Barton M. Biggs

The Giant Present Value Machine Downtown

Jim Harpel is a very smart guy. He went to both Harvards but more to the point, he has an honorary PhD in net worth enhancement from the financial markets, the premier graduate school in the world. Jim maintains the stock market is "nothing but a giant present value machine." In other words, he is saying the level of the stock market is really a reflection of the capital markets pricing (or dividend discount) model in which the key determinants are the long-term bond rate (really a measure of alternative return), the profitability of industry as measured by return on equity, and a justifiable price/earnings ratio.

The value of a stock, this theory says, consists of its current dividend capitalized by the investor's required rate of return and the contribution to value deriving from the profitable retention of earnings that will generate a stream of growth of future dividend payments. Thus, based on given interest rate levels and profitability, stocks as a whole will sell at a derived multiple. As interest rates go up, the justifiable multiple goes down. Today, stocks are considerably overpriced compared with the alternative return from bonds, so a lot of people are bearish. In fact, Harpel believes that, after a slow second quarter, economic growth will be strong in the second half of the year, corporate profits will rise, interest rates will go up, and the stock market will go down.

The valuation model looks something like this, although there are several variations, some of which are more elegant.

Valuation Model

	Bear Case	Alternative 1	Alternative 2
Five-Year Government Bond Yield	12.0%	12.0%	12.00%
Risk Premium for Equities	2.5	2.5	1.25
Required Total Return	14.5	14.5	13.25
Assumed Sustainable Return on Equity	14.5	19.0	19.00
Rate of Earnings Retention	55.0	50.0	50.00
Payout Ratio	45.0	50.0	50.00
Sustainable Earnings Per Share Growth Rate (Sustainable Return on Equity Divided by Rate of Earnings Retention)	8.0	9.5	9.50
Required Total Return	14.5	14.5	13.25
Minus Sustainable Earnings Per Share Growth Rate	(8.0)	9.5	9.50
Required Dividend Yield	6.5	5.0	3.755
Justifiable Earnings Yield (Required Yield Divided by the Payout Ratio)	14.4	10.0	7.50
Justifiable Price/Earnings Ratio (Reciprocal of Earnings Yield)	7.0x	10.0x	13.30x
Present Multiple on 1984 Earnings of S&P 500	9.0		

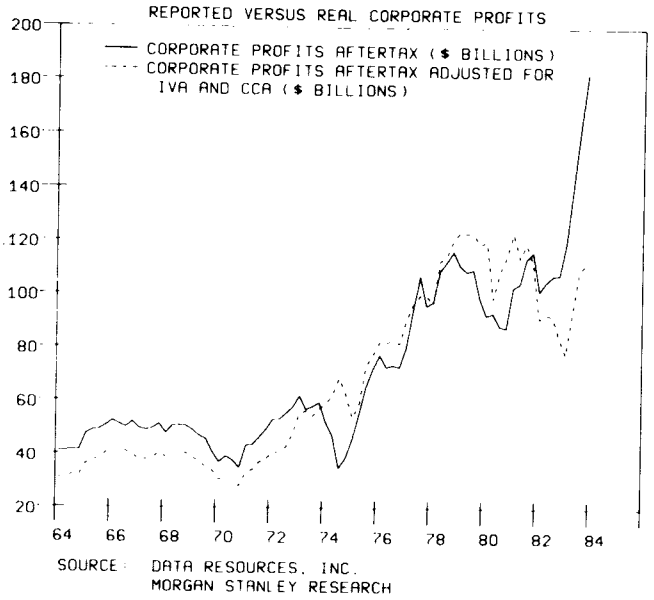
You see, the way it works is that this huge present value machine has been installed under the floor of the New York Stock Exchange and is hooked up to it and the bond market so that stocks can respond to interest rate changes. From time to time, secretly, late at night dressed completely in black, Harpel or some other opinion maker mutters the password and descends through a trapdoor hidden under the IBM post and changes the profitability variables.

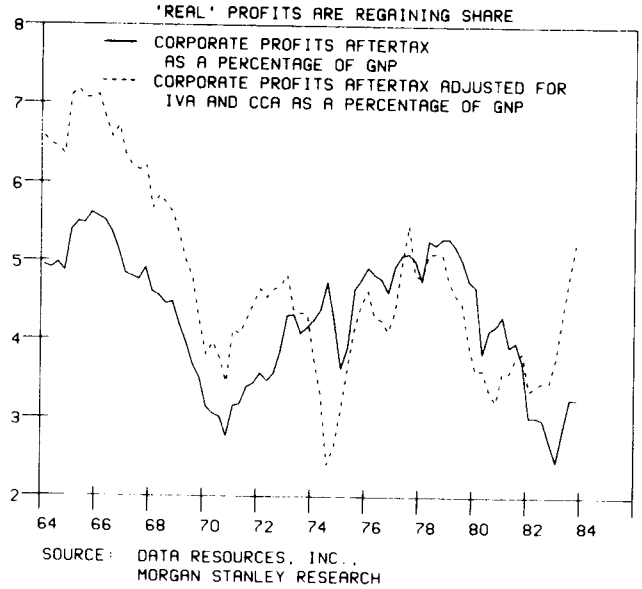
Obviously, Harpel is using a figure of speech when he describes the stock market as a giant present value machine, and he is one of the best thinkers and stock pickers around. Nevertheless, with all due respect, I can't buy it. I do agree that equities as a class of investment have to stand up to comparison with the alternative returns available from other assets, and, in particular, high-grade bonds, but my problems with the present value machine concept come from the assumptions by which it is driven.

In the first place, I wonder about the risk premium over bonds required from equities that is part of the lore that has been passed down from antiquity. Where did that dictum come from? It is as though after the Lord finished giving Moses the ten commandments he said, "Here's one more tablet for you to take back to the sinners on Wall Street." Short-maturity bonds are less volatile pricewise than equities, but all the studies show that over the long run, bonds have provided a far lower total return. Why should the better financial asset have to earn a "risk premium"? If risk means losing money, bonds have been much riskier investments than stocks for a generation now.

Secondly, a present value machine can't factor in qualitative factors and secular change. Because of the present high interest rates, the next five years contribute at least 80% of the present value calculation. Presently, "real" or inflation-adjusted corporate earnings are increasing much faster than reported profits because of the decline in inflation and the large increase in allowed depreciation charges in the 1981 tax legislation. Because depreciation is a pretax charge, this legislation had the effect of depressing reported aftertax profits but increasing "real" profits and cash flow.

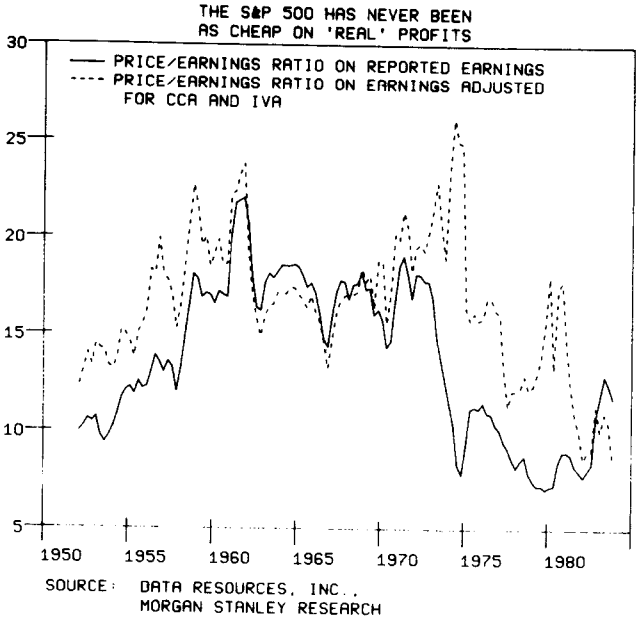
As Figure 1 shows, since the fourth quarter of 1980, reported profits through the final period of 1983 have declined 2.4%, but "real" earnings have soared 165%. Furthermore, "real" profits are now 29% higher than reported income, whereas since the early 'Seventies until recently they have always been much lower. In other words, the quality of reported profits today is much higher. As a result, the market as a whole has a much higher sustainable internal growth rate of earnings and dividends when real profitability and cash flow are enhanced in this manner even though reported return on equity does not rise very much. Corporate profits (and particularly "real" profits) are beginning to regain some of the share of GNP that was lost over the past 15 years or so and that is not reflected in the present value machine, giant that it is. Figure 2 indicates what is going on.





Thus, I would argue that on a basis comparable to the last 15 years, the return on equity is more like 19%, and in the future the payout ratio will go to 50% of reported earnings. When the valuation model is solved for these changes, the justifiable price/earnings ratio becomes 10 (Alternative 1), even with a two-and-a-half percentage point risk premium for bonds. If you cut the risk premium in half (or if interest rates fall 125 basis points), the justifiable price/earnings ratio rises to 13.3 (Alternative 2).

It seems to me that Figure 3 supports my point of view. It shows that the S&P 500 is at 11.8 times trailing annual reported earnings but is dirt cheap at 8.6 times "real" profits. In fact, it is selling at the lowest multiple of "real" earnings in its modern history and the price/earnings ratio hasn't even risen since August 1982 because profits have risen more than stock prices. In other words, if the right data were in the present value machine, it would look a lot better.



Finally, I would repeat the point John Templeton made to me. His studies of markets all over the world over the past 70 years show there is no correlation between interest rates and price/earnings ratios. Stocks are a dynamic, open-ended investment that represent a

call on asset and earnings growth, whereas bonds are a static, fixed-return investment. How can they be accurately compared? Templeton is unmoved by valuation models and so am I. Now if I could only get at the dials of that giant present value machine downtown.

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ECONOMIC PERSPECTIVES: The Great Credit Myth
John D. Paulus - 15 pages - 3/26/84

Is credit now so tight that interest rates should be wrenched downward to avoid an impending economic collapse? Or would lower interest rates fuel another inflationary spiral?

Confusion on this issue arises in part from overreliance on weekly statistics on commercial and industrial loans at large banks as a measure of monetary tightness or ease. However, these figures on loan demand are a lagging indicator of economic activity. Broader credit measurements do a better job of gauging credit tightness. Total borrowing by the nonfinancial sectors -- Federal, state, and local governments, households, and nonfinancial corporations -- provides a reliable indicator of the demand for and availability of credit. The expansion of the debt of these sectors suggests that credit has been both affordable and readily available throughout 1983 and on into 1984.

Although interest rates are at higher levels than in earlier recovery periods, this can be explained by certain factors present today that were absent in past economic rebounds. These include heavy Treasury borrowings to finance growing Federal deficits and the deregulation of the financial system, which has permitted more efficient intermediation between savers and borrowers at "high" interest rates. In addition, higher returns on invested capital today compared with earlier times allow businesses to pay more for credit. Given the permanency of these factors, we believe lower interest rates would produce an even sharper resurgence in inflation than is currently expected. (An acceleration to the 6% to 7% zone in 1985 seems almost inevitable.)

Credit is not tight. On the contrary, it has been extended at a rapid pace during the current economic recovery, suggesting that, if anything, credit has been too easy. This implies that if an eventual sharp rise in inflation is to be avoided, interest rates should move higher, not lower, over the next 18 months.

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