

Patience, Fortitude, and the Expected Return on Equities

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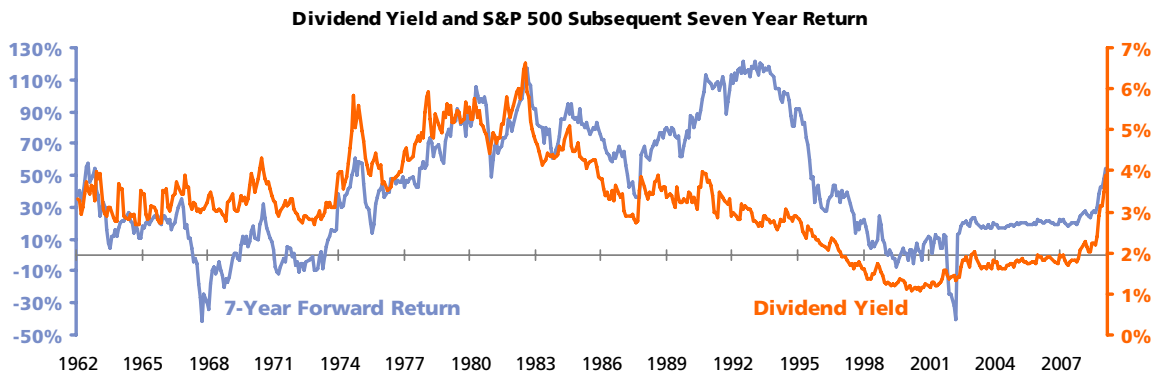
The 2009 return on the S&P 500 Index year-to-date is about -16%. This performance follows the -38.5% return in 2008. Naturally investors have become skeptical about equities but, even though it may be difficult to determine the market bottom, investors with long horizons have a good chance at this point of earning a reasonable risk premium.

There is an extensive academic literature on long horizon return predictability that provides evidence against the random walk hypothesis that returns are unpredictable. This analysis is based on John Cochrane's November 2008 manuscript "What do we know about the stock market?" I examine here the dividend yield (the ratio of dividends to price) as a signal in forecasting long horizon returns. The ability of the dividend yield ratio to forecast stock returns increases with the return horizon¹. Specifically, I use the S&P 500 dividend yield as a predictor of the cumulative return of the S&P 500 over the next seven years. The chart plots the current dividend yield against the seven-year forward return on the S&P 500.

The right hand axis measures the dividend yield and the left hand axis measures the seven-year forward return on the S&P 500. The correlation is clear and is approximately 0.50. When the dividend yield is high, the subsequent seven-year return on the S&P 500 tends to be high. A log-linear model of the above relationship is estimated over an expanding window. The dividend yield appears to explain about 25% of the variation in forward S&P 500 return. The fitted coefficients² from that model are subsequently used to forecast the forward seven-year return. The seven-year S&P 500 line is a combination of realized and predicted values, with the last seven years of data points representing forecasted values.

The dividend yield is currently 3.89%, which is a value in the top quartile of its distribution. The average dividend yield over the entire sample is 3.18%. As of the end of February 2009, the above model forecasts the seven year forward return on the S&P 500 to be about 55%, or approximately 6.4% per year³. This result is consistent with previous estimates based on the price-to-earnings ratio⁴. As a result, the current level of the dividend yield implies equities are undervalued for investors with long horizons. ■

Dividend Yield and Equity Returns: Higher Returns Follow Higher Yields, And Vice-Versa



Source: FactSet

- 1 Fama, E., and French, K., "Dividend Yields and Expected Stock Returns," *Journal of Financial Economics*, 22 (1988) 3-25
- 2 Because of the overlapping returns the dependent variable exhibits serial correlation which is potentially problematic for the coefficient estimates in that OLS underestimates their standard errors. The coefficients remain unbiased though.
- 3 Correcting for autocorrelation via GLS reduces the expected return over the next 7 years to about 47% or 5.7% pa.
- 4 Omarova, N., "Valuation Ratios and Equity Market Returns," *ING Investment Weekly*, February 23, 2009, page 1

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