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Today's Market

The Flawed Fed Valuation Model

Feb. 06, 2008 5:55 AM ET | **SPDR S&P 500 Trust ETF (SPY)** | 2 Comments

There are lots of things that investors believe which I find perplexing. The Superbowl indicator is one, but the oddest to me is the so-called Fed Model, also known as the IBES Valuation Model.

It is not that the Fed model is so terribly wrong -- it has been both right and wrong over the years. Rather, it is the way too many people conceptualize it.

First, the definition of the Fed Model: Yield on the 10-year U.S. Treasury Bonds should be similar to the S&P 500 earnings yield (forward earnings divided by the S&P price). This, in theory, should inform you of when equities are over-priced or under-priced.

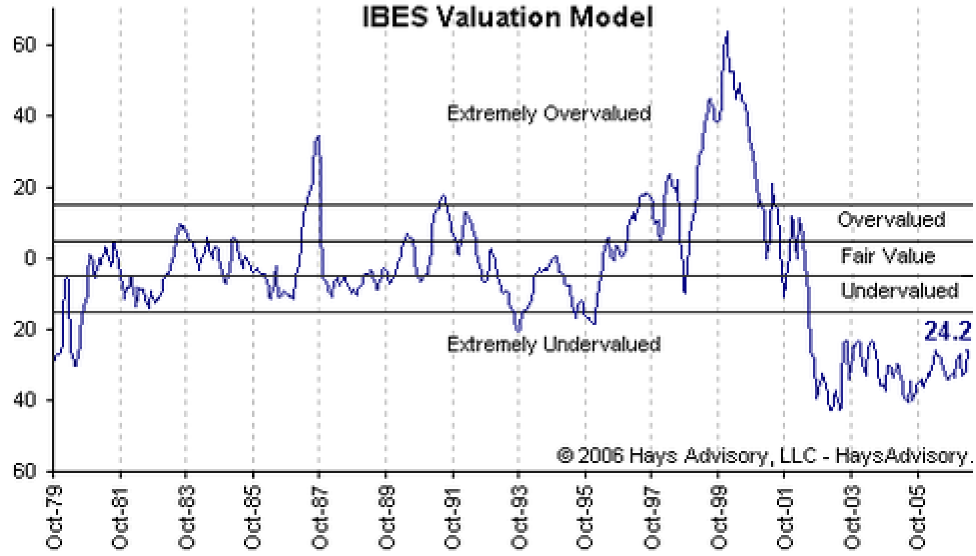
$$\frac{\text{Bond Yields}}{\text{Stock Earnings Yields}} = \frac{Y}{E/P}$$

Y = Bond Yields
E = Earnings Estimates of the S&P 500
P = Price of the S&P 500

Note that the formula contains two variables: While it is commonly described as a way to evaluate when stocks are over- or under- valued, the other variable in the formula above is the forward S&P500 earnings consensus. SPX prices and the 10 year yield are the knowns, while valuation and forward earnings are the unknowns.

Thus, the Fed model today *might* be telling you two things: When equities are undervalued -- or when consensus earning estimates are too high.

Let's see how that looks on a chart:



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graphic courtesy of Hays Advisory (June 2007)

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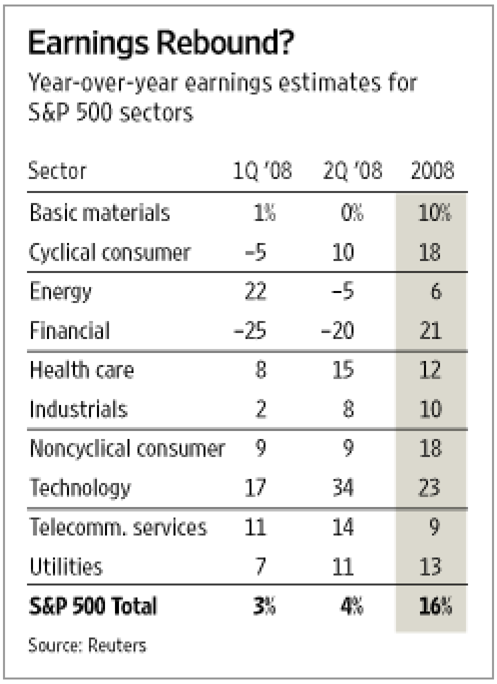
Looking at the chart above, we can identify some rather odd periods. The model had stocks extremely undervalued in 1979 -- just before a major 30% selloff. In 1981, stocks were fairly valued on the eve of the greatest bull market in history. From 1982-85, stocks bounced between slightly overvalued to undervalued, according to the model. In 1987, a very timely crash warning. 1998, an extremely early crash warning, missing a huge 2 year run in the indices. In 2001, it had stocks as undervalued -- and they proceeded to get a whole lot cheaper over the next 2 years. Equities have been extremely undervalued ever since.



Earnings Rebound?

Year-over-year earnings estimates for S&P 500 sectors

Sector	1Q '08	2Q '08	2008
Basic materials	1%	0%	10%
Cyclical consumer	-5	10	18
Energy	22	-5	6
Financial	-25	-20	21
Health care	8	15	12
Industrials	2	8	10
Noncyclical consumer	9	9	18
Technology	17	34	23
Telecomm. services	11	14	9
Utilities	7	11	13
S&P 500 Total	**3%**	**4%**	**16%**

Source: Reuters

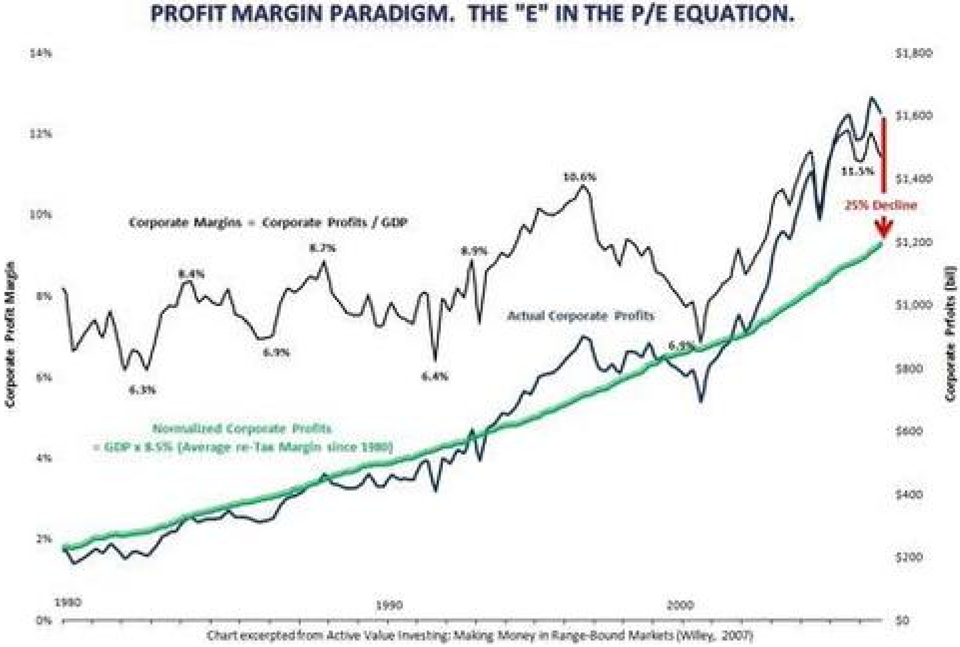
Now, given that rather inconsistent track record, I find it hard to get too excited about this. But the most damning evidence against the Fed model is the period prior to 1960s. Over that entire time, the Fed model had no utility whatsoever. "*Out of sample"* testing -- looking at a different set of data than the one proffered -- is quite damning to the Fed model.

Which brings us back to today. We continue to see the Fed model used to rationalize a bullish stance in equities. However, given that it is based in large part on analysts' consensus for future SPX earnings, investors need to be extremely cautious relying solely on the Fed model. Why? Analysts are unflaggingly inaccurate at turning points. Example: Q3 S&P500 earnings consensus were +8% -- S&P500 earnings came in at -8%. Q4 has been similarly lowered, undercutting the earlier forecasts of undervaluation.

Now let's look at 2008. S&P 500 forward earnings over the next 4 quarters are as follows: Q1 = 3%; Q2 = 4%; Q3 = 20%; Q4 = 50%, according to UBS.

So we are confronted with two possibilities. Perhaps, equities are seriously undervalued (that assumes earnings explode in 2H). An alternative explanation, and one I suspect is more likely: Analysts' consensus earnings are wildly exuberant for the second half.

One last issue: Let's ignore the analysts, and merely consider mean reversion: As the chart below shows, earnings have been unusually high relative to history. If they merely mean revert, they will come down another 25%. Even worse, most mean reversion blows right past historical averages to opposite extremes.



Graphic courtesy of Vitaliy's Contrarian Edge, from the book Active Value Investing: Making Money in Range-Bound Markets

The bottom line -- either equities are extremely under-valued, or analyst consensus earnings are significantly too high.

But to treat the Fed model as if it merely looks at valuation is to ignore a key variable -- future earnings consensus -- that tends to be wrong at the worst possible moment . . .

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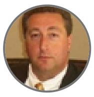

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