



INVESTMENT RESEARCH & INSIGHT

VOLUME 3

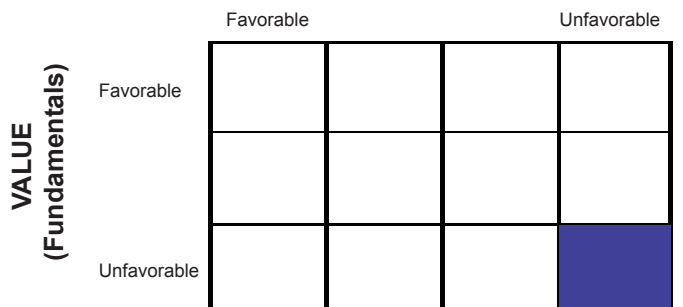
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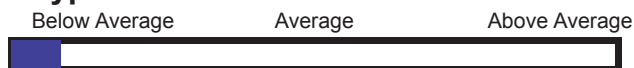
MARKET CLIMATE

The current profile of valuation and trend uniformity

UNIFORMITY (Prices, Breadth, Yields)



Typical Market Return in this Climate



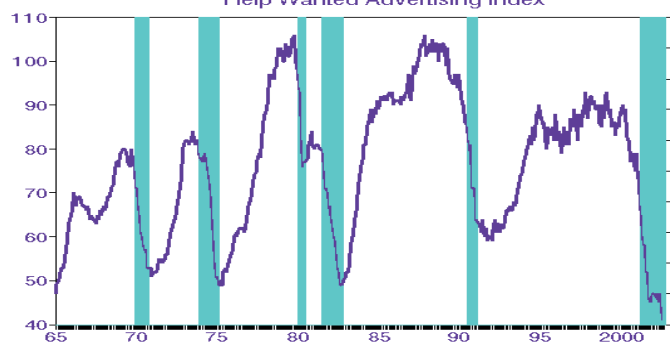
Typical Market Risk in this Climate



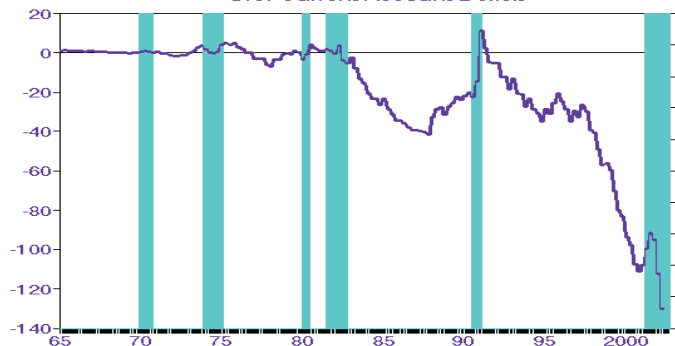
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THE TICKER

Possibly the most frequent question in investors' minds here is "Where is the bottom?" It is an interesting question, but an irrelevant one. **Even if the market reaches a "bottom" in the near future, it does not follow that stocks will respond with satisfactory long-term returns.**

In practice, we believe that it is largely impossible to identify market tops and bottoms in real-time with any precision. Instead, our investment discipline focuses on identifying the prevailing Market Climate and aligning our position with that Climate until we have objective evidence that it has changed. While the evidence often changes near what turns out to be, *in hindsight*, a market top or bottom, our focus is on that objective evidence and not on the constant guessing game that dominates the lives of many investors.

We don't spend much time trying to forecast where the market is headed, whether the market is turning, when the next rally is coming, whether we've hit a bottom, whether the latest rally is a fake-out, whether the latest decline is a major breakdown, and so forth. Our approach depends less on *forecasting* the future, as on *identifying* the present.

We need to know only two things. One is valuation - the relationship between stock prices and the stream of future cash flows that those stocks are likely to deliver to investors. The other is a quality of market action that we identify as "trend uniformity." We keep the specific criteria we use proprietary, but everything we need to know is *observable* in real-time. And there are well-defined actions that we take as new information arrives.

The reason that we are so willing to act on the basis of valuations and market action is that we believe these variables are, as mathematicians put it, "*of full rank*." This means that together, valuations and market action convey the public and private information held by millions of other investors almost as if the information was available directly.

For example, if investors are concerned about the risk of corporate defaults, this information appears in market action through a widening in the "risk spread" - the difference between yields on corporate bonds and default-free Treasury bonds. If investors are concerned that economic activity will fail to pass through to final demand, this information often appears through relative weakness in transportation stocks versus industrial stocks. **In short, the exact pattern of market action across a wide variety of sectors and security types contains important information that may not be well-recognized or publicly known.**

When both valuations and market action are unfavorable, we defend capital. This is the only Climate we identify in which stocks have lost value, *on average*. Indeed, every historical market crash has occurred from this single climate, including the 1929 and 1987 plunges, as well as the bulk of the decline from the market's recent peak in 2000.

When valuations or market action improve, we will accept a greater amount of market risk, in expectation that this risk will be rewarded, on average. At present, however, the stock market remains mired in the most negative Market Climate we identify.

Implicit in the search for a bottom is the assumption that once that bottom has been reached, stocks will advance back toward their previous highs. On this point, it is instructive to examine the behavior of the U.S. stock market between 1965 and 1982, or the experience of the Japanese market over the past 14 years. In both cases, as in recent years, stocks began from a point of overvaluation. Overvaluation does not imply that stocks must fall over the *short term*. In fact, when trend uniformity has been favorable, overvalued markets have historically tended to become even more overvalued. **But regardless of short-term influences, overvaluation makes it nearly certain that long-term returns will be disappointing.** On this front, the major indices continue to demonstrate relatively poor *investment merit*.

Alan Greenspan's 1996 comments regarding "irrational exuberance" offer a perfect illustration of our views on overvaluation. Though Greenspan was not adamant that the stock market was overvalued, we believe that stocks *were* overvalued when he made those remarks (near Dow 6500). Clearly, this overvaluation implied *nothing* about short-term returns. On the basis of measures we currently use, trend uniformity was favorable for most of the period from early-1995 through mid-2000 (the most notable exception being the Asian crisis of mid-1998). This allowed an overvalued market to become even more extreme.

But the law of investing remained true: overvaluation resulted in disappointing longer-term returns. From late-1996 - when Greenspan made his comments - to the present, short-term Treasury bills have outperformed the S&P 500 (including dividends).

Increasingly, Wall Street analysts have put a twist on Greenspan's words, asserting that the stock market now suffers from "irrational pessimism." In our view, these analysts do not have a well-formed concept of investment value, or the factors that drive total returns.

Very simply, the total return on stocks equals earnings growth, plus the dividend yield, plus the return attributable to changes in the price/earnings ratio. This is simple algebra. Regardless of whether one measures over the past 10, 20, 50 or 100 years, S&P 500 earnings have grown no faster than 6% compounded annually when measured from peak-to-peak across market cycles. While growth can certainly be much faster when measured from an economic trough, that peak-to-peak growth rate of 6% remained intact even during the past decade. If earnings had continued to grow along the peak of this channel (which we believe is attainable in the future), S&P 500 earnings would currently be \$54, about double their current level.

Using this potential level of peak earnings rather than current earnings, the S&P 500 P/E ratio remains above average, at about 16 times peak earnings (this figure is more reasonable than the sky-high multiple of 32 often quoted by bearish analysts). The problem is that the historical average is 14, the historical median is just 11 (which is about where stocks would be priced to deliver long-term returns of 10%), and most sustained bull markets have begun from a price/peak earnings multiple *below* 9. That's not a forecast of where valuations must go over the short-term, but the possibility of seeing such price/peak earnings multiples at some point in the coming decades should not be ruled out.

If the current multiple of 16 times peak earnings can be sustained indefinitely, stock prices will grow at exactly the same rate as earnings: 6% annually. Add in a 2% dividend yield, and stocks are currently priced to deliver a long-term total return of about 8% annually.

Some analysts argue that future earnings will grow faster than 6% peak-to-peak due to the impact of stock buybacks. Unfortunately, even if we factor in these buybacks, and assume against all evidence that companies will suddenly *stop diluting these buybacks* through grants of shares and options to company insiders, the effective impact on shares outstanding (and therefore earnings growth) would still be less than 1% annually. So at best, the S&P 500 may be priced to deliver a long-term rate of return of 9% annually, assuming that the P/E ratio remains above its historical norm *forever*, and that U.S. corporations suddenly cease and desist from stock and option grants to management and employees. Somehow, these assumptions seem strenuous.

Suppose instead that the price/peak earnings ratio reverts simply to its historical median of 11 at some point in the next, say, 20 years. In this event, the S&P 500 will earn a total return of less than 6.5% compounded annually between now and then. This is also simple algebra - and a result that should make investors dubious of the increasingly popular notion of hailing stocks "undervalued" on the basis of the 10-year Treasury bond yield.

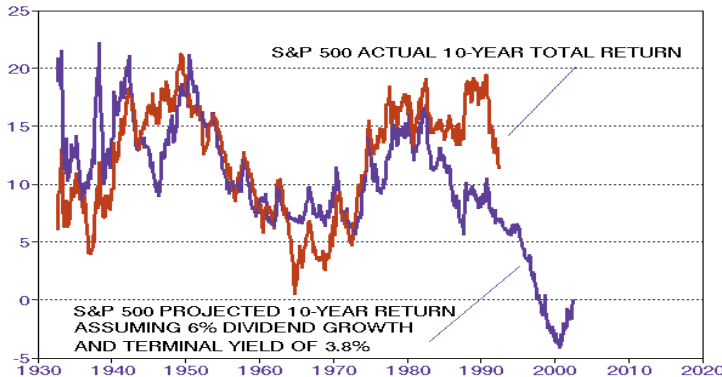
The market decline of recent years has certainly taken stocks down from their previous "bubble" valuations. Even so, valuations remain relatively high on a historical basis, and stocks are priced to deliver single-digit long-term returns even if valuations remain elevated indefinitely.

Nearly every argument that stocks are "undervalued" is based on the idea that with 10-year Treasury yields so low, stock valuations deserve to be above-average. This is fine, if you believe that 10-year yields will remain low indefinitely. Even then, it does not alter the fact that stocks are currently priced to deliver single digit long-term returns. Instead, these models boil down to a statement that a low long-term return on stocks is OK.

Investors hoping for more than about 6.5% as *long-term* compensation for taking stock market risk should understand this distinction, and the risks that go along with it. Namely, long-term investors are essentially betting that stock valuations will remain above-average *forever*. Again, if the S&P 500 P/E touches its historical median even *two decades* from now, the returns to buy-and-hold investors between now and then are likely to be disappointing.

In recent years, dividends have been disparaged as a useless indicator of value, largely because of investor faith in the power of retained earnings and stock buybacks. But as investors have learned the hard way, stock buybacks have merely offset dilution from stock and option grants to corporate insiders. Meanwhile, much of the retained earnings have been written off as losses, which is evident from the failure of book values to increase.

Given that earnings remain out of line with dividends, book values, revenues and other fundamentals, it is useful to consider these measures too. Assuming 6% annual dividend growth and a terminal dividend yield of 3.8% (the historical median, last seen in the early 1990's), the total return on the S&P 500 over the coming decade would be zero.



The stock market currently does not offer compelling investment merit for long-term, buy-and-hold investors. While we would be willing to take more market risk on the basis of speculative merit alone (favorable trend uniformity), even that merit is lacking at present. In short, a defensive posture is still warranted in stocks.

ECONOMIC PERSPECTIVES

"One of the main contributions to the earnings improvement [at U.S. commercial banks] came from net interest income... A more favorable interest rate environment helped lift net interest margins in the first six months of 2002. Commercial loans still lead a rising trend in charge-offs. The quarter's net charge-offs of \$10.6 billion were \$2.6 billion (33.1 percent) higher than a year earlier. Commercial and industrial (C&I) loans registered the largest increase; charge-offs were up by \$1.1 billion (34.6 percent), as net losses on C&I loans to non-U.S. borrowers increased by \$405 million (206 percent). Commercial banks' reserves for loan losses fell by \$756 million in the second quarter, the first time in three years (since the second quarter of 1999) that reserves have declined. In contrast, equity capital registered fairly robust growth. Total assets increased by \$245.3 billion (3.8 percent) in the second quarter, after declining by \$64.8 billion in the first quarter. This is the largest quarterly increase in industry assets on record, surpassing the \$222.1-billion increase posted by the industry in the fourth quarter of 1999. Reflecting the continued strength in mortgage refinancing activity, banks' holdings of mortgage-backed securities increased by \$45.4 billion (7.4 percent), while their residential mortgage loans rose by \$30.5 billion (3.8 percent)."

- FDIC Quarterly Banking Profile, September 12, 2002

The U.S. financial system is making a huge bet against a flattening yield curve. This fact is central to understanding the risks posed in by current economic conditions. The problem involves debt.

In recent quarters, Wall Street analysts have lauded the "strength" of the U.S. banking system, pointing to generally strong earnings among banks. Lost in this analysis is the question of *why* earnings have been strong. Very simply, the positive earnings performance of U.S. banks has been driven almost completely by growth in so-called "net interest margins" - the difference between the long-term rates charged by banks for lending money, and the short-term rates paid by banks to depositors. In short, the source of strong bank earnings has been a great dependence on very low short-term interest rates combined with substantially higher long-term rates (a "steep yield curve").

The difficulty here is that defaults and charge-offs at banks continue to surge. So underneath the benign picture of healthy earnings is an increasing trend toward loan losses, masked only by an unusually wide net interest margin.

Meanwhile, there has been a surge in asset growth in the U.S. banking system. But these assets have been primarily mortgages and mortgage-backed securities. Meanwhile, commercial and industrial loans at U.S. banks have declined for six straight quarters. The difficulty here is that as long-term interest rates fall, mortgages tend to be repaid and refinanced at lower interest rates. If short-term rates do not fall in tandem, bank earnings are suddenly squeezed. In short, the health of the U.S. banking system is particularly dependent on a steep yield curve. If the yield curve flattens - either by a further decline in long-term rates or an increase in short-term rates, weaker bank earnings may make the already growing problem of defaults much more obvious.

The dependence on a steep yield curve is not isolated to the banking system. In recent weeks, Fannie Mae reported a disturbingly large "duration gap" of -14 months. Since then, the company has reduced this gap to -10 months, but this is still unusually wide.

Duration is a measure of interest rate sensitivity. For example, if interest rates move up by 1%, a bond with a duration of 4 years will fall by about 4% in value, while a bond with a duration of 10 years will fall by about 10%. A "duration gap" essentially means that interest rate changes affect the value of the company's assets and liabilities unevenly. Since Fannie Mae is leveraged nearly 40-to-1, its current duration gap implies that a 1/2% decline in long-term interest rates would wipe out about 17% of the company's book value.

Fannie's assets are primarily mortgage payments it receives from homeowners, while its liabilities are primarily fixed, long-term debt. This means, essentially, that when homeowners decide to terminate their mortgages at one interest rate and refinance at a lower one, Fannie's long-term assets suddenly mature, leaving it "short" long-term debt. The more interest rates decline, the more pre-payments Fannie gets on the asset side, and the higher the book value of the liabilities. So falling interest rates have the effect of wiping out Fannie Mae's equity (assets minus liabilities) at a fairly uncomfortable clip.

Ironically, in order to shore up its duration gap, Fannie Mae is forced to buy long-term mortgage-backed securities. But the lower long-term interest rates move, the more refinancings occur, leading to the awkward result that Fannie's attempt to shore up its duration gap partially contributes to it. Given a rising rate of defaults and delinquencies on the part of home owners, Fannie also announced recently that it was tightening its standards on "cash out" refinancings (ones in which homeowners take equity out of their homes).

Now turn to the corporate side, where risk spreads (the difference between corporate bond yields and default-free Treasury yields) have spiked to some of the highest levels in history. This is in itself a strong indicator of probable future defaults and oncoming economic weakness. Then add an interesting additional fact. Many corporations have entered so-called "swap agreements" which have the effect of tying their debt service to short-term interest rates.

Swaps work like this. Suppose you're a large corporation that has borrowed money by issuing long-term bonds. At this point, you're on the hook to make fixed semiannual interest payments to bondholders.

Now you enter a "swap." In this transaction, some counterparty such as Citibank agrees to pay you a fixed amount semiannually (which you then turn around and use to pay your bondholders), and in return, you agree to pay a floating interest rate that moves with other short-term rates. Clearly, with short-term rates severely depressed, this kind of trade makes sense. But an increase in short-term interest rates would wreak havoc on corporate debt burdens.

And consider the counterparties to these swaps (major players include J.P. Morgan and Citibank). Unlike most banks, whose major risk is a change in the net interest margin between short-term and long-term rates, the banks that have taken out these swaps have very complex cash flows. They get short-term floating interest from their corporate swap counterparties, pay short-term interest to depositors, get long-term interest from risky corporate loans they have made, and pay long-term interest to their corporate swap counterparties. **While the cash flows match up nicely and these banks are very profitable when everything goes well, these large banking institutions have essentially**

doubled up their credit risk. Institutions like J.P. Morgan and Citibank face both credit risk on their loans to corporate borrowers, and further credit risk from the counterparties to their interest rate swaps.

Put all of this together, and you have a potentially fragile situation that relies on long-term rates not falling and short-term rates not rising. In other words, the U.S. financial system has made a huge systemic bet that the yield curve will not flatten.

And now the problem: a record U.S. current account deficit, and a widening Federal deficit. As I've noted frequently, every past economic expansion has begun with a surplus in the U.S. current account (see graph on page 1). This indicated that the U.S. had not only enough savings to finance its own investment; it actually had extra savings that could be sent abroad. In this situation, the U.S. always had a strong ability to finance large increases in capital spending and other forms of domestic investment.

Not this time. Even *current* levels of consumption and investment are highly dependent on foreign capital inflows. The record current account deficit leaves none of the leeway for growth in domestic spending that the U.S. has typically had at the start of every past economic expansion. So economic performance is likely to remain flat for a while. Unfortunately, flat economic growth is typically associated with a flattening yield curve as well.

Meanwhile, rapid growth in defense and entitlement spending is increasing certain inflationary pressures despite a weak economy. Most of this pressure is in labor and services. Already, the CPI inflation rate exceeds the Treasury bill yield, leaving the U.S. with negative real interest rates at the short end of the yield curve. While the Fed may very well cut the Federal Funds rate in the months ahead, investors should not expect short-term market interest rates to follow.

Bottom line, the worst scenario for the U.S. financial system would be a further flattening of the yield curve, with short-term rates rising faster (or falling slower) than long-term rates. As it happens, the most probable scenario for the U.S. financial system is a further flattening of the yield curve, with short-term rates rising faster (or falling slower) than long-term rates.

- John P. Hussman , Ph.D.

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