Valuation Yardsticks: The Earnings Yield

– Methodology

The valuation data that I deliver each month is based on an improved version of the "Fed Model" of valuing equities. In the late 1990s, the Federal Reserve did various studies that concluded that the *earnings yield*, or the inverse of the P-E ratio, can be compared to the yield on the ten year nominal bond for the purpose of determining whether the stock market is "undervalued" or "overvalued." If the earning yield exceeds the bond yield, stocks were deemed to be undervalued and vice versa. This fit well during the 1980s and 1990s.

But there is a fundamental problem with this methodology. Stocks are real assets while the standard bond is a nominal asset. A better way of understanding the data is to compare the earnings yield on stocks with yield on TIPS or Treasury Inflation Protected Securities. Since TIPS bonds yield are safe in real terms, the earnings yield on stocks should be higher than the TIPS yield by the amount of the equity risk premium. Two risk premiums are considered in the data: 2% and 3%.

There is much debate about the appropriate level of the equity risk premium. Historical analysis has placed it above 3%, but most analysts believe that it is between 2% and 3% today. Obviously, stocks will look more attractive with a 2% risk premium than with a 3% risk premium. The reader is invited to calculate valuation with any premium as all the necessary data are presented.

To determine the earnings yield on the S&P 500 Index a variety of earnings estimates are computed. The following are definitions of these estimates:

- ***Bottoms Up*** = taking the consensus estimate of analysts for *each* company in the S&P 500 Index and then adding those together.

- ***Top Down*** = Using macro data and forecasts to adjust last year's aggregate earnings figure to obtain the best estimate of next year's earnings.

- ***Operating earnings***: A generous earnings estimate that eliminates write-offs and other special charges. A "going concern" estimate of earnings.

- ***As Reported Earnings*** = Net income as reported by the firm, conforming to GAAP earnings. Is almost always lower than Operating earnings and deemed more conservative. It includes including write downs and special charges.

- ***Core Earnings*** = the most conservative earnings concept developed by Standard and Poor's in 2002 expenses options, calculates underfunded pensions plans, although it does eliminate some write-downs that are included in reported earnings. Generally (but not always) the lowest estimate.

- ***12 month forward*** = estimate of earnings for the next 12 months. For example, at the end of March, twelve month forward earnings would include estimates for the first quarter of the following year.

The Gordon Model of stock valuation, which is based on dividends, states that it is *next* period's dividend that is the one that is discounted to calculate the value of a stock. The earnings yield model assumes that all earnings are paid out as dividends, so next period's earnings is the appropriate estimate. In an annual model, this means the 12 month forward earnings estimate. Readers should be aware, however, that P-E ratios are often calculated using the last 12 months of earnings.

The earnings yields computed from these estimates are compared to the 10-year nominal bond (Standard Fed Model Comparison) and then to the 10-year TIPS or "real bonds" based on a 2% and then on a 3% risk premium. A negative number implies undervaluation of equities relative to bonds, and a positive number implies overvaluation.