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# The S&P Downgrade, the Risk Free Rate, and Flights to Quality

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At the time I write this (the morning of Aug. 8, 2011), it appears that the initial reaction in worldwide equity markets to the turmoil in the euro zone and Standard & Poor's downgrade over the weekend of the U.S. government's credit rating has been to sell off. In the U.S., for example, the Dow and S&P 500 indices appear to have dropped significantly in a.m. trading. The following days and months promise to be quite volatile.

I have written previously on the relationship of the risk-free rate and the equity risk premium during and since the Great Recession of 2008-2011. In light of the bumpy ride that began in the last half of 2011, I think an update may be useful.<sup>1</sup>

A *risk-free rate* is the return available on a security that the market generally regards as free of the risk of default. The risk-free rate reflects three components: (1) *rental rate* (real return for lending the funds over the investment period, thus forgoing consumption for which the funds otherwise could be used); (2) *inflation expectations*; and (3) *maturity risk or investment rate risk* (risk that the market value of the investment's principal will rise or fall during the period through maturity, as a function of changes in the general level of interest rates).

The Great Recession of 2008-2011 has proved to be anything but a period of stability. The standard practice of many practitioners has been to simply add the "spot" yield on 20-year U.S. government bonds (the risk free rate) to the arithmetic average of realized risk premiums as reported annually by Morningstar in the *SBBI Yearbook* as its base cost of capital estimate. But this methodology has created numerous erroneous estimates of a base cost of equity capital all through the Great Recession of 2008-2011.<sup>2</sup>

For example, as of December 2007, the yield on 20-year U.S. government bonds was 4.5%, and the arithmetic average of

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<sup>1</sup> Roger J. Grabowski, "Developing the Cost of Equity Capital: Risk-free Rate and ERP during Periods of "Flight to Quality," *Business Valuation Review* (Winter 2010): 172-185.

<sup>2</sup> The recession technically began in December 2007 and technically lasted 18 months to June 2009, the longest since the 1929 crisis. But in many persons' opinion the recession continued; hence, this author is using the term the "Great Recession" of 2008-2011. Many analysts admit that with the poor growth in GDP during the first half of 2011 we may be on the verge of reentering recession (i.e., a "double dip").

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realized risk premiums as reported in the *S&P Yearbook* for 1926-2007 was 7.1%. But as of December 2008, the yield on 20-year U.S. government bonds was 3.0% and the *S&P* realized risk premiums for 1926-2008 was 6.5%. So just at the time that the risk in the economy *increased* to maybe its highest point, the base cost of equity capital using realized risk premiums *decreased* from 11.6% (4.5% plus 7.1%) to 9.5% (3.0% plus 6.5%).<sup>3</sup>

The world economies were, and remain, in crisis. Financial crises are often accompanied by a “flight to quality.” Investors are looking for places to “park” funds that they consider free from loss of principal. During those periods they are not looking for yield. As nominal returns on “risk-free” securities fall dramatically for reasons other than inflation expectations, they may, without adjustment, become less reliable as the best building block upon which to estimate the cost of equity capital.

During these episodes of flight to quality, one may need to reevaluate simply using the quoted risk-free rate as the basic building block in estimating the cost of equity capital. In these instances, one needs to identify whether market (spot) interest rates have been artificially influenced by a flight to quality. On a monthly basis, we monitor changes in market interest rates relative to a rolling average of prior months’ interest rates and various economic indicators, such as the flow of funds, the implied volatility derived from options, changes in estimates of inflation, etc. Once we suspect that the market interest rates are abnormally low, we use a build-up approach to estimate a normalized risk-free rate by looking at the real rate of interest earned historically and at long-term inflation estimates.

## Back to the Future

While equities’ initial reaction to the recent turmoil was a sell-off, the yields on U.S. government 10-year bonds actually *decreased* in Monday morning trading following S&P’s

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<sup>3</sup> This author recognizes three periods in recent years during which the quoted risk-free rate is too low relative to its three underlying components (rental rate, inflation expectations, and maturity or horizon risk): November 2008–March 2009, June 2010–November 2010, and May 2011–present (note that “present” as of the time of writing is August 8, 2011).

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downgrade on Friday. Investors seem to be selling equities and buying U.S. government debt. Many may wonder why interest rates on U.S. government debt have not skyrocketed as a result of the downgrade by Standard & Poor's, or during the debate by Congress to increase the debt ceiling and accompanying spending cuts.<sup>4</sup> I think there are four major reasons:

First, it is important to remember that the U.S. government has in effect defaulted at least three times on its obligations during the 20th century. In 1934, for example, the U.S. government banned ownership of more than five ounces of gold per person and eliminated the right to exchange gold certificates for gold coins. At that time the price was \$20.67 per ounce. Ten months later the government revalued gold at \$35 per ounce, so those who sold lost 40% of their holdings. A second example is Congress's unilateral ban on the redemption of "silver certificates" for silver or silver bars in 1968, a practice that had been in place since 1934. And in 1971, foreign governments' ability to exchange dollars for U.S. government gold was stopped.<sup>5</sup> Each time, the U.S. economy recovered from the jolt.

Second, the sovereign debt crisis in Europe continues despite another agreement to bail out Greece. That agreement fails to address the other sovereign debt problems in the euro zone. The current agreement on Greece calls for an effective 20% haircut on outstanding Greek sovereign debt. Italy and Spain are now being dragged into the crisis, but they have their own share of debt problems that will prevent them from contributing to the Greek bailout. Germany (the perceived safe haven in the euro zone) would not have the capacity to bail out countries such as Italy or Spain (should the need arise), given the size of these economies.

In periods of high uncertainty, investors need as safe a haven as possible given the likelihood of real defaults, and U.S. government debt may still be perceived as the best of the

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<sup>4</sup> The U.S. Department of Treasury has no authority to issue or incur debt beyond the debt ceiling set by Congress. The 2011 debt ceiling debate was centered on the statutory limit of the amount of indebtedness the government of the United States can have and whether this limit should be raised. If the debt ceiling were not raised, either government spending would have to be decreased, or debt would have to be paid later than promised, leading to a technical default.

<sup>5</sup> Source: Ron Paul on Bloomberg, July 22, 2011.

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worst. For example, Warren Buffet, as quoted by CNBC on Aug. 8, 2011, said he is still buying U.S. government short term debt (T-bills), even though yields have fallen so low. “If I have to buy [T-bills] at a zero percent yield, I will,” he says. “I don’t like it, but we’ll do it.” Even though funds looking for safety could be parked in other currencies (e.g., Swiss franc), these other currencies simply do not have the volume of outstanding currency nor the liquidity to absorb the amounts of money looking for safe havens.

Third, this crisis differs from September 2008. The market has had time to prepare and has accumulated liquidity to weather a storm. While the potential of a technical default by the U.S. government on August 4 may have appeared to trigger investors concerns, the economic slowdown in the U.S., Europe, and even in developing economies has been an ever-increasing concern. Individual investors and companies have been selling risky assets and moving them into safer assets, including cash holdings in banks. As bank deposits have grown, banks have applied more funds in the investment of choice for the short-term – U.S. government securities. This has further driven down the yields on the shorter end of the U.S. government yield curve.

Lastly, the recent sovereign debt downgrade by S&P resulted from the debt overhang of the U.S. government, which is estimated to be at least \$60 trillion (when one counts the present value of all obligations direct and guaranteed of the U.S. government).<sup>6</sup> Such a downgrade was likely priced into the market already, but the current flight to quality is overwhelming any rate increase. In the end, it appears that the agreement by Congress and President Obama to avoid so-called “default” in the near term was not enough to assuage the market’s fears of impending fiscal hazards and may have been interpreted (by some, at least) as an indication of a general lack of resolve by the parties involved to reach any meaningful agreement. While the markets did not like the drama leading up to August 4 (the deadline to raise the debt ceiling), market participants expected some sort of compromise agreement to keep the U.S. from defaulting.

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<sup>6</sup> Bill Gross, *Investment Outlook*, April 2011.

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Where do we go from here? Maybe we need to heed Warren Buffett's advice on July 8:

"I could end the deficit in five minutes. You just pass a law that says that anytime there is a deficit of more than 3% of GDP all sitting members of Congress are ineligible for re-election."

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