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Analysis of private-company stock-based compensation rules.

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As part of its simplification initiative, the Financial Accounting Standards Board last March issued new stock-based compensation guidance. The update provides private companies, when granting stock to employees, with a one-time election to switch from measuring all liability-classified awards at fair value to measuring them at intrinsic value.

In contemplating whether to make such an election, companies should be mindful that not all valuation methodologies are created equal. Most importantly, while the option to value share-based awards using the "current value method" (CVM) is a relatively easy choice to make, compared with other methods it will understate the impact of options on the value of a company's common shares.

Indeed, choosing any of the various methods for allocating such values can have a major impact on a company's share price.

Common Equity Allocation Methods

Because stock grants are a form of equity, it's helpful to think at the outset about the various methodologies used to allocate value between classes of equity securities.

These include: (1) the current value method (CVM), also referred to as the intrinsic value method; (2) the option pricing method (OPM) and related hybrid methods; and (3) the probability-weighted expected return method (PWERM).

CVM is essentially a "waterfall analysis" that allocates the current enterprise value to the company's various series of preferred stock based on the greater of the series' liquidation preferences or conversion value. CVM relies on the intrinsic value based on the current share price without regard to potential exit scenarios and payoffs.

While allocation using CVM is easy to understand and apply, guidance suggests it is only appropriate in limited circumstances.

Note that CVM is not forward-looking and is considered to only be appropriate when either (1) a liquidity event is imminent, or (2) the enterprise is at a very early stage of development, prior to raising any arm's length financing.

That said, FASB's decision to provide private companies with a one-time election to switch from measuring liability-classified awards at fair value to measuring them at intrinsic value offers companies a viable alternative to the use of fair value measurement.

OPM treats the various classes of stock as call options on an enterprise's equity value, with exercise prices based on the liquidation preferences of the preferred stock.

This method implicitly considers the effect of liquidation preference as of a future liquidation date, explicitly recognizing the option-like payoffs of various share classes. The guidance states that OPM (or a related hybrid method) is the most appropriate method to use when specific future liquidity events are difficult to forecast.

PWERM is an expansion of CVM approach wherein multiple exit scenarios are considered and weighted based on their relative likelihood of occurrence. AICPA guidance suggests a PWERM approach is appropriate when a company is close to an exit event.

AICPA further notes that PWERM is complex to implement and requires detailed assumptions about potential future outcomes that can be difficult to support objectively, particularly when the timing of an exit event is more uncertain.

A hybrid OPM method utilizes PWERM to estimate the probability-weighted value across multiple scenarios, while utilizing OPM to estimate the allocation of value within one or more of the scenarios.

Stock Options Undervalued

CVM considers the intrinsic value of options only as of the valuation date, systematically understating the dilutive effects of the options by not taking into account the time value of the options.

Options with an exercise price above the current share price (i.e., they're "underwater") are not worthless; their value is driven by the potential growth over time in share price above their exercise price (i.e., their "time value").

Consider two companies that are years from a liquidation event, with the same enterprise value and the same number of common shares outstanding. The first company has no option shares outstanding, while the second company has many option shares outstanding, but all of them are one cent out-of-the-money. The intrinsic value of the option shares is zero, because they are underwater. CVM's resulting share price is the same for both companies.

Yet surely a share of common in the first company with no options is more valuable. OPM addresses this by including the time value of the options in the analysis, based on the volatility of the equity, the remaining contractual life of the option, and the expected time to exercise.

Impact of Options on Share Price

While CVM understates the value of outstanding options and their dilutive impact on share price, it does provide an informative upper bound on a company's share price.

A lower bound on the share price can be estimated under a "full dilution" scenario by dividing the enterprise value by the number of common shares and outstanding options, ignoring their exercise prices. When the implied share prices at the upper and lower bounds differ significantly, OPM provides a reasonable approach to estimating where the share price falls within this range.

The time value of the option can have a significant impact on share price in any of these four circumstances:

- The number of options outstanding is high relative to the number of common shares.
- The underlying equity is more volatile.
- Outstanding options have long remaining contractual lives and are not expected to be exercised in the near term.
- Outstanding options are underwater or not significantly in-the-money.

Number of Outstanding Options Matters

Consider, for example, a company whose equity is valued at $1 million, with 1,000 common shares outstanding, as well as 1,000 options outstanding, each with an exercise price of $1,000.

The implied CVM share price is $1,000, regardless of the number of outstanding options. The lower bound on the share price implied by assuming all the options convert to shares, ignoring the proceeds from their exercise, is $500 — half the CVM implied price.

However, using OPM to value the outstanding options (assuming an expected life of five years, volatility of 50% and risk-free rate of 2%), the implied share value is $733, more than 25% lower than the CVM implied price.

If the number of options outstanding is twice the number of common shares, the implied share price is $614, almost 40% lower. Clearly, the time value of outstanding options can have a large impact on share price.

Impact of Equity Volatility

The greater the volatility, the greater the time value of the options and hence the lower the implied share value, assuming all else is unchanged. Even when the volatility is only 25%, the OPM share price is 16% lower than under CVM.

Impact of Options' Expected Life

Even with a short time horizon to exercise, the time value of options can greatly impact the implied share price.

Impact of Out-of-Money Options

Similar impacts to share price occur when the equity includes outstanding options that are out of the money. CVM gives no value to out-of-the-money options, therefore these options have no dilutive effect, while OPM usually assigns value to these options due to their potential to recover prior to expiration.

Even options that are significantly underwater have value, particularly if the underlying equity is volatile and there is adequate time for the share price to recover.

Companies taking the CVM election for financial-reporting purposes should consider using the OPM method to estimate the cost of stock options. That will give management a better understanding of the impact of dilution, duration, and volatility on the company's common stock price.

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