VALUATION NEWS

NEWS FROM QUIST VALUATION
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Welcome

This issue of Quist Valuation News is devoted to the income approach, the most common valuation method applied by Quist Valuation. Our first article deals with the precision required in establishing the equity risk premium. Historically, appraisers have held Ibbotson data to be an appropriate estimate with relative blind faith. Recent research by Ibbotson and Chen, as well as, additional reviews of the components of the equity risk premium reflect that in many cases it has been overstated. Our second article demonstrates the growing need to analyze and assess the assumptions used in discounted cash flow models. Monte Carlo simulation and other defined probability distributions over multiple scenarios help valuation specialists to more clearly define the dependence and sensitivity of projections to certain inputs. Stress testing projections helps management and analysts focus on the key variables that drive valuation models.

As always, we hope that you find value in this edition of Quist Valuation News.

Sincerely,
M. Brett Suchor, CFA, ASA
President
Quist Valuation, Inc.
suchor@quistvaluation.com

Understanding the Current Equity Risk Premium Controversy

Changing stock market conditions over the past several years have called into question the returns that investors are expecting and requiring from equities. These required returns strongly influence equity valuations. When investors require high returns, valuations will be lower, all else equal. Conversely, lower expected returns lead to higher valuations. Required returns, and the resulting equity discount rates, can mean the difference between passing and failing an impairment test, over or underpaying for an acquisition, or miscalculating the amount of taxes owed.

The most critical input to valuing a business when using the income approach is the discount rate, which captures the rate of return an investor would require to own a certain equity security (also referred to as the cost of equity). Small differences in the discount rate can lead to significant swings in value. Consider the following simple example:

Assuming discount rates of 15% and 13%, and a long term growth rate of 5%, a normalized cash flow of $100, produces values of $1,000 and $1,250, respectively, which is a difference of 25%.

Significant research and analysis has been devoted to developing valid discount rates for both private and public companies. The fundamental components to establishing the discount rate include (1) the risk-free rate, (2) company specific adjustments, such as a small stock premium for the additional risk associated with investments in smaller companies, and (3) a premium, or additional required return, for the risk associated with an equity investment (e.g. the equity risk premium).

It is widely accepted by the valuation community that the long-term federal bond rate provides a reasonable approximation of the risk free rate of return. Company specific factors are debated and scrutinized based on reasonable market evidence and are the basis for much of the analysis provided by valuation experts. The equity risk premium, historically considered a straightforward input to valuation calculations has come into question in recent years due to wide fluctuations in market conditions. Ibbotson Associates defines the equity risk premium as the return an investor expects to receive to compensate for the additional risk associated with investing in equities as opposed to investing in risk-free assets.[1]

However, recent assessments have shown that this critical input to deriving an appropriate discount rate may in fact be overstated. Understanding how the equity risk premium is derived and fully considering the implications are critical components to understanding value.

By definition, the equity risk premium is a forward looking measure. Investors require this premium because the future earnings stream from equity investments has less certainty relative to bonds. By contrast, the Ibbotson data captures the returns that investors actually realized in the past. Using realized returns as a proxy for future expected returns assumes investors' expectations are consistent with prior experience and history. However, this may or may not be the case. Consider the period in early 2000. Investors had just come off the longest bull market in U.S. history, and equity valuations were at an all time

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[1] Ibbotson Associates, Inc., Stocks, Bonds, Bills and Inflation: Valuation Edition 2004 Yearbook. Chicago: Ibbotson, 2004.

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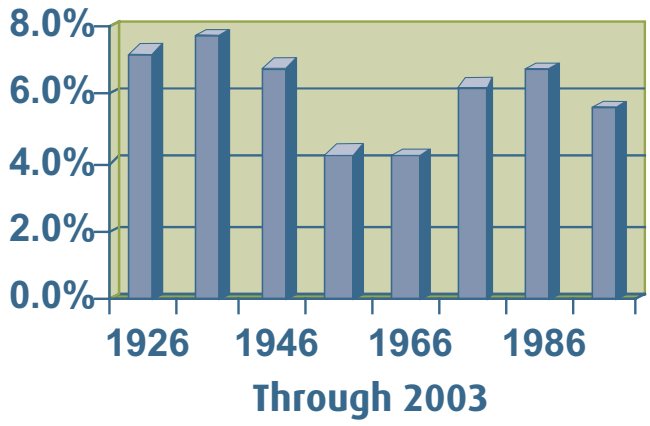
high. High valuations, in terms of high price-to-earnings multiples, equate to a low expected return. Furthermore, many investors believed that stocks were as safe as bonds, at least over the long-term (Dow 36,000, written by James K. Glassman and Kevin A. Hassett in 1999), also implying modest additional risk from investing in equities.

A related problem is that the realized returns may not have been what investors were expecting before they were realized. As an example, in the mid 1970s, long term investors had seen a period where the S&P 500 stock market index saw no net increase in value over a 12 year period (1962 to 1974). At the end of this bear market, interest rates were high and valuation multiples were low. Did investors foresee the overall decline in interest rates over the next 20-plus years or the rising valuation multiples that occurred at the same time? While we cannot know for sure, any difference between these factors would indicate a difference between expected future returns and those realized over the recent past and trigger skepticism in using historical returns to estimate expected future returns.

In addition, the historical return is dependent on the time period over which those returns are calculated. Ibbotson has generally used 1926 as the starting point in its calculations because it captures one full business cycle before the 1929 crash. However, good stock market data is available back as far as 1871, and less reliable data extends as far back as the late 1700s. While Ibbotson has started to provide realized returns over every year since 1926 (e.g. the average return from 1950 to 1975, 1960 to 2003, etc.), it is difficult to determine which time period to use. As shown in the following chart, the time period selected can have a significant impact on the equity risk premium.



While some believe that a very long horizon (e.g. 1926 through 2003) provides the best evidence for the equity risk premium because it captures a wide variety of economic and geopolitical events, others contend that the recent past is a better indicator (e.g. 1986 through 2003), because the world is a very different place today than it was nearly 80 years ago. Some would argue that looking at the latest full interest rate cycle (e.g. from the early 1960s to the present) provides a better current estimate, while others would suggest that a short-term perspective reflecting the equity risk premium over the latest economic cycle may be appropriate. As shown in the chart above, depending on the time horizon, the equity risk premium may vary by more than 3%.

Other factors that may create differences between past returns and current expectations are the differences between the volatility of stock and bond returns – the volatility gap is narrowing. Stock returns have become less volatile over time, indicating a lower equity risk premium all else being equal than in the past. Given the low volatility of stocks, investors view bonds as more risky today relative to stocks. This narrows the gap between stocks and bonds, thus reducing the applicable equity risk premium. In addition, the benefit of international diversification, which is a more recent phenomenon in the investment world, has lowered portfolio volatility, thus lowering the required return from equities.

Roger G. Ibbotson and Peng Chen recently forecasted the equity risk premium using a supply side model, with an earnings model as the basis for the estimate. This model

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incorporates historical returns and breaks them into four pieces. Three of these have historically been supplied by companies: inflation, income return and growth in real earnings per share. Growth in the price-to-earnings ratio, the fourth segment, reflects investors' changing expectations regarding future corporate earnings. Ibbotson states that while the supply of corporate growth is forecasted to continue as in the past, a change in investor expectations is not expected to occur, (meaning investors do not expect valuation multiples to increase further). The study concludes that the equity risk premium based on the supply side model is approximately 1.25% lower than based on historical returns alone.

The bottom line is that the equity risk premium, a key component to the income approach, is subject to additional scrutiny and may in fact be overstated. Blindly using historical Ibbotson numbers may lead to overstating the equity risk premium, thus incorrectly increasing the discount rate, and ultimately understating values. Defending the appropriate equity risk premium is essential to clearly deriving an appropriate discount rate.

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Testing the Variables

Prior to Sarbanes-Oxley, management teams were often comfortable providing projections and freely discussing the variability of inputs.

With the passage of Sarbanes-Oxley, auditors, boards and executives have all increased the level of attention applied to financial reporting. Growing levels of risk and perceived risk among shareholders and regulatory bodies, such as the Securities and Exchange Commission, have caused participants to exercise caution in providing inputs used in developing valuation models.

While management is carefully examining and assessing the quality of their projections, valuation professionals are being held to a similar high standard. Reviewing the quality and reliability of projections has become a relatively gray area with auditors, management and valuation personnel each sharing the burden of verifying and analyzing the quality of the projections. Testing for reasonableness, comparing the projections with industry trends and assessing the sensitivity of key variables to adjustments is becoming a key factor in developing a defensible income approach.

Monte Carlo simulation, which creates thousands of possible outcomes, can help analysts better understand the risks and variability inherent in their projections. Simulating how variables work through multiple scenarios can help quantify the likelihood of whether management will meet projections.

Simulation through defined probability distributions also helps assess the key inputs that drive uncertainty. Stress testing projections helps to improve accuracy, understand key risks and evaluate multiple scenarios, which in the end improve the quality of the output of the income approach.

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Insights from the 2004 ASA Conference in San Antonio

Tom Miller and I recently attended the Annual Advanced Business Valuation Conference in San Antonio. Three days of valuation sessions allowed us to gain additional insight into recent developments in business valuation. Many interesting topics were presented - some old and some new. Tax issues of interest included the on-going debate on pass-through entities such as the *Gross* case, the continued need to validate discounts with specific transaction data and whether restricted stock studies fully capture the appropriate lack of marketability discount. The topic of financial reporting continues to grow in importance as a segment of ASA conferences with hot topics, such as the valuation of intangible assets for FAS 141, the future of FAS 123 regarding stock options and valuation reviews performed by auditors. Scott Taub, of the Securities and Exchange Commission closed the conference with perspectives on how the valuation community, auditors, the SEC and companies can expand and improve the role of valuation professionals in fair value accounting.

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10901 West 120th Avenue | Suite 350 | Broomfield, Colorado 80021

VALUATION NEWS

In this issue:

NEWS IN BRIEF

• Quist Valuation is pleased to announce the addition of William K. Sayers to the firm. Mr. Sayers joins Quist as the Director of Client Services, charged with ensuring the highest level of client satisfaction possible. Mr. Sayers has been involved in the valuation community for more than a decade with firms such as CBIZ Valuation Group, American Appraisal and Marshall & Stevens. We are pleased to welcome Bill, his experience, expertise and talents to the Quist team.

• Under pressure from the SEC and companies, members of FASB recently voted to extend the deadline for requiring companies to list stock options as an expense for 6 months. The SEC is wary of overtaxing corporate accountants already burdened with implementing the changes required by the Sarbanes-Oxley Act.

IN OUR NEXT ISSUE:

• Testing the Variables Part II – we explore the advantages of using Monte Carlo simulation and other options for stress testing cash flows.