Estimating the Long-Term Return on Stocks

Valuations matter

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One of the interesting aspects of the recent bull market is that the historical return earned from holding stocks has increased from the former average of about 10%, to a higher level near 11.5%. The financial community has not missed a beat. If you ask a typical analyst "how much can I expect to earn if I buy stocks and hold them over the long run", the answer of choice is now 11.5%. We'll tell you flatly. The correct answer is something less than 7.4%. Probably much less.

Here's why. The long-term return on a security breaks into two pieces: income from dividends or interest payments, and capital gains from price changes. **Notice also that given any future stream of dividend, interest or face value payments, the higher the price you pay now, the lower the annual rate of return you will earn over the long run. In other words, when the future long-term return on a security falls, the current price rises.**

Consider, for simplicity, a 30-year zero-coupon bond with a face value of $100. If the bond is priced at a yield-to-maturity of 10%, it will cost you $5.73 today. Over the coming 30 years, the price will advance to $100, and your annualized return will be 10%. Just what you bargained for.

But what happens in the meantime? Suppose that over the first 10 years of your holding period, interest rates decline, and the yield-to-maturity on your bond falls to 7%. With 20 years remaining to maturity, the price of the bond will be $25.84. Now here's the crucial point. Even though the yield-to-maturity for the remaining life of the bond is just 7%, and the yield-to- maturity you bargained for when you bought the bond was only 10%, the return you have earned over the first 10 years is an impressive 16.26%!

By holding the security during a period when the yield-to-maturity is falling, you not only earn a return that is higher than the *original* yield to maturity, you earn a return that is dramatically higher than the *future* yield-to-maturity!

Now, the rest of the story. Over the remaining 20 years of the bond, you will not earn 16.26% annually, but 7% annually. If you do the math, you will find that over the entire 30 year holding period, you will have made -- surprise -- 10% annually. Just what you bargained for originally.

The same analysis applies to the stock market. For stocks, the "yield-to-maturity" comes from two components: income plus capital gain. The income component is simply the dividend yield. Assume initially that the dividend yield is held constant over time (we'll relax this assumption in a moment). If the dividend yield (Dividend/Price) is constant, then by definition, prices must grow at exactly the same rate as dividends grow. **By definition, when the dividend yield is unchanged between the date you buy stocks and the date you sell them, your total return equals the dividend yield (income) plus the growth rate of dividends (capital gain).**

Historically, earnings, dividends, revenues, book values and other stock market fundamentals have grown at a rate of 6% annually. Earnings are the most volatile of these, sometimes growing from trough-to-peak at rates approaching 20% annually, and sometimes plunging from peak-to- trough at rates approaching -20% annually. In fact, historically, earnings have been even more volatile than prices themselves. When measured from peak-to-peak or trough-to-trough however, earnings show exactly the same sturdy 6% annual growth rate that other stock market fundamentals exhibit. Over the past century, the highest growth rates over any 30-year period were 6.3% annually for dividends, and 7.8% for earnings (trough to peak).

As a rule, a good estimate of the "yield-to-maturity" on stocks is the 6% long term growth rate plus the dividend yield. But remember, your actual return will only be equal to this value if the dividend yield stays constant over the period that you hold stocks. As we saw in our example, if the yield falls during the period you are holding stocks, your actual return will be even higher than the yield-to-maturity that you bargained for. On the other hand, if the yield on stocks rises over your holding period, your actual return will be even less than the yield-to-maturity you bargained for.

Historically, the dividend yield on stocks has averaged about 4%, and has fluctuated both

above and below this 4% figure. As a result, the historical average return on stocks has typically been 6% + 4% = 10%. That's precisely where that 10% "historical return" on stocks comes from.

A decade ago, in May 1988, the dividend yield on the S&P 500 stood at 3.8%. At that point, one could estimate that stocks were priced for a long-term return of approximately 9.8%, assuming the future dividend yield would also be 3.8%. But over the next decade, the dividend yield plunged to an unprecedented low of 1.4%. Not surprisingly, the actual 18.95% annual total return earned by investors over this decade has been significantly higher than the 9.8% investors bargained for. The driving force has been falling yields, not growth in fundamentals. Over the past decade, earnings grew by 8.5% (largely due to temporary expansion in profit margins), and dividends by 5.2% annually. Assuming dividend growth speeds up to a 6% rate and the dividend yield in the distant future returns to 3.8%, those investors who bought stocks in May 1988 will have earned a total return of -- surprise -- that original 9.8% annually.

Mathematically, the total return on stocks over any future time horizon can be estimated using the following equation. **Annualized future total return =**

$$(1+g)(\text{Original Yield}/\text{Terminal Yield})^{1/N} - 1 + (\text{Original} + \text{Terminal})/2$$

Where Original Yield is the original dividend yield (in decimal form), Terminal Yield is the dividend yield expected at the end of the holding period, N is the holding period in years, and g is the growth rate of dividends over the holding period. For example, at the 1982 bear market low, the dividend yield on the S&P 500 Index reached a rich 6.7%. Over the following 16 years, the dividend yield has declined to just 1.4%, while dividends have grown at an average annual rate of 5.4%. Over those 16 years, the total return on the S&P 500 has been breathtakingly high, at over 20% annualized. Why? Do the math. **Annualized total return =**

$$(1.054)(.067/.014)^{1/16} - 1 + (.067 + .014)/2 = .203 = 20.3\% \text{ annually}$$

Note the rule: You want to own stocks when the yield on stocks is high, or while favorable market action (interest rates, inflation, market breadth) are uniformly driving the yield downward. Beware when neither is true.

Currently, assuming dividend growth speeds up to a 6% rate and that the dividend yield is still just 1.4% in the future, the long term total return on stocks will be 7.4%. But here's a more likely result: suppose the future dividend yield rises even a bit, even to just 2%. If that happens over the next 5 years, investors will earn a total return of zero over those 5 years. Over the next 10 years: just 4% annually. Over the next 20 years: 5.8% annually. Over the next 30 years: 6.4% annually. **If the dividend yield rises to the historical average of 4% even 30 years from now, investors will have earned a total return of just 5% annually over that span. Consider that figure long and hard before trusting your retirement plans to a buy-and-hold approach in stocks.**

It's probably less than you've bargained for.

Note: The foregoing article appeared in June 1998 and does not necessarily reflect the current investment position of the Hussman Funds. For weekly market commentary regarding our current investment stance and perspectives, please visit our Research & Insight *page.*

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