## The Equity Premium

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> The equity premium rewards investors for taking on the risk of investing in equity, which has a greater standard deviation of returns than other asset classes. Both policymakers and investors want to know what that premium should be. The authors use dividend and earnings growth rates to measure the expected growth rates in capital gains. Changes in the risk premium from 1872 to 2000, 1872 to 1950, and 1951 to 2000 are estimated. They find that the equity return from 1951 to 2000 is higher than that for the earlier period and higher than that expected from earnings growth rates. The authors conclude that the realized equity premium of the past 50 years was probably far above the unconditional expected premium.

Investors care about the expected excess return they receive for taking on the risk of investing in equities. This excess return, otherwise known as the risk premium, is the difference between the expected return on common stocks and the risk-free rate of return. It affects portfolio balancing, risk measures, and expectations for future returns, as well as such policy issues as pension and social security reforms. The authors ask two questions about the risk premium. First, they want to know if it has changed over time. Second, they want to know how it is related to dividend growth, earnings growth, and returns to the market portfolio.

Most financial market observers, whether academics or practitioners, use the historical return on a market portfolio, most commonly the S&P 500 Index, to estimate the expected market return. An analysis of the historical return, and the historical risk premium, thus has implications for market expectations.

Stock returns can be disaggregated into dividend yield and capital gains. Projections of fundamentals, specifically dividends and earnings (return on equity), are used to estimate capital gains. Looking at

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data from 1872 to 2000, the authors find that the expected annual real equity premium using the dividend growth model is 3.54 percent. If average stock returns are used, the average annual premium is considerably higher at 5.57 percent. What the authors find particularly interesting is that the dividend growth model closely follows the average return for the 1872–1950 period but diverges from 1951 to 2000—with the return on stocks outstripping the growth in dividends in the more recent period. This finding raises the question of which is a more accurate measure of the long-term equity premium—growth from fundamentals or appreciation in the stock price index?

The authors acknowledge that companies have changed their dividendpaying policies in recent years, preferring to repurchase stock or generate other forms of capital gains for shareholders. For this reason, they also run an earnings growth model using expected earnings in the form of return on equity in place of expected dividend yield. They find that the results are similar, but they prefer the dividend growth model because they believe it is a better indicator of the long-term expected growth of wealth.

The authors conclude that from 1872 until 2000, returns on fundamentals matched expected returns on stock prices, which leads them to believe that the equity premium for this period was appropriate. From 1951 until 2000, however, the average stock price return was much greater than the average return on fundamentals, regardless of whether dividends or return on equity was used as the measure. This finding leads the authors to believe that the equity risk premium was overstated in this period and that low expected returns are likely as the market realizes this fact.

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