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July 22, 2002

Briefing Note

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## *Equity Markets - Where Do We Go From Here?*

We recently we sent out copies of our second quarter "Chartwell Review" to clients. In it, for the first time in 3 years, we suggested institutional investors with a 2+ year investment horizon should re-balance their asset mix to ensure that current equity exposure is at, or above, their long-term strategic target. The real kicker was the "or above" modifier. We've consistently been in the "keep equity at neutral targets or below" camp since mid-1999. But now, we think the broad U.S. equity market is likely to be up over 30% cumulatively within the next 2 years (i.e., by 6/30/04). In effect, we envision the S&P 500 index reaches 1100 by then, compared to today's closing level of 820.

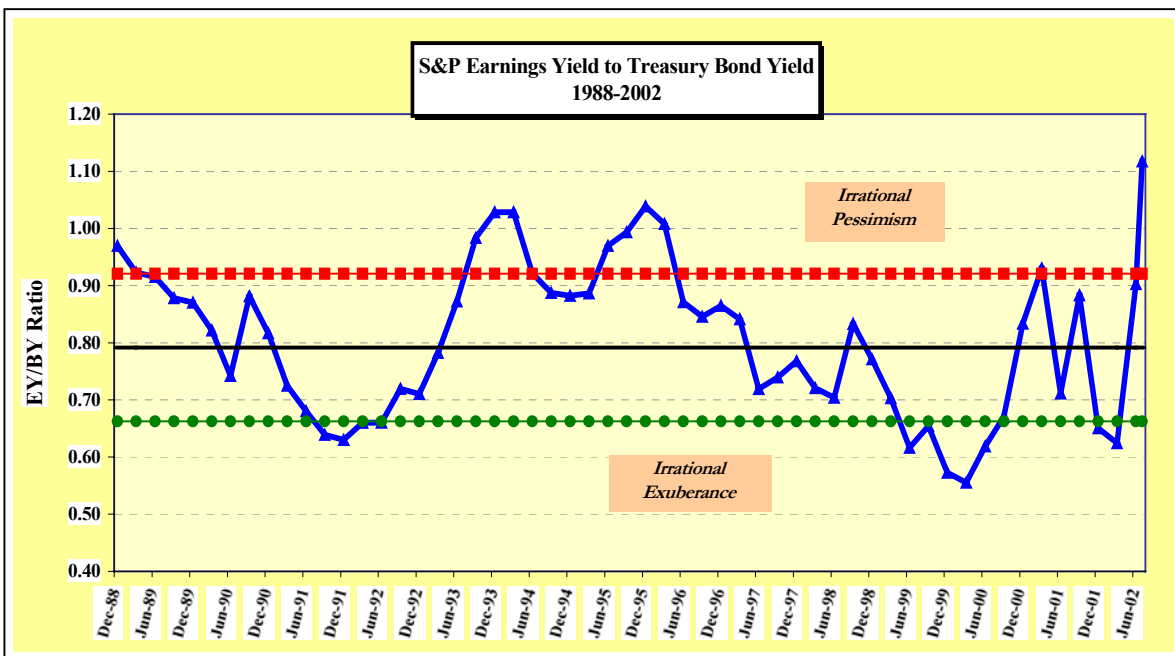
Having delivered the Cliff's Notes version in "Chartwell Review", it occurred to us that you also might appreciate the expanded analysis. Some observations –

- We're assuming the crisis of confidence engendered by the current vacuum in corporate governance will take two years to dissipate. It shouldn't take that long, but we're anticipating there is still much out there we don't know about;
- Earlier this year, we stated that institutional investors would be prudent to anticipate long-term domestic equity returns (dividends + appreciation) only in the 6.2 – 9.2% range when setting contribution and spending policies. Today's more optimistic two-year view should be seen as a subset of this conservative longer-term perspective;
- The last few months' market action has left most investors notably underweight their strategic equity allocation targets. Leaving that underweight in place is tantamount to forecasting a lasting upward shift in the long-term attractiveness of fixed income assets. If that's *not* the motivation, then staying underweight stocks is just an attempt to time the markets;
- But short-term market timing, however reasonable in theory, has been a losing game. So, we **aren't** trying to call some sort of near-term "bottom" for our clients. ***A critical element of our confidence is the 2-year timeframe. We don't think investors can prudently forecast the market's short-term valuation path.*** Those investors who have had to shorten their focus, perhaps due to plan-specific issues, should take note;
- We agree that the economic recovery will be tepid. If so, its leisurely pace is quite likely to help long-term (10-year) Treasury bond yields from rising more than 1% above today's level during the next two years;



- Consensus bottom-up forecasts from the analyst community have the S&P 500’s operating earnings recovering quickly from recessionary lows, rising by nearly 60% over the next 24 months. That is consistent with the corporate earnings growth pattern we saw coming out of the 1990-91 recession. But, the current economic recovery is slower than other ones, so Chartwell expects corporate operating earnings will rise much less than consensus over the next two years. We forecast trailing 1-year operating earnings of the S&P as of March 2004 to fall perhaps 16% short of consensus estimates.

Despite all of our haircuts to future earnings and rising interest rate assumptions, it comes out the same: domestic equity markets have become significantly undervalued on the recent waves of panic selling. Echoing our conclusions are two of Wall Street’s most infamous bears, Barton Biggs and Byron Wein. Both are on record this week that the domestic equity market is 25-35% undervalued. Mr. Wein even suggested it has not been this cheap since the early 1980’s. Our view is much more conservative than that, but we still foresee a very positive differential for stocks versus bonds during the next two years.



Helping to shape our view of the market’s two-year potential is the Fed Valuation Model, which looks at the trade-off investors make between investing in common equities, with their implicit call on future corporate earnings; and fixed income securities, with their explicit claim on a specific repayment stream. This model tracks the relationship between long-term bond yields and the “earnings return” provided by equity investments. The above graph explores how this relationship has varied over time since December 1988.

Since stocks and bonds are complementary investments, Earnings Yields(EY) and Bond Yields(BY) have a sustainable relationship with one another. (See the Addendum for a more thorough discussion of the Fed Model). The long-term average for this ratio is 0.79, in a normal range of 0.66 to 0.92. When the ratio is higher than the normal range (i.e., above 0.92), the equity market may be considered “fundamentally” cheap to bonds. On 7/22, the EY/BY ratio stood at 1.12, which is far above its previous 15-year high of 1.04 in December 1995.

While very simple, the model has a pretty good record of indicating future market returns. When the EY/BY ratio has closed a quarter above 0.79, the market’s median return in the next year has exceeded 20%. When the quarter-end ratio stood below its long-term average, the market’s median return the following year was less than 8%;

There have been two only developments that have kept a cheap market (ratio above 0.92) from producing a solidly positive return during the next 12 months – corporate earnings plunged during the next year or interest rates rose sharply. The former happened in the recession years of 1990 and 2001, while the latter occurred in 1994. Otherwise, whatever non-fundamental factors previously drove the market to cheap levels have not been able to keep it from rising the following year.

### **SUMMARY**

We think it will ultimately prove quite worthwhile if you re-build your plan’s overall equity exposure back to its long-term target allocation, *or higher*, despite all of the uncertainty and fear currently evident in the market. This is because we see the inevitable trade-off between bonds and stocks as clearly favoring equity exposure, *if you have a two-year investment horizon*.

Perhaps it goes without saying, but it would be imprudent to “bet the ranch” on this recommendation, and we are certainly **not** calling for a total exit from bonds in favor of stocks.

With the equity markets very “sloppy” right now, implementing this recommendation presents a few options. Present trading data suggest investors are dumping stocks for cash and bonds, with no rational underpinning for their short-term actions. It may be unnecessary to step all at once into this virtual torrent of selling pressure. Instead, we suggest calculating your current re-balancing amounts in \$ terms, then execute the re-balancing in three equal parts over the next, say, 2-4 months. Alternatively, more cautious investors may decide to rebalance all at once, but wait until the S&P shows some strength and recovers to, say, 900. Your Plan will have missed a chunk of the rally off the bottom, but not the largest move.

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## The Fed Valuation Model

The Fed Valuation Model is a simple method to sort out relative valuations between the bond versus stock markets. It is acknowledged to be one of the Federal Reserve's favorite tools to measure investor sentiment. This addendum explores the basics of its theory and practice.

The Fed Model inherently assumes there is a “guns or butter” type of trade-off between owning stocks versus owning bonds. It assumes the relative attraction of one over the other, and therefore the relative valuation of one over the other, is ultimately rooted in certain fundamentals (stock prices, corporate earnings, corporate earnings growth, bond yields). However, the model also embraces the view that other important factors, including qualitative and “emotional” ones, can temporarily drive the relative attraction of one investment over the other.

Said another way, the model assumes the fundamental elements of prices, cashflow, earnings, and earnings growth determine a “central tendency” in the relationship between equity and bond valuations, but this tendency is sort of a mean, or median relationship. The simple math doesn't always hold true, because there are many peripheral elements driving relative valuations in addition to the primary ones.

### MECHANICS

1. Observe the current estimated long-term return from investing in bonds. From a no credit risk perspective, the best estimator is the current yield-to-maturity of the long-term Treasury Bond. We use the 10-year Treasury's YTM. Call this percentage our Bond Yield, or **BY** (It was **4.50%** on 7/15/02);
2. Observe the current value of, i.e. cost to purchase, the S&P 500 index. (On 7/22/02 it was 819.8);
  - a. Observe the current “earnings per share” of the S&P 500 (actually, the weighted earnings per share of all the companies making up the index). We start our analysis by considering what has already been achieved, because we can easily then observe historical trends. Using reduced analyst estimates for earnings in this year's 2<sup>nd</sup> quarter (we reduced them by 10%, just on principle), the most recent 12 month's operating earnings of the S&P 500 was a depressed \$41.23. By comparison, trailing operating earnings for the 12 months ended June 1997 were \$42.60;
  - b. Calculate the amount of current corporate earnings you'll be getting an implicit claim on if you bought the index today. This would be  $\$41.23 / 820 = 5.03\%$ . This is called the Earnings Yield, or **EY**. (*it happens to be the inverse of the P/E ratio*);



3. Divide the current **Earnings Yield** by the current **Bond Yield**. Do this for every previous quarter-end you have data for. Graph the results. The numbers vary within a band, with a central tendency (or mean) of 0.79. Today's EY/BY would be 1.12;
4. Calculate the long-term volatility of the ratio - its standard deviation. Determine the ratio's "band of normalcy", by adding and subtracting one standard deviation from the mean. This band is 0.92 – 0.66. Note the market has been unable to sustain a EY/BY ratio outside this range for very long, regardless of interest rate changes, earnings shifts, or P/E levels.
5. Analyze the movement in this ratio in the context of actual market developments. Has it always shifted in value for the same reason (e.g., realized earnings changes), or is it more complex than that (it is)? Develop an independent forward-looking estimate of bond yields and earnings. What do these imply for future equity returns if investor emotion keeps the ratio high/low, or drives it toward the mean?

### ANALYSIS

A Treasury bond's long-term yield-to-maturity (BY) has very few variables associated with it. It is not much of a stretch for an investor to consider this his/her expected ROI. It is a "safe" return in virtually all respects (there is reinvestment risk). This is not the case with a stock's earnings yield (EY). On the negative side, you don't know what the company will do with the earnings – dividend them out, reinvest them successfully in the company's growth, use them for spurious loans to dishonest corporate executives, etc.

On the positive side, if/when corporate earnings grow, stockholders will ultimately derive a direct and increasing benefit not available to bondholders. It is this ability to benefit from *growing* returns that makes stocks fundamentally attractive for a long-term investor. The more earnings growth perceived to be out there, the more attractive today's stock(s) are.

When earnings growth expectations are very high, the relative attractiveness of stocks versus bonds increases, and you'll accept less *current* earnings yield compared to bond yield. The EY/BY ratio is poised to decline below its normal range. It will, as stocks are bid up versus bonds, unless realized earnings growth is fast enough to deliver on the high equity expectations. Then, as was the case in 1996-98, the ratio stays in its normal range even as the equity markets soar (it also helped that interest rates declined).

Ultimately, growth expectations reach a point where corporate earnings can't deliver on them. Stock prices are being bid up faster than earnings rise (you've heard of a market that is increasingly "priced for perfection") and the EY/BY ratio drops below its normal range, even if bond yields have dropped. This can be a period like 1999-2000, where earnings were rising sharply but expectations were rising even faster. Or it can be a period like 1991, where the market began anticipating an earnings recovery (growth) that didn't materialize for some time.

Unrewarded “animal spirits” (Keynes’ term) or irrational exuberance (Greenspan’s term) is eventually unsettling for investors, and the high relative attraction of stocks versus bonds begins slipping. The EY/BY ratio begins to rise. This can occur even as corporate earnings growth is finally coming on strong (like in 1993-94), or if the market expects a drop in bond yields will be quickly reversed (1995-96). In these two cases, equity markets became cheap because they had gained less than they fundamentally “deserved” to based on earnings growth and interest rates. This period represented the buying opportunity of a generation.

On the other hand, the high EY/BY ratio on March 2001 represented an insidious value trap. Market values had fallen very sharply from a wildly overvalued state 12 months earlier, even though bond yields were dropping. The kicker was forward-looking earnings (2001), which were poised to produce the greatest one-year percentage decline since the 1930’s. That is, stock prices had fallen more than trailing earnings, but not nearly enough to compensate for the earnings decline that was to come.

Where does that leave us today?

1. The EY/BY ratio is at its most favorable level in 15 years, with investor psychology and corporate earnings at depressed levels. If earnings growth materializes in moderate proportions, we could enjoy a period of stock market performance approaching that of 1996-98;
2. Earnings are expected to rise as we come out of this mild GDP recession and major profits recession. A period like 1991 could develop, where earnings growth is slower than expected. Except, in 1991 the market became overpriced as it waited for earnings growth to materialize. Today’s market has become incredibly cheap. In this case, you’re being compensated for the risk of having to wait “too long”;
3. Alternately, the very high EY/BY ratio could be another value trap like early 2001. Except, earnings growth is expected to be positive over the next two years, not the most negative since the depression.

In effect, the current wave of equity sellers is betting on a major double-dip recession and subsequent profits drop, or the beginnings of a “Japan-style” secular decline. If not, then they are just plain scared. Should economic growth remain even weakly positive, corporate earnings growth is also quite likely to be positive (it has been in every other recovery). On that basis, market indices will ultimately rise quite smartly from today’s fundamentally undervalued levels, because investors don’t stay irrationally pessimistic forever.

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