Guest Commentary by David Moore

Something's Rotten in the "Fed Model"

October 31, 2001

David Moore is an analyst with Castle Creek Capital, a merchant/investment banking firm specializing in the financial services sector.

A plethora of financial pundits have recently declared the market "undervalued" by virtue of the fact that the so-called "Fed Model" provides support for such a proclamation. More specifically, the Fed Model as of this writing suggests that the market, as defined by the S&P 500, is approximately 5% undervalued. For reasons outlined herein, however, I believe that valuations derived from the Fed Model should be discounted heavily in the current investment environment.

The Fed Model, perhaps the most popular method of determining the S&P's "fair-value" in recent years, is so named because the Federal Reserve Board uses it as a benchmark for stock valuations. Under the Fed Model, the S&P is fairly valued when its earnings yield (the inverse of the P/E) equals the yield on the 10-year Treasury bond. The logic underlying this approach is that stock investors should require a rate of return equal to the risk-free rate of return (on Treasuries) plus a risk premium. In the Fed Model, the risk premium is equal to the expected rate of earnings growth on the S&P. This model is popular because it (1) makes sense from a theoretical standpoint, (2) is easy to use and, most importantly, (3) has strong predictive power over the long term; that is, the historical correlation between the S&P's earnings yield and the yield on 10-year Treasury bonds is very high.

* Ratio of S&P 500 Index to its Fair Value (52-week forward consensus expected S&P 500 operating earnings per share divided by the 10-year US Treasury Bond yield) minus 100.

Source: Yardeni.com

Now, let me state from the outset that I am not a foe of the Fed Model when it is used in the proper context. In fact, in a piece titled "On the Nature of Long Term Returns from Holding Stocks" that was published on this site in June, I suggested that the Fed Model was a relatively useful tool for determining the market's fair value, and I still believe that today. Nevertheless, the Fed Model has its weaknesses and, in my view, such weaknesses are particularly glaring in the present environment.

The principal flaw with the Fed Model is that it relies heavily on the consensus estimate for the coming year's operating earnings on the S&P 500. For example, just a few months back, the consensus estimate for S&P operating earnings was $60 per share. Assuming a 5% yield on the 10-year Treasury and – voilá – we get a fair value of 1200 for the S&P 500. Today, however, the consensus earnings estimate for the S&P in 2002 has declined to roughly $53 per share. Had interest rates remained unchanged, the Fed Model would be telling us that the market's fair value is now 1060, or 12% below its indications from earlier in the year.

A second flaw with the Fed Model is that it assumes a constant rate of long-term earnings

growth for the S&P. In other words, if the Fed Model indicates that the S&P is at fair value, and subsequent earnings growth turns out to average 3% over some period instead of an implied 5%, then investors' realized risk premium for holding stocks will be 2% below expectations (and historical averages), holding interest rates steady.

Finally, a third imperfection with the Fed Model is that it assumes that low interest rate environments like the current one will necessarily be followed by low interest rate environments in the future. While this has been a good bet for the last twenty years, history suggests that this assumption is not failsafe.

So, let's look at the current market and measure the extent to which things could go wrong in using the Fed Model as an investment guide. With the 10-year Treasury yielding 4.65%, the fair value P/E for the S&P under the Fed Model is 21.5x earnings. Applying this P/E to current 2002 consensus operating earnings of $53 per share yields a fair value S&P estimate of 1140, or roughly 5% above current trading levels.

Let's assume, however, that 2002 S&P operating earnings come in at just $45 per share (the low end of the current range of estimates) and grow at just 5% per year over the next five years (that is, in line with historical averages). Let's further assume that inflation ticks up just slightly (to 2.5%) and that the yield on the 10-year Treasury is 5.5% in 2006 (for a 3% real return). Under this set of (not altogether unrealistic) assumptions, the S&P 500 would be fairly valued at 1045 in 2006, *or slightly below where it's trading today*. Clearly, very small changes in assumptions render the Fed Model somewhat impotent as an investment tool.

Importantly, none of the analysis herein touches on the notion of earnings *quality*. While a detailed analysis of earnings quality is an exercise for another day, suffice it to say that "quality" is not the appropriate adjective one should use in describing the current state of most corporate earnings reports. As a result of (1) the increased use of options as a primary form of compensation, (2) a frantic acquisition pace by Corporate America (with associated "non-recurring charges"), and (3) the increased use of non-operating gains to shore up income statements, earnings quality over the last decade, and the last five years in particular, has declined considerably. Consequently, although the issue was not addressed previously herein, the abysmal state of reported earnings is another reason to view the Fed Model with some degree of skepticism at the present time.

The bottom line is that many market watchers appear to be relying on the Fed Model for valuation cues at a particularly precarious time; that is, a time when all of the model's relevant variables could very likely disappoint investors going forward. More specifically, in my view, it's highly likely that (1) the consensus earnings estimates for the S&P are still too high, (2) the rate of earnings growth on the S&P 500 will revert toward its long-term average of 5%-6% per year over the next several years, and (3) inflation will be slightly higher in the future (2%-2.5%) than today's long-term interest rates imply (1.5%).

Thus, in the final analysis, as the example above illustrates, one should think long and hard about using the Fed Model as a compass for valuation over the next year. Despite a serious correction in equity valuations and the siren call of financial pundits everywhere, stocks still ain't cheap… or even fairly valued.

Opinions expressed are not necessarily those of David W. Tice & Associates, LLC. The opinions are subject to change, are not guaranteed and should not be considered recommendations to buy or sell any security.

Copyright David W. Tice & Associates, LLC. 2005 Privacy Policy | Terms & Conditions
site by jellysideup.com