect market participant assumptions regarding the investment, and should not reflect characteristics specific to the investor. Nevertheless, a fair value measurement may consider a reporting entity’s own assumptions about the investment if these are consistent with market participant assumptions. FASB ASC 820-10-35-54A states that

A reporting entity shall develop unobservable inputs using the best information available in the circumstances, which might include the reporting entity’s own data. In developing unobservable inputs, a reporting entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the reporting entity that is not available to other market participants (for example, an entity-specific synergy). A reporting entity need not undertake exhaustive efforts to obtain information about market participant assumptions. However, a reporting entity shall take into account all information about market participant assumptions that is reasonably available. Unobservable inputs developed in the manner described above are considered market participant assumptions and meet the objective of a fair value measurement.

Calibrating subsequent fair value measurements to the fair value at initial recognition helps identify market participant perspectives.

Examples

4.31 The following paragraphs provide examples illustrating the process of determining the unit of account for a variety of different types of investments and investment structures. The following outline summarizes the examples presented:

	<u>Paragraph(s)</u>
Example 1: 100% of equity held within a single fund (single reporting entity)	4.32–.56
A) Initial investment, December 31, 20X1	4.32–.41
B) Two years later, December 31, 20X3	4.42–.53
C) Four years later, December 31, 20X5	4.54–.56
Example 2: 45% of equity held in each of two funds managed by the same General Partner (GP)	4.57–.63
A) Initial investment, December 31, 20X1	4.57–.63
Example 3: Club Deal, 30% of equity held in each of three funds with different GPs	4.64–.67
A) Initial investment, “take private” transaction, December 31, 20X1	4.64–.67
Example 4: 100% of equity in entity with significant favorable tax position	4.68–.73
A) Initial investment, December 31, 20X1	4.68–.73
Example 5: Debt and 100% of equity held within a single fund under the same GP (single reporting entity)	4.74–.78
A) Initial investment, December 31, 20X1	4.74–.78
Example 6: Debt and 100% of equity held in different funds	4.79–.100
A) Initial investment, December 31, 20X1	4.79–.84.
B) Two years later, December 31, 20X3	4.85–.95
C) Four years later, December 31, 20X5	4.96–.100
Example 7: Repurchased Debt and 100% of equity in a single fund	4.101–.109
A) Repurchase debt one year after the acquisition, December 31, 20X3	4.101–.109
Example 8: Debt investment with warrants	4.110–.135
A) Initial investment, December 31, 20X1	4.110–.124
B) Two years later, December 31, 20X3	4.125–.133
C) Three years later, December 31, 20X4	4.134–.135
Example 9: Distressed equity investment with warrants	4.136–.146
A) Additional investment two years after the acquisition, December 31, 20X3	4.136–.146
Example 10: Multiple Investments in different classes of equity (Series A, B, C, etc.)	4.147–.154
A) Additional investment three years after formation, December 31, 20X4	4.147–.154

Example 1 – 100% of equity held within a single fund (single reporting entity)

A) December 31, 20X1

4.32 In December 20X1, a single fund purchases 100% of the equity of a company at an enterprise value of \$500 million, consisting of \$200 million in equity and \$300 million in third-party debt. The third-party debt has a five-year maturity and includes a change in control provision with repayment at 110% of par if a change of control occurs within the first year, 105% in the second year, 103% in the third year, 101% in the fourth year and par in the fifth year.

Considerations in Evaluating the Unit of Account and the Assumed Transaction

4.33 The unit of account in this example is the equity interest held by the fund (i.e., 100% of the equity). The assumed transaction would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

Orderly Transaction at the Measurement Date

4.34 The fair value measurement is based on an assumed orderly transaction at the measurement date, reflecting market conditions on that date. This assumed transaction is not a forced sale, a liquidation transaction, or a distress sale. Said another way, the fair value measurement would consider the assumptions that market participants would use in pricing the asset, considering all the characteristics of the investment and the facts and circumstances on the measurement date, including those related to the time horizon for the investment, the investment's risks and market liquidity under current market conditions.

Fair Value at Initial Recognition

4.35 The next step is to evaluate whether or not the transaction price represents fair value at initial recognition, and if so, to calibrate the valuation model that will be used in subsequent periods to the transaction price.⁷ In this example, the acquisition involved three distinct transaction components: (1) the sale of the company for \$500 million, (2) the investment in 100% of the equity of the company for \$200 million and (3) the third-party debt investment for \$300 million. Reviewing the factors that might indicate that the transaction price would not represent fair value from FASB ASC 820-10-30-3A, the fund confirms:

- a. The transaction is not between related parties.
- b. The transaction did not take place under duress.
- c. The unit of account represented by the transaction price for the equity investment (#2, above) is consistent with the unit of account for the fund's interest (100% of the equity).
- d. The market in which the transaction takes place is consistent with the principal market (or most advantageous market) for the investment (namely, the private equity market).

4.36 In addition, the fund determines that there are no other reasons that the transaction price would not represent fair value. Therefore, it is reasonable to conclude that the \$200 million transaction price represents the fair value of the equity interest at initial recognition.

⁷ Paragraph 4.26 describes some of the factors provided in FASB ASC 820 that may indicate when the transaction price might not represent the fair value of an asset or a liability at initial recognition.

Market Participant Assumptions

4.37 The fair value measurement for the subject interest would be determined using market participant assumptions, not solely entity-specific assumptions. As discussed in paragraph 4.30, FASB ASC 820 makes it clear that while a company may use its own data or assumptions, these assumptions should be adjusted if reasonably available information indicates that market participants would use different assumptions.

Ramifications of a Change in Control on the Measurement Date

4.38 An actual “Day 1” sale of the investment would trigger the change in control provision, which includes a prepayment penalty or premium on the debt, thereby reducing the proceeds that the equity holder would realize (that is, resulting in an immediate loss in the value of the investment). In particular, in this example, the payoff value for the debt if the business were to be sold on Day 1 would be \$330 million, including the 10% prepayment penalty, resulting in a net payoff to equity of \$170 million. This suboptimal result is inconsistent with the initial transaction and the assumptions that market participants, acting in their economic best interest, would use in pricing the asset.

Expected Time Horizon for the Investment on the Measurement Date

4.39 In measuring the value of the equity interest, it is presumed that market participants would consider the expected time horizon for the investment, similar to the assumptions made in the original transaction. The Day 1 fair value of the equity interest would be determined under this logic to be \$200 million, including the expected impact of the change in control provisions. Since the equity and debt holders already had full knowledge of the change in control provisions when establishing the transaction price for both the equity and debt, the \$200 million equity value already considers market participant assumptions regarding the expected probability and timing of a change of control, and the required rate of return given these provisions; therefore, no additional adjustment is needed. Typically, equity investors would only agree to the change of control provision for the debt in the context of the overall negotiations, which would also include the coupon rate, allowable leverage, covenants, and other features. As such, the fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Total enterprise value	\$500
Value of debt for valuing equity	\$300
Fair value of equity	\$200

Calibration

4.40 The valuation model would then be calibrated to the transaction price. For example, under the income approach, the fund would estimate the expected cash flows for the investment under current ownership through a liquidity event and then calibrate to calculate the required rate of return for the investment on the initial investment date. For subsequent measurement dates, the fund would consider the updated expected cash flows and the change in market participants’ required rate of return given current market conditions. A similar thought process would be used under the market approach. Please see paragraphs 10.13–.18 for an example.

Analogous Situations

4.41 As discussed in paragraph 4.21, the treatment of the change of control provision in this example is analogous to the manner in which restrictions on transfer are considered in FASB ASC 820. As such, for the purposes of estimating the fair value of the equity, the value of the debt would be measured

considering market participant assumptions regarding the expected probability and timing of a change of control, and the required rate of return given these provisions,⁸ consistent with the initial transaction and their economic best interest.

B) December 31, 20X3

4.42 Two years later, the company has faced significant challenges. The debt has a payoff value of 103% of par (\$309 million) and a fair value of 80% of par (\$240 million), based on the traded price for the debt considering the cash flows through maturity discounted at the current market yield. The value of the enterprise assuming a current transaction is \$350 million, considering the cost of capital for a new third-party buyer based on a new debt structure. The value of equity considering the cash flows to equity including the benefit of the below-market coupon for the debt, and considering the cost of equity based on an equity investor's required rate of return under current market conditions, is \$80 million. This \$80 million value for the equity is more than the amount that could be realized by selling the business and paying off the debt at \$309 million, but less than what could be realized by selling the business as a whole if the new buyer were still able to benefit from the below market debt, as discussed in paragraphs 4.47–.53.

Considerations in Evaluating the Unit of Account and the Assumed Transaction

4.43 The unit of account in this example is the equity interest held by the fund (100% of the equity). The assumed transaction would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

Orderly Transaction at the Measurement Date

4.44 The fair value measurement is based on an assumed orderly transaction at the measurement date, reflecting market conditions on that date. This assumed transaction is not a forced sale, a liquidation transaction, or a distress sale. Said another way, the fair value measurement may consider the assumptions that market participants would use in pricing the asset, considering all the characteristics of the investment and the facts and circumstances on the measurement date, including those related to the time horizon for the investment, the investment's risks and market liquidity under current market conditions.

⁸ The impact of the change of control feature on the fair value of the equity at each measurement date depends on market participants' expectations at the measurement date regarding the expected probability and timing of a future change of control. If market participants transacting in the equity would expect the change of control to occur in several years, commensurate with the maturity of the debt, then the change of control feature would have little value – any impact attributable to the lack of flexibility this feature imposes would be captured in the calibrated required rate of return for the equity investment. If market participants transacting in the equity would expect some likelihood that the change of control would occur at an earlier date, resulting in an increased payoff for the debt, then the valuation analysis would capture the probability and timing of various payoff scenarios. At the initial transaction date, the valuation models would be calibrated to assess the required rate of return for the equity and the required rate of return for the debt considering the probability-weighted payoff scenarios. At subsequent measurement dates, the valuation analysis would consider the change in market participants' assumptions regarding the probability and timing of a change of control and the corresponding impact on value. Note that market participants transacting in the equity may make different assumptions than market participants transacting in the debt, as these market participants would typically have access to different information; therefore, the value of debt used in estimating the fair value of equity may be different than the fair value of debt considered independently.

Ramifications of a Change in Control on the Measurement Date

4.45 Under the circumstances, an actual sale of the investment would trigger the change in control provision, which includes a premium on the debt relative to its fair value, thereby reducing the proceeds that would inure to the equity holder (that is, resulting in an immediate loss in the value of the investment compared with its value realized over the expected time horizon for the investment). This suboptimal result is inconsistent with assumptions that market participants, acting in their economic best interest, would make in pricing the asset at the measurement date.

Expected Time Horizon for the Investment on the Measurement Date

4.46 In measuring the fair value of the equity interest, it is presumed that market participants would consider the expected time horizon for the investment, consistent with their economic best interest. Using this valuation premise, under the income approach, the fund would consider the expected cash flows for the equity investment under current ownership through a liquidity event, using a consistent framework and calibrating the model to the fair value at initial recognition and to the previous interim measurement dates.

Calibration – Cash Flows to Equity

4.47 For the December 31, 20X3 valuation date, the fund would consider the updated expected cash flows and the change in market participants' required rate of return given current market conditions. The resulting fair value of the equity interest under this logic in this example would be \$80 million, consistent with market participant assumptions regarding the cash flows from the enterprise over the time horizon for the investment and the required cost of capital given current market conditions.⁹ As such, the fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Fair value of equity (based on cash flows to equity)	\$ 80

Calibration – Net Equity Value (Contractual Debt Payoff)

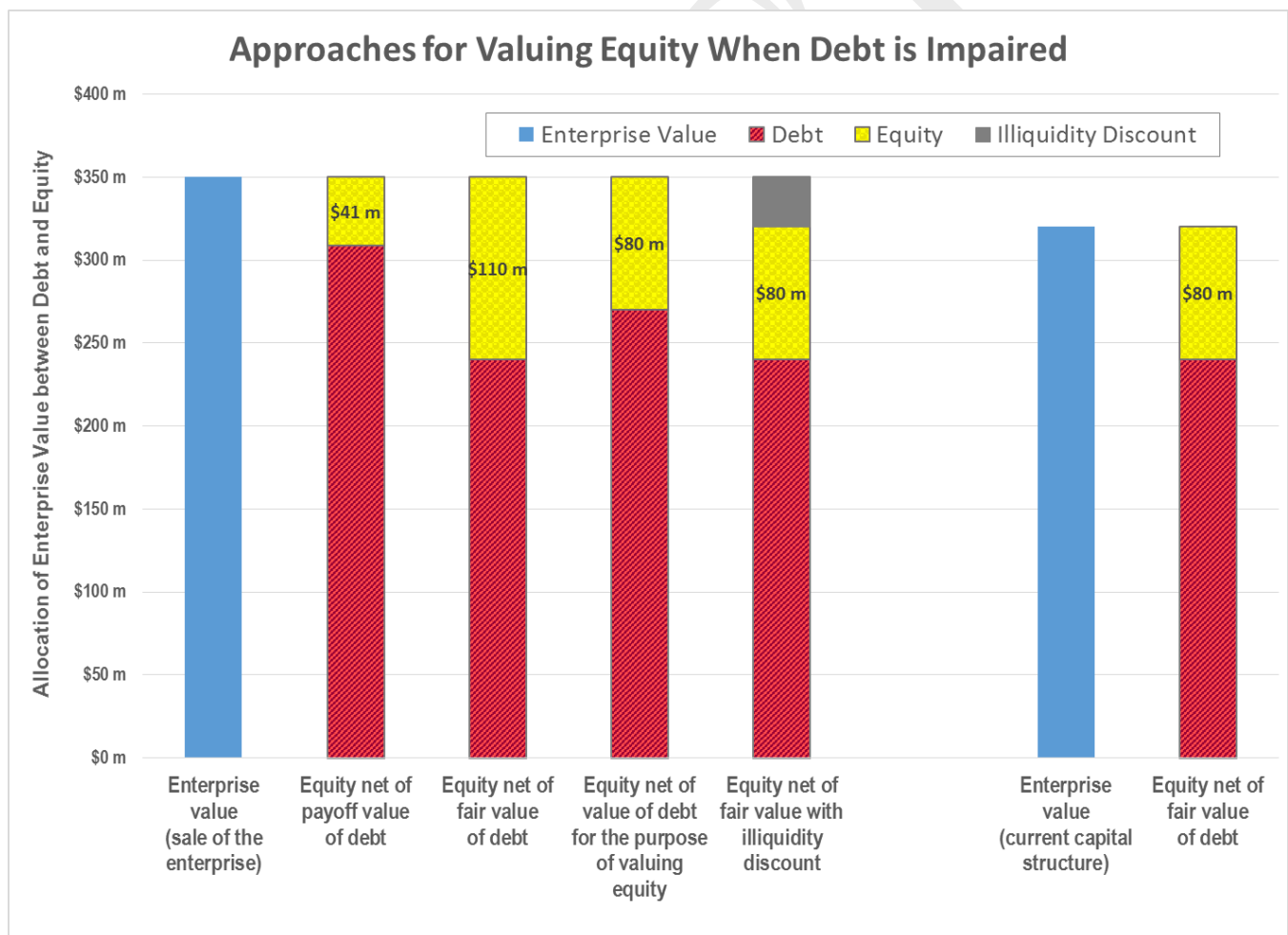
4.48 At one extreme, the debt holders have a contractual right to repayment at \$309 million; thus, it would be feasible (albeit suboptimal) to sell the company on the measurement date and repay the debt at its contractual payoff, resulting in a fair value of equity of \$41 million. As discussed in paragraph 4.45, this approach would be inconsistent with assumptions that market participants, acting in their economic best interest, would make in pricing the asset at the measurement date. Nevertheless, this estimate could be viewed as a lower bound on the fair value of the equity.

⁹ Note that while this approach presumes that market participants will realize value over the expected time horizon for the investment, there may be certain situations in which market participants may choose to realize a lower value with an earlier exit, as the perceived downside risk of an extended time horizon is too great. This result indicates that the required rate of return for the investment under current market conditions is higher than anticipated, and is consistent with market participants' economic best interest in such a situation. As such, it is important to look at the circumstances within a particular market when assessing the expected time horizon and market participants' required rate of return given the risks of the investment under current market conditions. Weighting of scenarios might be appropriate in estimating fair value.

Calibration – Net Equity Value (Fair Value of Debt)

4.49 At the other extreme, even though the assumed transaction is a transfer of the equity interest rather than a sale of the entire business on the measurement date, in the valuation analysis it would not be unreasonable to estimate the fair value of the equity interest by first estimating the enterprise value and subtracting the fair value of debt. In this example, the enterprise value on December 31, 20X3 is \$350 million, and the fair value of debt is \$240 million; hence, if it were feasible to sell the company on the measurement date and repay the debt at this lower price, the fair value of equity would be \$110 million. In practice, however, market participants may not be willing to pay this full value for the equity, since the equity position is more illiquid due to the effective restriction resulting from the change of control provision on the debt. Therefore, this estimate could be viewed as an upper bound on the fair value of the equity.

4.50 The following chart illustrates the lower and upper bound values discussed in paragraphs 4.48–.49, as well as the approaches for estimating the fair value of the interest discussed in paragraphs 4.51–.52 and footnote 13.



Calibration – Net Equity Value (Negotiated Debt Payoff)

4.51 Another approach for estimating the fair value of equity in this fact pattern would consider that the equity investor could negotiate directly with the debt holders to repay the debt at a price lower than the contractual payoff, but higher than the fair value that they would otherwise realize. In this scenario, both parties benefit by completing an earlier exit, giving them an incentive to negotiate. Assuming that the negotiated repayment value would be \$270 million, the resulting equity value is \$80 million.¹⁰ This approach assumes that the total enterprise value and the value of debt that would be realized in a current transaction (via market purchases or negotiations with the debt holders or both) are estimated directly, and that the equity value is measured as the difference. The resulting equity value will generally be consistent with the equity value estimated directly based on the cash flows to equity as described above.¹¹ However, it is often more practical to use the indirect approach for measuring equity value, as market data on the overall cost of capital is more easily available than data on the cost of equity for levered investments.¹² As such, the fair value of the equity interest would be measured based on the controlling enterprise value less the estimated renegotiated debt payoff:

	(\$ millions)
Total enterprise value	\$350
Value of debt for valuing equity (negotiated)	\$270
Fair value of equity	\$ 80

Calibration – Net Equity Value (Fair Value of Debt), adjusted for illiquidity

4.52 A final approach for estimating the fair value of equity in this fact pattern would first consider the equity value based on the enterprise value less the fair value of debt, but then apply a discount for illiquidity consistent with market participant assumptions regarding the cash flows from the enterprise

¹⁰ In this example, the entire business could be sold for \$350 million, but due to the change of control provision, the equity holders could not immediately realize the full business value less the fair value of the debt. Therefore, the sum of the parts (fair value of equity plus fair value of debt) does not equal the whole (fair value of the business). The bid price for the equity can be considered to be \$41 million, based on the value that could be realized if the business were sold without any attempt to minimize the amount payable to the debt holders, giving the debt holders the full \$309 million due upon the change of control. The ask price for the equity can be considered to be \$110 million, based on the value of the business less the fair value of the debt, giving the equity holders the full benefit of the below-market interest rate on the debt without any adjustment for the illiquidity of the position. Per FASB ASC 820-10-35-36C, “the price within the bid-ask spread that is most representative of fair value in the circumstances shall be used to measure fair value.” For the purposes of this example, the fund selected \$80 million, consistent with the fair value of equity based on the cash flows to the equity interests and the estimated required rate of return as discussed in paragraph 4.47. Other estimates within this range also may be reasonable, given the inherent uncertainty of the estimate. Please see paragraphs 6.19–.31 for further discussion.

¹¹ Since the fair value of the equity interest was \$80 million based on the calibrated cash flows to equity and market participants’ required rate of return, the equity investor would realize more value from selling immediately if the fund can negotiate the repurchase of the debt at less than \$270 million. However, it would generally not be appropriate to record a value higher than the indicated value considering the cash flows to equity unless the fund is considering a specific transaction and can demonstrate that the debt can be repurchased at a lower value. For example, if the fund is able to repurchase the debt at \$265 million instead of \$270 million, the fair value of equity would then be estimated as \$85 million.

¹² Another way of looking at this situation is that the \$240 million fair value of debt reflects the differential between the coupon rate and the current market yield. The equity investor can benefit from this full differential only over a time horizon through the maturity of the debt. In these market conditions, a market participant may require a higher rate of return for the asset. Therefore, the company-specific cost of capital through the expected liquidity event (based on the current market yield for the debt and the equity investors’ required rate of return) is higher than the cost of capital for a new third-party buyer using a new debt structure. The result is that the enterprise value used for valuing the equity interest under this valuation premise would be lower than the enterprise value that could be realized by selling the company today; nevertheless, the equity value would be the same or higher, because the equity holder would benefit from the below-market interest rate on the debt.

over the time horizon for the investment and the required cost of capital given current market conditions. Specifically, since market participants investing in the equity could not realize the full difference between the total enterprise value and the fair value of debt without holding the investment over a longer time horizon, they might demand a higher rate of return, commensurate with the risk and illiquidity of the position.¹³ The fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Total enterprise value	\$350
Fair value of debt	\$240
Value of equity (unadjusted basis)	\$110
Discount for illiquidity	(\$ 30)
Fair value of equity	\$ 80

4.53 All of the approaches outlined in paragraphs 4.47, 4.51 and 4.52 are different ways of measuring the fair value of equity considering market participants' required rate of return over the expected time horizon of the investment.

C) December 31, 20X5

4.54 Two years later (four years after the original transaction), the market has recovered and the fund has a signed agreement to sell the company at an enterprise value of \$800 million. The fund expects that the transaction will close in about three months. In light of the regulatory and financing uncertainties associated with the transaction, the fund determined, consistent with market participant assumptions, that there was a 25% chance that the transaction would not close. If this transaction falls through, the fund estimates that the enterprise value for the company would be \$700 million. The debt has a payoff value of 101% of par (\$303 million) and a fair value of par (\$300 million) if the transaction falls through.

Considerations in Evaluating the Unit of Account and the Assumed Transaction

4.55 The unit of account in this example is the equity interest held by the fund (100% of the equity). The assumed transaction would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, which in this case is only three months, assuming the transaction closes as planned. Since the fund will pay the prepayment penalty on the debt if the transaction closes, this prepayment penalty would be considered in estimating the fair value of the equity interest.

¹³ Discounts for illiquidity (also sometimes referred to as *discounts for lack of marketability*) reflect the incremental rate of return that market participants may require to compensate for the illiquidity of a position. When possible, the task force recommends measuring the required rate of return directly, via calibration, rather than applying discounts for lack of marketability to some arbitrary or formulaic calculation. In situations when the valuation approach includes a discount for illiquidity when calibration is not possible, such discounts may be measured using various models considering the volatility (risk) and length of the expected restriction period. See paragraphs B.08.01 –.08.

Calculating the Fair Value of the Equity Interest in Light of the Anticipated Transaction

4.56 Given these assumptions, the fair value of the equity interest in light of the anticipated transaction would be calculated as follows:

<i>(\$ millions)</i>	If the transaction closes	If the transaction falls through
Total enterprise value in this scenario	\$800	\$700
Value of debt in this scenario	\$303	\$300
Value of equity at transaction close, if transaction closes	\$497	n/a
Value of equity in this scenario	\$485*	\$400
Probability that transaction will close / will fall through	75%	25%
Fair value of equity (probability-weighted)	\$464	

** Reflects the expected transaction close price discounted at a 10% annualized required rate of return over the three months to the expected close, considering the risks of the investment.*

Example 2 – 45% of equity held in each of two funds managed by the same General Partner (GP)

A) December 31, 20X1

4.57 Two funds managed by the same GP purchase a company in December 20X1 for \$500 million, consisting of \$200 million in equity and \$300 million in debt, with the two funds each holding 45% of the equity and management holding 10%. The debt has a five-year maturity and includes a change in control provision with repayment at 110% of par if a change of control occurs within the first year, 105% in the second year, 103% in the third year, 101% in the fourth year and par in the fifth year.

Considerations in Evaluating the Unit of Account and the Assumed Transaction

4.58 The unit of account cannot include interests that are not owned by the reporting entity. Thus, in this example, the unit of account is the 45% equity interest in the company owned by the fund, which is the reporting entity. The assumed transaction would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

Fair Value at Initial Recognition

4.59 Given this valuation premise, the next step is to evaluate whether or not the transaction price represents fair value at initial recognition and, if so, to calibrate the valuation model that will be used in subsequent periods to the transaction price. In this example, the acquisition involved five distinct transactions: (1) the sale of the company for \$500 million, (2, 3) each fund's investment in 45% of the equity of the company for \$90 million each, (4) the issuance of 10% of the equity to management and (5) the third-party debt investment for \$300 million. Reviewing the factors that might indicate that the transaction price would not represent fair value from FASB ASC 820-10-30-3A, the fund confirms:

- The transaction is not between related parties.
- The transaction did not take place under duress.
- The unit of account represented by the transaction price for the equity investment (#2 and #3, above) is consistent with the unit of account for the fund's interest (45% of the equity).
- The market in which the transaction takes place is consistent with the principal market (or most advantageous market) for the investment (namely, the private equity market).

4.60 In addition, the fund determines that there are no other reasons that the transaction price would not represent fair value. Therefore, it is reasonable to conclude that the \$90 million transaction price represents the fair value of the 45% equity interest at initial recognition.

Expected Time Horizon for the Investment on the Measurement Date

4.61 In measuring the value of the equity interest, it is presumed that market participants would consider the expected time horizon for the investment, similar to the assumptions made in the original transaction. The Day 1 fair value of the 45% equity interest would be determined under this logic to be \$90 million, including the expected impact of the change in control provisions. As such, the fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Total enterprise value	\$500
Value of debt for valuing equity (fair value)	\$300
Fair value of equity	\$200
Fair value of the fund's 45% equity interest	\$90

Calibration

4.62 The valuation model may then be calibrated to the transaction price. For example, under the income approach, the fund would estimate the expected cash flows for the investment under current ownership through a liquidity event and then calibrate to calculate the required rate of return for the investment on the initial investment date. For subsequent measurement dates, the fund would consider the updated expected cash flows and the change in market participants' required rate of return given current market conditions. A similar thought process would be used under the market approach.

Subsequent Valuation Dates

4.63 In this example, both funds hold the same instruments, and thus, the interests of the equity investors are aligned.¹⁴ Furthermore, since the assumed transaction in this example is the transfer of the 45% equity interest on the measurement date, the valuation premise and approach are consistent with the situation presented in Example 1, where the assumed transaction is the transfer of the 100% equity interest. Thus, the fair value of the fund's 45% interest may be measured considering its pro rata share of the total equity value. The analysis at subsequent measurement dates would be consistent with the analysis outlined in Example 1.

Example 3 – Club Deal, 30% of equity held in each of three funds managed by different GPs

A) December 31, 20X1, Take Private Transaction

4.64 Three funds managed by different GPs take a company private in a club deal, with each fund holding 30% and management holding 10%. The market cap of the company prior to the transaction announcement was \$400 million, with no debt. The funds buy the company during December 20X1 for \$500 million, consisting of \$300 million in equity and \$200 million in bank-financed debt. The debt is prepayable at par.

¹⁴ Please see paragraphs 3.17–.22, “Considering whether investors’ interests are aligned,” for further discussion.

Considerations in Evaluating the Unit of Account and the Assumed Transaction

4.65 The unit of account cannot include interests that are not owned by the reporting entity. Thus, in this example, the unit of account is the 30% equity interest in the company owned by the fund, which is the reporting entity. The assumed transaction would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment. The fair value measurement would consider the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

Fair Value at Initial Recognition

4.66 As in Example 2, the fund first evaluates whether the transaction price represents fair value at initial recognition, and observes that there are no factors that would indicate that it is not. Therefore, it is reasonable to conclude that the transaction price represents fair value at initial recognition, and that \$90 million is the fair value of the 30% equity interest. The “premium” paid to take the company private reflects the improvements that market participants would expect the company to be able to realize given the ownership structure post-transaction. The fair value of the interest would therefore be calibrated to the transaction without adjustment, and reflects the cash flows under current ownership and the investors’ required rate of return. As such, the fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Market cap prior to transaction	\$400
Total enterprise value based on transaction that unifies functional control	\$500
Value of debt for valuing equity	\$200
Fair value of equity	\$300
Fair value of 30% equity interest	\$90

Subsequent Valuation Dates

4.67 In this example, all three funds hold the same instrument, and thus, the interests of the equity investors are aligned.¹⁵ Furthermore, since the assumed transaction in this example is the transfer of the 30% equity interest on the measurement date, the valuation premise and approach are consistent with the situation presented in Example 1, where the assumed transaction is the transfer of the 100% equity interest. Thus, the fair value of the fund’s 30% interest may be measured considering its pro rata share of the total equity value. The analysis at subsequent measurement dates would be consistent with the analysis outlined in Example 1.

¹⁵ Please see paragraphs 3.17–.22, “Considering whether investors’ interests are aligned,” for further discussion.

Example 4 – 100% of equity in a reporting entity with a significant deferred tax asset

A) December 31, 20X5

4.68 In December 20X1, a single fund purchased 100% of the equity of a company for \$500 million, funded entirely with cash. For the three subsequent years following the original acquisition, the company performed below expectations, generating net operating losses (NOLs) of \$100 million per year. From these NOLs, the company estimates a present value of \$95 million in tax benefits¹⁶ considering the investors' required rate of return,¹⁷ which would allow the company to reduce its taxable income in future years. The following year, the market had improved and the demand for the company's products had increased, allowing the company to operate at a net profit by the fourth quarter of 20X5.

- As of this date, the fund estimated that the whole company could be sold for \$425 million. The estimated enterprise value upon a sale does not include the full favorable tax position, because the tax benefits would be limited when the entire company is sold. Instead, the fund estimates that the present value of the favorable tax position upon a sale would be \$20 million.
- Alternatively, the investment may be transferred to a market participant to realize future returns over the expected time horizon for the investment, with an enterprise value of \$400 million considering the cash flows under current ownership (excluding the favorable tax position) and the investors' required rate of return. Under this scenario, the investors for the company's shares would also benefit from the favorable tax position, which on December 31, 20X5 was valued at \$95 million.

Considerations in Evaluating the Unit of Account and the Assumed Transaction

4.69 The unit of account in this example is the equity interest held by the fund (100% of the equity). The assumed transaction would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

Orderly Transaction at the Measurement Date

4.70 The fair value measurement is based on an assumed orderly transaction at the measurement date, reflecting market conditions on that date. Said another way, the fair value measurement would consider the assumptions that market participants would use in pricing the asset, considering all the characteristics of the investment and the facts and circumstances as of the measurement date, including those related to the time horizon for the investment, the investment's risks and market liquidity under current market conditions.

Ramifications of a Change in Control on the Measurement Date

4.71 Under the circumstances, the sale of the entire company on the measurement date would result in a change in control, thereby reducing the proceeds that would inure to the equity holder. In particular, in this example, although the value of the business to a third party is higher than the value under current ownership, the favorable tax benefit would be limited to \$20 million, resulting in a total potential value upon a sale of \$445 million. This suboptimal result is inconsistent with assumptions that market participants, acting in their economic best interest, would use in pricing the asset.

¹⁶ This favorable tax position would also be considered as a Deferred Tax Asset (DTA) for financial reporting purposes. In this example, however, the tax benefits are referred to in more general terms, since the example is focused on the economic value of the tax position, not the accounting treatment or recognition on the company's financial statements.

¹⁷ Note that the investors' required rate of return for a favorable tax position would consider the uncertainty regarding the timing and magnitude of the benefit that may be realized.

Expected Time Horizon for the Investment on the Measurement Date

4.72 To maximize the value of the company including the favorable tax position, the assumed transaction would be to transfer the asset to realize value over the expected time horizon for the investment.

	(\$ millions)
Equity value without favorable tax position	\$400
Value of favorable tax position	\$95
Fair value of equity	\$495

Analogous Situations

4.73 The treatment of the favorable tax position in this example is analogous to other situations in which the company has an asset that would not be transferrable upon a change of control. For example, certain licensing agreements and supplier agreements may have restrictions on transfer.¹⁸ If the business value would be lower without these assets or, in the extreme case, if the business would not be viable without these assets, it would not necessitate that the fair value be lower (or equal to \$0 in the extreme case). Rather, the fair value measurement would be based on the assumptions that market participants would make in pricing the equity interest in an assumed transaction considering all the characteristics of the equity interest, including the characteristics of the non-transferrable assets.

Example 5 – Debt and 100% of equity held within a single fund (single reporting entity)

A) December 31, 20X1

4.74 In December 20X1, a single fund purchases 100% of the equity and 100% of the debt of a company at a valuation of \$500 million, consisting of \$200 million in equity and \$300 million debt. The debt has a five-year maturity and includes a change in control provision with repayment at 110% of par if a change of control occurs within the first year, 105% in the second year, 103% in the third year, 101% in the fourth year and par in the fifth year.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.75 The units of account in this example are the equity position held by the fund (100% of the equity) and the debt position held by the fund (100% of the debt). The fair value of the equity and debt would be reflected separately on the fund's schedule of investments. The assumed transaction for the equity would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions. The assumed transaction for the debt would be the transfer of the debt position to a market participant who would realize value over the expected time to repayment of the debt. Alternatively, the fair value measurement may consider a transaction that involves both the debt and controlling equity position, if market participants would transact for the investment in this manner, consistent with their economic best interest.

¹⁸ It would be unusual for a PE or VC-backed company to enter into such agreements unless the restrictions would lapse within the expected time horizon for the investment. Real world situations where such restrictions may apply, however, would include the situation where a license is granted in a litigation settlement or where a supplier imposes restrictions in order to avoid the sale of a contract to a competitor.

Expected Time Horizon for the Investments on the Measurement Date

4.76 The fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment, while the debt position would be measured assuming a transfer to market participants who will realize value over the expected term of the debt:

	<i>(\$ millions)</i>
Total enterprise value	\$500
Value of debt for valuing equity (fair value)	\$300
Fair value of equity	\$200
Fair value of debt	\$300

Ramifications of Using the Enterprise Value Approach

4.77 Under the enterprise value approach, since the fund owns 100% of both the equity and the debt, the aggregate value of the equity and debt interests would generally be equal to enterprise value. After determining the fair value of the total investment, the fair value would then be allocated to each unit of account for presentation on the Schedule of Investments. As discussed in paragraphs 4.14–.15, the fund should select an approach for allocating the fair value to the individual interests on a reasonable and consistent basis.

Allocation of Value between the Equity and Debt Positions

4.78 As indicated in TIS Section 6910.34, the total fair value should be allocated between the equity and debt positions consistent with the overall valuation premise used to measure fair value. As discussed in Examples 1 and 6, in measuring the value of the equity interest, it is presumed that market participants for the equity interest would realize value over the expected time horizon for the investment. Market participants for the debt position would assume a similar time horizon, since the equity holders have control over the timing of any future liquidity event. Thus, the task force recommends using similar assumptions in the situation where both the equity and debt positions are held within a single reporting entity.

Example 6 – Debt and 100% of equity held within different funds

A) December 31, 20X1

4.79 In December 20X1, two funds purchase 100% of the equity and 100% of the debt of a company at a valuation of \$500 million, consisting of \$200 million in equity (held in Fund X, the equity fund) and \$300 million debt (held in Fund Y, the debt fund).¹⁹ The debt has a five-year maturity and includes a change in control provision with repayment at 110% of par if a change of control occurs within the first year, 105% in the second year, 103% in the third year, 101% in the fourth year and par in the fifth year.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.80 For the equity interest held in Fund X, the unit of account is the equity interest held by the fund (100% of the equity). The valuation considerations for Fund X are identical to Example 1.

4.81 For the debt interest, the unit of account cannot include interests that are not owned by the reporting entity (that is, Fund Y). Thus, in this example, the unit of account is the 100% debt interest in the company owned by Fund Y, which is the reporting entity. The assumed transaction for the debt would be the transfer of the debt position to a market participant who would realize value over the expected time to repayment of the debt.

Expected Time Horizon for the Investments on the Measurement Date

4.82 Since the equity and debt are held in separate funds, the valuations of the debt and equity are performed independently. In particular, the assumed transaction for the debt does not include the sale of the equity, since the debt investors would have no ability to effect such a sale. As such, the change in control provision would not be triggered, and the fair value of the debt would be based on its value given a market participant's view of the likely timing of repayment (typically, maturity, or through the expected timing of a liquidity event) as well as other characteristics of the debt including credit quality and market rates of interest for debt with similar characteristics. As such, the fair value of the debt interest held by Fund Y would be measured assuming a transfer of the position to market participants who will realize value over the expected term of the debt:

	(\$ millions)
Fair value of debt (Fund Y)	\$300

¹⁹ As discussed in paragraph 4.13, since the unit of account is defined in the context of the reporting entity's financial statements, the unit of account cannot include interests that are not owned by the reporting entity. Thus, in this example, the same thought process would apply irrespective of whether Fund X and Fund Y (two separate reporting entities) are managed by the same investment management company or general partner, or whether they are completely unrelated parties. Furthermore, in cases where some equity investors hold debt while others do not, the controlling equity investors have a fiduciary duty to the minority equity investors, and it would not be reasonable to assume that equity holders will pay off the debt at the payoff amount when the fair value of debt considering the contractual terms is lower than the payoff amount. Due to the appearance of conflict of interest, however, it may be difficult for an equity fund to use a valuation model that considers repaying debt at less than par when that debt is held by another fund managed by the same general partner. Therefore, for simplicity, the task force recommends that users of this guide think about Fund X and Fund Y as unrelated parties.

4.83 For the equity interest held by Fund X, fair value would be measured assuming a transfer of the equity interest to market participants who will realize value over the expected time horizon for the investment;

	(\$ millions)
Total enterprise value	\$500
Value of debt for valuing equity	\$300
Fair value of equity (Fund X)	\$200

Fiduciary Duty of the Fund Managers

4.84 Typically, even if both funds are managed by the same investment management company or general partner, the funds would have different fund managers, each acting on behalf of their particular investors in order to avoid conflicts of interest.

B) December 31, 20X3

4.85 Two years later, the company has faced significant challenges. The debt has a payoff value of 103% of par (\$309 million) and a fair value of 80% of par (\$240 million), considering the cash flows through maturity discounted at the current market yield. The value of the enterprise assuming a current transaction is \$350 million, considering the market participant cost of capital based on a new debt structure. The value of equity considering the cash flows to equity after paying the below-market coupon for the debt and the cost of equity based on an equity investor's required rate of return is \$80 million.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.86 For the equity interest held in Fund X, the unit of account is the equity interest held by the fund (100% of the equity). The valuation considerations for Fund X are identical to Example 1.

4.87 For the debt interest, the unit of account cannot include interests that are not owned by the reporting entity (that is, Fund Y). Thus, in this example, the unit of account is the 100% debt interest in the company owned by Fund Y, which is the reporting entity. The assumed transaction for the debt would be the transfer of the debt position to a market participant who would realize value over the expected time to repayment of the debt.

Expected Time Horizon for the Investments on the Measurement Date

4.88 Since the equity and debt are held in separate funds, the valuations of the debt and equity are performed independently. In particular, the assumed transaction for the debt does not include the sale of the equity, since the debt holders would have no ability to affect such a sale. As such, the change in control provision would not be triggered and the fair value of the debt would be based on its value given a market participant's view of the likely timing of repayment (typically, maturity, or through the expected timing of a liquidity event) as well as other characteristics of the debt including credit quality and market rates of interest for debt with similar characteristics.

4.89 Therefore, the fair value of the debt interest held by Fund Y would be measured assuming a transfer of the position to market participants who will realize value over the expected term of the debt:

	(\$ millions)
Fair value of debt (Fund Y)	\$240

4.90 For the equity interest held by Fund X, fair value would be measured assuming a transfer of the equity interest to market participants who will realize value over the expected time horizon for the investment:

	(\$ millions)
Fair value of equity (based on cash flows to equity)	\$ 80

4.91 Alternatively, the fair value of the equity interest could also be measured based on the controlling enterprise value less the estimated renegotiated debt payoff:²⁰

	(\$ millions)
Total enterprise value	\$350
Value of debt for valuing equity (negotiated)	\$270
Fair value of equity	\$ 80

4.92 As a third approach, the fair value of the equity interest could also be measured by subtracting the fair value of the debt from the enterprise value, but then applying a discount for illiquidity to capture market participants' required cost of capital for the investment being valued, given current market conditions:

	(\$ millions)
Total enterprise value	\$350
Fair value of debt	\$240
Value of equity (unadjusted basis)	\$110
Discount for illiquidity	(\$ 30)
Fair value of equity	\$ 80

4.93 In this example, the three different valuation approaches presented reflect different ways that market participants might estimate the fair value of the equity interest, but the assumed transaction in all three approaches is a sale of the equity interest in the same principal market with the same market participants. Given the lack of observable market prices for these investments, it is not uncommon for market participants to estimate value using differing assumptions and different approaches. Therefore, even for the same assumed transaction within the same principal market, there may be several reasonable approaches for estimating fair value. Please see chapters 5–9 for further discussion on valuation methodologies applicable to these types of interests.

²⁰ In this example, the change of control provision would give the debt holders leverage to negotiate a higher payoff if the equity holders were to sell the entire business on the measurement date. Given supply and demand dynamics, it typically would not be possible for the equity holders to purchase 100% of the debt at the equilibrium fair value applicable to smaller trades. Therefore, market participants transacting in the equity typically would not pay the full business enterprise value less the fair value of debt, but instead would consider the expected negotiation dynamics if they were to settle the debt. Equivalently, market participants transacting in the equity would demand a higher rate of return to compensate for the additional illiquidity of the position.

Market participants transacting in the debt, however, typically would not have any expectation that the equity holders would settle the debt in the near term, and therefore would value the debt considering the expected time horizon for repayment of the debt (e.g., maturity or any expected future change of control). The information available in each market is not symmetric, and therefore the debt value used in the two valuation analyses may differ.

Fiduciary Duty of the Fund Managers

4.94 Typically, even when both funds are managed by the same investment management company or general partner, the funds would have different fund managers, each acting on behalf of their particular investors in order to avoid conflicts of interest.

Aggregate Value

4.95 Note that unlike Example 5, it is possible that the aggregate value of the debt and equity interests may not equal the overall total enterprise value. In this example, the \$240 million fair value of debt reflects the differential between the coupon rate and the current market yield. However, the equity investor could not realize that full benefit on the measurement date and, thus, it is likely that market participants would not price the equity instrument based on the full difference between the enterprise value that could be realized in an immediate sale of the company and the fair value of the debt position.

C) December 31, 20X5

4.96 Two years later (four years after the original transaction), the fund has a signed agreement to sell the company at an enterprise value of \$800 million. The fund expects that the transaction will close in about 3 months. In light of the regulatory and financing uncertainties associated with the transaction, the fund determined that there was a 25% chance that the transaction would not close. If this transaction falls through, the fund estimates that the enterprise value for the company would be \$700 million. The debt has a payoff value of 101% of par (\$303 million) and a fair value of par (\$300 million) if the transaction falls through. The fair value of debt based on the traded price is 100.3% of par (\$300.9 million), reflecting debt market participants' expectations regarding the timing of repayment and the likelihood of repayment at a premium, the contractual coupon and other terms of the debt, and the required rate of return.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.97 For the equity interest held in Fund X, the unit of account is the equity interest held by the fund (100% of the equity). The valuation considerations for Fund X are identical to Example 1.

4.98 For the debt interest, the unit of account cannot include interests that are not owned by the reporting entity (that is, Fund Y). Thus, in this example, the unit of account is the 100% debt interest in the company owned by Fund Y, which is the reporting entity.

Expected Time Horizon for the Investments on the Measurement Date

4.99 Since the equity and debt are held in separate funds, the valuations of the debt and equity are performed independently. In particular, the assumed transaction for the debt does not include the sale of the equity. As such, market participants would not assume that the change in control provision would be triggered on the measurement date, and the fair value of the debt would be based on its value given a market participant's view of the likely timing of repayment (typically, maturity, or through the expected timing of a liquidity event) as well as other characteristics of the debt including credit quality and market rates of interest for debt with similar characteristics. Debt market participants would typically not have knowledge of a specific transaction until the transaction is announced.

Calculating the Fair Value of the Equity and Debt Positions in Light of the Anticipated Transaction

4.100 The fair value for the debt and equity interests would be measured assuming a transfer of each of the interests to market participants who will realize value over the expected time horizon for the investment and considering these market participants' assessment about the likelihood and timing of such a liquidity event, as follows:

Before announcement:

(\$ millions)	If the transaction closes	If the transaction falls through
Total enterprise value in this scenario	\$800	\$700
Value of debt in this scenario	\$303	\$300
Value of equity at transaction close, if transaction closes	\$497	n/a
Value of equity in this scenario	\$485*	\$400
Probability that transaction will close / will fall through	75%	25%
Fair value of equity	\$464	
Fair value of debt	\$300.9 (100.3%)**	

* Reflects the expected transaction close price discounted at a 10% annualized required rate of return over the three months to the expected close, considering the risks of the investment.

** Based on the price that could be realized considering the information available in the debt markets.

After announcement:

	(\$ millions)
Fair value of equity	\$464*
Value of debt at transaction close	\$303
Interest to be paid on debt at close	\$4.5**
Value of debt, assuming transaction closes	\$303.2**
Value of debt if transaction falls through	\$300
Fair value of debt	\$302.4***

* Since market participants investing in the equity interest would have the ability to do due diligence with the controlling equity investors, they would have knowledge of the pending transaction and the fair value of the equity interest would be the same before and after the announcement. The debt holders would typically not have knowledge of the pending transaction until it is announced.

** Assumes a 6% coupon and 5.7% market yield for the 3 months until the expected transaction close.

*** Based on the weighted-average value considering the probability that the transaction will close.

Example 7 – Repurchased Debt and 100% of equity in a single fund

A) December 31, 20X2

4.101 In December 20X1, a single fund purchases 100% of the equity of a company at a valuation of \$500 million, consisting of \$200 million in equity and \$300 million in third-party debt. The debt has a five-year maturity, is prepayable at par at any time, and must be repaid at par upon a change in control. One year later, company performance has tracked to plan, overall markets are stable and the enterprise value is still \$500 million. However, risk-free rates have increased significantly, decreasing the fair value of the debt to 80% of par (\$240 million). The fund then buys 10% of the debt back on the secondary market for \$24 million.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.102 The units of account in this example are the equity position held by the fund (100% of the equity) and the debt position held by the fund (10% of the debt). The fair value of the equity and debt would be reflected separately on the fund's schedule of investments. The assumed transaction for the equity would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions. The assumed transaction for the debt would be the transfer of the debt position to a market participant who would realize value over the expected time to repayment of the debt. Alternatively, the fair value measurement may consider a transaction that involves both the controlling equity position and the 10% debt interest, if market participants would transact for the investment in this manner, consistent with their economic best interest. In this case, the fund would still allocate value between the equity and the debt interest on a reasonable and consistent basis for presentation on the Schedule of Investments, as discussed in paragraphs 4.14–.15.

Expected Time Horizon for the Investments on the Measurement Date – Separate Transactions

4.103 If the fund concludes that market participants, acting in their economic best interest, would transact in the interests separately, then the fair value of the equity interest would be measured assuming a transfer of the equity interest to market participants who will realize value over the expected time horizon for the investment, and the fair value for the 10% debt interest would be measured assuming a transfer to market participants who will realize value over the expected term of debt:

	(\$ millions)
Fair value of equity (based on cash flows to equity)	\$220
Fair value of the 10% debt interest (based on the price in the secondary market)	\$ 24

4.104 Alternatively, the fair value of the equity interest could also be measured based on the controlling enterprise value less the estimated renegotiated debt payoff:

	(\$ millions)
Total enterprise value	\$500
Value of debt for valuing equity (negotiated)	\$280
Fair value of equity	\$220

4.105 As a third approach, the fair value of the equity interest could also be measured by subtracting the fair value of the debt from the enterprise value, but then applying a discount for illiquidity to capture market participants' required cost of capital given current market conditions:

	(\$ millions)
Total enterprise value	\$500
Fair value of debt	\$240
Value of equity (unadjusted basis)	\$260
Discount for illiquidity	(\$ 40)
Fair value of equity	\$220

4.106 In this example, the three different valuation approaches presented reflect different ways that market participants might estimate the fair value of the equity interest, but the assumed transaction in all three approaches is a sale of the equity interest in the same principal market with the same market participants. Given the lack of observable market prices for these investments, it is not uncommon for market participants to estimate value using differing assumptions and different approaches. Therefore, even for the same assumed transaction within the same principal market, there may be several reasonable approaches for estimating fair value. Please see chapters 5–9 for further discussion on valuation methodologies.

Expected Time Horizon for the Investments on the Measurement Date – Aggregate Transaction

4.107 If the fund concludes that market participants, acting in their economic best interest, would transact in the interests as a package, then the assumed transaction would be a transaction in the equity and 10% debt interest together. In particular, in this example, the fund concludes that even though they purchased the debt separately, the most advantageous market for exiting the position would be to transact in the interests as a package. Therefore, the fund estimates the fair value of the aggregate position. The fund would then allocate that value to the equity and the 10% debt interest on a reasonable and consistent basis.

	(\$ millions)
Total enterprise value	\$500
Value of debt for valuing equity (negotiated) for 100% of the debt	\$280
Value of equity given value of debt for valuing equity, if the fund did not already hold a portion of the debt	\$220
Fair value of the 10% debt position	\$24
Benefit to the equity holders from locking in fair value for 10% of the debt	\$4
Fair value of equity (adjusted to include the benefit of locking in fair value for 10% of the debt)	\$224
Total fair value of the fund's position (\$24 debt + \$224 equity)	\$248

4.108 By repurchasing a portion of the debt and aggregating it with the corresponding equity interest, the fund captures the difference between the fair values of the separate equity interest and debt interest and the pro-rata fair value of the enterprise for this portion of the investment, resulting in a \$4 million gain. The gain reflects the benefit to the equity holders from having locked-in the below-market price for the debt, avoiding the potential cost of having to settle the debt at the payoff due upon a change of control. Therefore, buying back the debt increases the liquidity of the equity position.²¹

²¹ In this example, since buying back the debt is clearly advantageous, it would be reasonable to ask why the fund did not buy the rest of the debt, or whether the fact that the fund did not buy the rest of the debt provides evidence that the transaction was not as advantageous as the valuation analysis would suggest. One possible explanation is that most debt is not actively traded, and in many cases, only a small amount of the debt might be for sale. Another possible explanation is that the fund might not have had sufficient capital to buy all of the debt, or might have reached the limit on the amount that the fund was allowed to hold in any one portfolio company. The theoretical “value maximizing” decision may be limited by real-world constraints.

Allocation of Value between the Equity and Debt Positions

4.109 The total fair value should be allocated between the equity and debt positions consistent with the overall valuation premise used to measure fair value. One reasonable basis for allocating value amongst the interests could be to estimate the fair value of each instrument independently, considering the assumptions that market participants would use in pricing each instrument, and then to allocate the aggregate fair value considering either the relative fair value of all the instruments (e.g. fair value of equity vs. fair value of debt), or the residual fair value for one of the instruments after subtracting the fair value of the other instruments (e.g. residual fair value of debt after subtracting the fair value of equity, or vice versa). The task force recommends the residual value approach when one or more of the instruments in the aggregate position have observable prices, but another instrument in the aggregate position does not have an observable price, provided this approach results in reasonable allocation of value among instruments. In this example, there is a secondary market price for the debt, which would be considered to be a level 2 input; therefore, it might be appropriate to use the residual value approach to allocate the remaining value to the equity. The total fair value for the units of account would be the same either way, but the fund has a choice about what consistent approach to apply for allocating that value for disclosure on the Schedule of Investments.

Example 8 – Debt Investment with Options or Warrants

A) December 31, 20X1

4.110 In December 20X1, two funds purchase 100% of the equity and 100% of the debt of a company at a valuation of \$500 million, consisting of \$200 million in equity (held in Fund X, the equity fund) and \$300 million debt (held in Fund Y, the debt fund).²² The debt has a five-year maturity, is prepayable at par at any time, and must be repaid at par upon a change in control. Fund Y also receives 20% **warrant coverage**²³ in at-the-money warrants with a five-year term – that is, warrants on 30% of the equity with a strike price of \$60 million.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.111 For the equity interest held in Fund X, the unit of account is the equity interest held by Fund X (100% of the common equity). The assumed transaction for the common equity would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

²² As discussed in paragraph 4.13, since the unit of account is defined in the context of the reporting entity's financial statements, the unit of account cannot include interests that are not owned by the reporting entity. Thus, in this example, the same thought process would apply irrespective of whether Fund X and Fund Y (two separate reporting entities) are managed by the same investment management company or general partner, or whether they are completely unrelated parties. Furthermore, in cases where some equity investors hold debt while others do not, the controlling equity investors have a fiduciary duty to the minority equity investors, and it would not be reasonable to assume that equity holders will pay off the debt at the payoff amount when the fair value of debt considering the contractual terms is lower than the payoff amount. Due to the appearance of conflict of interest, however, it may be difficult for an equity fund to use a valuation model that considers repaying debt at less than par when that debt is held by another fund under the same general partner. Therefore, for simplicity, the task force recommends that users of this guide think about Fund X and Fund Y as unrelated parties.

²³ "Warrant coverage" may be issued with debt or other investments to provide additional upside participation for the investors, and is typically described in terms of a percentage of the dollar amount of the investment (e.g. 20% warrant coverage would provide warrants on instruments with a face value equal to 20% of the amount invested). The value of warrant coverage can vary greatly depending on the other terms negotiated – some warrant coverage is issued in penny warrants, with a penny strike, while other warrant coverage is issued with an at-the-money or out-of-the-money strike price. In addition, in some cases the face value of the instruments may be based on the preferred stock price, but the warrants may be exercisable into common stock.

4.112 For the debt and warrant interests held in Fund Y, the units of account would be the debt position held by Fund Y (100% of the debt) and the warrants held by Fund Y (100% of the warrants). If market participants, acting in their economic best interest, would transact in the interests separately, the assumed transaction for the debt would be the transfer of the debt position to a market participant who would realize value over the expected time to repayment of the debt. The assumed transaction for the warrants would be the transfer to a market participant who would realize value over the expected term of the warrants.

4.113 For the debt and warrant interests held in Fund Y, if market participants, acting in their economic best interest, would transact in the interests as a package, then the assumed transaction would be a transfer of the debt and the warrants to a market participant who would realize value over the expected time horizon for the investment. In this case, the fund would still allocate value between the debt and the warrants on a reasonable and consistent basis for presentation on the Schedule of Investments, as discussed in paragraphs 4.14–.15.

Fair Value at Initial Recognition

4.114 As in the earlier examples, the funds first evaluate whether the transaction price represents fair value at initial recognition, and observe that there are no factors that would indicate that it is not. Therefore, it is reasonable to conclude that the transaction price represents fair value at initial recognition. In this example, the acquisition involved three distinct transactions: (1) the sale of the company for \$500 million, (2) Fund X's investment in 100% of the equity of the company for \$200 million, (3) Fund Y's investment in the debt and warrants for an aggregate of \$300 million. Since no investors bought the debt or the warrants separately, Fund Y would then allocate the \$300 million transaction price between the two instruments on a reasonable and consistent basis, as discussed in paragraphs 4.14–.15.

Ramifications of a Change in Control on the Measurement Date

4.115 An actual "Day 1" sale of the investment would trigger the change in control provision, which would require prepayment of the debt at par. In many cases, a change of control will also truncate the life of the warrants, which would result in total proceeds of \$300 million to the debt and warrants and \$200 million to the equity. In other cases, the warrants may include a provision that requires that they be paid out according to a formula price upon a change of control, thereby reducing the proceeds that the common equity holder would realize (that is, resulting in an immediate loss in the value of the investment). In this example, including the dilution impact of the warrants without also considering the below market interest rate on the debt and the corresponding fair value of debt below par would be inconsistent with the initial transaction and the assumptions that market participants, acting in their economic best interest, would use in pricing the asset.

Expected Time Horizon for the Investment on the Measurement Date – Common Equity

4.116 In measuring the value of the equity, it is presumed that market participants would consider the expected time horizon for the investment. Since the equity holders already had full knowledge of the warrants and the change in control provisions when establishing the transaction price, the Day 1 fair value would be determined to be \$200 million. The observed transaction price already considers market participant assumptions regarding the expected dilution impact of the warrants, the probability and timing of a change of control, and the required rate of return; therefore, no additional adjustments are needed. Typically, equity investors would only agree to include the warrant coverage and the change of control provision for the debt in the context of the overall negotiations, which would also include the coupon rate, allowable leverage, covenants, and other features. As such, the fair value of the common equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Total enterprise value	\$500
Aggregate value of debt + warrants (fair value)	\$300
Fair value of common equity	\$200

Expected Time Horizon for the Investment on the Measurement Date – Debt and Warrants

4.117 Since the common equity is held in a different fund from the debt and warrants, the valuations of these interests are performed independently. In particular, the assumed transaction for the debt does not include the sale of the common equity, since the debt holders would have no ability to affect such a sale. As such, the change in control provision would not be triggered and the fair value of the debt would be based on its value given a market participant's view of the likely timing of repayment (typically, maturity, or through the expected timing of a liquidity event) as well as other characteristics of the debt including credit quality and market rates of interest for debt with similar characteristics. Similarly, the fair value of the warrants would be based on their value given a market participant's view of the expected term of the warrants, given the contractual term as well as any provisions that might truncate the life of the warrants, for example, if the warrants must be settled upon a change of control.

4.118 Therefore, the fair value of the debt would be measured assuming a transfer to market participants who will realize value over the expected term of debt, and the fair value of the warrants would be measured assuming a transfer to market participants who will realize value over the expected term of the warrants. Using market participant assumptions regarding the equity volatility and the expected term of the warrants, Fund Y allocates the value by calibrating to the transaction as follows:

	(\$ millions)
Aggregate fair value of debt + warrants	\$300
Fair value of warrants	\$15
Fair value of debt	\$285

4.119 To calibrate the model that will be used in valuing the debt at subsequent valuation dates, Fund Y also confirms that the calibrated market yield for the debt implied by this allocation is reasonable given the characteristics of the investment.

4.120 Alternatively, if the fund concludes that market participants, acting in their economic best interest, would transact in the interests as a package, then the assumed transaction would be a transaction in the debt and warrants together. In this case, the fund would estimate the fair value of the aggregate position, and then allocate that value to the debt and the warrants on a reasonable and consistent basis.

Calibration – Total Enterprise Value

4.121 The valuation model for valuing the business as well as each instrument may then be calibrated to the transaction price. For example, for valuing the business under the income approach, the funds would estimate the expected cash flows for the investment under current ownership through a liquidity event and then calibrate to calculate the required rate of return for the investment on the initial investment date. For subsequent measurement dates, the funds would consider the updated expected cash flows and the change in market participants' required rate of return given current market conditions. A similar thought process would be used under the market approach.

Calibration – Common Equity

4.122 Using the total enterprise value, Fund X would estimate the fair value of the common equity by subtracting the fair value of the debt and the warrants given market participants' expectations regarding the timing of a change of control. Fund X might also estimate the fair value of the common equity by considering the enterprise value less the aggregate payoff for the debt and the warrants, if that approach is consistent with the way that market participants would estimate the fair value of the common equity given the facts and circumstances as of the measurement date.

Calibration – Debt and Warrants

4.123 Fund Y would estimate the fair value of the debt given the calibrated market yield for the investment, the change in the company's credit risk and changes in market yields since the transaction date, the contractual maturity, the prepayment feature, and any change in market participants' expectations regarding the timing of a change of control. Since the debt is prepayable at par at any time, the fair value of the debt would be unlikely to increase significantly even if the market yield falls, although the warrants may provide some upside for the investment. Using the total enterprise value, Fund Y would estimate the fair value of the warrants by subtracting the fair value of the debt and then allocating the remaining total equity between the common equity and the warrants, given the contractual term of the warrants and market participants' expectations regarding the timing of a change of control. Market participants may consider the likely behavior of the controlling equity investors in assessing the probability of a near-term change of control.

Subsequent Valuation Dates

4.124 In this example, since the funds hold different instruments, their interests are not aligned.²⁴ The assumed transaction for Fund X's holding is the transfer of the common equity interest on the measurement date, given market participant expectations regarding the timing of a change of control and their required rate of return. The assumed transactions for Fund Y's holdings are the transfer(s) of the debt interest and the warrants on the measurement date, given market participant expectations regarding the timing of a change of control. Thus, the analysis at subsequent measurement dates would follow the calibration principle as described previously.

B) December 31, 20X3

4.125 Two years later, the company has faced significant challenges. The debt has a payoff value of par (\$300 million) and a fair value of 80% of par (\$240 million), considering the cash flows through maturity discounted at the current market yield. The value of the enterprise assuming a current transaction is \$350 million, considering the market participant cost of capital based on a new debt structure. The value of equity considering the cash flows to equity after paying the below-market coupon for the debt, the upside allocation to the warrants and the cost of equity based on an equity investor's required rate of return is \$75 million.

Expected Time Horizon for the Investments on the Measurement Date – Common Equity

4.126 For the common equity interest held by Fund X, fair value would be measured assuming a transfer of the equity interest to market participants who will realize value over the expected time horizon for the investment:

	(\$ millions)
Fair value of equity (based on cash flows to equity)	\$ 75

²⁴ Please see paragraphs 3.17–.22, "Considering whether investors' interests are aligned," for further discussion.

4.127 Alternatively, the fair value of the equity interest could also be measured based on the controlling enterprise value less the estimated renegotiated debt payoff:

	(\$ millions)
Total enterprise value	\$350
Value of debt and warrants for valuing equity (negotiated)	\$275
Fair value of equity	\$ 75

4.128 As a third approach, the fair value of the equity interest could also be measured by subtracting the fair value of the debt and the warrants from the enterprise value, but then applying a discount for illiquidity to capture market participants' required cost of capital given current market conditions:

	(\$ millions)
Total enterprise value	\$350
Fair value of debt	\$240
Fair value of warrants	\$ 5
Value of equity (unadjusted basis)	\$105
Discount for illiquidity	(\$ 30)
Fair value of equity	\$ 75

Expected Time Horizon for the Investments on the Measurement Date – Debt and Warrants

4.129 Since the equity and debt are held in separate funds, the valuations of the debt and equity are performed independently. In particular, the assumed transaction for the debt does not include the sale of the equity, since the debt holders would have no ability to affect such a sale. As such, the change in control provision would not be triggered and the fair value of the debt would be based on its value given a market participant's view of the likely timing of repayment (typically, maturity, or through the expected timing of a liquidity event) as well as other characteristics of the debt including credit quality and market rates of interest for debt with similar characteristics.

4.130 Therefore, the fair value of the debt interest and the warrants held by Fund Y would be measured assuming a transfer of each position (or of both positions) to market participants who will realize value over the expected term of the debt and warrants. Using market participant assumptions regarding the equity volatility and the expected term of the warrants, Fund Y estimates the fair value of the aggregate position as follows:

	(\$ millions)
Fair value of debt (Fund Y)	\$240
Fair value of warrants (Fund Y)	\$ 5

4.131 If the fund concludes that market participants, acting in their economic best interest, would transact in the interests as a package, then the assumed transaction would consider the debt and warrants together. In this case, the fund would estimate the fair value of the aggregate position, and then allocate that value to the debt and the warrants on a reasonable and consistent basis. To estimate the fair value of the aggregate position, the fund would either need to estimate the fair value of the warrants directly, or to estimate the yield that market participants would require for the debt given the warrant coverage.²⁵

4.132 Once the fund has determined the fair value of the interests in aggregate, the fund would then allocate the value to the instruments on a reasonable and consistent basis. The fund has a choice about what consistent approach to apply to allocate the aggregate fair value amongst the instruments. Irrespective of the allocation approach chosen, however, the value assigned to any individual instrument held would not exceed the aggregate fair value of the position. In this example, the common equity is held in a different fund, and the aggregate fair value of the debt and warrants held by Fund Y is less than par. Therefore, it would not be reasonable for Fund Y to mark the debt at par, even though the business value is sufficient to cover the payoff amount of the debt.

Aggregate Value

4.133 Note that unlike Example 5, it is possible that the aggregate value of the debt and equity interests may not equal the overall total enterprise value. In this example, the \$240 million fair value of debt reflects the differential between the coupon rate and the current market yield, and the \$5 million fair value of the warrants reflects the dilution impact to the common equity on the upside. However, the common equity investor could not realize that full benefit on the measurement date and, thus, it is likely that market participants would not price the common equity based on the full difference between the enterprise value that could be realized in an immediate sale of the company and the fair value of the debt position plus the warrants.

C) December 31, 20X4

4.134 One year later (three years after the original transaction), the business value has recovered to \$500 million, and debt yields in the overall market have fallen substantially, making it advantageous for Fund X to refinance. To avoid dilution on the upside, Fund X also negotiates with Fund Y to buy out the warrants.

Calculating the Fair Value of the Equity and Debt Positions in Light of the Anticipated Negotiations

4.135 The fair value for the debt and equity interests would be measured assuming a transfer of each of the interests to market participants who will realize value over the expected time horizon of the investment and considering these market participants' assessment about the likelihood and timing of repayment of the debt and the term of the warrants. Since the debt is prepayable at par at any time, the fair value of the debt would be unlikely to increase significantly above par even though its coupon is higher than the market yield. Market participants would also include some value for the warrants, although this value would likely be lower than at inception since the warrants have only two years of remaining contractual life. Based on these considerations, Fund Y values the debt and warrants as follows:

²⁵ The yield that market participants would require for the debt given the warrant coverage may be estimated by calibrating to the initial transaction, or by observing comparable transactions where market participants transact in debt with warrant coverage. As the enterprise value changes at subsequent measurement dates, however, the warrants will become further in- or out-of-the-money, deviating from normal warrant coverage terms observable in the market. Therefore, the task force recommends estimating the fair value of the warrants directly and adding the fair value of the debt given the total market yield.

Before beginning negotiations with Fund X:

	(\$ millions)
Total Enterprise Value	\$500
Fair value of debt (Fund Y) (based on the expected timing of refinancing, given the movement in market yields and considering that the debt is prepayable at par)	\$300
Fair value of warrants (Fund Y) (considering the total equity value, the strike, volatility and remaining term)	\$ 10
Common equity value (Fund X)	\$190

After beginning negotiations with Fund X:

	(\$ millions)
Fair value of debt (Fund Y)	\$300
Fair value of warrants (Fund Y)	\$ 12*
Common equity value (Fund X)	\$190**

* The fair value of the warrants after negotiations commence is based on the expected outcome, and may be higher or lower than the value that Fund Y estimated without this information, depending on the negotiation dynamics.

In this example, Fund X initiated the negotiations because the investors wanted to avoid further dilution on the upside, and thus, the warrant value might rise in the negotiations as the price moves toward the higher end of the bid-ask spread.

** In this example, since the negotiations resulted in a higher price for the warrants than originally anticipated, Fund X considered the total enterprise value to be \$502 million instead of \$500 million.

Example 9 – Distressed Equity Investment with Options or Warrants

A) December 31, 20X3

4.136 In December 20X1, a single fund, Fund X, purchased 100% of the equity of a company at a valuation of \$500 million, consisting of \$200 million in equity and \$300 million in third-party debt. The third-party debt has a five-year maturity and includes a change in control provision with repayment at 110% of par if a change of control occurs within the first year, 105% in the second year, 103% in the third year, 101% in the fourth year and par in the fifth year.

4.137 Two years later, in December 20X3, the company has faced significant challenges, and earnings have fallen to the point where the company is in default of its debt coverage covenants. The value of the enterprise assuming a current transaction is \$350 million, considering the market participant cost of capital assuming the debt is refinanced, but the value that could be realized in liquidation (fire sale) would be substantially lower. The debt has a payoff value of 103% of par (\$309 million), and a fair value of 80% of par (\$240 million), considering the cash flows through the expected maturity discounted at the current market yield, but without considering any repayment due to covenants.²⁶

²⁶ Leveraged loans frequently include covenants requiring that the company maintain a certain level of *EBITDA coverage* or a maximum *debt-to-asset ratio* or other such ratios. These covenants reduce the likelihood of a loss of principal by requiring the borrower to cure the covenant violation or repay the debt early, protecting the lender. This example assumes that the company performance has declined to the point that it has violated one or more covenants, but the company can cure the covenant violation by repaying \$50 million of the outstanding debt balance (reducing the par value of the debt from \$300 million to \$250 million).

4.138 To cure the default, the company needs to raise \$51.5 million to pay down the debt to \$250 million par value. Since Fund X does not want to increase its investment, the company needs to raise a new financing. The company markets the investment opportunity for a reasonable and customary period and obtains multiple bids, ultimately completing a transaction with a new investor, Fund Y, who is the highest bidder and agrees to invest \$50 million in a participating preferred stock with a \$50 million liquidation preference and 50% equity participation. Fund X and Fund Y agree to share control over the business, but Fund X has the right to veto any transactions for two years. Fund Y also agrees to invest an additional \$1.5 million to cover the prepayment penalty, receiving warrants on common corresponding to 5% of the total equity, with a \$5 million strike price.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.139 For the equity interest held in Fund X, the unit of account is the equity interest held by Fund X (100% of the common equity, representing 50% of the fully-diluted equity excluding the out-of-the-money warrants). The assumed transaction for the common equity would be a transfer of the equity interest to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions.

4.140 For the equity interests held in Fund Y, the units of account are the preferred equity interest held by Fund Y (100% of the preferred equity, representing 50% of the fully-diluted equity excluding the out-of-the-money warrants) and the warrants held by Fund Y (100% of the warrants, representing 5% of the fully-diluted equity including the warrants). The assumed transaction for the preferred equity would be the transfer of the preferred equity position to a market participant who would realize value over the expected time horizon for the investment. The assumed transaction for the warrants would be the transfer to a market participant who would realize value over the expected term of the warrants. Alternatively, the fair value measurement may consider a transaction that involves both the preferred equity and the warrants, if market participants would transact for the investment in this manner, consistent with their economic best interest.

Fair Value at Initial Recognition

4.141 As in the earlier examples, the funds first evaluate whether the transaction price represents fair value at initial recognition. The funds review the factors that might indicate that the transaction price would not represent fair value from FASB ASC 820-10-30-3A, and confirm:

- a. The transaction is not between related parties.
- b. The transaction did not take place under duress. In particular, in this example, the company had an adequate exposure period and solicited multiple offers.
- c. The unit of account represented by the transaction price for the preferred equity investment is consistent with the unit of account for Fund Y's interest (100% of the preferred equity and warrants).
- d. The market in which the transaction takes place is consistent with the principal market (or most advantageous market) for the investment (namely, the private equity market).

4.142 In addition, the funds determine that there are no indicators that the transaction price would not represent fair value. Therefore, it is reasonable to conclude that the \$51.5 million transaction price for the preferred equity and warrants represents the fair value of Fund Y's interest at initial recognition. However, even with an adequate exposure period, given the challenges associated with raising capital for a company in this position, it is also reasonable for the funds to estimate the total enterprise value using other methods, and then consider an additional calibration factor or discount for illiquidity reflecting the negotiation dynamics. In this example, the total enterprise value would support a higher value for the interests, indicating that the transaction price incorporates a discount for illiquidity, as discussed further in paragraphs 4.144–.145.

Ramifications of a Change in Control on the Measurement Date

4.143 An actual "Day 1" sale of the investment would trigger the change in control provision, which would require prepayment of the debt at 103% of par (\$257.5 million after the \$51.5 million repayment funded by the new investment), and leaving \$92.5 million for the total equity. The preferred stock would then receive its \$50 million liquidation preference, and then preferred and common would share, receiving \$21.5 million each. The warrants would be out of the money, and would receive no value. This approach would give Fund Y a \$21.5 million Day 1 gain, and would give Fund X only \$21.5 million, when Fund X could have realized a minimum of \$41 million if the fund had chosen to sell rather than bringing in Fund Y. Therefore, this result is inconsistent with the transaction and the assumptions that market participants, acting in their economic best interest, would use in pricing the asset.

Expected Time Horizon for the Investment on the Measurement Date

4.144 In measuring the value of the equity, it is presumed that market participants would consider the expected time horizon for the investment. Since Fund X has the right to prevent a transaction for two years and it would be to their advantage to do so, a market participant would consider an expected time horizon of at least two years. The fair value of debt is thus 87% of par (\$217.6 million), considering the debt cash flows through the expected timing of a change of control (2 years, rather than the 3 years remaining to maturity), discounted at the current market yield. As such, the fair value of the common equity interest, the preferred equity interest and the warrants would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment:

	(\$ millions)
Total enterprise value	\$350.0
Fair value of debt	\$217.6
Fair value of equity, assuming full benefit to equity	\$132.4
Fair value of preferred equity liquidation preference (based on the \$50 million debt-like payoff discounted at the market participants' required rate of return)	\$32.0
Fair value of residual equity	\$100.4
Fair value of warrants (based on the total equity value, strike price, volatility and expected term)	\$1.4
Allocated value of common equity (50% of residual) ²⁷	\$49.5
Allocated value of preferred equity (50% of residual plus the fair value of the liquidation preference)	\$81.5
Fair value of preferred equity (calibrated to the transaction price less the fair value of the warrants)	\$50.1
Implied negotiation discount or discount for illiquidity ²⁸	38.5%

Calibration

4.145 Given the challenges associated with raising capital for a company in this position, it appears that the allocated value of Fund Y's investment prior to adjustment for illiquidity exceeds its cost. At the same time, however, the company pursued an orderly process and Fund Y provided the best terms among the investors identified. In addition, although Fund Y shares control with Fund X in making decisions for the company, Fund X has veto rights over any transactions for two years following the transaction, and thus, Fund Y cannot sell the company to realize an immediate gain. Therefore, it is reasonable to include an illiquidity discount in the valuation model used for valuing the investments.²⁹

Subsequent Valuation Dates

4.146 In this example, since the funds hold different instruments, their interests are not aligned.³⁰ The assumed transaction for Fund X's holding is the transfer of the common equity interest on the measurement date, given market participant expectations regarding the timing of a change of control and their required rate of return. By incorporating the two year holding period, the analysis captures the upside

²⁷ Fund X would also need to consider whether it would be able to realize this value in a sale of their common equity interest, or whether an illiquidity discount would apply to the fund's interest as well, in light of the transaction.

²⁸ The implied discount in this example reflects the negotiation dynamics and is calibrated to the transaction price given the other assumptions used in the example. In subsequent periods, the discount would be updated to reflect the change in the expected time horizon of the investment as well as any change in the risk profile (volatility). There are many approaches for estimating discounts for illiquidity; please see chapter 9, "Control and Marketability," for a discussion.

²⁹ It would also theoretically be possible to calibrate to the transaction without including a discount for illiquidity or negotiation discount by assuming a lower enterprise value. However, given the company's need for new investment, the limited availability of market participants who have interest in making investments in distressed companies, and the high rates of return that these investors typically require, it is reasonable to assume that the negotiation dynamics favored the new investor. Furthermore, financing rounds that are senior to previous rounds may not provide a good indication of the equity value for the enterprise, because they may result in models that do not appropriately capture the value of the junior investor interests, especially when the investors holding the junior interests have control or influence over the timing of the future liquidity event. Please see paragraphs 8.42–.45 for further discussion.

³⁰ Please see paragraphs 3.17–.22, "Considering whether investors' interests are aligned," for further discussion.

potential for Fund X's investment. The assumed transaction(s) for Fund Y's holdings are the transfer of the preferred equity interest and the warrants on the measurement date, given market participant expectations regarding the timing of a change of control and their required rate of return. By incorporating the two year minimum holding period, the analysis captures the risk to the preferred stock and the upside potential for the warrants. The analysis at subsequent measurement dates would use consistent valuation methodologies and update the assumptions used as of each measurement date to reflect the company's performance and current market conditions.

Example 10 – Multiple Investments in Different Classes of Equity

A) December 31, 20X4

4.147 On December 20X1, a single fund, Fund X, purchased the Series A preferred stock in a newly-formed company, investing \$5 million for 33.3% of the equity at a price of \$1 per share (\$15 million post-money valuation). One and a half years later, in June 20X3, the company had performed well, and the fund purchased the Series B preferred stock, investing \$10 million for 25% of the equity at \$2 per share (\$40 million post-money valuation).

4.148 In December 20X4, the company has continued to perform well, but now needs a significant amount of capital to expand its workforce, ramp up sales and scale production. The company decides to bring in another investor, Fund Y, in the Series C preferred stock, raising a total of \$50 million for 33.3% of the equity at \$5 per share (\$150 million post-money valuation³¹). Fund Y purchases \$35 million of the Series C, and Fund X purchases the remaining \$15 million. Each class of preferred stock has a 1x liquidation preference and is convertible 1:1, and the Series C preferred is senior to Series A and B, which in turn are senior to common. The Series C preferred also has veto rights over any transactions or new financings, voting as a class. The preferred stock is forced to convert to common upon a qualified IPO.

4.149 Following all of these financings, on a fully diluted basis, the common stock, Series A, Series B and Series C preferred shares represent 33.3%, 16.7%, 16.7% and 33.3% of the equity of the company, respectively. Fund X holds 100% of the Series A and B and 30% of the Series C, for a total interest of 43.3%; Fund Y holds 70% of the Series C, for a total interest of 23.3%.

Considerations in Evaluating the Units of Account and the Assumed Transactions

4.150 The units of account in this example are the classes of preferred stock held by each fund (i.e., Series A, B and C preferred stock for Fund X, and Series C preferred stock for Fund Y). The assumed transaction for each fund would be a transfer of that fund's preferred stock holdings or a transfer of each preferred equity class separately, to a market participant to realize value over the expected time horizon for the investment, consistent with the assumptions that market participants, acting in their economic best interest, would use in pricing the asset on the measurement date under current market conditions. If Fund X determines that market participants, acting in their economic best interest, would transact in the interests as a package, then the assumed transaction would be a transaction in all three preferred equity classes together. In this case, the fund would still allocate value on a reasonable and consistent basis between the three classes for presentation on the Schedule of Investments, as discussed in paragraphs 4.14–15.

³¹ Market participants in the private equity and venture capital industry typically negotiate transactions by referencing the pre-money or post-money value calculated on a fully-diluted basis. The negotiated price for the current financing equals the pre-money value divided by the pre-money common-stock equivalents, and the post-money value equals the price for the current financing multiplied by the post-money common-stock equivalents. In addition to negotiating the price, market participants also negotiate the specific features for the new round, including both economic rights and control features. In valuing different classes of equity for financial reporting purposes, it would be appropriate to consider the way that market participants would value these features. To the extent that different classes of equity have different values, the total equity value measured as the sum of the values of the individual classes may not equal the post-money value used in the negotiations.

Fair Value at Initial Recognition

4.151 As in the previous examples, the funds first evaluate whether the transaction price represents fair value at initial recognition, and observe that there are no factors that would indicate that it is not. Therefore, it is reasonable to conclude that the transaction price for the Series C preferred stock represents fair value at initial recognition. The fair values of Fund X and Fund Y's Series C interests would therefore be calibrated to the transactions without adjustment, and reflect the cash flows under current ownership and the investors' required rate of return. The fair values of Fund X's Series A and B interests would also be calibrated to the Series C transaction price, adjusting for differences between the classes of equity.

Expected Time Horizon for the Investment on the Measurement Date

4.152 In measuring the value of the equity, it is presumed that market participants would consider the expected time horizon for the investment. The expected future liquidity event for the Series A and Series B preferred stock is the same as for the Series C preferred stock – that is, a sale of the company or an IPO. If the company is successful, all classes of preferred stock will convert into common in order to participate in the upside; if the company is less successful, the Series C has a higher liquidation preference than the Series A and B and has seniority, placing the Series A and B in a position of more risk. As such, the fair value of the equity interest would be measured assuming a transfer to a market participant who will realize value over the expected time horizon for the investment, using a model that captures the expected cash flows to each class of equity³² and the market participants' required rate of return:

	(\$ millions)
Post-money value (based on common stock equivalents)	\$150
Fair value of Series C preferred (total financing)	\$50

4.153 Using market participant assumptions regarding the expected time horizon for the investment, the likelihood of a high value exit, and the equity volatility, Fund X estimates the fair value of the fund's interests by calibrating to the transaction as follows:

	(\$ millions)
Fair value of Series C preferred (Fund X investment)	\$15
Post-money value of Series B preferred	\$25
Post-money value of Series A preferred	\$25
Adjustment for differences among classes ³³	(\$5)
Fair value of aggregate equity interest	\$60

Subsequent Measurement Dates

4.154 In this example, since the funds hold different instruments, their interests are not aligned.³⁴ The assumed transaction for Fund X's holding is the transfer of Fund X's preferred stock interests on the

³² Note that venture capital investments may realize cash flows even if the business as a whole has negative cash flows, since it is not uncommon for venture-backed businesses to be acquired or complete an IPO before they reach profitability.

³³ There are many approaches for estimating the fair value of equity interests in complex capital structures. The purpose of this example is to discuss issues relating to the unit of account and the assumed transaction for venture capital investments. Therefore, for the purposes of this example, the valuation includes an adjustment for differences among the classes of equity, but does not provide details for how this adjustment was estimated. The fair value of the aggregate equity interest would then be allocated to the three classes of preferred, reflecting the fair value of each class. Please see chapter 8, "Valuation of Equity Interests in Complex Capital Structures," for further discussion.

³⁴ Please see paragraphs 3.17–.22, "Considering whether investors' interests are aligned," for further discussion.

measurement date, given market participant expectations regarding the timing of a change of control and their required rate of return. The assumed transaction for Fund Y's holding is the transfer of Fund Y's preferred stock interest on the measurement date, given market participant expectations regarding the timing of a liquidity event and their required rate of return. In situations where there are multiple classes of equity, it is important not only to consider the total enterprise value, but also the way that the enterprise value might evolve through the liquidity event, and the corresponding impact on the cash flows and risk profile for each instrument. The analysis at subsequent measurement dates would use consistent valuation methodologies and update the assumptions used as of each measurement date to reflect the company's performance and current market conditions.

Summary

4.155 Determining the unit of account and the assumed transaction for measuring the fair value of investments requires careful consideration of the definition of the assets to be measured, consistent with the specific investments in a given portfolio company held within each reporting entity. In addition, after identifying the assets, it would be appropriate for investment companies to consider the way that market participants would transact in these assets, grouping assets within a reporting entity if that grouping is consistent with their economic best interest. Finally, given the variety of investment strategies followed in this industry and the way that value is expected to be realized for these investments, it would be appropriate for investment companies to consider market participant assumptions regarding the expected time horizon for each investment as well as market participants' required rate of return given the characteristics of the investment and current market conditions. This chapter has presented several examples that illustrate this process in different situations. Chapters 5–9 discuss valuation methodologies in more detail.

Chapter 5

Overview of Valuation Approaches

- 5.01** In the process of estimating value, where possible best practice is to apply multiple valuation approaches and appropriate valuation methods using informed professional judgment in assessing which approaches and methods are most appropriate and how the results should be evaluated in reaching the concluded fair value. The use of informed professional judgment is an essential component of estimating value. Also, it is important for the fund to consider facts and circumstances specific to the subject company and the interests being valued.
- 5.02** As a foundation for estimating value, and before diving into the details on any particular valuation approach or method, it is critical to start by understanding what the business is. Is it a service business? Manufacturing? What industry does it operate in? What is its customer base? What is the stage of its development? What is the portfolio company's strategy and expected ultimate exit market? Please see chapter 1, "Overview of the Private Equity and Venture Capital Industry and its Investment Strategies," and chapter 3, "Market Participant Assumptions," for further discussion of these issues.
- 5.03** Although many valuation methods are used in practice to estimate value for an enterprise and the interests in the enterprise: all such valuation methods fall under one of the three approaches: the market, income, and asset approaches.¹ This chapter discusses in detail the three approaches and the significant assumptions that have the most effect on, and relevance to, each approach.
- 5.04** The fund generally will consider more than one valuation approach and method in estimating the value of an enterprise and the interests in the enterprise.² Because estimating fair value is not an exact science, value indications from different methods

¹ FASB ASC 820 describes three valuation approaches: market, income, and cost. The concepts underlying FASB market, income, and cost approaches apply broadly to the valuation of discrete assets and business enterprises. Within FASB's cost approach concept, practitioners distinguish valuations of individual assets and business enterprises by using different terminology. The cost approach is said to have been applied when valuing individual assets, and the asset approach is said to have been applied when valuing business enterprises. The *International Glossary of Business Valuation Terms*, which has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of SSVS No. 1, defines *asset approach* as "[a] general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities." This guide addresses valuation of equity and debt investments in privately held enterprises. As a result, this guide focuses on the three approaches that can be used to value an enterprise (market, income, and asset) and describes the cost approach in the context of valuing individual assets.

² For purposes of this guide, *enterprise value* is defined as the value of equity plus interest-bearing debt. In broader valuation practice, the term *enterprise value* is sometimes used to refer to the value of equity, plus interest-bearing debt, less all cash and equivalents; however, for this guide, the PE/VC Task Force (task force) defines *enterprise value* to include cash and cash equivalents. For purposes of this guide, *equity value* is defined as the enterprise value less the value of debt a market participant would use to determine the value of equity, measured considering the investors' risk-adjusted expected returns from their investment.

will not necessarily reconcile, but the results of one valuation method can be used to corroborate, or can otherwise be used in conjunction with, the results of one or more other valuation methods in estimating value. If the fund has applied multiple valuation methods, and one result is significantly different from the other(s), the fund would need to assess the reasons for the differences. When there are significant differences, it is recommended that the fund review and revisit the valuation methods, relevant valuation inputs, and the assumptions underlying the valuation methods. If one or more of the three valuation approaches discussed in this chapter is not used, it is a best practice for the fund to document the reason why the other approaches were not used,³ even if this guide indicates that a certain valuation approach may not be appropriate in certain situations or that a certain valuation approach may be more appropriate than another approach in certain situations. The valuation approaches and methods considered and the reasons for the valuation approaches and methods chosen are important factors in the estimation of fair value.

- 5.05** As noted in the previous paragraph, this guide includes recommendations about certain valuation approaches and methods being more or less appropriate in certain situations. It is important to interpret all such recommendations within the context of current, relevant, and appropriate valuation standards.

Market Approach

- 5.06** According to the Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) glossary, the *market approach*⁴ is “[a] valuation approach that uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities, such as a business.” The market approach bases the value measurement on what other similar enterprises or comparable transactions indicate the value to be. Under this approach, the fund examines investments by unrelated parties⁵ in comparable

³ Under Statement on Standards for Valuation Services (SSVS) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), and the Appraisal Foundation’s *Uniform Standards of Professional Appraisal Practice*, a valuation specialist should consider all three approaches (market, income, and asset), and if one or more is not used, then the valuation specialist should explain such nonuse. Under Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 820-10-35-24, a reporting entity should use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs. FASB ASC 820-10-35-24B indicates that, in some cases, a single valuation technique will be appropriate, but in other cases, multiple valuation techniques will be appropriate.

⁴ The *International Glossary of Business Valuation Terms*, which has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of SSVS No. 1, defines *market approach* as a “general way of determining a value indication of a business, business ownership interest, security, or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities, or intangible assets that have been sold.” It is also referred to as *market-based approach*.

⁵ The meaning of arm’s length has varying interpretations in practice. For example, some might consider the sale of preferred stock in a second round of financing to an existing investor a related-party transaction, even if other preferred shares in the same round are sold to new shareholders. A full discussion of this issue is beyond the scope of this chapter, but the reader should be aware that different interpretations of arm’s length do exist and should be adequately explored and explained in the valuation report.

instruments of the portfolio company or examines transactions in comparable assets or securities of comparable enterprises. Financial and nonfinancial metrics (see paragraphs 5.25–.26 and 5.29–.30) may be used in conjunction with the market approach to estimate the fair value of the interests in the portfolio company.

- 5.07** Two commonly used valuation methods for valuing a portfolio company within the market approach are the *guideline public company method* and the *guideline company transactions method*.
- 5.08** Calibration also may be used to infer the equity value for the company from a transaction involving the company’s own instruments⁶ (the results of which may require adjustment for the nature of the instruments or any unstated benefits derived; see paragraphs 5.52–.55 and 10.31). The resulting calibrated equity value may be used as an input into the valuation of the fund’s interests, similar to the way that the equity value derived from other approaches are used in valuing the fund’s interests, and can be used to calibrate the assumptions used in other forms of the market approach or in the income approach to support valuations at subsequent measurement dates. Calibration provides an indication of the way that market participants would value the investment as of the transaction date given the differences between the portfolio company and the selected guideline public companies or transactions. These initial assumptions may then be adjusted to take into account changes in the portfolio company and the market between the transaction date and each subsequent measurement date. See chapter 10, “Calibration.”
- 5.09** The market approach may also be used to value the interests in a portfolio company directly, based on transactions in the company’s own instruments. See paragraphs 10.31–.43, “Inferring Value From Transactions in a Portfolio Company’s Instruments.”

Considerations in Applying the Guideline Public Company Method

- 5.10** The inputs to the guideline public company method should be evaluated at each measurement date based on facts and circumstances.

Identification of Guideline Public Companies

- 5.11** For guideline companies whose stock is publicly traded, information about pricing, trading, and financial data for those companies is generally available. Consideration should be given to the level of trading activity in evaluating the relevance and reliability of the information.
- 5.12** When identifying guideline public companies to be used in a market approach, it is helpful to consider what makes a company comparable to the subject portfolio company.

⁶ Calibrating to any recent transactions in the company’s own instruments requires considering the rights and preferences of each class of equity and solving for the total equity value that is consistent with a recent transaction in the company’s own instruments, considering the rights and preferences of each class of equity. See chapter 8, “Valuation of Equity Interests in Complex Capital Structures,” for additional discussion of how to value equity interests within a complex capital structure, and chapter 10, “Calibration,” for additional discussion of calibration.

Operational and financial characteristics are considered to be factors of comparability and help determine those companies that have the most similar earnings capacity and relative levels of investment risk. Many sources⁷ of public company data are searchable by these key factors that can aid in identifying potential guideline public companies. Factors of comparability can include the following (note that this list is not intended to be an exhaustive list):

- Similar operational characteristics, such as
 - same industry or sector (the North American Industry Classification System or the Standard Industrial Classification code);
 - similar lines of business;
 - geographic reach (for example, domestic versus international versus multinational);
 - similar customers and distribution channels;
 - contractual versus non-contractual sales;
 - seasonality of the business;
 - similarity of business cycle (for example, short cycle characterized by ever-changing technology versus long cycle driven by changes in commodity pricing);
 - similar stage of business life cycle (start up, high growth, mature, and so forth); or
 - similar operating constraints (for example, reliance or dependence on key customers or government regulations).
- Similar financial characteristics, such as
 - similar size (for example, revenues, assets, or market capitalization, if subject is public);
 - similar profitability (for example, earnings before interest, taxes, depreciation, and amortization [EBITDA], operating margin, contribution margin);
 - similar anticipated future growth in revenues and profits;

⁷ As of the date of publication of this guide, third-party data vendors and publications included, but were not limited to, Capital IQ, MergerStat, Bloomberg, FactSet, and Compustat.

- similar asset-base (for example, manufacturing versus service business);
or
- similar pattern of owning versus leasing real properties, machinery, and equipment (for example, an entity that owns its manufacturing operations versus one that leases the building and machinery used for its operations).

- 5.13** The process of selecting appropriate guideline public companies will often include an analysis that summarizes the comparability of financial statistics, such as size, profitability, geography and growth, between the guideline public companies and the subject portfolio company. Other comparative financial ratios may also be included. Typically, after the guideline public companies for a given portfolio company have been selected at an initial measurement date, these same companies are used consistently in the analyses for subsequent periods. However, in some cases, there may be changes in the portfolio company's strategy or business model, or changes that apply for one or more of the guideline public companies, where it would be appropriate to consider adding or removing certain guideline public companies from the analysis. Acquisitions made of guideline public companies in subsequent periods would also justify removal of the guideline public company from use in the guideline public company method, but would make that company eligible for use within the guideline company transactions method. It is also best practice to perform a search for any recent market entrants or newly public companies that could be considered comparable in subsequent periods.
- 5.14** Not all of the factors listed in paragraph 5.12 will be applicable in every circumstance, and there may be many other important factors to consider, some of which may be industry specific. When performing the analysis, the factors of comparability are determined and public company data is screened to identify the best set of guideline public companies, if any, that meet these criteria.
- 5.15** When valuing privately-held, early stage portfolio companies, the guideline public company method has significant limitations and challenges. For instance, truly comparable guideline public companies, at a similar stage of development with similar growth and risk expectations, may be unlikely to exist. If the subject portfolio company has no earnings or has insignificant revenue, the guideline public company method may be less relevant because *prospective financial information (PFI)* for the subject portfolio company may then be uncertain. This limitation is particularly apparent for portfolio companies in stages 1 and 2. (See tables 1-1 and 1-2 for more information on different stages of development.) However, the principles of the market approach may still be instructive for an assessment of the terminal value under the income approach. (See paragraph 5.66 and appendix B, paragraphs B.05.01–.05.04, "Table of Capitalization Multiples," for further discussion).
- 5.16** In addition, there may be instances where the portfolio company is comparable to a division within a guideline public company or is comparable to only part of the guideline public company, or vice versa. Or for example, the subject portfolio company may rely entirely on third party distribution whereas the guideline public company may be more

vertically integrated. Consideration would need to be given to assess the importance of these differences in business models.

- 5.17** When the guideline public company method is used, the fund should identify and describe the selected guideline public companies and the process followed in their selection.

Number of Guideline Public Companies Selected for Comparison

- 5.18** The number of guideline public companies identified will vary based on facts and circumstances. Although in some cases there may be only one or two public companies that are considered closely comparable to the subject portfolio company, in other cases there will be several. Furthermore, there may be public companies that exhibit some, but not all, of the factors of comparability. There also may be situations in which a primary set of guideline public companies may be accompanied by a secondary, less comparable, but corroborating set of guideline public companies (for example, a primary set of guideline public companies could be apparel retailers focused on children's clothing, and the secondary corroborating set might be all apparel retailers of similar size, growth, and profitability to the subject portfolio company, regardless of consumer focus). In all cases, the guideline public companies selected need to reflect companies that are sufficiently similar to the subject portfolio company.

How to Calculate Multiples and Which Multiples to Use

- 5.19** Once the guideline public companies have been identified, financial information is gathered on each and comparative metrics that can be applied to the subject portfolio company are calculated considering the values as of the measurement date and the relevant metrics based on financial information that was available as of the measurement date. These metrics, commonly called *multiples*, are typically ratios of enterprise value or market value of equity to an underlying financial data point such as revenue, EBITDA, net income, or book value. One or more relevant multiples may be used, and the selection of the appropriate metrics may vary by industry or stage of development.

- 5.20** Some commonly used multiples include the following:

- Market value of equity (MVE) to net income
- MVE to book value of equity
- Enterprise value (EV) (excluding cash)⁸ to earnings before interest and taxes
- EV (excluding cash) to EBITDA

⁸ External data sources may already exclude cash in their calculation of EV in which case the adjustment may not be necessary. Because the amount of non-operating cash may not be comparable across otherwise similar businesses, it is appropriate to estimate multiples using the comparable EVs excluding cash, to multiply by the metrics of the portfolio company to be valued, and then to add back the portfolio company's non-operating cash.

- EV (excluding cash) to revenues
- EV (excluding cash) to debt-free cash flow
- EV (excluding cash) to book value of assets

- 5.21** The numerator of an enterprise value (EV) multiple is typically calculated as follows: stock price times the number of shares outstanding, plus the fair value of preferred shares and non-controlling interests, plus the fair value of debt.⁹ Enterprise value may also be referred to as *invested capital*, *market value of invested capital (MVIC)*, or *total enterprise value*.
- 5.22** These multiples can be calculated on a historical basis or a forward looking basis. The selection of historical versus forward looking multiples requires judgment about which measure(s) are most indicative of a normalized level of operations going forward. In many cases, both historical and forward looking multiples may be considered, with adjustments to account for expected growth and other factors. If the portfolio company has generated historical revenues or profits, most market participants will consider the historical multiples as one input, since historical data is more easily available and more likely to be reliable. However, if available, forward multiples are likely to provide more relevant information, especially for high growth businesses. See the following paragraphs, especially paragraph 5.38, for additional discussion.
- 5.23** Historical basis multiples may include the latest fiscal year and latest 12 months (LTM) or historical averages, such as the average of the last 3 years. Forward looking multiples may include the estimated current fiscal year, next 12 months (NTM), next fiscal year, or future fiscal years (2 or 3 years into the future).
- 5.24** The task force believes that multiples should be applied consistently between the guideline public companies and the subject portfolio company. For example, LTM multiples would be applied to the subject portfolio company's LTM performance. NTM multiples would be applied to the subject portfolio company's NTM anticipated future performance. It would not be appropriate to apply LTM multiples to the subject portfolio company's anticipated future performance. In order to use forward looking multiples, it is necessary to obtain estimates (for example, from analysts' reports) of future performance of each guideline public company.
- 5.25** When calculating multiples, EV multiples are typically paired with enterprise level-based financial metrics (for example, revenues or EBITDA), and equity market values are typically paired with equity-based financial metrics (for example, net income and book value of equity).
- 5.26** The fund would need to select the financial metrics that are applicable to the subject portfolio company valuation given the subject portfolio company's industry, stage of

⁹ In many cases, when the selected guideline public companies are not highly levered and there is no reason to think that the fair value of debt would be significantly different than its book value, book value or par value is used as a proxy for this measurement.

development, growth, profitability, geographic footprint and other relevant factors. Asset-based, sales-based, and income-based metrics that have proven useful in the past are typically more accepted in practice than alternative metrics that may not be as widely used. The correlation between the observed prices and metrics might also be considered in estimating the weight to apply to each measure. If multiple metrics are deemed to be relevant, but provide different indications of value, the fund may give greater weight to one measure instead of the other because one is believed to be more reflective of a market participant's perspective of value.

- 5.27** When EV is calculated net of cash, the value that results from applying this multiple to the subject portfolio company would also exclude the value of the subject portfolio company's cash.
- 5.28** There may be situations in which adjustments to a guideline public company for nonoperating assets are necessary for significant identifiable items, such as investments in an unconsolidated subsidiary or joint venture accounted for under the equity method, unused land adjacent to plant or facility, or corporate headquarters located in an area where the price of real estate is high. The objective for making these adjustments is to enhance the comparability between the guideline public companies and the subject portfolio company.
- 5.29** Nonfinancial metrics and key performance indicators sometimes used by market participants and analysts may also be used to estimate value, for example,
- price per subscriber (or homes passed) in the cable industry;
 - price per bed in the hospital industry;
 - EV (excluding cash) to research and development investment in the biopharmaceuticals industry;
 - Levels of probability-weighted reserves in the case of an oil and gas exploration company;
 - clicks or page views for an early stage internet company and
 - other industry-specific metrics.
- 5.30** A nonfinancial metric is often industry specific and would ordinarily be used when the nonfinancial metric is generally accepted in the industry and would be considered by market participants. In addition, with many early-stage entities, some traditional metrics cannot be used because the entities have not yet earned a profit and, therefore, nonfinancial metrics may be used in conjunction with the limited number of usable financial metrics. The task force recommends corroborating these metrics with other methodologies whenever possible.
- 5.31** The fund should document the applicable metrics selected for use in the valuation and the rationale for their selection.

Adjustments to Guideline Public Company Multiples to Enhance Comparability

- 5.32** The fund may need to make adjustments to select appropriate multiples based on a comparison to an enterprise that, in one significant respect or another, is not comparable to the portfolio company being valued. The purpose of making adjustments to observable multiples is to put the guideline public company on a more comparable basis to the subject portfolio company. If identified guideline public companies exhibit certain differences to the subject portfolio company but are otherwise deemed to be reasonably good comparative benchmarks, the observable multiples for the guideline public companies can be adjusted to account for these differences. Such adjustments relate to factors including profitability, anticipated growth¹⁰ size, leverage, working capital, nonrecurring or nonoperating income or expenses, or differences in accounting policies or principles (such as U.S. generally accepted accounting principles [GAAP] versus International Financial Reporting Standards)¹¹ or the timing of implementing new accounting standards. Generally such adjustments are captured by calibration (see chapter 10, “Calibration”).
- 5.33** In performing valuations of early-stage enterprises under the market approach, not only is it assumed that the industry, size of enterprise, marketability of the products or services, and management teams are comparable but also that the portfolio company’s stage of development is comparable. This last assumption often renders the market approach impractical for early-stage portfolio companies because pricing data for such enterprises is difficult, if not impossible, to find. Furthermore, even if pricing data can be found, until product or service feasibility is achieved, comparability among early-stage enterprises is difficult to achieve.

Adjustments to Subject Portfolio Company Financial Data

- 5.34** Market multiples are applied to subject portfolio company financial data that is considered to be normalized and, therefore, indicative of a normal level of operations going forward. Potential adjustments to subject portfolio company financial data that is not already on a normalized basis are infrequent, but might include the following:

¹⁰ For most venture capital-backed and private equity-backed companies, projected revenue and earnings growth exceed industry levels. Thus, even though the values of these companies typically reflect lower than average multiples of projected revenues or earnings, these same values also may reflect average or above average multiples of current revenues and earnings. For example, an early-stage company may have almost no current revenue, whereas a large private equity-backed company in a turnaround situation may have low earnings that are expected to improve under new management. In both of these examples, the value of the companies would reflect a high current multiple (escalating rapidly as revenues or earnings before interest, taxes, depreciation, and amortization [EBITDA] approach zero).

¹¹ Another consideration is that not all companies within an industry have similar operations. For example, some hotel companies purchase their properties, whereas others lease them. Companies with different operating models will likely trade at different multiples of various financial metrics, so it is important to consider these factors when estimating appropriate multiples for the company to be valued. It may also be necessary to make pro forma adjustments to the financial statements for selected guideline public companies or for the company to be valued to take into account factors such as favorable or unfavorable contracts (for example, a below-market lease or a low rate on a technology licensing agreement), recent or pending acquisitions, or one-time events.

- Removal of significant nonrecurring income or expenses (for example, a one-time restructuring charge)
- Removal of nonoperating income or expenses associated with nonoperating assets or liabilities of the subject portfolio company
- Removal of management fees that are not indicative of expenses the subject portfolio company would incur if it operated on a standalone basis
- Addition of imputed expenses that are not incurred by subject portfolio company but that would be incurred by a market participant operating that portfolio company on a standalone basis (for example, royalty for use of the corporate brand name).

5.35 The multiple selected must be consistent with the financial metrics considered. In many cases, private equity or venture capital funds will choose to invest in portfolio companies where they feel that the potential returns are high, and therefore, they may expect that the future performance for the portfolio company will not be similar to its historical performance. Furthermore, these portfolio companies may not be operating in established industries where you would find good guideline public companies. Therefore, using normalized financial metrics in these situations may be reasonable. Nevertheless, to the extent that the financial metrics incorporate significant adjustments, market participants would select a multiple that reflects the risks associated with these adjustments. Calibration to any recent transactions may be used to ensure that the selected multiple and the adjusted financial metrics are internally consistent at the transaction date. The multiple and metrics would then be updated to reflect changes in the company's performance and market conditions at future measurement dates. Judgment is critical in estimating a fair value that reflects market participant assumptions at the measurement date.

Elimination of Multiples That Are Not Meaningful

5.36 Once multiples have been calculated for the relevant guideline public companies they are analyzed for meaningfulness. Outliers considered to be "not meaningful" are eliminated from the data set. For example, public companies in distress whose earnings have fallen faster than their stock price, or public companies that have only recently achieved profitability, may have a very high EV-to-EBITDA multiple. For example, in a set of guideline public companies with the majority of EV-to-EBITDA multiples ranging from 8x to 10x, and with one outlier of 30x EBITDA for a guideline public company in distress, the outlier is eliminated from consideration, assuming the subject portfolio company also has a track record of positive earnings and is not also in distress. Although the guideline public company may still be considered relevant, the multiples of certain financial metrics may not be meaningful given the guideline public company's performance as of the measurement date.

5.37 In general, multiples for a dataset of guideline public companies that are in a narrow range are generally better indications of value than a dataset of multiples that exhibit

wide dispersion. Statistical measures can be calculated to assist in analyzing the dispersion of multiples within a dataset, though statistical calculations are not required if the analysis can be performed through other means (for example, qualitative assessments).

How to Select Multiples to Apply to the Subject Portfolio Company

- 5.38** Valuations are forward looking. The observed guideline public company multiples and ultimately the selected multiple of the portfolio company in a guideline public company method are essentially a proxy for market participant expectations regarding future cash flow, growth and risk. Thus, when evaluating and selecting multiples, be it LTM or NTM, EV to revenue or EBITDA, the fund should consider differences in expectations for cash flow, growth and risk between the guideline public companies and the portfolio company being valued. Key considerations in assessing these relative differences might include historical and expected growth rates, customer concentration, pricing models (e.g. subscription versus sale in the software industry), direct distribution versus wholesale, etc. Calibration should also be used to assess the impact of these differences.
- 5.39** The median and mean (average) multiple are often calculated for each dataset of guideline public company market multiples. The high, low, and interquartile multiples are also sometimes calculated in order to establish a range of the valuation metrics that might be relevant for the subject company. Selecting the relevant market multiple to apply to the subject portfolio company requires careful consideration. It is not sufficient to simply apply the median or mean multiple from the dataset without concluding that the median or mean is the most appropriate in the circumstances. Analysis needs to be performed and professional judgment is required to determine the key value drivers in the array of multiples and their correlation to financial metrics, including similarities and differences between the guideline public companies and the subject portfolio company. In some circumstances, it may be possible that the relevant multiple chosen might be outside the range of high and low metrics from the guideline public companies. For example, if a portfolio company has a growth rate that dramatically exceeds that of any of the guideline public companies, which are necessarily more established businesses, the value of the company may reflect a multiple above the high end of the range. In such cases, the market approach may still be used to understand market participants' view of the value and assess changes period to period. Calibration with the entry price can assist in selecting the appropriate multiple.
- 5.40** EV-to-EBITDA multiples generally correlate to anticipated future growth in revenues and earnings. EV-to-revenue multiples generally correlate to both profit margins and future growth. At a minimum, the subject portfolio company's anticipated future growth and profit margins are compared to each guideline public company as appropriate and the multiple selection includes consideration of these factors. Regression analysis, though not required, can be a useful tool when analyzing the key value drivers affecting market multiples.
- 5.41** In certain instances, one or a few of the guideline public companies might be considered to be most comparable. In these situations, the multiples of these companies may be

relied upon most heavily in selection of multiples to apply to the subject portfolio company. In addition, there may be other important factors to be considered and some of these factors may vary by industry.

- 5.42** Note that even though historical valuation practice was to consider the guideline public company method to reflect an enterprise value on a minority basis, and the guideline company transactions method to reflect an enterprise value on a controlling basis, the key factor in selecting a multiple is to compare the portfolio company with the relevant guideline public companies or transactions and select an appropriate multiple considering the differences in factors such as size, growth and profitability. The task force recommends considering the differences between the portfolio company and the selected guideline public companies or transactions directly when selecting the multiples, rather than applying a premium or discount to some arbitrary or formulaic calculation. Calibration should be used to select multiples that are consistent with the transaction price, as long as the transaction price reflects fair value at initial recognition. These assumptions should then be updated in future periods considering changes in the company and changes in the market. Please see Q&A 14.33 and 14.60–.66, as well as paragraphs 2.26, 3.17, 3.22, 4.16, 5.51, 7.02–.09, 9.01–.17, and 10.28–.30, for a discussion of these concepts.

Weighting of Multiple Type

- 5.43** In some instances, it may be appropriate to use more than one multiple type in the market approach. The factors discussed previously, which are important in the selection of multiple types, also apply in determining appropriate weightings. The level of reliance placed on a particular multiple type and the weighting assigned to the multiple type is a matter of judgment. In certain industries, certain multiple types are more widely used than others, and these generally would be expected to receive greater weighting.
- 5.44** It is not always appropriate to weigh each multiple type equally. Weighting of multiple types is based on judgments about the relative importance of each multiple type and quality of the dataset. When determining appropriate weightings, the facts and circumstances of each portfolio company would need to be carefully considered.

Enterprise Versus Equity Level Multiples

- 5.45** An important consideration in application of a market approach is whether the market multiples being applied result in the value intended—enterprise value (EV) or equity value. If an enterprise value is desired and EV multiples are applied, no further adjustment is required. However, if an equity value is desired and EV multiples are applied, an adjustment to convert the resulting enterprise value to equity value needs to be made. This is typically achieved by subtracting from enterprise value the value of debt that a market participant would consider, as discussed in chapter 4, “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments.” If the portfolio company has no debt, the fair value of the subject portfolio company’s equity would be the same as the enterprise’s fair value.

Considerations in Applying the Guideline Company Transactions Method

- 5.46** Most of the considerations that apply to the guideline public company method also apply to the guideline company transactions method, but a few differences exist. Following are some additional considerations in applying the guideline company transactions method.

Limitations on Availability of Data

- 5.47** When using the guideline company transactions method to value a subject portfolio company, limited data may be available on guideline company transactions. For example, some limitations may include the lack of information supporting the financial characteristics or the tax structure of the transaction.

Assessing Relevant Time Period for Guideline Company Transactions

- 5.48** It may not be appropriate to use guideline company transactions that took place during periods in which economic conditions were not the same as they are at the measurement date, without appropriate adjustments. There are no bright lines, but, in general, the older the transaction, the less relevant the information.

Number of Guideline Company Transactions Selected for Comparison

- 5.49** It is common practice to compare as many guideline company transactions as can be identified during a relevant recent historical time period as possible. If the transaction price has not been disclosed, a transaction cannot be used as a guideline because it will not be possible to calculate any market multiples.

How to Select Multiples to Apply to the Subject Portfolio Company

- 5.50** Due to the limitations of the data, it may be difficult to make adjustments to the multiples for differences in financial characteristics between the guideline company transactions and the subject portfolio company. As with the guideline public company method, market multiples need to be scrutinized and outliers labeled as "not meaningful." Further, for some transactions, data may be available to calculate only one or a few multiples. As with the guideline public company method, a dataset of market multiples that are in a narrow range is generally a better indicator of the quality of the multiple than a dataset of multiples showing wide dispersion.
- 5.51** Note that even though historical valuation practice was to consider the guideline public company method to reflect an enterprise value on a minority basis, and the guideline company transactions method to reflect an enterprise value on a controlling basis, the key factor in selecting a multiple is to compare the portfolio company with the relevant guideline public companies or transactions and select an appropriate multiple considering the differences in factors such as size, growth and profitability. The task force recommends considering the differences between the portfolio company and the selected guideline public companies or transactions directly when selecting the multiples, rather than applying a premium or discount to some arbitrary or formulaic calculation. Calibration should be used to select multiples that are consistent with the transaction

price, as long as the transaction price reflects fair value at initial recognition. These assumptions should then be updated in future periods considering changes in the company and changes in the market. Please see Q&A 14.33 and 14.60–.66, as well as paragraphs 2.26, 3.17, 3.22, 4.16, 5.42, 7.02–.09, 9.01–.17, and 10.28–.30, for a discussion of these concepts.

Transactions in the Portfolio Company's Instruments

- 5.52** When using calibration to estimate the implied equity value that is consistent with a recent transaction in the portfolio company's instruments, the fund generally will consider any transactions in equity interests of the portfolio company directly with investors or among the investors themselves. In using this method, the fund should document the rationale for selecting the transactions deemed relevant (and for excluding other transactions, if any) and what adjustments were used in estimating fair value. In selecting the relevant transactions, the fund should consider whether those transactions involve any stated or unstated rights or privileges, any effects of which would ordinarily be factored out of any fair value estimate. See chapter 10, "Calibration."
- 5.53** Because transactions in private companies may involve lengthy negotiations, factors may change between the date that the terms of a transaction were finalized and the date the transaction closes. Thus, when using calibration, a fund should consider any events that were known or knowable as of the valuation date, including significant value-creating milestones, that could affect the value of the portfolio company and that have occurred since the terms were agreed for the latest financing round (or that are expected to occur prior to finalizing terms for the next financing round, if the next financing round is pending).
- 5.54** In addition, even if the most recent transactions were not arm's length, any recent or pending transactions in the portfolio company's equity instruments would need to be considered when estimating the fair value of the other equity interests in the portfolio company, making adjustments as needed. For example, if the portfolio company has completed a preferred stock financing round within the previous year or is in substantive negotiations to complete such a financing soon after the valuation date, the valuation of the portfolio company's other equity interests would need to
- consider the differences in rights and preferences between the current financing and the portfolio company's other classes of equity;
 - evaluate the changes in the value of the portfolio company between the transaction date and valuation date¹² or the risk associated with a planned transaction if the transaction has not yet closed; and

¹² If the company is in negotiations for a financing that is expected to be completed soon after the valuation date, the valuation specialist should consider the information that is known or knowable as of the valuation date and the reliability of that information.

- if the transaction is not arm's length, provide an explanation for the differences between the transaction price and fair value of the interest purchased.

5.55 Prices observed in issuances of securities by guideline private companies (if available) may not be appropriate as market comparables without adjustment if those transactions involve *synergies* that are specific to a particular buyer-seller relationship. Prices paid for private instruments by major suppliers, customers, or licensing or co-marketing partners may not be appropriate as market comparables without adjustment because such transactions may involve the granting of certain rights or privileges to the supplier, customer, or partner. If that transaction reflects any significant consideration for strategic or synergistic benefits in excess of those expected to be realized by market participants, but these buyer-specific synergies would not be expected to be available in the exit market for the interest to be valued, the fund ordinarily would identify those excess benefits and remove them from the valuation. It would be appropriate to consider future synergies in valuing the portfolio company only to the extent that market participants purchasing the fund's interest would expect the portfolio company to realize a synergistic premium at exit (for example, if multiple strategic buyers would be expected to bid up the price). See chapter 9, "Control and Marketability."

Income Approach

5.56 According to the FASB ASC glossary, the *income approach*¹³ "convert[s] future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount." The fair value measurement is estimated on the basis of the value indicated by current market expectations about those future amounts. The income approach obtains its conceptual support from its basic assumption that value emanates from expectations of future income and cash flows.

5.57 The income approach may be used to estimate the fair value of the asset being valued (in this case, the interest in the privately held enterprise). Whereas the market approach is based on market data which may need to be adjusted for any differences between the selected comparable and the interest to be valued, the income approach is often based on unobservable inputs. As stated in FASB ASC 820-10-35-54A, "A reporting entity shall develop unobservable inputs using the best information available in the circumstances, which might include the reporting entity's own data. In developing unobservable inputs, a reporting entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the reporting entity that is not available to other market participants." In particular, when valuing the interests in a portfolio company, it is appropriate to consider the cash flows that market participants would expect the portfolio company to generate under current ownership through the anticipated liquidity event, as

¹³ The *International Glossary of Business Valuation Terms* defines *income approach* as a "general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount." It is also referred to as *income-based approach*.

modified given the degree of influence that the market participant transacting in the interest would have over those plans considering the nature of the interest acquired.

- 5.58** The valuation method commonly used in applying the income approach to value an interest in a privately-held company is the *discounted cash flow (DCF) method*. The DCF method requires estimation of future economic benefits and the application of an appropriate *discount rate* to equate them to a single present value. The future economic benefits to be discounted are generally a stream of periodic cash flows attributable to the asset being valued,¹⁴ but they could also take other forms under specific circumstances (for example, a lump sum payment at a particular time in the future without any interim cash flows).
- 5.59** There are many considerations in applying the income approach. One consideration is the issue of how risk is assessed and assigned. Under the *discount rate adjustment technique*, which is discussed in paragraphs 10–12 of FASB ASC 820-10-55, risk is assigned to, or incorporated into, the discount rate.¹⁵ The discount rate adjustment technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events. Those conditional cash flows are then discounted to present value using a risk-adjusted rate of return, or discount rate. The greater the perceived risk associated with the cash flows, the higher the discount rate applied to them and the lower their present value.¹⁶
- 5.60** Another technique that falls under the income approach is the *expected present value technique*. As discussed in FASB ASC 820-10-55-13, this technique “uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (that is, the *expected cash flows*). The resulting estimate is identical to *expected value*, which, in statistical terms, is the weighted average of a discrete random variable’s possible values with the respective probabilities as the weights. Because all possible cash flows are probability weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).” However, as indicated in FASB ASC 820-10-55-18, “to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques.

¹⁴ The asset being valued could be a single asset, a collection of assets, or an entire enterprise.

¹⁵ Typically, a discounted cash flow (DCF) method uses after-tax cash flows and employs an after-tax discount rate. The use of pretax cash flows generally is inconsistent with how value ordinarily is measured in a DCF method. In any case, the cash flows and discount rate used (after-tax or pretax) should be consistent (that is, pretax cash flows should not be used with after-tax discount rates and vice versa).

¹⁶ Note that for early-stage companies, management’s estimates of an enterprise’s cash flows are often contingent on the success of the enterprise, reflecting a scenario in which the enterprise achieves the planned technical breakthroughs and executes on its business plan. Therefore, the discount rates used for these contingent cash flows are often quite high. In this case, the fund should perform procedures to understand and support the assumptions underlying the cash flow forecast and to select a discount rate consistent with the risk in the cash flows. Regardless of whether fair value measurements are developed by the fund, by portfolio company management or by a third-party, the fund is responsible for the measurements that are used to prepare the financial statements and for underlying assumptions used in developing those measurements.

Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows.”

5.61 The expected present value technique has two variations:

- In method 1, the probability-weighted expected cash flows are first adjusted for systematic (market) risk by subtracting a cash *risk premium* (that is, risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty-equivalent cash flow, which is discounted at the risk-free interest rate. A certainty-equivalent cash flow refers to a probability-weighted expected cash flow adjusted for risk so that a market participant would be indifferent to trading the certain cash flows for the risky probability-weighted expected cash flows. The Black-Scholes model is an example of this method; risk-neutral simulation techniques and lattice models are other examples. In practice, the task force believes it is impractical to directly assess the certainty-equivalent cash flows for an enterprise or the interests in the enterprise, so aside from Black-Scholes and other techniques that use a risk-neutral framework, method 1 is rarely used.
- In method 2, the probability-weighted expected cash flows are adjusted for systematic (market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the cash flows are discounted at a risk-adjusted rate of return that corresponds to an expected rate associated with these probability-weighted cash flows (that is, an expected rate of return).¹⁷ Models used for pricing risky assets, such as the *capital asset pricing model*, can be used to estimate the expected rate of return. As in the discount rate adjustment technique, the greater the perceived risk associated with the expected cash flows, the higher the discount rate associated with it. Because in this method all possible cash flows are probability weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event, unlike the cash flows used in the discount rate adjustment technique. Thus, the overall discount rates used in discounting probability-weighted cash flows are often lower than those used in discounting single best estimate (success) cash flows, all else being equal. Note, however, that probability-weighted cash flows are not the same as certainty-equivalent cash flows, and the discount rate used would still be significantly higher than the risk-free rate.¹⁸ In either case, the inputs used to determine the discount rate can be calibrated by using the acquisition price, if fair value, and the cash flows resulting in an internal rate of return at inception.

¹⁷ The scenario analysis method discussed in chapter 8, “Valuation of Equity Interests in Complex Capital Structures,” is an example of this method.

¹⁸ The venture capital and private equity portfolio rates of return described in appendix B, paragraphs B.04.01–.04.04, may provide an indication of the discount rates that may be appropriate for valuing a portfolio company using probability-weighted cash flows. However, keep in mind that venture capital and private equity portfolio rates of return reflect a return considering the diversifiable risk across the entire portfolio. To the extent that an investment in a specific company has additional nondiversifiable risk or financing risk, the discount rate for expected cash flows should be higher than the portfolio rate of return.

- 5.62** It is important to note that FASB ASC 820, *Fair Value Measurement*, does not limit the use of present value techniques to measure fair value to these three choices. Many elements of risk may be handled by adjusting either the level of expected cash flows or the discount rate or both.
- 5.63** In selecting a discount rate in the discounted cash flow method, it is important to consider not only the various inputs typically used to estimate the cost of capital, but also the differences between the portfolio company and the selected guideline public companies used in estimating these other inputs, which might indicate that a higher or lower cost of capital is appropriate. Calibration provides an indication of the way that market participants would value the investment as of the transaction date given the differences between the portfolio company and the selected guideline public companies. These initial assumptions can then be adjusted to take into account changes in the portfolio company and the market between the transaction date and each subsequent measurement date. See chapter 10, "Calibration."
- 5.64** In applying many of the methods that fall under the income approach, a challenge exists in addressing the final cash flow amount, or *terminal value*. Forecasting future cash flows involves uncertainty, and the farther the forecast goes into the future, the greater the uncertainty of the forecasted amounts. Because discounting attributes less value to cash flows the farther in the future they are expected to occur, there is a point in time beyond which forecasted cash flows are no longer meaningful. For start-up portfolio companies with little or no operating history, forecasts beyond one or two years are likely to be speculative and unreliable. Nevertheless, the terminal value is often a significant component of the total enterprise value and the value of the interests in that portfolio company, and it should be carefully considered. See appendix B, paragraphs B.01.01–.01.10, "Relationship Between Fair Value and Stages of Enterprise Development," for a discussion regarding the reliability of using the income approach for companies at various stages of development.
- 5.65** Although it may be difficult to forecast future cash flows beyond a certain point, it does not mean that the portfolio company will not have such cash flows. Those flows also will be periodic flows unless the ownership of the portfolio company is changed or transferred as a result of a liquidity event. In many cases, such an event will result in a single cash flow, which represents the value of the portfolio company expected to be realized at that point in time. In other cases, the liquidity event may result in multiple future cash flows, which need to be discounted to estimate terminal value. In all cases, the terminal value should be estimated and incorporated into the DCF calculation of value.¹⁹
- 5.66** The cash flows for the portfolio company as a going concern also provide a basis for reasonably estimating a terminal value. That estimate generally is made as of the date the portfolio company is expected to begin a period of stable cash flow generation. That period may be one of growth at some assumed constant rate or one of no growth. See appendix B, paragraphs B.05.01–.05.04, "Table of Capitalization Multiples," for a discussion of capitalization multiples that may be applied to the stable annual cash flow

¹⁹ In some cases, for example when valuing a run-off business, the terminal value may be zero.

in estimating a terminal value. Whether terminal value is estimated by the use of a capitalization multiple or other means, the terminal value is the fund's best estimate of the present value of those future cash flows, consistent with market participant assumptions. That terminal value is incorporated into the DCF calculation of value by further discounting the terminal value to a present value.

- 5.67** Finally, even if the fund is unable to reasonably estimate future cash flows beyond a certain date, the fund still should estimate a terminal value using acceptable valuation methods.²⁰ That terminal value should be incorporated into the DCF calculation of value, as discussed in paragraph 5.66.
- 5.68** Another consideration in applying the income approach is the basis of the valuation (that is, whether the resulting portfolio company or portfolio company's instrument value would be considered controlling or minority and whether it would be considered marketable or nonmarketable). See chapter 9, "Control and Marketability."
- 5.69** Some funds use valuation methods that split a portfolio company's economic benefit streams into two or more flows and then discount each at a different rate of return. This method may be appropriate, for example, in the case of a portfolio company that has a commercially viable product being sold in the marketplace but that also has a new product under development that has not yet achieved commercial feasibility. Often, the economic results of different product lines can be readily separated and the riskiness of each separately assessed. The assessment following such separation is similar to the investment analysis performed by the fund using the disaggregated segment data of diversified enterprises.

Significant Assumptions of the Income Approach

- 5.70** The form of the income approach (DCF method) can be generalized as follows:

- $PV = Cf_1/(1+k) + Cf_2/(1+k)^2 + \dots + Cf_n/(1+k)^n$
 - **PV is the present value of future cash flows**
 - **Cf_n is the expected cash flow in period n**
 - **k is the risk-adjusted discount rate**

- 5.71** All income-based methods share two critical features:

- They are *forward-looking*, that is, the relevant benefit stream is based on expectations for future cash flows (or other metrics) for a particular asset and as of a particular measurement date.
- The *discount rate selected must be consistent with the benefit stream* with respect to the risk of the estimate, the level of the estimated benefit (e.g., enterprise cash flows,

²⁰ For example, the Gordon growth method and observed market multiples are commonly used methods.

cash flows to equity, cash flows to a specific investment, pre-tax v. after-tax, pre-revenue v. post-revenue, etc.), the time period and other risk factors.

- 5.72** In addition, for entities or assets with very long/infinite lives, the *selection of terminal period assumptions is particularly sensitive*. For some early stage companies, as well as more mature turnaround investments, the terminal value can represent substantially all of total fair value. These key factors are further described in the following sections.

Forward looking benefit stream

- 5.73** More than any other factor, the reliability of any measurement of fair value under the income approach depends on the quality of, support for, and overall reasonableness of the PFI upon which the future stream of cash flows (or other metric) is based. It is not enough to take the prior year's revenues and costs, then grow them at a fixed percentage, and then compensate for a lack of support by applying a risk premium to the discount rate. Just as an investment in a bad business cannot be corrected with a great structure, a bad forecast cannot be fixed with a good discount rate.

- 5.74** The quality of the PFI and its relevance for purposes of measuring fair value depends upon many factors, which are often interrelated. One useful tool for addressing these factors is the AICPA Guide, *Prospective Financial Information* (the PFI Guide), which, among other things, is intended to assist third-party specialists who are engaged to compile or examine client company PFI. It sets forth conditions that such specialists should follow before associating themselves with PFI that could be relied upon by third-party users. These conditions presume certain factors:

- The third-party specialist will have appropriate access to management
- The responsible party should have a reasonably objective basis for its forecast
- Sufficiently objective assumptions can be developed for each key factor

The PFI Guide defines *responsible party* as “[t]he person or persons who are responsible for the assumptions underlying the prospective financial information. The responsible party usually is management, but it can be persons outside the entity who currently do not have the authority to direct operations (for example, a party considering acquiring the entity).”

- 5.75** For funds, the context is very different. The PFI is only one, albeit a critical, element in the determination of an investment's fair value. More importantly, many funds may not be able to support the PFI and underlying key assumptions for their portfolio companies at the level of sufficiency required by the PFI Guide. While not directly authoritative in the context of performing a valuation using the income approach, or even feasible in many cases, it may be worthwhile referencing this guidance in relation to the level of care that it might be prudent to take when preparing or assessing the PFI upon which the fund's valuation may be based.

- 5.76** The task force believes that market participant assumptions should be taken into account when considering the level of detail used in assessing PFI. In some cases, there may be extensive

support for PFI, in other cases there may be very limited support. The level of underlying support for PFI will vary based on the individual facts and circumstances.

Discount factors/rates

- 5.77** As discussed herein, discounting techniques under GAAP fall into three generic categories: a discount rate adjustment technique (DRAT), and expected present value methods 1 and 2. It is critical for the fund to properly identify the nature of the PFI to be discounted, and ensure that the correct discount rate technique is applied:

Discount rate adjustment technique (conditional)

- 5.78** One frequently encountered type of conditional PFI is in the form of a single scenario in which a successful resolution of an uncertain risky event is assumed. This may be an assumption that a current R&D project leads to a successful product; that a future product will be highly successful; that high growth will be accompanied by high margins; or assumptions of other favorable developments that are uncertain at a given measurement date. In such situations, the fact that a risky outcome has been assumed to be favorably resolved in the estimate of future cash flows requires that a risk premium be considered, to prevent overvaluation of the investment. The quantification of such a premium is beyond the scope of this guide, but the task force believes it should bear a logical relationship to the nature of the unresolved risk. If a company, for example, has a drug candidate that has successfully completed Phase 3 trials and is awaiting final FDA approval, the adjustment (risk premium) to the discount rate would likely be much smaller than for a company with a similar drug candidate that has not completed Phase 3 trials.

Expected present value technique (Method 2):

- 5.79** Expected present value-based PFI come in many forms. For example, the PFI may be disaggregated into multiple success and failure scenarios, weighted by probabilities of occurrence. This would be a more detailed way of addressing unresolved risks such as the ultimate success of a single product or service. Another format would be a single scenario PFI that represents a weighted set of outcomes. In both of these cases, the PFI still contains risky assumptions concerning revenues, margins, growth, and other factors that require the application of a risky discount rate such as a WACC- or CAPM-based rate. In general, such a rate would be lower than the conditional rate discussed previously, because the expected cash flow or other metric would already be de-risked for conditional events/milestones via the probability-weighting process.

Expected present value technique (Method 1 or certainty-equivalent):

- 5.80** Method 1 is a special case of the expected present value method, in which multiple scenarios are considered and probability-weighted as discussed. However, the future cash flows are then further de-risked so that the only remaining risk is the time value of such cash flows. In this case, the appropriate discount rate is the risk free rate, since all other uncertainties have already been taken into account in the estimation of future cash flows. This discounting technique is rarely encountered in enterprise or aggregate equity

measurements. It is consistent with option pricing methods and certain Monte Carlo applications that are performed in risk-neutral frameworks.

Entity vs Investment Level Cash Flows

5.81 When the unit of analysis is an entity (either the entire invested capital or the aggregate equity value of the entity), one or more discount rates based on the risk associated with each potential future periodic benefit is applied to convert these future benefits into a single point estimate of present value:

- Most entities can be appropriately valued using a single discount rate
- Some entities have evolving risk profiles and capital structures that may call for more complicated discount rate assumptions

5.82 When the unit of analysis is a specific tranche of preferred, for example, and the PFI has been adjusted to focus on the cash stream available to this specific level of investment, further adjustments to the discount rate should be considered. For example, stock that is preferred with regard to liquidation rights, etc. is less risky than common stock in many scenarios, and may be less risky than the entity's aggregate equity. As discussed in chapter 8, "Valuation of Equity Interests in Complex Capital Structures":

- The fund should consider whether different discount rates should be used for each shareholder class, considering the relative risk of each class. The discount rates would typically be calibrated to the most recent round of financing so that the selected probabilities and discount rates are internally consistent.
- The discount rate for the common stock and junior preferred may take into consideration the leverage imposed by the debt, as well as the liquidation preferences senior to each class. The weighted average discount rate across all the classes of equity should equal the company's cost of equity. This approach is a form of method 2 of the expected present value technique discussed in paragraph 5.61.
- Estimates of the risk-adjusted rate of return an investor would require for each share class, given the risk inherent in the probability-weighted cash flows to each class will vary based upon the risk associated with the specific enterprise and share class and will be determined based upon a review of observed rates of return on comparable investments in the marketplace.
- Note that it would typically not be appropriate to select a different discount rate for each event scenario, because investors cannot choose among these outcomes. Instead, the fund should select a discount rate for each share class appropriate to the risks inherent in the probability-weighted cash flows to this class.
- To summarize, discount rate selection must always take its cue from the risk profile of the cash flow estimate to be discounted. It must match the level

(enterprise, aggregate equity, specific investment), the type (conditional, expected, certainty equivalent), and the nature (pre-revenue costs, post-revenue profits) of the benefit stream to be valued. And it must carefully account for the qualitative factors identified and discussed herein.

Terminal period assumptions

- 5.83** The terminal value represents the value of the portfolio company as of the end of the discrete cash flow period in a discounted cash flow model, consistent with market participant assumptions. As previously discussed, the discrete period conceptually would cover a sufficient number of periods to allow for the entity to reach a steady state, in which the entity's cash flows are expected to grow thereafter at a constant rate. However, many funds will estimate the terminal value at an earlier point in the company's development, coinciding with the timing of an expected exit event.
- 5.84** Acceptable and commonly used methods for calculating a terminal value include a long-term growth rate method such as the *Gordon growth model*, the *two-stage growth method*, the *H-Model method*,²¹ and the observed (exit) market multiple method. After applying one of these methods, the terminal value is incorporated into the DCF calculation by discounting the future value of the terminal value to a present value. See appendix B, paragraphs B.05.01–.05.04, “Table of Capitalization Multiples,” for additional discussion of long-term growth rate methods compared with the exit market multiple method.
- 5.85** As mentioned, the terminal value is often the single largest component of value in a DCF analysis. Thus, the assumptions embedded in the terminal period calculation should be subject to heightened scrutiny.
- 5.86** Key assumptions (and potential pitfalls) include:
- Final year cash flow (or other metric)
 - Care must be taken not to simply apply a growth rate to the final discrete year of the PFI
 - The estimate should be properly adjusted to address future fixed asset and working capital needs consistent with the terminal growth rate
 - The estimate should take into account any industry-specific factors

²¹ The common theme among various long-term growth methods is that a long-term growth method estimates terminal value based upon the present value of estimated future cash flows. The Gordon growth model is used when the entity is expected to have a stable long-term growth rate in the terminal period. The two-stage method is used when the entity is expected to have an initial phase of higher growth in the terminal period followed by a subsequent phase of stable long-term growth. The H-Model is similar to the two-stage method except the initial phase of higher growth is not constant but declines linearly over time to reach the subsequent phase of stable long-term growth.

- The estimate should account for any business, industry or macroeconomic cycles
- Final growth rate (in cash flow)
 - One mistake is assuming that terminal growth rates are always positive
 - Sensitivity analysis should be considered with respect to terminal growth rates
- Applicable capitalization rate (discount rate less growth rate)
 - Care should be taken to ascertain that the capital structure (and other elements of the entity's risk profile) in the terminal period is consistent with the preceding discrete periods; to the extent it is inconsistent, such differences should be explainable.
 - The terminal period discount rate should reflect the discount rate that market participants would require given the risks remaining in the business at that point in time, because the terminal value reflects the value that the business would have in that terminal year assuming that it has achieved the projected cash flows. Note that to estimate the total enterprise value, the present value of the terminal value would be added to the value from the discrete cash flows, considering the market participant required rate of return given the probability of achieving these cash flows. The concluded terminal value would be consistent with the expected exit multiple for the business. The risk of achieving that terminal value would be captured in the present value added to the enterprise value.

Leverage Assumptions

- 5.87** Another factor in estimating the value of a business and the overall cost of capital for the business is the amount of leverage available. For example, in a leveraged buyout (LBO), market participants typically estimate the value of a business considering the amount of leverage available to that business. If a fund estimates that it would be able to raise debt financing for its purchase at 6x EBITDA, it might then be inclined to pay more for the enterprise than if debt financing could be raised at only 5x EBITDA. The added leverage would help the fund achieve its required rate of return on equity, albeit with commensurately greater risk.
- 5.88** To analyze the impact of leverage, some market participants may use the income approach, considering the resulting cash flows to equity and the equity required rate of return. The discounted cash flow method may be used to estimate the present value of future cash flow streams to equity holders. The key inputs for this analysis are the equity required return, leverage terms, the operating cash flows (to calculate debt service, dividend capacity, leveraged cash taxes, and exit metric), and the expected exit value (multiple). This type of analysis may be most applicable for subject assets with a history of being a leveraged buyout target, or when the likely market participants are buyout financial sponsors. The

output from this analysis would be the incremental equity value that a financial sponsor might be willing to pay, given the leverage available; the sum of this equity value plus the estimated debt capacity would be the enterprise value for the business. The fund would then subtract the company's current value of debt for the purpose of valuing equity to estimate the value of the fund's equity interest given the actual debt obligations of the company.

- 5.89** In analyzing the business value considering a potential LBO transaction and the leverage and equity value that would result from that transaction, it is important to consider an equity-specific discount rate, typically reflective of a buyout financial sponsor's required rate of return for the type of asset, calibrated to the entry price. Other key assumptions, such as the leverage terms and the expected time to exit, would be assessed considering market participant assumptions.
- 5.90** It is also possible to estimate the value of equity under the existing capital structure using the cash flows to equity and the required rate of return to equity given the existing capital structure. In this analysis, rather than considering the hypothetical amount of leverage available in a new LBO, the fund would consider the actual amount of leverage and the corresponding cost of equity. This analysis would allow the fund to directly estimate the value of equity, rather than adding back the hypothetical leverage and then subtracting the actual leverage. In this analysis, the fund would also need to make realistic assumptions about expected changes in leverage; e.g. if the company is underlevered, the fund might assume the company would do a recap in a year.

Income and Market Approach Summary

- 5.91** The discussion herein is not intended to address all of the complexities and nuances of income approaches. The primary focus is on methods such as DCF analyses. One final point is critical – the income approach has the same objective as the market approach, and is often based on inputs that are identical in substance. For example, a revenue multiple is essentially the inverse of a cash flow capitalization rate, adjusted for the relationship between net cash flow and revenue. For illustrative purposes, consider the following example for a company that has reached a steady growth state:

Income Approach

NTM revenue	\$10,000,000
Cash flow margin	20%
NTM cash flow	\$2,000,000
Valuation multiple	10.0x (1)
Enterprise Value	\$20,000,000

(1) Inverse of 10% capitalization rate: $1/(15\% \text{ WACC} - 5\% \text{ growth})$

Market approach

NTM revenue \$10,000,000

Revenue multiple 2.0x (2)

Enterprise Value \$20,000,000

(2) Income approach valuation multiple x 20% cash flow margin

Note that this simplified example includes only one year in the income approach for illustrative purposes, even though a typical discounted cash flow method would include several years in the discrete period. The more granular assumptions with respect to margins, growth and cost of capital in the income approach are consistent with a revenue multiple in the range of 2.0x. If, for example, a multiple of 1.8x or 2.2x were selected, the value under the market approach (\$18 million or \$22 million) would differ from the income approach as of this measurement date; such a difference may or may not be acceptable, depending on facts and circumstances. If, however, a revenue multiple in the range of 4.0-4.5x were selected, the resulting large value differential between the income and market approach would suggest that the key underlying metrics be re-evaluated. The relationships between the income and market approaches represent an important consideration of the reasonableness of both approaches, and should be considered whenever multiple approaches are applied based on individual facts and circumstances.

Milestone Driven Valuations

- 5.92** In corporate finance theory, it is generally accepted that when discounting a risky future cash flow, the discount rate should include (a) the time value of money, often at a risk-free rate; (b) a market risk premium; and (c) other adjustments to account for risks not captured in (a) and (b). The PFI may represent a conditional scenario that assumes, e.g., that a new product will be successfully completed and gain market acceptance. The discount rate would need to be adjusted to capture such additional risks.
- 5.93** Market and other risks are generally treated as a function of time, and thus a payoff that is subject to these risks for a longer period of time would be worth less today than an equivalent payoff subject to these risks for a shorter period of time. When using a present value technique where the expected payoff is based on a probability weighted value of a company at exit, as time passes but no new information is available regarding the probability of a successful outcome, one perspective is that the time over which the ultimate exit value is subject to market and other risks has now decreased, and the value should increase as a function of the discount rate and decreased time, all else equal. However, if the discount rate includes a premium for the uncertainty of conditional events or other risks that are not a linear function of time, value should not be accreted simply as a result of a decrease in the time to exit.

SIDEBAR – RESOLUTION OF UNCERTAINTIES OVER TIME

The underlying concept of risk-adjusted returns and related discount rates within the valuation profession is that the risk premium is directly related to time; that is, when cash flows are discounted at a risk-adjusted rate of return, the inherent assumption is that risk is resolved as time passes. This is often, but not always, the case. When this link between risks and time is broken, a certainty-equivalent technique will frequently produce better results. Brealey & Myers dealt with this issue; the following example is based on their approach:

Assume a cargo ship leaves London on January 1, 1701, headed for the Far East. The expected round-trip time is 2.0 years. The expected present value of the cargo after expenses as of January 1, 1703 is \$200,000. The voyage has many risks, however:

- *The ship may sink*
- *It may be delayed*
- *The crew may not survive/return*
- *The cargo may not be as valuable as hoped*
- *Trip expenses may be higher than planned*

Based on all of the above risks, the present value of the voyage is \$120,000, implying a risk-

adjusted discount rate of 29.1%. The risk-free rate in London is 5%. One more fact – due to the state of communications technology in the early 18th century, the owners of the ship will have no knowledge of how the voyage is going until the day the ship returns to London.

At December 31, 1701, the owners want to record the updated value of this voyage. Utilizing the implicit rate of return of 29.1%, they suggest reporting the adjusted value at \$154,900 ($\$120,000 \times 1.291$). However, can this be correct? What knowledge have they gained during this 12-month period? Do they know if the ship has successfully reached its destination? Do they have any information about the volume and price of any cargo? Do they know if the voyage is on schedule? To sum up, all that is known is that one year of the two year period has expired. Given the lack of information, the only adjustment that the owners can legitimately record is the time value of money for one year at the risk-free rate of 5%,²² for an adjusted value of \$126,000. One year later, on December 31, 1702, the value can be adjusted again, to \$132,300. Whether or not the value appreciates to \$200,000 the next day will depend on an evaluation of the cargo, net of costs, that the owners (hopefully) will learn the next morning when the ship returns.

In summary, the risk premium (\$67,700) clearly does not vary or resolve linearly with time. Use of a risk-adjusted rate of return during interim periods (in the absence of learning) will produce an overstated value.

5.94 For investments where fair values are based on anticipated exit events, the change in value at any particular date is a function of (a) changes in the probabilities associated with achievement of exit scenarios, (b) changes in the values of the expected exit scenarios, (c) changes in discount rate, and (d) changes in time to exit event(s). If a substantial portion of the risk included in the discount rate depends on the achievement of conditional events (milestones) rather than the passage of time, there are several techniques that may be employed to ensure that the fair value at subsequent measurement dates is appropriate as follows:

- Assume that market participants would not increase the value due to the passage of time by using the original time horizon within the calibrated valuation model. For example, if a value-enhancing milestone was originally expected to occur 9 months from the investment date, 6 months have passed and resolution of the milestone is expected to be known in 3 months, the investor simply assumes there is still a 9 month period of uncertainty. Market participants might make that assumption to reflect the lack of progress toward resolution of the uncertainty. Mathematically this assumption produces a value that is consistent with the lack of risk resolution.
- Assume that the discount rate is increasing. In this case, the time horizon is appropriately reduced, but the potential gain in value is offset by applying an increased discount rate. Again, this produces a value that is consistent with facts and circumstances.

²² Note that at current risk-free rates, the value change between dates due to time value of money is *de minimis* and would typically be ignored.

- Bifurcate the risky discount rate. This technique is based on the reasonable recognition (at time of initial investment) that the risky rate utilized to calibrate the conditional/success-based PFI to the amount invested comprises at least two types of risks:
 - Risks that resolve with the passage of time, such as product sales, workforce expansion, etc.; for early-stage companies, this component of the discount rate may be very small, and even approximated by the risk-free rate; as time passes, the accretion in value due to this component will typically be insignificant.
 - Risks that resolve with the occurrence of key events; this component may best be modeled through use of probability-weighted scenarios; as key events occur, the accretion in value from adjustments to the probability of success may be significant.

This final technique does not require the application of arbitrary assumptions such as ignoring the passage of time or making adjustments to discount rates that are not supported by changes in the market or at the portfolio company. However, in the absence of the resolution of significant risks/achievement of milestones, all three techniques will produce similar estimates of fair value.

Asset Approach

- 5.95** Of the three approaches to valuing an operating enterprise and the interests in the enterprise under a going concern *premise of value*, the asset (or asset-based) approach, under most circumstances, is considered to be the weakest from a conceptual standpoint. It may, however, serve as a "reality check" on the market and income approaches and provide a "default value" if the available data for the use of those other approaches are fragmentary or speculative. The asset approach is typically more relevant for valuing enterprises and the interests in the enterprise in the earliest stages of development, prior to raising arm's-length financing, when there may be limited (or no) basis for using the income or market approaches. The use of the asset approach is generally less appropriate in the later stages of development once an enterprise has generated significant intangible and goodwill value.²³
- 5.96** For certain investments, where market participants would value the company primarily based on the value of its tangible assets, the asset approach may be an appropriate methodology. For example, at the early stages of real-estate development projects or other development projects, market participants may not assign value for the potential future profits of the business beyond the amount spent in developing the tangible assets to date. At the same time, the sellers of the project would assign value to the amount invested in the project to date, adjusted for any changes in the project's direction and

²³ See the discussion in appendix B, paragraphs B.01.01–.01.10, "Relationship Between Fair Value and Stages of Enterprise Development."

changes in relevant market conditions. See paragraph 5.98–.101 for further discussion of the replacement cost approach.²⁴

- 5.97** The *International Glossary of Business Valuation Terms*, which has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of SSVS No. 1, defines the *asset approach* as “[a] general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities.” The general principle behind the asset approach is that the fair value of equity is equivalent to the fair value of its assets less the fair value of its liabilities. When using the asset approach, it is important to consider not only those assets that are recognized in the entity’s financial statements but also assets that are not recognized in the financial statements. In particular, internally developed assets, such as intangibles created through research and development activities, are typically not recognized in the financial statements but are an important component of the enterprise value for many early-stage companies. Under the asset approach, the *asset accumulation method* is commonly used, whereby the value of the enterprise is estimated to be the net of the fair value of the enterprise’s individual assets and liabilities.²⁵ The fair values of individual assets and liabilities may be estimated using a variety of valuation methods.
- 5.98** In applying the asset accumulation method under the asset approach, it is necessary to estimate the values of the tangible assets. In some instances (for example, when estimating the fair value of an asset that is part of a turnkey operation), a *cost approach*²⁶ is often used, with the *replacement cost new* (or replacement cost) being a common method. Under this method, an asset’s value today is what it would cost today to acquire a substitute asset of equivalent utility. In applying the cost approach, replacement cost often serves as a starting point, and then, adjustments are made for depreciation or changes in relevant market conditions, as discussed in the following paragraph.
- 5.99** Tangible assets change value over time due to a variety of factors:
- Changes in relevant market conditions, such as the cost of the components used in the project (for example, the cost of materials for a real estate project), or the

²⁴ Within FASB’s cost approach concept, practitioners distinguish valuations of individual assets and business enterprises by using different terminology. The cost approach is said to have been applied when valuing individual assets, and the asset approach is said to have been applied when valuing business enterprises. The *International Glossary of Business Valuation Terms*, which has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of SSVS No. 1, defines asset approach as “[a] general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities.”

²⁵ The asset accumulation method is also commonly referred to as the *adjusted net asset value method* or the *adjusted book value method*.

²⁶ Cost approach is one of the valuation techniques that can be used to estimate fair value of individual assets. According to the FASB ASC glossary, the *cost approach* is “[a] valuation approach that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as *current replacement cost*).” FASB ASC 820-10-55-3E further indicates that “[f]rom the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence.”

value of properties in the specific market (for example, due to regulatory or zoning changes or the attractiveness of the type of development)

- Depreciation for physical usage for certain assets and the fact that certain used assets may have a shorter expected remaining life than new assets
- Obsolescence or costs that would not have to be incurred to replace the asset if the project were started again, related to function, technology, and external factors, including locational and economic²⁷
- Increases in maintenance charges associated with increases in age of certain assets

5.100 The replacement costs for a project would include the soft costs associated with planning, approvals, and so on, to the extent that they would still be relevant to completing the project. That is, to estimate fair value in an unforced transaction, a fund valuing such a project would typically consider the perspective of a market participant who was investing in the project, assuming that the project would be developed as planned. Note that in observed transactions where projects are sold after the design work is completed but before tangible progress has begun, market participants typically do not pay full value for the soft costs incurred. However, such transactions are rare and often reflect situations where the original investor was not able to obtain financing or otherwise was forced to abandon the project, and therefore the transaction prices may incorporate some degree of distress. Therefore, the soft costs would be included as part of the value to the extent that they would still be useful for the project.

5.101 In some cases, replacement cost may be estimated by comparing historical cost with a relevant current index published by a trade association, government agency, or other independent source. An example is the valuation of a building using a relevant construction cost index that takes into account the kind of building and its location. (Factors not incorporated into the index, such as the effects of technological changes and building cost changes, also would be considered in estimating replacement cost.)

5.102 In the absence of having built substantial goodwill or intangible value, an enterprise's value under the asset approach is based on the fair value of its tangible assets less its liabilities. The asset approach is most useful when it is applied to tangible assets and enterprises whose assets consist primarily of tangible assets. The reliability of value estimated under the asset approach tends to be greater for tangible assets recently purchased in arm's-length transactions. Because many early-stage enterprises derive the majority of their value from the development of intangible assets (for example, through research and development), the asset approach is unlikely to be appropriate for these enterprises unless the value of these intangible assets is included.

5.103 Another consideration in applying the asset approach is the basis of the valuation (that is, whether the resulting enterprise value would be considered controlling or minority and

²⁷ Robert F. Reilly and Robert P. Schweihs, *Valuing Intangible Assets* (New York: McGraw-Hill, 1998).

whether it would be considered marketable or nonmarketable). See chapter 9, “Control and Marketability.”

Significant Assumptions of the Asset Approach

- 5.104** The asset approach requires assumptions related to the individual fair value of the enterprise’s assets and liabilities. In estimating the value of tangible or intangible assets, such as real estate development projects or research and development projects, under the asset approach, the fund might estimate under a cost approach that part of the expenditures needed to replace the project. For example, for a research and development project for an early-stage enterprise, the costs expended to prove the feasibility of a product or service concept may serve as a proxy for the project’s value. The rationale for this assumption is that if an expenditure results in the creation of value, then an enterprise acquiring the asset would not have to replicate those costs (that is, they are already incorporated in the asset).
- 5.105** If historical project costs are used as a proxy for the replacement cost of the asset, a significant issue is the determination of whether any adjustments are necessary to reflect the costs that would be necessary to replace the asset with one of equivalent utility. For instance, the state of obsolescence or impairment of the asset subsequent to its creation is an important consideration. Often, an asset is operationally functional but has lost value as a result of new products or services that are more efficient or operationally superior. Thus, although the historical cost of the asset may be easily determinable, its replacement cost may be less than historical cost due to obsolescence or impairment. The software industry, for example, has many examples of product obsolescence and impairment.
- 5.106** Another consideration is that historical costs may include *sunk costs* related to failed efforts that are not directly attributable to the asset being valued but that may have contributed indirectly. For example, if a biotechnology enterprise has spent a significant amount of money proving a new protocol for the treatment of cancer, the question arises regarding what intangible asset value this research has generated for valuation purposes. Even if, say, 9 out of the 10 protocols the enterprise experimented with failed, the cost of the experimentation process itself may be considered as contributing to the value of the effective protocol because an enterprise purchasing the intangible asset would not need to pursue those same failed paths to identify an effective protocol. In addition, the value of a known successful protocol may far exceed its cost. In some cases, research may be necessary to advance knowledge or acquire assets (for example, locate oil), and in those cases, the cost of the research phase may be considered an integral part of the cost of the enterprise’s development. However, sunk costs that are incurred as the result of enterprise inexperience typically would not be considered as part of the value under the cost approach. Assumptions regarding the valuation of research would ordinarily be disclosed in a valuation report.
- 5.107** Another consideration is the extent to which it is appropriate to include a developer profit component in estimating an asset’s replacement cost. Generally speaking, as assets are developed, the expectation is that the developer will receive a return of all the costs associated with the development, and may also receive a return on those costs. Otherwise,

there would be no incentive to develop the asset. For example, in a real estate development project, the cost of carry (financing costs including both interest expense and a return on equity, measured as a percentage of costs incurred) would be an inherent component of the replacement cost of the project, as any market participant would incur similar costs. In addition, it may be necessary to consider an entrepreneurial incentive, or opportunity cost. However, market participants may or may not be willing to pay more than the base replacement cost, until and unless the project has reached certain milestones. The fair value would consider the way these factors would influence the price at which the asset would transact given the negotiation dynamics for the specific asset.

- 5.108** The task force recommends that the treatment of overhead costs in determining the cost of an asset be disclosed in the valuation report. Typically, this disclosure would be most applicable in the case of a self-constructed asset.
- 5.109** The cost approach to valuing individual assets does not consider interest or inflation. Two valuation methods to determining replacement cost under the cost approach are useful in explaining why that is the case. One method assumes the purchase of an identical asset in its current (depreciated) condition. The other method assumes the replication of a self-constructed asset. With respect to the first method, there is no need to consider either the time value of money or inflation because the assumption is that all costs are incurred as of the valuation date. With respect to the second method, the cost would be obtained by applying to the asset's historical cost an index of specific price change for that asset. Once that index is used, there is no further need to adjust for inflation because the index adjustment is the measure of specific inflation for that asset and includes a measure of general inflation.

Chapter 6

Valuation of Debt Instruments

- 6.01** This chapter provides guidance regarding the valuation of debt instruments or debt-like preferred stock, both in situations when the debt or debt-like investment is the subject of the measurement, and in situations when the debt or debt-like investment is held by a third party and its value is considered as an input in valuing the equity interests.¹
- 6.02** The fair value of debt reflects the price at which the debt instrument would transact between market participants transacting in the debt, in an orderly transaction at the measurement date. This value would consider the contractual terms of the debt instrument (e.g. coupon rate, contractual maturity, amortization and other pre-payment features, change of control provisions, conversion rights if any), the historical and projected financial performance of the company, the information that market participants transacting in the debt would have regarding the plans of the portfolio company that issued the debt (e.g. expected time horizon), and the expected cash flows and market yield considering the risk of the instrument and current market conditions.
- 6.03** The value of debt for the purpose of valuing equity (that is, used as an input in valuing the equity interests in a portfolio company), reflects the value of the liability that market participants transacting in the equity interests would subtract from the total enterprise value to establish a price for the equity interests in an orderly transaction at the measurement date. This value similarly would consider the contractual terms of the debt instrument (for example, coupon rate, contractual maturity, amortization and other pre-payment features, change of control provisions, conversion rights if any), the historical and projected financial performance of the company, the information that market participants transacting in the equity would have regarding the plans of the portfolio company that issued the debt (e.g. expected time horizon), and the expected cash flows and market yield considering the risk of the instrument and current market conditions. See paragraphs 6.19–.31 for further discussion.

¹ From the economic perspective, the discussion in this section is equally applicable to debt and debt-like preferred stock, irrespective of whether it is accounted for as debt or equity. Debt-like preferred stock is junior to debt but almost always senior to other equity interests, and it plays the same role in the capital structure as mezzanine debt. It typically pays a cumulative dividend through a liquidity event, and it may be mandatorily redeemable on a specified date. It does not have conversion rights or participation rights that would allow it to participate in any increase in the fair value of the company beyond the specified dividend rate; however, in many cases, the same investors who hold the debt-like preferred stock hold proportionate amounts of common stock. Because debt-like preferred stock does not have conversion rights or the right to participate in future rounds, it may be treated as debt, and its fair value may be subtracted from the enterprise value, along with other debt, before allocating the remaining equity value to the other equity interests in the capital structure. Note that this chapter does not discuss the methodologies used for valuation of convertible notes or convertible preferred stock, which are hybrid instruments that have characteristics of both debt and equity. For a discussion of the valuation of convertible notes, please see chapter 13, “Special Topics.” For a discussion of the valuation of convertible preferred stock, please see chapter 8, “Valuation of Equity Interests in Complex Capital Structures.”

6.04 Several other measures of the value of debt instruments are often used as proxies for the fair value of debt or the value of debt for the purpose of valuing equity in some circumstances. These measures do not necessarily reflect the fair value of debt nor the value of debt for the purpose of valuing equity:

- Par value – the notional value of the debt
- Face value – the par value of the debt plus any accrued (paid-in-kind, or PIK) interest
- Book value – the value of the debt used for financial reporting purposes, typically measured as par less any original issue discount (OID), inclusive of debt issuance costs if any, accreting toward par over the maturity as defined by the financial reporting guidance
- Payoff amount – the value of the debt that would be owed upon repayment at the measurement date, which may include a pre-payment penalty and thus be higher than face value
- Traded prices, matrix prices or indicative broker quotes – the price for the debt reported from trades or various pricing services or provided by one or more brokers, which may or may not reflect the fair value as of the measurement date and may or may not reflect a binding offer to transact.

Fair Value of Debt Instruments (when Debt is the Unit of Account)

6.05 The fair value of debt may not be the same as its face value. A fair value of debt lower than face value reflects the cost to the debt holders of being locked into the investment at a below-market interest rate. This situation can arise either due to overall market conditions or company-specific credit issues. For example, if Company A issued debt on June 30, 2X08, at London Interbank Offered Rate (LIBOR) + 300 basis points (bps) with a 5-year maturity but as of June 30, 2X11, would have to pay LIBOR + 700 bps to refinance the debt for the remaining 2 years to maturity, the debt holders will not receive a market rate of return for the remaining 2 years.

6.06 A fair value of debt higher than face value reflects the benefit to the debt holders from the portfolio company being required to pay an above-market interest rate. For example, if Company B issued debt upon reemergence from bankruptcy in 2X08 at LIBOR + 700 bps with a 5-year maturity but in 2X11 had improved performance sufficiently to be able to refinance the debt at LIBOR + 300 bps for the remaining 2 years to maturity, the debt holders may have an advantage for the remaining 2 years. The advantage applies only if the portfolio company is locked into the above-market rate (that is, if the debt is not prepayable or has significant prepayment penalties). If the debt is prepayable, the fair value should not be significantly higher than the payoff amount because if the portfolio company is paying an above-market rate, the portfolio company could theoretically refinance at the lower market rate.

- 6.07** Because debt may include change of control provisions, the penalty (or benefit) to the debt holders associated with the below- (or above-) market yield will typically persist only through the anticipated liquidity event for the portfolio company. The fair value of debt will consider the expected cash flows, including the coupons and principal payments, taking into account any change of control provisions that would apply at the expected liquidity event, and the timing of repayment that market participants transacting in the debt would expect. If the nature and timing of the liquidity event is uncertain, it may be appropriate to consider multiple scenarios and estimate the fair value as the probability-weighted average across these scenarios.
- 6.08** The portfolio company may have several classes of debt outstanding, including first lien and second lien loans, other senior secured debt, senior unsecured debt, subordinated debt, convertible notes, or other debt and debt-like instruments. If the debt instrument that the fund holds in the portfolio company is traded, the traded price as of the measurement date may be the best estimate of fair value, assuming the transaction is determined to be orderly. Most “traded” debt is traded through brokers or market makers where trades may be sparse. However, if the identical debt instrument is traded in an active market, then the fair value would be measured as $P \times Q$.
- 6.09** When a traded price as of the measurement date is not available or is deemed to not be determinative of fair value,² the typical valuation technique to estimate the fair value of the debt is to use a discounted cash flow analysis, estimating the expected cash flows for the debt instrument (including any expected prepayments [for example, if prepayment is required upon a liquidity event]) and then discounting them at the market yield. This valuation technique is referred to as the *yield method*.
- 6.10** The market yield for the debt as of the valuation date can be measured relative to the market yield at the issuance date³ by observing
- the change in credit quality for the portfolio company.⁴
 - the change in credit spreads for comparable debt instruments, considering the characteristics of the debt compared to the comparable traded debt, including the seniority, strength of the covenants, portfolio company performance, quality of the assets securing the debt, maturity, early redemption features or optionality, and any other differences that a market participant would consider in determining its fair value.

² See paragraph 10.34 for a summary of the FASB ASC 820 guidance and a flowchart that describes when it is allowable to place less weight on a traded price when the market is not active.

³ The market yield at the issuance date may be inferred by calibration as long as the transaction price reflected fair value at initial recognition. If the transaction price was not fair value at initial recognition, then a best practice is to assess the market yield at issuance considering the negotiation dynamics and the resulting off-market terms, and then assess the change in yields to the measurement date in the same manner as discussed in paragraphs 6.09–.18.

⁴ If the portfolio company has other debt instruments that are traded, the change in the yields for the traded debt instruments of the portfolio company may be considered good indications of the change in yields for the debt instruments held by the fund, after adjusting for differences in seniority and other characteristics of the debt in question.

- for fixed-rate debt, the change in the reference rate matching the remaining maturity of the debt (that is, the change in the LIBOR swap rate or treasury rate).

6.11 For example, to estimate the fair value of the debt described previously for Company A as of June 30, 2X11, the first step is to look at the credit quality of the company and this debt issuance. Although the company is not rated, when the debt was issued on June 30, 2X08, the spread of 300 bps corresponded to roughly a B+ rating. In the 3 years since issuance, the company made significant progress on its business plan and grew revenues significantly. Based on a *synthetic rating* analysis, as described in paragraphs 6.12–.15, the estimated rating for the debt had improved from B+ as of the issuance date to BB+ based on the company's most recent financial statements as of June 30, 2X11. However, during that same 3 years, the market risk premium for a given credit quality increased significantly. In particular, the credit spreads for debt rated B+ increased from roughly 300 bps to 900 bps, an increase of 600 bps. For Company A's debt, this increase was offset to some extent by the improvement in credit quality. Spreads for debt rated BB+ as of June 30, 2X11, were, on average, 200 bps lower than spreads for debt rated B+. Therefore, the estimated market yield as of June 30, 2X11, is LIBOR + 700 bps. Because the market yield is higher than the coupon, the fair value of debt is thus lower than the face value.

6.12 One method for assessing the credit risk of a portfolio company is to perform a synthetic credit rating analysis. A synthetic credit rating is a quantitative analysis that compares selected financial ratios for the portfolio company to public companies with rated debt, using these metrics to estimate the rating for the portfolio company. This process considers the same types of metrics as those used by the major credit rating agencies, such as:

- natural logarithm (total assets) [company size]
- debt / total assets [leverage]
- EBIT / net debt [solvency]
- return on assets [operating performance]
- EBIT / revenues [operating margin]
- EBIT / average capital [return on capital]
- etc.

6.13 Most synthetic credit rating algorithms use a variety of metrics (e.g. five to seven selected metrics that have been shown to be predictive of ratings, while avoiding overlap), and compare these metrics across a pool of all relevant public companies with rated debt (e.g. public companies in the US and Canada or other relevant markets with rated debt, excluding industries that have significantly different characteristics such as financial services and utilities, and in some cases, oil & gas) using some form of regression

analysis. To estimate the range of spreads for a given credit rating, the same population of public companies would be considered, using the option-adjusted spreads (OAS) reported for each outstanding bonds for these companies and filtering to find bonds with similar maturities.

- 6.14** A synthetic credit rating analysis provides a mathematical estimate for the corporate family rating that does not take into consideration any qualitative factors that may impact the credit rating of the portfolio company. After calculating this rating, the fund may then apply judgment to adjust considering the factors that the synthetic credit rating analysis may not capture. In particular, portfolio companies that seek capital from private capital markets may have qualitative factors that prevent them from obtaining debt from more conventional sources, and therefore the calibrated spreads for debt investments often fall at the higher end of the indicated synthetic credit rating, or may better be considered to fall within the range for a lower credit rating. Therefore, it is important to calibrate the model to the issuance price to infer a credit spread and corresponding rating, and then consider the *changes* in the portfolio company's credit quality, if any, as indicated by the synthetic credit rating model. See, for example, case study 13, *Business Development Company with Various Debt Investments*, Investment 2, paragraphs C.13.43–72.
- 6.15** In addition, a synthetic credit rating is designed to estimate the corporate family rating (CFR) for the portfolio company, which typically also reflects the rating that would be expected for a senior unsecured bond issued by the portfolio company. Secured bonds typically are rated one notch better than the CFR (e.g. BB+ instead of BB), while subordinated bonds may be two to three notches below the CFR. However, these are not prescriptive thresholds and as with any valuation, the assumptions should be properly supported. Other methods for adjusting for seniority consider the relative expected recovery rates upon default, especially when the portfolio company has a recent debt issuance for another debt instrument or has traded debt that can be used to infer the spreads for the debt investment held by the fund. It is important to consider the seniority of the debt instrument when estimating the credit risk.
- 6.16** Rather than using synthetic credit ratings, many funds rely on their own underwriting practices to infer the change in credit risk for their portfolio companies. Funds typically consider the total enterprise value or asset value and subtract the face value of any senior debt to estimate the degree of coverage (loan-to-value or LTV), estimate the EBITDA-to-interest coverage ratio and the projected cash flows to assess the portfolio company's ability to service the debt payments, and benchmark these factors against their current lending criteria. When using these criteria to assess spreads, however, it is also important to consider how the other characteristics of the instruments and the market for competing financing have changed. For example, even if mezzanine debt rates have remained relatively stable, the characteristics of the companies seeking mezzanine debt and the covenants that lenders are able to demand have changed significantly in periods when credit markets are looser or tighter.
- 6.17** In some cases, the issuance of debt or debt-like preferred stock may not initially be considered to be an arm's-length transaction. For example, new debt may be issued to existing debt investors as part of a recapitalization following a bankruptcy or in a

negotiation to avoid a default, and debt-like preferred stock may be issued to investors who also received common stock proportionately. In these cases, the market yield for the debt or debt-like preferred stock as of the valuation date can be measured by considering the

- credit quality for the company.
- credit spreads for comparable debt instruments, considering the characteristics of the debt compared to the comparable traded debt, including the seniority, strength of the covenants, company performance, quality of the assets securing the debt, maturity, and so on.
- base rate corresponding to the expected maturity of the debt (for example, the treasury rate).

6.18 If the debt has prepayment features (such as call or put rights), it may be necessary to consider the optimal timing of repayment for the issuer (call features) and the holder (put features), given the future evolution in market yields. For example, if the debt is prepayable with decreasing levels of prepayment penalties as time progresses, it may be optimal for the issuer to prepay at a later date rather than prepaying immediately. Typically, debt instruments with such features may be valued using a one-factor stochastic model such as a Black-Derman-Toy (BDT) model.

Value of Debt for the Purpose of Valuing Equity

6.19 One widely used approach for valuing equity interests is to estimate the enterprise value and then subtract the value of debt. Please see chapter 7 for a discussion of approaches for valuing the enterprise for the purpose of valuing the equity interests in the enterprise. The following section discusses approaches for valuing debt for the purpose of valuing the equity interests in the enterprise, given a reasonable estimate of the enterprise value.

6.20 The value of debt for the purpose of valuing equity reflects the cost that market participants transacting in the equity would assign to this liability given the expected interest and principal payments over the expected time horizon for the debt. Note that market participants transacting in the equity may make different assumptions than market participants transacting in the debt, as these transactions would take place in different markets. Market participants transacting in the equity would consider the impact of the debt on the investment knowing that the company ultimately would be responsible for redeeming all the debt, not just a piece. In addition, the usual and customary due diligence for a transaction in the equity would typically provide better information about the company's strategies, and thus, the equity holders might make different assumptions regarding the expected timing of a liquidity event or other factors. Therefore, the value of debt used in estimating the fair value of equity may be different than the fair value of debt considered independently. Please see chapter 4 for additional discussion.

6.21 In many cases, funds valuing equity interests may use the par value, face value, book value or payoff amount as a proxy for measuring the value of debt for the purpose of

valuing equity. These proxies provide a lower and upper bound on the value of equity. Specifically, the equity value measured based on the enterprise value less the payoff amount may be regarded as a lower bound on the value of equity, because the equity holders could redeem the debt for this price. The equity value measured based on the enterprise value less the fair value of debt may be regarded as an upper bound on the value of equity, because the equity holders would recognize that the company ultimately would be responsible for redeeming all of the company's debt. If the company were to redeem the debt before maturity or the equity holders were to buy the debt back in a negotiated transaction, they would typically have to pay a higher price than the fair value for the debt instrument on a standalone basis. Judgment is required to estimate the value of debt for the purpose of valuing equity within this range, considering the facts and circumstances.

- 6.22** Market participants might consider a value of equity closer to the upper bound if the debt has a below market coupon and the time horizon for the investment is relatively long, so that they would expect to be able to realize value from the below-market coupon over a period of time. Market participants might consider a value of equity closer to the lower bound if they expect to exit the investment in a short period of time and the debt has a change of control provision that would prevent them from realizing value from any below-market coupon. If the payoff amount and the fair value of debt are close, the market participant assumption regarding the value of debt for the purpose of valuing equity is that they typically would transact based on an equity value measured as the enterprise value less the face value of debt.⁵
- 6.23** The value of debt for the purpose of valuing equity will typically be estimated using the same valuation methodologies used for estimating the fair value of debt. The value of debt for the purpose of valuing equity will consider the expected cash flows, including the coupons and principal payments, taking into account any change of control provisions that would apply at the expected liquidity event for the portfolio company, and the timing of repayment that market participants transacting in the debt would expect. In fact, the maturity of the debt and the duration of any penalties associated with an early change of control are factors that should be considered in establishing the likely timing of a liquidity event.
- 6.24** If the company's debt is traded, the traded price as of the measurement date may be the best starting point for estimating the value of debt for the purpose of valuing equity, assuming the transaction is determined to be orderly. It should be noted, however, that as discussed in paragraph 6.20, the market participants investing in equity are different than the market participants investing in debt; therefore, the value of debt for the purpose of valuing equity may differ from the traded price for the debt. The valuation model used for estimating the value of debt for the purpose of valuing equity would be calibrated to the traded price for the debt consistent with the assumptions that market participants

⁵ The fair value of debt will typically not be higher than the payoff amount, because market participants transacting in the debt would assume that the company would pay off the debt rather than paying an above market coupon for an extended period of time. If the fair value of debt is above the face value, it would be more appropriate to subtract the fair value or payoff amount from the enterprise value to estimate equity, rather than assuming that face is a reasonable proxy.

transacting in the debt would make, and then adjusted to capture any differences in assumptions that market participants transacting in the equity would make.

6.25 Another valuation technique for estimating the value of debt for the purpose of valuing equity is to include the future payoff for the debt within the model used for allocating the enterprise value among the various claims on the portfolio company. The allocation model would then calculate the expected value of debt that would subtract from the total enterprise value, resulting in the residual value of equity:

- For paid-in-kind debt without covenants, the future payoff for the debt equals its principal plus accrued interest through maturity, and the value of the debt for the purpose of valuing equity can be measured via an allocation methodology that includes the debt.
- For debt that pays cash interest or is amortizing, the value of the debt will be higher than the value of an equivalent nonamortizing debt in which the interest accrues through maturity.⁶ Because allocation models typically model the payoff amounts for the various instruments, rather than modeling the interim cash flows, they typically cannot capture the value of the requirement to make current payments on the debt. In this situation, it is possible to model the present value of the interim cash flows separately and include only the final debt payoff in the allocation model.

6.26 If the debt is included in the allocation model used for allocating value to the equity interests for the business, it may be necessary to estimate its value for the purpose of valuing equity outside the allocation model (for example, using a yield method, as discussed previously). It is then possible to include the debt within the allocation model by solving for the future payoff amount (the *zero coupon bond equivalent*) that results in an allocation to the debt matching this value. See paragraph 8.48(c) for a more detailed description of the pros and cons of including debt within the allocation model.

6.27 In a few situations, it may not be possible to estimate the market yield from public debt data. For example, in some leveraged buy-out situations, the debt may have much higher leverage than is observable in the public debt markets. In these situations, the debt will behave more like equity, and the value may be estimated by allocating the total enterprise value directly. For PIK debt, one approach would be to allocate the enterprise value using a payoff amount for the debt equal to its face value, plus accrued interest through the liquidity event, plus any prepayment penalty. For debt with cash interest, one approach would be to subtract the present value of the cash interest from the enterprise value and then allocate the residual value using a payoff amount for the debt equal to its face value plus any prepayment penalty. When estimating the value of debt by allocating the total

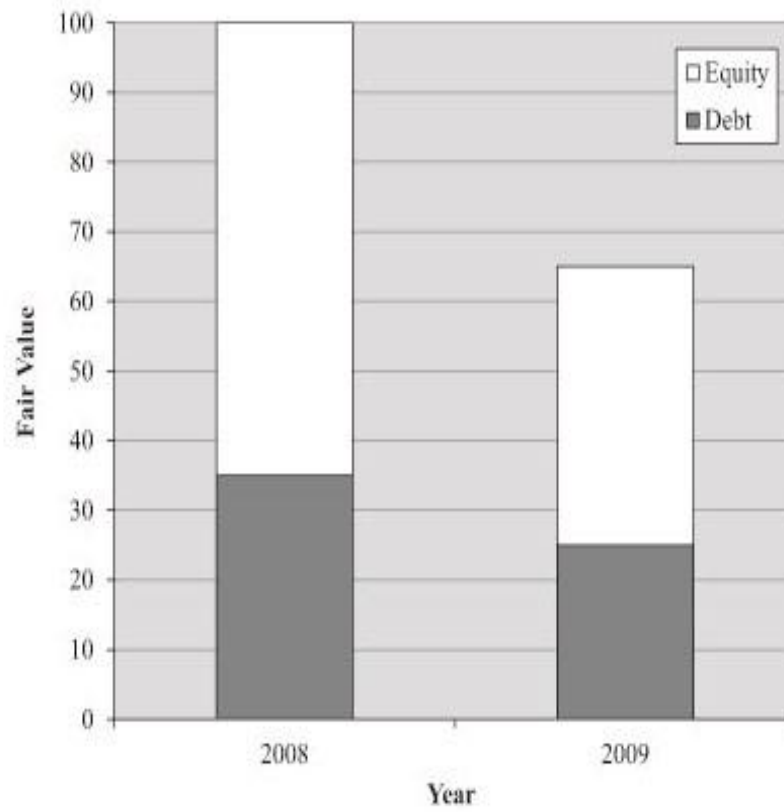
⁶ Paid-in-kind (PIK) debt is riskier than debt that pays cash interest because the performance of the portfolio company can decline significantly without triggering a default (unless the debt has tight covenants). If the portfolio company is obligated to make cash interest, principal payments, or both, the portfolio company will default whenever the cash flows are not sufficient to cover these payments. When portfolio company performance is declining, triggering a default earlier may improve the recovery rate for the debt and effectively decreases its risk.

enterprise value directly, it is a best practice to also calculate the yield implied by the analysis and assess whether it is reasonable, given the leverage and terms of the debt.

- 6.28** One key difference in estimating the value of debt for the purpose of valuing equity in situations where the debt has a change of control provision is that market participants transacting in the equity may not assign full value to the benefit that they may ultimately realize from paying a below market interest rate, since this benefit can be realized only by holding the investment through the maturity of the debt. Assessing this impact requires judgment. This additional illiquidity may be reflected by using a value between the fair value of debt and the payoff amount as the value of debt for valuing equity (estimating a negotiated debt payoff), or by applying an illiquidity discount to the value of equity resulting after subtracting the fair value of debt (estimating the fair value of equity adjusted for illiquidity). See paragraphs 4.51–.52 for examples of these approaches.
- 6.29** In situations where the portfolio company is not highly levered and the fair value of debt is close to its book value or payoff amount, many market participants use the book value of debt or payoff amount as the value of debt for valuing equity. Using the book value reflects the value of debt as originally negotiated, updated for accretion toward maturity. Using the payoff amount reflects the value of debt that would be due upon a repayment at the company's option, if the debt is prepayable, or that would be due upon a change of control. These approaches may provide a reasonable approximation for valuing equity when the change in the value of the debt would have only limited impact on the equity value.
- If the credit quality of the company has not changed and credit markets have been reasonably stable, the fair value of debt is likely to be relatively close to its book value. For example, for debt that was funded at par, an increase in market yields of 50 or 100 bps over a five to seven year term to maturity would indicate a fair value of debt of approximately 94 to 99 percent of par. At thirty percent leverage (debt to TIC), using a value of debt for the purpose of valuing equity of 95 percent of par would increase the estimated equity value by less than two percent of TIC.
 - Alternatively, if the company's credit quality has improved or market yields have declined, it might be optimal for the company to pay off the debt, and thus, it would be reasonable to measure the value of equity using the payoff amount for the debt. If the debt has a pre-payment penalty, the payoff amount for the debt would be above par. At thirty percent leverage (debt to TIC), using a value of debt for the purpose of valuing equity of 102 percent of par would decrease the estimated equity value by less than one percent of TIC.
 - When the credit quality of the company has declined or the market yields have increased significantly, the value of debt for the purpose of valuing equity may be significantly below par, and furthermore, the leverage for the company may be higher as TIC may also have declined. At fifty percent leverage (debt to TIC), using a value of debt for the purpose of valuing equity of 70 percent of par would increase the estimated equity value by around twenty percent of TIC.

- 6.30** Another consideration in estimating the value of debt for the purpose of valuing equity is the level of information available regarding the debt. If the fund has only limited information on the debt's terms (for example, if it does not have information about prepayment or other features), it may be challenging to assess the value of debt for the purpose of valuing equity. In these limited situations, the fund would need to use the information available to estimate whether the value of debt for the purpose of valuing equity would be significantly different from its book value or par, considering changes in the company's credit quality and in the credit markets since the issuance date. The fund would also consider whether market participants transacting in their position would require a higher rate of return due to the lack of information on the company and its debt. See chapter 9, "Control and Marketability," for further discussion.
- 6.31** It should be noted that a decline in the fair value of debt is usually accompanied by a decline in the overall enterprise value as the portfolio company performance declines or the portfolio company's overall cost of capital increases. The overall decline in the fair value of the portfolio company will typically be shared between the debt and equity. In the following example, the total enterprise value was \$100 million in March 2008, with newly issued debt with a \$35 million principal balance paying 10 percent interest and an equity value of \$65 million. By March 2009, following the financial crisis in the fourth quarter of 2008, the enterprise value had fallen by 35 percent, and rates had increased to the point that the fair value of debt had fallen to \$27 million, leaving \$38 million for equity. Thus, in this example, the fair value of debt declined slightly more than 20 percent, and the fair value of equity declined slightly more than 40 percent.

**Effect of a Decline in Enterprise Value
on the Fair Value of Debt and Equity**



Chapter 7

Valuation of Equity Interests in Simple Capital Structures

- 7.01** This chapter provides guidance regarding the valuation of equity interests for a portfolio company with a capital structure involving a single primary class of equity (for example, common stock or common units of an LLC). The capital structure may also include debt or debt-like preferred stock, as well as options and warrants or profits interests in an LLC. For a discussion of the valuation of equity interests in a portfolio company having multiple classes of stock (for example, convertible or participating preferred and common stock), see chapter 8, "Valuation of Equity Interests in Complex Capital Structures."
- 7.02** In a *simple capital structure*, the value of the single primary class of equity interests in the portfolio company typically is calculated based on a pro rata share of the total enterprise value less the value of debt for valuing equity,^{1, 2, 3} measured considering the cash flows from the enterprise under current ownership and the required rate of return for the investors who in aggregate have control of the business. The key assumption underlying this method is that the price that the investors who in aggregate have control of the business are willing to pay for an enterprise reflects their risk-adjusted expected returns from that investment.⁴ To the extent that a market participant investing in an interest in the business will share in the same returns, the fair value of the other interests would need to reflect the same returns; thus, the enterprise value used to value the equity interests in the portfolio company would need to be consistent with these expected

¹ The value of debt for valuing equity reflects the cost that market participants transacting in the equity would assign to this liability given the expected interest and principal payments over the expected time horizon for the debt. Note that market participants transacting in the equity may make different assumptions than market participants transacting in the debt, as these market participants would typically have access to different information; therefore, the value of debt used in estimating the fair value of equity interests within an enterprise may be different than the fair value of debt considered independently. See paragraphs 6.19–.31, "Value of Debt for the Purpose of Valuing Equity."

² If the capital structure also includes options or warrants or profits interests, the value of these options and warrants or profits interests should be subtracted from the total equity value to obtain the value of the single class of equity (for example, common stock). Thus, in this situation, if the total equity value is measured considering the expected time horizon of the investment including potential upside for the options and warrants or profits interests, the calculation becomes iterative; that is, the per share value of the single primary class of equity is used as an input into the option and warrant valuation, and the aggregate value of the options and warrants is subtracted to estimate the value of the single primary class of equity. If the total equity value is measured considering the controlling enterprise value net of stock-based compensation, reflecting the value that a third party might pay to acquire the business, then the dilution impact for the options and warrants and profits interests would be measured considering the contractual payoff value under the terms of the option or warrant plan upon a sale (typically, the intrinsic value) rather than the full option value inclusive of the additional option value that might be realized over the expected time horizon of the investment. See paragraphs 13.65–.76, "Dilution."

³ Note that it is also possible to value equity investments considering cash flows to equity, price to earnings multiples, or other direct methods. Most market participants use methods that involve first estimating the enterprise value and then estimating the value of equity by subtracting the value of debt for the purpose of valuing equity. Therefore, this chapter focuses on the latter approach.

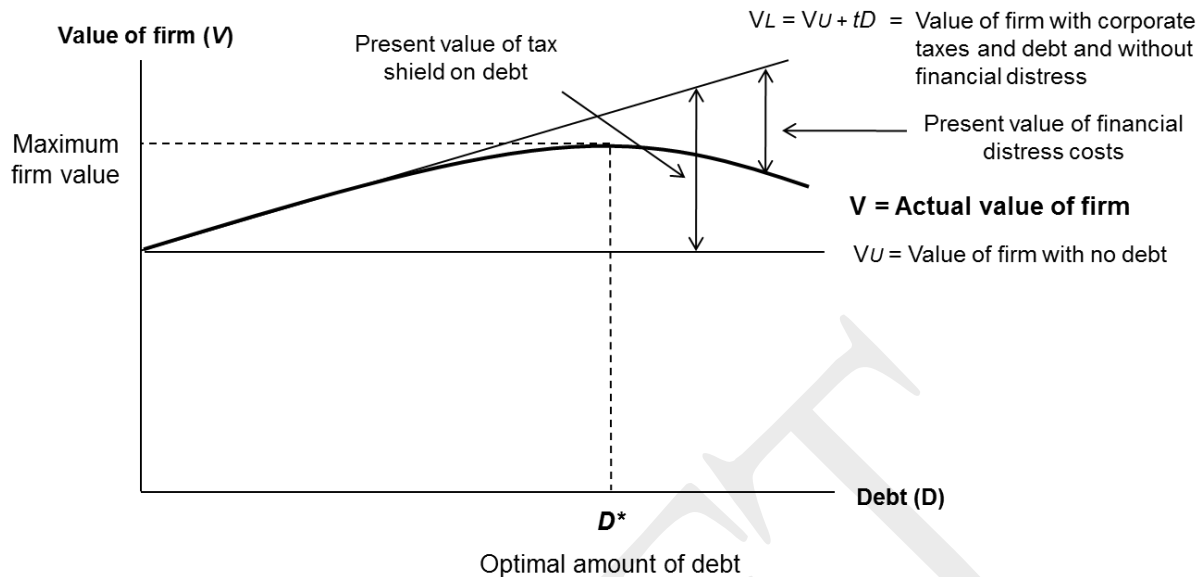
⁴ Most privately held companies have investors who in aggregate have control of the enterprise. When valuing equity investments within a privately held portfolio company, it is appropriate to consider these investors' required rate of return.

returns. Subsequently, adjustments should be made for differences in the return that a market participant purchasing the specific investment would require, if appropriate, given any differences in the contractual rights for the instruments, the alignment of the investors' interests, and the primary exit market. See paragraph 7.07, paragraphs 3.17–.22, "Considering whether investors' interests are aligned," and chapter 9, "Control and Marketability."

- 7.03** The valuation of an enterprise used when valuing equity interests in the enterprise is not necessarily the same as the fair value of the enterprise used when valuing the enterprise as a whole. In particular, the assumed transaction considered in estimating the fair value of the equity interests in a portfolio company is a sale of those equity interests, whereas the assumed transaction considered in estimating the fair value of the enterprise is a sale of the enterprise. Although the enterprise values considered from these two different perspectives will typically be similar or identical, they are conceptually different and can differ significantly in some circumstances.
- 7.04** The key difference between the valuation of the enterprise for purposes of valuing the equity interests in the enterprise and the fair value of the enterprise itself is that in some cases, a market participant acquiring the equity interest would not have the unilateral ability to change the portfolio company's strategy and policies. Therefore, the assumptions used in valuing the equity interests in the enterprise generally should be consistent with the portfolio company's plans under current ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the interest acquired, and the required rate of return for the investors who in aggregate have control of the business. See chapter 9, "Control and Marketability," for additional discussion.
- 7.05** Some enterprises (for example, family-owned or other tightly held enterprises) may intend to remain private indefinitely. A market participant investing in a minority interest in such an enterprise would use company-specific assumptions regarding the plans of the enterprise, including the cash flows and the expected capital structure, when estimating the enterprise value for the purpose of valuing the interest. That is, in situations where market participants investing in the interest would have no ability to change the cash flows or capital structure or other plans of the business, market participant assumptions for the specific interest would be aligned with company-specific assumptions for the enterprise. The company-specific assumptions for the enterprise would be consistent with the assumptions that a market participant investing in the fund's interest would make in valuing that interest.
- 7.06** Almost all venture capital-backed and private equity-backed companies will ultimately seek liquidity through an initial public offering (IPO) or sale of the company. When considering the enterprise value for valuing the equity interests in a venture capital-backed or private equity-backed enterprise, market participants may think about the value in one of two ways:

- a) Measure the fair value of the enterprise considering the value that would be expected to be realized upon a sale to a third party (typically referred to as the *controlling enterprise value*).
- This enterprise value would reflect the typical third party cost of capital and leverage structure, as well as any synergies or improvement strategies that third parties would expect (excluding unique, buyer-specific synergies that would not be expected to be incorporated into the purchase price, given the negotiation dynamics). This value would also be measured excluding any stock-based compensation, as a third party would also expect to issue stock-based compensation to the company's management – that is, no value would be incorporated into the enterprise value to account for the potential upside appreciation for any options or profits interests.
 - The equity value would then be measured by subtracting the value of debt for the purpose of valuing equity and adjusting the resulting equity value for illiquidity, if applicable, as discussed in paragraphs 6.19–.31, “Value of Debt for the Purpose of Valuing Equity.” Since the value of the enterprise was measured excluding any stock-based compensation, the value of the single primary class of equity would be measured by subtracting the value of any options and warrants or profits interests at their *intrinsic value*.
 - Because the investors who hold the single primary class of equity in aggregate have control of the enterprise, this approach results in a lower bound on the value of the single primary class of equity – that is, market participants would not sell the interest for less than could be realized by selling the enterprise as a whole on the measurement date, considering the value of debt for valuing equity.
 - On the other hand, even if market participants believe that the equity interest will have more value given the company's plans under current ownership than in an immediate sale, market participants would be unlikely to be able to sell the interest for more than the pro-rata value that could be realized by selling the enterprise as a whole on the measurement date, considering the value of debt for valuing equity. That is, market participants investing in the equity interests might believe that the business has enormous potential, but they would expect a correspondingly high rate of return.
- b) Measure the value of the enterprise for the purpose of valuing the equity interests in the enterprise using market participant assumptions about the company-specific plans and cost of capital through the liquidity event. Although most private equity and venture capital funds do not think about the portfolio company value in this way, some valuation specialists would consider this approach as another methodology for understanding the value of equity in situations where the cash flows to equity differ from the value that would be realized in a sale of the portfolio company on the measurement date. At the liquidity event, the estimated exit value would be based on the amount that might be realized in an IPO or a sale, considering the way that IPO investors or a new third-party buyer would evaluate the enterprise at that point.

- This enterprise value would reflect the company-specific cost of capital and leverage structure, as well as any synergies or improvement strategies that market participants transacting in the equity interests would expect under current ownership, consistent with the assumptions that market participants would make when investing in an interest in the enterprise, as discussed in paragraphs 7.04–.05. This value may or may not be measured excluding any stock-based compensation; if the value is measured including the value of the stock-based compensation, then the model would need to include the full dilutive impact of any options or warrants or profits interests. If not, the model would consider the intrinsic value of the options or warrants or profits interests.
- The equity value would then be measured by subtracting the fair value of debt, since the company-specific cost of capital, which includes the company-specific cost of debt used in modeling the fair value of debt, was used in estimating the enterprise value, consistent with the assumptions that market participants would make when investing in an interest in the enterprise. The value of the single primary class of equity would be measured by subtracting the value of any options and warrants or profits interests considering either the full option value given the expected time horizon for the investment or their intrinsic value, depending on whether these costs were subtracted when measuring the enterprise value.
- If the portfolio company is not in financial distress, then the company-specific cost of capital assumption that market participants would make when investing in an interest in the enterprise and the third-party cost of capital assumption that market participants would make when acquiring the entire enterprise would be expected to be approximately the same across a wide range of capital structures. Specifically, as leverage increases, both the cost of debt and the cost of equity increase, but the percentage debt increases and the value of the tax savings increases. Formulaically, the company-specific cost of capital may appear lower than the third-party market participant cost of capital; if so, the additional return may be added to the cost of equity. Increasing leverage is one of the strategies that private equity investors use to increase equity returns.



- If the fair value of debt is significantly below its face value, then the company-specific cost of capital most likely reflects some degree of financial distress, and would be expected to be higher than the third-party market participant cost of capital, consistent with the assumptions that market participants would make when investing in an interest in the enterprise. At the same time, the equity holders would benefit from having locked-in a below market coupon for the debt. The increased company-specific cost of capital reflects the fact that market participants transacting in the equity interests would require higher returns, given the requirement either to hold the investment through the maturity of the debt to gain the benefit of the below-market coupon or to negotiate with the debt holders to obtain these benefits in a near-term exit. This approach is equivalent to valuing the enterprise considering the third-party market participant cost of capital and then subtracting the expected negotiated debt payoff or subtracting the fair value of debt and adjusting the resulting equity value for illiquidity, as discussed previously.

- 7.07** When using either of these approaches to measure the value of the equity interests in a portfolio company, the enterprise value should be measured including the benefits of control. The valuation for any equity interests where the investor's interests are not aligned and that do not have the same rights as the investors who in aggregate have control of the business may then be adjusted for differences in risk attributable to lack of various control and information rights and lack of marketability, if appropriate. See chapter 9, "Control and Marketability."
- 7.08** Table 7-1 briefly describes some of the key differences between the valuation of the enterprise for valuing the equity interests in the enterprise and the fair value of the enterprise. This table is not all-inclusive, and there are other differences that are not discussed here.

Table 7-1

<i>Fair Value of an Investment in the Enterprise (for example, assets held by funds)</i>	<i>Fair Value of the Enterprise as a Whole (for example, goodwill impairment testing)</i>
<ul style="list-style-type: none"> Assumes sale of the investment in the enterprise on the valuation date. Market participant would be other private equity or venture capital investors, unless it would be optimal for the fund to be actively marketing the position in a different market. Considers the enterprise value consistent with <ul style="list-style-type: none"> cash flows and capital structure that market participants buying an interest in the enterprise would expect considering the post-transaction ownership (through the expected liquidity event, if any). Specifically, market participants transacting in the equity interests would consider the portfolio company's plans given the investors who in aggregate have control of the business, and make corresponding assumptions regarding the expected cash flows for the business and the expected time horizon for the investment. tax attributes under current ownership through the expected liquidity event, if any. company-specific cost of capital (based on the investors' expected rate of return). Valuation may reflect adjustments relative to guideline public company or guideline company transaction multiples, if justified based on company-specific factors.⁵ 	<ul style="list-style-type: none"> Assumes sale of the enterprise on the valuation date. Market participant would be a buyer for the enterprise as a whole; typically, a strategic or financial buyer. Considers the enterprise value consistent with <ul style="list-style-type: none"> cash flows and capital structure that market participants buying the entire enterprise would expect (excluding buyer-specific synergies), which might assume changes to strategy. third party market participant cost of capital, considering a normalized leverage structure. Valuation may reflect adjustments relative to guideline public company or guideline company transaction multiples to the extent that market participants buying the enterprise would make such adjustments.

7.09 The reason it is appropriate to use company-specific assumptions when estimating the value of the enterprise for the purpose of valuing the equity interests in the enterprise is that the unit of account is the equity interest, not the portfolio company as a whole. A market participant investing in an interest in the portfolio company might not be able to change the company's strategy and policies. Therefore, a market participant investing in an interest in the portfolio company would consider the company's plans under existing ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the interest acquired. Specifically, market participants transacting in an interest would consider which investors have control or in aggregate have control, and make corresponding assumptions regarding the expected cash flows for the business and the expected time horizon.

⁵ See chapter 9, "Control and Marketability."

- 7.10** For the purpose of valuing interests in the portfolio company's equity interests, the fund would need to estimate the value of equity. Thus, if the fund begins by estimating the total enterprise value, the fund would then subtract the value of debt that market participants transacting in the equity would consider, if any, from the total enterprise value. Note that in some cases, the market approach or income approach is used to value equity directly using equity multiples or after-debt cash flows. If such an approach is used, it is not appropriate to subtract debt to estimate the equity value.
- 7.11** After estimating the total equity value and subtracting the value of any options or warrants or profits interests⁶, the remaining value may be allocated to the single primary class of equity. Typically, this allocation would be made on a pro-rata basis, as all investors have the same class of equity. It might be appropriate to make further adjustments to this value if the specific investment lacks certain non-economic rights, such as information rights, that market participants would typically expect. See chapter 9, "Control and Marketability," for a discussion of the circumstances in which it might be appropriate to apply a discount for lack of marketability to capture the additional rate of return that market participants might demand for investments that lack these rights.

⁶ The value of the options or warrants or profits interests for the purpose of estimating the dilution impact on the investor interests would be measured at intrinsic value if the enterprise value was measured net of full compensation costs, or would consider the option value over the time horizon of the investment if the enterprise value is measured considering the expected time horizon of the investment including potential upside for the options and warrants or profits interests. See Q&A 14.27, *Incorporating Stock-Based Compensation into the Valuation*, for further discussion.

Chapter 8

Valuation of Equity Interests in Complex Capital Structures

- 8.01** This chapter provides guidance regarding the valuation of equity interests for a portfolio company with a capital structure involving multiple classes of stock. Many (if not most) venture capital-backed and private equity-backed portfolio companies are financed by a combination of different classes of equity, each of which provides its holders with unique rights, privileges, and preferences (hereinafter referred to collectively as *rights*). Often, these portfolio companies issue both preferred and common shares and options or warrants, with the preferred stock comprising several series, resulting from successive rounds of financing, each of which has rights that likely differ from those of other series. When estimating the fair value of the fund's investment, the fund should determine how each class of equity would participate in future distributions from a sale or other liquidity event, and the implications for the fair value of each class of equity.
- 8.02** Typically, portfolio companies with multiple classes of stock divide the classes into two broad categories: preferred and common. Sometimes, one of the principal objectives of issuing preferred stock—the granting of different rights to different groups of stockholders—may be achieved instead by issuing multiple classes of common stock or different classes of membership units in a limited liability company. The issues discussed in this chapter for valuing equity interests in complex capital structures apply not only to preferred versus common stock but also to any situations involving multiple classes of equity issued by a portfolio company wherein some classes have senior rights similar to those of holders of preferred stock.
- 8.03** Capital structures involving multiple classes of equity are often found in start-up portfolio companies funded by venture capital. Value creation in such portfolio companies is frequently a high-risk process. Venture capitalists may fund such portfolio companies beginning at an early stage of the portfolio company's existence when the portfolio company may have an unproven business model, little or no infrastructure, an incomplete management team, and little or no short-term prospects of achieving a self-sustaining business with revenue, profits, or positive cash flows from operations. In spite of such challenges, such portfolio companies may draw significant capital from venture capitalists and other investors because of the potential for high returns in the event that the portfolio company is successful in achieving its plans.
- 8.04** Capital structures involving multiple classes of equity may also be found in larger portfolio companies funded by private equity. Private equity investors seek high returns through a variety of strategies (for example, acquiring well-run companies that can be used as a platform for expansion [a "roll up"] or acquiring poorly run companies in which profitability can be improved through better management [a "turnaround"]). In many cases, private equity investors also increase the risk and reward profile for their equity investments through leverage.

8.05 In view of the high risks associated with their investments, venture capital and private equity investors typically seek downside protection and significant control or influence over the portfolio companies' activities. Thus, in many cases, in exchange for cash investments in the portfolio company, investors may receive preferred stock that conveys various rights to its holders. For venture capital-backed portfolio companies, initial issuances of common stock are primarily to founders for nominal or no cash consideration. For private equity-backed portfolio companies, the initial shareholders in the acquired company may retain common stock, and in addition, common stock may be granted to key executives. In addition, employees are often granted options to purchase the portfolio company's common stock or profits interests if the portfolio company is structured as a partnership or limited liability company. The result is that venture capital-backed and private equity-backed portfolio companies frequently have complex capital structures with various classes of stock involving different rights:

- a. Venture capital-backed companies are often funded through a series of financing rounds, which are usually negotiated independently and often involve different investors; thus, the capital structure may include many different classes of preferred stock with different rights and preferences.
- b. Private equity-backed companies are often funded through a large initial investment to buy out existing shareholders, and a new capital structure is often put in place in connection with this investment. Private equity investors are also more likely to set up a holding company as a limited liability company, using profits interests as compensation for key executives.
- c. Another capital structure used by some private equity funds is for the investors to receive both a debt instrument or debt-like preferred stock with a specified cumulative dividend rate (sometimes referred to as the *hurdle rate*), as well as the majority of the common stock, reserving a fraction of the common stock as a compensation pool for executives. In this structure, all investors receive both preferred and common stock, so even at the initial investment date, the transaction included multiple instruments, so the preferred stock cannot be assumed to be worth its face value without further analysis. If the leverage (debt divided by total invested capital) on the debt or preferred stock falls within the observable range for commercial debt issuances, the PE/VC Task Force (task force) believes that the best practice for estimating the fair value of a debt-like preferred stock is the yield method, which is described in paragraphs 6.09–.18. This approach captures the required return on the debt or debt-like preferred investment, allowing for the fact that the investors have control of the timing of exit, similar to the control that covenants provide to commercial debt investments. If the leverage on the investors' debt or preferred stock holding falls outside the observable range for commercial debt issuances (for example, if the principal value is set at 90 or 100 percent of the total invested capital), then the common stock may be considered as an option.

8.06 Estimating the value of the different classes of equity in a portfolio company requires an understanding of the rights associated with each class. Such rights are meaningful,

substantive rights and often are intensely negotiated and bargained for by the investors.¹ The holders of the preferred instruments often structure the associated rights to allow the holders to control the business and direct the company's operations.

8.07 Almost all venture capital-backed and private equity-backed companies will ultimately seek liquidity through an initial public offering (IPO) or sale of the company; thus, the methods in this chapter focus on estimating the fair value of the different classes of equity based on the future payoffs at the time of the liquidity event. However, there are other situations in which a company with a complex capital structure may remain private indefinitely. In these situations, the liquidity event should be considered to be the event in which the preferred stock is to be redeemed or repurchased. Examples include the following:

- a. In rare instances, a venture capital-backed company will "go private" by acquiring the preferred stock from outside investors. In this situation, the company typically retires the preferred stock at the repurchase date, and this repurchase may be treated as a "liquidity event."
- b. Many family-owned or other closely held businesses have simple capital structures. (See chapter 7, "Valuation of Equity Interests in Simple Capital Structures.") However, when these businesses raise capital from private equity or venture capital investors without creating a new class of equity, the investment is often accompanied by various side agreements. In these situations or when such a business has a more complicated capital structure, the fund will need to consider the specific facts and circumstances, considering the time frame until the resolution of the uncertainties relating to the future payoffs to the investment. Note that when a fund makes a minority investment in such a business, the fund will typically negotiate a path to liquidity (for example, a put right or mandatory redemption feature that forces the company to repurchase the investment at the higher of cost or fair market value or a negotiated formula price after a specified amount of time.²). Such liquidity rights should also be considered when estimating the fair value of the investment.

8.08 For simple capital structures (that is, capital structures that include only common stock plus debt, debt-like preferred instruments, or both), it is possible to estimate the value of the equity interests in the portfolio company by directly estimating the value of any debt and debt-like preferred instruments as discussed in paragraphs 6.19–.31, subtracting those values from the total enterprise value, then allocating the residual equity value pro rata to the common stock. See chapter 7, "Valuation of Equity Interests in Simple Capital

¹ The terms *meaningful* and *substantive*, as applied to rights, are used in this chapter to describe preferred stock rights that are important to a venture capitalist or private equity investor, in the sense that those rights provide the investor a level of control and influence that he or she requires in order to invest in the portfolio company.

² See also case study 6, *Impact on Value of Senior Equity Interests when Junior Equity Interests have Control*, in appendix C, "Valuation Case Studies," describing the valuation of a minority investment in a joint venture where the junior instruments retained control, but the investors held a put right.

Structures.” Thus, the more sophisticated methods discussed later in this chapter may not be required in this circumstance.

Rights Associated With Preferred Stock

8.09 The rights received by preferred stockholders may be divided into two broad categories: direct economic rights and non-economic rights.³ Economic rights are designed to facilitate better economic results for preferred stockholders as compared with common stockholders. Those rights relate to the timing, preference, and amounts of returns the preferred stockholders receive as compared with the holders of other classes of stock. Non-economic rights provide preferred stockholders with the ability to influence the portfolio company in a manner that is disproportionate to their ownership percentages.

8.10 The following are some of the typical economic rights enjoyed by preferred stockholders (which are discussed in detail in appendix B, paragraphs B.07.03–.07.15):

- a. Preferred liquidation preferences and seniority
- b. Preferred dividends
- c. *Mandatory redemption rights*
- d. *Conversion rights*
- e. *Participation rights*
- f. *Antidilution rights*
- g. *Registration rights*

8.11 The following are some of the typical non-economic rights enjoyed by preferred stockholders (which are discussed in detail in appendix B, paragraphs B.07.16–.07.24):

- a. *Voting rights*
- b. Protective provisions and veto rights
- c. *Board composition rights*
- d. *Drag-along rights*⁴

³ Economic rights may also allow investors to influence negotiations regarding future financing, while non-economic rights may also allow investors to protect the economics of their investment. For purposes of this discussion, economic rights have been classified as those that are typically explicitly included in the valuation analysis, and non-economic rights as those that would be considered in estimating the expected time horizon for the investment and determining who would have influence over the portfolio company’s strategy and direction.

⁴ Drag-along rights should not be confused with tag-along rights, which have different meanings in various other contexts. (See appendix B, paragraphs B.07.01–.07.24, “Rights Associated With Preferred Stock,” and the glossary for definitions.)

- e. *Right to participate in future rounds*
- f. *First refusal rights*
- g. *Tag-along rights*
- h. *Management rights*
- i. *Information rights*

8.12 Non-economic rights allow preferred stockholders to influence the manner in which a portfolio company governs itself and manages its operating and financial affairs, irrespective of those stockholders' proportional ownership interests. For example, preferred stockholders may own 30 percent of the outstanding voting capital stock, but non-economic rights could allow them to influence the portfolio company's operations as if they owned a majority of the outstanding voting capital stock. Non-economic rights generally lapse at the time of an IPO as the preferred stock is converted into common stock.

8.13 The following tables summarize the nature of the rights typically held by preferred stockholders, whether such rights are generally considered meaningful and substantive in the context of valuing privately held company equity interests, and whether methods for valuing equity interests typically consider such rights (see appendix B, paragraphs B.07.01–.07.24, “Rights Associated With Preferred Stock,” for additional details):

Table 8-1

Economic Rights

<i>Nature of right</i>	<i>Is the right meaningful and substantive?</i>	<i>Purpose of right</i>	<i>When, if ever, is the right generally meaningful and substantive before initial public offering (IPO)?</i>	<i>Is the value of the right readily and objectively measurable?</i>	<i>Do valuation methods typically consider the right?</i>
Preferred dividends (noncumulative)	No	Preference to receive dividends if declared	N/A ¹	N/A	N/A
Preferred dividends (cumulative)	Yes	Aims to provide a minimum fixed return in all situations except IPO	Entire life of instrument	Yes	Yes
Liquidation preference (nonparticipating)	Yes	Ensures higher return up until break-even point ²	Up until break-even point ³	Yes	Yes

<i>Nature of right</i>	<i>Is the right meaningful and substantive?</i>	<i>Purpose of right</i>	<i>When, if ever, is the right generally meaningful and substantive before initial public offering (IPO)?</i>	<i>Is the value of the right readily and objectively measurable?</i>	<i>Do valuation methods typically consider the right?</i>
Liquidation preference (participating)	Yes	Ensures disproportionately higher return in all situations except IPO	Entire life of instrument	Yes	Yes
Mandatory redemption	Yes ⁴	Right to return of capital; aims to provide liquidity	Entire life of instrument	No	Yes
Conversion (fixed or variable ratio)	Yes	Produces better economic results in certain circumstances	Entire life of instrument	Yes	Yes
Participation (fixed or variable ratio)	Yes	Ensures disproportionately higher return in all situations except IPO	Entire life of instrument	Yes	Yes
Antidilution	Yes	Aims to protect value of investment	Entire life of instrument	Maybe ⁵	No
Registration	No ⁶	Aims to provide liquidity	N/A	N/A	N/A

- ¹ Noncumulative preferred dividends are payable only if declared. Because it is unusual for private companies to declare dividends, these rights are considered nonsubstantive until the company considers actually declaring a dividend. Cumulative preferred dividends are payable regardless of whether declared and, thus, increase the liquidation preference for the preferred and are considered substantive.
- ² Break-even point refers to the value of the proceeds resulting from an assumed enterprise liquidation for which conversion of preferred to common stock would result in proceeds for preferred shareholders equal to their liquidation preference.
- ³ See table note 2.
- ⁴ Mandatory redemption provisions provide investors with a mechanism for influencing the timing of a liquidity event or other negotiated exit strategy, even in situations where the investors in the respective class of equity do not have control over the enterprise as a whole.
- ⁵ Antidilution provisions (for example, down-round protection features) increase the value of preferred stock and preferred or common warrants by increasing the conversion ratio or decreasing the warrant strike price if shares are issued at a lower price at a future date. For the valuation of these instruments, if the company expects to raise one or more future financings that may trigger the provision, the provision should be taken into account in a simulation model (or a lattice if only one financing is expected). If the company expects to reach a liquidity event without needing any additional financing, a simulation would not be required. A scenario analysis that focuses on only a few specific outcomes, rather than considering the distribution of outcomes in one or more scenarios, is generally not an appropriate method for valuing a warrant because it does not provide enough granularity in the future scenarios. The guidance regarding the accounting for such instruments for issuers is complex and subject to change. For investment companies that report under FASB ASC 946, as considered within the scope of this guide, the portfolio company accounting typically is not relevant, as market participants would consider the fair

<i>Nature of right</i>	<i>Is the right meaningful and substantive?</i>	<i>Purpose of right</i>	<i>When, if ever, is the right generally meaningful and substantive before initial public offering (IPO)?</i>	<i>Is the value of the right readily and objectively measurable?</i>	<i>Do valuation methods typically consider the right?</i>
value of each unit of account for their schedule of investments rather than considering the balance sheet classification at the portfolio company.					
⁶ Typically, private enterprises go public when they are operationally ready, and when market conditions are conducive to a successful initial public offering (IPO). It is not typical for a private enterprise to go public as a result of the preferred stockholders exercising their rights to force the enterprise to file a registration statement for an IPO.					

Table 8-2

Non-economic Rights

<i>Nature of right</i>	<i>Is the right meaningful and substantive?</i>	<i>Purpose of right</i>	<i>When, if ever, is the right generally meaningful and substantive before initial public offering (IPO)?</i>	<i>Is the value of the right readily and objectively measurable?</i>	<i>Do valuation methods typically explicitly consider the right?</i>
Voting	Yes	Ability to control or influence	Entire life of instrument	No	No
Protective provisions and veto rights	Yes	Ability to influence disproportionate to ownership	Entire life of instrument	No	No
Board composition	Yes	Ability to influence disproportionate to ownership	Entire life of instrument	No	No
Drag along	Yes	Ability to require other shareholders to participate in any sale of the investment	Entire life of instrument	No	No
Right to participate in future rounds	Yes	Ability to maintain ownership percentage	Entire life of instrument	No	No
First refusal	Yes	Restricted ability to sell shares	Entire life of instrument	No	No
Tag along	Yes	Improved ability to sell shares	Entire life of instrument	No	No
Management	Yes	Access to inside information not available to	Entire life of instrument	No	No

<i>Nature of right</i>	<i>Is the right meaningful and substantive?</i>	<i>Purpose of right</i>	<i>When, if ever, is the right generally meaningful and substantive before initial public offering (IPO)?</i>	<i>Is the value of the right readily and objectively measurable?</i>	<i>Do valuation methods typically explicitly consider the right?</i>
		common stockholders			
Information	Yes	Access to inside information not available to common stockholders	Entire life of instrument	No	No

Methods of Estimating the Fair Value of Multiple Classes of Equity

8.14 This chapter discusses four methods for valuing multiple classes of equity used in practice as observed by the task force. Other methods also may exist or be developed in the future.

Overall Comments Applicable to All Four Methods for Valuing Equity Interests

8.15 No single method for valuing equity interests appears to be superior in all respects and circumstances over the others. Each method has merits and challenges, and there are trade-offs in selecting one method instead of the others. The level of complexity differs from one method to another.

8.16 Some methods for valuing equity interests may appear to have more theoretical merit than others. However, such methods typically are more complex, and often, it may be difficult to corroborate estimates of certain critical inputs. A more complex or detailed method would not necessarily be superior to a simpler method that captures the key characteristics that market participants would consider. In addition, there appears to be no method available that takes into account all rights of preferred stockholders. Rather, due to the nature and complexity of some of the typical preferred stock rights, the effect of only certain of the various preferred stock rights is considered under the available methods. That most of these rights typically do not appear in conjunction with securities issued by publicly traded enterprises contributes to the absence of market comparables for funds to draw upon. The resulting challenges in estimating fair value do not, however, justify the use of "rules of thumb."

- 8.17** Non-economic rights such as voting rights, protective provisions, and veto rights, board composition rights, drag-along rights, first refusal rights and tag-along rights, management rights, and information rights are generally not explicitly considered in any of the commonly used methods for valuing equity interests. However, these rights would be considered in assessing market participant expectations regarding expected exit scenarios and the timing of exit. In addition, the impact of these rights may be captured in adjustments applied to the modeled value for the preferred stock after estimating the value of the equity interests consistent with the investors' required rate of return⁵ using one of the methods described subsequently. See chapter 9, "Control and Marketability," for a discussion of these adjustments.

Considerations Affecting the Selection of a Method for Valuing Equity Interests in Complex Capital Structures

- 8.18** FASB ASC 820 does not describe any specific techniques that are required for estimating the fair value of equity interests in complex capital structures. The following sections describe four possible methods for valuing equity interests:

- scenario-based methods, a forward-looking method that considers one or more possible future scenarios. These methods include simplified scenario analysis and relative value scenario analysis, which tie to the fully-diluted ("post-money") equity value, as well as full scenario analysis, also known as the probability-weighted expected return method (PWERM);
- the option pricing method (OPM), a forward-looking method that considers the current equity value and then allocates that value to the various classes of equity considering a continuous distribution of outcomes, rather than focusing on distinct future scenarios;
- the current value method (CVM), which allocates the equity value to the various equity interests in a business as though the business were to be sold on the measurement date; and
- the *hybrid method*, a hybrid of scenario-based methods and OPM.

Most of these methods are illustrated by case studies in appendix C, "Valuation Case Studies," especially in case study 9, *Biotech Investment with a Complex Capital Structure – Multiple Investors' Perspectives*, which shows how several funds approached valuation of their investments in an early-stage biotech company. Other methods may be used, but these four methods have been commonly used in practice. Sometimes, more than one method is used, and the results of one method may be used for purposes of corroborating the results of another. It would be appropriate for the fund to use judgment in selecting a reasonable methodology under the circumstances, considering the nature of the portfolio

⁵ As discussed in paragraph 7.02, most privately held companies have investors who in aggregate have control of the portfolio company. When valuing the minority instruments within a portfolio company, it is appropriate to consider these investors' required rate of return.

company and the characteristics of the specific equity interests, as further described in the next paragraph.

8.19 The task force recommends that in selecting a method for valuing equity interests, the following criteria be considered:

- a.* The method reflects the going-concern status of the portfolio company. The method reflects that the value of each class of instruments results from the expectations that market participants investing in those instruments would make about future economic events and the amounts, timing, and uncertainty of future cash flows to be received by the holders of each instrument.
- b.* The method assigns some value to the junior instruments, unless the portfolio company is being liquidated and no cash is being distributed to the junior instruments.
- c.* The results of the method can be either independently replicated or approximated by other valuation specialists using the same underlying data and assumptions. The method does not rely so heavily on proprietary practices and procedures that assurance about its quality and reliability cannot be readily and independently obtained.
- d.* The complexity of the method is appropriate to the portfolio company's stage of development. Consider, for example, a start-up company with few or no full-time employees and in the early stages of development. A highly complex full scenario analysis performed at high cost may not be appropriate for such a portfolio company. The assumptions underlying that valuation could be highly speculative, and the variability in the valuation may be correspondingly high. A simplified scenario analysis, relative value scenario analysis or option pricing model, with the simpler set of assumptions required for these methods, may give equally reasonable results at a lower cost.

Scenario-Based Methods

8.20 Scenario-based methods are forward-looking methods that consider the payoff to each class of equity across a range of future exit scenarios, discounted to the measurement date at an appropriate rate of return for that class. Scenario-based methods can be relatively simple or extremely complex, depending on the number and complexity of the scenarios required to capture the differences in value between the various classes of equity. For the purposes of this discussion, three types of scenario-based methods are considered: simplified scenario analysis, relative value scenario analysis, and full scenario analysis.

Simplified Scenario Analysis

8.21 Under a simplified scenario analysis, the value of the various equity interests are estimated based on their pro-rata share of the "post-money" value for the company, considering the maximum number of common-stock equivalents that would be required to be issued if all outstanding classes of equity in the current capital structure were

converted. That is, the post-money value models each class of equity on an as-converted basis, and then multiplies by the common-stock-equivalent price, updated for each measurement date considering the changes in the company and changes in the markets as described in paragraph 8.23. The pro-rata share of the post-money value is also known as the fully-diluted value of equity.

- 8.22** The simplified scenario analysis approach may be appropriate if the distribution of outcomes for the portfolio company is expected to be bimodal with no value on the downside; that is, if the portfolio company is either expected to succeed, exiting at a value that is high enough that all classes of equity will convert, or fail, exiting at a low value that would provide no payoff to the existing classes of preferred.⁶ This approach may also be appropriate if market participants would assume that it is highly likely that the preferred stock would convert, which may be the case for companies that are expected to exit via an IPO or where the later rounds have additional preferences but the earlier rounds have control over the timing of exit. In these situations, the liquidation preferences for the preferred stock would be expected to have no impact on the ultimate payoff realized, and thus, the future payoffs would be consistent with a fully-diluted approach for measuring the value of the equity interests on the measurement date.
- 8.23** The post-money value used as an input to a simplified scenario analysis would be calibrated to the latest financing round and then updated for each measurement date considering the changes in the company and the changes in the markets, evaluating the changes in the expected future exit value in the “success” scenario and on market participants’ required rate of return for the equity interests. A useful check in estimating the post-money value is to consider what price the investors would be willing to pay if the company were to raise an additional round of financing on the measurement date. See appendix C, case study 10, *Early Stage Software as a Service Startup with Binary Expected Outcomes*, paragraphs C.10.26–.29, for an example of this approach.

Relative Value Scenario Analysis

- 8.24** Under a relative value scenario analysis, the value of the various equity interests are estimated based on their pro-rata share of the post-money value for the company calibrated to the most recent round, considering the common stock equivalents, and then adjusted to consider the differences in expected cash flows and difference in risk for the earlier rounds of financing.
- 8.25** For example, if the portfolio company has just raised a series D round of financing that has seniority over prior rounds, the fund might estimate that there is a 30% chance of success where all classes of equity convert, a 40% chance of a mid-value exit where the series D would receive an expected value of 70% of its liquidation preference but earlier rounds would receive no payoff, and a 30% chance of dissolution where neither the series D nor the earlier rounds would receive any return. The payoff to the earlier rounds would

⁶ Please see Q&A 14.54, *Value of Liquidation Preferences*, for a discussion of the reasons why the liquidation preferences for early rounds of financing are unlikely to receive a direct economic payoff. Please see Q&A 14.52, *Use of the Option Pricing Method*, for a discussion of the implications for the valuation of the investments and the related common stock considered in valuing management interests when using the Option Pricing Method.

thus be lower than the series D price by 28% (40% times 70%) of the series D liquidation preference. If the Series D price was \$3 and there were 50 million common-stock equivalents outstanding, the post-money value would be \$150 million, and the fair value of the Series A, B and C would be estimated at \$2.16 per share.

- 8.26** The relative value scenario analysis approach may use whatever scenario structures and probabilities are appropriate given the facts and circumstances: for example, scenarios where the latest round receives its full liquidation preference and the earlier rounds receive a portion of their liquidation preferences, or where the latest round receives its liquidation preference and earlier rounds convert, and so on. In assessing the differences between the classes of equity, this approach would typically ignore discounting, treating the differences as reflecting the present value of the relative payoffs.
- 8.27** The post-money value used as an input to this analysis would be calibrated to the most recent round of financing considering the range of future exit scenarios, and then updated for each measurement date considering the changes in the company and in the markets, evaluating the changes in the expected future exit values in all success and mid-value exit scenarios and on market participants' required rate of return for the equity interests. See appendix C, case study 9, *Biotech Investment with a Complex Capital Structure – Multiple Investors' Perspectives*, for an example of this approach (illustrated specifically in paragraphs C.09.53–.54 and C.09.74), as well as a comparison with other valuation approaches.
- 8.28** For example, referring back to paragraph 8.25, suppose at the next measurement date, the portfolio company has performed well and the fund estimates that the updated post-money value has increased to \$200 million. This post-money value would indicate that the fair value of the Series D has increased to \$4 per share. The fund also estimates that the probability of success has increased to 40% and the probability of a middle value exit where Series D receives an expected value of 70% of its liquidation preference has decreased to 30%, so the earlier rounds would be priced at a 21% discount to the Series D. The fair value of the Series A, B and C thus would be estimated at \$3.16 per share.

Full Scenario Analysis

- 8.29** Under a full scenario analysis, the value of the various equity interests are estimated based upon an analysis of future values for the portfolio company, assuming various future outcomes. Share value is based upon the probability-weighted present value of expected future investment returns, considering each of the possible future outcomes available to the portfolio company, as well as the rights of each share class. Although the future outcomes considered in any given valuation model will vary based upon the portfolio company's facts and circumstances, common future outcomes modeled might include an IPO, a merger or sale, a dissolution, or continued operation as a private company until a later exit date.⁷ The future exit scenarios and required rate of return would be calibrated to the most recent round of financing, considering expected dilution

⁷ As discussed in paragraph 8.07, almost all venture capital-backed and private equity-backed companies will ultimately seek liquidity through an initial public offering (IPO) or sale of the company; thus, it is typically not appropriate to model a scenario in which such a company remains private indefinitely.

from future financings. The required rate of return for other classes of equity would be assessed considering the relative risk of each class.

8.30 This method involves a forward-looking analysis of the potential future outcomes available to the portfolio company, the estimation of ranges of future and present value under each outcome, and the application of a probability factor to each outcome as of the valuation date, consistent with market participant assumptions. The following list is a simple overview of how this method may be applied. The specific construct of the model and the assumptions used will depend on the facts and circumstances surrounding the portfolio company.

- a. *Determine the possible future outcomes available to the portfolio company.* First, the fund needs to determine the range of possible future exit scenarios for the portfolio company (for example, IPO, merger or sale, dissolution, or continued operation as a private portfolio company until a later exit date).
- b. *Estimate the future equity value under each outcome, either as a point estimate or range.* The future *pre-money value* of the portfolio company is estimated at the date of each possible future outcome. A simple application might use a single value and date for each outcome, whereas a more complex application might use a range of values and dates for each outcome. At a minimum, the range of outcomes considered should include both high and low values (for example, a high-value strategic sale and a low-value sale of assets). If the range of possible future values considered is too narrow, the scenario analysis will not fully capture the value of the downside protection and the value differences driven by differences in seniority and liquidation preferences for the preferred stock. In some cases, it may be appropriate to consider a hybrid approach with a probabilistic distribution of values for a given scenario. For example, if the company is considering a near-term IPO, but the IPO might also be deferred, and the company is unsure what exit value it might achieve, it might be reasonable to use specific details for the IPO scenario and a lognormal distribution of future values (such as in the OPM) in the postponed exit scenario, consistent with market participant assumptions. This hybrid approach would also be appropriate in the situation in which the company has a number of possible near-term exits that can be modeled explicitly, but it may also remain private for an extended period of time and does not have good insight into the distribution of outcomes if the exit is delayed (the private company scenario). See the discussion of the hybrid method in paragraphs 8.60–.66.
- c. *Allocate the estimated future equity value to each share class under each possible outcome.* Within each scenario, the future values are then allocated to the various shareholder classes based upon the rights afforded each class, assuming each class of shareholder will seek to maximize its value. For example, at value levels when preferred shareholders would maximize their return by converting to common stock, conversion is assumed. Conversely, at value levels when return would be maximized by exercising a liquidation preference, such exercise is assumed. The allocation should also include the dilution impacts of any additional required

financings for each scenario and any options and warrants that may be exercised, when exercise should be assumed for a given scenario (with the resulting proceeds added to the equity value) if exercising the options and warrants would be optimal in that scenario. Companies frequently reserve an option pool that includes the options that may be issued to new and existing employees as the company progresses toward a successful liquidity event. In a full scenario analysis, it is appropriate to include in the allocation the options that will be needed to reach each exit scenario, along with the cash that would be realized from their exercise prices.

- d. *Weight each possible outcome by its respective probability to estimate the expected future probability-weighted cash flows to each share class.* Probabilities are assigned to each of the possible future outcomes. If desired, the valuation model may include various sub-scenarios within each outcome, each with its own probability, or it may use a probability distribution to model a range within each outcome.
- e. *Discount the expected equity value allocated to each share class to present value using a risk-adjusted discount rate.* The expected shareholder value under each outcome is discounted back to the valuation date using appropriate discount rates. The fund should consider whether different discount rates should be used for each shareholder class, considering the relative risk of each class. The discount rates would typically be calibrated to the most recent round of financing so that the selected probabilities and discount rates are internally consistent.⁸
- f. *Divide the present value allocated to each share class by the respective number of shares outstanding to calculate the value per share for each class.* The per-share value of each class of shares, including the common stock, is then calculated. A good check is to compare the share price of the latest round of preferred financing with the value implied for that share class by the model to assess whether the assumption set used is reasonable in light of that actual financing transaction.
- g. *Consider additional adjustments.* The fund should consider whether any additional discounts are appropriate (for example, discounts for illiquidity or lack of marketability). See chapter 9, “Control and Marketability,” for a discussion of these adjustments.

⁸ The discount rate for the common stock and junior preferred may take into consideration the leverage imposed by the debt, as well as the liquidation preferences senior to each class. The weighted average discount rate across all the classes of equity should equal the company’s cost of equity. This approach is a form of method 2 of the expected present value technique discussed in paragraph 5.61.

Note that in some circumstances, the scenarios modeled in a full scenario analysis incorporate a different level of company-specific risk. For example, the IPO scenario may be modeled using aggressive banker projections, but the sale or later exit scenarios may be modeled using more conservative internal projections. In these situations, it may be appropriate to include an additional risk premium within specific scenarios and to estimate the conditional present value for each instrument before estimating the probability-weighted average. Even in these situations, however, it is important to keep in mind that the selected discount rate for each instrument should reflect the overall required rate of return to the expected cash flows for that instrument (that is, a portfolio rate of return).

Additional Considerations

8.31 Although scenario-based methods focus on the future exit values and their allocation to each class of equity, it is also important to consider the interim cash flows.

- Typically, a simplified scenario analysis or relative-value scenario analysis is calibrated to the most recent transaction date, and then updated to reflect the changes in the post-money value through the measurement date. If the post-money value considering common-stock equivalents is estimated by considering a future exit value, then these methods should incorporate an estimate of the dilution from future rounds of financing required to reach that exit.
- Typically, a full scenario analysis approach is used when the company is close to exit and does not plan on raising additional capital. In this case, the interim cash flows would be funded out of existing cash, and the cash considered at the liquidity event would be the expected residual cash. If additional financing is needed to reach the modeled exit scenarios, the capital structure used in the full scenario analysis allocation should include both the future payoff amount for the debt (calibrated so that the expected value across all the scenarios equals today's fair value), as well as any future rounds of financing the company will need in order to reach that future exit. Because the details of these future financings are not known until the time to a liquidity event is short, the use of a full scenario analysis for companies that still need more than one additional round of financing can be challenging.

Estimated dilution would be incorporated as discussed in paragraphs 13.65–.76, “Dilution.”

8.32 Scenario-based methods focus on either (a) the current post-money value, or (b) a range of future exit values allocated to the various equity interests and then discounted to the measurement date. When possible, a best practice is to reconcile the probability-weighted present values of the future exit values to the overall equity value for the portfolio company estimated as discussed in paragraphs 7.03–.07, to make sure that the overall valuation of the portfolio company is reasonable. In a full scenario analysis, calibration may be used to infer the equity value implied by a recent financing transaction by considering the future outcomes available to the portfolio company as described previously, and then estimating the future exit values, the probabilities for each scenario, and the discount rates for the various equity interests such that value for the most recent financing equals the amount paid. Care should be taken to avoid unrealistic assumptions regarding the return to the preferred in the dissolution or low-value sale scenarios.⁹ Higher returns to the *senior classes of equity* in the dissolution or low-value sale scenarios should be supported with evidence that the portfolio company would have

⁹ Venture capital data indicates that the average return to the investors in exits when the investor interests receive a return less than or equal to their original investment is between 15 percent and 25 percent of invested capital, depending on the round of the investment, and that the investors receive no value in approximately 35 percent to 45 percent of these exits. Therefore, when reconciling to a recent financing round in a scenario-based framework, the upside scenarios must have a high enough return to offset these downside scenarios. See, for example, Andrew Metrick, *Venture Capital and the Finance of Innovation* (Hoboken, NJ: John Wiley & Sons, Inc., 2007).

assets that would be saleable or distributable to shareholders upon dissolution even if cash is exhausted, and current development plans are not successful.

- 8.33** The primary virtues of scenario-based methods are their conceptual merit and alignment with the way that market participants consider these investments. These methods explicitly consider the various terms of the shareholder agreements, including various rights of each share class, at the date in the future that those rights will either be executed or abandoned. Scenario-based methods are forward looking and incorporate expectations about future economic events and outcomes into the estimate of value as of the present. Scenario-based methods are not simply a static allocation among shareholders of a single estimate of the portfolio company's value as of the present. Finally, if the scenarios are constructed using rational expectations and realistic assumptions and calibrated to any recent transactions, the relative equity values for each class of equity that result from these methods are typically not overly sensitive to changes in the probability estimates, except when one of the possible outcomes is assigned a very high probability. Therefore, as long as the model can be calibrated, it is not essential that the assumptions used in the analysis perfectly reflect future outcomes for the business (which would be impossible anyway, given the high uncertainty associated with most private-equity and venture capital-backed companies), but rather, that the assumptions are internally consistent and reflect the fund's best estimate of market participant assumptions.
- 8.34** The primary limitation of scenario-based methods, especially full scenario analysis, is that they can be complex to implement and require detailed assumptions about potential future outcomes. Estimates of the probabilities of occurrence of different events, the dates at which the events will occur, and the values of the portfolio company under and at the date of each event may be difficult to support objectively.¹⁰ The methods may involve complex construction of probability models and might depend heavily on subjective management assumptions. To the extent possible, calibration should be used to mitigate these issues.
- 8.35** In short, the attributes of scenario-based methods make them conceptually attractive, but they may be challenging to implement, and the values they produce could be difficult to support using other means. In addition, because scenario-based methods typically consider only a specific set of discrete outcomes, rather than the full distribution of possible outcomes, these methods are not appropriate for valuing option-like payoffs, such as common stock options, profits interests, or warrants. Instead, an OPM or hybrid method should be used for valuing these instruments.
- 8.36** Because future outcomes need to be explicitly modeled, full scenario analysis is generally more appropriate to use when the time to a liquidity event is short, making the range of possible future outcomes relatively easy to predict. For earlier-stage companies, it is possible to use a simplified scenario analysis or relative value scenario analysis, or a variant of these approaches that focuses on the exit values on a per-share basis relative to

¹⁰ Note that a hybrid model that uses an option pricing framework within each exit scenario or a simulation model might be used to take into account the variability of each of these inputs. This approach provides advantages of the scenario-based framework while still capturing a full distribution of outcomes. See paragraphs 8.60–.66.

the latest financing round (for example, considering the probabilities of achieving no return, less than 1 times the return, up to 1.5 times the return, up to 2 times the return, 2–5 times the return, 5–10 times the return, and 10 times the return or more). Data on the distribution of exit multiples for early-stage ventures by round of financing is available.¹¹ Another approach that is appropriate for earlier-stage companies is a hybrid method that considers the expected equity value in various scenarios but that uses OPM to allocate the value within each of those scenarios. See paragraphs 8.60–.66.

The OPM

- 8.37** The OPM is an allocation method that considers the current value of equity and then allocates that equity value to the various interests considering their rights and preferences. The OPM treats common stock and preferred stock as call options on the portfolio company's equity value, with exercise prices based on the liquidation preferences of the preferred stock. Under this method, the common stock has value only if the funds available for distribution to shareholders exceed the value of the liquidation preferences at the time of a liquidity event (for example, a merger or sale), assuming the portfolio company has funds available to make a liquidation preference meaningful and collectible by the shareholders. The common stock is modeled as a call option that gives its owner the right, but not the obligation, to buy the underlying equity value at a predetermined or exercise price. In the model, the exercise price is based on a comparison with the equity value rather than, as in the case of a "regular" call option, a comparison with a per-share stock price. Thus, common stock is considered to be a call option with a claim on the equity at an exercise price equal to the remaining value immediately after the preferred stock is liquidated. The OPM has commonly used the Black-Scholes model to price the call option.¹²
- 8.38** The OPM considers the various terms of the stockholder agreements that would affect the distributions to each class of equity upon a liquidity event, including the level of seniority among the classes of equity, dividend policy, conversion ratios, and cash allocations. In addition, the method implicitly considers the effect of the liquidation preference as of the future liquidation date, not as of the valuation date.
- 8.39** One of the critical inputs into the OPM is the total equity value for the portfolio company. As discussed in chapter 7, "Valuation of Equity Interests in Simple Capital Structures," this total equity value should be measured considering the cash flows under current ownership and the investors' required rate of return. This basis of valuation

¹¹ Ibid. Care should be taken that the distribution of returns captures the full range of downside and upside scenarios and that the preferred stock value implied from the model reconciles to the recent round of financing.

¹² Option valuation methodologies are constantly evolving, and readers should be alert to which methodologies are considered preferable to others under various sets of facts and circumstances. Examples of option valuation methodologies that differ conceptually from the Black-Scholes model include path-dependent or lattice models, including simulation or binomial models. These types of approaches are used when valuing instruments whose value depends on the evolution of the value of the company at interim periods (for example, instruments with antidilution provisions or down-round protection).

For an illustration of a path-dependent model, see Travis Chamberlain and others, "Navigating the Jungle of Valuing Complex Capital Structures in Privately Held Companies: An Integrative Simulation Approach," *Journal of Business Valuation and Economic Loss Analysis* 2, no. 2 (2008).

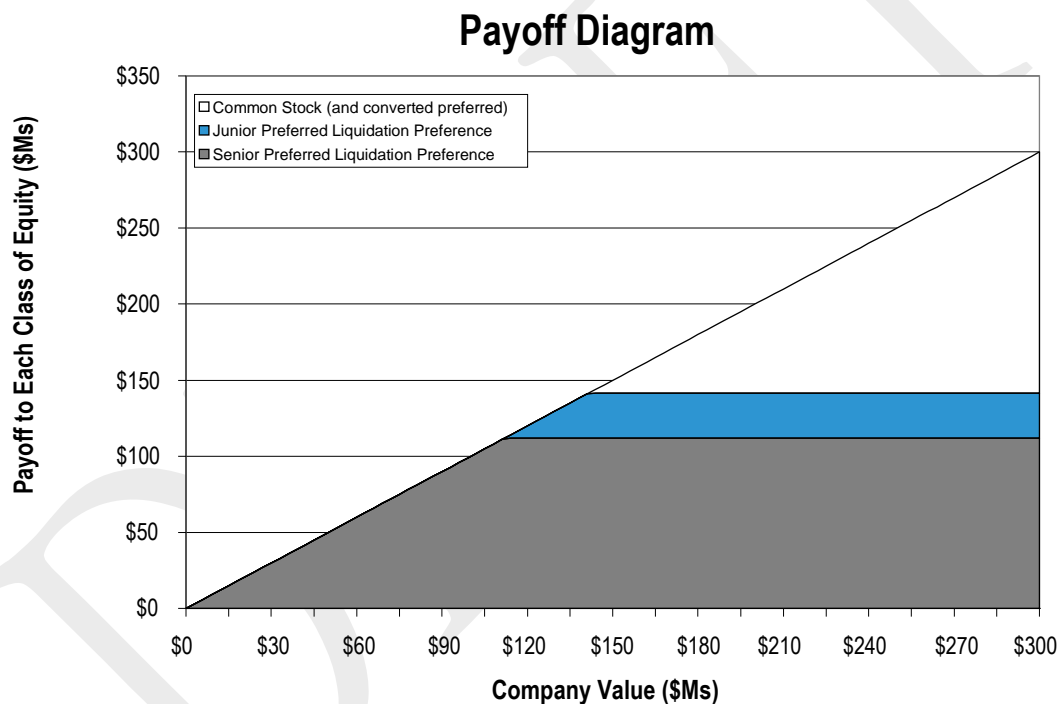
provides an indication of value for the equity interests that considers the degree of control and marketability for the interests held by the investors who in aggregate have control of the business, providing a consistent basis for comparison with the liquidation preferences for the preferred stock. Because the liquidation preferences for the preferred stock provide a threshold level of return for the investors before the common stock begins participating, option pricing models that treat the liquidation preferences as a strike price should take as their input the enterprise value that is consistent with the investors' required rate of return.

- 8.40** In an OPM framework, calibration may be used to infer the equity value implied by a recent financing transaction by making assumptions for the expected time to liquidity,¹³ volatility, and risk-free rate and then solving for the value of equity such that value for the most recent financing equals the amount paid. This method is most appropriate when the financing transaction is an arm's-length transaction and *pari passu* with previous rounds. If the transaction is distressed, has seniority over prior rounds, or lacks the information rights and control features that investors typically expect, it may be appropriate to make adjustments to the price prior to calibrating. See paragraphs 8.42–.45 for a discussion of the issues with calibrating to senior rounds of financing using the OPM, and paragraph 10.31, “Inferring Value From Transactions in a Portfolio Company’s Instruments,” for a discussion of various types of transactions that may be considered in inferring the equity value and the value of related equity interests in a portfolio company.
- 8.41** Note that the equity value used in an OPM framework will typically be significantly lower than the post-money equity value, since the OPM framework considers the full value of the downside protection associated with the preferred stocks' liquidation preferences using a lognormal distribution, whereas the post-money value calculation assumes that all equity interests in the capital structure have the same *pro rata* value. Either the OPM calibration approach or post-money approach may be used for estimating the enterprise value to be used as an input for estimating the fair value of the interests in the enterprise, depending on the facts and circumstances, provided that the methodology used for estimating the enterprise value and the methodology used for allocating the enterprise value are internally consistent. Using a post-money value and allocating it using an OPM, or vice versa, will yield nonsensical results. If the liquidation preferences for the equity interests would not be relevant to market participants' transaction decisions at the measurement date, then an OPM would be less appropriate than a scenario-based method. Please see paragraphs 8.20–.36 for a discussion of scenario-based methods for estimating the fair value of the equity interests in the enterprise using the post-money equity value as an input.
- 8.42** The OPM was designed to model option-like payoffs such as common stock, capturing the value of the potential upside for an asset above a specified threshold. It also is an appropriate method for estimating the value of a highly-levered debt or debt-like

¹³ The expected time to liquidity is the probability-weighted average time to liquidity across all future exit scenarios and represents the expected time over which the enterprise value may evolve before the payoffs to the various classes of equity are resolved.

preferred instrument, where the debt-like instrument receives a specified payoff when the asset value exceeds that payoff, or the debt-like instrument receives the asset if the asset value is not high enough to meet the specified payoff. In this case, the value of the debt-like instrument can be measured as the total value of the assets less the value of the upside option. However, the OPM and other structured models that estimate the payoff to the various classes of equity following the strict contractual terms of the waterfall are not ideal for estimating the relative value of senior and junior preferred classes.

- 8.43** The issue with modeling senior and junior preferred classes within the OPM is that the liquidation preference for the junior preferred class is "sandwiched" between the senior preferred and the common stock. On the downside, only the senior preferred is protected. On the upside, the junior preferred liquidation preference receives only the specified payoff, while the common receives any additional growth in value. This issue is illustrated in the following payoff diagram:



- 8.44** In practice, the investors in the preferred stock have influence over the portfolio company's operations and the timing of exit. Rather than blindly allowing the value of the company to evolve through a predetermined exit date, as is assumed in OPM, the investors would typically manage through downturns, perhaps taking the opportunity to invest more capital or buy out senior equity interests at a low valuation. Furthermore, in a low value sale exit or bankruptcy scenario, even though each tier of seniority has its own interests that may be at odds with the other tiers, all the investors have an incentive to negotiate to achieve the best exit possible – the longer the portfolio company languishes before finding a buyer, the lower the value that will be realized. Since the size of the pie is not static, the holders of the senior preferred may maximize their return by offering to

share value with the junior preferred, rather than insisting on strictly following the waterfall. OPM does not model any of these dynamics.

8.45 For funds that choose to use OPM to value investments in portfolio companies where the preferred classes of equity have different levels of seniority, the task force recommends considering carefully which class or classes of equity in aggregate have control of the timing of exit and decisions regarding future financing rounds, and assessing the company's strategies and the extent to which the liquidation preferences will impact the value that may be realized for each class of equity at the liquidity event. Given these factors, several variants of the OPM may be considered to better model the relative values of the senior and junior preferred classes:

- If the portfolio company will need additional financing in order to reach a successful exit and would have no value on the downside, then it may be appropriate to ignore the contractual differences in seniority and model the liquidation preferences as *pari passu*, since any new financing would be likely to be senior to all of the outstanding classes of equity.
- The fund could also perform a valuation of the total equity as of the most recent financing date based on other methods, and then apply a calibration discount to the senior classes of equity to capture the difference between the model values and the transaction price. This calibration discount would then be carried forward for future measurement dates, continuing to use the same calibrated framework as long as market participants would use that same framework. The calibrated discount would be adjusted over time, considering any changes in facts and circumstances, including factors such as any changes in the capital structure or changes as the company approaches a liquidity event.
- Another approach would be for the fund to use a simulation analysis that includes any additional financing needed and captures the likely characteristics of that financing depending on the evolution of the value of the portfolio company. The simulation approach can also be used to model the investors' ability to choose the timing of exit depending on the evolution in value of the company.
- Yet another alternative would be for the fund to use a hybrid method as described in paragraphs 8.60–.66, considering the expected value of the portfolio company under various scenarios, including any additional financing needed, and then modeling the allocation to the senior and junior preferred classes within each scenario using the OPM framework.

It is important to consider the facts and circumstances in estimating the fair value of each position.

8.46 Unlike scenario-based approaches that explicitly estimate future exits, the OPM begins with the current equity value and estimates the future distribution of outcomes using a lognormal distribution around that current value. Therefore, the OPM should incorporate the interim cash flows in the estimate of that initial equity or enterprise value. For

example, in a discounted cash flow analysis, the cash flows in each period would reflect the revenues and costs in that period. For early-stage companies, these cash flows are typically negative for several periods, reflecting the company's investments in growth.

- 8.47** In general, because the OPM considers the evolution of the equity value without allowing for proceeds raised in additional financings, the allocation does not include the dilution impacts of any additional financings nor the offsetting cash raised, nor the dilution impacts of any options and warrants that may be issued as the company progresses toward a future liquidity event. That is, even if the company has reserved a pool of options that may be issued to new and existing employees as the company progresses toward a successful liquidity event, only outstanding options and options that will be issued in the short term, irrespective of any changes in the company's value, are included in the allocation.¹⁴ The total equity value used in the allocation typically would consider the current invested capital and current outstanding shares, rather than considering the full range of value that might be realized at the liquidity event and the additional financings and additional shares that would be required to achieve that range of exits. Please see paragraphs 13.65–.76, for additional discussion of the dilution impacts of future financing rounds.
- 8.48** The primary limitation of the OPM is that it assumes that future outcomes can be modeled using a lognormal distribution and that it is sensitive to certain key assumptions, such as the volatility assumption (one of the required inputs under the Black-Scholes model), that are not readily subject to contemporaneous or subsequent validation. Additionally, the lack of trading history for privately held portfolio companies makes the subjectivity of the volatility assumption a potential limitation on the effectiveness of the method to estimate fair value. Key issues to consider in estimating the volatility are as follows:
- a.* For early-stage companies, it is likely that the guideline public companies will be larger, more profitable, and more diversified; thus, the appropriate volatility may be best represented by the higher end of the range of the guideline public companies, especially for shorter time frames, migrating toward the median of small public companies over the longer term. If no direct competitors are small, high-growth companies, consider using a set of smaller companies from the broader industry to estimate the volatility.
 - b.* For later-stage privately held companies, consideration should be given to the effect of the company's leverage. Although many early-stage firms have limited, if any, debt, later-stage firms or those acquired in a leveraged buy-out may have significant debt financing, the effect of which can be to significantly increase the volatility of the firm's equity. For example, in a company with 75 percent debt, if the value of the company doubles, the value of equity increases by a factor of 5. The general relationship between equity value and asset value can be expressed as follows:

¹⁴ More sophisticated lattice or simulation models that consider future financings and option issuances as a function of the change in value of the company over time are also feasible; however, the assumptions regarding the terms and conditions of future financing rounds may be speculative and difficult to estimate.

$$\text{Equity Value} = \text{Total Asset Value} \times N(d1) - \text{Book Value of Debt} \times \exp(-rT) \times N(d2)$$

In this equation, r is the risk-free rate, T is the time to liquidity, and $d1$ and $d2$ have their standard Black-Scholes definitions based on the asset's volatility. In addition, the relationship between equity volatility and asset volatility can be written as follows:

$$\text{Equity Volatility} = (\text{Total Asset Value} \times N(d1) \times \text{Asset Volatility}) / \text{Total Equity Value}$$

In a highly levered company, it is possible to solve for an asset volatility and equity volatility that satisfy both equations by treating the total asset value as the implied value of assets, given the company's leverage. This approach results in estimates of asset volatility that are internally consistent and better match market data.¹⁵

- c. An alternative approach is to use the portfolio company's enterprise value as the underlying asset. Under this approach, the zero coupon bond equivalent of the debt¹⁶ is modeled as the first breakpoint, modeling the total equity as a call option on the enterprise value. In this approach, the volatility used should be the asset volatility, which would not be affected by the financial leverage. In theory, these two approaches should result in equivalent values. In some cases, however, the allocation of enterprise value instead of equity value may have the effect of shifting value from the senior classes of equity to the junior classes of equity because the liquidation preference for the senior preferred is "sandwiched" between the debt and junior classes of equity. In practice, rather than allowing the debt holders to claim the full enterprise value as is assumed when allocating enterprise value using the OPM, the controlling investors typically will begin a negotiation process with the debt holders prior to liquidation. Therefore, the task force believes that using the equity value as the underlying asset, considering the value of debt for the purpose of valuing equity, as discussed in paragraphs 6.19–.31, provides a better indication of the relative value of the senior and junior classes of equity.
- 8.49** It may also be difficult under the OPM to take into account the right and ability of preferred shareholders to control the timing of exit (that is, to sell the portfolio company or take the portfolio company public earlier or later than anticipated), which can change the allocation of value between the senior and junior classes of equity. The potential for

¹⁵ Stanislava M. Nikolova, "The Informational Content and Accuracy of Implied Asset Volatility as a Measure of Total Firm Risk" (research paper, 2003).

¹⁶ The zero coupon bond equivalent of the debt is the future payoff amount for the debt such that the modeled value of the debt (the value allocated to the first breakpoint) equals its fair value. See paragraphs 6.25–.26 and Q&A 14.47, *Using the Zero Coupon Bond Equivalent for Including Debt in the Option Pricing Method*.

changing the timing of exit depending on the evolution in the equity value is most appropriately modeled using a lattice or simulation model.

- 8.50** In some cases, it may be appropriate to consider more than one scenario and run the option pricing model within each. For example, if the preferred stock has the right to both its liquidation preference and upside participation in a sale but is forced to convert upon a *qualified IPO*, it might be necessary to model the sale scenario (with unlimited participation) separately from the IPO scenario (with forced conversion at the qualifying IPO threshold).¹⁷ Another example in which this approach can be helpful is when a new financing round is being negotiated, but the price depends on whether the company achieves certain milestones. See the discussion of the hybrid method in paragraphs 8.60–.66.
- 8.51** After allocating the equity value to the preferred and common stock, the fund should consider whether any additional discounts are appropriate (for example, discounts for illiquidity or lack of marketability). See chapter 9, “Control and Marketability,” for a discussion of these adjustments.
- 8.52** An advantage of the OPM is that it explicitly recognizes the option-like payoffs of the various share classes, utilizing information about the underlying asset (that is, estimated volatility) and the risk-free rate to adjust for risk by adjusting the probabilities of future payoffs. A disadvantage of the OPM is that it considers only a single liquidity event and, thus, does not fully capture the characteristics of specific potential future liquidity events (for example, IPO or sale) at various time horizons.
- 8.53** The OPM (or a related hybrid method) is an appropriate method to use when specific future liquidity events are difficult to forecast. That is, the use of the method may be appropriate in situations in which the portfolio company has many choices and options available, and the enterprise’s value will evolve depending on how well it follows an uncharted path through the various possible opportunities and challenges. If the distribution of outcomes is expected to be bimodal (for example, reflecting two outcomes where a technology or product either succeeds or fails), a scenario-based method or hybrid method may be more appropriate.

The CVM

- 8.54** The Current-Value Method (CVM) of allocation is based on first estimating equity value on a controlling basis, assuming an immediate sale of the portfolio company, and then allocating that value to the various series of preferred stock based on the series’ liquidation preferences or conversion values, whichever would be greater. The CVM is easy to understand and relatively easy to apply, thus making it a method frequently encountered in practice. However, given the way in which market participants realize

¹⁷ Note that the IPO scenario in this example should be thought of as “aim-for IPO” rather than describing an IPO at a specific value. In this scenario, if the fair value of the company increases enough to reach the qualifying IPO threshold, then the preferred stock is forced to convert. If the fair value of the company declines or increases to less than the required threshold, then the model assumes that the company will accept a lower value exit (via a sale or sale of assets rather than an IPO), and the preferred stock will not be forced to convert.

value from investments, the task force believes its use is appropriate mainly in two limited circumstances; see paragraph 8.58. Note that allocating value pro-rata to the various classes of equity based on their as-converted values or common stock equivalents would be reasonable if market participants would assume that the liquidation preferences would have no impact on the ultimate payoffs received. This method would be considered to be a simplified scenario analysis, which is described in paragraphs 8.21–.23.

- 8.55** The fundamental assumption of this method is that the manner in which each class of preferred stockholders will exercise its rights and achieve its return is estimated based on the enterprise value as of the valuation date, not at some future date. Accordingly, depending upon the enterprise value and the nature and amount of the various liquidation preferences, preferred stockholders will participate in equity value allocation either as preferred stockholders or, if conversion would provide them with better economic results, as common stockholders. Convertible preferred stock that is "out of the money"¹⁸ as of the valuation date is assigned a value that takes into consideration its liquidation preference. Convertible preferred stock that is "in the money" is treated as if it had converted to common stock. Common shares are assigned a value equal to their pro rata share of the residual amount (if any) that remains after consideration of the liquidation preference of "out-of-the-money" preferred stock.
- 8.56** The principal advantage of this method is that it is easy to implement and does not require assumptions about future exits or the use of complex tools. The method assumes that the value of the convertible preferred stock is represented by the most favorable claim the preferred stockholders have on the equity value as of the valuation date.
- 8.57** However, this method often produces results that are highly sensitive to changes in the underlying assumptions. Another limitation of the method is that it is not forward looking and fails to consider the option-like payoffs of the share classes and, therefore, may not appropriately reflect the way that market participants would realize value from the interest. That is, absent an imminent liquidity event, the method fails to consider the possibility that the value of the portfolio company will increase or decrease between the valuation date and the date at which common stockholders will receive their return on investment, if any.
- 8.58** Because the CVM focuses on the present and is not forward looking, the task force believes its usefulness is limited primarily to two types of circumstances. The first occurs when a liquidity event in the form of an acquisition or a dissolution of the portfolio company is imminent, and expectations about the future of the portfolio company as a going concern are virtually irrelevant. In this circumstance, the CVM value, adjusted if necessary for the timing and risk associated with the expected transaction, would reflect the fair value of the equity interests. The second occurs when the fund's position to be measured has seniority over the other classes of equity in the portfolio company and the

¹⁸ Convertible preferred stock is "out of the money" if conversion to common stock would result in a lower value of the holdings of preferred stockholders than exercising the liquidation preference. Conversely, convertible preferred stock is "in the money" if conversion to common stock would result in a higher value of the holdings of preferred stockholders than exercising the liquidation preference.

investors who hold this class of equity have control over the timing of exit. In this case, the investors could sell the portfolio company on the measurement date and their position would realize the allocated value from the CVM (the CVM value). Therefore, the value of the fund's position cannot be lower than the CVM value. If the fund's position also has participation or conversion rights that would allow the fund to participate in the upside, the fund may consider if the fair value of the position would exceed the CVM value.

- 8.59** Note that for simple capital structures, it is possible to allocate the enterprise value by directly estimating the value of any debt and debt-like preferred instruments using the yield method, subtracting those values from the total enterprise value, then allocating the residual equity value pro rata to the common stock, as discussed in chapter 7, "Valuation of Equity Interests in Simple Capital Structures." Unlike the CVM, the yield method is a forward-looking method that estimates the value of the debt and debt-like preferred instruments for the purpose of valuing equity, given the market yield for these instruments over the expected duration, considering the risk of the instruments. This method may also be applicable for valuing participating preferred stock by considering the fair value of the debt-like component of the preferred stock corresponding to the liquidation preference, plus the fair value of the upside participation as a common stock equivalent. See paragraphs 6.09–.18 for a discussion of the yield method. It would generally not be appropriate to use the CVM to estimate the fair value of debt and debt-like preferred instruments based on their recovery value.

Hybrid Methods

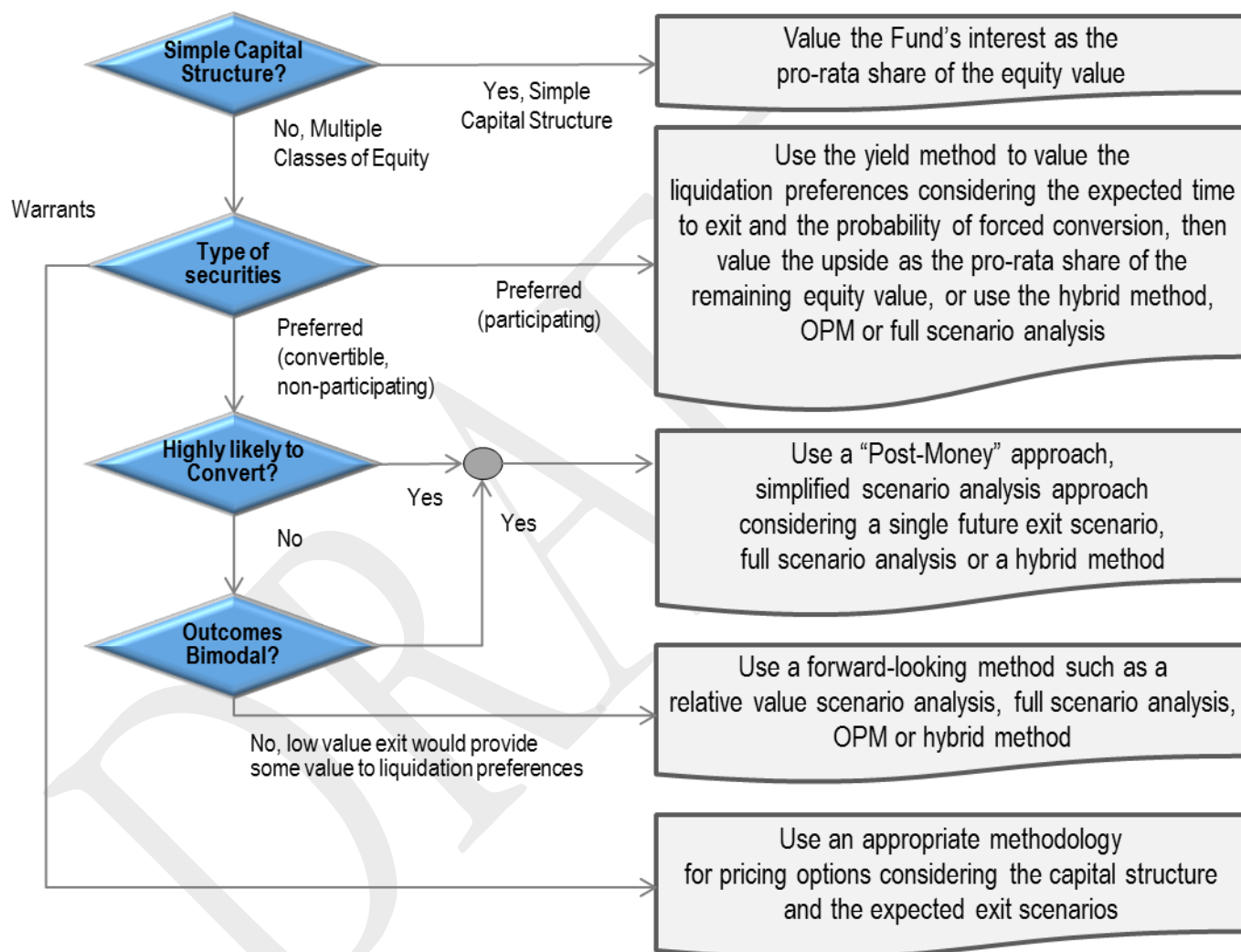
- 8.60** The hybrid method is a hybrid between scenario-based methods and OPM, estimating the probability-weighted value across multiple scenarios but using the OPM to estimate the allocation of value within one or more of those scenarios.
- 8.61** The hybrid method can be a useful alternative to explicitly modeling all scenario outcomes in situations when the company has transparency into one or more near-term exits but is unsure about what will occur if the current plans fall through. For example, consider a firm that anticipates an 80 percent probability of an IPO in nine months; however, if the IPO falls through due to market or other factors, the chances for a liquidity event are much more uncertain, and the firm is expected to remain private for three years. Under these circumstances, it might be appropriate to use a hybrid method. The value of the share classes under the IPO scenario might be based on the expected pricing and timing of the anticipated IPO, explicitly modeling this scenario. Then, an OPM with a three-year time to liquidity might be used to estimate the value of the share classes, using the conditional equity value assuming the IPO does not occur. In this instance, the resulting share values under each scenario would be weighted by their respective probabilities.
- 8.62** Another example in which a hybrid method would be appropriate would be if the portfolio company is in negotiations with investors and expects to close a new financing round at \$4 per share in six months if it achieves a technical milestone, but if the financing does not occur, the company will likely close its doors and no classes of equity will receive a return. Under these circumstances, it might be appropriate to calibrate the

conditional equity value to the possible transaction using the OPM to solve for the equity value and corresponding value of each class of equity based on the \$4 per share expected price for the new financing round. The resulting preferred and common stock values would then be weighted by the probability of achieving the technical milestone and discounted at a risk-adjusted discount rate for six months to estimate the value of each class of equity as of the valuation date.

- 8.63** Additional examples of situations in which a hybrid method would be appropriate were discussed previously in connection with scenario-based methods and OPM. See paragraphs 8.30 (b) and 8.50.
- 8.64** In applying a hybrid method, the fund will typically use a different current equity value within each of the relevant scenarios. For example, suppose there is a 40 percent probability that the portfolio company will obtain a contract with a major customer and will then be able to complete an IPO in one year and a 60 percent probability that the portfolio company will not get this contract and will instead choose to exit via a sale in two years. In this situation, the equity value used as an input to the OPM for the IPO scenario would be higher than the equity value used as an input to the OPM in the sale scenario, and the overall current equity value would reflect the weighting between the two. Similarly, suppose the overall current equity value considering all the risks is \$50 million, but the valuation uses a hybrid method to explicitly model the 20 percent chance that the portfolio company will not obtain financing. Furthermore, suppose that if the portfolio company does not obtain financing, it will dissolve, returning \$5 million to the investors. In this situation, the equity value in the success scenario is higher than the overall enterprise value because the \$50 million equity value is the weighted average between the two scenarios. More specifically, the equity value in the success scenario would be \$61.25 million, calculated as the \$50 million overall equity value, less the value from the dissolution scenario (20 percent multiplied by \$5 million), divided by the probability of the success scenario (80 percent). A best practice is to reconcile the probability-weighted present values of the future exit values to the overall equity value for the portfolio company estimated as discussed in paragraphs 7.03–.07, to make sure that the overall valuation of the portfolio company is reasonable.
- 8.65** In a hybrid framework, it is still important to reconcile the preferred stock values to the most recent transaction (subject to adjustments, as described in chapter 10, “Calibration”). This process involves developing the framework of the future scenarios, as described previously, and then calibrating the current equity values and probabilities for each scenario such that value for the most recent financing equals the amount paid.
- 8.66** An advantage of hybrid methods is that they take advantage of the conceptual framework of option pricing theory to model a continuous distribution of future outcomes and capture the option-like payoffs of the various share classes while also explicitly considering future scenarios and the discontinuities in outcomes that early-stage companies experience. A disadvantage is that these models require a large number of assumptions and may be overly complex.

Considerations in Selecting a Methodology for Valuing Equity Interests

8.67 The following flowchart and examples provide an overview of the factors that the fund may wish to consider when selecting a valuation approach for investments in equity interests, for most situations. Note that when a liquidity event is imminent or the fund has both seniority and control over the timing of exit, a CVM may be appropriate, and thus, the fund may not need to consider the flowchart.



Example #1 – Simple capital structure

(see chapter 7, "Valuation of Equity Interests in Simple Capital Structures.")

8.68 In a simple capital structure (that is, when all outstanding shares are common or equivalents with the same rights and preferences), the fair value of the fund's interest equals its pro-rata share of the total equity value. Since all investors have the same class of equity, more complex models such as scenario analysis or OPM are not required to allocate the equity value to the interest. When the company is ultimately sold or goes public, all investors will receive a pro-rata share of the value that is realized.

- 8.69** The allocation between shareholders will not be affected by the distribution of future outcomes (as could be the case if certain classes of equity were afforded downside protection under low value outcomes, but others were not). The equity value therefore can be measured considering the expected cash flows under current ownership through the future liquidity event and the investors' required rate of return. Typical valuation practice is to estimate the fair value of the equity interest by measuring the enterprise value and subtracting the value of debt. See chapter 7, "Valuation of Equity Interests in Simple Capital Structures," for further discussion.

Example #2 – VC investment with bimodal outcomes or high probability of conversion

- 8.70** VC funds typically make initial investments in the form of Series A preferred stock with a 1x liquidation preference. The preferred stock is generally convertible into common stock on a 1:1 basis. The price of the preferred stock is typically negotiated using an agreed-upon post-money value for the enterprise, measured on a fully diluted basis. For example, if the agreed-upon post-money value is \$10 million and there will be 10 million shares outstanding upon closing, the preferred stock would be priced at \$1 per share. The founders often retain shares in the common stock in the enterprise, and later hires are typically granted options on the same shares.
- 8.71** As time passes, new rounds of financing are often used to fund operations, through the point where the company either fails or reaches sustained profitability. If the company is progressing well, new rounds of financing will typically have a structure similar to the original financing (that is, 1x liquidation preference, no dividends and pari passu with earlier rounds), but each subsequent round may have a higher purchase price, and hence a higher liquidation preference.
- 8.72** When measuring the fair value of convertible (non-participating) preferred stock where all the rounds are pari passu and convert at 1:1,¹⁹ funds frequently use the fully diluted equity value and allocate that value to the investor interests on an as-converted basis, consistent with the simplified scenario analysis approach described in paragraphs 8.21–.23. In explaining this approach, many funds note that the investors will realize value only through a sale of the company or an IPO and, as a result, their focus is on the company's upside under which all the shares would convert. They also note that since outcomes for early-stage companies are generally bimodal, the fund typically would not receive much benefit from the liquidation preference. Therefore, investors typically do not believe that more complex models intended to differentiate the value associated with different liquidation preferences are needed.
- 8.73** When market participants would assume that it is highly likely that the preferred will convert at the liquidity event, or if the company is at such an early stage that the outcome

¹⁹ The as-converted participation for each class is not necessarily the same as the fully diluted percentage participation because some shares may convert at more (or less) than 1:1. For example, conversion ratios higher than 1x may result from a ratchet feature (anti-dilution provision) or accrued dividends (through the expected liquidity event). When the conversion ratio for a given class is not 1x, the same approaches may be used by considering the as-converted participation rather than the fully diluted participation (that is, an investor that owns shares that converted at 2x would be allocated twice the value on a per-share basis as those that own shares that convert at 1x).

is likely to be bimodal (that is, there are no outcomes in which the liquidation preferences matter), using the fully diluted equity value and allocating the equity value to the investor interests on an as-converted basis may be appropriate, since the value of the liquidation preference is negligible in this case.

- 8.74** In addition, even if full credit is given to the liquidation preferences through the use of more complex models that consider a range of outcomes using a lognormal distribution such as an OPM or hybrid method, these analyses typically indicate that the differences in values due to differences between the preferred stock liquidation preferences tend to be relatively small.

Example #3 – Investments in participating preferred

- 8.75** In some cases, the investment may be in participating preferred (that is, preferred instruments with participation rights). A holder of these interests will share in the upside on an as-converted basis without having to forgo the liquidation preference for the interest. This structure is used for many PE-backed companies and some VC-backed companies. When the portfolio company is sold, the proceeds are typically distributed by first repaying the liquidation preferences for each participating preferred class of equity, then allocating the remaining value to all classes on an as-converted basis. Therefore, the participating preferred instrument may be considered as two components: a debt-like preferred instrument corresponding to the liquidation preference, plus an as-converted interest in the common.
- 8.76** In valuing a participating preferred instrument that is in a minority position, it is important to consider explicitly both the probability of conversion and the present value of the liquidation preferences, given the expected time to liquidity. As such, the CVM would generally not be an appropriate approach in this situation, and it may be necessary to model the complex payoff structure using a scenario analysis, OPM or hybrid approach. The OPM approach may be particularly appropriate if the liquidation preferences represent the majority of the total equity value, creating leverage that is much higher than is observable in the public debt markets as described in paragraph 6.27. In this case, the upside participation for the participating preferred and the common stock effectively have only option value, and the fair value of the liquidation preference can be measured as the total equity value less the option value for the upside, considering the expected time horizon of the investment. In lower leverage situations, the present value of the liquidation preferences may be estimated via the yield method, considering the payoff at the liquidity event (including accrued dividends, if any) discounted at an estimate of the required rate of return for those cash flows. The remaining value would then be allocated on an as-converted basis.
- 8.77** In a qualified IPO, the agreement may specify that the participating preferred instruments will automatically convert to common shares and lose their liquidation preference.²⁰

²⁰ Participating preferred may be used both in partnership or LLC structures and in corporate structures. Automatic conversion upon an IPO is more often specified in the articles of incorporation in corporate structures, since it is possible for a corporation to complete an IPO without restructuring, but investors in IPO markets typically will not

In these cases, the value of a liquidation preference in a participating preferred instrument may be estimated by considering the probability of a sale or other exit in which the preferred stock will retain its liquidation preference, and multiplying that probability by the present value of the liquidation preferences.

Example #4 –Investment where the dissolution scenario has value

8.78 For more established companies with complex capital structures, where the value of the portfolio company would be expected to rise or fall more smoothly based on the company's performance, the liquidation preferences for preferred stock become more meaningful to the valuation. It would also be important to consider the liquidation preferences for VC-backed companies that have made enough progress that senior classes of equity would receive some value in a low-value sale or sale of assets (dissolution scenario), but that have not yet reached the point where it is highly likely that all classes of equity would convert. In these cases, because the outcome is generally not bimodal, it would be appropriate to use a forward-looking method such as a full scenario analysis, OPM or hybrid method to value the equity interests in the portfolio company, capturing the effect of the liquidation preferences considering the protection provided in the downside scenarios.

Other factors to consider

8.79 In valuing investments in portfolio companies with complex capital structures, it is important to consider the negotiation dynamics that led to the inclusion of additional preferred features and their ramifications in assessing the relative value of prior rounds. The following list describes a few additional factors that may be considered when assessing the appropriateness of a valuation methodology:

- If the preferred classes have differing seniority, it is important to consider why the seniority was negotiated and who controls the decision about the nature and timing of the ultimate liquidity event (for example, can the junior preferred investors initiate an IPO that forces conversion for the senior preferred, even if converting would not be optimal for the senior investors?) If new investors negotiated for seniority or greater than a 1x liquidation preference, the negotiations themselves may provide an indication that the liquidation preferences matter, so assuming a de minimis value for the liquidation preferences may not be reasonable.
- If the latest round of financing was sold with warrant coverage or a greater than 1x conversion ratio, then the price per common stock equivalent is lower than the nominal price per share from the financing. In these cases, care must be taken to

agree to retain a capital structure where outstanding preferred stock has seniority over the common stock. For partnership and LLC structures, since these entities generally cannot complete an IPO directly, but instead must convert to a corporation or complete an IPO for a related entity that is structured as a corporation, the original partnership or LLC that issued the participating preferred may continue to exist and have the right to repayment of the liquidation preference, typically via conversion into common stock based on the price of the common stock at the conversion date. As always, it is important to consider the specific rights and preferences for the investment when performing the valuation.

assess the impact of these additional features when estimating the total equity value or post-money value and the implications for the valuation of the other classes of equity.

- In situations where a fund's investment has seniority and the value of the company exceeds the liquidation preference but has declined since the initial investment, but the fund does not have the ability to redeem the investment or sell the portfolio company on the measurement date, it would generally be appropriate to mark down the investment, since the decline in the overall enterprise value implies that the investment is in a position of more risk.
- If the structure of the liquidation preferences is complex and there are plausible exit scenarios with values near the threshold where the junior preferred begin participating, it may be most appropriate to use a hybrid method to capture the impact of the liquidation preferences on the values of the senior and junior preferred classes.
- If a fund believes that the liquidation preferences are unlikely to have value in any exit scenarios, then the cash flows for all the classes of equity, including the common stock, would be the same. However, different classes of equity may still have different values if market participants investing in junior interests would require a higher rate of return due to increased risk, or if certain classes lack information rights and other protections that investors typically expect. See chapter 9, "Control and Marketability," for additional discussion.

Chapter 9

Control and Marketability

- 9.01** In standard valuation theory, the value of an enterprise or the equity interests in an enterprise may be measured on a controlling or minority interest basis and on a marketable or nonmarketable basis. Therefore, it is important to consider control features and the degree of marketability of the investment when estimating the fair value of a fund's interest in an enterprise. It should be noted that the controlling and minority interests discussed in this guide are considered from the perspective of the holder, with a focus on the degree of influence that a market participant transacting in the interest would have over the portfolio company's strategy and operations. These classifications are different from controlling and noncontrolling (also sometimes referred to as *minority*) interests addressed in Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 810, *Consolidation*, which are from the perspective of the parent.
- 9.02** In a valuation of an interest in a privately held portfolio company,¹ the objective of the analysis is to value the instruments that the fund holds within the portfolio company rather than to value the enterprise as a whole. However, the value of the enterprise, subject to the considerations discussed in earlier chapters, may help inform judgments as to the value of individual interests. As discussed in chapters 7 and 8, investors in an interest in a portfolio company may consider not only the value of the company that could be realized upon an immediate sale, but also the way a market participant who might be presently evaluating an investment in the portfolio company might expect the value of the company to evolve over the expected time horizon for the investment, through the future liquidity event. Specifically, market participants transacting in an interest would consider which of the investors have control or significant influence (or in aggregate have control or significant influence), and make corresponding assumptions regarding the expected cash flows for the business and the expected time horizon. This value may or may not be the same as the fair value of the portfolio company that would be used in an analysis that assumes an immediate sale of the enterprise, such as for impairment testing of goodwill under Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 350-20, in which the unit of account is the entire reporting unit rather than an individual instrument. In particular, minority interest holders would not be able to change the capital structure for the portfolio company, nor would they be able to change the amount or timing of cash flows. See table 7-1 for some of the key differences between the valuation of an interest in an enterprise and a valuation of the enterprise as a whole. Therefore, the task force believes that when valuing a fund's interest, it is most appropriate to consider the expected cash flows to the interest, given

¹ The concepts in this chapter apply to the valuation of instruments that are not identical to securities that are traded in an active market. If the interest held by the fund comprises securities that are identical to securities that are traded in an active market (e.g. a holding of exchange-traded public stock), then the fair value of the interest should be measured as the product of the quoted price for the individual security times the quantity held. See paragraphs 13.02–.24 for further discussion regarding valuation of securities in an enterprise that has traded securities.

the portfolio company's plans under existing ownership, as modified given the degree of influence that the market participant transacting in the interest would have over those plans considering the nature of the interest acquired.

- 9.03** In many cases, funds value the instruments in a portfolio company using the enterprise value as an input. At interim measurement dates when no near-term exit is planned, the total enterprise value if sold to a third party would typically not be expected to reflect a “premium” to the value under current ownership considering the expected time horizon for the investment. In fact, if the business would have significantly more value if sold to a third party on the measurement date, the investors seeking to maximize value would most likely already be pursuing such an exit.² That is not to say that a third party never would pay more for a company than the business can achieve under current ownership – there may be circumstances where an unanticipated third party approaches a company due to some idiosyncratic characteristics that have value to that buyer,³ or where the private equity or venture capital investors decide that selling to a strategic buyer would provide a more efficient path to achieving scale and distribution. In most situations, however, at these interim measurement dates, market participants typically expect that the investors who in aggregate have control of the business will continue making improvements to the business and executing the strategy that attracted them to the investment, until the business has reached a position where it would be attractive to a third-party buyer or to the IPO market. The valuation of the business at any measurement date would still reflect any differences from the median or average multiple of the selected guideline public companies, either higher or lower depending on the facts and circumstances, but would not reflect a “premium” or “discount” per se.

Controlling Versus Minority Interests

- 9.04** A controlling interest, subject to restrictive agreements and applicable laws and regulations, can exercise full rights of ownership regarding the management of a portfolio company, including:

- making investment decisions;
- appointing management;
- determining the amount of any special dividends paid; and
- liquidating, dissolving, selling, or recapitalizing the enterprise.

² Valuation typically assumes that shareholders are rational, even in situations when contrary evidence exists. Fund managers typically will assume that their companies are run optimally. Nevertheless, there may be situations where it would be appropriate to consider suboptimal management for a given portfolio company, particularly if a fund investment is in a minority position and the controlling investors are clearly not maximizing value.

³ Some companies may have scarcity value or other hidden unique value that may result in a high valuation relative to the company's plans under current ownership. For example, the company might have an employment agreement with a world-renowned CEO and that employment contract might be enough to attract a third party who needs those skills to buy the whole company.

- 9.05** Some holders of minority interests may be able to exert significant influence similar to the rights of a controlling interest. Such influence, whether on its own or when acting in concert with other investors when the investors' interests are aligned, may be considered similarly to a controlling interest. In such cases, the price paid by a "minority" investor to enter a position would typically be the same as that paid by a "controlling" investor.⁴ In other cases, investors' interests may not be aligned, and it would be important to consider the specific rights associated with the interest.
- 9.06** There is no question that PE and VC investors place value on having influence over the portfolio companies in which they make investments. In particular, investors often negotiate rights to ensure that they have both operational influence, enabling the fund to execute its strategy for the portfolio company, and influence over the company's capital structure and exit plans, enabling the fund to determine the nature of any future financings and provide a path to liquidity for the investment. Certain investment companies, such as fund of funds or co-investment funds, may instead choose to invest in positions where another lead investor has control. In these situations, the fund typically invests in the same class of equity as the lead investor and has tag-along rights that allow the fund to participate equally with the lead investor in any future sales, ensuring that their interests remain aligned. Other investment companies may invest in minority positions where the founders or original investors retain control, while the new minority instruments have additional economic rights (for example, debt, convertible notes, or preferred stock with a liquidation preference and upside participation). In these situations, the fund typically negotiates a maturity date, mandatory redemption date, or put right to define a maximum time horizon for the investment. These investments may also include covenants that allow the fund to preserve value for their position if the portfolio company performance begins to decline. When valuing the equity interests in a portfolio company, it is important to consider the specific facts and circumstances to determine how the control features associated with the position may impact value.
- 9.07** In many cases, a *control premium* or an *acquisition premium*⁵ is paid when a portfolio company is acquired. Given the economics of supply and demand, a buyer who wishes to acquire control of a portfolio company may have to pay a premium over a previous value to incentivize current interest holders to sell. These premiums may be justified by the expected improvements to the cash flows, reductions in risk that buyers expect to

⁴ Note that it is common for multiple investors participating in a single capital raising event to pay the same price per share as part of the investment round, even when, for example, the lead investor(s) who invests the most money gets preferential rights, including rights to nominate board members, consent rights on certain types of transactions or even rights to drag along other investors into a sale transaction. In these cases, the other investors generally view the group of investors taken together as having sufficient alignment of interest with the lead investor(s) that they are content to pay the same price per share.

⁵ As of the writing of this guide, the Appraisal Foundation is working on a project regarding the assessment and measurement of control premiums in valuations for financial reporting. The purpose of this project is to present views on how to approach and apply certain aspects of the valuation process appropriate for measuring the fair value of controlling interests in business enterprises for financial reporting purposes. Please refer to the Appraisal Foundation's website at www.appraisalfoundation.org for further information about this project and its status.

achieve, or both.⁶ Such a premium, if any, is generally incorporated into the transaction price and is considered in calibrating valuation inputs, as long as the transaction price reflects fair value at initial recognition. Because any minority interest holders would also benefit from these improvements to the business, it would be appropriate to use the same calibrated equity value to value any minority interests immediately following the transaction.

- 9.08** At later measurement dates, the calibrated inputs, adjusted for any changes in the company and for then current market conditions, generally would incorporate the value associated with control. If so, it would not be appropriate to add an additional on-top “control premium” when estimating fair value. No further adjustment is required since the improvements that may be realized post-transaction were already incorporated into the cash flows and calibrated required rate of return assumptions or calibrated market multiples used in the analysis. See chapter 10, “Calibration,” for further discussion.
- 9.09** Within the private equity and venture capital industry, market participants look for opportunities to achieve high returns, and then decide whether to invest and what price and terms to negotiate based on the size of the potential opportunity relative to the risks and market considerations that could impact the prospects of realizing the desired outcome. These market participants likely do not think about fair value estimates or transaction prices by applying premiums or discounts, or by first identifying a price and then adding a premium or deducting a discount. They consider and negotiate for the best possible terms they can obtain in a transaction, including rights to influence the company and/or enhance the liquidity of their interest, but they generally do not do so on the basis of some pricing relative to a benchmark. Further, while the price paid for an investment may mathematically be more or less than some other price (such as the traded price for a public company prior to a transaction in which that company is taken private), that fact does not mean that valuation estimates, especially future valuation estimates for portfolio company investments, are arrived at using a premium or discount.
- 9.10** Applying control premia or acquisition premia has been pervasive in the valuation industry. Valuation practitioners frequently estimate the control premium for an enterprise by observing the difference between public company multiples and the multiples paid in transactions.⁷ However, when considering portfolio company

⁶ The owners of portfolio company may increase enterprise value by improving the cash flows directly (for example, by increasing revenues; reducing operating costs; or reducing nonoperating costs, such as taxes). The owners of the portfolio company may also increase enterprise value by reducing risk (for example, by diversifying the business, improving access to capital, increasing the certainty of cash flows, or optimizing the capital structure). Both of these factors may be used to justify the premiums paid in transactions.

⁷ For example, the *Mergerstat Review* provides statistics and analysis of mergers and acquisitions for U.S. companies, segregated by industry. However, note that these statistics reflect averages over a wide range, and the actual premium paid in any given transaction depends upon the negotiation dynamics. When estimating an acquisition premium for a specific company, it is important to consider the characteristics of the likely market participants and the level of improvements to the cash flows and synergies available to these market participants. Synergies available to only one potential acquirer typically should not be included in the estimated control premium because it would be difficult for the sellers to capture the value of these synergies in the negotiation process. It is also important to note that control premiums are observed only for companies that are acquired. The vast majority of companies are not

investments, it typically will not be appropriate to apply a control premium to estimate the enterprise value for valuing controlling interests or conversely, to apply a minority discount to estimate the enterprise value for valuing minority interests. Instead, when estimating the value of an interest in an enterprise and the cash flows that will result from this interest, the fund should consider the relevant facts and circumstances, including, for example:

- Who has control? What are the portfolio company's plans under current ownership? If the fund sold its interest, how would those plans change?
- Does control matter? Would taking control of the business allow the investors to change the strategy of the business in a way that would increase the cash flows or reduce risk?
- What would a third-party pay for the entire enterprise today? Would it be advantageous for the controlling investors to prepare the company for sale in the near term, or to execute the investors' planned strategies over the expected time horizon for the investment?
- What exit multiple would market participants investing in an interest in the portfolio company on the measurement date expect to realize upon a future exit?
- Are the cash flows to the specific interest proportionate to the overall equity value, or would some instruments receive disproportionate returns depending on how the enterprise value evolves through the future exit? If different instruments would receive disproportionate returns, how would the investors who in aggregate have control of the business maximize their returns, and what would that imply about the value of the other instruments in the enterprise?

9.11 All investors, whether controlling or non-controlling, will realize proceeds from the ultimate exit, and would consider these factors when assessing the value of their position. Thus, it is critical to consider the specific facts and circumstances, using calibration whenever possible, rather than to apply premia without supporting the specific improvements that market participants would expect that would support a higher valuation. In other words, particularly due to the degree to which specific rights and privileges that impact value can vary greatly in the context of private companies, any use of a rule of thumb or benchmark for premia or discounts would likely not be appropriate in valuing PE or VC investments.

9.12 In a valuation of a fund's interest in a privately held portfolio company, the objective of the analysis is to value the instruments in the portfolio company rather than the enterprise as a whole. However, the value of the enterprise, subject to the considerations discussed in earlier chapters, may help inform judgments as to the value of individual interests. The task force believes that the basis of valuation for the portfolio company should be

acquired in any given year. Thus, the companies that are acquired may represent a sample in which higher levels of improvement are possible, resulting in higher observed control premiums than would otherwise be the case.

consistent with the amount that investors would pay for an interest in the portfolio company, given the company's plans under current ownership, as modified given the degree of influence that the market participant acquiring the interest would have over those plans considering the nature of the interest acquired, and the market participants' required rate of return.⁸ In particular:

- in the market approach (guideline public company method or guideline company transactions method), the multiple selected would be calibrated with the entry multiple, as applicable, and would reflect the differences between the portfolio company and the guideline companies, given the company's plans under current ownership. It would not include any additional acquisition premium that a third party buying the entire portfolio company might pay – the selected multiple would incorporate market participants' expectations regarding improvements that would be made in the business through the expected liquidity event and the ultimate exit price that might be realized.
 - In some situations, the value of the portfolio company for the purpose of valuing the fund's interest would be the same as the fair value of the portfolio company if the company were to be sold on the measurement date. For example, suppose that a private equity firm acquires control of an enterprise for 10 times the last 12 month (LTM) earnings before interest, taxes, depreciation, and amortization (EBITDA),⁹ but the median multiple observed for the selected guideline public companies in the guideline public company method is 8 times the LTM EBITDA. This difference may reflect the improvements to the business that the enterprise is expected to make under the new ownership and would incorporate the value associated with control. Because any minority interest holders would also benefit from these improvements to the business, to value any minority interests immediately following the transaction, it would be appropriate to consider the 10 times the LTM EBITDA multiple in estimating the value of the enterprise for the purpose of valuing the minority interest. That is, it typically would not be appropriate to value the enterprise differently when valuing the minority interests than when valuing the controlling interest.¹⁰

⁸ As discussed in paragraph 7.02, most privately held companies have investors who in aggregate have control of the enterprise. When valuing the interests in an enterprise, it is appropriate to consider these investors' required rate of return. Such investors would be expected select management and influence strategy to maximize value.

⁹ Note that, for simplicity, this example refers only to last 12 month multiples of earnings before interest, taxes, depreciation, and amortization (EBITDA). In practice, a valuation should consider other relevant indications of value (for example, forward multiples, multiples of other metrics, and the income approach). See chapter 5, "Overview of Valuation Approaches," for further discussion of valuation methodologies.

¹⁰ After valuing the enterprise consistent with the perspective of the investors who in aggregate have control of the business, the valuation for the specific interests held by the fund may then be adjusted for differences in risk attributable to lack of control and lack of marketability, if appropriate. See paragraphs 9.18–32 and appendix B, paragraphs B.08.01–.08.08, "Models Used in Calculating Discounts for Lack of Marketability."

- In estimating the fair value of an interest in the portfolio company when it would be optimal to sell the portfolio company, the valuation would consider the amount a third party buying the entire portfolio company might pay corresponding to the improvements in the cash flows or reductions in risk that the third-party buyer might achieve.¹¹ In such circumstances, a controlling interest would generally be valued on the same basis as a minority interest; that is, on a pro-rata basis when proceeds from the sale would be proportionate to the interest held, or pursuant to the *waterfall*, that is, the contractual allocations of cash flows returned to investors, if certain equity interests would receive different payouts.
- In the income approach (discounted cash flow method), the projected cash flows for the purpose of valuing the fund's interest would reflect the cash flows that market participants investing in the interest would expect under current ownership, including any expected improvements in the cash flows or other changes that an investor in the fund's interest would consider and be willing to pay for.
 - For example, suppose that a private-equity firm purchases a business using a turn-around strategy, bringing in a new management team and identifying several opportunities for improving revenues and reducing costs. Market participants investing in an interest in the business would consider the cash flows including the improvements that the new management team is expecting to make to the business (including company-specific synergies).
 - Market participants would also consider the risks associated with these plans when estimating their required rate of return. When assessing the value of the fund's interest, the discount rate selected should reflect the cost of debt and cost of equity a market participant would expect through the liquidity event. For example, in a highly levered company, the company-specific cost of debt (current market yield) and company-specific cost of equity (private-equity or venture capital rate of return) may be higher than the cost of debt and cost of equity typical for public companies in the industry, leading to a higher overall cost of capital.
 - In contrast, in estimating the fair value of the portfolio company when it would be optimal to sell the portfolio company, the valuation would instead consider the cash flows that a third party buying the entire portfolio company would expect (excluding buyer-specific synergies but including synergies that would be available to multiple buyers) and the expected cost of capital that these third party buyers would expect for the

¹¹ See also case studies 2, *Late Stage "Carve-Out" Investment When Third-Party Debt Financing Was Not Readily Available*, and 8, *Evaluating Opportunities for a Strategic Exit – "Last Man Standing"*, in appendix C, "Valuation Case Studies," describing the valuation of a private equity-backed buyout where the investors later added leverage, made improvements to the business, and achieved a strategic exit (case study 2), and the valuation of a business where certain competitors were sold to strategic investors at high multiples (case study 8).

portfolio company after acquisition. Note that as discussed in chapter 7, "Valuation of Equity Interests in Simple Capital Structures," the fair value of the portfolio company may be the same as the value of the portfolio company used for valuing interests in the company, but the two valuations are conceptually different.

- 9.13** In short, the task force believes it is not appropriate to include a control premium or an acquisition premium in the enterprise value used in valuing the fund's interest in the portfolio company. Instead, the task force recommends that funds evaluate the instruments in each portfolio company considering the improvements to the business that an investor in the fund's interest would expect under existing ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the interest acquired. No further adjustment is required since this value would be directly incorporated into the cash flows and calibrated required rate of return assumptions or calibrated market multiples used in the analysis.
- 9.14** The value of the portfolio company used as an input for the purpose of valuing the fund's interest should also consider the value that might be realized for the enterprise upon a liquidity event, if any. If the portfolio company has no plans to be sold or go public,¹² the fund would not be able to realize any premium that a third-party buyer might pay to acquire or gain control of the portfolio company. If the portfolio company ultimately plans to be sold or go public,¹³ the fund will ultimately participate in this liquidity event. Thus, in this case, it may be appropriate to value the fund's interest based on its share of the cash flows leading up to, and to be realized upon, the future liquidity event (whether via a strategic sale or via an IPO). That is, if market participants investing in the fund's interest would expect to realize a synergistic premium at exit (for example, if multiple strategic buyers would be expected to bid up the price), this exit premium would be appropriately included in the fair value of the portfolio company used for estimating the value of the fund's interest.¹⁴
- 9.15** The investors in a portfolio company who in aggregate have control of the business may have a greater degree of influence over the company's operations and future exit strategy than minority interest holders, even if no one investor has strict control. However, all investors may participate in the future exit event, differentiated only by the economic rights and preferences of each instrument in the capital structure. In a simple capital

¹² For example, a family-owned or other closely held business or partnership without private equity or venture capital backing might plan to remain private for the indefinite future.

¹³ For example, almost all successful private equity-backed and venture capital-backed companies ultimately have a liquidity event (that is, the company is sold or taken public), so that the investors can realize the return on their investments.

¹⁴ Note that this discussion focuses on the intent of the portfolio company because market participants transacting in an interest in the business would consider the expected time horizon for the investment given the company's plans under current and new ownership, rather than the plans that a third party buying the entire business would make. Therefore, when assessing the assumptions that a market participant investing in the fund's interest would make about the business, it is appropriate to consider the information that such an investor would possess after completing a due diligence process. In most cases, these assumptions will be consistent with the plans of the enterprise under current ownership.

structure, all the investors share pro rata in the proceeds from a sale, or they may realize the traded share price on or after an IPO.

- 9.16** Until the future liquidity event, when valuing the fund's interest, the cash flows should reflect the portfolio company's plans under existing ownership, as modified given the degree of influence that a market participant transacting in the fund's interest would have over those plans considering the nature of the interest acquired. Because the portfolio company's strategy, considering the investors who in aggregate have control of the business, are already considered in developing the forecast, there is no difference in the enterprise cash flows used in valuing the various equity interests in the enterprise.
- 9.17** Beyond the future liquidity event, the assumptions that a market participant investing in the fund's interest would make regarding the cash flows or expected exit multiple should be used. The post-exit cash flows, or selected exit multiple, may incorporate expected improvements to the business under new ownership. Additionally, these inputs may incorporate synergies that the company may achieve in conjunction with the acquirer, to the extent that investors in the fund's interest would assume that the company would be able to capture a portion of these synergies in their negotiations for a sale of the company at the future liquidity event. If investors in the fund's interest would not assume such a premium would be paid for the company at exit, the post-exit cash flows should not be adjusted for expected post-exit improvements under an income approach. Similarly, under a market approach, the multiples and financial metrics would not reflect an acquisition premium.¹⁵ Depending on the circumstances, it may be appropriate to place some weight on both types of exit. Regardless of the type of exit expected, because all investors will share in the same future exit values, there is no difference in the enterprise value used in valuing the various instruments in the enterprise.
- 9.18** Even though the enterprise value used in valuing the instruments held by the investors who in aggregate have control of the business and the other instruments in the portfolio company, the value of the instruments themselves may differ. The two types of disproportionate returns that investors typically enjoy are as follows:
- a. Certain investors' interests include explicit economic rights, such as a liquidation preference or preferred dividends, which provide disproportionate returns over the other instruments. These types of returns can be captured in the models for valuing equity interests in complex capital structures, as described previously.
 - b. Certain investors have significant influence over the portfolio company, including control over the timing of exit and the negotiations for future financing rounds,

¹⁵ Note that although an initial public offering (IPO) results in the sale of shares on a minority basis, IPO multiples may be higher than the average public company multiples or comparable transaction multiples, perhaps due to market participants' view of the growth potential for newly public companies or due to the fact that product or service the company offers may be differentiated from existing public companies in ways that may appeal to new investors to be compelling. In addition, an IPO is typically accompanied by a tremendous marketing effort in the form of a "road show" that leads up to the IPO. An IPO also provides liquidity for the minority shareholders.

which provides the investors with optionality that the holders of other instruments lack. These types of returns are more difficult to model.

- 9.19** In many cases, any difference in value attributable to the degree of influence the investor has over the portfolio company may be captured by modeling the explicit rights and preferences of the investors' interest, as described previously; thus, the task force believes that, in many cases, a discount for lack of control, if any, would be minimal.¹⁶ However, to the extent that the difference in value between the various instruments in the enterprise cannot be modeled in the cash flows (for example, due to rights such as those described in paragraph 9.18 (b)), the task force believes it *may* be appropriate to apply a discount to the instruments that lack the rights that investors would typically expect, to capture the difference in level of influence between different classes of instruments in the enterprise, to the extent that the investors' interests are not aligned. Such a discount, if applicable, should generally be supported via calibration.
- 9.20** One situation in which it may be appropriate to estimate the fair value of the investment by incorporating adjustments to its allocated proportion of the total equity value would be if the portfolio company has raised financing in several different rounds. In such situations, the later rounds of financing may have superior economic rights (such as a higher liquidation preference, seniority, or a guaranteed 2x return), but market participants may not expect to be able to effect an exit that would allow them to fully capitalize on these rights. In particular, the investors in earlier rounds may still have control over the timing of exit, and would benefit from allowing more time for the value of the company to appreciate or to weather any downturn in value, rather than exiting at a value that benefits the investors in the senior rounds. If the valuation analysis uses an allocation model, such as the option pricing model that assigns full value to these rights, the allocation may overstate the value of the senior rounds and an adjustment to the modeled value may be appropriate. See paragraph 6.25–.26 and chapter 8, “Valuation of Equity Interests in Complex Capital Structures,” for further discussion regarding valuation of investments in equity interests in complex capital structures.
- 9.21** Another situation in which it may be appropriate to apply an adjustment to estimate fair value would be if the enterprise has publicly-traded stock and the fund has invested in instruments such as convertible notes, convertible preferred, restricted stock, or warrants at a price that reflects a discount to the model value implied by the traded stock price. In this situation, since the instruments are not identical to the traded public stock and the transaction price implies market participants investing in these related instruments would transact at a different price than is implied by the model, it may be necessary to apply a discount to the input stock price or resulting model value or consider applying weight to another method when estimating the fair value of the investment. This adjustment may be considered a negotiation discount or discount for illiquidity. Calibration may be used to

¹⁶ A frequent example supporting the position that the discount for lack of control is minimal occurs in private equity investments when the *lead investor* retains control, but *tag-along investors* pay the same price per share. On the other hand, this example could be considered a special case when the tag-along investors have sufficient respect for the lead investor that they are willing to forgo control in order to benefit from the lead investor's strategic oversight, its network of contacts and its complement of consulting skills.

estimate the magnitude of such a discount. See paragraphs 13.02–.24 for further discussion regarding valuation of investments when the enterprise has traded securities.

- 9.22** The most common method for estimating a discount for lack of control uses the inverse of the acquisition premium observed in transactions, as discussed in paragraph 9.10.¹⁷ However, the task force believes these premiums overstate the "pure" difference in value attributable to the difference in the level of influence between various interests in the enterprise because the control premiums measured in merger and acquisition studies include synergies and reflect transaction dynamics at the enterprise value level, and all investors will ultimately realize proceeds from this exit.
- 9.23** In summary, as discussed in paragraphs 9.14–.18, when valuing the fund's interest in a portfolio company, the enterprise value would be measured considering the company's cash flows under existing ownership, as modified given the degree of influence that the market participant transacting in the interest would have over those plans considering the nature of the interest acquired, as well as the plans for a future liquidity event (if any), and the premium (if any) that investors in the fund's interest would expect to be realized upon the future liquidity event (whether via a sale or an IPO). The enterprise value would not include a significant control or acquisition premium, unless market participants investing in the fund's interest would pay such a premium for an interest in the portfolio company under current ownership (that is, when the expected improvements to the cash flows or reductions in risk under current ownership justify such a premium relative to the selected guideline public companies). After measuring the enterprise value on this basis, it is unnecessary to back out a premium in estimating the fair value of the fund's interest, even if the fund is in a minority position.¹⁸

Marketable Versus Nonmarketable Interests

- 9.24** Lack of marketability detracts from an instrument's value when compared to an instrument that is otherwise comparable but readily marketable. For two given investments identical in all other respects, market participants may apply a downward adjustment to the value of the one that cannot be readily converted into cash versus the one that can be readily converted into cash. A *nonmarketable investment* is one that lacks a ready market; an *illiquid investment* is one in which a market exists, but the investment is not actively traded, or restrictions on the investment prevent access to that market. For example, a private portfolio company considered as a whole is marketable (there is a market) but illiquid (there is no active market). A typical fund's interest in a private portfolio company is illiquid.

¹⁷ Using this method, the discount for lack of control would be measured as $1 - (1 / (1 + \text{control premium}))$.

¹⁸ If investors would pay a significant control or acquisition premium for an interest in the enterprise today, even though the expected liquidity event is some time into the future, that premium should be considered in estimating the fair value of the minority interest. These premiums are typically justified by the expected improvements to the business under the new ownership. The discount for lack of control that may apply to the minority interest relative to the interest held by the investors who in aggregate have control of the business should capture only the differences in the required rate of return, if any, due to differences in rights as described in paragraph 9.19.

- 9.25** As discussed in appendix B, paragraphs B.01.01–.01.10, "Relationship Between Fair Value and Stages of Enterprise Development," and paragraphs B.03.01–.03.10, "Valuation Implications of a Planned Initial Public Offering," venture capital and private equity investors have historically demanded and achieved higher returns than investors in public capital markets.¹⁹ These expected returns are reflected in the discount rates that are appropriate in the income approach and in the lower than average multiples of projected revenues or projected earnings that may be appropriate in the market approach (guideline public company method or guideline company transactions method).²⁰
- 9.26** Because the enterprise value is defined in terms of the cash flows to the investors who in aggregate have control over the business, the investors' interests and the portfolio company as a whole can generally be considered to be equally marketable. In particular:
- both investors' interests and the portfolio company as a whole are harder to sell than a share of stock traded on an exchange, but they are easier to sell than a single share in the portfolio company that lacks the rights that investors would typically expect. Although transactions between investors or sales of a portfolio company early in the investment cycle are rare, they do occur.
 - the investors who in aggregate have control over the business typically have access to information that would allow them to take potential buyers through a due diligence process, making it possible to access an exit market for either the investors' interests or the portfolio company as a whole.
- 9.27** Considering these factors, the task force believes it is typically appropriate to consider the portfolio company and the equity interests held by the investors who in aggregate have control of the business as equally marketable investments, and to value them as such.²¹ The task force does not believe it is appropriate to value the portfolio company as though it were a fully liquid asset and then apply a discount for lack of marketability to the enterprise value or investors' interests to account for the higher rate of return these investors demand. For example, in estimating the measurement date fair value of equity to be used in valuing the shares within a simple capital structure (as described in chapter 7, "Valuation of Equity Interests in Simple Capital Structures") or in the various methods

¹⁹ The investors' required rate of return also reflects the high risk of these investments. Venture capital investments are risky because of the nature of early-stage companies; historically, private equity investments have created a similar risk profile through high leverage. Because, on average, the market is risk averse, investors in high-risk companies can achieve higher than market returns.

²⁰ For most venture capital-backed and private equity-backed companies, projected revenue and earnings growth exceed industry levels. Thus, even though the values of these companies typically reflect lower than average multiples of projected (NTM) revenues or earnings, these same values also may reflect average or above average multiples of historical (LTM) revenues and earnings. For example, an early-stage company may have almost no current revenue, whereas a large private equity-backed company in a turnaround situation may have low earnings that are expected to improve under new management. In both of these examples, the value of the companies would reflect a high LTM multiple.

²¹ The enterprise value and corresponding equity value should be measured from the perspective of the investors who in aggregate have control of the business. If the investors' interests are not aligned, it would be appropriate to consider the impact of the lack of alignment on the valuation of the fund's position.

for valuing equity interests within a complex capital structure (as described in chapter 8, "Valuation of Equity Interests in Complex Capital Structures"):

- In the income approach, the fund should discount the cash flows at a discount rate corresponding the required rate of return for the investors who in aggregate have control of the business,²² rather than at the lower rate that might be appropriate in the public capital markets.
- In the market approach, the fund should select multiples that are appropriate to the portfolio company, considering the required rate of return for the investors who in aggregate have control of the business, given the size, expected growth, and profitability for the private company, versus the public capital market's required rate of return, given the size, expected growth, and profitability of the selected guideline public companies.

9.28 In a simple capital structure, all investors have the same instruments. Therefore, to the extent that the investors' interests are aligned and the instruments have the same rights (tag along, information rights, and so on) and same principal exit market, the value of the instruments would be the same for all investors. However, if the fund has a different principal exit market or additional restrictions on their interest that other investors do not, it may be appropriate to apply a discount for lack of marketability to these instruments, as discussed subsequently.

9.29 In a complex capital structure, certain investor interests or management interests, such as common stock or profits interests, may be less marketable than the instruments held by the investors who in aggregate have control of the business, for the following reasons:

- In general, the holders of equity interests such as common stock or profits interests are not privy to the same level of information that is available to the interests held by the investors who in aggregate have control of the business and, thus, do not have the same level of access to potential buyers.²³
- Furthermore, in many cases, the holders of common stock or profits interests will participate only in the upside appreciation in the value of the portfolio company after the senior classes of equity receive a return of capital, and therefore, may demand a higher rate of return given the additional risk associated with this position.

9.30 Considering these factors, the task force believes that after allocating the equity value to the various instruments within the portfolio company or assessing the discount rate for an instrument considering its economic rights, it might be appropriate to apply a discount for lack of marketability to certain instruments, to the extent needed to capture the incremental rate of return, if any, that investors would demand given the information

²² Please see paragraphs 7.02–.05 for further discussion.

²³ When estimating the discount for lack of marketability to be combined with an explicit discount for lack of control, it is important not to double count. Many of the factors that make certain interests more marketable than others are attributable to the non-economic rights associated with these interests.

rights and other non-economic rights associated with these instruments. Such a discount should initially be supported via calibration, and would typically not apply in situations where the position includes information rights and the investors' interests are aligned.

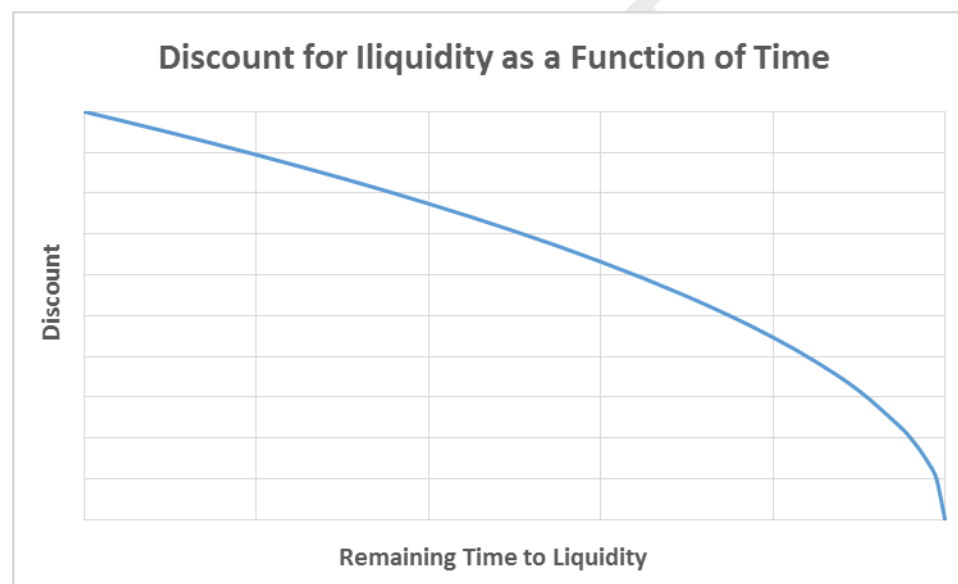
- 9.31** As discussed in chapter 7, "Valuation of Equity Interests in Simple Capital Structures," for the purpose of valuing the fund's interest in the portfolio company, the total enterprise value is measured considering the cash flows under current ownership and the required rate of return of the investors who in aggregate have control of the business. Therefore, when estimating the discount for lack of marketability for other instruments in the enterprise, it is appropriate to consider the degree of illiquidity of these instruments relative to the degree of illiquidity already incorporated into the valuation of the portfolio company, and the degree to which the fund's interest has the rights that investors would typically expect. See also Q&As 14.60–.66.
- 9.32** There may be a few situations in which a fund considers a discount for lack of marketability, relative to the allocated value based on the enterprise valuation and equity valuation guidance outlined previously, to apply to the fund's position.²⁴ To address these situations, there are many quantitative and qualitative methods for assessing these discounts as discussed in appendix B, paragraphs B.08.01–.08.08, "Models Used in Calculating Discounts for Lack of Marketability." The most popular quantitative methods estimate the discount as a function of the duration of the restriction or expected period of illiquidity for the investment (time horizon until the expected liquidity event for the business) and the risk of the investment (volatility). Such discounts may also be considered in valuing restricted stock interests in public companies, calibrating the quantitative model when possible. In most cases, the researchers developing each method then validated their results via a regression analysis using data from restricted stock placements.

Assessing Discounts or Premia via Calibration

- 9.33** In some situations, such as those described in paragraphs 9.20–.21, the fund may use a valuation approach that requires a calibration adjustment to reflect the fair value of the investment at the initial transaction. This adjustment may be considered a negotiation discount (or premium) or discount for illiquidity. At future measurement dates, the fund would need to update these adjustments to reflect the change in circumstances.

²⁴ Please note, it is appropriate to first estimate the enterprise value considering calibration to any recent transactions, which would incorporate both the benefits of control and the returns that investors may require given the illiquidity of the position. Even if calibration is not possible, the enterprise value would still be measured on this basis. No further adjustment is required since the value that may be realized given the plans of the business under existing ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the interest acquired, would already be incorporated into the cash flows and required rate of return assumptions or market multiples used in the analysis. A discount for lack of marketability would only apply to the specific interests held by the fund if market participants transacting in those interests would require an incremental rate of return to account for the lack of certain rights, such as information rights or certain non-economic rights, that investors would typically expect, or if the interests of the fund are otherwise not aligned with those of the investors who in aggregate have control of the business.

- For example, for a restricted stock investment with a one year restriction that is considered a characteristic of the investment,²⁵ the calibration adjustment (that is, the discount from the traded price) would be expected to decline as the duration of the restriction declines, ultimately reaching zero when the restriction ends. This decline would typically not be expected to be linear, but instead to decline more gradually at first. One common model estimates that discounts decline proportionately to the square root of the duration of the restriction (remaining time to liquidity), as illustrated in the following diagram. The discount might also be adjusted either up or down if the risk profile of the underlying instrument changed.



- In other cases, the negotiation adjustment might not be tied to an expected duration of a restriction or time to liquidity, but might instead reflect the characteristics of the selected valuation model and the portfolio company's capital structure. For example, in some negotiations, the portfolio company might accept a dilutive investment due to the company's need for capital, or the selected valuation model might not capture the agency impact when the senior classes of equity do not have control of the timing of exit. In these cases, it may be appropriate to apply the calibrated negotiation adjustment at future measurement dates, without a reduction for the passage of time, until there is a significant change in the facts and circumstances. A few possible circumstances where it might be appropriate to update the calibrated negotiation adjustment would include the portfolio company meeting a major milestone or valuation inflection point, or raising a new round of financing. For portfolio companies with traded securities, another indication that it might be appropriate to update the calibrated negotiation adjustment would be observing changes to the traded stock price that demonstrate that market participants in the public markets have had an opportunity to incorporate the impact of the dilutive transaction. Please see paragraphs 13.65–.76 for a discussion of dilutive investments, and paragraphs 8.42–

²⁵ Please see paragraphs 13.08–.14, for a discussion of how to assess whether a restriction is considered a characteristic of the investment.

.45 for a discussion of the adjustments that may be needed in valuing senior classes of equity in certain valuation models.

- 9.34** The task force expects further improvements relating to assessing the impacts of control and marketability as valuation practice continues to evolve. Specifically, the use of calibrated inputs, adjusted for any changes in the company and for then current market conditions, generally would incorporate the value associated with control and marketability, and therefore no further adjustments would be needed. See chapter 10, “Calibration,” for further discussion. The fund should consider the facts and circumstances for each investment and apply an appropriate method when the valuation is performed.

Chapter 10

Calibration

Introduction

- 10.01** Many of the valuation techniques used to estimate the fair value of portfolio company investments require significant unobservable inputs (Level 3 inputs). Although it is possible to use market data from similar traded securities as one indication for estimating each input, selecting specific reasonable assumptions for valuing an investment can be challenging and requires judgment in the evaluation of relevant information and techniques. In particular, the observed ranges of values for similar traded securities may be quite wide, making it necessary to further refine inputs and valuation techniques to reflect the characteristics of the specific investment. In addition, there may be important differences between the specific investment and the similar traded securities, or characteristics of the investment that are not captured by the valuation technique. For example, early stage VC-backed companies typically are not profitable but have much higher expected growth than their observable public company peers. Therefore, when using a valuation technique that requires unobservable inputs, it is important to calibrate these inputs to any observed transactions in the investment itself, providing an initial set of assumptions that are consistent with the transaction price when the transaction price represents fair value.
- 10.02** Calibration is the process of using observed transactions in the portfolio company's own instruments, especially the transaction in which the fund entered a position, to ensure that the valuation techniques that will be employed to value the portfolio company investment on subsequent measurement dates begin with assumptions that are consistent with the original observed transaction as well as any more recent observed transactions in the instruments issued by the portfolio company. On the original transaction date, when the transaction price represents fair value, using the selected valuation techniques with the calibrated inputs will result in a fair value of the portfolio company investment that equals the transaction price. At subsequent measurement dates, these input assumptions (for example, financial metrics for the company such as revenues and EBITDA, projected revenues and EBITDA, or projected cash flows; non-financial metrics for the company including specific operating key performance indicators such as number of customers, volume, efficiency measurements, and so on; and market-related inputs such as valuation multiples, cost of capital, or other factors) should then be updated to reflect changes in the investment (e.g., portfolio company performance and expectations) and changes in market conditions (e.g. valuations, cost of capital, etc., in the relevant universe of guideline public companies). For example, consider a transaction where a portfolio company investment is acquired with a transaction price that would equate to a multiple of 7x last twelve months EBITDA when the guideline public companies are trading at

multiples of 9.5x last twelve months EBITDA.¹ Calibration involves monitoring the difference between the multiple used in valuing the company in the initial transaction and the changing market multiple for the comparable universe against which the initial transaction was benchmarked.

10.03 Calibration to the transaction price is required when the initial transaction for an investment represents fair value, and is also used when there are observed transactions in the portfolio company's instruments at later dates. As indicated in FASB ASC 820-10-35-24C, "If the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps a reporting entity to determine whether an adjustment to the valuation technique is necessary (for example, there might be a characteristic of the asset or liability that is not captured by the valuation technique). After initial recognition, when measuring fair value using a valuation technique or techniques that use unobservable inputs, a reporting entity shall ensure that those valuation techniques reflect observable market data (for example, the price for a similar asset or liability) at the measurement date."

10.04 This chapter discusses the calibration framework and presents examples showing how calibration may be applied in developing assumptions that are consistent with an observed transaction and then valuing the investment in subsequent periods. In particular, the framework and examples below address the following key questions:

- When is a transaction a reliable indication of fair value? Is it possible to apply calibration techniques if a transaction is not at fair value?
- How would calibration be applied in valuing a debt or equity investment in a business using the income approach? Using the market approach?
- How long should a transaction be considered relevant for calibration? What factors should be considered in assessing the relevance of a transaction that took place prior to the measurement date?
- What are the implications of calibration when considering how market participants would value an investment given the characteristics of the investment, including the fund's level of influence over the portfolio company's operations, the illiquidity of the position, and the specific economic and other rights? What are the implications if calibration indicates a discount or a premium to the valuation of the investment relative to the value implied by the guideline public company inputs?

¹ The examples in this chapter principally illustrate the use of calibration in the context of valuations performed using the market approach. However, calibration is done based upon whatever metrics are used in actual practice. See for example case study 10, *Early Stage Software as a Service Startup with Binary Expected Outcomes*, in appendix C in which calibration is done based upon changes in perceived likelihood of scenarios occurring relative to an original transaction date.

- If there are other transactions in the portfolio company's instruments or secondary market activity in a company's stock, how would this activity be considered in the valuation?
- If other valuations are being performed for a portfolio company (e.g. for stock-based compensation or for goodwill impairment testing), how would these other valuations be considered in the valuation of the fund's investments in the portfolio company?

Valuation implications of observed transactions

10.05 Most valuation techniques described in this guide require significant unobservable inputs, and thus, performing a valuation analysis requires judgment. In the absence of relevant transaction data, selecting these inputs typically involves using observable comparable data and making adjustments to capture differences between the portfolio company and the guideline public companies or transactions. Calibration is used when a transaction price that represents fair value is available, and provides evidence supporting the unobservable inputs used in each selected valuation technique as of the transaction date. The calibrated inputs may be compared with observable comparable data, providing an initial indication of the adjustments needed to capture the specific characteristics of the investment. To estimate the fair value of the investment in subsequent periods, these calibrated inputs would then be updated to reflect changes in the company and in the markets in the period since the transaction. The valuation would also consider the assumptions used in the most recent prior period, updating those assumptions to reflect changes in the company and in the markets since that period, to ensure consistency from one measurement date to the next.

10.06 Calibration is used with various valuation techniques. To estimate fair value on subsequent measurement dates, the calibrated inputs as of the transaction date are carried forward and adjusted to reflect (then current) comparable market data and any changes in the company itself. This process results in using valuation inputs at each subsequent measurement date that reflect the adjustments implied by the transaction price, capturing differences between the company and the observable guideline public companies or transactions. The calibrated input assumptions used with each valuation technique are revisited at each measurement date to determine how they should be updated for changes in market conditions and/or for the performance of the portfolio company vis-à-vis the selected guideline public companies or transactions. A similar process is used to update assumptions used from one period to the next, to ensure that the valuation inputs are consistent from period to period even when a recent transaction is not available. This process of calibrating the valuation model to the most recent transaction and then updating the inputs from period to period remains relevant as long as there has not been a significant change in the circumstances – see paragraph 10.27 for more details.

10.07 In determining whether a transaction price (an entry price) represents fair value at initial recognition, it is important to consider the characteristics of the transaction and the unit of account. As indicated in FASB ASC 820-10-30-3A, "When determining whether fair value at initial recognition equals the transaction price, a reporting entity shall take into account factors specific to the transaction and to the asset or liability. For example, the

transaction price might not represent the fair value of an asset or a liability at initial recognition if any of the following conditions exist:

- a.* The transaction is between related parties, although the price in a related party transaction may be used as an input into a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms.
- b.* The transaction takes place under duress or the seller is forced to accept the price in the transaction. For example, that might be the case if the seller is experiencing financial difficulty.
- c.* The unit of account represented by the transaction price is different from the unit of account for the asset or liability measured at fair value. For example, that might be the case if the asset or liability measured at fair value is only one of the elements in the transaction (for example, in a business combination), the transaction includes unstated rights and privileges that are measured separately in accordance with another Topic, or the transaction price includes transaction costs.
- d.* The market in which the transaction takes place is different from the principal market (or most advantageous market). For example, those markets might be different if the reporting entity is a dealer that enters into transactions with customers in the retail market, but the principal (or most advantageous) market for the exit transaction is with other dealers in the dealer market.”

10.08 Even when the transaction price does not reflect fair value at initial recognition, it is a best practice to compare the estimated fair value with the transaction price and reconcile the differences, giving consideration to the reasons that the transaction price was not considered to be fair value and explaining the day one gain or loss.

10.09 In addition to calibrating to the transaction price at initial recognition for the investment itself, any more recent transactions in the portfolio company’s instruments would need to be considered when estimating the fair value of the fund’s investment in the company, making adjustments as needed.² For example, if the portfolio company has completed a preferred stock financing round within a relevant time period or is scheduled to complete such a financing within the next few months and, as a result, has information which impacts the current valuation, the valuation of the company’s other equity interests would need to

- consider the differences in rights and preferences between the current financing and the company’s other classes of equity;
- evaluate the changes in the value of the company between the transaction date and measurement date, if any, or the risk associated with a planned transaction if the transaction has not yet closed; and

² See paragraphs 10.31-.43, “Inferring Value From Transactions in a Portfolio Company’s Instruments.”

- calibrate the valuation technique and assumptions to the transaction price, if the transaction price is representative of the fair value of the interest purchased, or understand the reasons for the differences between the transaction price and fair value of the interest purchased, if the transaction is not arm's length.

Applying calibration in valuing a debt investment in a business

10.10 When a traded price is not available, the typical valuation technique used to estimate the fair value of debt is to use a discounted cash flow analysis, estimating the most likely or expected cash flows for the debt instrument (including any expected prepayments – for example, if prepayment is required upon a liquidity event) and then discounting them at a market yield (the yield a market participant would expect for an instrument with similar duration and risk). This valuation technique is referred to as the *yield method*. See paragraphs 6.09–.18 for additional discussion of the yield method and other commonly-used methods for estimating the fair value of a debt investment.

10.11 The market yield for debt as of the measurement date can be measured relative to the issuance date yield by observing

- the change in credit quality of the company, if any.
- the change in credit spreads for comparable debt instruments, considering the characteristics of the debt compared to the comparable traded debt, including the seniority, strength of the covenants, company performance, quality of the assets securing the debt, maturity, and any other differences that drive debt value.
- for fixed-rate debt, the change in the referenced rate matching the remaining maturity of the debt (i.e., the change in the LIBOR swap rate or treasury rate, etc.).

10.12 For example,³ suppose that Company A issued debt on June 30, 2X08, at a rate based on the London Interbank Offered Rate (LIBOR) + 300 basis points (bps) with a 5-year maturity. To estimate the fair value of this debt as of June 30, 2X11, the first step is to look at the credit quality of the company and this debt issuance. Although the portfolio company is not rated, when the debt was issued on June 30, 2X08, the spread of 300 bps corresponded to roughly a B+ rating. This implied rating and the associated spread reflect the calibrated valuation inputs as of the issuance date. In the three years since issuance, the company made significant progress on its business plan and grew revenues significantly. Based on a synthetic rating analysis considering the company's most recent financial statements,⁴ the estimated rating for the debt as of June 30, 2X11, has improved to BB+. However, during that same three years, the market risk premium for a given credit quality increased significantly. In particular, the credit spreads for debt rated B+

³ As discussed in the preamble to appendix C, "Valuation Case Studies", the examples in this guide are provided only to demonstrate concepts discussed in the preceding chapters of this guide and are not intended to establish requirements. Furthermore, the assumptions and inputs used in these examples are illustrative only and are not intended to serve as guidelines. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

⁴ See paragraphs 6.05–.18 for further discussion on valuation methodologies for estimating the fair value of debt.

increased from roughly 300 bps to 900 bps, an increase of 600 bps. For Company A's debt, this increase was offset to some extent by the improvement in credit quality. Spreads for debt rated BB+ as of June 30, 2X11, were, on average, 200 bps lower than spreads for debt rated B+. Therefore, the estimated market yield as of June 30, 2X11, for Company A debt would be LIBOR + 700 bps. Because the market yield is higher than the coupon, the fair value of debt is thus lower than the par value.

Applying calibration in valuing an equity investment in a business

Market Approach

- 10.13** In valuing an equity investment in a business, one approach is to estimate the overall enterprise value using a multiple of EBITDA, revenues or other financial metrics, and then subtract the value of **net debt**. These multiples are typically selected based on comparable public data or transaction data, and thus this valuation technique is a form of the *market approach*. See paragraphs 5.06–.55 for additional discussion of the market approach.
- 10.14** In selecting a multiple in the market approach, it is important to consider not only the range of observable multiples, but also the differences between the portfolio company and the selected guideline companies or transactions, which might indicate that a higher or lower multiple is appropriate. Calibration provides an indication of the way that market participants would value the investment as of the transaction date given the differences between the portfolio company and the selected guideline public companies or transactions. These initial assumptions can then be adjusted to take into account changes in the portfolio company and the market between the transaction date and each subsequent measurement date.
- 10.15** For example, suppose that a company is acquired for \$500 million, with \$200 million in equity and \$300 million in debt. This company has an outstanding management team and is expected to grow faster than the guideline public companies in the industry. The transaction price implies a multiple of 10X the last twelve months (LTM) EBITDA of \$50 million, and 8.33X the forward EBITDA of \$60 million. For comparison, the median multiple observed for the selected comparable public companies is 8X the LTM EBITDA, and 7X the forward EBITDA.⁵ The difference between the implied multiple paid and the median observed multiples in this example was due to the market participants' assessment that the near term financial performance for the company was likely to exceed that of its peers. In the next measurement period, it typically would not be appropriate to ignore the multiple implied by the transaction and assume that the company's value would suddenly fall to be consistent with the median of the guideline public companies. Instead, at subsequent measurement dates, the valuation would consider the portfolio company's progress and changes in observable market data (such as the EBITDA multiples of the guideline public companies) to estimate the fair value under current market conditions.

⁵ See paragraphs 5.06–.55 for further discussion on valuation methodologies for estimating the fair value of a business using the market approach.

- 10.16** Continuing this example, suppose that after six months, the company is performing as expected. LTM EBITDA has improved to \$55 million, and forward EBITDA has improved to \$64 million. Furthermore, the median multiple for the guideline public companies has improved to 9X the LTM EBITDA instead of 8X, and 7.5X forward EBITDA instead of 7X. After considering the company's recent performance and positioning, the fund concludes that market participants would still expect the company to outperform the guideline public companies, but not to the same extent. To update the valuation, the fund selects a multiple of 10.5X LTM EBITDA, indicating a value of \$577.5 million, and 8.5X forward EBITDA, or \$544 million. Averaging these indications of value, the fund concludes on an enterprise value of \$560.75 million.
- 10.17** On subsequent measurement dates, the calibrated inputs will be updated and considered in estimating the fair value of the investment. In the example, the company was acquired at 10X LTM EBITDA but the guideline public companies were trading at 8X LTM EBITDA. At subsequent measurement dates, the fund would consider the change in the observable comparable multiples and the change in company specific factors to select updated valuation multiples for the portfolio company. In the example, the median multiple for the guideline public companies increased to 9X LTM EBITDA after 6 months; therefore, on a purely mathematical basis, the calibrated initial input of 10X would be adjusted to a multiple of 11.25X. However, because some of the planned improvements had already been realized, the fund instead selected a multiple of 10.5X, taking into account the fact that market participants would no longer expect the subject company to outperform the guideline public companies to the same degree. The selected multiple reflects the fact that the company had directionally narrowed the gap in realized and expected performance relative to the guideline companies. Using calibrated inputs in this way can facilitate communications about the differences between the portfolio company and the guideline companies and how those differences are changing over time.
- 10.18** To estimate the equity value corresponding to this enterprise value, management then considered the value of debt. The fund observes although the company's credit quality is unchanged, interest rates have decreased slightly over the six month period. Since a debt prepayment would incur a penalty, this decline in yields would indicate that the value of debt increased. Using the yield method, the fund estimates a value of the debt of \$304.5 million. Subtracting the debt, this analysis implies a total equity value of \$256.25 million (a 28% increase over six months).

Income Approach

- 10.19** Another widely used approach for valuing an equity investment in a business is to estimate the overall enterprise value using the projected cash flows of the business using a discounted cash flow method, and then subtract the value of net debt. These cash flows correspond to the expected income of the business, and thus this valuation technique is a form of the *income approach*. See paragraphs 5.–.90 for additional discussion of the income approach.
- 10.20** The key inputs in the discounted cash flow method are the projected cash flows and the market participants' required rate of return, or discount rate. In selecting a discount rate

in the discounted cash flow method, it is important to consider not only the various inputs typically used to estimate the cost of capital, but also the differences between the portfolio company and the selected guideline companies used in estimating these other inputs, which might indicate that a higher or lower cost of capital is appropriate.

Calibration provides an indication of the way that market participants would value the investment as of the transaction date given the differences between the portfolio company and the selected guideline public companies. These initial assumptions can then be adjusted to take into account changes in the portfolio company and the market between the transaction date and each subsequent measurement date.

- 10.21** For example, suppose that a company is acquired for \$500 million, with \$200 million in equity and \$300 million in debt, consistent with the market approach example described in paragraphs 10.15–.18. This company has an outstanding management team and is expected to grow faster than the guideline public companies in the industry. The transaction price implies an internal rate of return (IRR) of 15.7% when taking into account the transaction price, forecast future cash flows and modeled terminal value.⁶ The difference between this implied required rate of return and the weighted-average cost of capital (WACC) estimated for the selected guideline public companies in this example was due to market participants' assessment that given the high growth, the company is riskier than the guideline public companies. In the next measurement period, it typically would not be appropriate to ignore the required rate of return implied by the transaction and assume that the weighted-average cost of capital (WACC) for the company would suddenly fall to be consistent with the median of the guideline public companies. Instead, at subsequent measurement dates, the valuation would consider the portfolio company's progress and changes in observable market data (such as changes in the equity risk premium or betas for the selected guideline public companies) to estimate the fair value under current market conditions.
- 10.22** In the discounted cash flow method, the implied transaction IRR provides strong evidence to support the company-specific risk premium (CSRP or alpha), one of the most judgmental components of the WACC or discount rate which will be used to estimate fair value at subsequent measurement dates. Continuing the example, suppose that as of the transaction date, based on market data and considering the selected guideline public companies, the following components of the WACC are determined:

⁶ See paragraphs 5.56–.90 for further discussion on valuation methodologies for estimating the fair value of a business using the income approach.

Risk-free rate of return:	3.0%
Levered Beta:	1.05
Market Risk Premium:	6.3%
Small Stock Premium:	6.0%
Company Specific Risk Premium	7.7%
Cost of Equity	23.3%
Equity Weighting	60%
Cost of Debt (post tax)	4.2%
Debt Weighting	40%
Discount Rate (WACC)	15.7%

While judgment is required to identify the inputs to a WACC calculation as summarized above, such judgments are relatively straightforward except for the CSRP. Calibration is a tool which allows a CSRP to be identified at inception and provides a starting point for evaluating subsequent changes in the CSRP. In this example, given the inputs noted above, a CSRP of 7.7% was the calibrated input necessary to result in a WACC of 15.7% matching the transaction IRR.

- 10.23** Continuing the example, suppose that after six months, the company was performing to plan. Given the history of successful execution, it was determined that the risk specific to this company had decreased. However, with the projected high growth, significant risk still remained. Therefore, a CSRP of 6% was used as an input to determine the overall discount rate at this measurement date. Fair value was determined by applying a 14.8% discount rate to the updated cash flows, resulting in an enterprise value of \$570 million. Updated inputs used to determine the discount rate were as follows:

Risk-free rate of return: (updated to reflect current market conditions)	3.2%
Levered Beta: (updated to reflect current market conditions)	1.1
Market Risk Premium: (updated to reflect current market conditions)	6.0%
Small Stock Premium: (no change in the market)	6.0%
Company Specific Risk Premium (changed from 8% due to de-risking of the investment)	6%
Cost of Equity	21.8%
Equity Weighting (no change in expected market participant assumptions as to expected capital structure)	60%
Cost of Debt (post tax) (updated to reflect current market conditions)	4.2%
Debt Weighting	40%
Discount Rate (WACC)	14.8%

- 10.24** On subsequent measurement dates, the calibrated inputs will be updated and considered in estimating the fair value of the investment. In the example, the company was acquired with a 15.7% implied internal rate of return. At subsequent measurement dates, the fund would consider the change in the observable cost of capital inputs for the guideline public companies and the change in company specific factors to update the cash flows and discount rate for the portfolio company. In the example, the inputs reflecting risk-free rate, beta, and market risk premium were all updated after 6 months to reflect guideline public companies and then current market conditions. Because some of the planned improvements had already been realized, the fund determined judgmentally that the Company Specific Risk Premium should be reduced from 8% to 6%, resulting in an overall a discount rate of 14.8%, taking into account the fact that market participants would no longer expect the subject company to have the same degree of risk. The selected discount rate reflects the fact that the company had directionally narrowed the gap in risk relative to the guideline public companies. Using calibrated inputs in this way can facilitate communications about the differences between the portfolio company and the guideline public companies and how those differences are changing over time.
- 10.25** Although this example focused on calibrating the CSRP assumption for a given set of cash flows, it is important to note that for many private equity and venture capital-backed companies, a significant portion of the total value of the business is in the terminal value. Calibration would also help to ensure that the modeled terminal value is consistent with

the original transaction and the change in the company and the markets from period to period, and that these two critical assumptions (cash flows, including the terminal value, and discount rate) are internally consistent. In most cases, there will be several significant drivers of value, and calibrating the analysis to use qualitative and quantitative inputs that are both individually supportable and collectively consistent with the transaction requires judgment.

Relevance of calibration as time passes

- 10.26** Calibration is most relevant when the measurement date is close to the transaction date. However, even if a substantial period has passed, calibration can be used to ensure the consistency of the unobservable assumptions with the transaction price as of the transaction date, and to ensure that the evolution of those assumptions over time is reasonable in light of the facts and circumstances at each measurement date. If there have been any additional orderly transactions in the portfolio company's instruments subsequent to the initial transaction, calibrating to the more recent transactions will typically be more relevant than calibrating to the original investment. In addition, calibration can be used to ensure that the movement in the valuation between measurement dates is reasonable, even in the absence of a recent transaction.
- 10.27** Calibration between a transaction date and the measurement date or between measurement dates stops being relevant when there has been such a significant change in the circumstances as to warrant a change in the valuation methodology. For example:
- If a portfolio company is about to be sold, the valuation would consider the likelihood of a successful sale at a given price, potentially supported or triangulated with the income approach or market approach.
 - If a portfolio company has entered bankruptcy or market participants would expect the debt to be restructured, the valuation for the debt would consider the expected recovery, timing of that recovery, and a market yield for distressed debt, rather than using contractual cash flows and calibrating to the market yield consistent with the investment and the change in the market yields for the company over the period since issuance.
 - If there has been a significant change in a portfolio company that makes observable comparable data more relevant than the historical transactions for the company itself; for example, when there are changes to the company's business model, stage of development, anticipated exit or principal market.

Implications of calibration when considering theoretical discounts or premia associated with control and marketability

- 10.28** Calibration resolves one of the significant challenges faced by the Private Equity and Venture Capital industry – namely, assessing the valuation impact of the level of control and illiquidity associated with an investment. For example, under the income approach, the fund would initially estimate the expected cash flows for the investment under current

ownership through a liquidity event or through the maturity of the instrument, and then calibrate to calculate the required rate of return for the investment on the initial investment date. Since the transaction price already incorporates market participants' required rate of return, no additional adjustment for control or illiquidity would apply. For subsequent measurement dates, the fund would consider the updated expected cash flows and the updated market participants' return assumptions given current market conditions. A similar thought process would be used under the market approach. See chapter 9, "Control and Marketability," for further discussion.

- 10.29** If the transaction price reflects a premium to the guideline public companies, one common historical practice has been to call this premium a "control premium" or "market participant acquisition premium" without further analysis.⁷ However, these terms may imply that the premium results solely from the existence of control, rather than focusing on the changes that market participants would expect in the business given the change in control. In updating the valuation inputs for subsequent measurement dates, it is necessary to understand the underlying rationale for the premium paid – that is, to describe the differences between the portfolio company and the guideline public companies that support this higher valuation as of the transaction date, so that it is possible to assess to what extent these differences still apply as of subsequent measurement dates. For example, it may be that a transaction price that reflects a premium to the guideline public companies when measured relative to LTM EBITDA might actually reflect a discount relative to pro-forma LTM EBITDA or to projected EBITDA, after considering the operational improvements that the fund intends to implement post-close. In this example, after these improvements are made and reflected in the actual performance of the portfolio company, this premium may no longer apply. Please see chapter 9, "Control and Marketability," for additional discussion.
- 10.30** Similarly, if the transaction price reflects a discount to the guideline public companies, one explanation might be to call this discount a "marketability discount" or "illiquidity discount" without further analysis. However, as with the term "control premium", these terms may imply that the discount results solely from the illiquidity of the position, rather than focusing on the reasons that market participants would demand a higher rate of return than the valuation model might otherwise indicate. In updating the valuation inputs for subsequent measurement dates, it is necessary to understand the underlying rationale for the low price paid – that is, to describe the differences between the portfolio company and the guideline public companies that led to this lower valuation as of the transaction date, so that it is possible to assess to what extent these differences still apply as of subsequent measurement dates. For example, it may be that a transaction price that reflects a discount to the guideline public companies when measured relative to LTM EBITDA might reflect a need to invest more capital in the business or to strengthen the management team in order to reach a normalized level of performance. In this example, after these improvements are made and reflected in the portfolio company's expected

⁷ As of the writing of this guide, the Appraisal Foundation is working on a project regarding the assessment and measurement of control premiums in valuations for financial reporting. The purpose of this project is to present views on how to approach and apply certain aspects of the valuation process appropriate for measuring the fair value of controlling interests in business enterprises for financial reporting purposes. Please refer to the Appraisal Foundation's website at www.appraisalfoundation.org for further information about this project and its status.

performance, such a discount may no longer apply. Please see chapter 9, “Control and Marketability,” for additional discussion.

Inferring Value From Transactions in a Portfolio Company’s Instruments

10.31 As discussed in paragraph 10.09, in addition to calibrating to the transaction price at initial recognition for the investment itself, any more recent transactions in the company’s instruments would need to be considered when estimating the fair value of the fund’s investment in the company, making adjustments as needed. There are many types of portfolio company transactions that may be completed, with differing degrees of relevance as an indication of the fair value of the equity interest in the enterprise. In many cases, when there is a transaction in instruments of a given portfolio company, the investor is either a party to the transaction or fully informed about the facts and circumstances surrounding the transaction. In these situations, the investor is in a position to make a determination about the implications of the transaction to the fair value of the other interests in the portfolio company. If the transaction price is deemed to be fair value at initial recognition, it may then be possible to calibrate the valuation inputs and techniques to the price from the transaction, developing an indication of the total equity value of the enterprise and the value of the other interests in the enterprise that is consistent with the transaction. In other cases, adjustments to the price observed in a transaction may be needed. Some of the more frequent types of portfolio company transactions and their relevance to the fair value of the interests in the enterprise are as follows:

- a. Simple preferred stock financing transactions
 - i. When the transaction involves new investors, and the company is not in distress, the company and existing investors, if any, have an incentive to negotiate the best possible price for the shares; however, the new investors have an incentive not to overpay. These transactions generally are relevant in estimating the fair value of the interests in the enterprise.
 - ii. When the transaction does not involve new investors, the investors are effectively related parties, and the transaction may not reflect an arm’s length value.⁸ The task force believes more weight should generally be given to transactions that involved robust negotiations (for example, if certain investors were increasing or decreasing their percentage ownership or if the round is at a different price than the previous round). It should be noted that a Board of Directors generally has the legal obligation to set the price of newly issued shares at a valuation which is in the best interests of the company at the time of the transaction. The factors considered by the

⁸ According to FASB ASC 850-10-50-5, [t]ransactions involving related parties cannot be presumed to be carried out on an arm’s-length basis, as the requisite conditions of competitive, free-market dealings may not exist.” Therefore, when a transaction involves related parties, the transaction may still reflect fair value, but cannot be presumed to be at fair value.

Board may provide some insight in considering whether the pricing of the round was at fair value.

- iii. When the company is in distress, the price for a new round may incorporate a steep discount in situations in which the investor is able to capitalize on the company's need for capital. Raising this capital may improve the equity value for the company. In these situations, it may be appropriate to estimate the value of the equity interests in the company, considering the company as a going-concern post-transaction rather than basing the valuation on the situation for the company immediately prior to the transaction.

b. Strategic preferred stock financing transactions

- i. When the transaction involves a strategic relationship in which the investor receives certain benefits over and above the value that is expected to be realized from the stock itself, the transaction may reflect a higher price for the stock than a market participant who did not receive these benefits would be willing to pay. For example, pharmaceutical companies may invest in biotech companies at relatively early stages of development because there is value in being the first to know about the companies' progress on various drug candidates. Thus, the price the pharmaceutical company pays may reflect these additional benefits. In these cases, one approach would be to perform a valuation of the equity using other methods but then also compare the model values to the transaction price to assess whether the implied value is reasonable in light of the strategic benefits the investor may realize.
- ii. When an investor invests in the company and also negotiates a formal license to use the company's products in the investor's business, it may be necessary to allocate value between the equity investment and license.⁹ In these cases, one approach would be to perform a valuation for both the equity and license agreement using other methods and then compare the combined values to the total investment.
- iii. When a strategic relationship is formed in which any additional elements of the transaction equally benefit the company and investors, it may be an indication that the transaction price is at or near fair value. In these cases, it may be appropriate to calibrate to the transaction without additional adjustments.

⁹ Note that the focus in this discussion is to understand the implications of multielement transactions on the value of the instruments sold in the observed transaction and the corresponding value of the other interests in the enterprise. In some cases, it is also necessary to recognize the elements of multielement transactions separately in the entity's or investor's financial statements. The guidance regarding the accounting and valuation treatment for such transactions is beyond the scope of this guide.

c. Tranched preferred financing transactions

- i. A *tranched preferred investment* is a transaction in which the investors agree to buy a certain number of shares at the initial closing date, as well as additional shares at one or more future dates, at a pre-negotiated price. Typically, both tranches are for the same class of preferred stock and have the same price per share, but the investment in the subsequent tranches may be contingent on the company meeting certain milestones. In most cases, both the company and investors have committed to complete the subsequent tranches whenever the milestones are met, regardless of whether the value of the company has changed for other reasons (that is, the tranched structure creates a contingent forward contract rather than an option under the control of one of the parties). Because in most cases, the preferred stock would be expected to increase in value if the milestones are met, the initial investment price typically reflects a premium to the value on the initial investment date (including both the preferred stock itself and the contingent forward), and the later investment is at a discount to the value. In other cases, the criteria for receiving the next tranche may be unrelated to the company's progress, but the preferred stock value may still increase due to the overall progress of the company over the time frame. Therefore, before relying on a tranched preferred transaction to imply the value of the other equity interests in the enterprise, the task force believes the transaction price would need to be allocated among the initial investment and forward contract. In these cases, to estimate the value of the other preferred and common stock in the enterprise as of the initial transaction date, one approach would be to allocate the transaction price between the stock and forward contract to estimate the value of the tranched preferred stock and then solve for the equity value that is consistent with that preferred stock value. For subsequent investment dates, the valuation would then consider the future value of the preferred stock implied by the model used to value the forward contract, making adjustments for any unexpected changes in the company's performance or the market over the intervening period.

d. Use of shares in an acquisition or a joint venture

- i. When portfolio companies use their own shares in the acquisition of other companies, the transaction documents may specify a value for these shares. In many cases, however, the value specified in the documents is the price paid in the latest preferred financing round, but the shares issued are common stock. This same situation occurs in joint ventures in which one party may contribute cash, and the other may contribute intellectual property, and the interests issued in exchange for cash are senior to the other interests. It is important to carefully consider the rights and preferences of each class of equity when estimating the aggregate fair value implied by the transaction. In these cases, one approach would be to perform a specific valuation of the interests issued or the noncash

consideration received (i.e., the value of the intellectual property contributed to the joint venture or the value of the company purchased in the acquisition). It would not be reasonable to rely solely on the nominal price specified in the documents.

e. Private investment in public equities (PIPEs)

- i. In a PIPE transaction, investors purchase an interest in a public company. These investments may be in the form of a direct investment in the common stock, but often instead take the form of convertible debt or preferred stock or warrants or any combination of such instruments. In addition, the interests may have additional rights or protections, including rights such as down-round protection, high interest and/or the return of multiples of investment upon redemption or change of control, the right to immediate redemption if the shareholders do not vote to authorize adequate shares for conversion, and in some cases, enhanced information rights, influence over the strategic direction of the company, or a board seat. The interests also may not currently be registered or may have other restrictions. Since the public stock price is an observable input, it should be considered carefully in any valuation; however, the valuation of the PIPE should also consider the differences between the specific instruments held and the common stock, given the unit of account and the market participants in the principal market for the interests.
- ii. If the public market can serve as an exit market for the interests (for example, via the conversion of a convertible instrument or the exercise of warrants on the measurement date), then it may be appropriate to consider the value that could be realized in this exit market as an input into the valuation analysis. The concluded value for the investment would place more weight on the public market pricing to the extent that the public market is a viable exit market for the interests on the measurement date, and less weight on the public market pricing to the extent that the fund is unable to access this market (e.g. due to security-related trading restrictions or due to differences in the unit of account).
- iii. If the public market can provide an alternative entry point for investing in the portfolio company, then it may be appropriate to consider the observed price as an indication of the value that market participants would pay for the common stock. Although there may be incremental value for the fund's investments attributable to specific economic rights and/or specific features, the incremental value would be limited to the extent that market participants would prefer the interests held by the fund over making a direct investment in the traded common stock. Therefore, if the fund's valuation is significantly higher than the value of the interests implied by the traded stock price, the fund should document the reasons that market participants would not instead take advantage of the opportunity to invest

in the traded stock at a lower price rather than purchasing the fund's interest at a higher price.

- iv. If the valuation places less than full weight on the observable common stock price, it is a best practice to also include a reconciliation between the observable common stock price and the common stock value used as an input in the valuation of the investment in the supporting documentation. In particular, in some cases, the valuation of the fund's position may incorporate information about current quarterly results that would be known to market participants in a private market transaction, but would not be known to the public markets as of the measurement date. If this information is later disclosed to the public markets in the company's earnings release and financial statements, it may also be appropriate to observe the change in the observable stock price that results from the release of this information, and ensure that the shift is directionally consistent with the fund's estimates. Systematic differences may be an indication that the valuation is not consistent with market participant assumptions regarding the value of the portfolio company. Differences may also be expected to be observed when the private equity or venture capital investors hold preferred stock or convertible instruments that represent the majority of the company's equity value; in this situation, the traded stock price might be more reflective of option value and may not provide reliable information from which a value for the senior interests should be derived.
- v. Paragraphs 10.32–.43 discuss transactions in a portfolio company's instruments, including transactions in related securities in an active market and secondary market transactions, in more detail.

f. Direct common stock transactions

- i. In some cases, an investor in a private company¹⁰ may purchase common stock directly from common stockholders in the company, either as a stand-alone transaction or in connection with a preferred stock transaction. For example, in some transactions of this type, the company or its current investors may be unwilling to issue as much stock as a new investor would like. Thus, the new investor may approach the holders of the common stock to see if they would be willing to sell. Frequently, these transactions involve the purchase of the common stock at the same price as the preferred stock. These situations require careful analysis of the negotiation dynamics to understand the investor motivations and the implications for the fair value of the common stock.

(1) If the common stock is only a portion of the investment, the transaction may be considered in aggregate to imply a value for the

¹⁰ See chapter 13, "Special Topics," for a discussion of investments in public company securities.

preferred stock and a value for the common stock consistent with the overall transaction. In this situation, it is important to carefully consider the rights and preferences of each class of equity when estimating fair value of each class of equity consistent with the aggregate fair value implied by the transaction.

- (2) If the investor has strategic reasons for the investment, the investor may be willing to pay more than fair value for the common stock in order to meet some other goal, even if the specific investment is not expected to provide the investor's target return. In this situation, if the investor acquires not only the common stock but an additional economic benefit, the value of the additional benefit would need to be considered in assessing the implications of the transaction to the value of the portfolio company's instruments.
- (3) If the company has strategic reasons for accepting the investment, the transaction may imply that the preferred stock is worth more than what was paid for it. For example, if the company will benefit from having a "marquis" investor involved when approaching an IPO, they may accept a deal that provides that investor with superior terms (such as a guaranteed 2x return over the short expected time through the IPO), even if the company would have been able to realize a better price or terms in an alternative financing. In this situation, the task force believes other indications of value would generally need to be considered when assessing the value of the interests.¹¹
- (4) Other factors to consider when evaluating these transactions are whether the transaction is a one-time event or repeated and whether it is open to only a few common stockholders (for example, the founders or senior executives only) or is a broader tender offer. If the transaction is part of a repeatable exit market for the employees or other shareholders who are not compelled to sell, it generally provides a strong indication of fair value.

Transactions in which an investor purchases common stock at a price that is near or equal to the preferred stock price may indicate that market participants think a near term exit or an initial public offering (IPO) (i.e., a liquidity event) is likely. Therefore, in valuing the equity interests in these types of situations, it may be appropriate to consider a hybrid method with some significant probability assigned to a liquidity event scenario in which

¹¹ Note that the focus of this discussion is on calibrating to the transaction when inferring the value of the company and the other interests in the company. In estimating the fair value of the new investment at the transaction date, the new "marquis" investor would consider whether the transaction price should be considered to be fair value at initial recognition pursuant to the criteria in FASB ASC 820-10-30-3A. If so, it would be appropriate to include a negotiation discount or discount for illiquidity for the new investment when calibrating to the transaction itself.

the preferred stock converts and the preferred and common stock have the same value.

- ii. Other common stock transactions may be facilitated by secondary exchanges. Secondary exchanges provide a venue where nonpublic debt and equity instruments may be traded, either directly on the exchange or by use of the exchange as an intermediary.¹² Since 2003, the number of exchanges, number of funds that participate in these exchanges, and volume of shares transacting in these exchanges has grown significantly. Given the characteristics of these exchanges, when valuing the common stock, it may be appropriate to consider a weighting between value indicated by the observable secondary market price and the value indicated by the fund's direct valuation models, considering the factors discussed in paragraph 10.40.
- iii. Paragraphs 10.32–.43 discuss transactions in the portfolio company's instruments, including transactions in related securities in an active market and secondary market transactions, in more detail.

10.32 When estimating the fair value of the interests in an enterprise, it is important to consider transactions in the portfolio company's instruments, including transactions in an active market and secondary market transactions, and to assess the degree to which these transactions reflect the fair value of the related interests in the enterprise. The definition of *fair value* in FASB ASC 820, *Fair Value Measurement*, refers to "an orderly transaction between market participants at the measurement date." This definition includes the concept of a transaction between informed, willing parties.

10.33 FASB ASC 820-10-35-36 states that "[v]aluation techniques used to measure fair value shall maximize the use of relevant observable inputs and minimize the use of unobservable inputs." Therefore, to the extent that transactions in an active market and secondary market transactions meet the other characteristics required to be relevant indications of fair value, the task force believes it may be appropriate to prioritize these transactions over model-based estimates of fair value.

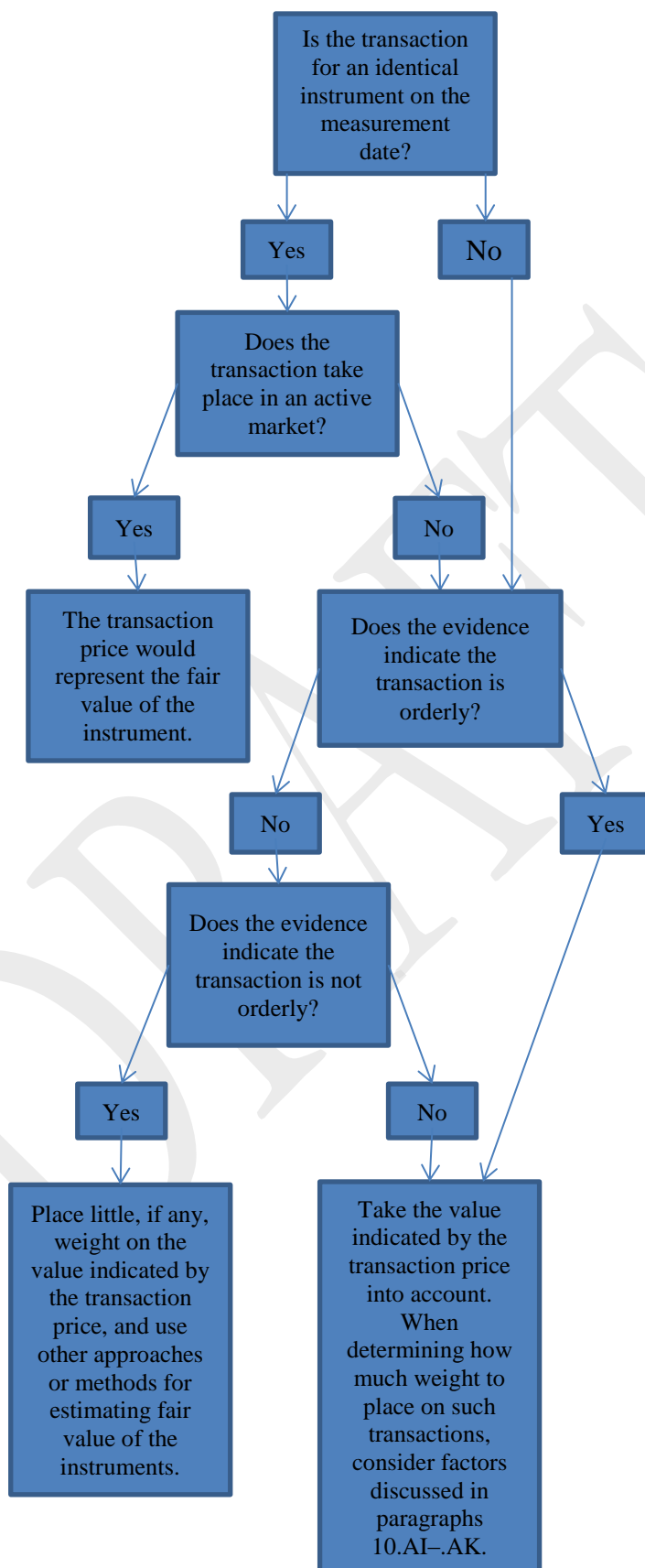
10.34 When evaluating transactions in an active market and secondary market transactions and their relevance for estimating fair value of the equity interests in an enterprise, the task force recommends considering the following framework, which is consistent with guidance in paragraphs 44 and 54J of FASB ASC 820-10-35:

¹² Such traded securities include private company stock; restricted securities; auction-rate securities; structured products, such as residential mortgage-backed securities, collateralized mortgage bonds, and collateralized debt obligations; limited partnership interests; and bankruptcy claims. Secondary exchanges of this type manage trillions of dollars of alternative investments, including private company stock. Many of these exchanges are registered broker-dealers and, as of the date of publication of this guide, included, but were not limited to, such names as SecondMarket, SharesPost, GSTRUE, OPUS-5, and 144a-Plus. They have an international reach, but most transactions are focused in the United States. Although a number of different securities are traded on secondary exchanges, this chapter is focused on transactions in the securities of privately held companies on such exchanges.

If there is a transaction for an identical instrument or a related instrument in the same portfolio company on the measurement date and

- if the transaction is for an identical instrument and takes place in an active market, then the task force believes the transaction price would represent the fair value of the instrument.
- if the transaction is for an identical instrument but not in an active market or for a related instrument and the evidence indicates that the transaction is orderly, then the task force believes that transaction price should be taken into account. The amount of weight placed on that transaction price when compared with other indications of fair value will depend on the facts and circumstances, including the volume of the transaction.
- if the evidence indicates that the transaction is not orderly, then the task force believes little, if any, weight should be placed on that transaction price.
- if the investor does not have sufficient information to conclude whether a transaction is orderly, then the task force believes it should take into account the transaction price (that is, give it some weight in the analysis) but also augment the transaction price with other valuation techniques.

The following flowchart shows these steps.



10.35 FASB ASC 820 defines an *orderly transaction* as "a transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (for example, a forced liquidation or distress sale)." In portfolio company financing transactions, the usual and customary marketing activities generally include time for the investors to perform due diligence and to discuss the company's plans with management or the board of directors, or both.

10.36 FASB ASC 820-10-35-54J states

[a] reporting entity shall consider all of the following when measuring fair value or estimating market risk premiums:

- a. If the evidence indicates the transaction is not orderly, a reporting entity shall place little, if any, weight (compared with other indications of fair value) on that transaction price.
- b. If the evidence indicates that a transaction is orderly, a reporting entity shall take into account that transaction price. The amount of weight placed on that transaction price when compared with other indications of fair value will depend on the facts and circumstances, such as the following:
 1. The volume of the transaction
 2. The comparability of the transaction to the asset or liability being measured
 3. The proximity of the transaction to the measurement date.
- c. If a reporting entity does not have sufficient information to conclude whether a transaction is orderly, it shall take into account the transaction price. However, that transaction price may not represent fair value (that is, the transaction price is not necessarily the sole or primary basis for measuring fair value or estimating market risk premiums). When a reporting entity does not have sufficient information to conclude whether particular transactions are orderly, the reporting entity shall place less weight on those transactions when compared with other transactions that are known to be orderly.

A reporting entity need not undertake exhaustive efforts to determine whether a transaction is orderly, but it shall not ignore information that is reasonably available. When a reporting entity is a party to a transaction, it is presumed to have sufficient information to conclude whether the transaction is orderly.

10.37 When assessing the relevance of transactions in related instruments in the portfolio company and secondary market transactions to the fair value of the interests in the enterprise based on the guidance in FASB ASC 820, an important consideration is

whether the observed transaction is orderly or not orderly. FASB ASC 820-10-35-54I states:

Circumstances that may indicate that a transaction is not orderly include the following:

- a. There was not adequate exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities under current market conditions.
- b. There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.
- c. The seller is in or near bankruptcy or receivership (that is, the seller is distressed).
- d. The seller was required to sell to meet regulatory or legal requirements (that is, the seller was forced).
- e. The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.

A reporting entity shall evaluate the circumstances to determine whether, on the weight of the evidence available, the transaction is orderly.

Although the preceding guidance is focused on the seller's perspective, in which the transaction price may be below fair value, the task force believes that the assessment of whether a transaction is orderly or not orderly may also consider the perspective of the buyer, in which the transaction price may be above fair value.

10.38 For secondary market transactions, because the investor may have little information about the nature of the transactions, it may be difficult to conclude whether these transactions are orderly. Therefore, as noted in FASB ASC 820-10-35-54J(c), these transactions may not necessarily be the sole or primary basis for measuring fair value. However, if the investor is unable to conclude that the transaction is not orderly, the task force believes the transaction price would need to be given some weight in measuring fair value, but that it also would be appropriate to augment the transaction price with other valuation techniques.

10.39 *Weighting – Transaction for the portfolio company's securities in an active market.* In situations in which the fund has an interest in private instruments (such as convertible debt or preferred stock or warrants) in a portfolio company that also has securities that are traded in an active market, determining how much weight to place on the value implied by the transactions for the portfolio company's securities in an active market requires significant judgment and is dependent on specific facts and circumstances. When making that evaluation, the task force believes it may be helpful to consider the factors

listed in this paragraph. The following list is not meant to be all-inclusive; there may be other factors to consider, and no one factor is individually determinative:

- a. Timing of the most recent transaction in the fund's interest.* In valuing the fund's interest, the task force believes one would need to begin by calibrating to the most recent transaction in this interest, as long as this transaction represents fair value at initial recognition. Calibration provides a basis for assessing the price that market participants transacting in the fund's interest would pay, consistent with the unit of account. Calibrating to the value indicated by the observable public stock price may require that the model incorporate a negotiation discount or discount for illiquidity, reflecting market participants' required rate of return; calibrating to the fund's direct valuation models may also require a similar type of adjustment, albeit of different magnitude. For subsequent measurement dates, the fund would update the calibration inputs considering any changes in the company and the markets over the intervening period. The fund would consider the time that has elapsed between the transaction date and measurement date as one factor in assessing the relative reliability of the calibrated model using the observable public stock price and the calibrated model using the fund's direct valuation models.
- b. Differences in the information available to market participants in the active market and the market participants in the principal market for the fund's interest.* Even though the public stock markets require that companies provide certain financial information (for example, audited financial statements), there may be situations where reasonable and customary due diligence would provide better information to market participants transacting in the fund's interest. For example, these market participants would typically have access to management, and might have better information about product plans, customer relationships, operations, potential acquisitions, etc. To the extent that the market participants transacting in the observable public stock do not have the same information about the company, these transactions may be less relevant indicators of fair value of the related interests in the enterprise.
- c. Degree of dilution.* In theory, the observable public stock price should incorporate any dilution impact attributable to a transaction in convertible instruments and/or warrants. However, in many cases, the observable public stock price for companies that require this type of financing might be more reflective of option value, where the market participants transacting in the public stock know that the company will not have value unless the company was successful at raising capital. Typically, in such cases, the observable public stock price will increase upon announcement of the financing, and then may take months or years to adjust to incorporate the dilution impact of the new instruments. To the extent that the observable public stock price implies a value for the company that is unreasonably high, it may be appropriate to place more weight on the direct valuation.

- d. *Ability to exit via the public market.* If the public market can serve as an exit market for the interest (for example, via the conversion of convertible instruments or the exercise of warrants on the measurement date), then it would be possible for the fund to realize the public stock value for the interest if it were advantageous to do so. The concluded value for the fund's interest may place more weight on the public market pricing to the extent that the public market is a viable exit market for the interest on the measurement date, and less weight on the public market pricing to the extent that the fund is unable to access this market (e.g. due to security-related trading restrictions or due to differences in the unit of account).

10.40 *Weighting – Secondary Market Transactions.* Determining how much weight to place on secondary market transactions requires significant judgment and is dependent on specific facts and circumstances. When making that evaluation, the task force believes it may be helpful to consider the factors listed in this paragraph. The following list is not meant to be all-inclusive; there may be other factors to consider, and no one factor is individually determinative:

- a. *Timing of transaction data.* In evaluating the relevance of secondary market transactions, the task force believes one would need to consider the time that has elapsed between the transaction date and measurement date. The point at which a transaction becomes "stale" will vary depending on specific facts and circumstances. According to FASB ASC 820-10-35-54D, "Adjustments also may be necessary in other circumstances (for example, when a price for a similar asset requires significant adjustment to make it comparable to the asset being measured or when the price is stale)." In particular, in many secondary market transactions, there is a delay of 30–60 days between the date at which the price is agreed between the parties and the date at which the transaction closes, during which the company or existing investors have the right to exercise their right of first refusal. Thus, it may be important to consider whether the transaction is binding as of the agreement date and whether prices have changed over the period between the agreement date and transaction close.
- b. *Sufficient sophisticated bidders.* In most secondary exchanges, the investors must typically be accredited, which requires a certain minimum income or level of assets and a statement that the investor is willing to accept the risks of buying securities through these exchanges. Thus, the pool of buyers may be limited. The level of investor interest and activity will vary depending on the company and would need to be assessed for each situation.
- c. *Sufficient information to value the investment and make an investment decision.* Companies traded on secondary exchanges are not subject to the financial reporting requirements faced by public companies, although certain secondary exchanges require that companies provide certain financial information (for example, audited financial statements). Due to the generally limited information available, investors may not be sufficiently informed to reasonably predict a company's potential. To the extent that the investors do not have the financial

information about the company, these transactions may be less relevant indicators of fair value of the interests in the enterprise.

- d. *Pattern of trades.* In many cases, companies will establish a formal relationship with a secondary exchange. The first step in the process is a company partnering with a secondary intermediary. Next, the company decides which information is to be released, if any, and may provide an approved list of buyers. The share offering is then marketed to specified buyers, with approved information provided to these company-approved buyers. Once the information has been reviewed by the buyer(s), an offer, or offers, are made, and the trades are settled. In other cases, the company itself may provide no information and even take steps to block sales in the secondary exchange. If the transactions involve only one or two investors who want to acquire a certain percentage ownership interest, then the transactions may not reflect a repeatable price. If the transactions involve many investors and many sellers, and the pattern of bidding reflects a reasonably low disparity between the lowest and highest bids among the winning bidders, then the transactions may provide a better indication of fair value. It should be noted that even for public companies, the number of shares traded in any given month will typically represent only an insignificant percentage of the total outstanding number of shares. Therefore, it is important to consider whether there is a sufficient number of buyers and sellers and the repeatability of the transactions.
 - e. *Other biases or costs of holding, hedging, or trading the securities.* In addition to the preceding factors, it is important to consider whether any other biases or perceptions of additional costs would apply in the secondary market transactions.
- 10.41** As indicated in paragraph .31 of Statement on Standards for Valuation Services No. 1, *Valuation of a Business, Business Ownership Interest, Security or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), in developing the valuation, all three valuation approaches (market, income, and asset) should be considered. If more than one valuation approach or method is used, as is often the case, the fund would need to assess the relevance and quality of the data used in each, as well as the various value indications. While different valuation approaches would be expected to result in different indications of value, it is a best practice to triangulate between these approaches to understand the causes of any differences and ensure that the assumptions used in the various approaches are internally consistent. Because weighting will depend upon the relevant strengths and confidence in one approach versus another, the fund would need to consider the merits and weaknesses of the other valuation approaches or methods used when determining how much weight to place on transactions for related securities in an active market and secondary market transactions.
- 10.42** If the transactions are not considered to represent fair value or are given only limited weight in estimating fair value, it is a best practice for the investor to compare the estimated fair value of the instruments to the transaction prices, explaining the differences to the extent the available information allows.

10.43 Given the factors discussed in the preceding paragraphs, the task force believes that although transactions in a portfolio company's instruments, including transactions for related securities in an active market and secondary market transactions, are observable, they would need to be assessed for relevance to determine how to weight them in estimating the fair value of the interests in the enterprise. In certain situations, it may be appropriate to give these transactions substantial weight, but in others, they may be given limited weight. In particular, even if the investor concludes that these transactions do not provide the sole measure of the fair value of the interests in the enterprise, the task force believes such transactions would need to be carefully considered in estimating the fair value of these interests.

Consistency with other valuations performed for the portfolio company

10.44 The concept of calibration may also be used when considering the similarities and differences between valuations performed for different purposes. In many cases, in addition to the valuations that the fund performs for each investment for periodic financial reporting purposes, the portfolio company itself performs valuations for supporting the issuance of stock-based compensation, for testing goodwill for impairment, for valuing other financial instruments, or for tax purposes. In these situations, to the extent the fund has access to the information, it is a best practice for the investors to understand the valuation framework and assumptions used in the valuations performed for the portfolio company and reconcile, as appropriate, with assumptions used in valuing the investments for the fund.

10.45 Even when a portfolio company has performed a valuation for the company or the instruments issued by the company at a relevant measurement date, the reference to the portfolio company's valuation does not alleviate the need for the fund to make its own assessment of the value of its interests. Nevertheless, to the extent that underlying assumptions that might impact common elements of the valuation (e.g., the assessment of the enterprise value or the methodology used to derive it), benchmarking based upon these other available valuations may be helpful. In performing this analysis of the differences between the valuations, key considerations include that:

- There are likely to be differences in the valuations performed for the portfolio company versus the valuations needed for the fund's unit of account. In particular, the instruments held by the fund may have significant incremental rights, including seniority or control, not considered in the portfolio company's valuation. If the portfolio company has performed a goodwill impairment analysis, the portfolio company's valuation may be for a division, rather than the whole company. If the portfolio company has performed a tax valuation, the basis of value may differ from the required basis of valuation for financial reporting purposes – for example, tax rules may allow discounts which would be inconsistent with fair value for financial reporting purposes.
- The measurement dates used in the portfolio company valuations may not exactly coincide with the measurement dates needed for the fund's valuations. In addition, many private portfolio companies take several months longer to prepare

their financial statements than the fund's reporting deadlines for reporting to its limited partners. Thus, even when the portfolio company's valuation coincides with the measurement date, its valuation may not be available until after the fund's reporting deadline. Alternatively, a valuation performed by the portfolio company for which information is available may have been for a much earlier measurement date, and the facts and assumptions may have changed in the interim.

- There may be differences in the information available to the fund and to the portfolio company, leading to differences in the information market participants would have in assessing the investment and thus, differences in the corresponding valuations. For example, the fund's management may have access to confidential information not available to the portfolio company at the time its valuation was prepared (e.g., proposed near term strategic exit) that impacts its assumptions in maximizing long term shareholder value. These assumptions may be inconsistent with assumptions made by portfolio company management planning to operate the business as an independent entity.
- The fund investors may use different assumptions regarding the weighted average cost of capital, including higher costs attributable to the equity capital used by private equity or venture capital funds (a market participant for equity at the company's current stage), whereas the portfolio company may include a longer term horizon (e.g., post IPO) where it might have access to lower costs of capital.
- The fund may include its own desire or willingness to provide the company with further resources over time; whereas, the fund might be unwilling to provide that information to the portfolio company management lest they be less prudent in managing current resources.
- In circumstances where the portfolio company has engaged a third party valuation specialist to perform or review the valuation, the report issued by the valuation specialist is often addressed solely to the portfolio company and expressly states that it cannot be relied upon by third parties or used for any other purpose. Furthermore, the valuation specialist may not be privy to the fund's plans or strategy for the portfolio company and these may not be captured in the valuation. Therefore, even if the fund has access to the valuation, it would not be appropriate for the fund to rely exclusively on this valuation for the fund's purposes.

10.46 There are numerous challenges associated with making judgments about the valuation of fund holdings in a regulatory environment that sometimes presumes that market participants would have perfect information and where the fund's conclusions are evaluated with the benefit of hindsight.

- Often, individuals who are part of the valuation process for the fund may serve as Board members of the portfolio company. In such situations, portfolio company Board Members who represent the fund and are involved with fund valuation conclusions may also have specific knowledge of the portfolio company's

approach and assumptions (e.g. through membership on the portfolio company's audit committee or compensation committee). In these situations, subject to the duties and responsibilities the Board Member owes to the portfolio company in light of his or her position, it is particularly important for the fund to be able to explain any differences in the valuation framework and assumptions used for the various purposes.

- When auditing financial statements, auditors are required to consider management assumptions and estimates. Since the natural biases at the fund level may be different from those for the portfolio company, reconciling between the valuations performed for both purposes helps to combat these biases. Therefore, auditors may seek to gain access to other perspectives contained in valuation work done at the portfolio level.
- In reviewing the fund's fair value estimates for a portfolio company, regulatory agencies or tax authorities (who may be reviewing the work of the fund manager or the work of its auditor) may request access to valuations performed at the portfolio company level for comparison. In addition, although the definitions of fair value or fair market value used for various purposes have some differences, the regulators may approach these matters with the presumption that the underlying assumptions are expected to be fairly consistent and the valuation conclusion would generally be expected to represent the price at which the specified interest in the Company would transact between market participants.

10.47 Those performing valuations should be mindful that they are responsible for making a reasonable estimation of the fair value as of the measurement date based upon the available information at the time. There may be valid reasons for differences in the facts and assumptions that may lead to different results for different reporting entities. To the extent that information regarding other valuations is available at the time the fund makes its determination of fair value, it is advisable to perform a reconciliation to the portfolio company's valuation.

Chapter 11

Backtesting

Introduction

- 11.01** When used in this guide, *backtesting* (also called a “retrospective review”) refers to the process of using the observed value of the fund’s interests as implied by the ultimate sale, liquidity event (for example, an IPO) or other significant change in facts with respect to those interests, related instruments, or the enterprise, to assess the fair value estimated for an investment in a position in the enterprise as of an earlier measurement date (or measurement dates). The purpose of backtesting is to assess and improve the investment company’s process for developing fair value measurements with benefit of hindsight. Importantly, even a large difference does not necessarily mean the earlier estimate lacked sufficient support or rigor. Between the measurement date and the observed transaction, there may have been meaningful and justifiable substantive differences in the company’s position, the outlook for its business, or the external market, among other factors.
- 11.02** Backtesting should not be confused with assessing subsequent events for accounting and disclosure purposes under the requirements of FASB ASC 855, *Subsequent Events*, as the purpose of backtesting is different. While there are common elements to analysis associated with backtesting and subsequent events, the objective of backtesting is process improvement pertaining to the valuation estimate process and is fundamentally different from the accounting or disclosure objectives of FASB ASC 855. The level of granularity at which the analyses are performed is also different in light of the different objectives of the analyses. Paragraphs 11.16–20 further discuss the relationship between backtesting and evaluating subsequent events under FASB ASC 855. The focus in this guide with respect to backtesting is to encourage improvements in the fund’s valuation process, rather than to evaluate whether factors not considered in a valuation or other developments would be considered errors or require reporting in accordance with the FASB ASC 855 subsequent events guidance. Specifically, the focus in this guide with respect to backtesting is on identifying what was known or knowable as of the measurement date and considering how the fund could improve its processes for collecting and evaluating such information in light of subsequent transactions that may highlight those market participant assumptions.
- 11.03** For clarity, the process of backtesting described in this chapter considers the following relevant dates:
- Measurement date – The valuation date for financial reporting purposes (also known as the *balance sheet date*)
 - Analysis date – The date the valuation analysis was actually performed
 - Issuance date – The date that the financial statements were issued or became available to be issued, which may be before or after the event date

- Event date – The date the actual realization, liquidity event, or other significant change in facts occurred
- Backtesting date – The date the backtesting was performed

11.04 The PE/VC Task Force (task force) believes that it is a best practice for investment companies whose financial statements are based upon fair value estimates to perform periodic (for example, quarterly) backtesting on investments which have had subsequent realizations, liquidity or other significant events, comparing the implied value from the transaction to the fair value estimate from the most recent analysis as well as valuations from other prior periods that may be deemed relevant. Backtesting provides an ongoing feedback loop that could enhance the rigor of the fund's valuation processes for periodic fair value estimates and may contribute to the fund's system of internal control over financial reporting. In addition, in situations where a subsequent event occurs between the measurement date and the issuance date, backtesting is not only a best practice but in certain circumstances may be used for evaluating the subsequent event under the guidance in FASB ASC 855. Also, as discussed further in this chapter, backtesting may provide important evidence or support by which a limited partner could evaluate net asset value (NAV) when using it as a practical expedient to measure the fair value of their interests in a given fund.

11.05 Another critical aspect of backtesting includes analyzing and documenting the likely substantive factors that may have contributed to the change in the valuation from the measurement date to the event date. The focus of this analysis should be to consider the drivers of change in value, both direct and indirect, given what was known or knowable as of the measurement date considering the information that could be obtained through usual and customary due diligence efforts. Investment companies should make a reasonable effort to understand the substantive differences and the reasons for those differences. As the purpose of backtesting is to enhance the fund's processes, backtesting will generally focus on qualitative factors, rather than considering quantitative factors at the level of granularity used in estimating fair value. The extent of the backtesting analysis and documentation will depend on the nature of the fund's internal controls over valuation.

11.06 Naturally, backtesting has its limitations. In many cases, it is not possible to anticipate the exact price at which an actual transaction would close until the liquidity event, because it is seldom evident to the investment company or to other market participants how a particular buyer perceives value. For example, in the context of a sale of a business to a strategic buyer, unless the buyer issues a public statement to this effect (for example, because the buyer is a public company and the acquisition of the target is material to the buyer), it would be difficult to know what assumptions the buyer has made about cost savings or revenue growth through synergies, and the time period over which they may be realized. These differences, which may not always be fully transparent even with hindsight, may lead to a meaningful change between the valuation as of the measurement date and the value realized at the event date.

11.07 Although not explicitly required by FASB ASC 820, the process of backtesting is consistent with the requirement in FASB ASC 820 to evaluate and, if appropriate, modify

or supplement, valuation methodologies when certain events take place. In particular, FASB ASC 820-10-35-25 states

Valuation techniques used to measure fair value shall be applied consistently. However, a change in a valuation technique or its application (for example, a change in its weighting when multiple valuation techniques are used or a change in an adjustment applied to a valuation technique) is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, any of the following events take place:

- a. New markets develop.
- b. New information becomes available.
- c. Information previously used is no longer available.
- d. Valuation techniques improve.
- e. Market conditions change.

In light of this requirement in FASB ASC 820, the task force believes that backtesting is an important component of an investment company's valuation process. By comparing results from actual transactions to prior estimates in a consistent and structured manner, investment companies can evaluate and, if necessary, modify or improve, their valuation methodologies and overall valuation process.

11.08 In addition, backtesting is increasingly becoming part of the control environment that regulators, policy makers, investors and other stakeholders expect over an investment company's valuation procedures. For example, the AICPA TIS Section 2220.20, *Determining Whether NAV Is Calculated Consistent With FASB ASC 946, Financial Services—Investment Companies*, which provides guidance on using NAV practical expedient to measure the fair value of certain investments, has explicit reference to backtesting. This TIS enumerates backtesting as one of the means by which a reporting entity could evaluate whether the NAV has been calculated in a manner consistent with the measurement principles of FASB ASC 946. In particular, the TIS states that

A reporting entity's management is responsible for the valuation assertions in its financial statements. Determining that reported NAV is calculated consistently with FASB ASC 946, including measurement of all or substantially all of the underlying investments of the investee in accordance with FASB ASC 820, requires a reporting entity to independently evaluate the fair value measurement process utilized by the investee fund manager to calculate the NAV. Such an evaluation is a matter of professional judgment and includes determining that the investee fund manager has an effective process and related internal controls in place to estimate the fair value of its investments that are included in the calculation of NAV...

...Only after considering all relevant factors can the reporting entity reach a conclusion about whether the reported NAV is calculated in a manner consistent with the measurement principles of FASB ASC 946.

The TIS also provides examples of factors that the reporting entity might consider when evaluating the valuation received from the investee fund manager, including "comparison

of historical realizations to last reported fair value,” which, in essence, is backtesting, as discussed in this chapter.

- 11.09** Importantly, although backtesting necessarily focuses on assessing the differences between the fair value measurement and the realized value for a specific investment, the purpose of backtesting is not to highlight any mistakes in the valuation or to correct or revise a valuation conclusion reached as of a particular valuation date. Instead, the primary objective of backtesting is to help an investment company to assess and improve its overall valuation process. In addition, as described in AICPA TIS Section 2220.20, backtesting may provide evidence to investors that NAV is calculated in a manner consistent with the measurement principles of FASB ASC 946.
- 11.10** The process of backtesting is not about merely comparing value of the subject interests as of the measurement date to the value implied by the liquidity event or transaction on the event date. It is entirely possible that a valuation that is properly performed as of the measurement date can be significantly different from the valuation resulting from a subsequent liquidity event. As illustrated more fully in the following examples, reasonable judgments made in connection with a valuation, based upon all relevant available information, can produce valuations of the company and interests in the company that may differ significantly from values at which realizations occur even within a relatively short period of time. Factors (such as financial or operating leverage, businesses with binary outcomes, synergies and changes or variations in market perception) can result in significant differences, particularly when valuing individual equity interests. For example, a company levered at 6.5x LTM EBITDA might have equity interests valued based upon an enterprise value of 7.0x LTM EBITDA as of the measurement date. A sale transaction at an enterprise value of 7.1x LTM EBITDA would imply that the enterprise was sold for only 1.4% higher than determined by the valuation, yet the value net to the equity interest holder would be 20% higher than that determined in the valuation (0.6x LTM EBITDA compared with 0.5x LTM EBITDA, after subtracting the debt leverage of 6.5x LTM EBITDA). Thus, merely comparing the results from the valuation of the equity interests between the measurement date and the event date would be insufficient and misleading.
- 11.11** The important elements of backtesting are to: (1) determine what information and factors were known or knowable as of the measurement date, (2) assess how well those factors were considered in developing the fair value measurement and (3) identify whether there were factors that were relevant to the valuation as of the event date that were not considered or given weight as of the measurement date. In other words, backtesting allows the fund to improve valuation processes by assessing whether the factors that appear to have contributed to the actual result were consistent with those previously identified in the valuation. Simply comparing the actual equity value received as of the event date to the equity value estimated as of the measurement date, without carefully analyzing the key factors affecting the valuation, could lead to the improper conclusion that the valuation process was inadequate.
- 11.12** As the assumed transaction at the measurement date is hypothetical, the entity measuring fair value cannot observe a price, but instead must assess how it believes other market participants would estimate fair value for purposes of transacting. Given the complex

nature of private company investments, subjective elements can significantly affect each market participant's estimate of value and, thus, the valuation must consider factors such as market conditions, company-specific progress (e.g. milestones or setbacks), a market participant's expected time horizon for the investment, the investment thesis upon which value creation is expected, and so on. Given the unobservable nature of these subjective inputs, it is not at all surprising that with the benefit of hindsight, the ultimate exit price in a market transaction may be significantly different from the value that was reasonably anticipated at a prior measurement date.

- 11.13** Backtesting may also highlight situations in which the investment company identifies information that was not previously incorporated into the fair value measurement. Situations that may require further analysis, for example, may include the situation where the valuation did not consider a group of market participants in its assumptions and underestimated the interest of a certain category of buyers in the target company. Similarly, the valuation may have underestimated the potential buyers' perception of the strategic value of the target business to their core strategic plans and, thus, underestimated the scarcity value of the target's business. Alternatively, the valuation of a biotech company's shares may have assumed a higher probability that the target company's product would receive regulatory approval than an actual buyer was prepared to assume. Situations such as these require careful analysis to determine if the information would have been relevant or significant to a market participant's view of fair value at the measurement date consistent with the guidance in FASB ASC 820. Information that would have been factored into the fair value measurement by market participants should be considered in the fair value estimate as of the measurement date.
- 11.14** In practice there will frequently be differences between the measurement date value and the event date value, but these differences will not necessarily imply that there was an error in the valuation. Backtesting would encourage the fund to look at the types of differences that have occurred between the measurement date and the event date, and the extent to which the underlying events or conditions giving rise to such differences were known or knowable as of the measurement date. Importantly, backtesting can provide meaningful valuation insights that could be applied when estimating fair value in the future. When viewed over time, it also allows the fund to assess whether there are inherent biases (for example, overly conservative assumptions) built into its valuation processes and identify areas for improvement.
- 11.15** When performing backtesting, given the benefit of hindsight, it may be possible to gather significantly more information about the facts that existed on and subsequent to the measurement date than was actually available or knowable on the analysis date. One can, therefore, perform much more extensive analysis of what the fair value might have been based upon information that becomes known after the fact. While one might second guess each of the prior estimates the fund has made, the task force believes a more targeted effort should be undertaken that recognizes the goal of backtesting – that is, to assess and improve the effectiveness of the fund's valuation processes. Therefore, the effort allocated to backtesting would be driven by the resources that are reasonably available on the backtesting date and would focus on matters of significance.

Relationship between Backtesting and Evaluating Subsequent Events under FASB ASC 855

11.16 Backtesting may be performed throughout the year as events occur, and its purpose is to improve the investment company's valuation process rather than to evaluate changes to the estimate. However, when the event date is after the measurement date (balance sheet date), but before the date the financial statements were issued or became available to be issued (the issuance date), the investment company is required to evaluate the impact of the event on the fair value estimate in the context of FASB ASC 855, *Subsequent Events*. FASB ASC Master Glossary defines *subsequent events* as:

Events or transactions that occur after the balance sheet date but before financial statements are issued or are available to be issued. There are two types of subsequent events:

- a. The first type consists of events or transactions that provide additional evidence about conditions that existed at the date of the balance sheet, including the estimates inherent in the process of preparing financial statements (that is, recognized subsequent events).
- b. The second type consists of events that provide evidence about conditions that did not exist at the date of the balance sheet but arose subsequent to that date (that is, nonrecognized subsequent events).

11.17 Paragraph .43 of Statement on Standards for Valuation Services (SSVS) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, Professional Standards, VS sec. 100), clarifies that conditions not known or knowable as of the measurement date should not be considered in the fair value measurement:

The valuation date is the specific date at which the valuation analyst estimates the value of the subject interest and concludes on his or her estimation of value. Generally, the valuation analyst should consider only circumstances existing at the valuation date and events occurring up to the valuation date. An event that could affect the value may occur subsequent to the valuation date; such an occurrence is referred to as a *subsequent event*. Subsequent events are indicative of conditions that were not known or knowable at the valuation date, including conditions that arose subsequent to the valuation date. The valuation would not be updated to reflect those events or conditions. Moreover, the valuation report would typically not include a discussion of those events or conditions because a valuation is performed as of a point in time—the valuation date—and the events described in this subparagraph, occurring subsequent to that date, are not relevant to the value determined as of that date.

11.18 In a fair value measurement, market participants are presumed to have knowledge of the item being measured, consistent with what could be obtained through usual and customary due diligence efforts that would have occurred up to and including the measurement date. As such, when measuring the effects of a subsequent event on fair value as of the measurement date, the task force believes that it is important to consider if the condition

that existed as of the measurement date was either known by market participants or would have been knowable through customary due diligence.

- 11.19** In some cases, events or transactions may occur subsequent to the measurement date (the balance sheet date), but prior to the issuance date, that reflect information regarding conditions that existed on the measurement date and that was knowable as of the measurement date, leading to a recognized subsequent event. If this information was known prior to the analysis date when the fund performed the valuation, the fund would naturally incorporate it in the analysis. If the information was not known when the fund performed the valuation analysis, the fund would be required under FASB ASC 855 to update the valuation. The valuation would take into account information that was known or knowable as of the measurement date. For example, if a portfolio company of a fund completes an equity financing transaction after the balance sheet date but before the financial statements are issued, the negotiation pertaining to the equity financing would generally be considered known or knowable and information resulting from the negotiation at that point in time should be considered in the measurement as of the balance sheet date. However, the fund as a reporting entity would still need to evaluate whether events and circumstances that occurred between the balance sheet date and the financing transaction would have impacted the valuation and would make adjustments as necessary to reflect its best estimate of fair value as of the balance sheet date.
- 11.20** Information that becomes available before the financial statements are issued or are available to be issued but that reflects conditions that did not exist at the measurement date would lead to a non-recognized subsequent event. If the conditions existed but the information was not knowable as of the measurement date, the event would be classified as a recognized subsequent event, but would not have any impact on the valuation as of the measurement date. In both cases, this information would not be considered in the valuation as of the measurement date, but may need to be disclosed.

Factors to Consider When Performing Backtesting

- 11.21** As discussed previously, there are many factors that can contribute to a difference in value for a particular investment between the measurement date and the event date. The following are examples of the types of questions that can help a fund to identify and evaluate those factors and, more importantly, analyze how those factors could enhance its overall valuation process:
- What facts and circumstances that are important to market participants in estimating fair value changed between the measurement date and the event date? Were these facts and circumstances known or knowable as of the measurement date? What do those changes suggest regarding the fund's process for estimating value?
 - What other metrics or additional facts might have been considered by the buyer as of the event date that may not have been considered by the fund on the analysis date?
 - Was the actual buyer included in the market participant universe used as of the measurement date? If not, why not?

- Are the assumptions implied by the price on the event date reasonable when compared to the assumptions used as of the measurement date, given the changes in facts and circumstances between the two dates?
- What other factors (for example, changes in market conditions for the sector or peer group, general economic or market trends, or other company-specific factors) that occurred between the measurement date and the event date could have had an impact on value?

Illustrative Examples

11.22 The following section provides examples illustrating the process of, and key considerations around, backtesting across different types of investments under various scenarios. The examples in this section are provided only to demonstrate concepts discussed in the preceding sections of this chapter and are not intended to establish requirements. Furthermore, the assumptions and inputs used in these examples are illustrative only and are not intended to serve as guidelines. Facts and circumstances of each individual situation should be considered.

11.23 The focus of these examples with respect to backtesting is to encourage improvements in the fund's valuation process, rather than to evaluate whether factors not considered in a valuation or other developments would be considered errors or require reporting in accordance with the FASB ASC 855 subsequent events guidance. Specifically, the focus in these examples with respect to backtesting is on identifying what was known or knowable as of the measurement date and considering how the fund could improve its processes for collecting and evaluating such information in light of subsequent transactions that may highlight those market participant assumptions.

11.24 The following outline summarizes the examples presented in the remainder of this chapter:

		<u>Backtesting Implication</u>	<u>Paragraph(s)</u>
Example 1:	Potential Buyer's Synergies Unknown	No change	11.25–.33
Example 2:	Unidentified Operational Issues	Consider process and other changes	11.34–.43
Example 3:	Subsequent IPO and Significant Price Increase	No change	11.44–.51
Example 4:	Subsequent Rescue of a Company in Financial Distress	No change	11.52–.58
Example 5:	Bridge Loan Followed by Down-Round Financing	No change	11.59–.74
Example 6:	Material Non-Public Information with Publicly Traded Shares	No change	11.75–.79
Example 7:	Subsequent Working Capital Adjustment and Contract Claims	Consider process and other changes if not previously considered	11.80–.85
Example 8:	Unidentified Investor or Market Participant	No change	11.86–.92
Example 9:	Clinical Trial Results	Consider process and other changes	11.93–.101

Example 1 – Potential Buyer’s Synergies Unknown

A) Valuation on the analysis date

- 11.25** Fund X owns a 75% equity interest in Company B, which currently holds the number two position in the consumer products sector with a 10% market share, just behind Company A, which holds a 20% market share and is publicly traded. Company A’s stock price implies an enterprise value consistent with a multiple of 7.5x LTM EBITDA as of December 31, 2X15 (the measurement date). In the past quarter, Company A’s shares had traded at values that implied valuations between 7.4x and 7.8x LTM EBITDA. However, just before the end of the year, Company A had announced that a fire in one of its plants would delay production in one of its smaller product lines for two weeks, as a result of which the stock traded down slightly in the last week of trading.
- 11.26** Compared to Company A, Company B has slightly better margins. However, Company B relies on third-party distributors rather than having its own distribution channel, has slower growth (that is, 4% annual revenue growth rate versus 5% for Company A), has higher fixed costs and had recently changed its CEO. The median multiple in the industry was 7.6x LTM EBITDA and the lowest trading multiple was 6.9x. In addition, Fund X, which had a majority investment in Company B, was aware through informal conversations with lending sources that the number three player in the industry, Company C, which has an 8% market share, had been recently acquired by a private equity firm, CA Partners, in a privately negotiated transaction at an announced valuation that was consistent with 7.2x LTM EBITDA.
- 11.27** As of the measurement date, using the information regarding the public company market multiples and the recent M&A transaction involving Company C, Fund X valued its interest in Company B using an LTM EBITDA multiple of 7.5x. In doing so, Fund X evaluated Company B’s business relative to public market competitors and what was known about Company C, and decided to value Company B just below the midpoint of the range. In selecting the multiple, Fund X considered Company B’s high margins as well as Company B’s inability to grow as fast as the market leader based, in part, on its lack of control over its distribution channel. The fact that Company B had just undergone a recent CEO change was also considered a risk factor in the analysis and led Fund X to conclude that it was too early in the new CEO’s tenure to expect that the company could trade above the median market multiple. But Fund X noted that Company A’s value had also recently experienced a slight decline due to the fire at one of its plants. Considering all these factors, Fund X concluded that as the number two player in the industry with solid brand recognition and a good mix of products that had staying power, Company B would command a valuation similar to the median market multiple.
- 11.28** On the analysis date in early January 2X16, Fund X was aware that CA Partners had contacted Company B about a possible combination with Company C, but there were no indications as to valuation or the strategic rationale for the transaction. As neither Fund X nor the new CEO had any plans to engage in near-term M&A and since CA Partners had a reputation for bargain hunting, Fund X estimated a low probability of this early contact leading to a transaction at a price the fund would accept. In addition, Fund X considered Company A to be the most likely acquirer of Company B in an M&A transaction and

thought that 7.5x LTM EBITDA was the best estimate of the price that Company A would likely pay.

- 11.29** Therefore, using the multiple of 7.5x LTM EBITDA, Fund X valued its 75% interest in Company B at \$150 million, determined as follows:

LTM EBITDA	100
Multiple	7.5x
Enterprise Value	750
Less: Company B Debt	(550)
Equity Value	200
Fund Ownership	75%
Fund Equity Value	150

B) Valuation as of the event date

- 11.30** On February 21, 2X16 (the event date), a definitive agreement was signed pursuant to which Company B was sold in an all-cash transaction to Company C for a price that reflected an enterprise valuation of 8.0x LTM EBITDA. The value of Fund X's interest upon the close of the transaction, compared with the previous estimate, was as follows:

LTM EBITDA	100
Multiple	8.0x
Enterprise Value	800
Less: Company B Debt	(550)
Equity Value	250
Fund Ownership	75%
Fund Equity Value at Event Date	187.5
Valuation at Measurement Date	150
Difference in Equity Value	37.5
% Difference	25%

- 11.31** During the discussions between CA Partners, Company B and Company C, it was determined that Company C had excess capacity in both its manufacturing and its distribution and that CA Partners had little confidence in Company C management to get the value out of its business and wanted Company B's CEO to run the combined business. CA Partners believed that the combination of Company B and C could result in a combined company that could challenge the leadership of Company A. As a result, they were prepared to buy Company B at a valuation that was above the market multiple (using historical metrics) of the market leader, Company A. Although the combination would involve some one-time upfront costs to close two of Company B's older production

facilities, CA Partners expected to be able to achieve synergies after the first two years that would more than offset the price differential. Fund X was able to capture a significant portion of the value of these synergies in the negotiations, achieving a higher price due to Company B's unique position as the number two player and the fund's success in attracting a highly regarded CEO.¹

C) Application of backtesting

11.32 Since CA Partners first contacted Company B about a possible combination with Company C after the measurement date, and since Company C was privately owned and little information was available about its operations, the task force believes that neither the extent of the buyer's excess capacity nor the view of the value of Company B's new CEO would have been known or knowable as of the measurement date. As a result, the transaction does not imply that it was unreasonable to arrive at a fair value estimate using 7.5x LTM EBITDA as of the measurement date, given the facts and circumstances that existed as of that date.

11.33 Because the definitive agreement to buy Company B was signed after the measurement date but prior to the issuance date for the fund's December 31, 2X15 financial statements, the fund also considered the event in accordance with the subsequent events guidance. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 2 – Unidentified Operational Issues

A) Valuation on the analysis date

11.34 MH Partners Fund 4 (MH 4) acquired a 100% interest in ALD Manufacturing Inc. (ALD) in 2X11 as part of a carve out from PLTI, a large multinational company. It paid a total of \$100 million in a transaction in which there was no debt financing available. MH 4 performed extensive due diligence and brought in a new CEO who had successfully run this business before it was acquired by PLTI. Following the completion of the carve-out, ALD established a five-member board of directors comprising three representatives from MH 4, the CEO and a retired executive who formerly headed a marketing agency which did business with ALD.

11.35 In 2X13, after ALD had completed two years of successful operations, ALD approached MH 4 and three banks with a proposal to acquire BBB Corp, a publicly traded company

¹ FASB ASC 820 indicates that fair value should consider market participant assumptions. Thus, typically, buyer-specific synergies are excluded when estimating fair value, since valuation theory assumes that the price for an asset in an orderly transaction between market participants would not include any unique value that only one buyer can realize. The rationale is that since another bidder would not be able to capture any buyer-specific synergies, the highest bidder could make a competitive offer without having to share a significant portion of those synergies with the seller. In this example, however, Company B was a unique fit for CA Partners' strategy, and so the negotiations favored Fund X. In general, even though the specific synergies that drove the negotiations may not be readily identifiable, the transaction price would be deemed to be fair value and, therefore, would be considered without adjustment in backtesting.

which operated three factories similar to those operated by ALD. Although ALD's and BBB's businesses were somewhat comparable, BBB's valuation was rather modest, which afforded ALD the opportunity to acquire BBB by issuing \$120 million of debt and without requiring new equity. Importantly, although foreign operations represented only a small portion of BBB's current revenues, the BBB acquisition would provide a platform to support ALD's international expansion plans since two of BBB's facilities operated outside the U.S.

- 11.36** ALD completed its acquisition of BBB in 2X14 after usual and customary due diligence and began operating as a combined company with all operations reporting to the U.S. headquarters. Subsequent to the acquisition, the combined company generated \$20 million in cash flow from operations and was able to bring down its debt to \$100 million.
- 11.37** On March 15, 2X15, ALD had a signed term sheet to be acquired by ABC Manufacturing for \$300 million. The term sheet granted the buyer a two-month period of exclusivity for the purpose of conducting due diligence and to obtain the necessary financing commitments to complete the transaction.
- 11.38** Given the imminent expected exit, when MH 4 performed the valuation of its interest in ALD as of March 31, 2X15, the measurement date, the fund considered the term sheet to be the most relevant factor in determining the value of its 100% equity interest in ALD. On April 25, 2X15, the analysis date, MH 4 estimated the equity value at \$175 million after subtracting \$100 million of outstanding debt from the \$300 million transaction price and after applying a 12.5% judgmental discount to account for the uncertainty around the deal, considering the due diligence results and buyer financing contingencies.

B) Valuation as of the event date

- 11.39** In June 2X15, usual and customary due diligence performed by the buyer as part of the sale process revealed previously unknown operational and mechanical issues with one of ALD's overseas factories. The factory, which was one of the facilities acquired in the BBB transaction, had employed ineffective environmental safeguards that resulted in impermissible discharges and had engaged in employment practices that resulted in significant tax and employee benefit obligations. These issues, if left unaddressed, would have exposed ALD to significant additional potential liability and penalties. The cost to remediate and make restitution for those issues was estimated to be \$150 million. These issues came as a complete surprise to MH 4. The existence of the issues at the factory had not been discussed at the board level at all. Agendas for the board meetings had focused on sales, product design and marketing challenges. Since the U.S.-based management team had extensive operational experience in manufacturing, the board had not questioned management regarding operating issues. After a series of confrontational discussions with ALD's management, it was learned that the executive team had only visited the facility twice and had left the local operations team in place from prior to the BBB acquisition. The local operations team was fully aware of the issues prior to the measurement date as evidenced by their correspondence with counsel and regulatory authorities. Because the factory consistently reported increasing sales and regularly met budget, the executive team did not feel the need for additional oversight. Following these discussions, MH 4 realized

that it had little choice but to allow the transaction with ABC to go forward at a reduced price that fully considered the expected costs associated with the issues at the factory. As a result, the transaction closed on September 15, 2X15 (the event date), at an enterprise value of \$125 million. After adjusting for \$100 million in net debt, the equity value realized by MH 4 on the event date was only \$25 million.

C) Application of backtesting

- 11.40** The equity value realized on the event date was significantly lower compared to the fair value estimated as of the measurement date due to the additional significant remediation and restitution costs required. In order to evaluate the reasonableness of the \$175 million fair value estimate as of the measurement date, it is important to determine what information about ALD's factories were known or knowable as of the measurement date.
- 11.41** The facts suggest that the operational issues at the factory were longstanding issues which an appropriate set of managerial protocols and practices would likely have uncovered. In addition, had ALD performed a more thorough due diligence at the time of its acquisition of BBB, probing more deeply into the facilities outside the U.S. even though these facilities represented only a small portion of the business at the time, perhaps the issues would have been known to MH 4 sooner. But even without this expanded scope of due diligence, sufficient time had passed with management of the BBB operations under ALD ownership that information relative to each facility would have been regularly reported to ALD's U.S. headquarters. Therefore, one would expect that given the significant adverse impact the issues at the factory would have on ALD, the existence of these problems should have been brought to the attention of ALD's board, especially since they were known by local management. Alternatively, board members may have made more diligent inquiry of ALD's management in relation to its risk and regulatory compliance efforts. These facts suggest that the existence, if not the full extent, of the issues with the factory were known by local management of ALD and knowable by ALD's board and at the measurement date. As a result, the task force believes that it would have been appropriate to consider this issue in the valuation of MH 4's interest in ALD at the measurement date.
- 11.42** Because the issues uncovered by ABC's customary due diligence were deemed known or knowable at the measurement date, MH4 took the necessary steps to assess whether this omission altered its fair value estimate on the measurement date. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.
- 11.43** The task force believes that the fund should make reasonable inquiry, consistent with the level of access to management or the board their investment gives them the opportunity to exercise, and that the valuation process should consider all relevant information that such reasonable inquiry would discover. This example demonstrates how backtesting can help identify the critical question(s) one should ask when evaluating the reasonableness of a prior fair value estimate and can help uncover any potential deficiencies in a fund's valuation process (for example, insufficient due diligence procedures).

Example 3 – Subsequent IPO and Significant Price Increase

A) Valuation on the analysis date

- 11.44** ADS, an automated design software company, cleared all SEC comments on its Form S-1 for IPO filing on September 10, 2X15. The offering was planned to be 10 million primary shares representing 10% of ADS with a filing range of \$18 to \$22 per share. This pricing range was determined using an income approach with an assumed discount rate of 23%. ADS started marketing the offering on September 14, 2X15 and expected to complete the offering during the third week of October.
- 11.45** As of the measurement date, September 30, 2X15, two weeks into the four-week schedule for the roadshow, the underwriting book had orders for approximately three million shares at \$20 per share, the midpoint of the range. Therefore, in its analysis on September 30, 2X15, Fund Y valued its 20 million shares of ADS at \$17.50 per share, considering the expected timing and risk associated with completing the IPO.

B) Valuation as of the event date

- 11.46** On October 17, 2X15 (the event date), the offering priced at \$25 per share and ADS sold 14 million shares. The order book was two times oversubscribed. After the first day of trading, the share price closed at \$32 per share.
- 11.47** After a major market correction, ADS's shares traded down to \$14 on November 15, 2X15, the backtesting date.

C) Application of backtesting

- 11.48** Although only a couple of weeks elapsed between the measurement date (September 30) and the event date (October 17), several changes in the industry and the overall market occurred. The task force believes that it is a best practice to identify and document those factors that may qualitatively explain the change in value from \$17.50 per share as of the measurement date to \$25.00 per share on the event date. One of these factors, for example, is the risk and uncertainty that remained prior to the IPO regarding the ability to complete the IPO and the required return that market participants would demand for investing. That is, the concluded value of \$17.50 as of the measurement date still incorporated some risk that the IPO might ultimately not be completed.
- 11.49** Fund Y also noted that from October 1 to October 17, the overall stock market was up 5% and the software and technology sector increased by 7%. Furthermore, a research report issued on October 5 indicated that government spending on the defense sector, which represented 45% of ADS's customer base and was its fastest growing sector, was likely to grow at an annual rate of 20% in the next three years. In addition, ADS's closest competitor announced a delay in the beta release of its next product by six months, thereby giving ADS a significant head start on its competitor. Another competitor released earnings that beat analyst estimates by 5%, thereby raising guidance for the full year and suggesting that the industry dynamics were demonstrating positive momentum for the sector. These factors

led to increased subscriptions to the IPO book in the second half of the roadshow and ultimately supported the higher valuation at the IPO.

- 11.50** The task force believes that sufficient evidence appears to support Fund Y's valuation, notwithstanding the developments that occurred subsequently. In fact, given the improvement in market valuations and multiples as well as the positive developments surrounding ADS and the industry, an increase in value between the measurement date and the event date should be expected. As such, it was not unreasonable to arrive at a fair value estimate of \$17.50 per share as of the measurement date, given the facts and circumstances that existed as of that date.
- 11.51** Because the IPO occurred after the measurement date but prior to the issuance date for the fund's September 30, 2X15 financial statements, the fund also considered the event in accordance with the subsequent events guidance. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 4 – Subsequent Rescue of a Company in Financial Distress

A) Valuation on the analysis date

- 11.52** In December 2X15, Precision Widget Manufacturing Company (Widget) was in financial distress. The company had been acquired by Fund Z in June 2X13. At the time of the acquisition, the financial statements of Widget reported total assets of \$250 million and debt of \$175 million. Since the acquisition, Screw Corporation (Screw), a major customer representing 15% of Widget's revenue, had run into financial difficulty and, as a result, Widget had experienced challenges collecting its receivables from Screw.
- 11.53** On December 20, 2X15, the bank declared Widget in default on its loans, giving it 45 days to cure the default by making a \$30 million installment payment. Widget engaged bankers to raise equity capital or arrange a sale to strategic buyers. The bankers recommended talking exclusively to Hammer Industries (Hammer), Widget's largest competitor, indicating that Hammer was the only company that could act quickly enough and with sufficient financial flexibility to resolve the default condition.
- 11.54** On January 5, 2X16, Widget received a preliminary term sheet for a purchase of the entire enterprise for \$200 million, implying a total equity value of \$25 million after paying off the \$175 million debt balance. On January 15, 2X16 (the analysis date), Fund Z estimated the fair value of its 100% equity interest in Widget as of December 31, 2X15 (the measurement date), at \$10 million. The \$10 million estimate reflected a discount of 65% to the value implied by the term sheet, given the uncertainty of completing a transaction with Hammer and the fact that the most likely alternative to the transaction with Hammer appeared to be Widget's liquidation through bankruptcy, which potentially would leave no value to the equity.

B) Valuation as of the event date

- 11.55** On January 30, 2X16 (the event date) Widget succeeded in raising \$25 million in new equity from its customer, Screw, which had just received a new capital injection from its controlling shareholder. Screw's controlling shareholder had apparently become distracted from Screw's business. When confronted with Screw's own financial difficulties, he attributed them to mismanagement at Screw and on January 4, 2X16, fired Screw's CEO and took operational control of Screw's business. As part of the strategic review at Screw, he was alerted to Widget's financial distress and determined that Widget's survival without interruption was vital to Screw's business. As such, he decided Screw needed to have a meaningful stake in Widget, leading to this investment.
- 11.56** The transaction, in which Screw paid Widget all \$15 million of its past-due trade payables and injected \$25 million in equity, resulted in Screw becoming a 33.3% shareholder of Widget, implying an enterprise value of \$220 million for Widget. The additional capital and the collection of its past due trade receivables allowed Widget to cure the default on its debt. As a result of the transaction, the implied value of Fund Z's 66.7% interest (after the dilution from Screw's investment) was \$50 million, compared with the \$10 million valuation assigned to Fund Z's position as of the measurement date.

C) Application of backtesting

- 11.57** The task force believes that given the circumstances that were known or knowable as of the measurement date, it was reasonable to assign a meaningful discount to the possibility that Hammer, the only identified potential acquirer as of the measurement date, would complete a transaction at the originally indicated valuation before Widget's default. Specifically, given the facts as of the measurement date, it would not have been possible to anticipate that Screw, the most significant contributor to Widget's financial distress, would undergo such a swift change in leadership and strategy and provide a better solution to Widget's difficulties. As a result, it was not unreasonable to arrive at a fair value estimate of \$10 million for the equity in Widget as of the measurement date, given the facts and circumstances that existed as of that date.
- 11.58** Because Widget successfully raised \$25 million in new equity from its customer after the measurement date but prior to the issuance date for the fund's December 31, 2X15 financial statements, the fund also considered the event in accordance with the subsequent events guidance. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 5 – Bridge Loan Followed by Down-Round Financing

A) Valuation on the analysis date

- 11.59** Yellow Tree Fund (Yellow Tree) is a 70% shareholder in NEWIDEA Corporation (NEWIDEA). Yellow Tree had been the lead investor in the Series B and C rounds. NEWIDEA was formed in 2X11 and had succeeded in raising a new round of capital each year. In 2X13, the Series C round brought the total capital raised for the business to \$100

million. All shares issued were at a price of \$1,000 per share, with each series having the same economic interest upon conversion to common. The only distinction among series is the liquidation preference the later series has over each prior series. The following table lists the investors in NEWIDEA and their respective ownership stakes:

	Series A	Series B	Series C	Subtotal
Yellow Tree Fund		30,000	40,000	70,000
Orange Purple Fund	5,000	1,500	11,500	18,000
BWO Ventures	500	500	2,000	3,000
Angel Eyes Fund	500	2,000	500	3,000
Wheeler Dealer Fund	1,000	2,000	-	3,000
Management	1,000	1,000	1,000	3,000
Total	8,000	37,000	55,000	100,000

- 11.60** NEWIDEA used the capital raised to develop a new energy storage device that could revolutionize wireless retransmission of cellular data signals over a microwave radio spectrum using existing coaxial cable installations that allowed significantly greater efficiency, with only limited retrofit of existing transmission infrastructure.
- 11.61** NEWIDEA had developed a prototype for the retransmission device which had attracted the interest of several large cable operators. Two such companies engaged NEWIDEA to form joint ventures for pilot programs within their routing facilities. Each of these new pilot programs required NEWIDEA to invest \$15 million; this investment was matched by each cable operator.
- 11.62** As of December 31, 2X14 (the measurement date), NEWIDEA had spent a total of \$52 million on R&D and \$10 million on overhead. The two pilot programs were projected to bring NEWIDEA's available cash balance to only \$8 million over the course of the next 90 days. Therefore, in December 2X14, NEWIDEA began the process of raising capital, planning to raise a Series D round in the amount of \$75 million in the first quarter of 2X15, which would provide enough capital to fund operations for the next 18 months if one of the two projects turned into a full deployment, or 12 months if it decided to market the device more broadly and seek to roll it out on a national scale. In addition, in December 2X14, NEWIDEA approached its existing investors for a bridge loan in order to be able to present a better liquidity position on its December 31, 2X14, balance sheet, until it was able to secure the additional \$75 million of equity financing. The proposed bridge loan had an 18-month maturity and an 8% paid-in-kind (PIK) interest rate. The loan would automatically convert into Series D shares if NEWIDEA succeeded in raising the \$75 million it was seeking.
- 11.63** Orange Purple Fund indicated that it had no more capital available, while Angel Eyes and Wheeler Dealer had previously indicated that they would no longer support NEWIDEA and resigned their board positions. BWO agreed to invest its last \$2 million in the bridge loan, management provided \$500,000 and Yellow Tree provided \$15 million. Thus, NEWIDEA was able to raise \$17.5 million, which increased its net cash available from

\$8 million to \$25.5 million, but it would need to raise another \$57.5 million in order to reach its desired goal of \$75 million for the Series D round.

- 11.64** To raise the additional capital required, NEWIDEA hired bankers to find new investors, focusing on financial investors since bringing in strategic investors at this stage might make other competitors less likely to work with the company on new projects. The bankers understood the constraints, but in light of the significant traction that NEWIDEA had gained in getting the two pilot projects off the ground, the bankers indicated that the company could expect to price the Series D round between \$1,050 and \$1,250 per share.
- 11.65** As of the measurement date, Yellow Tree recognized that some risk remained in relation to the fundraising, given that NEWIDEA had just started work on the pilot programs with the cable operators and they had not yet received meaningful customer feedback. Yellow Tree evaluated the proposed Series D prospectus based upon the views expressed by NEWIDEA's bankers and looked to NEWIDEA's success in attracting interest in its technology. In light of the significant market opportunity and recent transaction, Yellow Tree deemed NEWIDEA very likely to be successful in raising capital. Yellow Tree also considered that if the financing were unsuccessful, NEWIDEA would likely be forced into an early sale to a strategic buyer at potentially a much lower valuation.
- 11.66** As a result, Yellow Tree determined the fair value of its holdings in NEWIDEA to be \$88.5 million. Yellow Tree valued the \$15 million bridge loan at its face value, given its recent issuance. Yellow Tree valued 70,000 shares of NEWIDEA (30,000 Series B and 40,000 Series C) at \$73.5 million, or \$1,050 per share, considering the low end of the estimated range for the Series D given the risk and uncertainty that remained around the financing. Yellow Tree did not assign any differential in value to the Series B or C shares attributable to the liquidation preference, because the total equity value was expected to exceed the price at which all classes of equity would convert and have the same value in all the relevant scenarios it had evaluated.

B) Valuation as of the event date

- 11.67** On March 10, 2X15, NEWIDEA announced a successful completion of its Series D fundraising initiative. In total, the Series D round investors contributed \$107.5 million, which was \$32.5 million above its initial target of \$75 million for this round of financing. In addition to the \$17.5 million in bridge notes that converted into the Series D round, NEWIDEA raised \$90 million from three new investors. The round was led by TC Global Investors, a PE firm specializing in telecom investments, which invested \$71 million. Two other funds invested \$9 million each and management team members invested \$1 million. The Series D shares had the same terms as the Series A, B and C shares, with the exception of a liquidation preference requiring a return of the amount of the Series D invested capital before the earlier series investors would participate in liquidation proceeds.
- 11.68** However, as explained in the following paragraphs, the Series D capital was priced at only \$800 per share (20% below the pricing of the earlier rounds), rather than closing within the much higher range originally indicated by bankers. As a result, Yellow Tree's \$15 million bridge loan converted into 18,750 Series D shares and TC Global's \$71 million investment

converted into 88,750 Series D shares, making TC Global and Yellow Tree equal shareholders on a fully diluted basis. The full share ownership table following the completion of the Series D investment was as follows:

	Series A	Series B	Series C	Subtotal	Series D	Total
Yellow Tree Fund		30,000	40,000	70,000	18,750	88,750
TC Global					88,750	88,750
Orange Purple Fund	5,000	1,500	11,500	18,000		18,000
New Fund 1					11,250	11,250
New Fund 2					11,250	11,250
BWO Ventures	500	500	2,000	3,000	2,500	5,500
Angel Eyes Fund	500	2,000	500	3,000	-	3,000
Wheeler Dealer Fund	1,000	2,000	-	3,000	-	3,000
Management	1,000	1,000	1,000	3,000	1,875	4,875
Total	8,000	37,000	55,000	100,000	134,375	234,375
Price Per Share	1,000	1,000	1,000		800	
Capital Raised	\$ 8,000,000	\$ 37,000,000	\$ 55,000,000	\$ 100,000,000	\$ 107,500,000	\$ 207,500,000

- 11.69** One driver of the lower valuation was that early in the first quarter of 2X15, NEWIDEA's pilot programs showed mixed results. In one case, the pilot showed technical feasibility, but there had been cost overruns, and a dispute ensued between the parties as to whether the additional costs were due to improper training of the operator's employees or imprecise product specifications by NEWIDEA. At the other pilot program, the device was proving to be unstable and performance was much slower than specified. The engineers had not yet concluded whether there were issues specific to the device or the environment in which it was operating.
- 11.70** As part of its due diligence efforts, TC Global's technical advisers also identified some intellectual property that NEWIDEA would be required to license in order to operate the system commercially; the license would require a \$5 million payment to the patent owner. More significantly, TC Global was skeptical about NEWIDEA's estimates of the costs to operate at a large scale upon full deployment. Specifically, TC Global was concerned that NEWIDEA might need to double the size of its technical team in the field and bring several teams of outsourced engineers, whereas NEWIDEA's plans assumed that the customers would provide much of the needed manpower upon implementation. Accordingly, TC Global indicated that in order for the investment to reach its target rate of return, the Series D round would need to be larger (to provide NEWIDEA the additional cushion of capital TC Global thought it would need for the added costs they were concerned about) and they would need to price the round at \$800 per share. In addition, TC Global required that they have at least as large a position and the same number of board seats as the next largest investor, Yellow Tree.
- 11.71** NEWIDEA decided to issue the shares at \$800 per share because the proposed financing ensured that it would have all the capital it needed to get to commercialization of its product, and also would put it in a position to pursue a strategic transaction if that proved to be the better exit. In addition, NEWIDEA thought that bringing on an investor such as

TC Global (with a strong track record in the industry and significant technical resources) would enhance its chances of successfully reaching an IPO or strategic transaction.

- 11.72** Yellow Tree recognized that with the Series D round priced at \$800, its fully diluted ownership would be 38%. With the \$1,000 price per share, all else being equal, Yellow Tree's ownership would have been only 3% higher or 41%. Given the advantages of completing the Series D round and bringing in TC Global as an investor, Yellow Tree, as NEWIDEA's largest shareholder prior to the financing, decided to accept the \$800 price and consented to the transaction. Given the Series D transaction price of \$800 per share, Yellow Tree estimated the value of its investment to be \$71 million (that is, $800 \times 88,750$ shares), compared to the \$88.5 million value it had estimated as of the measurement date.

C) Application of backtesting

- 11.73** As of the measurement date, there was little information about the pricing of the Series D round that was known or knowable. Yellow Tree evaluated the input from the investment bankers, but also evaluated the possibility that the fundraising would not be successful. As a result, it considered a discount to the banker indications. The only item that would appear to have been knowable as of the measurement date was the requirement that NEWIDEA spend \$5 million to acquire some additional intellectual property. However, even if this expenditure was subtracted from the premoney equity value, it would only have reduced the indicated range of value for Yellow Tree's shares to \$1,000 to \$1,200 per share, instead of the \$1,050 to \$1,250 indicated by the anticipated Series D pricing. Therefore, the task force believes that Yellow Tree's determination to base the valuation of its position on the face value of the bridge loan plus the equity position at \$1,050 per share was not unreasonable as of the measurement date.
- 11.74** Because the pricing for the Series D financing was negotiated after the measurement date but prior to the issuance date for the fund's December 31, 2X14 financial statements, the fund also considered the event in accordance with the subsequent events guidance. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 6 – Material Non-Public Information with Publicly Traded Shares

A) Valuation on the analysis date

- 11.75** Fund A holds 40 million common shares in Pelican Laboratories, a public biotech company, whose shares are traded on an exchange with an average daily volume of 10,000 shares. Fund A's shares represent 56% of Pelican's fully diluted shares. Fund A determined that, consistent with Fund A's accounting policy, the shares were traded on an active market. Therefore, Fund A valued Pelican's common shares at $P \times Q$ (that is, closing stock price times the quantity of shares held). On September 30, 2X15 (the measurement date), the closing price of Pelican's shares was \$2.50 per share, implying a value of \$100 million for Fund A's position. This value was reported in Fund A's September quarter-end financial statements, released on October 17, 2X15. In addition, in early September, unknown to the public markets, Fund A's representative on Pelican's board of

directors and Pelican's CEO had begun confidential negotiations with a potential buyer, and the confidential term sheet had assigned a value of \$5.00 per share to Pelican's shares.

B) Valuation as of the event date

11.76 On October 2, 2X15, Pelican announced that over the prior weekend it had entered into a definitive merger agreement with Big Pharma, a large pharmaceutical company. The transaction valued Pelican's shares at \$4.75 per share. The merger agreement was subject to a shareholder vote and regulatory approval. Consistent with the confidential term sheet signed on September 25, 2X15, Fund A agreed to vote in favor of the transaction. Definitive documents were drafted and presentations were made to Big Pharma's board on September 27, 2X15, and to Pelican's board on September 29, 2X15. Formal approval of the transaction by each company's board occurred on October 1, 2X15 (the event date). On October 10, 2X15, following the announcement of the merger, Pelican's shares began trading in a range between \$4.40 and \$4.60 per share, and during the week following the announcement, an average of 3 million shares traded per day.

C) Application of backtesting

11.77 In order to evaluate the reasonableness of Fund A's fair value estimate on the measurement date, it is important to review Fund A's determination of whether the market for Pelican's shares was active and what information was known or knowable as of the measurement date. Although the daily trading volume of Pelican's shares on its principal exchange increased significantly following the announcement of the merger, Fund A had determined that the market was active as of the measurement date with daily trading volume of 10,000 shares. Therefore, the unit of account for the measurement was a single share, rather than the 56% interest held by Fund A. The fact that Fund A had more shares than would be traded over a 10-year period at that volume did not make the market inactive.

11.78 Although the stock price increased significantly upon the announcement of the merger agreement on October 2, 2X15 (by approximately 75% to 85%), the task force believes that Fund A's fair value estimate based on P*Q as of the measurement date was reasonable because the details of the merger agreement were not available to market participants in the principal market (that is the public market) for the unit of account (a single share) as of the measurement date. That is, even though Fund A had material non-public information at the measurement date that would imply a higher value for the investment than the public stock price indicated, and even though the public stock price adjusted after the transaction was announced, it would not have been appropriate for the fund to incorporate this information into the analysis as of the measurement date. Please also see Q&A 14.68–.69 and paragraphs 13.02–.24 for additional discussion regarding the measurement of investments in companies with traded securities.

11.79 Because the merger was announced after the measurement date but prior to the issuance date for the fund's September 30, 2X15 financial statements, the fund also considered the event in accordance with the subsequent events guidance. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 7 – Subsequent Working Capital Adjustment and Contract Claims

A) Valuation on the analysis date

11.80 Fund L owned an 85% interest in ABC Company (ABC) and had board representation consistent with its ownership percentage. On December 31, 2X15, ABC and Fund L entered into a definitive agreement to sell 100% of ABC's shares to XYZ Company (XYZ) for a price that would result in a valuation of \$250 million for Fund L's 85% ownership in ABC on January 5, 2X16. As of December 31, 2X15, substantially all of the closing conditions had been met, regulatory approvals had been received and the buyer had the financial resources to close the transaction. After efforts consistent with other investors and board representatives and considering the expected impact of working capital and other possible post-close adjustments, Fund L concluded that the impact of these adjustments would likely be minimal and valued its ABC shares at \$250 million as of December 31, 2X15 (the measurement date).

B) Valuation as of the event date

11.81 The transaction closed as planned on January 5, 2X16. However, subsequent to close, certain additional facts came to light, reflecting conditions that existed at the measurement date but were not captured in the agreed transaction price. These factors resulted in a negotiated adjustment to the purchase price that was settled on May 3, 2X16 (the event date). Specifically, on February 15, 2X16, Fund L received a notice from XYZ that the working capital adjustment resulted in a deficiency in the working capital balance of \$3.0 million, or \$2.55 million net payable by Fund L. On March 13, 2X16, ABC received an anticipated tax refund of \$2.0 million, or a \$1.7 million net receivable to Fund L, which was not a part of the earlier working capital adjustment. Under the terms of the contract, such refund would be payable to Fund L. On March 22, 2X16, Fund L received a letter from the XYZ's legal counsel alleging misstatement of representations in the purchase agreement related to product claims amounting to approximately \$3.0 million (payable to XYZ), which were known by ABC Company as of December 31, 2X15 but not disclosed to XYZ Company. On May 3, 2X16 (the event date), ABC's shareholders, including Fund L, agreed to settle the working capital, tax adjustments and the warranty claim for a net payment to XYZ of \$3.5 million, or \$2.98 million net payable by Fund L.

C) Application of backtesting

11.82 The task force believes that the working capital deficiency, tax adjustments and warranty claims were known or knowable as of the measurement date, given Fund L's ability to make a reasonable inquiry about these potential issues to its controlled portfolio company. Therefore, if these post-close provisions were in fact relevant to Fund L's assessment of the fair value of its investment, Fund L should make a good-faith effort to evaluate those considerations. Such inquiry might have led to a downward adjustment to the original fair value estimate (that is, fair value would be less than \$250 million), if Fund L deemed that the potential negative adjustments more than offset the potential positive adjustments. If Fund L had ignored those potential considerations, then it might have acted unreasonably, thereby highlighting a deficiency in its valuation process and a potential error in the fair value estimate.

- 11.83** On the other hand, if Fund L proceeded in good faith and made a reasonable effort to assess the potential post-close issues and, based on this evaluation, deemed the impact on the value of its investment to be minimal, then it was not unreasonable to arrive at a fair value estimate of \$250 million as of the measurement date, given the facts and circumstances that existed as of that date. The post-close adjustments could reasonably have been estimated to have a minimal impact either if no issues were expected, or if Fund L deemed the post-close provisions to be relevant but determined the net effect of those post-closing adjustments on the fair value measurement to be insignificant due to offsetting impacts. That is, if the fund's estimate that the net impact of these adjustments would be minimal was consistent with market participants' best estimate of fair value, then the overall fair value estimate would not be unreasonable, even if the actual post-close adjustments turned out to be significant.
- 11.84** The key question in this example is what level of due diligence on the part of Fund L would be deemed sufficient. The task force believes that the answer depends on many factors, including management's judgment, its level of access to the underlying details concerning the transaction and the prevailing facts and circumstances. In this example, Fund L undertook reasonable efforts to identify and understand the potential issues and held a discussion with ABC's CFO about these issues, reaching a conclusion that the values of these adjustments were likely to offset and that the net impact would be minimal.
- 11.85** Because the potential for adjustments to the valuation due to the working capital deficiency, tax adjustment, and warranty claims were deemed known or knowable on the measurement date, Fund L took the necessary steps to evaluate if these omissions would have resulted in a different fair value estimate on the measurement date. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 8 – Unidentified Investor or Market Participant

A) Valuation on the analysis date

- 11.86** On December 31, 2X14, eConcierge Incorporated had a postmoney value of \$500 million following the completion of its Series F round one week earlier. The Series F round involved the issuance of 125 million shares to six highly regarded venture capital funds, three of which were new investors. eConcierge raised a total of \$125 million from the Series F round, \$5 million of which was used to redeem an angel investor who had originally purchased Series A shares. The following table shows the shares outstanding following the Series F financing.

	Original Price Per Share	Outstanding Prior to Series F	Concurrent with Series F	Immediately After Series F
Common Shares	\$ 0.01	10,000,000		10,000,000
Series A	\$ 0.05	25,000,000	(5,000,000)	20,000,000
Series B	\$ 0.10	50,000,000		50,000,000
Series C	\$ 0.25	95,000,000		95,000,000
Series D	\$ 0.50	100,000,000		100,000,000
Series E	\$ 0.75	100,000,000		100,000,000
Series F	\$ 1.00		125,000,000	125,000,000
		380,000,000	120,000,000	500,000,000

11.87 AVC Fund had one seat (out of 11) on eConcierge's board and held 10 million shares each of the Series B, C and D preferred rounds. As of December 31, 2X14, AVC valued its holdings at \$30 million (or \$1.00 per share).

11.88 The following year, eConcierge's new application, SmartBook, was launched and between April and August 2X15 the number of downloads of the mobile app had gone from zero to 35 million. For the first eight months of 2X15, eConcierge generated revenues of \$25 million, compared to zero in all prior periods. Consumers were using SmartBook to make appointments for all sorts of services, from pediatricians to beauty salons. eConcierge received revenue for each scheduled appointment. With the successful launch of SmartBook, eConcierge began talking to investment bankers about its capital needs for the next marketing push and was looking to raise another round of equity capital either in a private round or in an IPO. On September 30, 2X15, investment bankers looked at eConcierge's business model, its expected growth rate and estimated that its current equity could be worth between \$1.0 billion (or \$2.00 per share) and \$2.5 billion (or \$5.00 per share), using multiples ranging from 15 to 25 times eConcierge's projected 2X16 revenue of between \$70 million and \$100 million. The bankers believed that it would take about six months to prepare for an IPO and there was no certainty that market conditions would continue to be conducive to the offering. Alternatively, they expressed confidence that they could raise an additional \$100 million from a private equity fund with a broad mandate at a *premoney value* of \$900 million (or \$1.80 per share).

11.89 AVC considered information from the investment bankers, as well as the fact that an additional 10 million users downloaded the app during the month of September, generating \$100,000 in additional revenue, reflecting both an adoption rate and revenues 20% above eConcierge's plan. Based on these factors, on October 22, 2X15 (the analysis date), AVC valued its position at \$2.00 per share as of September 30, 2X15 (the measurement date). As eConcierge's total equity value was expected to exceed the price at which all classes of equity would convert and have the same value in substantially all of the exit scenarios considered in its valuation, AVC gave little weight to the liquidation preference feature of the shares in determining the fair value of its position.

B) Valuation as of the event date

11.90 On November 1, 2X15, the investment banker introduced eConcierge to AM&Co, an affiliate of an asset management company which typically invests only in publicly listed securities. AM&Co was interested in investing \$500 million to acquire a 20% stake in eConcierge, offering to use half of the money to acquire shares from existing shareholders at \$5.00 per share and the other half to acquire Series G shares directly from eConcierge. The Series G shares were economically equivalent to Series A to F shares, with the exception of the liquidation preference. The transaction closed three weeks later. With an additional \$250 million in cash, and eConcierge's operating results in October exceeding expectations by 25%, eConcierge decided to defer its plans for an IPO for at least two years. In addition, in November 2X15, a company with a similar business model but focused on the Chinese market—which was thought to offer a similar sized market opportunity as that which eConcierge was pursuing—was successful in raising capital at a valuation of \$2 billion. Based upon these facts, it may appear that as of mid-November 2X15, the shares of eConcierge had a fair value closer to \$5.00 than \$2.00 per share.

C) Application of backtesting

11.91 Given the early-stage nature of eConcierge's business and the recent launch of its mobile app in a dynamic market, it is not unexpected that there would be potential volatility in its valuation. Also, as of the measurement date, AM&Co was not a category of investor that was thought to be interested in such an early-stage private company, given the asset manager's past history. Similarly, the developments related to eConcierge's continued outperformance and the success of the comparable company in raising money at a high valuation were not known or knowable as of the measurement date. In fact, knowing that eConcierge's performance had continued to exceed expectations, AVC valued its position at \$2 per share as opposed to \$1.80 per share, which is the valuation at which the bankers believed they could raise money from a private equity investor. Based on these facts and circumstances, the task force believes that it was not unreasonable for AVC to arrive at a valuation of \$2.00 per share as of the measurement date.

11.92 Because the investment by AM&Co was negotiated after the measurement date but prior to the issuance date for the fund's September 30, 2X15 financial statements, the fund also considered the event in accordance with the subsequent events guidance. This assessment was separate from the backtesting process for evaluating potential improvements to the fund's valuation process and not in the scope of this illustrative example.

Example 9 – Clinical Trial Results

A) Valuation on the analysis date

11.93 Medtrial Company is engaged in the development of a surgical instrument that would allow a surgeon to repair a torn ligament by fusing a pig's ligament to that of a human patient. It is estimated that this process would allow for a faster recovery time and a lower incidence of complications than the use of ligaments from a human cadaver. Medtrial estimates that if it is successful in getting the procedure approved it could capture a revenue potential of between \$300 and \$500 million within three years of commercialization. Medtrial was

founded by two highly respected physicians and a university scientist, and over the first three years since founding, it had raised three rounds of financing totaling \$200 million. The most recent round (the third round), completed in October 2X13, included JKO and LMN, two reputable venture capital investors, and a diversified biotechnology company, each investing \$15 million. JKO received a board observer role as part of its investment. The October 2X13 investment round of \$45 million implied a postmoney valuation for Medtrial of \$150 million. In the fourth quarter of 2X13, Medtrial initiated Phase 3 clinical trials through an outsourced clinical trial management company, which was supervising the trials being conducted in another country.

- 11.94** On December 30, 2X13, Medtrial was informed that the trial needed to be stopped as a result of one of the 20 patients in the trial developing an infection as part of the procedure. It was unclear at the time whether the infection may have been due to the conditions in the operating room, the instruments being tested, the ligaments being implanted or some other cause. The outsourcing company advised that an investigation into the cause of the issue would take approximately 45 days to complete and cost about \$1 million; moreover, if the trial were to cease, Medtrial would need to pay a termination fee of \$2 million. Alternatively, if the trial were to resume, additional precautions would probably require Medtrial to raise at least \$25 million in additional financing to complete the trial. At that time, Medtrial had \$50 million of cash remaining. The outsourcing company also advised Medtrial that it was possible that the investigation may lead to further information that could question the viability of the endeavor. Medtrial management in turn communicated this information to its board and board observers.
- 11.95** On January 15, 2X14 (the analysis date), when no additional information was available, JKO valued its \$15 million investment in Medtrial at \$12.5 million as of December 31, 2X13 (the measurement date), assuming the trial would not resume, that Medtrial's \$50 million would be used to pay for the investigation, the \$2 million termination fee and \$10.5 million in shutdown costs, including \$7 million in severance costs for Medtrial's employees. JKO valued its interest by taking into account their liquidation preference from the most recent round and calculating their share of what would be one-third of Medtrial's remaining \$37.5 million, pro rata to their participation in the most recent round.

B) Valuation as of the event date

- 11.96** On February 22, 2X14, Medtrial held a board meeting at which JKO's representative was in attendance. The outsourcing company reported the results of the investigation, noting that the infection was caused by unsanitary practices in the supply chain not previously detected by regulators or inspectors in the suppliers' jurisdictions. Three more patients had developed infections, one of whom required an amputation. It was estimated that it would cost a total of \$10 million to reverse the procedures for all patients and an additional \$5 million in compensation to the trial participants. At the board meeting, Medtrial decided to completely cease the trial and put the company into liquidation mode. With this being the only information available to JKO as of March 31, 2X14, the value of its holdings was reduced to \$8 million with the expectation that Medtrial's cash balance will be depleted from \$40 million to just below \$25 million, and that JKO would be entitled to one-third of

the liquidation proceeds. In absence of new information, JKO held the valuation constant over the next several quarters while waiting for the liquidator report.

- 11.97** As of September 30, 2X15 (the event date), the shareholders received a report from Medtrial's liquidator reporting that Medtrial's liquidation was nearly complete. It included the following reconciliation:

Cash at January 1, 2X14	50,000,000
Cost of Investigation	(1,000,000)
Termination Fee for Outsource Company	(2,000,000)
Other support services from Outsource Company	(750,000)
Cost of Procedures for Trial Participants	(9,500,000)
Compensation for Trial Participants	(10,750,000)
Legal and Administrative Fees	(3,500,000)
Employee Severance Costs	(7,500,000)
Lease Termination and other Shut Down Costs	(1,900,000)
Recovery from Supplier - Settlement	4,500,000
Bid Received from Third Party for Intellectual Property	900,000
Net Cash Available to Shareholders	<u>18,500,000</u>

- 11.98** The liquidator asked the shareholders to vote on a proposal to accept the bid from a third party for the sale of Medtrial's intellectual property and, in recognition of the fact that the first- and second-round investors had the right to disrupt, slow down or veto the liquidation process, the liquidator proposed the following allocation of the liquidation proceeds among the shareholders:

Third Round Investors	15,000,000
Second Round Investors	2,000,000
First Round Investors	1,500,000
	<u>18,500,000</u>

- 11.99** Assuming the shareholders approved the liquidation plan, JKO would receive \$5 million, representing one-third of the money attributable to the third-round investors (that is, JKO invested \$15 million of the \$45 million round).

C) Application of backtesting

- 11.100** On January 15, 2X14, it appeared that JKO did not assign any weight to the possibility that the issues with the trial would be minor and could be addressed over time. Although one possibility was that Medtrial could raise the additional capital necessary to complete the trial, the task force believes it might have been helpful to explore other possible outcomes as part of its valuation analysis. The estimate did not appear to consider a number of other developments that led to further disbursements nor did it contemplate the possibility that the senior classes of equity might need to negotiate with the junior classes of equity, allowing them some participation in the liquidation proceeds to facilitate an orderly liquidation. As a result, the task force believes that JKO should have contemplated and

given weight to a third scenario that considered additional “downside” factors as of the measurement date. The task force believes JKO should take these factors into consideration in evaluating whether the prior measurement was appropriate and in making improvements to their valuation process.

- 11.101** Because the potential that the negotiations might result in additional disbursements to the other classes of equity was deemed known or knowable as of the measurement date, JKO took the necessary steps to evaluate if these omissions would have resulted in a different fair value estimate on the measurement date. This assessment was separate from the backtesting process for evaluating potential improvements to the fund’s valuation process and not in the scope of this illustrative example.

Chapter 12

Factors to Consider At or Near a Transaction Date

Introduction

- 12.01** In estimating fair value at or near a transaction date (that is, a recent purchase or contemplated exit), an investor evaluates circumstances involving the acquisition transaction and facts which may be known about a contemplated sale. In the context of purchase transactions, often there may be a significant time delay between the determination of pricing and ultimate closing. In the context of a contemplated sale transaction, there may be uncertainties about the buyer's ability to consummate a transaction at the proposed price (for example, due to financing, regulatory, or other risks). As a result, while recent or anticipated transactions may be strong indicators of fair value, certain adjustments reflecting market participant assumptions may be necessary. In addition, transaction costs are excluded from fair value measurements. Therefore, even though investors measure their total returns considering the net proceeds relative to the total incurred costs, the fair value as defined under GAAP of a recently purchased investment may not be the total cost of that investment, and the fair value as defined under GAAP of an investment about to be sold may not be the net proceeds expected to be received.
- 12.02** When an investment company acquires an interest in a portfolio company, incremental costs (such as legal, due diligence, and other costs) are often incurred in order to consummate the transaction. FASB ASC 946-320-30-1 provides that "[a]n investment company shall initially measure its investments in debt and equity securities at their transaction price. The transaction price shall include commissions and other charges that are part of the purchase transaction." FASB ASC 946-320-35-1 also states that "[a]n investment company shall measure investments in debt and equity securities subsequently at fair value." Consistent with guidance in FASB ASC 820-10-35-9B, when measuring fair value of their investments, investment companies (as defined by FASB ASC 946) consider "[t]he price in the principal (or most advantageous) market used to measure the fair value of the asset or liability [which] shall not be adjusted for transaction costs." FASB ASC 820-10-35-9B further indicates that "[t]ransaction costs are not a characteristic of an asset or a liability; rather, they are specific to a transaction and will differ depending on how a reporting entity enters into a transaction for the asset or liability." As a result, questions have arisen about the appropriate accounting treatment for transaction costs¹ in

¹ FASB ASC Master Glossary defines transaction costs as

The costs to sell an asset or transfer a liability in the principal (or most advantageous) market for the asset or liability that are directly attributable to the disposal of the asset or the transfer of the liability and meet both of the following criteria:

- a. They result directly from and are essential to that transaction.
- b. They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made (similar to costs to sell, as defined in paragraph 360-10-35-38).

the context of estimating fair value. To some extent, this is due to the apparent divergence between the FASB ASC 946 requirement to capitalize all transaction costs and the FASB ASC 820 requirement to exclude transaction costs. This chapter addresses what constitutes a transaction cost and how these costs should be accounted for in the context of estimating fair value.

- 12.03** As indicated in FASB ASC 820-10-30-3, “[i]n many cases, the transaction price² will equal the fair value.” However, in contrast to the FASB ASC 946 requirement to capitalize and initially measure the investment at the transaction price including transaction costs, the definition of transaction price that would be considered in estimating the fair value in accordance with FASB ASC 820 excludes transaction costs. In addition, FASB ASC 820-10-30-3A goes on to say that in certain circumstances “the transaction price might not represent the fair value of an asset or a liability at initial recognition.” As the transaction price is not the automatic basis for determining fair value at entry, questions have arisen on how investment companies should measure fair value on Day 1 (representing the initial transaction date), on the first measurement date after the initial transaction, and on the measurement date near the ultimate sale date.

Fair Value Considerations at Initial Recognition

- 12.04** For investment companies, the cost of an investment includes transaction costs that are a part of the purchase transaction. As indicated in FASB ASC 820-10-35-9B, transaction costs should be accounted for in accordance with the provisions of applicable accounting guidance. As such, based on guidance in FASB ASC 946-320-30-1, transaction costs are capitalized at initial recognition and, therefore, impact the unrealized and realized gains and losses from investments reported in the statement of operations of the investment company at each subsequent measurement date.
- 12.05** The following example illustrates the questions which arise from the apparent divergence between FASB ASC 946 and 820: Assume that Fund A acquires Company X for \$95 and in addition incurs \$5 of transaction costs for total cost of \$100 (as outlined in table 12-1).

Other costs (for example registration fees, other administrative costs, and so on) that are connected to the investment company’s operating activities but are not directly attributable to any one investment do not fall under the definition of transaction costs. Similarly, costs incurred post transaction (such as those incurred in connection with attending board meetings of an acquired company) are not considered transaction costs because these costs are related to the ongoing operations of the investment company and not the transaction itself.

² FASB ASC 820-10-30-2 states “When an asset is acquired or a liability is assumed in an exchange transaction for that asset or liability, the transaction price is the price paid to acquire the asset or received to assume the liability (an entry price). In contrast, the fair value of the asset or liability is the price that would be received to sell the asset or paid to transfer the liability (an exit price). Entities do not necessarily sell assets at the prices paid to acquire them.” FASB ASC 820 defines an *entry price* as “The price paid to acquire an asset or received to transfer a liability in an exchange transaction.”

Table 12-1

Purchase price of Company X	95	
<i>Transaction costs:</i>		
Legal fees	2	
Due diligence fees	3	
<i>Total transaction costs</i>	<i>5</i>	
Total cost	100	

- 12.06** Fund A acquired Company X for \$95. When Fund A completes the transaction, the total cost of \$100 is capitalized as the investment cost on Day 1. As indicated earlier, the Day 1 fair value measurement may or may not be equivalent to total cost. Because fair value measurement excludes transaction costs, the Day 1 fair value could be deemed to be the total cost less the transaction costs (i.e., the net purchase price of Company X).
- 12.07** To illustrate why this result may occur, consider the following example. Immediately after the transaction, Fund A decides to sell Company X to a market participant that has the same views as Fund A. All of the inputs and models used by the market participant are consistent with the original transaction and result in a fair value of \$95. Since, as discussed previously, FASB ASC 946 requires investment companies to report all investments at fair value and FASB ASC 820 does not allow for transaction costs to be included in a fair value measurement, the \$5 of transaction costs incurred by Fund A would not be part of the fair value measurement immediately after the transaction. Because total cost is capitalized as required by FASB ASC 946, mechanically the initial fair value measurement results in a Day 1 unrealized loss of \$5, even though Fund A would be basing the amount it was willing to pay for Company X and its return assumptions on a total cost of \$100. Said differently, Fund A was willing to pay an “all-in” price of \$100.
- 12.08** This example draws a clear distinction between the costs that are incurred to purchase an investment and how fair value is assessed after the transaction is complete. Fair value at any point in time is the amount a market participant would be willing to pay in an orderly transaction at the measurement date. Therefore, as described previously, fair value immediately after the transaction would be \$95. Fair value does not change solely due to the incurrence of entity specific costs. This premise holds true regardless of which entity pays the transaction costs (that is, the investment company or the portfolio company), fair value will still be \$95. At subsequent measurement dates, fair value would be determined without automatically defaulting to the transaction price or cumulative costs incurred in the purchase transaction (for example, purchase price plus transaction costs).

Fair Value Considerations At or Near Exit

- 12.09** A question arises as to whether fair value measurements near an exit or sale date should be adjusted for costs expected to be incurred at exit. Expanding upon the previous example,

after the passage of time, Fund A is now the seller of Company X and, as part of the sales process, will incur certain sales transaction costs (such as investment bank fees, legal fees, third party valuation fees, and other costs). Assume that Fund A enters into a transaction to sell Company X for \$200 and, in addition, Fund A's seller transaction costs are expected to be \$10. This example is summarized in table 12-2:

Table 12-2

Purchase price of Company X (transaction price to be paid by buyer to seller)	200
<i>Selling transaction costs to be incurred by Fund A:</i>	
Legal fees	4
Investment bank fees	4
Third party valuation fees	2
<i>Total transaction costs</i>	<u>10</u>
Net proceeds	190

- 12.10** If the preceding deal terms are known as of Fund A's measurement date but the deal has not yet closed, the fair value of Company X as of the measurement date would be the \$200 sales price (i.e., the exit price under FASB ASC 820), excluding transaction costs to be incurred, and not the \$190 of expected net proceeds. As the \$10 of transaction costs have not yet been incurred, they would not yet represent a period expense pertaining to the holding of Fund A. Reporting entities may decide that disclosure of the expected net proceeds, when significantly different from the transaction price, would be meaningful to users of the reporting entity's financial statements.

Illustrative Examples

- 12.11** In accordance with the guidance in FASB ASC 946, funds typically measure the investment at the transaction date as the capitalized cost including transaction costs. At the first reporting date following the transaction, the fund is required to measure the investment at fair value. Therefore, even when the transaction price was a negotiated price that reflected fair value, a key consideration is how the fair value of the investment changed over the period between the date that the price was negotiated, which may have been well before the closing date, and the first reporting date.
- 12.12** Consider the example presented in table 12-1, where the entry price was \$100 including \$5 of transaction costs. In this example, the fair value at the first reporting date after the transaction may not be \$95, particularly in a situation in which the purchase price (that is, the \$95) was negotiated in advance of the actual closing date. Said differently, inputs to the fair value determination at the measurement date could differ from inputs used at the time the transaction was negotiated. As an example, assume Fund A negotiated the price it was willing to pay for Company X as 10 times LTM EBITDA of \$9.5, resulting in the purchase price of \$95. Assume the price was negotiated and fixed for a period of time

prior to the actual closing of the transaction. Further assume that LTM EBITDA shortly after closing the transaction has improved to \$9.8 (and that there have been no market movements which would change the multiple being paid). Using these facts, the fair value immediately after the transaction would be \$98 (\$9.8 EBITDA times the 10 multiple) and there would be a Day 1 unrealized loss of \$2 (\$98 vs the capitalized cost of \$100). Fair value would be further impacted if there had been changes in market conditions between the date the transaction price was negotiated and the measurement date.

- 12.13** As individual facts and circumstances vary widely, there is no requirement that the fair value shortly after the closing equal the transaction price excluding transaction costs, including transaction costs, or any amount between. The key point is that FASB ASC 946 requires transaction costs to be included in the transaction price as part of the initial measurement of the investment. At subsequent measurement dates (whether one day, one month, one quarter, one year, or beyond) a fair value measurement excludes transaction costs. As a result, the fair value at the first measurement date may be equal to, less than, or more than the transaction price under FASB ASC 946, depending on specific facts and circumstances.
- 12.14** As the portfolio company approaches an exit, it is important to evaluate specific facts and circumstances of each situation and use judgment when determining fair value near an exit, which excludes estimated transaction costs at exit. Differences can occur between the negotiated transaction price and the ultimate price. Such differences may arise because of changes in performance of the underlying company, changes in expected working capital, and other factors. An escrow mechanism is used to account for such differences and to ensure that the final transaction price has been adjusted for such items.
- 12.15** In most cases, market participants would not be 100% confident as to the ultimate transaction proceeds, even very late in the sales process or with a signed agreement in place. Furthermore, since the agreed transaction typically reflects the best potential exit for the Company, the factors that could lead to the transaction price not being realized typically would have a negative impact on value. Therefore, when determining fair value using market participant assumptions, the task force recommends that the negotiated price be adjusted to take into account the risks that the potential sale could fall through, that timing of the sale could be delayed, and that the price could change. All of these risks would be taken into account in estimating fair value near an expected exit date. Therefore, fair value may differ from the negotiated price. It may be reasonable that the fair value measurement in advance of the actual culmination of the transaction may be a lesser amount, depending on the facts and circumstances after taking into account the risks associated with closing a transaction.
- 12.16** Consider the example presented in table 12-2, where the negotiated price was \$200 and the fund would realize \$190 net of \$10 of transaction costs if the transaction closes as planned. The agreement includes a provision for working capital adjustments and certain typical indemnifications, and is subject to regulatory approval. Given these risks, the fair value of the investment of the measurement date would be lower than the \$200 negotiated price. To demonstrate how these risks impact fair value estimates, the impact can be quantified using the following illustrative assumptions.

- If the transaction falls through due to anti-trust or other considerations, the fund estimates that its next best alternative transaction would have a significantly lower price, e.g. \$120-150.
- In addition, the fund estimates that the impacts of the working capital and other indemnification adjustments would be in the range of \$0 to \$20, with an expected value of \$5-10.
- Therefore, considering a 90% probability that the deal will close as planned, the fund calculated a risk-adjusted fair value for the investment of $90\% * (\$190-195 \text{ after subtracting expected adjustments}) + 10\% * (\$120-150) = \$183 \text{ to } \190.5 .
- In a circumstance like this example, the fund might mark the position at \$185, reflecting their best estimate.

In practice, market participants will apply a risk discount to the negotiated price to reflect these impacts.

Impact of Transaction Costs on Calibration

- 12.17** As discussed in chapter 10, “Calibration,” when the initial transaction price is representative of fair value, the inputs used to determine fair value should be calibrated to the transaction price. As the calibration process focuses on fair value, it is important to ensure that transaction costs are reflected consistently when considering the expected return assumptions and valuation assumptions and related inputs.
- 12.18** As noted in chapter 10, calibration is the process of using observed transactions in the portfolio company’s own instruments, especially the transaction in which the fund entered a position, to ensure that the valuation techniques that will be employed to value the portfolio company investment on subsequent measurement dates begin with assumptions that are consistent with the observed transaction. For example, consider a scenario in which, on Day 1, the negotiated transaction price, excluding transactions costs, paid by Fund A for Company X, was \$95. Total costs were \$100, including \$5 of transaction costs paid by Fund A. EBITDA of Company X on Day 1 was \$10, implying an EBITDA multiple of 10.0X, based on total costs and 9.5X based on the total cost excluding transaction costs. In year 2, assume market multiples have not changed and all other inputs remain consistent with the original investment thesis on Day 1; however, Fund A now incorporates expected seller transaction costs upon exit of \$15 into its fair value model and Company X now has EBITDA of \$20. When calibrating using the original transaction multiple (assuming no market changes), Fund A would utilize an EBITDA multiple of 10X to value Company X at \$200, and then exclude \$15 of transaction costs to estimate fair value as \$185, or would apply a multiple of 9.5x to estimate fair value as \$190. These two approaches would result in a similar fair value estimate. As such, calibration demands methodological consistency but does not require a specific approach.

Chapter 13

Special Topics

Introduction

13.01 Although the valuation of most portfolio company investments relies on the business valuation, debt valuation, and allocation techniques discussed in previous chapters, valuing certain other types of instruments or performing valuations in certain situations may require additional techniques. Although this guide cannot cover every type of instrument or every situation that may arise, this chapter provides a brief overview of a few additional topics and is structured as follows:

- A. Enterprise has traded securities
 - P*Q rule
 - Underwriter lockups and SEC Rule 144A
 - Similar vs. identical securities
 - Significant decrease in volume or activity or distressed transactions
- B. Pricing services, broker and dealer quotes
 - Background
 - Management responsibilities
- C. Indicative offers
- D. Insider financing rounds
- E. Early stage companies with no recent financing rounds
- F. Rights and privileges not enforced
- G. Commitments to portfolio companies
 - Loan commitments
 - Equity commitments
- H. Guarantees
- I. Dilution
 - Anticipated future dilution
 - Changes to anticipated future dilution
 - Impact of share-based awards
 - Current dilution
 - Summary
- J. Options and warrants, convertible notes and related instruments
- K. Contractual rights (*contingent consideration*)
- L. Private fund interests

- NAV practical expedient
- Alternatives to the NAV practical expedient
- Secondary transactions in an interest in a private fund
- Discounted cash flows

Enterprise has Traded Securities

13.02 When an enterprise has traded securities, the traded prices of the securities provide an observable price for valuing the securities themselves. The price for such securities is also an observed input for valuing any related interests in the enterprise that are not actively traded. FASB ASC 820-10-35-36 states that "[v]aluation techniques used to measure fair value shall maximize the use of relevant observable inputs ... and minimize the use of unobservable inputs." Therefore, as discussed in paragraphs 10.31–.43, “Inferring Value From Transactions in a Portfolio Company’s Instruments,” to the extent that traded prices are available that are relevant indications of fair value, the task force believes it may be appropriate to prioritize these transactions over model-based estimates of fair value. The following section presents a few specific situations where traded prices may be used as an input for estimating the fair value of investments.

*P*Q Rule*

13.03 As discussed in paragraph 4.07, although the unit of account is generally defined by other Topics, FASB ASC 820 specifies the unit of account for instruments that are traded in an active market (that is, instruments that can be measured within Level 1 of the fair value hierarchy). In particular, FASB ASC 820-10-35-44 states:

If a reporting entity holds a position in a single asset or liability (including a position comprising a large number of identical assets or liabilities, such as a holding of financial instruments) and the asset or liability is traded in an active market, the fair value of the asset or liability shall be measured within Level 1 as the product of the quoted price for the individual asset or liability and the quantity held by the reporting entity [that is, $P*Q$].

By stating that fair value should be determined as $P*Q$, FASB ASC 820 in effect prescribes the unit of account for assets comprising instruments that are traded in an active market as the individual instrument.¹

13.04 Determining whether or not a traded price should be considered to be a Level 1 input requires judgment. FASB ASC 820 defines an active market as “a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.” This principles-based definition does

¹ For assets comprising instruments that are not traded in an active market, the unit of account and the assumed transaction would be determined in accordance with the FASB ASC Topic that requires or permits the fair value measurement (per FASB ASC 820-10-35-2E as discussed in paragraph 4.06). For estimating the fair value of the fund’s position in a given portfolio company, when assessing the unit of account and the assumed transaction for measuring fair value, the fund would consider the way in which market participants, acting in their economic best interest, would transact. Please see paragraphs 4.08–.16 for further discussion.

not provide specific guidance to indicate what level of frequency and volume is sufficient to provide reliable pricing information, nor does it indicate whether transactions in over-the-counter markets (for example, pink sheets, gray sheets) would meet the definition of an active market. The fund will need to apply judgment, based on the nature of the fund's investments, as to the frequency or volume or both that would be considered to provide reliable pricing information. For example, if a fund holds an investment in a traded security where the public float represents a small percentage of the total outstanding shares and trading activity is dominated by only a few holders, the fund may consider this level of activity not to reflect an active market that would provide reliable pricing information. Alternatively, if a fund invests directly in securities that are traded over-the-counter and the fund considers this market to be its principal market, the fund may consider this level of activity to reflect an active market.²

- 13.05** There are limited circumstances where a fund may conclude that a quoted price for a traded security may not be indicative of fair value, if the market is not active and additional analysis indicates that the price does not reflect the price at which market participants in the principal market for the fund's interests would transact. One such situation might arise when there has been a significant decrease in trading volume or activity and the market is no longer active, as discussed in paragraphs 13.20–24. For example, following a tender offer, a small fraction of the shares might not be tendered, and thus would still be traded in the public market. Although quoted prices for the shares would still be available, the overall float for the security would be significantly reduced, and the market might no longer be considered to be active.
- 13.06** FASB ASC 820-10-35-41C (b) provides another exception to the P*Q rule that may be relevant for private equity and venture capital investments, indicating that adjustments to a Level 1 input would be allowed

When a quoted price in an active market does not represent fair value at the measurement date. That might be the case if, for example, significant events (such as transactions in a principal-to-principal market, trades in a brokered market, or announcements) take place after the close of a market but before the measurement date. A reporting entity shall establish and consistently apply a policy for identifying those events that might affect fair value measurements. However, if the quoted price is adjusted for new information, the adjustment results in a fair value measurement categorized within a lower level of the fair value hierarchy.

The following examples show situations where using an adjusted price may be appropriate:

² Even if a market is not considered to be active, observable transactions would still provide a Level 2 indication of value, and would need to be considered as discussed in chapter 10, "Calibration." However, the fund's guidelines will determine when the unit of account for the investment would be considered to be the individual instrument (for example, a single unit or a single share), or the entire position in that instrument held by the fund (for example, the fund's aggregate holding in each debt instrument and each equity instrument that would be listed separately on the Schedule of Investments, rather than the smallest unit that could be sold). In addition, when assessing the assumed transaction for measuring fair value, the fund would consider the way in which market participants, acting in their economic best interest, would transact. Please see paragraphs 4.08–16 for further discussion.

- a) Consider a situation where a public biotech company received negative news from the FDA on December 31st, but announced this information after the markets closed. This negative news was then reflected in futures market activity as well as after-hours trading. In this situation, the information was knowable as of December 31st, and it may be appropriate for the fund to estimate the fair value of the investment considering an adjustment to capture the resulting decline if that is consistent with the fund's organizational documents and agreements or past practice.
- b) As another example, consider a situation where the fund holds an investment in a security that has become the subject of an acquisition offer that represents a substantial premium over the stock's closing price, which was announced on the measurement date but following the close of trading. In this situation, it may be appropriate for the fund to estimate the fair value considering an adjustment to capture the resulting increase if that is consistent with the fund's organizational documents and agreements or past practice.

13.07 For securities that are traded in an active market, the fund would not consider any non-public information that it might possess in estimating fair value, even if that information would have a significant impact. For example, if the fund is aware that the company is in merger negotiations and believes that the price of the company's traded stock is likely to increase dramatically when the news is announced, the fund still would not consider this information in the valuation of its interest prior to the public announcement. The rationale for excluding this information is that, per FASB ASC 820-10-35-44, as discussed in paragraph 13.03, the unit of account for assets where the individual instruments comprising the asset are traded in an active market is defined as the individual instrument (for example, a single share). Therefore, market participants performing the usual and customary due diligence for transacting in this unit of account would not have access to any non-public information. This guidance prevents the fund from being required to use confidential information in estimating fair value, avoiding the potential quandary where the fund might otherwise be required to implicitly or explicitly disclose confidential information in explaining why the fund's valuation differs from the market.

Underwriter Lockups and SEC Rule 144A

13.08 Upon completion of an IPO, the original investors typically retain a significant investment in the company, in the form of common stock. Following the IPO, the investors have the right to sell their shares in the public market and will typically do so through a series of secondary offerings over the next few years. To avoid immediate downward pressure on the stock, however, most underwriters require any significant shareholders to enter into an *underwriter lockup*. An underwriter lockup is an agreement that prohibits the investors from selling or hedging their investment for a period of time, typically 180 days, following the IPO. As discussed further in the following paragraphs, in order to estimate the fair value of a position with such a restriction, the investor needs to consider (a) whether this lockup is a characteristic of the asset or a characteristic of the holder, and (b) how to value the asset if the lockup is a characteristic of the asset.

- 13.09** Underwriter lockups can take different legal forms. At a federal level, the SEC does not require the underwriting firm and the company issuing stock to agree to a share lock-up in conjunction with a public offering; however, some states mandate that issuers and underwriters enter into lockup agreements. Furthermore, certain international jurisdictions, such as China and India, impose a lockup period by statute. Even in the absence of a legal requirement, the underwriting firm or syndicate and the company issuing stock typically agree to a contractual lockup to prevent market saturation at the beginning of its public trading. While the terms associated with an underwriter lockup are not uniform, a lockup agreement establishes the period for which company insiders (founders, management, employees, venture capitalists, and so on) are prohibited from selling their shares (typically 180 days). All details included in lockup agreements must be outlined in the registration documents the company files as part of the IPO process, including its prospectus.
- 13.10** In addition to the restrictions imposed directly by the underwriters, the SEC's Rule 144A prohibits affiliates from reselling their *restricted securities* through the public markets. The length of the restriction depends on whether the affiliate is subject to the reporting requirements under the Securities Exchange Act of 1934 (the Act). If the affiliate is subject to the reporting requirements of the Act, the restriction is six months; if not, the restriction is one year. The SEC's Rule 144 also restricts affiliates from selling securities based on a trading volume formula, where the number of equity securities affiliates may sell during any three-month period may not exceed 1% of the outstanding shares, or if the class is listed on a stock exchange, the greater of 1% or the average reported weekly trading volume during the four weeks preceding the sale. Furthermore, shareholders who hold restricted securities who are not affiliates still may not resell these securities through the public markets until the restrictive legend is removed, which may occur when the securities are registered or when the issuer's transfer agent removes the restrictive legend after obtaining the issuer's consent to do so.
- 13.11** In situations where the underlying security is traded in an active market but where there is a legal or contractual restriction which is deemed a characteristic of the shares and not of the holder, an adjustment to the P*Q fair value estimate may be necessary. Such a restriction would prevent the fund from accessing the public market and, therefore, the principal market would be a transfer of the interest to another market participant who typically would also be subject to the restriction. FASB ASC 820-10-55-52 provides an example of the effect on a fair value measurement of a restriction on sale, considering the following situation:

A reporting entity holds an equity instrument (a financial asset) for which sale is legally or contractually restricted for a specified period. (For example, such a restriction could limit sale to qualifying investors, as may be the case in accordance with Rule 144 or similar rules of the Securities and Exchange Commission [SEC].) The restriction is a characteristic of the instrument and, therefore, would be transferred to market participants.

Irrespective of whether the restriction is a legal or regulatory restriction on the sale of shares, a contractual restriction on the fund through an underwriter agreement, or an

additional regulatory restriction due to the status of the fund as an affiliate, the fund is prohibited from selling shares through the public markets for a given period of time. Furthermore, when evaluating an assumed transfer of a position, any buyer of the position typically would be subject to the same restrictions, either via direct transfer of the restriction (for legal or regulatory restrictions), or because the counterparty would require that the buyer accept the same restrictions (for contractual restrictions). Therefore, in such cases, the task force believes that it is appropriate to consider the restriction to be a characteristic of the asset irrespective of the form of the restriction.

- 13.12** Fundamentally, the assumptions that a market participant would take into account drive the determination of fair value. Since an underwriter's lockup or a restriction under the SEC's Rule 144A effectively prevents the sale of the securities, the hypothetical transaction could only take place if the lock up accompanied the shares when sold to a market participant, and thus the restriction would be considered to be a characteristic of the asset. Such market participants typically would not pay the full traded price for locked up shares, and therefore an adjustment typically would be necessary. When there is a restriction on the shares that would be transferred to market participants, FASB ASC 820-10-55-52 indicates:

In that case, the fair value of the instrument would be measured on the basis of the quoted price for an otherwise identical unrestricted equity instrument of the same issuer that trades in a public market, adjusted to reflect the effect of the restriction. The adjustment would reflect the amount market participants would demand because of the risk relating to the inability to access a public market for the instrument for the specified period. The adjustment will vary depending on all of the following:

- a. The nature and duration of the restriction
- b. The extent to which buyers are limited by the restriction (for example, there might be a large number of qualifying investors)
- c. Qualitative and quantitative factors specific to both the instrument and the issuer.

- 13.13** Another adjustment often considered in some valuation analyses (for purposes other than financial reporting) is an adjustment for blockage. In normal conditions, the traded price for a stock reflects an equilibrium between supply and demand. Selling a large block of shares would increase supply, pushing the price down; thus, transactions in large blocks of shares frequently reflect a blockage discount. Because the blockage is a function of the size of the position, however, rather than a characteristic of the asset itself, these adjustments may not be considered in estimating fair value for financial reporting purposes. Specifically, FASB ASC 820-10-35-36B states:

Premiums or discounts that reflect size as a characteristic of the reporting entity's holding (specifically, a blockage factor that adjusts the quoted price of an asset or a liability because the market's normal daily trading volume is not sufficient to absorb

the quantity held by the entity, as described in paragraph 820-10-35-44) ... are not permitted in a fair value measurement.

That is, for actively-traded securities (securities that can be measured within Level 1 of the fair value hierarchy), no discount would be allowed even if the block held could not be sold at one time at the traded price. Please see paragraph 13.19 for a discussion of the application of this guidance to the valuation of interests that would be measured within Level 2 or Level 3 of the fair value hierarchy.

- 13.14** The fair value for an asset with a restriction that is a characteristic of the asset would equal the price that would be received in a transaction for the unrestricted asset, adjusted for the effects of the restriction. Consistent with the prohibition of blockage discounts in FASB ASC 820-10-35-36B, the fund would not consider the size of the interest when estimating the discount for the restriction— that is, the discount that would apply for a 30% interest would be the same as the discount for a 10% interest or even a 1% interest. The fund would instead estimate the discount considering the duration of the restriction and the risk (volatility) of the price. Please see appendix B, paragraphs B.08.01–.08.08, “Models Used in Calculating Discounts for Lack of Marketability,” for a discussion of commonly used methodologies for estimating discounts for lack of marketability.

Similar vs. Identical Securities

- 13.15** In some situations, including those commonly referred to as *PIPE transactions*, investors may purchase interests in a public company in a private placement or from other investors. These investments may be in the form of a direct investment in the common stock, but often instead take the form of convertible debt or preferred stock or warrants. For instruments that are not identical to the traded common stock, FASB ASC 820-10-35-44 does not apply, and the unit of account would be the investment in each instrument held by the fund. In this situation, the valuation must consider the relevance of the public stock price as an input into the analysis, as well as considering the assumptions that market participants would use in pricing the investment.
- 13.16** To the extent that the transaction price reflects fair value at initial recognition, the fund should calibrate the valuation model to the transaction price. In most cases, such transactions will be priced at a discount to the traded public stock price, reflecting the relative negotiating leverage between the company and the investors in situations where the company does not have access to less expensive forms of capital. Thus, one possible valuation approach would be to consider the value of the interests implied by the traded public stock price, less a calibrated negotiation discount or discount for illiquidity. For highly dilutive transactions, however, the observed calibrated discounts may significantly exceed the ranges supported by the quantitative models. In addition, the duration of the effective restriction period or period of illiquidity may not be clear, making it difficult to assess how the discount would be updated for subsequent measurement dates. Finally, the public stock price may be influenced by market dynamics specific to the public market and may not be a reliable indicator of the total equity value; in which case, using a valuation model that considers only the traded public stock price adjusted by a discount

may not appropriately consider the market participant perspective for the market participants in the principal market for the interests.

- 13.17** Since the public stock price is an observable input, it must be considered carefully in any valuation; however, the valuation must also consider the differences between the specific instruments held and the common stock, given the unit of account and the market participants in the principal market for the instruments. Thus, when valuing private instruments (such as convertible debt or preferred stock or warrants) in a portfolio company that also has securities that are traded in an active market, it may be appropriate to consider a weighting between value indicated by the observable public stock price and the value indicated by the fund's direct valuation models, considering the factors discussed in paragraph 13.18.
- 13.18** In situations in which the fund has an investment in private instruments (such as convertible debt or preferred stock or warrants) in a portfolio company that also has securities that are traded in an active market, determining how much weight to place on the value implied by the transactions for the portfolio company's securities in an active market requires significant judgment and is dependent on specific facts and circumstances. When making that evaluation, the task force believes it may be helpful to consider the factors listed in this paragraph. The following list is not meant to be all-inclusive; there may be other factors to consider, and no one factor is individually determinative:
- a. Timing of the most recent transaction in the fund's interest.* In valuing the fund's interest, the task force believes one would need to begin by calibrating to the most recent transaction in this interest, as long as this transaction represents fair value at initial recognition. Calibration provides a basis for assessing the price that market participants transacting in the fund's interest would pay, consistent with the unit of account. Calibrating to the value indicated by the observable public stock price may require that the model incorporate a negotiation discount or discount for illiquidity, reflecting market participants' required rate of return; calibrating to the fund's direct valuation models may also require a similar type of adjustment, albeit of different magnitude. For subsequent measurement dates, the fund would update the calibration inputs considering any changes in the company and the markets over the intervening period. The fund would consider the time that has elapsed between the transaction date and measurement date as one factor in assessing the relative reliability of the calibrated model using the observable public stock price and the calibrated model using the fund's direct valuation models.
 - b. Differences in the information available to market participants in the active market and the market participants in the principal market for the fund's interest.* Even though the public stock markets require that companies provide certain financial information (for example, audited financial statements), there may be situations where reasonable and customary due diligence would provide better information to market participants transacting in the fund's interest. For example, these market participants would typically have access to management, and might

have better information about product plans, customer relationships, operations, potential acquisitions, etc. To the extent that the market participants transacting in the observable public stock do not have the same information about the company, these transactions may be less relevant indicators of fair value of the related interests in the enterprise.³

- c. *Degree of dilution.* In theory, the observable public stock price should incorporate any dilution impact attributable to a transaction in the convertible instruments and/or warrants. However, in many cases, the observable public stock price for companies that require this type of financing might be more reflective of option value, where the market participants transacting in the public stock know that the company will not have value unless the company was successful at raising capital. Typically, in such cases, the observable public stock price will increase upon announcement of the financing, and then may take months or years to adjust to incorporate the dilution impact of the new instruments. To the extent that the observable public stock price implies a value for the company that is unreasonably high, it may be appropriate to place more weight on the direct valuation.
- d. *Ability to exit via the public market.* If the public market can serve as an exit market for the interest (for example, via the conversion of convertible instruments or the exercise of warrants on the measurement date), then it would be possible for the fund to realize the public stock value for the interest if it were advantageous to do so. The concluded value for the fund's interest may place more weight on the public market pricing to the extent that the public market is a viable exit market for the interest on the measurement date, and less weight on the public market pricing to the extent that the fund is unable to access this market (e.g. due to security-related trading restrictions or due to differences in the unit of account).

13.19 One question that may arise is whether all or part of the difference between the transaction price and the value for the interest implied by the public stock price is attributable to blockage and, therefore, should not be considered in the fair value measurement. Consistent with the prohibition of blockage discounts in FASB ASC 820-10-35-36B, the fund would not consider the size of the interest when estimating any applicable adjustment needed between the value implied by the traded public stock price

³ Another situation where the market participants for the public stock might have a significantly different perspective than market participants for the fund's interest would be when the business has changed direction but the public shareholders are unaware of the full impact of the shift. For example, a fund may take control of a company without taking it private, leaving a small percentage of the shares in the hands of the public. These public shareholders may have the shares as a result of the company's legacy business, and may not have focused on the way the business has been transformed under the fund's ownership. In this case, to increase liquidity in the stock, the company might issue shares in a new public offering, telling its story to a fresh set of investors – investors who might be more natural owners of the company and its new growth story. More extreme examples would include companies that have recently completed a reverse merger or Special-Purpose Acquisition Corporations (SPACs). Although the company benefits from the regulatory status of having its shares listed and approved for trading, the market participants in the public market that exists before the new offering may be different from the market participants in the fund's principal market and in the public market that is expected to emerge after the company more fully communicates its strategy.

and the fair value of the interest – that is, any adjustment that would apply for a 30% interest would be the same as the discount for a 10% interest or even a 1% interest. Rather, in this situation, the interest is not traded in an active market and the principal market for the interest would be the private equity market and, therefore, irrespective of the size of the interest, the fair value would not necessarily match the value implied by the traded public stock price. That is, the market participants in the principal market would consider not only the traded public stock price, but also the total enterprise value and the claim that the interest would have on that value given their characteristics, irrespective of whether the position held by the fund was convertible into 10 million shares or 100 million shares. Therefore, the task force believes that the transaction price does not incorporate a blockage factor as defined in FASB ASC 820, and calibrating to the transaction results in the best estimate of fair value.

Significant Decrease in Volume or Activity or Distressed Transactions

- 13.20** As discussed previously, FASB ASC 820 indicates that if a security trades in an active market, fair value will equal the quoted price (given that market participants are conducting actual trades at such prices).
- 13.21** FASB ASC 820 defines active market in broad terms, without providing bright lines or rules of thumb for what constitutes an active market. To provide additional guidance in periods of market disruption, however, FASB ASC 820 also lists criteria that indicate situations in which a market may have had a significant decrease in the volume or level of activity, and thus may no longer be an active market. In these situations, a quoted price would not typically be used in isolation without considering other valuation methodologies.⁴ Specifically, FASB ASC 820-10-35-54C states:

The fair value of an asset or a liability might be affected when there has been a significant decrease in the volume or level of activity for that asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities). To determine whether, on the basis of the evidence available, there has been a significant decrease in the volume or level of activity for the asset or liability, a reporting entity shall evaluate the significance and relevance of factors such as the following:

- a. There are few recent transactions.
- b. Price quotations are not developed using current information.
- c. Price quotations vary substantially either over time or among market makers (for example, some brokered markets).
- d. Indices that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.
- e. There is a significant increase in implied liquidity risk premiums, yields, or performance indicators (such as delinquency rates or loss severities) for

⁴ See also paragraphs 54D-54I in FASB ASC 820-10-35, as well as the discussion in the remainder of this section.

observed transactions or quoted prices when compared with the reporting entity's estimate of expected cash flows, taking into account all available market data about credit and other nonperformance risk for the asset or liability.

- f. There is a wide bid-ask spread or significant increase in the bid-ask spread.
- g. There is a significant decline in the activity of, or there is an absence of, a market for new issues (that is, a primary market) for the asset or liability or similar assets or liabilities.
- h. Little information is publicly available (for example, for transactions that take place in a principal-to-principal market).

13.22 In situations when there has been a significant decrease in the volume or level of activity, it may be appropriate to consider other valuation techniques in estimating the fair value of the asset. Specifically, FASB ASC 820-10-35-54F provides:

If there has been a significant decrease in the volume or level of activity for the asset or liability, a change in valuation technique or the use of multiple valuation techniques may be appropriate (for example, the use of a market approach and a present value technique). When weighting indications of fair value resulting from the use of multiple valuation techniques, a reporting entity shall consider the reasonableness of the range of fair value measurements. The objective is to determine the point within the range that is most representative of fair value under current market conditions. A wide range of fair value measurements may be an indication that further analysis is needed.

13.23 Market transactions made between independent and unrelated parties should ordinarily be viewed as indicative of fair value given that they represent exchanges between market participants operating in their best economic interests. However, even if it has been determined that the transaction has been made at arm's length, it may not represent fair value if it can be shown that the exchange was not orderly. For example, if a company is under significant distress due to diminishing liquidity to the point where it prioritizes the speed at which it can conduct a financing round over the valuation that the offering implies for the business, the transaction price may not reflect the fair value of the company. FASB ASC 820-35-54I states the following situations that may indicate that a transaction is not orderly:

- a. There was not adequate exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities under current market conditions.
- b. There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant.
- c. The seller is in or near bankruptcy or receivership (that is, the seller is distressed).

- d. The seller was required to sell to meet regulatory or legal requirements (that is, the seller was forced).
- e. The transaction price is an outlier when compared with other recent transactions for the same or a similar asset or liability.

13.24 A key question that arises when there is a market disruption of this nature is at what point the market should be considered to have adjusted such that the fair value should once again be estimated based on the traded price for the asset. For example:

- a. In some cases, such as the auction rate securities market in late 2008, the market may remain illiquid for an extended period and activity may not recover to the point of qualifying as an active market. In these cases, it would be necessary to estimate the fair value of the interest using other methods. The valuation analysis would typically consider any observed prices, making adjustments to those prices to the extent that they are not representative of fair value on the measurement date. As noted in FASB ASC 820-10-35-54E, the valuation should also “include appropriate risk adjustments, including a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty in the cash flows of an asset or a liability.”
- b. In other cases, the markets may resume a normalized level of activity within a couple of quarters. For example, on June 27, 2015, the Athens stock exchange suspended trading, in a reaction to the uncertainty related to the Greek government debt crisis. The market reopened five weeks later, on August 3, 2015, dropping 16% overall relative to the closing prices as of June 26, 2015, the last observable trading day. In this situation, when estimating fair value as of June 30, 2015, it would be appropriate to apply the guidance in FASB ASC 820-10-35-41C (b), as described in paragraph 13.06. In particular, after the close of the market on the last trading day prior to the measurement date, new information was disclosed, namely, that the market would be shut down for at least a week. Therefore, the valuation analysis would consider the impact of the market shutdown consistent with the way that market participants would consider this information. The prices observed on the first day of trading when the markets reopened in August which provides insight into conditions that existed on the measurement date. Note, however, that even though these stocks were not traded in an active market on June 30, 2015 and therefore the valuation was no longer constrained by the P*Q rule, it would generally not be appropriate to ignore the traded prices from June 26, 2015 and estimate the fair value solely based on the fund’s own valuation models.
- c. The opposite situation existed in the Chinese market on June 30, 2015: although down 15% from its peak in mid-June, the market was still up by 35% for the year, and many investors considered prices in the Chinese stock market to be inflated. Nevertheless, given the P*Q rule, investors were required to mark their investments in these securities at the traded price. In mid-August 2015, the Chinese government devalued the currency, and the stock market plunged, falling below December 31, 2014 levels. In this situation, the decline in prices would be

considered a non-recognized subsequent event, where the decline related to the currency devaluation occurred after the measurement date.

- d. In other cases, the markets may resume activity, but at a lower level. For example, in reaction to the significant decrease in the price of oil in the last quarter of 2014, the volume of activity for many debt instruments in the industry declined significantly, the market for many of these instruments was not considered to be active, and there were some indications that the observed transactions were not orderly. In this situation, for valuations performed as of December 2014 and March 2015, it might be appropriate to consider not only any observed prices, but also other valuation approaches, capturing the expected cash flows and market participants' required rate of return for the debt investment under current market conditions.
- As noted in FASB ASC 820-10-35-54G, "Even when there has been a significant decrease in the volume or level of activity for the asset or liability, the objective of a fair value measurement remains the same. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (that is, not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions." Therefore, if the fund decides to consider other valuation methodologies, the fund would assess the required rate of return for the debt instrument considering market participant expectations regarding the company's ability to service the debt and the potential recovery in distressed scenarios, consistent with overall market conditions at the measurement date, which included the lower oil prices, the illiquidity in the market, and the other risks that market participants would consider.
 - In December 2014, there were few sellers in the market, and some indications that sellers that did sell were not maximizing value (that is, they were entering in to transactions that may not have been orderly). The lack of willing sellers provided evidence that many market participants considered it likely that oil prices would recover, and that the debt issuers would be able to service the debt and repay the full principal at maturity. Therefore, the valuation would also consider these market participant assumptions.
 - After the market has stabilized at a new level, it would be appropriate to reassess whether the volume of activity re-qualifies as an active market, or whether it is appropriate to continue supplementing any observable prices with other valuation approaches.
 - Please see Q&As 14.73–.75 which discuss certain issues related to measuring fair value when the volume or level of activity for an asset or a liability with observable prices or quotes has significantly decreased.

Pricing Services, Broker and Dealer Quotes

Background

- 13.25** It is common for funds investing in debt instruments and other infrequently traded instruments to use third-party sources such as pricing services and quotes from brokers or dealers to assist in their fair value estimation process. Funds investing in debt instruments may also obtain indicative offers from brokers or dealers or other potential buyers.
- 13.26** FASB ASC 820-10-35-54K indicates that the use of quoted prices provided by third parties, such as pricing services or brokers and dealers, is permitted if the reporting entity has determined that the quoted prices provided by those parties are developed in accordance with the fair value standard. Therefore, reporting entities that use pricing services need to understand how the pricing information is developed and obtain sufficient information to determine where instruments fall within the fair value hierarchy.
- 13.27** Dealer quotes can be binding or nonbinding dependent on whether the dealer stands ready and willing to transact at that price. Brokers, on the other hand, report what they see in the market but usually are not ready and willing to transact at that price.
- 13.28** Pricing services are services that provide fair value estimates for various instruments using various valuation techniques which include, but are not limited to:
- Matrix pricing⁵
 - Consensus pricing⁶

Management Responsibilities

- 13.29** The preparation of financial statements requires management to establish accounting and financial reporting processes for determining fair value measurements. These responsibilities are further discussed in appendix A, “Valuation Process and Documentation Considerations.” Even though third-party sources may provide information to management as sources of fair value information, management is still responsible for:
- Complying with the applicable Codification Topics, including disclosure requirements; and
 - Maintaining appropriate internal controls to prevent or detect material misstatements related to the fair value measurements and disclosures.

⁵ Matrix pricing is an example of the market approach. It is a mathematical technique that may be used to value debt instruments by relying on the instruments’ relationship to other benchmark quoted prices and is commonly used to price bonds, most notably corporate and municipal bonds.

⁶ A consensus valuation is a common approach (e.g., for loans and derivatives) when multiple participants in a group assembled by a pricing service submit their best estimate of price for the assets or liabilities that each entity holds in its trading books. The pricing service returns consensus prices to each subscriber based on the data received.

13.30 Management should understand how a quotation or a price provided by a third-party source was determined. It should understand what the source of the information was, the inputs and assumptions used and whether a quote is binding or not. In addition, management is expected to establish internal controls to determine that the pricing information received from a third-party source and used by management in the valuation process is relevant and reliable, including:

- Whether the prices are consistent with the fair value measurement objective (that is, the price at which an orderly transaction would take place between market participants on the measurement date); and
- Whether there are number of price indicators for a single instrument and the price indications are widely dispersed. If so, management should consider which prices best represent the price at which an orderly transaction would take place between market participants on the measurement date. It would not be appropriate for management to use the median or average of the indicated prices to determine fair value, it needs to consider whether the resulting price is indicative of fair value.

13.31 In assessing the relevance and reliability of information provided by pricing services management should consider a number of factors, including the following:

- Whether the price provided is based on recent market information;
- Whether the price provided is based on transactions of similar or identical instruments; and
- The extent and nature of the market information on which the price was based.
- Whether price provided by the pricing service is representative of a market to which the entity has access

13.32 In assessing the relevance and reliability of broker or dealer quotes management should consider a number of factors, including the following:

- Whether quote is contemporaneous and actionable (that is, binding or not);
- Who at the broker or dealer provided the quote;
- Is the broker or dealer active in assets of the type for which they provided the quote; and
- What disclaimers from the broker or dealer accompany the quote?

13.33 With respect to those whose financial statements are used to fulfill regulatory reporting requirements with the SEC, the SEC Staff's communications⁷ have clarified management's responsibilities relating to prices obtained from third-party pricing sources that are used by management for estimating fair values for financial reporting purposes.

Indicative Offers

13.34 Equity investors may receive indicative offers when they are negotiating the sale of a business. The process of selling a business involves several stages of negotiations, from the first discussions, to narrowing the list to the leading bidders, to signing a term sheet with a specific counterparty, to closing the deal. When measuring the value of the equity position at measurement dates that may fall at various stages of this process, the fund must consider how to incorporate any indicative offers received into the fair value measurement.

13.35 Indicative offers are not observable market prices – instead, they represent the buyers' starting point for the negotiations. Some prospective investors approach an auction with the goal of continuing to have the option to participate in further negotiations, and therefore present the intermediary with their most optimistic indication of value, knowing that price adjustments may be made during due diligence. Other prospective investors may deliberately offer a low price if the investor believes that the seller may be in a forced sale position, or to take an opportunity to increase their equity stake at the expense of other less liquid stakeholders. Thus, rather than placing too much credence, if any, on the indicative offers, the fund's valuation would typically consider an adjusted indication of value based on the offers, while also considering other fair value inputs. When considering the degree of reliance to place on any indicative offers, it is important to consider several factors, such as:

- Range of the offers
- Amount of due diligence that has already been done
- Reputation of the prospective buyers and their track record for completing deals with little to no difficulty or with significant renegotiation through the due diligence process
- Proposed terms of the agreement, such as:
 - Additional rights and preferences, that may support a higher headline price without truly indicating a higher value for the company
 - Components of consideration or contingencies included in the agreement

⁷ Including but not limited to the Speech by SEC Staff, Jason Plourde, before the 2011 AICPA National Conference on Current SEC and PCAOB Developments and the SEC's Division of Investment Management, Valuation Frequently Asked Questions.

- Means by which value may be recaptured by the buyer through licensing or services agreements at off-market terms
- Tax sharing agreements
- Extent of financing contingencies – if the offer is contingent on an unrealistic level of debt financing being available, it might not be feasible for the bidder to complete the transaction as planned. Financing commitments provided by lenders prior to the latest stage of the negotiations are likely to have additional contingencies.
- Regulatory approvals or shareholder approvals required for the transaction to close

13.36 To estimate the value of equity based on an indicative offer, the fund must first adjust the offer price to reflect any differences between the indicative price and market participants' assumptions regarding the expected closing price after the negotiations are complete, given the fund's experience with similar negotiations, and then consider the probability of closing, the fund's next best alternative if the transaction doesn't close, the timing of closing, and required rate of return through the anticipated exit. The fund would also consider other indications of value to support its concluded fair value for its position.

Insider Financing Rounds

13.37 In many cases, the price from a recent transaction in the company's instruments is a reliable indication of the fair value of those instruments. However, when a financing round is funded entirely by insiders, that is, the investors who already had a stake in the company, the transaction price may be at fair value, but should not be presumed to be at fair value. Instead, the fund should consider the transaction dynamics to understand the negotiations and make the determination as to whether the transaction is at fair value.

13.38 As discussed in paragraph 10.31, there are several factors to consider in assessing the relevance of an insider financing round in estimating fair value. For example, the transaction may be a more reliable indication of fair value if some investors participated in the round and others did not, or if the round was heavily negotiated. The transaction may be a less reliable indication of fair value if all investors participated pro-rata, and thus any dilution or accretion would not have much impact.

Early Stage Companies With No Recent Financing Rounds

13.39 The valuation of investment holdings in pre-revenue firms or firms where revenues or other financial metrics do not provide a good basis for valuation presents several challenges. Market approaches based on guideline public company or transaction multiples are often difficult to apply to early stage firms due to the absence of meaningful financial metrics, relevant comparable companies, and other factors. Discounted cash flow (DCF) models can produce a wide range of value indications due to uncertainty regarding the timing and amounts of future revenue, income and cash flow, and due to the wide range of discount rates reported in studies of the required rates of return for early stage investments. Given these challenges, these "traditional" approaches may not be appropriate for the valuation of pre-revenue entities.

- 13.40** As traditional approaches may be problematic, valuations of these entities are often based on transactions in the equity instruments of the subject company. Such transactions can include financing transactions where the company sells shares directly to investor(s) and secondary transactions where existing shareholders sell shares. Financing transactions frequently involve more significant dollar amounts and a larger number of investors compared to transactions between shareholders. Financing transactions, particularly arm's length transactions which involve new investors, are generally viewed as better evidence for establishing fair value estimates, as transactions between shareholders are infrequent and the motivations for these transactions may not be known.
- 13.41** A prior transaction may be used to establish the value of the overall business enterprise and the interests in the enterprise, by calibrating to the transaction price. Although developing assumptions for use in a guideline public company or transaction model or a DCF model for a pre-revenue company may be challenging, as discussed in paragraph 13.39, the development of and calibration of these models (or other relevant techniques) at the time of a financing transaction can assist in assessing future changes in the fair value of investment holdings. At the time of a subsequent valuation, the model inputs can be revised to capture the impact of interim value events on revenue and cash flow projections and risk expectations for the entity.
- 13.42** For early stage companies without a recent financing round, the best choice will very likely involve a technique that "rolls forward" the value obtained from a previous (now stale) financing round that reflected fair value at initial recognition. Before pursuing this course of action, or, before relying solely on this technique, however, a variety of factors should be considered. Each valuation will depend on specific facts and circumstances – significant professional judgment is required. Selection and application of an appropriate valuation methodology will require answers to the following questions:
- a. *Was a calibrated valuation model developed at the time of the previous financing?* If a calibrated model exists, then its usefulness for the current valuation, as well as the identification of changes in key assumptions and model inputs, can be determined by the answers to additional questions. If a calibrated model does not exist, the fund may begin by performing an analysis as of the most recent financing date to ensure that the starting assumptions used in the model are consistent with market participant assumptions for the transaction.
 - b. *Is the entity performing in accordance with its business plan?* Conceptually, for pre-revenue companies, successful execution of a business plan in the absence of other significant value events would suggest an increase in value. All other things held equal, shortening of the expected time to a successful exit would produce an increase in value, as the firm is moving closer to generating positive cash flows and a self-sustaining operating position. In this case, updating the model developed at the time of the previous financing event would be a reasonable choice to estimate fair value, subject to any additional analysis or tests of reasonableness deemed prudent. Note, however, that value accretion for early stage companies is rarely linear, and that in the absence of some objective determination of "progress", market participants would be unlikely to pay more

simply due to the passage of time or due to the company's expenditure of effort. Please see the "Resolution of Uncertainties over Time" sidebar in chapter 5, "Overview of Valuation Approaches."

- c. *Have any significant value events (internal or external) occurred since the previous financing round?* Value events can be either favorable (e.g., achievement of a significant milestone) or unfavorable. Value events are typically viewed as internal developments achieved by an entity. However, value events may also include industry or general economic developments external to the entity. Both internal and external value events that have occurred since the previous financing round should be considered.

Examples of internal value events for pre-revenue firms include:

- Assembly of key members of management team
- Delivering a proof of concept or prototype
- Obtaining regulatory approval
- Establishing ongoing relationships with strategic partners
- Executing contracts with key customers

The importance and transparency of value events can vary. Biotech firms perform research and development efforts, the results of which are critical to the continued operation of the firm. This information is often held confidentially pending completion of the effort. MIS and other pre-revenue companies may have fewer significant value inflection points, and their progress may be measured by more incremental metrics. Related somewhat to these concepts, the degree of uncertainty regarding ultimate technical feasibility and market acceptance may vary. For example, biotech firms typically have a much higher risk of technical feasibility relative to other firms.

The impact of value events may vary depending on the stage of development of an entity. Pre-revenue early stage companies (Stage 1 and 2) have significant remaining risk. Consequently, the impact of a single value event at early stage firms may be less significant as a large amount of execution risk still remains. Delivering a prototype to a potential customer is not the same as signing a multi-year contract, which in turn is not the same as actually generating revenues and profits.

External factors may also impact the company. For example, if the company is developing a great new technology to address a particular market need, and the industry evolves in a way that obviates that market need, the company may be forced to retrench. In such a case, the previous financing round would not be relevant and the valuation would consider the company as if it were a brand new start-up, given its management team, workforce and any other useful assets.

Industry and general stock market movements should also be considered in the valuation of a pre-revenue entity. Minor movements in the prices of firms in an

industry are often not included in the development of fair value estimates for pre-revenue companies, due to the significant differences in stage of development of pre-revenue companies relative to public companies. Significant movements in the prices of firms in an industry, however, should be considered as a possible indication of a change in the market potential for a subject company. A significant change in economic outlook for the industry could impact all privately-held companies, both mature and developing, within the industry.

As with industry price movements, small movements in the overall stock market may be less meaningful for pre-revenue companies. Large movements could reflect a change in the investment climate that would impact the value of an investment in a pre-revenue firm. The financial crisis beginning in 2008 adversely impacted security prices and capital availability. Valuations across the general market as well as within the venture capital sector declined as a result of the financial distress.

When available, transactions in “similar” early stage companies may also be considered. In assessing these transactions, the reliability of information is an important consideration. Information is typically private and subject to limited public disclosure requirements, if any. Also, as discussed, the comparability of the firms at a pre-revenue stage may present significant valuation challenges.

Subject to changes in the company’s strategy and considering the nature of any intervening value events, the starting point for the valuation process would be the model used to calibrate to the previous round. However, given that one or more of these events is considered to be significant, adjustments to model assumptions and inputs may produce meaningful changes to the measurement, requiring the development of reasonableness tests based on factors outside of model parameters.

- d. *Does the entity need additional financing to survive to a successful exit event?*
This question addresses the issue of viability – will the company be able to continue pursuing its original strategy? Liquidity and capital adequacy are important considerations in the valuation of pre-revenue firms.

Venture capital-financed companies typically require multiple rounds of financing, and the company’s success in the fund raising process will depend on a variety of factors.

- One key consideration is the company’s progress on development efforts and execution to date relative to the business plan in place at the time of the financing. The absence of favorable value events could lead to a cessation of future financing and the termination of operations of a pre-revenue firm. On the other hand, if the company is on the cusp of a positive value inflection event and has timed its financing needs perfectly, or has access to bridge financing, the company may have the ability to raise the next round at a significantly higher price.

- Another important influence on the availability, pricing and terms for future financing rounds is the cash runway of the company, considering the resources on hand and the company's burn rate. Early stage entities with limited cash resources may experience lower future valuations due to a weaker negotiating position. Reduction in cash resources and absence of new financing activity could suggest a lack of value creation and an increasing risk of financial distress and a reduced time period until cash resources are fully expended. These factors contribute to reduced strategic options and lower valuations. In advance of the financing, the valuation would consider the greater risk profile for the company.

These factors can impact the decision regarding the selection of a valuation model and its key inputs. If the company's viability is in question, then a simple update of the calibrated model may produce a value that is not properly adjusted for the risk of failure. In such circumstances, it may be necessary to develop additional scenarios to capture the increased risk of failure that may not have been present at the time of the previous financing round.

- e. *Is the entity attempting to raise additional financing as of the measurement date?* Valuation discussions at or prior to a valuation date should be considered in the development of fair value estimates. A negotiated price for a transaction that has not yet closed, with appropriate adjustments for the uncertainty associated with the pending transaction, may be considered along with a revised DCF model and/or other methods in determining an updated valuation.

13.43 Although the valuation of pre-revenue companies is challenging, careful consideration of recent transactions as well as the changes in the company and the markets over the period since the transaction provides a reasonable basis for valuation. The starting point in the valuation of pre-revenue companies that have had no recent usable financing transactions will typically be a roll-forward of the value based on the previous, now stale, financing transaction, by employing the model used to calibrate to that transaction and updating its key assumptions and inputs. However, unless the circumstances suggest that nothing of significance has occurred since that previous transaction, the updated value should be carefully tested for reasonableness, and supplemented with additional scenarios as necessary. The selection of additional analyses and scenarios is, as always, a matter of professional judgment.

Rights and Privileges Not Enforced

13.44 In connection with investments in instruments issued by private companies, investors often negotiate for additional rights as part of their agreements. As discussed in paragraphs 8.10–.11, these rights can include both economic and non-economic rights, such as:

- liquidation and dividend preferences,
- information rights,
- registration rights,

- rights to appoint a certain number of directors to the company's board,
- rights to approve budgets,
- rights to approve major transactions,
- rights to force a sale of the company,
- protection against dilutive (or down round) financing, or
- rights to contribute additional capital at a pre-agreed price and a pre-agreed valuation.

In addition, particularly when investing in minority positions or joint venture arrangements, the investors may negotiate put rights, buy-sell arrangements, drag-along rights, or other mechanisms that may be used to trigger a sale of the company or otherwise accelerate a liquidity event.

- 13.45** These rights are often quite important in the negotiations when investors are deciding whether to make the investment. At times, they play a critical role in allowing the investor to maximize the value of the investment or to protect the fund's interests. Furthermore, having influence over the company's board of directors in itself may not be sufficient. In many cases, funds use their rights to appoint members of the board to influence the strategic direction of the company. But funds also may negotiate these separate shareholder rights, because in many jurisdictions a board member has a duty to protect the interest of all shareholders, whereas the fund as a shareholder may be free to act in the fund's own interest when exercising rights the fund has separately negotiated with the company as part of its investment. Nevertheless, these shareholder rights are generally not exercised in a vacuum, so it is important to understand the broader context to estimate the way that these rights might influence value considering the facts and circumstances.
- 13.46** Many investors view the bundle of rights for which it has negotiated as being soft tools to help guide the company, rather than a roadmap for how it expects to impose its will on the company. For example, a shareholder may have the right to cause a company to go public, but exercising that right when the portfolio company's management views the company as not being ready or the market conditions as not being optimal might cause too much friction in the long term interest of the company or investor. Or if, for example, the investor has a right to cause the liquidation of a real estate company after it fails to achieve a liquidity event, the potential (as opposed to actual) exercise of that right may be considered a "nuclear" option that would be intended to motivate other investors and management to be focused on achieving a liquidity event for all investors, rather than to actually seek to divide up the company's assets. Many investors in equity interests are unprepared to take in-kind distributions of buildings in satisfaction of their liquidation rights, so a right to force a liquidation might simply provide the negotiating leverage necessary for the investor to obtain full or partial liquidity on a timeline that is more favorable than it might otherwise be. Similarly, some rights may take an extended period of time to enforce and such enforcement may be subject to review by international courts that may take a different view of the facts surrounding the rights of the investors and their enforceability under local laws. As a result, valuation specialists should use caution when seeking to assign value to each separate component of the bundle of rights to which the investor and the company have agreed, since the investor may not choose to exercise

them all, even when they become operative. In addition, in assessing the value of the bundle of rights, care should be taken understanding the challenges of enforcing all of the investor's rights and the claims and counterclaims that could be raised as part of a negotiated exit or a contentious battle.

- 13.47** While investors generally seek to maximize value and accelerate realizations to the earliest possible date, practical considerations and collateral implications of short term actions on the long term value proposition need to be taken into account in order to achieve those objectives. For example, in a situation where an investor has a right to make follow-on investments in a successful portfolio company at pre-agreed pricing, if the company doesn't need additional capital, the investor may consider the broader implication of exercising that right. While it may be in the investor's short term economic best interest to own more of the company at favorable pricing, the collateral implications of exercising that right may prove more costly. Management team members and other investors may feel that the dilution they suffer from the exercise of those rights unfairly punish them for success, and they may, for example, demand that the company issue additional stock-based compensation to compensate for the dilution, leaving the investor no better off for having invested the additional capital.
- 13.48** Similarly, there may be situations in which the investors have superior rights to more junior equity holders which they choose not to enforce in order to facilitate an orderly exit transaction. This may be the case even in situations where the junior equity holders do not have rights to block the transaction. Investors may feel that agreeing to share some of what might otherwise be proceeds inuring only to their interest might reduce the propensity for other stakeholders to create adverse publicity, initiate litigation or otherwise cause dissension. It may also be the case that in the context of a liquidation in bankruptcy or as part of a settlement, the senior equity holders may be forced to share a portion of their proceeds in order to approximate an equitable result where, for example, the result of the liquidation or sale of the company deprived holders of the junior classes of equity of an opportunity to benefit from a hoped-for revival of the company's fortunes. For this reason, the buyer of a company in an M&A transaction may condition the sale upon an agreeable outcome among all of the company's stakeholders, including the equitable treatment of management shareholders, in order to ensure a smooth transition under new ownership. Similar considerations may be at play for the sellers of senior classes of equity who place value on expeditious sale transactions, who promote their reputation for fairness, or who prefer to avoid the commitment of resources associated with extended litigation. Scenario-based methods and hybrid methods, as discussed in chapter 8, "Valuation of Equity Interests in Complex Capital Structures," provide a mechanism for addressing these challenges.
- 13.49** When considering the impact of the rights and privileges associated with a given investment, it is important to consider how market participants would evaluate the investment, looking at the circumstances holistically, evaluating the relative positions of the holders of the various classes of equity under the scenarios being evaluated, considering the past practices of the parties, and assessing the most likely result in each scenario. One should not always assume that senior equity holders will enjoy the full benefit of their contractual rights or that a company will be liquidated in accordance with

the strict priority of the rights of the holders of each class of equity as written in each of the governing agreements. Similarly, when estimating the market yields for debt with different levels of seniority, market participants will typically consider differences in average recovery rates, rather than assuming that the junior debt will recover nothing whenever the senior debt is impaired. However, to the extent that ignoring or interpreting contractual rights in less favorable ways has an impact on the resulting conclusion of fair value, the fund would document and support how the selected approach is consistent with market participant assumptions.

Commitments to Portfolio Companies

Loan Commitments

- 13.50** Investment companies may make investments in loans to portfolio companies where the portfolio company has the unilateral right to draw capital in the future, rather than borrowing the entire capital at the agreement date. Loan commitments are generally defined as written agreements, signed by the borrower (the portfolio company) and lender (the fund), detailing terms and conditions under which a loan of up to a specified amount will be made. The commitment has an expiration date and typically a fee will be paid for agreeing to make the commitment. Such a commitment is irrevocable (a hard commitment) but may be conditioned on the borrower's maintenance of satisfactory financial standing and satisfaction of other covenants. Lines of credit are often less detailed than a formal loan commitment, and are often letter expressions of willingness to lend up to a certain amount over a specified time frame, usually one year. In other circumstances, the fund may agree to provide capital to the portfolio company subject to approval and future negotiations (a soft commitment). These soft commitments do not require the fund to provide capital at less than fair value nor require the portfolio company to draw capital at more than fair value, and thus would not result in recognition.
- 13.51** A written loan commitment is a financial instrument in accordance with FASB ASC 825. These financial instruments are investments of the investment company and as such should be recorded at fair value as required by FASB ASC 946. Such loan commitments may be part of the unit of account with the corresponding portion of a funded loan. See chapter 4, "Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments."
- 13.52** To estimate the fair value of a loan commitment, the fund would typically consider the expected net cash flows, including the probability and timing of future draws (outflows) and interest and principal payments (inflows), and then use a valuation methodology similar to those used for valuing other debt investments, as discussed in chapter 6, "Valuation of Debt Instruments."
- 13.53** Loan commitments typically provide the portfolio company with the right, but not the obligation, to draw on the commitment. Thus, the loan commitment will typically have a fair value less than zero or be a liability position, as it represents an obligation of the fund. For example, if market yields have moved or may move such that the portfolio company could raise money at a lower rate, the portfolio company might not draw the

whole amount; if market yields have increased and the coupon is lower than the rate that the portfolio company would otherwise have to pay, the portfolio company would be more likely to draw the whole amount.

- 13.54** The portfolio company may pay a commitment fee to the fund when entering into the agreement, whether that fee is received in cash or in warrants or in another form of consideration. The portfolio company may also pay a fee on the undrawn line, typically a percentage of the total amount undrawn, that would compensate the fund for reserving the capital necessary to fund the commitment to the portfolio company. Such fee arrangements are outside the scope of this guide. The fund should evaluate its recognition of revenue for these fees consistent with other guidance.

Equity Commitments

- 13.55** Investment companies may negotiate commitments to provide equity funding to portfolio companies, when they expect that the portfolio company will need future funding to accomplish its objectives. These structures are most often employed in the context of acquisition or roll-up strategies and capital-intensive development companies. These commitments are often structured to take place over a multi-year period.
- 13.56** Equity commitments may be “soft” commitments where the fund and the company have expressed an intent to pursue a strategy but do not represent an enforceable obligation to provide capital, or “hard” commitments where the fund and the company have an irrevocable contractual obligation to transact when certain conditions are met. A contractual equity commitment should be evaluated to determine if it is a financial instrument in accordance with FASB ASC 825 or if it is a derivative in accordance with FASB ASC 815, or both. Commitments that are financial instruments or derivatives or both are typically considered investments of the investment company and as such should be recorded at fair value consistent with the guidance in FASB ASC 946. Contractual equity commitments typically may be considered as a single unit of account in combination with the corresponding equity investment in the portfolio company. See chapter 4, “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments.”
- 13.57** The equity commitment typically allows the company and the investors to agree to fund total investment up to a specified amount of committed capital, at a specified price per unit. This structure implies that future capital would be called at the same valuation as the initial investment. Note, however, that since in these structures, the investors in aggregate typically hold almost all of the equity of the business, and future capital calls will be pro-rata, any difference between the value of the units purchased in a future capital call and the price paid would have little impact on the value of the aggregate investment – even if the capital call is dilutive or accretive, the dilution to the existing units and benefit to the new units, or vice versa, would offset each other. That is, any dilution will not matter, since the investors would be just diluting themselves, pro-rata. If the commitment were not pro-rata, then more analysis may be required.

13.58 Consider the following example: The portfolio company needs \$300m for a development project. The lead investor signs up for \$160m of the \$300m, and then finds other investors to commit the remaining \$140m. The board has the right to call capital from all investors as and when they deem appropriate. In general, none of the investors can be forced to put in additional capital, therefore, the equity commitment would be considered a “soft” commitment. That is, if an investor had committed to invest a total of \$50m, but then decided not to participate after funding \$20m, the investor could not be forced to put in the extra \$30m. However, the terms might have certain penalties that would reduce the rights of the initial \$20m investment, which would provide an incentive for the investors to continue to participate. For example, possible penalties might include:

- Lose whole investment (contribute shares back to the company)
- Receive a subordinated position instead of maintaining seniority

In the context of valuing the fund’s investment, the fund would consider the soft obligation and possible penalties when assessing the probabilities that the future financings would be completed as planned given scenarios regarding the change in value of the existing investment. In performing this analysis, the fund would consider not only the implications of potential penalties if it chose not to fund the future financings, but also whether the potential penalties were sufficient to offset the shortfall in funding if another investor chose not to participate. In most cases, the negotiated penalties would be regarded to be fair compensation for the risks that certain investors might later decide not to fund their commitments.

13.59 For hard equity commitments, the company and the investors have made an irrevocable commitment to fund capital calls at the specified price or formula price when certain conditions are met, and therefore these commitments would be considered as a contingent forward contract. In valuing contingent forward contracts with a pre-specified price, the fund would consider the contingent value of the units in the scenarios where the contingencies are met, and compare with the forward price discounted at an appropriate discount rate (for example, the risk-free rate for forwards where the probability relates to non-systematic risks or for certainty-equivalent probabilities; risk-adjusted rates that consider the risk of achieving the specified financial or other metrics for systematic risks⁸). In valuing contingent forward contracts with a formula price that is intended to approximate fair value at the time the commitment is funded, the fair value of the forward contract may be close to zero. As noted in the preceding discussion, the aggregate value of the current investment and the forward would typically equal the pro-rata value of the company, since any difference would dilute or accrete to the existing units on a pro-rata basis, and therefore, the valuation of the contingent forward would have little to no impact on the aggregate value of the investment. If the commitment were not pro-rata, then more analysis may be required.

⁸ See the Appraisal Foundation guidance under development, *Valuation of Contingent Considerations*, for additional discussion. Please refer to the Appraisal Foundation’s website at www.appraisalfoundation.org for further information about this project and its status.

- 13.60** If an equity commitment from a fund to a portfolio company is pledged to a third party, this equity commitment may implicitly provide a guarantee to the third party beneficiary. For example, a pledge to a third party beneficiary could require the fund to invest more capital even if the portfolio company was in bankruptcy. If the commitment is pledged to a third party beneficiary and thus provides an implicit guarantee, the fund may need to estimate the fair value of this commitment as a liability of the fund. See the next section for further discussion of guarantees.

Guarantees

- 13.61** In some cases, the portfolio company may not have the wherewithal to enter into a transaction independently, but the fund or funds that in aggregate have control of the investment may agree that it would be to their benefit to facilitate that transaction. For example, when an early-stage portfolio company may need to sign a lease to obtain office space, the venture capital funds backing the portfolio company may provide a guarantee for that lease.
- 13.62** The accounting for guarantees is complex and is discussed in FASB ASC 815 (for derivatives) and FASB ASC 460. Recognized guarantees also may qualify for application of the Fair Value Option subsections of FASB ASC 825-10. Given the complexity of these standards, the accounting for guarantees is outside the scope of this guide.
- 13.63** In some circumstances, the accounting may require or allow the fund to carry the guarantee at fair value in accordance with FASB ASC 820. When estimating the fair value of a guarantee in accordance with FASB ASC 820, the fund would typically measure the net value of the guarantee by considering the value of the subject contract with the guarantee, which would reflect the value given the fund's credit risk, less the value of the subject contract without the guarantee, which would reflect the value given the portfolio company's credit risk.
- 13.64** Some funds may mitigate their risk by signing a reimbursement agreement with the portfolio company, such that if they have to pay on the guarantee, the portfolio company will reimburse them. Such reimbursement agreements provide some recourse for the fund in the event that the portfolio company defaults, and may improve the recovery for the fund upon default. The reimbursement agreement would be considered in measuring the fair value of the aggregate position, reflecting the guarantee, net of the value of the underlying contract, plus the reimbursement agreement given the portfolio company's credit risk. The fair value of the aggregate position may then be allocated to the units of account for the various components of the position if required.

Dilution

- 13.65** For purposes of this section, *dilution* is defined as the reduction of a fund's current ownership position or level of participation in future appreciation due to the following types of events:

- a. The fund's future ownership percentage decreases relative to the fund's current ownership percentage due to future financing rounds and future share-based compensation awards ("anticipated future dilution"). Although such events will always be dilutive from this standpoint, these events may not result in a decrease in the value of the fund's position relative to the fund's original expectations, as the smaller percentage ownership typically will be offset by the new investment.⁹
- b. The fund's future ownership percentage changes relative to base case expectations ("changes in anticipated future dilution"). Future financing rounds and future share-based awards might be dilutive relative to initial expectations if the value of the company is lower than such initial expectations at the time of the new financing or share-based awards, or might be less dilutive relative to initial expectations if the value of the company is higher than such initial expectations or capital needs are lower than anticipated. Such events typically would not result in a change in the value of the fund's position relative to the value immediately prior to the event, as the smaller percentage ownership may be offset by the new investment; however, such events typically will reflect a change in value relative to the fund's original expectations.
- c. The fund's ownership percentage decreases in a current transaction, and the new investment is not sufficient to offset the reduction in ownership ("current dilution"). Financing rounds or other issuances of new instruments are currently dilutive to the extent that they are issued at less than fair value. Such events typically will result in a decrease in the value of the fund's position relative to the value immediately prior to the event, and may arise, for example, when the company has had difficulty raising capital and the primary investors want to create an incentive for all of the current investors to participate in the financing.

Anticipated Future Dilution

13.66 Many portfolio companies have future capital needs that are anticipated at time of the initial investment as well as at subsequent measurement dates. Portfolio companies may need future capital for various reasons, for example, including but not limited to:

- early stage companies, where the portfolio company expects to experience losses before reaching breakeven, but investors typically will not fund the entire amount needed up front
- expansion stage companies, where the portfolio company is experiencing rapid growth or wants to add resources to fund rapid growth, and thus chooses to operate at a loss rather than keeping costs contained
- roll-ups or acquisition strategies, where the portfolio company needs capital for making acquisitions

⁹ In the case of share-based compensation awards, the value of the awards would typically be regarded as incremental to the value of the investment, not dilutive, as the price that market participants would be willing to pay for the investment would be based on the valuation considering the need to offer share-based compensation to attract talent. Please see Q&A 14.27, *Incorporating Stock-Based Compensation into the Valuation*, for an example with further discussion.

- more mature companies, where the portfolio company needs capital to improve operations
- 13.67** When the portfolio company is expected to need additional capital, even in the base case, investors expect their current equity ownership position to be diluted prior to the expected exit event. This dilution may take the following forms:
- Future financing rounds of equity that are senior to the current investment position
 - Future financing rounds that are *pari passu* with, or junior to the current investment position
 - Future awards of share-based compensation
- 13.68** Regardless of the specific nature of these future issuances, they will all be dilutive in the sense that any proceeds from the ultimate sale of the portfolio company will likely be shared with these new investors. That is, for any given future aggregate equity value at an exit event, the more of these instruments that are outstanding, the lower the percentage of total exit proceeds the current investors will receive (subject to seniority rights and liquidation preferences).
- 13.69** It is thus important to the measurement of fair value as of any particular pre-exit date, for the investor to incorporate estimates of anticipated future dilution as appropriate for its choice of valuation methodology. In some approaches, such as the discounted cash flow method for valuing the business, this dilution may be incorporated when estimating a current equity value, net of the costs of future investment, and then that current equity value may be allocated to the current outstanding classes of equity. In other approaches, such as scenario-based methods, a future equity value may be estimated without subtracting the costs of future investment, and then dilution may be incorporated when estimating the ownership attributable to the current outstanding classes of equity. It is important to analyze, in the context of the company's business plan, the future resources needed to achieve its plan. Estimating the value of the company's current equity interests consistent with market participant assumptions regarding the company's business plan requires incorporation of assumptions regarding the amounts, pricing and timing of future capital needs and stock and option awards.
- 13.70** A scenario analysis by its nature focuses on discrete future values at the time of exit, the achievement of which may be dependent upon future financing rounds and share-based awards. In such cases, the investor should consider the nature, amount and timing of anticipated future dilution in its allocation of future exit values.
- 13.71** For valuation methods that do not explicitly incorporate future financing rounds such as the OPM, anticipated future dilution is typically incorporated as a reduction in the current equity value, rather than being measured directly in the ownership percentages for the company's current equity interests, with two exceptions:
- If a future pre-exit financing event is probable and its key terms are ascertainable, this financing can be explicitly incorporated into the OPM

- Anticipated near term (within the next twelve months) compensatory stock and stock option awards can be incorporated into the OPM

13.72 When the future rounds of financing and share-based awards are expected to have a significant impact on the fair value of current investments, the fund may need to explicitly model the possible future events, capturing the impact of dilution using a scenario analysis or hybrid valuation model.

Changes to Anticipated Future Dilution

13.73 For purposes of the measurement of fair value at any particular date, there is no conceptual difference between the models used to incorporate updates to the anticipated future dilution and the original anticipated future dilution. The fund would measure fair value including adjustments to reflect new expectations by revising previous estimates of anticipated future dilution based on new information. As discussed herein, to the extent the new information suggests that future financing rounds may have an impact on the fair value of current investments, and the current model does not incorporate such future events, the fund may need to reconsider the usefulness of its model.

Impact of Share-based Awards

13.74 Share-based awards come in a variety of forms, including grants of shares, grants of options exercisable into shares, profits interests and carve-outs. These awards generally lead to anticipated future dilution, subject to seniority rights and liquidation preferences, reducing the fund's participation to the extent that the awards vest and the company's performance meets whatever strike price or other threshold is required. Analogous to the discussion herein with respect to future financing rounds, such existing and anticipated future awards should be considered in the measurement of the fair value of the fund's position as of a particular date, either by measuring the equity value net of the costs of such awards and then allocating that value to the current classes of equity, or by explicitly incorporating dilution in the percentage ownership. For companies with simple capital structures, the typical approach for incorporating the dilution impact of share-based awards is to measure the equity value as though the company were to be sold on the measurement date and then allocate the value considering the intrinsic value of the share-based awards.

Current Dilution

13.75 This type of dilution (also suffered by existing investors) is usually unanticipated, and results from the issuance of interests that are sold or granted at prices below fair value. Specific examples may include:

- Preferred shares with "sweeteners"
 - Liquidation preferences in excess of investment cost
 - Warrant coverage
 - Seniority provisions

- Options granted with rich terms that provide compensation that exceeds the value of expected services to be performed
- “Bundled” issuances that include both financial and non-financial terms

Summary

13.76 It is important to distinguish between transactions that result in current dilution, where new interests are issued below fair value and result in a loss in value to the previous classes of equity, and transactions that may appear to cause current dilution but that are actually sold or granted at fair value. Although anticipated future dilution is considered to be dilutive with respect to the future ownership percentage, it typically is not dilutive in the current sense. Unanticipated future dilution reflects a loss in value relative to original expectations, but has the same impact on current values as anticipated future dilution. Both unanticipated future dilution and current dilution may in fact be a consequence of negative developments, where the portfolio company’s value has declined relative to original expectations, and the current or prospective transaction is simply confirming the decline in value.

Options and Warrants, Convertible Notes, and Related Instruments

13.77 Options and warrants, convertible notes, and related instruments come in many forms, but share one key feature – their payoff value at exercise or maturity is contingent upon the value of another asset. The contingent nature of the payoff makes the measurement of fair value more complex. This section describes the types of options and related instruments that funds are most likely to encounter, and illustrates some of the commonly-used valuation methodologies for these instruments. Such instruments include:

- *Call option*: an instrument, usually free-standing or detachable, that provides the holder with the right, but not the obligation, to purchase an asset (referred to as an *underlying*, such as a share of stock) at a fixed price (referred to as an *exercise price* or a *strike price*) at any time during a contractually defined time period (an “American” call) or at the expiry of the time period (a “European” call). The difference between a call option and a warrant is that the exercise of an option is a transaction that does not involve the issuing company. No proceeds are received by the issuer, and no new shares of stock are issued.
- *Put option*: an instrument, usually free-standing, that provides the holder with the right, but not the obligation, to sell an asset (the underlying, such as a share of stock) at a fixed price during or at the expiry of a contractually defined time period. A put option may be with a third party or with the issuing company.
- *Warrant*: an instrument, usually free-standing or detachable, that provides the holder with the right, but not the obligation, to purchase an asset (the underlying, such as a share of stock) at a fixed price during a contractually defined time period (an “American” warrant) or at the expiry of the time period (a “European” warrant). The exercise of a warrant is a direct transaction with the issuing company, resulting in the issuance of new shares of stock in exchange for exercise proceeds.

- *Convertible note*: a debt instrument that also includes an option to convert the repayment obligation into an alternative instrument, typically the issuer's common stock. The terms of the convertible instrument establish the conversion price or ratio that dictate the number or value of shares to be received when the conversion is executed, and also may establish predetermined dates or defined events when conversion may or must take place.
- *Convertible preferred*: a preferred instrument that also includes an option to convert into an alternative instrument, typically the issuer's common stock. As with a convertible note, the terms of the instrument establish the rights. Convertible preferred often represents a significant fraction of the company's capital structure, and thus would more often be modeled using the approaches discussed in chapter 8, "Valuation of Equity Interests in Complex Capital Structures."
- *Convertible bridge notes or preferred that converts at a price that depends on a future financing*: a debt instrument or preferred instrument that converts at a price that depends on a future financing. These instruments are typically issued as bridge financing, when the portfolio company needs additional financing to reach the next milestone, but there is enough uncertainty associated with the milestone that the investors do not want to agree on a value at the financing date. For example, a biotech company that is a few months away from reaching the next clinical milestone knows that if the results are positive, the company will be able to raise the next round at a much higher valuation. In such a situation, the existing investors might agree to a bridge financing where they provide funding that will convert to the next round at a function of the next round price. For example, if the bridge financing is convertible into the next round of financing at 80% of the next round price, the payoff upon conversion would be 125% of the face value. Since these instruments do not have a fixed strike price, the payoff at maturity is not actually an option, and these instruments would typically be modeled using the approaches discussed in chapter 6, "Valuation of Debt Instruments."

This section discusses the valuation techniques that are most commonly used for valuing options, warrants, and convertible notes.

13.78 From a fund's perspective, options, warrants and convertible notes usually represent either an asset to be valued directly, or an obligation of a portfolio company that impacts the fund's measurement of the fair value of its investment in the portfolio company.

A fund may:

- hold these instruments directly, as stand-alone investments (asset)
- hold them directly, as components of a multi-instrument investment in a portfolio company (asset)
- hold investments that may be subject to dilution from options, warrants and convertibles held by others (reduction in asset value)

The fund would consider the unit of account for the investment and the significance of the options, warrants, convertible notes or related instruments to the overall investment in selecting an appropriate valuation model. For example, embedded features in convertible instruments would typically not need to be separately valued for investment companies,

although the features would be considered in the overall value of the investment.

As another example, in a situation where the fund and its co-investors all have options to invest more capital in the portfolio company at a fixed price, pro-rata with their current holdings, the existence of these options would have little impact on the value of the fund's aggregate equity holding; that is, without the options, the fund would hold a pro-rata interest in the portfolio company, and with the options, the fund still holds a pro-rata interest in the portfolio company.

- 13.79** Many instruments that are typically referred to as *call options* – for example, employee stock options, or “ESOs” – are in fact warrants as defined herein, due to the fact that the holder's exercise is a direct transaction with the issuer that results in the issuance of new shares. When (a) the underlying stock is publicly traded, and (b) the market is aware of the terms and conditions of the outstanding ESOs (or other warrant-like instruments), such instruments are often valued using Black-Scholes and other option pricing models, and do not need to be adjusted for the dilution resulting from the issuance of new shares at below-market prices. The assumption in these cases is that the observed market price of the underlying stock already anticipates the dilutive impact of warrant exercise.
- 13.80** If the market price of the underlying common stock does not anticipate the impact of warrants, for example, if the transaction has not yet been announced to the public markets, then the valuation model should incorporate adjustments for the dilution from the warrants. Likewise, if the issuing company is privately held, and the underlying stock has been valued without considering the dilutive impact, the selected warrant valuation model should include an adjustment for such dilution. A similar thought process should be applied to hybrid instruments such as convertible debt. The exercise of the option to convert debt to equity usually results in the creation of new shares, the dilutive impact of which may or may not be modeled in the current stock price.
- 13.81** Options, warrants, convertible notes, and related instruments come in two fundamental forms. The option-like feature may be included in a stand-alone instrument (for example, options and warrants), or embedded in a host instrument (for example, a convertible note). Valuation issues associated with each type of instruments are addressed in appendix B, paragraphs B.09.01–.09.17, “Valuation Issues – Stand-alone Option-like Instruments” and B.10.01–.10.16, “Valuation Issues – Convertible Instruments.”
- 13.82** Some funds routinely invest in warrants as part of the fund's investment approach (for example, BDCs who invest in debt plus warrants). Other funds may focus on investments in convertible notes, or may invest in convertible notes after investing significantly in other interests in the company. It is important to consider the facts and circumstances when valuing the fund's position. For example, for convertible notes, if the conversion feature is significantly in the money, it may be reasonable to look at the note on an as-converted basis. If the convertible note is significantly out of the money, it may be reasonable to look at it as a debt instrument. If the shares underlying the convertible note represent a small fraction of the shares held by the fund, then the value of the equity features associated with the convertible note may not be significant to the valuation of the fund's investment, and it may be reasonable to use a simplified approach to valuing the investment as a whole.

Contractual Rights (contingent consideration)

13.83 The proceeds received upon the sale of a business enterprise often comprise both certain amounts (which may be cash and non-cash), plus amounts contingent upon the occurrence of future events. This latter component arises from contractual rights contained in the sale agreement, and is generally referred to as an *earnout* or as contingent consideration.¹⁰ This contractual right to an earnout payment or contingent consideration should be evaluated as to whether it meets the definition of a financial instrument consistent with the guidance in FASB ASC 825. Where the definition of a financial instrument is met, the contractual right is an asset of the fund and its fair value would be reported consistent with the guidance in FASB ASC 946.

13.84 For investment companies, typical situations which give rise to the need to value such contractual rights include:

- a) Sale of the portfolio company – If a fund sells its investment in a portfolio company and contingent consideration is part of the transaction structure, an asset (or less frequently, an obligation) representing the contractual right will be held by the fund.
- b) Fund buys a portfolio company – For an investment company reporting pursuant to FASB ASC 946, the value of its portfolio investment may include (i.e., may be affected by and adjusted for) the fair value of the contractual obligation to pay future contingent consideration.
- c) The portfolio company makes an acquisition – If a portfolio company makes an acquisition which includes an earnout, the contingent future payments would be an obligation of the portfolio company, and this contractual obligation is considered in the valuation of investments in the portfolio company.

13.85 Earnout payoffs may be complex functions of future events that are uncertain and subject to risk. Earnouts are more frequently negotiated in transactions when there is disagreement or uncertainty with respect to the value of the portfolio company at the time of the sale.

13.86 From the perspective of the fund, the objective is to measure the impact of the earnout on the fair value of the investment in the portfolio company at inception and at each subsequent reporting date in accordance with FASB ASC 946. The valuation of these contractual rights should consider the expected cash flows given the contingent payment structure and the risk-adjusted rate of return appropriate to those cash flows. Valuation methodologies for measuring the fair value of contingent considerations are discussed in

¹⁰ In some circumstances, the buyers and sellers may negotiate an indemnity or clawback, where the sellers may need to repay the buyer part of the purchase price under certain conditions, most often from an escrow account. Indemnities and clawbacks would also be a form of contingent consideration, and would be considered in estimating the fair value of the escrow asset.

the Appraisal Foundation's guidance under development, *Valuation of Contingent Considerations*.¹¹

- 13.87** When measuring the value of investments in portfolio companies that have earnout obligations to the sellers from previous acquisitions, or that have earnout rights from previous divestitures, the fund must consider not only the overall value of the portfolio company based on its cash flows, but also the value of the earnout obligations or rights of the company. When measuring the value of the investment in the portfolio company, the fund should use internally consistent assumptions for the cash flows for the company and the expected cash flows for the earnout (considering for example the probability of meeting the milestones that trigger various earnout payments).

Private Fund Interests

NAV Practical Expedient

- 13.88** Fund-of-funds and other investors in private investment companies (private funds) are generally required to estimate the fair value of their interest in an underlying private fund at regular intervals for purposes of their own financial reporting, risk management, and fiduciary obligations. As a practical expedient to estimate fair value of a private fund interest, FASB ASC 820, Fair Value Measurement, permits the use of the investor's allocable portion of the private fund's net asset value (NAV) if the following conditions are met:

- the investment does not have a readily determinable fair value (as per FASB ASC 820-10-15-4(a))
- the investment is in an investment company within the scope of FASB ASC 946 or is an investment in a real estate fund for which it is industry practice to measure investment assets at fair value on a recurring basis and to issue financial statements that are consistent with the measurement principles in FASB ASC 946 (as per FASB ASC 820-10-15-4(b)); and
- the NAV is calculated in a manner consistent with the measurement principles of FASB ASC 946 (that is, all or substantially all underlying investments are reported at fair value) as of the measurement date (as per FASB ASC 820-10-35-59).

- 13.89** If a fund interest is actively traded on a securities exchange, it has a readily determinable fair value, which would preclude it from using the NAV practical expedient. The fund-of-funds may also consider whether the fund interest has a readily-determinable fair value in other situations, even if the fund interest is not actively traded. Fair value of such funds should be determined using the readily determinable fair value.

¹¹ As of the writing of this guide, the Appraisal Foundation is working on a project regarding the valuation of contingent consideration. The purpose of this project is to outline best practices in the valuation of contingent consideration for financial reporting purposes. Please refer to the Appraisal Foundation's website at www.appraisalfoundation.org for further information about this project and its status.

- 13.90** FASB ASC 820-10-35-60 notes that, if the NAV obtained from the investee is not as of the reporting entity's measurement date or is not calculated in a manner consistent with the measurement principles of FASB ASC 946, the reporting entity should consider whether an adjustment to the most recent NAV is necessary. The objective of any adjustment is to estimate a NAV for the investment that is calculated in a manner consistent with the measurement principles of FASB ASC 946 as of the reporting entity's measurement date.
- 13.91** Paragraphs 59–62 of FASB ASC 820-10-35 contain guidance for permitting the use of NAV as a practical expedient. However, consistent with the guidance in FASB ASC 820-10-35-62, if a decision has been made to sell a fund interest and the proceeds are expected to differ from NAV, then NAV should not be used to estimate fair value.
- 13.92** Net asset value for a private fund interest is measured as the summation of the reported fair value of the private fund's investments plus other assets less liabilities and accrued incentive/carried interest allocations on the measurement date. Accrued incentive/carried interest allocations are determined based upon a hypothetical realization of the private fund's investments at their reported fair values on the measurement date. An investor in a private fund is then allocated a portion of the private fund's NAV either through a share or unit structure for unitized funds or through its partnership or member's interest in the case of limited partnerships or limited liability companies. How the NAV is allocated is typically governed by offering documents such as a private offering memorandum or partnership agreement of the investee fund.
- 13.93** An investor in a private fund may use reported NAV provided by the investee private fund manager as a practical expedient to estimate the fair value of their interest in the private fund if their allocable share of NAV is calculated in a manner consistent with the measurement principles of FASB ASC 946 as of the investor's measurement date. The investor's management is responsible for the valuation assertions in its financial statements and, thus, has a responsibility to determine if the underlying private fund has calculated NAV at the measurement date consistent with the measurement principles of FASB ASC 946.
- 13.94** AICPA Technical Questions and Answers Sections 2220.18-28¹² provide further guidance on the NAV practical expedient. Section 2220.19 addresses that the unit of account for interests in a private fund is the interest in the private fund itself and not the underlying investments within the investee fund. Section 2220.20 provides guidance as to considerations management can use in evaluating whether the underlying private fund's NAV is calculated consistent with the measurement principles of FASB ASC 946. Sections 2220.21-23 pertain to topics related to adjustments to reported NAVs. Section 2220.28 addresses the definition of readily determinable fair value and its interaction with the NAV practical expedient.

¹² AICPA Technical Questions and Answers Sections 2220.18–.28 are intended to assist reporting entities when implementing the provisions of FASB ASC 820 to estimate the fair value of their investments in certain entities that calculate net asset value. Sections 2220.18–.28 apply to investments that are required to be measured and reported at fair value and are within the scope of paragraphs 4–5 of FASB ASC 820-10-15.

Alternatives to the NAV Practical Expedient

- 13.95** If an investor in a private fund chooses not to or is not able to use the NAV practical expedient, it needs to estimate fair value using other approaches. Approaches commonly used include a market approach using secondary market transactions or bids from qualified buyers and an income approach using a discounted cash flow method. AICPA TIS Section 2220.27, “Determining Fair Value of Investments When the Practical Expedient Is Not Used or Is Not Available,” also suggests factors to consider when estimating fair value in those circumstances.

Secondary Transactions in an Interest in a Private Fund

- 13.96** In some cases investors in a private fund will sell their position in the private fund to another investor (which is commonly referred to as a *secondary transaction*). Use of a price from a secondary transaction requires considerable judgement in order to determine whether or not it is indicative of fair value.
- 13.97** In some cases the availability of data with respect to secondary transactions is limited. As of the writing of this guide, external market transactions for a private fund interests have typically been infrequent and opaque. Secondary prices are negotiated and may be influenced by factors beyond fair value and based on assumptions and return expectations that are often unique to the counterparties. In addition, specific transactions may not be determined to be orderly and any pricing data available may not be current. Finally, secondary transactions may include baskets of interests in different private funds which may obscure availability of pricing information for an individual fund interest.
- 13.98** When applying the market approach to value an interest in a private fund, see the concepts illustrated in paragraphs 5.06 and 5.52–.55.

Discounted Cash Flows

- 13.99** In situations in which an investor decides not to use or cannot use NAV as a practical expedient to estimate fair value, another valuation technique available to estimate the fair value of a private fund interest would be a discounted cash flow method. In this method, all expected future cash flows for the private fund are discounted at an appropriate discount rate. When applying the income approach to value an interest in a private fund, see the concepts illustrated in paragraphs 5.56–.63.

Chapter 14

Frequently Asked Questions

Introduction

14.01 In the course of preparing the guide, the task force has received numerous questions from funds, auditors and valuation practitioners. This chapter attempts to address the questions that arose most frequently. The questions are loosely grouped by topic, as follows:

- Material Covered in the Guide
 - Q&A 14.1: Material Covered in the Guide
 - Q&A 14.2: Intended Use of the Guide
 - Q&A 14.3: Managing Complexity of the Valuation Process
 - Q&A 14.4: Getting Started
 - Q&A 14.5: Impact of the Guide
 - Q&A 14.6: Consistency with Other Guidance
 - Q&A 14.7: Measurements at Net Asset Value
- Internal Controls over Valuations
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 - Q&A 14.9: Mandatory Performance Framework
 - Q&A 14.10: Third Party Opinions
 - Q&A 14.11: Inherent Uncertainty of the Estimate
 - Q&A 14.12: Conservatism in Fair Value Estimates
 - Q&A 14.13: Bid / Ask Spread Considerations
- Value Changes over Time
 - Q&A 14.14: Frequency of Preparation of Fair Value Estimates
 - Q&A 14.15: Carrying Value at Cost
 - Q&A 14.16: Value Changes over Time
 - Q&A 14.17: Adjusting the Value of the Portfolio from Period to Period
 - Q&A 14.18: Portfolio Company Financial Information Used in the Valuation Analysis
 - Q&A 14.19: Shelf Life of Value-Related Information
- Reconciliation with Other Valuations
 - Q&A 14.20: Reliance on IRC 409A or FASB ASC 718 Reports
 - Q&A 14.21: Differences in Fair Value Estimates
 - Q&A 14.22: Valuation Diligence on Club Deals
- Considering Risks and Outcomes associated with Contractual Rights
 - Q&A 14.23: Valuation of an Equity Interest with a Put Right
 - Q&A 14.24: Valuation of Contingent Consideration
 - Q&A 14.25: Valuation of an Interest in a Company that Has Filed for Bankruptcy

- Valuing Businesses for the Purpose of Valuing Investments
 - Q&A 14.26: Earnings Normalization
 - Q&A 14.27: Incorporating Stock-Based Compensation into the Valuation
 - Q&A 14.28: Treatment of Synergies
 - Q&A 14.29: Considering Multiple Lines of Business within a Single Portfolio Company
 - Q&A 14.30: Using Data from Guideline Public Companies when the Portfolio Company Is Not Really Comparable
 - Q&A 14.31: Alternatives to using Guideline Public Companies when the Portfolio Company Is Not Really Comparable
 - Q&A 14.32: Addressing the Lag in Available Financial Information for the Guideline Public Companies as of the Measurement Date
 - Q&A 14.33: Incorporating Discounts or Premia into the Enterprise Value
 - Q&A 14.34: Private Equity Cost of Capital
 - Q&A 14.35: Company-Specific Assumptions
- Calibration
 - Q&A 14.36: Holding Value at Cost
 - Q&A 14.37: Insider financing rounds
 - Q&A 14.38: Tranched financing
 - Q&A 14.39: Considering Transaction Costs in Calibration
 - Q&A 14.40: Calibrating to a Transaction with Assumed Debt
 - Q&A 14.41: Calibrating to a Transaction with a Contingent Tax Liability
 - Q&A 14.42: Offers to Purchase
 - Q&A 14.43: Repayment of Debt Investments
 - Q&A 14.44: Calibration to Broker Transactions in Public Company Securities
- Value of Debt for the Purpose of Valuing Equity
 - Q&A 14.45: Valuing Debt for the Purpose of Valuing Equity Using the Book Value or Face Value
 - Q&A 14.46: Valuing Debt for the Purpose of Valuing Equity Using the Traded Price
 - Q&A 14.47: Using the Zero Coupon Bond Equivalent for Including Debt in the Option Pricing Method
 - Q&A 14.48: Impact of Estimating Equity Value Using a Value of Debt Lower than Face Value When Both the Enterprise Value and the Value of Debt Have Declined
 - Q&A 14.49: Impact of Estimating Equity Value Using the Value of Debt for the Purpose of Valuing Equity When the Enterprise Value Has Remained Unchanged

- Valuing Equity Interests in Complex Capital Structures
 - Q&A 14.50: Use of the PWERM
 - Q&A 14.51: Use of the Current Value Method
 - Q&A 14.52: Use of the Option Pricing Method
 - Q&A 14.53: Different Values for Earlier and Later Round Investments
 - Q&A 14.54: Value of Liquidation Preferences
 - Q&A 14.55: Treatment of Equity Interests with Different Liquidation Preferences
 - Q&A 14.56: Allocation Methods When Using Post-Money Value
 - Q&A 14.57: Using the OPM as the Fund’s Standard Approach for All Portfolio Companies
 - Q&A 14.58: Two Funds Under the Same Investment Company Manager Hold Different Classes of Equity
 - Q&A 14.59: Measuring Volatility for Early-Stage Companies
- Control & Marketability
 - Q&A 14.60: Basis of Value – Control Considerations when Measuring Enterprise Value
 - Q&A 14.61: Valuation Approaches and Controlling and Non-Controlling Interests
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 - Q&A 14.63: Illiquidity and Marketability of Investments
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- Information to be Considered in the Valuation
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 - Q&A 14.70: Post-valuation Event (Customer Financial Condition)—Assessment as Known or Knowable
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 - Q&A 14.72: Expected Financing—Effect on Valuation
 - Q&A 14.73: Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability with Observable Prices or Quotes Has Significantly Decreased – Applicability of Guidance
 - Q&A 14.74: Measuring Fair Value When the Volume or Level of Activity for an Asset or Liability with Observable Prices or Quotes Has Significantly Decreased –Objective of a Fair Value Measurement
 - Q&A 14.75: Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability with Observable Prices or Quotes Has Significantly Decreased – Rules of Thumb or Quantitative Thresholds

- Remeasurements Relating to Changes in Portfolio Company Financials
 - Q&A 14.76: Remeasurements relating to Restatements of the Portfolio Company's Financial Statements
 - Q&A 14.77: Remeasurements Relating to Accounting Changes

Material Covered in the Guide

Q&A 14.1: Material Covered in the Guide

Q: How may the material in this guide be useful to me?

A: Although the guide is non-authoritative, the guide was designed to provide investment companies, auditors and valuation specialists with tools to address some of the key challenges that arise in valuing investments for this industry. FASB ASC 820 requires informed judgment, and applying judgment when valuing illiquid investments with unobservable inputs requires careful consideration of the facts and circumstances. Therefore, this guide is extensive, providing technical material and examples that show how judgment may be applied in many situations. Users may focus on the guidance and examples that are most relevant to their investments. As always, an entity's specific situation should be considered when applying the guidance or examples in valuing a given investment.

FASB ASC 820 is a principles-based standard that defines fair value and provides a framework for estimating fair value, but does not provide detailed guidance addressing the specific issues that arise in estimating fair value for this industry. In addition, because the focus of the analysis is to estimate the fair value of a specific investment in a portfolio company, rather than the fair value of the portfolio company as a whole, these valuations involve nuances that may be less familiar to some practitioners. Thus, the guide includes some fairly dense technical accounting and valuation material, as well as more practical examples and case studies. The task force recommends using the technical material for reference when developing or improving the fund's valuation policies, or for valuation specialists and auditors when assessing the fund's valuations.

The task force believes that in order to make an appropriate assessment of the fair value of an investment in a portfolio company, a PE or VC fund needs to start with a thorough understanding of the key facts and assumptions that drive the valuation. The specific facts and circumstances would generally dictate the types of valuation approaches and adjustments that would be required to properly estimate the fair value of the position.

The guide is intended to be user-friendly with examples that demonstrate the concepts discussed in the chapters and illustrate the way these concepts apply to real situations faced by management, valuation specialists and auditors.

Q&A 14.2: Intended Use of the Guide

Q: Do I need to know everything in this guide in order to be able to perform valuations for this industry?

A: The guide includes material that is relevant for management, valuation specialists and auditors in understanding key issues relating to valuations for this industry. However, given the breadth of the guide, some of the material may not be relevant to your situation – for example, practitioners who work primarily with venture capital investments may not need to consider chapter 6, “Valuation of Debt Instruments,” and practitioners who work primarily with LBOs may not need to consider chapter 8, “Valuation of Equity Interests in Complex Capital Structures.” You may also want to consider the examples in appendix C to see how judgment may be applied in selecting valuation methodologies and assumptions in specific situations that are most like the types of investments made in your funds.

Certain of the technical accounting material in the guide will be most relevant for those who need to develop or improve the fund’s valuation policies and support that these policies are compliant with FASB ASC 820; and certain of the technical valuation material will be most relevant in providing better support for the fund’s fair value estimates rather than resulting in a significant change to those estimates. Nevertheless, the task force believes that the best practices described in this guide will be helpful to the industry.

Q&A 14.3: Managing Complexity of the Valuation Process

Q: I am a preparer at a mid-sized venture capital fund. I am concerned that given the size of this guide and the extensive discussion of so many technical issues and valuation techniques, the workload for preparing my fund’s financial statements will be significantly greater following the publication of this guide. In addition, I am concerned that the documentation my auditors will now require will be considerably greater. Has the task force considered these factors in developing this guide?

A: This guide does not promulgate new requirements; instead, it describes what is required by GAAP and explains best practices for complying with those requirements. The complexity of the valuation issues discussed in this guide reflects the level of judgment required in estimating fair value in accordance with FASB ASC 820. The specific facts and circumstances for each investment matter. Many of the judgments that management is required to make may be qualitative in nature, rather than quantitative, and these qualitative judgments are important in assessing fair value – in some fact patterns, the valuation models employed will be relatively simple, with management judgment of appropriately supported qualitative factors comprising much of the analysis and documentation. The case studies in appendix C illustrate several situations where the preparers and practitioners have developed reasonable fair value estimates without undue burden. The task force believes that the extensive discussion in the guide will help to educate those who need to understand the valuations prepared by venture capital and private equity funds about the complexity of this industry and the inherent estimation uncertainty associated with these estimates.

Q&A 14.4: Getting Started

Q: As a practitioner who is new to the private equity and venture capital industry, how do I best use the guide to get up to speed on the issues that are most critical to valuing my portfolio?

A: A practitioner new to this industry might first review chapters that cover broad industry issues: chapter 1, “Overview of the Private Equity and Venture Capital Industry and Its Investment Strategies,” chapter 3, “Market Participant Assumptions,” chapter 4 “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments,” and chapter 10, “Calibration,” will be particularly beneficial. These chapters provide context for more specific examples. The general valuation chapters provide an overview of the valuation methodologies that are appropriate for valuing these types of investments, and provide details that may be relevant to a current need, such as chapter 6, “Valuation of Debt Instruments.”

The examples in appendix C illustrate a broad spectrum of situations, covering different investment strategies (e.g. LBO, early-stage venture capital investments and BDCs) and industries (e.g. real estate, biotech, software, cleantech, oil & gas, medical devices, among others; including capital intensive and low capital growth businesses). The introduction to the appendix provides a summary to assist practitioners in quickly identifying those examples that are most relevant for a specific valuation need. However, the task force recommends that a practitioner read through all examples that are at all similar to investments in the portfolio. For example, if the current valuation need is in the venture capital space, a practitioner would benefit from a familiarity with all venture capital examples in this appendix. This strategy for understanding the guide will prevent the practitioner from focusing excessively on a current situation or solution that may create unanticipated issues at subsequent measurement dates.

Finally, practitioners are encouraged to review chapter 11, “Backtesting,” and chapter 12, “Factors to Consider At or Near a Transaction Date,” for additional examples addressing commonly encountered issues for this industry, as well as chapter 13, “Special Topics,” for less frequently encountered situations, and this chapter 14, “Frequently Asked Questions,” for general guidance.

Q&A 14.5: Impact of the Guide

Q: What are some of the key areas where the guide may help clarify best practices for this industry?

A: Valuing investments for this industry can present unique challenges, and this guide was designed to help practitioners address these challenges. The task force recommends the following approaches for certain key areas:

- Consider the time horizon of the investment when estimating the fair value of an equity investment, considering the value of debt for the purpose of valuing equity and the value of any NOLs, even when valuing a controlling position (chapter 4)

- For debt investments with warrant coverage, allocate value between the debt and warrants to report the fair value as separate line items on the schedule of investments (chapter 4)
- Estimate the value of the enterprise for the purpose of valuing equity interests in the enterprise without consideration of premia or discounts (Q&A 14.33 and 14.60–.66, as well as paragraphs 2.26, 3.17, 3.22, 4.16, 5.42, 5.51, 7.02–.09, 9.01–.17, and 10.28–.30.)
- Estimate the fair value of debt and the value of debt for the purpose of valuing equity consistent with the cash flows, the market yield, and the remaining expected term (chapter 6, especially paragraphs 6.19–.31 regarding the value of debt for the purpose of valuing equity)
- For equity investments in portfolio companies with complex capital structures, consider alternative methodologies or apply appropriate adjustments when using the option pricing method (OPM) to allocate value between senior and junior preferred classes of equity (paragraphs 8.42–.45)
- Estimate value by calibrating the selected valuation model to any recent transactions and then update these assumptions for changes between the transaction date and the measurement date (chapter 10)
- Perform backtesting to improve the fund’s valuation processes (chapter 11)
- Exclude transaction costs from the fair value of investments on day 2; that is, the fair value immediately after the transaction close may be less than the capitalized cost (chapter 12)

Q&A 14.6: Consistency with Other Guidance

Q: Is there other AICPA guidance that already addresses some of the issues that arise for this industry? Is this guide consistent with the previously published guidance?

A: The AICPA addressed certain issues related to the unit of account and the implications for valuation of fund investments in two Technical Information Statements (TIS) published in 2013. AICPA TIS 6910.34, *Application of the Notion of Value Maximization for Measuring Fair Value of Debt and Controlling Equity Positions*, indicates that when a fund invests in both debt and equity, it may be appropriate to value the positions based on the aggregate enterprise value, if that is the way that market participants acting in their economic best interest would transact. The aggregate value should then be allocated to the specific units of account using a reasonable and consistent methodology. The TIS does not address how to estimate the fair value of debt as a standalone instrument or how to think about debt in the context of valuing equity. This guide addresses these questions. Please see chapter 4, “Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments,” especially examples 5 and 7, and chapter 6, “Valuation of Debt Instruments,” for further discussion.

AICPA TIS 6910.35, *Assessing Control When Measuring Fair Value*, indicates that when control of an entity is shared across multiple funds, it would not be appropriate to aggregate positions across the funds when estimating the fair value of the positions held in each fund; however, market participants transacting in the position held by one of the funds may still consider the value associated with being part of the controlling group. This guide further explains that in such situations, the funds who in aggregate have control of the business will typically make the initial investment at the same price and exit the investment at the same price, and there will typically be other rights, such as tag along rights, associated with the positions that are designed to keep the investors' interests aligned. Thus, the task force recommends valuing these interests by measuring the enterprise value considering the cash flows and required rate of return from the perspective of the investors who in aggregate have control of the business. Please see chapter 9, "Control and Marketability," especially paragraphs 9.04–.11, for further discussion.

In 2013, the AICPA also published the Accounting and Valuation Guide, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*. The 2013 guide covers the valuation of equity interests in similar types of companies and presents many of the same valuation techniques, but focuses on minority equity interests that may be issued as stock-based compensation. The current guide focuses on the accounting and valuation for portfolio company investments from the perspective of private equity and venture capital and other investment funds.

Q&A 14.7: Measurements at Net Asset Value

Q: As an investor in a private equity or venture capital fund, how do I determine the fair value of my limited partner interest?

A: Limited partner investors in funds, including fund of fund investors, typically may use the practical expedient to measure fair value as the net asset value (NAV) reported by the fund that holds the underlying investments. If the practical expedient does not apply, they may also consider other methods, as discussed in paragraphs 13.95–.99 in the "Private Fund Interests" section. AICPA TIS 2220.18–.28 also address these issues. The purpose of the guide, however, is to provide insights and examples that will assist funds in measuring the fair value of portfolio company investments in accordance with FASB ASC 946, using the fair value principles from FASB ASC 820. Therefore, the task force has focused on valuation techniques that apply to valuing portfolio company investments for funds that are required to report their investments at fair value.

Internal Controls over Valuations

Q&A 14.8: Internal Control Policies & Procedures for Valuations

Q: Under what circumstances are internal control policies that cover valuation practices required?

A: Internal control policies and procedures for valuation may be required by auditing standards, applicable rules and regulations, or the organizational documents of the fund. For example, for any private funds that are audited in accordance with AICPA guidance, as indicated in AU-C200.A2 of the Clarified Auditing Standards of the AICPA, management has responsibility “for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.” As discussed in AU-C540.A21 of the Clarified Auditing Standards of the AICPA:

The preparation and fair presentation of the financial statements also requires management to establish financial reporting processes for making accounting estimates, including adequate internal control. Such processes include the following:

- Selecting appropriate accounting policies and prescribing estimation processes, including appropriate estimation or valuation techniques, including, when applicable, the appropriate models
- Developing or identifying relevant data and assumptions that affect accounting estimates
- Periodically reviewing the circumstances that give rise to the accounting estimates and reestimating the accounting estimates as necessary

In addition, under rule 206(4)–7 of the Investment Advisers Act of 1940 (“Advisers Act”), it is unlawful for an investment adviser registered with the SEC to provide investment advice unless the adviser has adopted and implemented written policies and procedures reasonably designed to prevent violation of the Advisers Act by the adviser or any of its supervised persons. Such written policies and procedures should address, among other things, processes to value client holdings and assess fees based on those holdings, and consider and address the risks associated with any conflicts. In many cases, such written policies and procedures call for valuing client holdings in accordance with US GAAP.

Management should carefully consider what requirements are applicable to them and how they will fulfill such obligations. Typically, in order to fulfill management’s financial reporting responsibilities, management needs to have internal controls that include policies and processes for estimating fair value consistent with FASB ASC 820.

Q&A 14.9: Mandatory Performance Framework

Q: I am responsible for the valuation process for my fund. Am I, or others involved with fair value estimates at my fund, required to follow the guidance set forth in the Mandatory Performance Framework (MPF) and Application of the MPF (collectively

referred to as *MPF documents*) that were developed in conjunction with the Certified in Entity and Intangible Valuations (CEIV) credential¹?

A: The CEIV credential was jointly developed by AICPA, ASA and RICS. According to the “Scope of Adoption and Adherence by Valuation Professionals” section of the MPF

The framework and the Application of the MPF were designed to be used by *all* valuation professionals who provide valuation services for financial reporting purposes.

As further discussed in the “Scope of Adoption and Adherence by Valuation Professionals” section of the MPF, following the MPF is required for holders of the CEIV credential. For those without the CEIV credential, following the MPF is not required, but is considered best practice. Specifically, the MPF (page vi) states:

- *Valuation professionals with the CEIV credential.* It is mandatory for valuation professionals who have earned the CEIV credential to adhere to the framework and the Application of the MPF (collectively referred to as ‘MPF documents’) when engaged by (a) an entity required to submit registration statements or filings to the SEC or (b) a privately held entity that prepares and issues financial statements in accordance with US GAAP, to perform a valuation of a business, business interest, intangible asset, certain liabilities, and inventory used to support management’s assertions made in financial statements issued for financial reporting purposes.
- *Valuation professionals without the CEIV credential.* As noted previously, the framework and the Application of the MPF were designed for use by all valuation professionals. Although only those valuation professionals who have the CEIV credential are required to adhere to the MPF documents, the Performance Requirements Work Stream believes that adhering to the MPF documents should be considered best practice by valuation professionals who do not have the CEIV credential and who perform valuation of a business, business interest, intangible asset, certain liabilities, and inventory used to support management assertions made in financial statements issued for financial reporting purposes.

The MPF applies to valuations of businesses, business interests, intangible assets, certain liabilities, and inventory that are prepared for financial reporting purposes.

One of the core purposes of the MPF was to describe the degree and types of documentation that would be appropriate to support a valuation analysis. Specifically, the “Extent of Documentation Requirements” section of the MPF states:

2.10 The valuation professional must support the conclusion of value with sufficient detail to provide a clear and well-organized link from the data and

¹ As of the writing of this guide, a second certification, Certified in Valuation of Financial Instruments (“CVFI”), was under development. The CVFI credential was also expected to follow the MPF framework with respect to appropriate documentation of valuation analyses.

information gathered to the final conclusion of value presented in the final valuation report. An experienced professional (note: who may or may not be a valuation professional) reviewing the final valuation report who has no involvement with the engagement must be able to do the following:

- 2.10.1 Understand the purpose, nature, extent, and results of the valuation procedures performed.
- 2.10.2 Understand all approaches and methods used in the valuation analysis and, if applicable, understand why commonly used approaches and methods were not used in the valuation analysis.
- 2.10.3 Understand the inputs, judgments, and assumptions made and the rationale for their use.
- 2.10.4 Determine who performed the work and their qualifications (for example, valuation professional, subcontractor, management).
- 2.10.5 Identify the intended users of the valuation report.
- 2.10.6 Identify the sources and supporting data for the inputs, judgments, and assumptions made.
- 2.10.7 Identify the measurement date.

Additional information about the MPF and Application of the MPF is available at <https://www.aicpa.org/interestareas/fairvaluemeasurement/resources/mandatory-performance-framework.html>.

Q&A 14.10: Third Party Opinions

Q: Am I required to have a third-party valuation expert provide an opinion on my valuations?

A: Certain funds may have policies that require them to obtain third party opinions, or may have promised to obtain third party opinions in their limited partnership agreements or other governing documents. In addition, some funds may need to consider regulatory requirements such as the Alternative Investment Fund Managers Directive (AIFMD) from the European Union, or other global regulations. Thus, it may be advisable to consult counsel and your auditors when making this determination in your specific situation. Generally, however, there is no broad requirement that fair value measurements be performed by a third-party valuation expert. The task force recommends that valuations be performed by qualified professionals, who may be third parties or may be employed directly by the investment company manager. Moreover, even if a third-party valuation specialist is engaged, the fund is ultimately responsible for its valuation assertions.

Q&A 14.11: Inherent Uncertainty of the Estimate

Q: If I have one portfolio company that represents 80% of the value of my fund, but the range of the value for that investment is very wide, can I still issue GAAP-compliant financial statements?

A: Yes. It is important to remember that many portfolio company investments are illiquid, so there are no observable transactions on which to rely. It may still be years until the ultimate exit, and no one knows how the future will play out. The goal is to develop a reasonable valuation that provides limited partners with the information they need to track the fund's performance and make their own fair value determinations, rather than to pinpoint a perfect answer.

The inherent estimation uncertainty in certain circumstances may be quite high. There have been companies that went public at a revenue multiple of 45x and traded up to 120x on the same day. Similarly, during the financial crisis, certain debt instruments became illiquid with a significantly reduced volume of activity, with quoted bid prices as low as 20 and ask prices in the 70's. Calibration may be used to reduce estimation uncertainty, but only when relevant transactions are available. If investments with high estimation uncertainty represent a significant portion of the fund's assets, the inherent estimation uncertainty can easily exceed materiality for the fund.

Fair value reflects the fund's best estimate of the point in the range at which the investment would transact on the measurement date, and making this determination requires judgment. When the inherent estimation uncertainty is high, the key to supporting management's estimates is to combat biases by having a reasonable, consistent process for developing assumptions from period to period, considering the facts and circumstances and available relevant market data as of the measurement date.

Disclosures regarding these fair value estimates should be provided consistent with the requirements of FASB ASC 820, *Fair Value Measurement*, and FASB ASC 275, *Risks and Uncertainties*. As stated in FASB ASC 275-10-05-6, "If users understand better the inherent limitations on precision in financial statements, they will be better able to make decisions."

Q&A 14.12: Conservatism in Fair Value Estimates

Q: Is conservatism acceptable for fair value estimates?

A: No. The fund should choose its best estimate of the point in the range that is most representative of fair value under current market conditions, that is, the exit price at which the investment would transact in an orderly transaction between market participants on the measurement date.

Q&A 14.13: Bid / Ask Spread Considerations

Q: Where in the bid – ask range should we mark our investments? Would it be appropriate to use the bid (low), ask (high), midpoint, or some other point?

A: The fund should choose its best estimate of the point in the range that is most representative of fair value under current market conditions, that is, the exit price at which the investment would transact in an orderly transaction between market participants on the measurement date. Even though fair value is defined as an exit price, there is no requirement that the fund mark its investments at the bid price. Per FASB ASC 820-10-35-36C:

If an asset or a liability measured at fair value has a bid price and an ask price (for example, an input from a dealer market), the price within the bid-ask spread that is most representative of fair value in the circumstances shall be used to measure fair value regardless of where the input is categorized within the fair value hierarchy (that is, Level 1, 2, or 3). The use of bid prices for asset positions and ask prices for liability positions is permitted but is not required.

This guidance applies irrespective of where the measurements are categorized in the fair value hierarchy, and can be a useful concept for considering the negotiation dynamics that would influence the transaction price even for investments where a broker has not provided a quoted bid or ask. For example, if there are many investors who would like to invest in a given portfolio company, it may be appropriate to mark the investment closer to the ask price, whereas if the portfolio company is finding it challenging to raise additional capital, it may be more appropriate to mark the investment closer to the bid price.

Although measuring fair value within the bid-ask range considering the expected negotiation dynamics requires judgment, the guidance does not preclude using the midpoint or another specific pricing convention as a practical expedient. Per FASB ASC 820-10-35-36D:

This Topic does not preclude the use of mid-market pricing or other pricing conventions that are used by market participants as a practical expedient for fair value measurements within a bid-ask spread.

It is a best practice for the fund to choose a consistent approach for estimating fair value within the bid-ask spread for each type of investment, adjusting only if facts and circumstances support a change in approach.

Value Changes over Time

Q&A 14.14: Frequency of Preparation of Fair Value Estimates

Q: How frequently does the fund need to estimate fair value for its investments?

A: FASB ASC 946 requires that a fund report the fair value of its investments at every reporting period – typically, quarterly for most private equity and venture capital funds, and sometimes monthly or even daily for hedge funds.

Q&A 14.15: Carrying Value at Cost

Q: Is there a rule of thumb for a timeframe during which it is permissible to carry our investments at cost from the date of our initial investment (e.g., a one year safe harbor?).

A: No. Although in some cases, value may not change significantly over a short period of time, in other cases, value can change dramatically overnight. For example, the value of a biotech company may plummet or increase several times over based on an FDA decision, or valuations across an industry or across the market as a whole may shift rapidly due to market disruptions such as the drop in the price of oil in late 2014 or the financial crisis in the fall of 2008. The objective of the fair value measurement is to reflect the exit price for the investment at the measurement date. Calibration may be used to assess the inputs to the valuation model that are consistent with the entry price, provided that the transaction price reflects fair value at initial recognition, and then at later measurement dates, these inputs would then be updated to reflect company-specific progress and current market conditions, as discussed in chapter 10, “Calibration.”

Q&A 14.16: Value Changes over Time

Q: Do I accrete value over time, or hold value constant?

A: Neither. The value of a position may not change significantly from period to period, or it may change rapidly. However, value may not accrete smoothly. Instead, it would be appropriate to consider the changes in the portfolio company and changes in the markets from period to period, to estimate the price that market participants would pay for the asset as of the measurement date. Please see the sidebar following paragraph 5.93 for a discussion of how value may accrete between milestones.

Q&A 14.17: Adjusting the Value of the Portfolio from Period to Period

Q: If our fund of 20 investments has done a full valuation of our portfolio at year end, is it reasonable for us to just make adjustments for our interim GAAP statements based upon an adjustment relative to a benchmark index or overall market movement, or do we need to review each position at every measurement date?

A: Although market movements are one factor that drive changes in valuations, company-specific progress is a more important consideration for many private equity and venture capital investments. Furthermore, GAAP requires that each fund report the fair value of each position in the schedule of investments, rather than just reporting the NAV in aggregate. Therefore, if you are reporting your interim information on a GAAP basis, it is important to consider the movement in value for each position considering all the facts and circumstances rather than looking only at the overall change in the markets.

Q&A 14.18: Portfolio Company Financial Information Used in the Valuation Analysis

Q: Can I base my December 31 valuations on the portfolio company’s third quarter financials? In other words, can I report values using a one quarter lag?

A: The fair value measurement reflects the price that would be received to sell the asset in an orderly transaction at the measurement date, which in this case is the December 31 reporting date. However, you would base your valuation on the best information available to a market participant on the measurement date. Market participants transacting on the measurement date would generally not have the complete and final financial statements for the portfolio company through the measurement date. Instead, these market participants would likely rely on some interim financial information, adjusted based upon known events between the last completed set of financial statements for the portfolio company and the measurement date.

Q&A 14.19: Shelf Life of Value-Related Information

Q: My portfolio company completed a financing with a new investor for \$20 per share on January 31, 2X11. The portfolio company operates in an industry in which both pricing and demand for products have a history of volatility. For 2X11, the portfolio company forecasted a 30 percent growth rate in sales. Would the equity transaction on January 31, 2X11, be an appropriate indicator of the fair value of my equity position on March 31, 2X11?

A: Generally, no. In financial reporting, there is no bright line for estimating the shelf life of a valuation implied by a transaction price or valuation analysis. Instead, the shelf life of a valuation depends on the specific facts and circumstances and is inversely related to the number and significance of the events that have taken place since the valuation date. It is generally not considered reasonable to expect the value of a share of stock to have the same value that it had several months earlier, especially for an enterprise that experiences more volatility than a mature or zero-growth enterprise. However, the January 31, 2X11 transaction price combined with other objective and substantive evidence may assist the fund in estimating a fair value on March 31, 2X11. It may be appropriate to use the earlier valuation if no significant events that would affect the enterprise's value, such as milestones or progress toward a near-term IPO, have occurred during the intervening period. In short, when considering the appropriateness of using an earlier value indication, it is important to exercise professional judgment, considering changes in company specific and market factors occurring in the intervening period.

Reconciliation with Other Valuations

Q&A 14.20: Reliance on IRC 409A or FASB ASC 718 Reports

Q: Can I use the same value per share in valuing my preferred share investment as the value that the company got from its valuation report for purposes of documenting its common stock value for setting the strike price for options for IRC 409A and estimating the fair value of stock-based compensation for FASB ASC 718?

A: Probably not. When estimating the fair market value of common stock to support compliance with IRC 409A and when estimating the fair value of the common stock to be used for valuing the restricted stock or options issued in accordance with FASB ASC 718, portfolio company management and the company's independent

valuation specialist typically focus solely on the common stock that underlies the company's stock-based compensation. Although the valuation report may indicate a value for the various classes of equity via an allocation of a total equity value using an option pricing method (OPM) or via a probability-weighted expected return method (PWERM) considering future exit values discounted back to the valuation date, the preferred stock is typically not the focus of the report and the valuation may not consider various features of the preferred stock that would matter to market participants transacting in the preferred stock, but did not impact the value allocable to the common stock. Instead, the fund needs to make an independent assessment. Nevertheless, if the fund has access to valuation reports prepared for the portfolio company, it may be important for the fund to understand and be able to articulate the ways in which the valuations differ. See paragraphs 10.44–.47 for further discussion.

Q&A 14.21: Differences in Fair Value Estimates

Q: Why do valuations prepared for tax or other financial reporting purposes come up with different values?

A: Although value estimates developed for other purposes may have similar underpinnings as the fair value estimates developed for FASB ASC 946 following the principles of FASB ASC 820, the unit of account and other considerations specific to the measurement may be different, and therefore, the valuations performed for these different purposes may not necessarily result in the same value. For example, when valuing the interests within a portfolio company for FASB ASC 946, the fund may need to consider the rights associated with those specific interests, whereas when valuing the enterprise for testing goodwill impairment, the portfolio company would not need to consider the rights associated with the specific interests. This guide focuses on the valuation of portfolio company investments for entities that report fair value under FASB ASC 946.

Q&A 14.22: Valuation Diligence on Club Deals

Q: If a fund has an investment in a portfolio company in which other investment funds hold similar interests (for example, a “club deal”), is it required that the investment fund consider the fair value estimates of the other fund sponsors when determining the fair value of its position?

A: There is no requirement for the fund to undertake efforts to ascertain the fair value estimate of the other fund sponsors. However, if the fund becomes aware of another fund sponsor's valuation, it should consider the relevance and reliability of that information when determining its own fair value estimate. This information can be useful as it provides information about another market participant's perspective. The degree of consideration that the fund may give to the other fund's estimate of fair value will depend on the depth of understanding that the fund has with respect to the other valuation, including its ability to identify and validate the underlying assumptions upon which the other sponsor based its determination and the extent of comparability of the investment positions or alignment of interest of the sponsors.

While there is no requirement to seek this information, the task force believes that efforts to understand how other consortium members or investors with similar positions are valuing their investment and their rationale for their valuation estimates can provide the fund with valuable information in determining its own estimate of fair value. Of course, even closely aligned consortium members are usually under no obligation to share this information, their reporting process may involve different timelines for their determinations, and they may have adopted different valuation policies and procedures. Furthermore, it is the reporting entity's responsibility to make its own determination of the fair value of its holdings. As a result, it would generally not be anticipated that a fund would obtain or consider the valuations of other investors or consortium members in all instances.

Considering Risks and Outcomes associated with Contractual Rights

Q&A 14.23: Valuation of an Equity Interest with a Put Right

Q: If I have preferred shares that represent a 25% interest in a company and I have a right to put my shares to the controlling shareholder for the fund's cost plus a 15% IRR, do I need to evaluate the probability of being able to enforce that put right against the controlling shareholder before using the valuation implied by the put right as a "floor" on my valuation? Do I need to evaluate creditworthiness of the controlling shareholder? Do I need to evaluate whether the courts in the controlling shareholder's country of residence have a history of enforcing rights against their citizens in favor of foreign capital providers?

A: Yes, it is important to consider these factors. Market participants would consider these risks in assessing the price that they would pay for this position.

Q&A 14.24: Valuation of Contingent Consideration

Q: If my portfolio company is acquired and my fund becomes contractually entitled to a future payout contingent on the portfolio company's performance over the next few years, am I supposed to record a value for this contingent asset?

A: Yes. In this fact pattern, the contingent consideration is a contractual right to a future payment or series of payments, and therefore is an asset that the fund should record at fair value. Please see paragraphs 13.83–.87, for additional discussion.

Q&A 14.25: Valuation of an Interest in a Company that Has Filed for Bankruptcy

Q: If one of my portfolio companies files for bankruptcy, should I automatically value my position at zero?

A: No. A bankruptcy filing triggers a set of negotiations among the various classes of debt and equity in the portfolio company. At the end of these negotiations, the senior classes of equity may receive most or all of their face value, but junior classes of equity often also receive some consideration. To value a position in a business that has filed for bankruptcy, it is appropriate to assess the likely outcome or outcomes of a restructuring

considering the rights associated with the position, to develop an estimate of the expected payoff to the position, and then discount at the market participants' required rate of return considering the risks though the expected resolution.

Valuing Businesses for the Purpose of Valuing Investments

Q&A 14.26: Earnings Normalization

Q: Is it appropriate to value a business based on normalized earnings?

A: Market participants frequently consider the value of a business and its historical and projected earnings as inputs for valuing debt or equity instruments within a business, considering the loan-to-value ratio and EBITDA coverage ratios or other factors that indicate the portfolio company's credit risk for valuing debt instruments, and considering the value of equity after subtracting the value of debt for valuing equity interests. When making an investment in a portfolio company, market participants frequently use historical performance adjusted for one-off items to reflect the potential sustainable performance for the business, and thus, may consider normalized or pro-forma earnings in assessing the price to pay for the investment. The normalized or pro-forma earnings may be regarded as a proxy for the earnings that the business would have been able to generate without one-off items, rather than relying solely on a historical measure that does not correct for these factors or a forecasted measure that may incorporate more speculative growth assumptions. Therefore, it is reasonable to consider normalized earnings as one input to valuing a business. It is also important to consider the nature of the one-off items and how market participants would evaluate the potential risks and rewards for the investment when selecting the multiple. That is, the selected multiple would need to be commensurate with the normalized earnings metric (apples to apples), calibrating the multiple used with these normalized earnings to any recent transactions, and then considering how market participants would assess the normalized earnings and the changes in the multiple for future measurement dates, given the company's progress and changes in market conditions.

Q&A 14.27: Incorporating Stock-Based Compensation into the Valuation

Q: My fund typically sets up stock-based compensation plans for our portfolio companies. When valuing the business for the purpose of valuing our investments, what is the best approach for incorporating stock-based compensation?

A: Stock-based compensation is an important part of the total compensation package required to attract and retain employees, especially for privately-held businesses. A market participant acquiring the business or a position in the business would also assume that the business would need to pay the employees; therefore, the value that a market participant would pay for the enterprise would take into account the expected value of this compensation. This approach results in an enterprise value and corresponding equity value that is measured based on market participant expectations of the net impact of the stock-based compensation. The equity value measured net of the impact of the stock-based compensation may then be allocated to the various investor

interests and the already earned portion of the value of the management interests (that is, the intrinsic value).

As an example of one approach for addressing this issue, suppose that a fund bought a business for \$200 million, structuring the portfolio company as a limited liability company (LLC) where the investors held 100 percent of the Class A units. The portfolio company then issued Class B units as profits interests to the executives, allowing the executives to participate in 15% of the appreciation of the value of the business above \$200 million.

- On day 1, the value of the business that market participants typically would consider for valuing the Class A units would be \$200 million, and the valuation models would be calibrated to this value. When buying the business, any market participants would expect to provide some form of stock-based compensation, so the value of this stock-based compensation plan would be embedded in the calibrated multiple in the market approach and in the calibrated required rate of return in the income approach. The value of the Class A units would then be measured by subtracting only the intrinsic value of the Class B units, which on the measurement date was zero, since these units participate only on the upside.

In this approach, the fair value of the Class B units for financial reporting purposes for the portfolio company would be treated as incremental. Suppose that in this example, given the expected time to a liquidity event and the estimated volatility, the portfolio company estimated fair value of these units \$10 million. Treating this value as incremental would result in an equity value of \$210 million including these units. The higher equity value would be used in models for estimating the fair value of the stock based compensation. In this approach, the Class B represents the executives' "investment" in the business – the executives are investing their time in exchange for the expected value of \$10 million, knowing that they have the opportunity to earn a much higher payoff if the business is successful, but will receive nothing if it is not. The higher equity value would typically not be used in the approach market participants would consider for valuing the Class A units, since the value a third party would pay for the business would be only \$200 million, because market participants would assume that the business would need to pay the employees.

- A year later, suppose that the business had performed well and increased both historical and projected revenues and profits. The fund valued the business at \$260 million, consistent with the price that market participants would pay for 100 percent of the outstanding equity, considering market participant expectations of the net impact of the new stock-based compensation that they would assume that the business would need to issue post-transaction. The value of the Class A units would then be \$251 million, measured by subtracting only the intrinsic value of the Class B units, which on the measurement date would be \$9 million (15 percent of \$60 million), since these units participate only on the upside.

The fair value of the Class B units for financial reporting purposes for the portfolio company would be treated as incremental. In this example, given the expected time to

a liquidity event and the estimated volatility, the portfolio company estimated fair value of these units \$17 million, resulting in an equity value of \$268 million including these units. The additional \$8 million (\$17 million less the \$9 million intrinsic value of the Class B units) represents the executives' investment of time in the business.

Q&A 14.28: Treatment of Synergies

Q: How are synergies treated in developing fair value estimates?

A: FASB ASC 820 specifies that fair value is a market-based measurement, not an entity-specific value. Therefore, a fair value estimate would incorporate market participant synergies that would be available to a typical market participant, but exclude buyer-specific synergies that would be available to only one buyer. The rationale for excluding buyer-specific synergies is that it would be difficult for the seller to capture the value of these synergies in the negotiation process. Even if the buyer will benefit from certain synergies, the seller's next best alternative would not include this benefit unless similar synergies would be available to other market participants. Therefore, in theory, the negotiation dynamics between market participants with a typical degree of motivation (for example, where both parties have reasonable alternatives) would result in a price that excludes the value of any buyer-specific synergies.

For FASB ASC 946, the objective of the measurement is to value an interest in the business, rather than the business itself. Market participants transacting in an interest in the business would estimate the cash flows considering the company's plans under current ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the position acquired. Therefore, the valuation may consider cash flows that include company-specific synergies, such as plans for completing a roll-up or for international expansion or for other strategies that the company might execute, to the extent that market participants transacting in the interest would consider those synergies. These cash flows would be discounted at the investors' required rate of return considering the risk in the cash flows, calibrating to any recent transactions – that is, unless the transaction met other criteria that indicated that the transaction price was not fair value, it would not be appropriate for the inclusion of company-specific synergies to result in a gain on the investment on day one.

Negotiations for the sale of illiquid assets often involve not only unique buyer-specific synergies, but also unique seller-specific synergies. For example, if the buyer has a need for exactly the technology that the portfolio company has, and no other competing company can deliver that technology, the seller may be able to capture more of the synergy value in the negotiations than valuation theory would otherwise indicate. In such a situation, the combined business may have more value than the sum of the parts, and the fund may realize value from these synergies. When the portfolio company is approaching a liquidity event and the portfolio company has something unique to offer, it would be appropriate to consider market participant assumptions regarding the range of values that might be realized upon exit given the competitive sale dynamics, inclusive of the value that might result from these unique factors.

Q&A 14.29: Considering Multiple Lines of Business within a Single Portfolio Company

Q: How do I handle a portfolio company that has multiple divisions and multiple product lines? If I am using a market approach, do I need to look to guideline public companies that overlap in those sectors? If I am using the income approach, do I need to look at the WACC differently by sector?

A: Yes. In such a situation, to the extent that the different divisions within the portfolio company have different operational and growth characteristics and different risk profiles, it would be appropriate to perform separate valuations for the various divisions of the portfolio company, aggregating them and adjusting for shared costs. See paragraph 5.12 for a discussion of factors to consider in selecting guideline public companies.

Q&A 14.30: Using Data from Guideline Public Companies when the Portfolio Company Is Not Really Comparable

Q: I run market comparable analyses to value my portfolio companies. Given that none of the guideline public companies are exactly akin to my company, can I just use the average?

A: No, you need to consider how a market participant would view your portfolio company versus the guideline public companies, including factors such as growth potential, profitability, business model, etc. Please see paragraphs 5.10–.45, “Considerations in Applying the Guideline Public Company Method,” for a discussion of factors to consider in selecting guideline public companies, determining reasonable multiples to use, and deciding whether and how to adjust the multiples for comparability or to use pro-forma data for the portfolio company, or both, as appropriate. Further, as discussed in chapter 10, “Calibration,” it is important to calibrate the market multiples to any observable transactions, calculating the historical, projected and pro-forma multiples, as applicable, and then estimating the value at subsequent measurement dates by adjusting the multiples to take into account changes in the company and changes in the markets.

Q&A 14.31: Alternatives to using Guideline Public Companies when the Portfolio Company Is Not Really Comparable

Q: My portfolio company generates significant revenue, but is the first of its kind, and is not comparable to existing public companies. Do I have to use comps?

A: In this situation, public company information will be less relevant with regard to direct pricing information, such as revenue or EBITDA multiples. Calibration is the best approach for estimating the fair value of such companies. However, “comps” may still play an important indirect role in many areas: measuring market values to evaluate the change in the range of possible exit values relative to the original calibrated assumptions; evaluating the reasonableness of management estimates such as margins and growth rates; assessing the competitive environment for the portfolio company, the nature of possible acquirers, the scale that would be needed to complete an IPO, and many other factors that may be useful in the development of inputs to other valuation methods.

Q&A 14.32: Addressing the Lag in Available Financial Information for the Guideline Public Companies as of the Measurement Date

Q: When I estimate market multiples for the guideline public companies as of December 31st, the latest financial information for the guideline public companies will typically be September 30th. Is it reasonable to use that data?

A: Yes, it is reasonable to use the September 30th financial metrics for the guideline public companies, if that is the latest information available as of the measurement date. The multiples derived using this data would technically not be “last twelve months” multiples, but would be based on the December 31st market values divided by twelve month historical financial performance with a quarter lag. However, since market participants would consider the latest information available for the portfolio company, the financial metrics for the portfolio company and the selected multiples may then need to be adjusted consistent with market participant assumptions. See paragraphs 5.34–.35 for a discussion of relevant adjustments to guideline public company multiples and portfolio company data. To assess the relative performance of the portfolio company and the guideline public companies, it may be necessary to read industry news or analyst reports to understand what was happening for the guideline public companies in Q4.

Under normal circumstances, the Q4 financial metrics for the guideline public companies typically would not be reported until February or March, and therefore, this information would not be available as of the measurement date. However, when performing the valuation on an analysis date after the guideline public companies have reported their Q4 financials, some valuation practitioners will make use of this information, effectively assuming that the actual information, which was not available on the measurement date, is a good proxy for the information that was knowable as of the measurement date. This approach is reasonable to the extent that there were no major surprises in the Q4 results. If there was a surprise for one of the guideline public companies in Q4, then the stock price and corresponding multiple for that company would reflect only the information that was known or knowable as of the measurement date and, therefore, it would be necessary to estimate the multiple for that company considering expectations as of the measurement date.

Q&A 14.33: Incorporating Discounts or Premia into the Enterprise Value

Q: Should I be applying discounts or premia when estimating the fair value of the enterprise for the purpose of valuing investments?

A: Generally, no. The value of the enterprise used for valuing the instruments in the enterprise should reflect the cash flows under current ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the interest acquired, discounted at the required rate of return for the investors who in aggregate have control of the business. In some cases, this value may reflect a higher market multiple than the median or average of the selected guideline public companies. However, it is more appropriate to think of this difference as being attributable to the characteristics of the portfolio company (e.g. high growth, improving profitability, higher

leverage, potential for synergies at exit), rather than thinking of the multiple as being at a “premium” to some arbitrary measurement. In fact, in many cases, a portfolio company’s multiples might be higher than the peers relative to historical performance and lower than the peers relative to projected performance, reflecting the high risk in the projections. Calibration is the best approach for estimating the assumptions to be used in valuing portfolio company investments. Please see chapter 9, “Control and Marketability,” for further discussion.

Q&A 14.34: Private Equity Cost of Capital

Q: How do I determine my cost of capital for a private equity-backed portfolio company?

A: When using the income approach to value a business, you will need a calibrated valuation model that considers the cash flows for the business and the calibrated internal rate of return (IRR) that matches the transaction price. Therefore, at subsequent measurement dates, it would be appropriate to use the same calibrated model, updating the cash flows to reflect the company’s revised expectations and the cost of capital to reflect changes in the markets and changes in the company-specific risk. The most important factor in assessing the change in the cost of capital for the company is to understand the key drivers of risk in the cash flows and the changes in that risk between periods.

Q&A 14.35: Company-Specific Assumptions

Q: Is it appropriate to use company-specific assumptions when valuing an interest in an enterprise?

A: FASB ASC 820-10-20 defines fair value measurement for financial reporting as “the price that would be received to sell an asset or to transfer a liability in an orderly transaction between market participants at the measurement date.” Therefore, it is required to consider market participant assumptions. For portfolio company investments, the characteristics of the portfolio company, including its plans under current ownership, may generally set the context for the assumptions that market participants would make in valuing the investment. In particular, market participants investing in an interest in an enterprise would consider the portfolio company’s plans under current ownership, as modified given the degree of influence that the buyer would have over those plans considering the nature of the interest acquired, and the required rate of return for the investors who in aggregate have control of the business. Thus, in situations where market participants investing in the interest would have no ability to change the cash flows or capital structure or other plans of the business, market participant assumptions for the specific interest would be aligned with company-specific assumptions for the enterprise, through the expected liquidity event. That is, the company-specific assumptions for the enterprise, including assumptions regarding the cash flows and the expected capital structure through the liquidity event, would generally be consistent with the assumptions that a market participant investing in the fund’s interest would make in valuing that interest.

Another consideration in valuing portfolio company investments is that the fund may lack transparency into the specific assumptions that various market participants might use regarding the potential future outcomes for the business. As discussed in paragraph 4.30, FASB ASC 820-10-35-54A notes that a fair value measurement may consider a reporting entity's own assumptions about the investment if these are consistent with market participant assumptions. Therefore, the fund may begin with its own data or assumptions, but these assumptions should be adjusted if reasonably available information indicates that market participants would use different assumptions.

Calibration

Q&A 14.36: Holding Value at Cost

Q: My portfolio company isn't generating revenue yet. Can't I just leave it at cost since I don't know how the next round is going to price?

A: The objective of the fair value measurement is to reflect the exit price for the investment at the measurement date; thus, holding investments at cost would generally not be appropriate. Calibration may be used to assess the inputs to the valuation model that are consistent with the entry price, provided that the transaction price reflects fair value at initial recognition, and then at later measurement dates, these inputs would then be updated to reflect company-specific progress and current market conditions, as discussed in chapter 10, "Calibration." For pre-revenue companies, the key factors to consider in the valuation are what progress the company has made toward achieving its milestones. See paragraphs 13.39–.43, "Early Stage Companies With No Recent Financing Rounds," for further discussion.

Q&A 14.37: Insider financing rounds

Q: How should the valuation consider insider financing rounds when estimating the value of a portfolio company?

A: Insider financing rounds cannot be presumed to be at fair value, but the price may nonetheless reflect fair value if it was negotiated between the company and the investors. When assessing the implications of an insider financing round on the valuation, it is a best practice for the fund to consider the transaction dynamics to understand the negotiations and make the determination as to whether the transaction is at fair value, and if not, how the fair value would compare with the transaction price. See paragraphs 10.05–.09 for a discussion of factors to consider in assessing the relevance of an insider financing round in estimating fair value.

Q&A 14.38: Tranched financing

Q: The fund agreed to provide \$10 million in capital in two equal tranches, both at \$1 per share. We specified that we would contribute the additional \$5 million as long as the company met certain milestones. The company met the milestones as expected, and we contributed the additional capital. Should I increase the estimated fair value or hold it flat?

A: Tranched financing structures are often negotiated for development stage companies such as biotech companies, where the amount of capital needed or the time to reach the next major value inflection point is greater than the investors feel comfortable funding up front. In such a situation, the company and the investors want confidence that the company will have access to the full amount of capital needed to complete the current development tasks, but the investors also want to impose fiscal discipline and ensure that the company spends the money wisely. The milestones specified in these arrangements typically are agreed progress markers that show that the company is on track, but may not be significant drivers of value. Also, since failing to provide the agreed tranche capital is tantamount to forcing the company out of business, the investors typically will fund the next tranche as long as the company is making acceptable progress, irrespective of whether the company met the specified milestones. Therefore, agreeing to fund the next tranche does not necessarily mean that the company has grown in value or even that the value has stayed flat. To assess the fair value of the investment at the date that the tranche is funded, it would be appropriate to consider the pricing from the original tranched agreement and then update the value considering the changes in the markets and the changes in the company relative to the investors' original expectations.

Q&A 14.39: Considering Transaction Costs in Calibration

Q: In connection with a recent acquisition, in addition to the purchase price of \$100 million (\$20 million in primary capital and \$80 million to sellers in a secondary sale), the fund making the acquisition paid a finder's fee of \$500,000, the fund incurred legal, accounting and consultant fees of \$350,000 for due diligence and contract negotiation and the seller paid a brokerage fee of \$1,200,000. In addition, out of the \$20 million in capital being provided to the company, \$2.5 million is required to be paid to management to fund stay bonuses paid for services between signing and closing. Are any of these costs relevant in determining the initial fair value for purposes of calibration?

A: For purposes of calibration, the initial fair value is \$100 million. The fair value would exclude the finder's fee, due diligence fees, and the brokerage fee. The \$2.5 million in stay bonuses was included in the \$100 million purchase price, and therefore does not represent additional purchase consideration.

Q&A 14.40: Calibrating to a Transaction with Assumed Debt

Q: My fund just made an LBO acquisition of a real estate development company, where we assumed some favorable debt as part of the consideration. When determining the price paid in the acquisition, should we factor in the debt at its face value or its fair value? How should we calibrate our valuation models to the transaction?

A: In this transaction, the fund was allowed to assume the favorable debt (debt with a below market coupon), allowing the fund to finance the transaction at a lower cost than they would otherwise have had to pay. The consideration paid corresponds to the value of the equity interests of the portfolio company that the fund acquired. For future measurement dates, you may want to estimate the enterprise value and subtract the value of debt for the purpose of valuing equity. In that valuation approach, you would calibrate the valuation model to the enterprise value implied by the transaction, which includes the total equity value implied by the consideration paid plus the value of the favorable debt.

To estimate the total enterprise value, you would add the total equity value and the value of the debt. Since the debt had favorable terms, it would be optimal for market participants to retain the debt in place. Therefore, it would be appropriate to take into account the value of the favorable terms by calculating the enterprise value using the fair value of the debt, rather than its face value, par value or pay-off amount. The valuation model used to estimate the enterprise value at subsequent measurement dates would be calibrated to the total enterprise value implied by the transaction, and the assumptions used would be updated each period. The valuation model used to estimate the value of debt for the purpose of valuing equity would be used consistently and updated each period.

Q&A 14.41: Calibrating to a Transaction with a Contingent Tax Liability

Q: In a recent LBO transaction, the target company had tax exposure with a potential impact of up to \$11 million. The exposure related to a tax position for which no tax liability had been recorded on the target company's financial statements as of their most recent balance sheet date because the target company believed that it was unlikely that any additional payment would be owed. Given the current status of the tax examination, the tax counsel advised that the exposure could be extinguished in a settlement with the tax authorities for as little as \$1.25 million, including interest and penalties, but could range from between zero and \$15 million if the dispute continued through the appeal process. The seller provided an indemnity to the company to cover the exposure, but that indemnity expires in two years and the seller had limited resources with which to cover the higher end of the range of outcomes. Does the estimated value of the target company's assumed exposure need to be included in determining the price paid for the company for purposes of calibration?

A: The purpose of the fund's analysis is to value the investment in the target company. In calculating the enterprise value and the corresponding value of the fund's investment in the context of an LBO transaction for calibration purposes, it would be appropriate to consider the liabilities assumed, including exposures for which the target had not

recognized a liability, at their fair value. In estimating the fair value of the assumed liabilities, it is important to consider all relevant facts and circumstances. The facts considered in the question suggest that the target company would have the opportunity to settle the tax exposure during a time frame that would be covered by the indemnity provided by the seller and in an amount (\$1.25 million) that was within the seller's ability to pay. Thus, settling the tax liability as soon as possible would be the fund's optimal strategy, minimizing both counterparty credit risk and the risk of a worse outcome. Accordingly, these facts suggest that the net fair value of the assumed liability was *de minimis*, and therefore the fund considered the value of the investment without adjustment for this liability.

Q&A 14.42: Offers to Purchase

Q: Does an offer or a nonbinding letter of intent constitute fair value?

A: Probably not, since some uncertainty still exists. The first step is to consider whether the offer is realistic and will serve as the starting point for negotiations, and what degree of relevance it has as an indication of value. If the two parties are in the process of negotiations, the next step is to consider what adjustments to the price would be expected between the offer or letter of intent and the signing. The adjusted offer price would then be weighted alongside the value that would be expected to be realized if the transaction falls through. The adjustments and weighting applied would be a function of various factors including the conditions associated with the offer (e.g. financing contingencies), stage of due diligence, regulatory approvals, and so on.

Q&A 14.43: Repayment of Debt Investments

Q: Does debt that is subsequently paid off at par after the valuation date equate to par on the valuation date?

A: On the valuation date, the value of the debt can be modeled as the cash flows through the expected repayment discounted at the market yield. If market participants know that the debt is likely to be repaid at par within a relatively short timeframe, the value is likely to be close to par, but could be above or below par if the coupon that will be received over the time to repayment is above or below market, given the risks of the debt instrument.

Q&A 14.44: Calibration to Broker Transactions in Public Company Securities

Q: We hold 10.0 million unrestricted shares of a public company which has approximately 500,000 shares traded a day on the NYSE. On the measurement date, we received a bid from a broker to sell 2.5 million shares. We chose not to sell because the broker's bid for the block trade included a 6% discount to the closing price. Because we thought that the discount was too high, relative to the 4% discount we sold shares for in our previous block trade, we did not execute this trade. Would the value of our position under GAAP be based upon the discount of 4%, 6% or would it be based solely on P*Q?

A: Since the securities are identical to securities traded in an active market, the fair value of the investment should be measured as $P \times Q$. Although calibration is required whenever a transaction price reflects fair value at initial recognition, one of the characteristics that may indicate that a transaction price may not be fair value at initial recognition is if the unit of account does not match. As discussed in paragraph 13.03, FASB ASC 820-10-35-44 in effect prescribes the unit of account for assets comprising instruments that are traded in an active market to be the individual instrument. Therefore, even though the fund completed a trade at a discount of 4% and obtained a bid for another trade at a discount of 6%, the fair value of the securities should be measured as $P \times Q$.

Value of Debt for the Purpose of Valuing Equity

Q&A 14.45: Valuing Debt for the Purpose of Valuing Equity Using the Book Value or Face Value

Q: When estimating debt value for the purpose of valuing equity interests in the enterprise, are there circumstances when the value of debt for the purpose of valuing equity will equal the book value or face value of debt?

A: Because the cash flows to equity are the residual after paying the contractual coupon for the debt, but the cost of capital is measured using the current market yield for the debt, the value of debt for the purpose of valuing equity would be measured considering the market yield for the debt, given current market conditions. Thus, the value of debt for the purpose of valuing equity will not necessarily equal its book value or face value. In some cases, however, the value of debt for the purpose of valuing equity will approximate its book value or the face value. Consider the following examples:

- If the debt was issued in an arm's-length transaction on the measurement date, the value of debt for the purpose of valuing equity can be assumed to approximate its book value. Note that the book value of debt is measured net of its original issue discount, so the book value of debt may not be the same as its face value.
- If the debt is prepayable and carries an above-market coupon, it would generally be optimal for the company to pay back the debt early, and the value of debt for the purpose of valuing equity can be assumed to approximate the payoff amount. Note that the payoff amount for the debt is measured based on the face value plus any prepayment penalty and accrued interest, so the payoff amount for the debt may not be the same as its book value or face value.
- If the holders of the debt may demand repayment at a change of control, and a change of control is imminent, the value of debt for the purpose of valuing equity can be assumed to approximate the payoff amount.

See paragraphs 6.19–.31, “Value of Debt for the Purpose of Valuing Equity,” for further discussion.

Q&A 14.46: Valuing Debt for the Purpose of Valuing Equity Using the Traded Price

Q: When estimating equity value for the purpose of valuing equity interests in the enterprise, are there circumstances when it is appropriate to use the traded price of debt as the value of debt for the purpose of valuing equity?

A: The traded price for the debt on the measurement date provides a good indication of the fair value of debt when the debt is the unit of account and provides a good indication of the required market yield for the debt, given its expected cash flows (through maturity or through the expected call or put date). When valuing equity interests in the enterprise, however, the value of debt for the purpose of valuing equity would be considered from the point of view of a market participant buying an equity interest in the enterprise rather than a market participant buying debt. The fair value of debt for the purpose of valuing debt reflects the market clearing price for a transaction in a position in the debt, rather than the market clearing price for a transaction in 100 percent of the debt. Since the market participants transacting in the equity cannot be assured of being able to realize the value differential between the fair value of debt and the required payoff for the debt, these market participants may consider a different value for the debt for the purpose of valuing equity, consistent with their required rate of return given the risks and illiquidity of the equity position.

For example, if the debt must be repaid at a change of control, and a change of control is likely to occur prior to the maturity of the debt, the value of the debt for the purpose of valuing the equity interests would assume repayment at that change of control, rather than assuming the debt will be held to maturity. In addition, if the due diligence process for the equity transaction would reveal information that the debt markets do not know, then that information would be considered in estimating the value of debt for the purpose of valuing the equity interests. Note that the fair value of debt may also incorporate assumptions regarding the likelihood of early repayment upon a change of control or other information known to the market participants transacting in the debt, to the extent that market participants transacting in the debt would consider this information. See paragraphs 6.19–.31, “Value of Debt for the Purpose of Valuing Equity,” for further discussion.

Q&A 14.47: Using the Zero Coupon Bond Equivalent for Including Debt in the Option Pricing Method

Q: For a complex capital structure for an enterprise that includes debt, it is possible to estimate the value of the equity interests using the option pricing method (OPM), either by allocating equity with a levered volatility or by allocating enterprise value using asset volatility and including debt in the model with a breakpoint equal to its zero coupon bond equivalent. In the latter approach, how should the zero coupon bond equivalent be estimated?

A: Because debt typically includes covenants and has interim cash coupons, in most cases, it is best to estimate the value of the debt for the purpose of valuing equity using the yield method, as described in paragraphs 6.09–.18. The zero coupon bond equivalent

for the debt is the future payoff amount for the debt, with no interim coupons, that has the same present value as the actual expected cash flows for the debt discounted at the market yield. Incorporating the zero-coupon bond equivalent into an OPM model results in the model value for the debt equaling the value of debt for the purpose of valuing equity, and therefore, using this value avoids distorting the overall equity value. As discussed in paragraphs 8.42–.45 and 8.48(c), however, the OPM model does not adequately capture the ability for the investors who in aggregate have control of the enterprise to accelerate or delay the liquidity event for the portfolio company depending on the company's performance and market conditions as the exit approaches, nor does it capture the actual negotiation dynamics between the holders of the senior and junior classes of equity in a low value exit. Therefore, when allocating value to various interests using the OPM, the task force recommends that to the extent possible, the value of the liquidation preferences for interests that are senior to the class of equity that will control the timing of exit be modeled separately, and that the volatility for the remaining allocable value be adjusted for the leverage from the debt as well as any liquidation preferences excluded from the OPM. Please see paragraphs 8.42–.45 for further discussion of the challenges in using OPM to allocate value between senior and junior claims on the enterprise value.

Q&A 14.48: Impact of Estimating Equity Value Using a Value of Debt Lower than Face Value When Both the Enterprise Value and the Value of Debt Have Declined

Q: On March 31, 2X11, the fund acquired an enterprise for \$100 million, using 75 percent debt with a term requiring repayment at par upon a change of control. One year later, the enterprise value had fallen by 25 percent, and the fair value of debt based on quoted prices had fallen to 80 percent of par. How should I value the equity?

A: In this situation, the equity holders may benefit from allowing time for the enterprise value to recover before the liquidity event. Thus, even though selling the entire enterprise on the measurement date would result in no value to equity, the equity interests in the enterprise still have value. In a transaction, the fund estimated that it would be able to repurchase the debt at a negotiated value somewhere between the traded price of 80% of par and a repayment at 90% of par. The value of equity would be calculated as follows:

Equity = Enterprise value less value of debt for the purpose of valuing equity

= 75% of original enterprise value less 80 – 90% of original debt value
(based on the expected negotiated value for paying off the debt)

= 75% of original enterprise value less 80 – 90% of 75% of the original
enterprise value (since the face value of the debt was 75% of the original
enterprise value)

= 75% of original enterprise value less 60– 67.5% of original enterprise
value (80 – 90% * 75%)

= 7.5 – 15% of original enterprise value

Thus, the value of equity is now 7.5 – 15 percent of the original enterprise value, compared with 25 percent at the initial transaction date: a 40 to 70 percent decline in value. The change in the value of the debt and equity is illustrated as follows:

	<i>Estimated Fair Value as of March 31, 20X1</i>	<i>Estimated Fair Value as of March 31, 20X2</i>	<i>Change in Estimated Fair Value</i>	<i>Percent Change in Estimated Fair Value</i>
Enterprise value	\$100	\$75	(\$25)	–25%
Less: value of debt for the purpose of valuing equity	75	60 to 67.5	(7.5 to 15)	–10% to – 20%
Fair value of equity	\$25	\$7.5 to 15	(\$10 to 17.5)	–40% to – 70%

Q&A 14.49: Impact of Estimating Equity Value Using the Value of Debt for the Purpose of Valuing Equity When the Enterprise Value Has Remained Unchanged

Q: On March 31, 2X11, the fund acquired an enterprise using 75 percent debt. One year later, the goodwill impairment analysis shows that fair value of the enterprise has remained unchanged, but the traded price for the debt has fallen to 90 percent of par. What is the value of equity?

A: Two general types of situations may lead to a decline in the fair value of debt for an enterprise:

- If the enterprise performance is worse than expected, then the credit risk increases, leading to an increase in the cost of debt.
- If debt markets become more risk averse or interest rates rise, the cost of debt may rise even if the enterprise performance is unchanged.

Typically, in both of these situations, the enterprise value will also decline. If the enterprise is not performing well, the enterprise value will fall, and if the cost of capital rises, the enterprise value will fall. However, the example specified that the goodwill impairment analysis shows that the enterprise value (measured on a controlling basis for goodwill impairment purposes) stayed the same. Using this enterprise value and subtracting the fair value of debt would imply that the value of equity has increased over the intervening year, even though the debt value has fallen. Mathematically, this situation can occur only if the cost of equity has declined, or the company's performance has actually improved significantly but the debt markets have not recognized this improvement.

In certain economic climates, the market yields for high-leverage or high-risk debt may increase even when the market yields for lower-leverage, lower-risk debt stay the same or decline. Thus, if the enterprise is overleveraged compared to the norms for the industry, the company-specific cost of capital over the time horizon of the investment may be higher than the cost of capital used in estimating the fair value of the enterprise for

goodwill impairment. In that case, it may be possible that the goodwill analysis will show that the fair value of the enterprise has remained unchanged, even though the enterprise value for the purpose of valuing the interests in the enterprise has declined. Therefore, it is important to be cognizant of this difference when estimating the fair value of the equity interests within a portfolio company. When thinking about the change in equity value from one period to the next, the equity value used for valuing the equity interests in the enterprise most often would not be expected to rise when the fair value of debt has fallen.

Valuing Equity Interests in Complex Capital Structures

Q&A 14.50: Use of the PWERM

Q: The AICPA Accounting and Valuation Guide, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, uses the term “PWERM” for “Probability-Weighted Expected Return Method”— why don’t I see that term in this guide?

A: To better reflect the terminology used by market participants in the industry and the broader range of application, this guide uses the term “scenario analysis” for this approach, rather than PWERM. The purpose of this guide is to help investment companies estimate the fair value of their portfolio company investments, consistent with market participant assumptions. Market participants in this industry will often consider the market opportunity and expected future value for a portfolio company in a successful exit scenario, and assess whether the potential return on investment is sufficient given the risks. This approach may consider one scenario or multiple scenarios, depending on whether there are multiple scenarios that will return value to some or all of the classes of equity. This approach is appropriate for both early stage and later stage companies, as long as the analysis is calibrated to the most recent financing, updated for changes in the company and the markets since the transaction date. Please see chapter 8, “Valuation of Equity Interests in Complex Capital Structures” for further discussion.

Q&A 14.51: Use of the Current Value Method

Q: My fund has control of the portfolio company and could sell the company if we wanted. Should I use Current Value Method to value my interests?

A: It depends. If the fund’s interests have seniority over the other interests in the capital structure, and the fund has the right to choose to sell the company on the measurement date, then the value that could be realized in a current sale of the company would be a lower bound on the value of the fund’s investment. For example, if the fund has a participating preferred stock, but management interests also participate on the upside, the additional time value that the management interests could realize if the company value increases would not be considered to be dilutive to the investor interests. In this situation, the enterprise value would be measured net of the expected time value of stock-based compensation.

In other situations, the CVM may not capture gains or losses that have occurred since the financing date. For example, if the fund has a convertible instrument and the value of the

company has increased since the financing date, the CVM may miss the increase in value attributable to the increased likelihood of high value exits where the instrument will convert. If the fund's interests have seniority but the fund does not have the right to sell the company on the measurement date, the CVM would generally not be a reasonable approach. For example, if the value of the company has declined since the financing date, the CVM will miss the decline in value attributable to the increased likelihood of low value exits, where the instrument will not recover its full liquidation preference.

Note that even when the fund has control or in aggregate shares control with other investors in the senior class of equity, the fund still may not have the right to trigger a sale of the company without the consent of the other preferred investors. The other classes of preferred may have the right to approve or block certain actions, voting as a class. Thus, it is important to understand the control rights available to each class of equity and assess the best interest of each class when considering the expected timing of exit.

In simple capital structures, it would be reasonable to allocate the enterprise value by directly estimating the value of any debt and debt-like preferred stock using the yield method, subtracting those values from the total enterprise value, then allocating the residual equity value pro rata to the common stock, as discussed in chapter 7 "Valuation of Equity Interests in Simple Capital Structures." The yield method for valuing debt and debt-like preferred stock is a forward-looking method, not a form of the CVM.

In complex capital structures where market participants would assume that the liquidation preferences would have no impact on the ultimate payoffs received, it would be reasonable to allocate the equity value pro-rata to the interests based on their as-converted values or common stock equivalents. This method would be considered to be simplified scenario analysis as described in paragraphs 8.21–.23.

Q&A 14.52: Use of the Option Pricing Method

Q: This guide discusses several situations where the OPM is not the best approach for allocating value to the investor interests – especially if the distribution of outcomes is bimodal, or when considering differences in seniority between various classes of preferred. In these situations, why is it still reasonable to use the option pricing method to estimate value for the management interests issued as compensation?

A: Selecting a valuation methodology that is appropriate for the specific interests that are the subject of a valuation is a matter of judgment. The option pricing method is a widely accepted methodology for allocating equity value among multiple classes of equity for an enterprise with a complex capital structure, and also is often used to infer a total value for the enterprise by calibrating to a transaction price. Like all valuation methodologies, however, it makes certain simplifying assumptions:

- It does not include the dilution impacts of any additional financings, nor the dilution impacts of options and warrants that may be issued as the company progresses toward a future liquidity event.

- It can be problematic when potential enterprise values at time of exit are skewed (for example, when there are substantial risks of failure), or when some preferred investors have seniority or outsized liquidation preferences relative the size of their investment (for example, when the company has raised a late round financing that guarantees a 2x return for the investors, but market participants still value the earlier rounds on an as-converted basis; or when the company negotiates seniority to entice new investors, but the new investors do not control the timing of exit).
- It assumes that future outcomes can be modeled using a lognormal distribution, and is sensitive to certain key assumptions, such as the volatility assumption, that are not readily subject to contemporaneous or subsequent validation.
- It generally does not account for the right and ability of one or more of the classes of preferred equity to control the timing of exit, which can limit the downside risk for senior preferred, if the senior classes of equity have control, or can allow more time for value to recover from a downturn, if the junior classes of equity have control.

Consequently, depending on specific facts and circumstances, the option pricing method may be less representative of market participant assumptions than scenario-based methods when valuing investments in preferred equity. Nevertheless, the method does have a number of advantages that make it more frequently relevant for the valuation of management interests issued for compensation purposes:

- Option pricing methods are particularly applicable for the valuation of assets that do not begin participating until another threshold is met (for example, the repayment of a liquidation preference for the preferred stock), where the value of the subject interest is in the “tail of distribution” (for example, common stock interests). The liquidation preference acts as a strike price, and the management interests begin participating only after this strike price is met.
- Once key inputs such as volatility, time to exit, and contractual rights and preferences are identified, the valuation and allocation process is relatively straightforward and well understood.
- The OPM is a good model of the distribution of future outcomes for later stage companies, in situations where the portfolio company does not require significant additional rounds of financing, and the expectations of future returns through the date of exit are normally distributed.
- Even for early stage companies, the OPM may be more relevant than bimodal scenario-based methods for valuing management interests, since bimodal models or hybrid models for early stage companies may produce unreasonably high values for common (approximately equivalent to preferred, since all classes may have the same values in both scenarios). That is, the OPM may better represent market participant assumptions for transactions in the common equity, since the

common equity holders would not have the right to participate in subsequent rounds of financing, and have little transparency and no influence over the subsequent rounds of financing or the timing of the ultimate exit.

- Even in situations where future rounds are anticipated, the liquidation preference granted to current investors serves as a proxy for those future preferences, since the common participates only on the upside. Further, the next round of financing could be an up round (higher preference), or down round (usually senior), and in either case, these new preferences may effectively replace the value and protection of the existing round, from the perspective of the common equity holders. The value of the management interests, in the tail of the distribution, is unaffected by whether the modeled liquidation preference really reflects the liquidation preference from earlier rounds or later rounds of financing; however, the new rounds of financing will have a significant impact on the value of the previous preferred classes.
- OPM is often the most appropriate method for valuing management interests when specific future liquidity events are difficult to forecast. Scenario-based methods require more unobservable inputs, and it is harder to appropriately model low probability, option-like payoffs. Therefore, the use of the OPM may be more appropriate for valuing management interests in situations in which the enterprise has many choices and alternatives available, and the enterprise's value depends on how well it follows an uncharted path through the various possible opportunities and challenges.

The task force recommends considering the facts and circumstances when selecting the most appropriate methodology for valuing the debt or equity interests that are the subject of the valuation. This guide focuses on the valuation of portfolio company investments of venture capital and private equity funds and other investment companies. For discussion of accounting and valuation issues relating to stock-based compensation for privately-held companies, please see the AICPA Accounting and Valuation Guide, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*.

Q&A 14.53: Different Values for Earlier and Later Round Investments

Q: Would you expect all investors to measure the value of a previous investment in a venture portfolio company which has a recent round of financing involving third-party investors at the value resulting from that round of financing?

A: It is each fund's responsibility to make its own fair value determination for its investment, given the interests it holds. If the rights of the interests are similar or the expected distribution of outcomes is bimodal, it is common practice for venture capital investors to estimate that the fair value of early rounds of financing would equal the transaction price for the latest round. However, as time passes and more rounds of financing are completed, the rights associated with newer rounds of financing may begin to deviate more from the earlier rounds, and the likelihood of a mid-value exit may increase. In those cases it would be common for the investors to have different

perspectives on value based on differences in assumptions relating to the distribution of future exits, the associated payoffs to each class of equity, and risk. Furthermore, even if the recent round of financing is relatively insignificant in relation to an investor's overall position in the portfolio company, it may have invested in that round of financing based on its overall perspective on the value of its total position, as opposed to that indicated solely by the most recent round of financing. Such different perspectives illustrate the significant degree of estimation uncertainty that exists for certain venture capital investments.

Q&A 14.54: Value of Liquidation Preferences

Q: There are many circumstances illustrated in the guide in which liquidation preferences are considered to have no value, and the fair values of the various equity interests are estimated based on the as-converted values. If the liquidation preferences don't matter, why do funds spend so much time negotiating them?

A: Private equity and venture capital investments routinely include a 1x liquidation preference, whether or not they expect the downside protection to have any economic value. Failing to negotiate a liquidation preference when it is customary and available would not be in the fund's best interest. However, because venture capital-backed companies typically require several rounds of financing in order to build a substantial enterprise and achieve a high valuation, the liquidation preferences for early rounds of financing are unlikely to have a direct economic impact. Instead, liquidation preferences tend to ensure that the participants in the most recent round of financing will have the most senior and potentially the greatest share of the total value, giving them influence over the nature of future financings and the ultimate exit transaction. The ability to exercise that influence has the most importance in situations where the company has not achieved its intended objectives – that is, when the company is approaching a low to mid-value exit. In short, liquidation preferences matter when they matter.

Q&A 14.55: Treatment of Equity Interests with Different Liquidation Preferences

Q: How should the valuation appropriately capture the fair value of higher ranking (senior) and lower ranking (junior) classes of equity?

A: As numerous examples in this guide illustrate, in some situations, seniority (or lack thereof) will have a significant impact on the value of an equity interest, while in other situations, seniority may have little or no effect on value. At very early stages, the expected outcomes may be “bimodal,” such that all equity interests are expected to have similar values if the enterprise achieves success, and similar (\$0) values if the enterprise fails. At the other end of the spectrum, as some successful enterprises approach an exit event, market participants may assume with near certainty that the enterprise will exit at a high value in which all classes of equity will convert and share equally. In either of these cases, seniority will have little impact on fair value. For the many situations between these two extremes, however, where the distribution of potential outcomes includes scenarios in which the senior classes of equity will benefit from contractual rights and preferences that are superior to those of the junior classes of equity, it would be

appropriate to use a valuation method that is designed to capture such differences. Please see chapter 8, “Valuation of Equity Interests in Complex Capital Structures” for a discussion of these methods.

Q&A 14.56: Allocation Methods When Using Post-Money Value

Q: I just completed a Series C financing for one of my portfolio companies, where the pre-money value was \$80 million with 16 million shares outstanding, and the financing raised \$20 million in primary capital for 4 million shares at a price of \$5 per share. If I’m using the post-money value of \$100 million to support my fair value estimate, does it matter how I allocate that value to my Series A and Series B shares?

A: The post-money value assumes that the various classes of equity have the same value, and therefore, it is most commonly used with a simplified scenario analysis where market participants would assume that the liquidation preferences have little to no value. As discussed previously, sometimes liquidation preferences matter, and the values of different classes of equity may vary significantly. In such cases, it would be appropriate to apply an allocation method that captures such differences. Furthermore, it is important for the equity value used in the analysis to be consistent with the selected allocation methodology. It would not be appropriate to use a post-money value in an OPM, since the OPM inherently assumes that the various classes of equity have different values. A relative-value scenario analysis begins with the fully-diluted value for the equity (consistent with the post-money value, updated for changes in value since the financing date), and then applies adjustments to estimate the fair value of the earlier rounds of financing relative to the latest round. A full scenario analysis considers future exit values rather than relying directly on the post-money value.

Q&A 14.57: Using the OPM as the Fund’s Standard Approach for All Portfolio Companies

Q: I typically use OPM to value my investments in all of my portfolio companies. Do I ever need to consider other approaches?

A: As discussed in chapter 8, “Valuation of Equity Interests in Complex Capital Structures” there are several possible approaches for valuing equity interests in complex capital structures, and the option pricing method is appropriate in certain circumstances. However, as discussed in paragraphs 8.42–.45, there are other circumstances when some of the simplifying assumptions in the OPM fail to capture the negotiation dynamics between classes of equity and the ability of the investors who in aggregate have control of the business to determine the nature and timing of the ultimate exit event. In such cases, it would be necessary to make adjustments to the OPM to capture these factors or to consider other methods.

Q&A 14.58: Two Funds Under the Same Investment Company Manager Hold Different Classes of Equity

Q: I am an investment manager and have two funds that are invested in the same portfolio company – an older fund that holds Series A and Series B, and a newer fund that holds Series C? How should I value my position?

A: As discussed in paragraph 4.13, the unit of account for the investments would be the position held within each reporting entity, not the aggregate position that you manage. The valuation of both investments would consider the company's plans under current ownership, given the way in which the investors who in aggregate have control of the business would maximize value, as discussed in paragraph 9.05. As the investment manager for both funds, if you have influence over decisions that would maximize the value for all three classes of equity, then you would consider your ability to influence the company's plans to the benefit of both funds. However, you would still need to estimate the fair value for the older fund's investment in Series A and Series B separately from the newer fund's investment in Series C. Please see chapter 8, "Valuation of Equity Interests in Complex Capital Structures" for a discussion of valuation methodologies that may be appropriate for valuing investments in companies with complex capital structures.

Q&A 14.59: Measuring Volatility for Early-Stage Companies

Q: An early-stage company makes an innovative product that is used for environmentally friendly construction. The company's only competitor is BigCo, a highly diversified business with a \$20 billion market cap. The fund needs to estimate the volatility for purpose of valuing the warrants it holds in the company. Is it appropriate to use BigCo as a guideline public company for measuring volatility?

A: No. Because BigCo is a large, highly diversified business, its overall performance is driven by successes in some product lines balanced by failures in others. Higher diversification leads to lower volatility. In contrast, for an early-stage company with only one product, the company's overall performance is driven by the success or failure of that single product. Therefore, it is more appropriate to select guideline companies that may not be direct competitors but that are more similar in size and level of diversification. Since there are no truly comparable guideline public companies for early-stage companies, it may also be appropriate to adjust the volatility to account for differences between the portfolio company and the selected guideline companies, considering the expected distribution of future exit values. This adjustment may result in an estimated volatility that is outside the observed range, reflecting the risk of these types of businesses.

Control and Marketability

Q&A 14.60: Basis of Value – Control Considerations when Measuring Enterprise Value

Q: When valuing private company interests where there are no observed transactions, how is "control" considered in the valuation process? Should the value of the enterprise reflect a controlling or non-controlling basis?

A: Generally, the value of the enterprise should reflect assumptions that are consistent with the company's plans under current ownership, given the way in which the investors who in aggregate have control of the business would maximize value, as discussed in paragraph 9.05. In many cases, this enterprise value will be consistent with the enterprise value measured on a controlling basis. However, it would generally not be appropriate to

estimate the enterprise value without considering control and then apply a control premium. The market multiples used in a market approach and the discount rate used in an income approach would not be based mechanically on guideline company data, but instead would be adjusted to reflect the portfolio company's growth, profitability and risk when compared with the guideline public companies. As discussed in chapter 10, "Calibration," calibration should be used to ensure that the valuation inputs are consistent with any relevant observed transactions.

Q&A 14.61: Valuation Approaches and Controlling and Non-Controlling Interests

Q: When valuing private company interests where there are no observed transactions, how should the valuation approach differ when valuing non-controlling (minority) interests versus controlling interests?

A: As discussed in paragraph 9.05, the value of the enterprise used as an input to estimating the fair value of the interests in the enterprise should reflect assumptions that are consistent with the company's plans under current ownership, given the way in which the investors who in aggregate have control of the business would maximize value. This enterprise value would be used as the input for valuing both non-controlling (minority) interests and controlling interests. The fund would then consider whether any additional adjustments are needed. When the investors' interests are aligned and the fund has the information rights needed to allow market participants to perform reasonable and customary due diligence on the investment, it would typically not be necessary to adjust the value of the minority interest. In other situations, as discussed in paragraph 9.32, after allocating the equity value to the various interests within the portfolio company or assessing the discount rate for an interest considering its economic rights, it might be appropriate to apply a discount to the fund's interests, to the extent needed to capture the incremental rate of return, if any, that investors would demand given the information rights and other non-economic rights associated with these interests.

Q&A 14.62: Applying Discounts for Lack of Marketability to the Total Equity Value

Q: Is it appropriate to apply a discount for lack of marketability to the total equity value of the enterprise?

A: A discount for lack of marketability reflects an adjustment to the calculated values from the model to reflect differences in the value of specific interests that are not otherwise captured by the model, considering the principal market for those specific interests. Therefore, it generally would not be appropriate to apply a discount for lack of marketability to the total equity value.

Q&A 14.63: Illiquidity and Marketability of Investments

Q: My fund holds an investment in a private portfolio company. Should this investment be considered marketable from a valuation perspective? How should the illiquidity and marketability of the shares be considered when valuing the investment? Also, should I adjust for illiquidity when estimating the total equity value by calibrating to a transaction?

A: As discussed in paragraph 9.16, a typical investment in a private portfolio company is marketable (a market exists) but illiquid (the market is not active). The task force recommends that for the purpose of valuing equity interests in the enterprise, the value of the enterprise should be measured considering the cash flows under current ownership, as modified by the degree of influence that the buyer would have over those plans considering the nature of the interest acquired, and the required rate of return for the investors who in aggregate have control of the business. Thus, for valuation purposes, interests held by the investors who in aggregate have control of the business² would be considered as marketable as the enterprise measured on this basis.

In some cases, there will be certain investors who do not have the same information and control rights as the investors who in aggregate have control of the business. To the extent that the lack of these features would limit access to the same principal market, it would be appropriate to consider these interests to be less marketable.

When solving for the equity value implied by a transaction, if the transaction includes information rights and control features consistent with those held by the investors who in aggregate have control of the business, no adjustment would be needed. If the transaction is for a small interest that does not include these features, then adjustments to the price may be considered. See paragraphs 10.31–.43, "Inferring Value From Transactions in a Private Company's Instruments," for more discussion of this issue.

Q&A 14.64: Basis of Valuation

Q: When valuing an equity interest held by our fund, should we value the business on a controlling basis or a minority basis?

A: Historical valuation practice has been to estimate enterprise value on a controlling or minority basis and on a marketable or non-marketable basis, using premia and discounts to adjust from one basis to another. The task force recommends that a better practice for estimating enterprise value for the purpose of valuing the instruments in the enterprise is to consider the cash flows under current ownership, as modified by the degree of influence the market participant would have given the interest acquired, and the required rate of return for the investors who in aggregate have control of the business. That is, the task force recommends estimating the enterprise value directly, rather than applying premia or discounts relative to some arbitrary or formulaic starting point. Calibration should be used to estimate the enterprise value consistent with any recent transactions, as long as the transaction price represents fair value at initial recognition.

² These investors typically have the ability to decide the timing of additional financings and the ultimate liquidity event. In addition, these investors typically have additional rights, such as information rights and various control features, that would allow a new investor to conduct a due diligence process and that give them the ability to protect their investment. Note that the enterprise value would still be measured based on the cash flows under current ownership and the investors' required rate of return. It would typically be appropriate to consider the expected time horizon of the investment when valuing the interests in the enterprise. Please see chapter 4, "Determining the Unit of Account and the Assumed Transaction for Measuring the Fair Value of Investments" for additional discussion.

Q&A 14.65: Differences in the Basis of Valuation for Controlling versus Minority Positions

Q: Doesn't it matter if my investment is a controlling position or a minority position?

A: Irrespective of whether the investment is a controlling position or a minority position, the enterprise value used as an input to valuing an equity interest would be measured the same way. The enterprise value is measured from the perspective of the business under current ownership, as modified by the degree of influence the market participant would have given the interest acquired. If the interest is a controlling interest or has significant influence and market participants investing in that interest would consider improvements to the cash flows, those improvements would be considered. In many cases, however, private equity and venture capital-backed businesses are already being run optimally, and market participants would not assume improvements to the cash flows.

It is important to consider the cash flows under current ownership when valuing an equity interest in the business, not because a minority interest has a different value than a controlling interest on a pro-rata basis given the total equity value consistent with market participant assumptions, but because a market participant acquiring a minority interest may not be able to modify the cash flows for the business. For example, for a family-owned business that is being run sub-optimally, market participants transacting in a minority interest would continue to assume those sub-optimal cash flows. Market participants transacting in a controlling interest would likely assume that they would make improvements to the cash flows, but would also likely require high returns considering the risk associated with making those improvements.

Q&A 14.66: Valuations with Multiple Related Fund Investors

Q: Two related funds each acquire 45 percent of a company (90% total acquired). How are control premiums or minority discounts included in the valuation of the 45% interest?

A: In this situation, it is reasonable to assume that the investors' interests are aligned. While each fund's interest is a non-controlling interest, in aggregate, the investors have control of the portfolio company. The enterprise valuation would be performed considering the cash flows under current ownership and the required rate of return for the investment, calibrated to the transaction price. Each fund's interest would then be estimated at the pro-rata share of the equity value.

Information to Be Considered in the Valuation

Q&A 14.67: Incomplete Information

Q: How do you factor incomplete information into a valuation estimate?

A: Some funds make investments where they do not have information rights. In other situations, a portfolio company may stop providing information due to disruptions in the company's operations, or extraordinary situations such as regulatory concerns or pending enforcement actions. In these situations, the fund still has the obligation to estimate the fair value of the investment. This fair value should reflect the price that would be

received to sell the asset in an orderly transaction on the measurement date. Thus, the fair value estimate should consider the information that market participants would have, including the valuation calibrated to the entry price and updated through the previous measurement date, any information available on company-specific performance, albeit limited, and overall sector trends. It may also be appropriate to consider whether market participants would require a higher rate of return for such an investment, given the facts and circumstances.

Q&A 14.68: Use of Non-Public (“Inside”) Information

Q: We have a 10% interest in a public company and have a seat on the board. How should the non-public (“inside” or “insider”) information be considered in the valuation of interests in public companies?

A: To the extent that you hold shares that are identical to securities that are actively traded, the unit of account would be the individual share, the principal market would be the public stock market, and the valuation would be based on $P \times Q$. To the extent that you hold shares that are not identical to the publicly traded securities, the unit of account would be the investment, and you would consider the information that a market participant conducting reasonable and customary due diligence on your position would have, to the extent that such disclosure would not violate securities law. Funds in possession of material non-public information may wish to consult legal counsel to assess whether it would be permissible to disclose this information to market participants.

Q&A 14.69: Incorporating non-public information into the valuation

Q: We have a controlling interest in a public company, in the form of convertible preferred stock. If we plan to make a change in the management team that will result in significant costs to the portfolio company but may also result in a better outlook, should we consider these changes in the valuation of the position, or should we wait to consider that in our valuation until the changes are announced and the company reports the impact?

A: The valuation should reflect a market participant perspective, and should include only the information that a market participant would be permitted to receive under applicable securities laws. Since the fund’s interest is in the form of convertible preferred stock, rather than in common stock, a market participant transacting in the fund’s interest might have access to information that was not available to the public common stock market; however, in some cases, it might not be permissible to disclose such information. Therefore, after consultation with counsel, the fund would consider the information in the valuation that would be known or knowable to a market participant transacting in the fund’s interest. For example, if the information on your planned changes was not public and incorporating the information in the valuation would disclose these plans, the change in plans might be considered material non-public information.

Q&A 14.70: Post-valuation Event (Customer Financial Condition)—Assessment as Known or Knowable

Q: As of the valuation date of December 31, 2X10, the fund was not aware that a major customer of the portfolio company filed for bankruptcy protection in late December. Consequently, the filing was not considered in the valuation assumptions. If the fund becomes aware of the bankruptcy filing in late January 2X11, prior to issuance of the valuation report, should the fund consider the possible effects of the filing on the valuation as of December 31, 2X10?

A: Yes. Because the filing was a matter of public record, it was known or knowable by market participants as of December 31, 2X10, and should be reflected in the report to the extent that it would affect the valuation. Note, however, that a bankruptcy is often not fatal to a company, and its ability to continue as a customer and to meet its obligations might not be impacted by the bankruptcy filing. Therefore, it would be appropriate to consider the specific situation when estimating the impact on the valuation.

Q&A 14.71: Post-valuation Event (Product Approval)—Assessment as Known or Knowable

Q: The fund was estimating the fair value of its investment in the equity of a pharmaceutical company on February 1, 2X11, for the valuation date of December 31, 2X10. As of December 31, 2X10, the Food and Drug Administration (FDA) was in the process of approving a new drug for the company; however, management of the company did not know whether the drug would be approved. Management was hopeful that the drug would be approved in the near future. Approval of the drug was obtained on January 25, 2X11. Would the fund consider the drug approval event as part of the December 31, 2X10, stock valuation?

A: No. The actual drug approval event would not be considered in the valuation as of December 31, 2X10, because it was not known or knowable by market participants as of that date whether the drug approval event was going to occur on January 25, 2X11. The fund would consider the fact that the company had a drug with potential FDA approval when trying to value the company on December 31, 2X10. However, the fund would not base the company's valuation on the fact that the FDA approval had been subsequently obtained but, instead, would base it on the likelihood of approval as of December 31, 2X10. That is, the fair value estimate as of December 31, 2X10, would be the same, regardless of whether FDA approval was subsequently obtained or denied. The fund would consider disclosing the subsequent FDA action in the fund's financial statements.

Q&A 14.72: Expected Financing—Effect on Valuation

Q: An enterprise, as of the valuation date of December 31, 2X10, is in negotiations for financing that is expected to occur in February 2X11. Should the "impending" financing be reflected in the valuation?

A: Financing events are uncertain until they actually occur; thus, it was not known or knowable by market participants as of December 31, 2X10, that the enterprise will

definitely obtain the financing. However, the fund would consider the likelihood of possible event outcomes that existed as of the valuation date, including the likelihood of the financing event and the perspectives of those market participants who may participate in the financing.

Q&A 14.73: Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability with Observable Prices or Quotes Has Significantly Decreased – Applicability of Guidance

Q: Was the guidance in paragraphs 54C–54J of FASB ASC 820-10-35 provided solely for use during the “Great Recession” that occurred during 2007–2009?

A: No. While the guidance in paragraphs 54C–54J of FASB ASC 820-10-35 was developed during the “Great Recession” and addressed the market disruptions of that period, the guidance is not restricted to that period. Other market disruptions may impact the reliability of observed prices for investments where traded prices or quotes are available, when there is not an active market. A reporting entity should carefully consider the factors outlined in FASB ASC 820-10-35-54C in arriving at a conclusion as to whether there has been a significant decrease in the volume or level of activity for an asset or a liability. Such analysis should consider the totality of information using the evidence available. FASB ASC 820-10-35-54D indicates that “[i]f a reporting entity concludes that there has been a significant decrease in the volume or level of activity for the asset or liability in relation to normal market activity for the asset or liability (or similar assets or liabilities), further analysis of the transactions or quoted prices is needed. A decrease in the volume or level of activity on its own may not indicate that a transaction price or quoted price does not represent fair value or that a transaction in that market is not orderly. However, if a reporting entity determines that a transaction or quoted price does not represent fair value (for example, there may be transactions that are not orderly), an adjustment to the transactions or quoted prices will be necessary if the reporting entity uses those prices as a basis for measuring fair value and that adjustment may be significant to the fair value measurement in its entirety.” Paragraphs 54D–54M of FASB ASC 820-10-35 provide guidance that is useful in making that determination.

Q&A 14.74: Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability with Observable Prices or Quotes Has Significantly Decreased – Objective of a Fair Value Measurement

Q: Does a significant decrease in the volume or level of activity for an asset or a liability change the objective of a fair value measurement under FASB ASC 820?

A: No. As indicated in FASB ASC 820-10-35-54G, “[e]ven when there has been a significant decrease in the volume or level of activity for the asset or liability, the objective of a fair value measurement remains the same. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (that is, not a forced liquidation or distress sale) between market participants at the measurement date under current market conditions.”

Q&A 14.75: Measuring Fair Value When the Volume or Level of Activity for an Asset or a Liability with Observable Prices or Quotes Has Significantly Decreased – Rules of Thumb or Quantitative Thresholds

Q: May I include “rules of thumb” or quantitative thresholds in assessing when the volume or level of activity for an asset or a liability has significantly decreased?

A: While such “rules of thumb” or quantitative thresholds may be useful for initially assessing when the volume or level of activity for an asset or a liability has significantly decreased and assessing whether there is an active market for the asset or liability, the Task Force believes that undue reliance on rules of thumb or quantitative thresholds (that is, using such rules as a sole basis for making this determination) without a thorough consideration of the factors outlined in paragraphs 54C–54J of FASB ASC 820-10-35 could lead to inappropriate conclusions.

Remeasurements Relating to Changes in Portfolio Company Financials

Q&A 14.76: Remeasurements relating to Restatements of the Portfolio Company’s Financial Statements

Q: If a portfolio company restates its financial statements subsequent to the measurement date, to correct an error in a previous period, does a fund need to revise its fair value measurement of that portfolio company as of the measurement date?

A: Generally, significant events that occur after the measurement date, or changes in the facts and circumstances surrounding a particular investment, would likely lead to changes in the methodologies or assumptions that market participants would use in measuring fair value as of the date that those events or changes occurred. However, with respect to a prior measurement date, the impact of these changes or events could be different and would primarily depend on what was known or knowable as of the measurement date. (The considerations around subsequent events are discussed in further detail in chapter 11, “Backtesting.”)

In general, an investor looking to make a new investment in a company will have significant access to information about the company when making its investment decision. Therefore, as a first step in determining whether a prior fair value needs to be revised as a result of a portfolio company’s restatement, the fund would evaluate what information was known or knowable as of the measurement date from the perspective of market participants conducting the usual and customary due diligence. If after this evaluation, the fund determines that the cause (or causes) of the restatement did not exist or could not have been known as of the measurement date from a market participant perspective, then it would be reasonable to assume that the fund’s fair value measurement as of the measurement date need not be revised for the subsequent restatement.

If on the other hand, the fund determines that the factors around the restatement existed and were known or knowable as of the measurement date from a market participant perspective, the fund would analyze those factors and verify if those were incorporated in

its fair value estimate as of the measurement date. If the fund failed to consider those factors as of the measurement date, then it would reassess how those factors would impact fair value, and if necessary revise the assumptions used and the concluded fair value as of the measurement date.

Q&A 14.77: Remeasurements Relating to Accounting Changes

Q: If a portfolio company restates its financial statements subsequent to the measurement date as a result of an accounting change that does not affect free cash flow, such as a change in revenue recognition policy, does a fund need to revise its fair value measurement of that portfolio company as of the measurement date?

A: From a purely theoretical perspective, the fair value of an interest in a business would not change as a result of a change in accounting policy. The fair value of an interest in a business is based on cash flows; therefore, changes in accounting policy, especially those policies that do not have an effect on a portfolio company's expected cash flows such as revenue recognition, typically would not have a significant effect on fair value.

Nevertheless, fair value is often measured using financial metrics (e.g., revenue, EBITDA) that may be affected by adopting different revenue recognition policies. For instance, changes in revenue recognition could mechanically lead to a different fair value estimate when using the market approach based on multiples of the company's reported financial metrics or the income approach based on the projected financial information for the company, even when the fundamental operations or underlying risk of the business has not changed. This situation highlights one reason that it is important not to perform valuations using a purely mechanical approach.

As such, the task force believes that it would be appropriate for the fund to determine whether the revision in the portfolio company's reported revenues (or other accounting changes) would ultimately translate into a different set of cash flows (or a different level of risk) that would impact the value to the equity holders. When using a market approach, the fund also would consider how these accounting changes affected the selected guideline public companies or transactions, and the corresponding estimated multiples. For example, the calibrated multiple from the original investment date may need to be adjusted to remove the impact of the change in accounting policy. In situations where some of the guideline public companies have different accounting policies than others, the multiples for the guideline public companies may need to be adjusted to be consistent and relevant given the portfolio company's policy.

Similarly, changes in the projected financial information for the company could be impacted by changes to the company's accounting policy, unless adjustments are made to eliminate the impact. When using an income approach, the fund would consider the expected cash flows to the business, which would generally not be affected by accounting policy.