

The Muhlenkamp Memorandum

Essay (Continued) As long-term rates have fallen over the past few months, the models that use long-term rates as a base have begun to show that stocks are fairly priced. One database that we purchase, Ford Investor Services, Inc., calculates a price/value ratio for 2000 stocks based on long-term bond rates. Ford's price/value ratio fell below 1.0 (indicating prices are fair value) in August 1993 for the first time since July of 1980 (except for a brief period during the Gulf War.) During much of the 1980's stocks prices frequently bottomed at a price/value ratio of 1.2. At those levels, the model indicated that stocks were 20% overpriced, but the reality was that interest rates were too high; stocks were a good buy."

Shortly after publishing that newsletter we received from Ford Investor Services a plot of their price to value ratio for the period 1970-1992. Quoting Ford's explanation of their model, "Ford's price to value ratio (PVA) is determined by comparing the price of a company's stock to that derived by a proprietary dividend discount model (DDM). A PVA greater than 1.00 indicates that a company is overpriced whereas a PVA less than 1.00 implies that a stock is trading below the level justified by its earnings, quality, dividends, growth projections, and prevailing interest rates. Each month Ford publishes the average PVA of all the companies in the Ford Data Base." The graph below shows these monthly figures.

For their "prevailing interest rates", Ford uses long-term interest rates. The structure of the model produces the result that, if all other things are equal, interest rates that are too low will depress the Price to Value Ratio and indicate that stock prices are too low. Similarly, interest rates that are too high will boost the Price to Value Ratio and indicate that stocks prices are too high.

Below, we have printed a plot of Ford's Historical Average Price to Value Ratio which is compiled from the PVA's of a large number of stocks (currently 2000). In line with this chart, we have re-printed (from Newsletter #28) our real long-term Government Bond Chart. We have also printed a plot of the Dow Jones Industrial Average from our "Investment Climate" essay (from Newsletter #25).

You can see that from 1973-1980 Ford's PVA is below 1.0 when real (adjusted for inflation) interest rates were unusually low. From 1981-1993 Ford's PVA is above 1.0 when real interest rates were unusually high. You can also see that when interest rates were unusually low, causing stocks to appear "cheap," stock prices moved sideways. In fact nominal returns in the 1973-1980 period (before inflation) were about 3% per year. Conversely when interest rates were unusually high, causing many to conclude that stocks were too high, stocks in fact returned 15% per year - for a quadruple in 10 years.

We're not denigrating Ford Investor Services; we find their data and many of their conclusions very useful. We're merely using their plot to illustrate a fundamental flaw in most stock value models. Such models use current interest rates and assume that such rates are the proper base. What we don't understand is why these assumptions seem to go unquestioned after 20 years of giving signals that are backward.

Charts

