1984 - 2003: The Golden Age of - Treasury Bills?

April 2004

The past 20 years have provided above-average returns for holders of financial assets (stocks, bonds, and money market funds). During the past five years the bull market in financial assets has become frayed, buffeted by one major event after another. The Asian contagion in 1998, Y2K, the extreme overvaluation in technology stocks in 2000, a contested Presidential election, the terrorist attack on 9/11/01, corporate scandals, two wars (Afghanistan and Iraq) and the collapse in technology stocks in 2001-02 have each disturbed the financial markets.

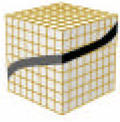
The environment for investors in stocks during the past five years has been especially brutal. As the financial asset class most subject to changes in the economic outlook, stock markets around the world have been volatile and on average, down over the past five years. Stocks in the U.S. have performed poorly since 1998; both the tech-heavy Nasdaq and the broadly based S&P 500 have lost about 10% in price from 12/31/98-12/31/03.

The last five years have provided a wonderful backdrop for one group - financial market analysts. The unusual number of crises has stimulated these analysts to develop and publish various believable doomsday forecasts including but not limited to: 1) the current account deficit will sink the dollar, 2) inflation is just around the corner, 3) deflation is just around the corner, 3) the U.S. consumer is stretched to the breaking point, 4) interest rates must rise, or 5) this economic recovery is jobless and will falter.

We are not going to engage in a discussion of the various economic forecasts. Just as we chose not to waste our precious analytical resources forecasting the war on terror, we believe it is not possible to forecast with sufficient accuracy the types of events listed in the prior paragraph.

Our analytical focus is fundamentally different. We choose to observe what has already happened and try to understand the importance and analyze the durability of these changes in the investment environment. We would like to emulate the brilliant analytical work and intellectual honesty displayed by the little boy in the classic story, "The Emperor's New Suit" written by Hans Christian Andersen in 1837. In this charming tale an emperor is duped into buying non-existent clothing by two con men. The emperor's advisors, afraid one and all for their lives, join in the fiction as the emperor appears in front of his subjects in the buff. Only a little boy sees the truth clearly and utters to his father, "The emperor has no clothes!"

Two events of the past five years, the Nasdaq boom-bust cycle from late 1998 until early 2001 and the decline in U.S. Treasury Bill yields beginning in late 2000 qualify as worthy candidates for analysis. Both events have already occurred; both markets are large and important. So far, it looks to us like the prevailing analysis of these two markets has been performed by the advisors to the emperor rather than the perceptive and fearless little boy.



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The Nasdaq Boom-Bust Cycle

The speculative excess in the Nasdaq in 2000 brought with it great press coverage. The meteoric rise and fall of the dot.com millionaires rivaled the best TV soap operas for drama, greed, and disillusion. Immediately below is a chart comparing the price performance (excluding dividends) for the last 20 years of the S&P 500 and the Nasdaq index.

Source: Baseline

The two stock market indexes tracked in line until late 1998, when in the space of 2-1/2 years the Nasdaq burst to a peak and then collapsed. Fortunately, the brevity of this cycle prevented the speculative excess in the Nasdaq from becoming embedded in the financial system. The entire cycle was over before most of us could change our financial habits; the severe decline in the Nasdaq index did not cause more than a mild recession.

As the chart above shows, the Nasdaq index appreciated at 10.4% per year for the 20 years, slightly faster than the 10.0% appreciation of the S&P 500. Including dividends, the performance derby changes significantly. Since the Nasdaq stocks paid almost no dividends from 1983-2003, it is fair to estimate that its price-only return was equal to its total return. Dividends for the S&P 500 are more important; including reinvested dividends, the S&P 500 earned a total return of 12.8% per year for the 20 years, easily exceeding the annual return from the Nasdaq.

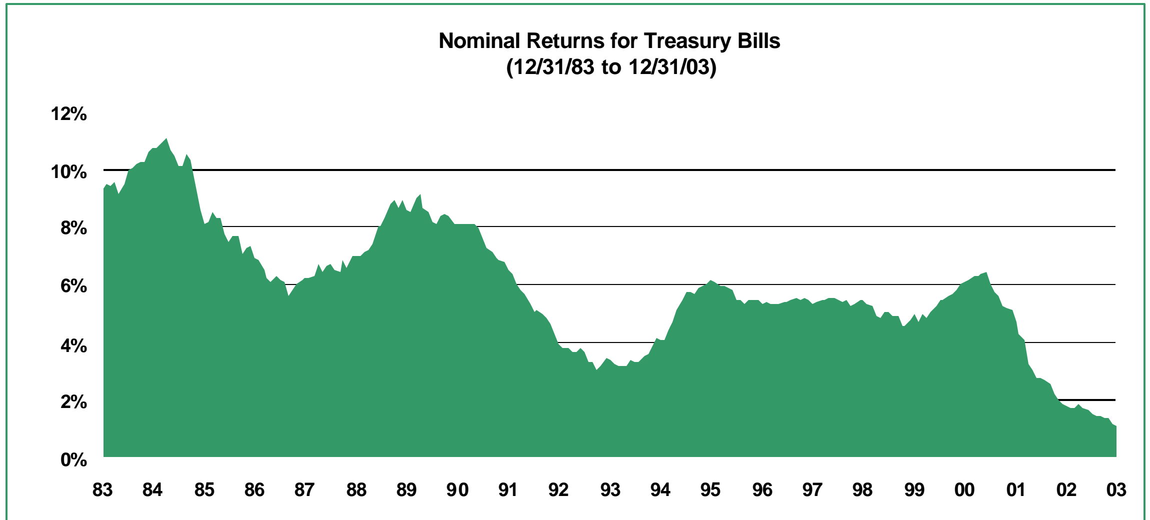
The boom-bust cycle in the Nasdaq qualifies as a major market event mostly in the minds of analysts. In fact, the cycle does not meet our criteria for a sustained financial market excess.

The Real and Durable Excess

At the end of 2000, 6-month U.S. Treasury Bills yielded over 6%. Little more than three years later, 6-month T-Bills yield now less than 1%. We have observed this decline with no little wonder but we admit we have been somewhat tardy in focusing on this important change. We hope you understand that we have been pre-occupied with navigating your portfolio through the recent investment crises. If that excuse does not satisfy you, perhaps we could fall back on that old standby, "the dog ate my homework." We do offer one saving grace in our favor. As slow as we have been, we think our competitors have been even slower, for no one seems to be writing about this issue. Worse, many are in denial.

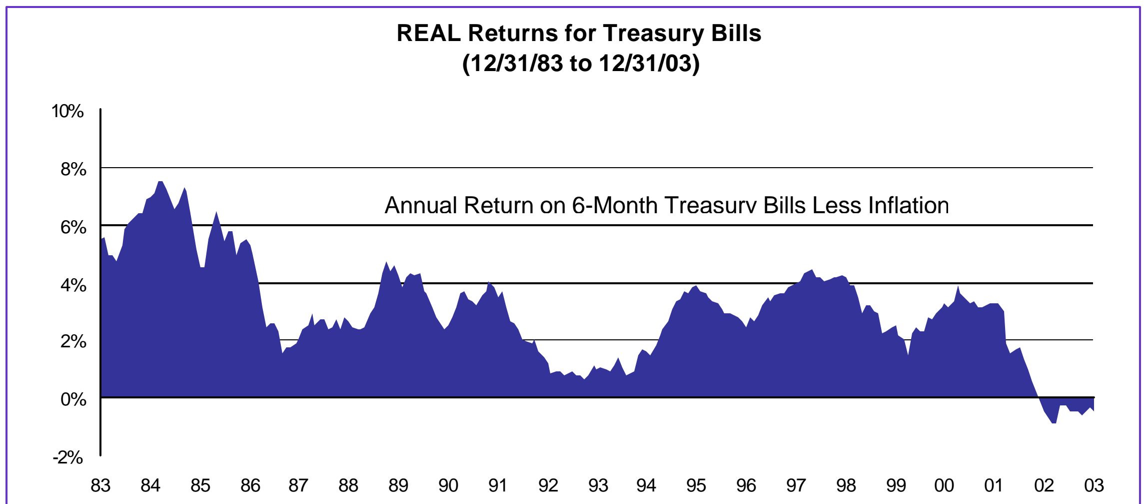
The decline in T-Bill yields fits our criteria of a major financial event that has already occurred. It is also mundane, for who wants to think about T-Bill yields? The challenge before us now is to analyze this important change in the markets.

The following chart details the nominal return from 6-month U.S Treasury Bills from 12/31/83-12/31-03.



From 12/31/83-12/31/03 6-month Treasury Bills yielded an annual compound return of 5.7% per year.

The following chart details the real return (after inflation) from 6-month U.S. Treasury Bills from 12/31/83-12/31/03.



From 12/31/83-12/31/03 6-month Treasury Bills yielded an annual compound return of 2.9% per year after inflation.

Chart Sources: Bureau of Economic Analysis, Bloomberg and StockVal

What are purchasers of 6-month U.S. Treasury Bills due?

A 6-month Treasury Bill is a short-term loan between the borrower (U.S. Government) and any lender who purchases U.S Treasury Bills. Interest rates on T-Bills are a transfer payment. There are three risks a buyer of 6-month T-Bills must consider when making a purchase:

1) **Credit risk.** What are the odds of full re-payment of principal and interest?

2) **Inflation risk.** Since a loan is typically repaid in current dollars, how much will the purchasing power of the currency have declined over the life of the loan?

3) **Maturity risk.** Since the lender cannot change the terms, the longer the loan the greater the risk to the lender.

These risks are somewhat inter-related. A 30-year loan requires the lender to hazard a guess as to the credit-worthiness of the borrower and the rate of inflation far off into the future.

What is a fair return on 6-month Treasury Bills? We believe purchasers of T-Bills are due zero "real" return. The purchaser (lender) has not accepted measurable credit or maturity risk. The U.S. government (the borrower) has the strongest military, biggest economy, and controls the money printing press. The purchaser can sell T-Bills anytime and may renew or change the loan every six months. With no credit or maturity risk, the purchaser of 6-month Bills need only ask whether the compensation (interest rate or yield) offers a fair protection from inflation.

Because the purchaser of T-Bills is due only the rate of inflation, we believe the inflation-adjusted return of 2.9% per year over the last 20 years has been excessive.

The period of excess return from T-Bills appears to be over. Beginning in late March of 2000, the nominal and real yields on 6-month T-Bills collapsed. Today 6-month T-Bills yield about 1% in nominal terms, or about equal to the 0.9% year-to-year inflation rate early in 2004. We believe the present yields on T-Bills are fair.

Past Winners from 20 years of Excess Returns from T-Bills

Whereas the spike in Nasdaq stock prices lasted for about 2-1/2 years, the excess return from T-Bills lasted for nearly 20 years.

The long period of excess returns from 6-month Treasury Bills was not unique to that type of debt security. Short-term and long-term debt instruments of nearly every type yielded wonderful returns both in nominal terms and after inflation.

Excess returns of this duration favored lenders of every type. Financial service companies, fixed income managers, investors in money market funds all enjoyed excellent returns and corporate defined-benefit pension plans were able to reduce their unfunded liabilities.

High nominal and real interest rates have enabled financial intermediaries lots of room to earn high nominal and real returns on their outstanding loans. For our purposes here a financial intermediary is any corporation that borrows and lends money, including banks, mortgage companies, Savings and Loans, and two Government-Sponsored-Enterprises, Fannie Mae and Freddie Mac.

The financial service company stocks earned stellar returns over the past 20 years. At the end of 1983 the financial service sector totaled 5.9% of the market value of the S&P 500; by 12/31/03 the financial service sector had grown to 22.9% of the S&P 500. The financial service group as a whole earned a compound annual price appreciation of 17.7% per year for the 20-year period. The performance of the financial service sector far outperformed the 10.4% per year earned by the Nasdaq index and the 10.0% earned by the S&P 500 index.

The superior performance of the financial service group is validated by the long-term performance of two industry bellwether stocks, Fannie Mae and Citigroup, the largest financial service company in the United States. Fannie Mae, a mortgage intermediary, earned a price-only compound annual return of 20.1% per year for the 20 years ended 12/31/03. Citigroup posted a 22.3% price-only compound annual return during the same period.

A second area benefiting from high real interest rates has been fixed income management. Mr. Bill Gross has earned superstar status as a bond manager for PIMCO investment company. His flagship $73.8 billion PIMCO total return fund has earned 8.61% (before sales fees) per year since its inception on May 11, 1987. For the past five and ten years ended 12/31/03 his fund has earned 6.82% and 7.11% per year, respectively. Not only has Mr. Gross' fund beaten its competitors and its benchmark, but the fund has provided competitive returns to stocks. For the past five and ten years ended 12/31/03, the Nasdaq composite has provided -1.8% and 9.9% compound annual returns, respectively.

A related area of fixed income management which has benefited from high real interest rates has been the management of money market funds. According to the Investment Company Institute, at yearend 1999 money market funds had total assets of about $1.6 trillion, or 23% of the $6.8 trillion invested in mutual funds. Money market funds were then yielding about $100 billion per year and providing nice fees for the managers of those funds.

Investors in money funds have enjoyed a marvelous risk-adjusted real return.

Corporate defined-benefit plans typically have invested 30-40% of pension assets in fixed income securities. Until 2000, high nominal interest rates have allowed corporations with retirement plans to forecast high future returns from plan assets, which has reduced unfunded liabilities.

Implications of Zero Real Return from T-Bills

We believe the excess return has been squeezed from T-Bills. This change in T-Bill yields is still in its infancy. This limits our capacity to offer more than a broad guess at the likely changes in the investment landscape. We expect the markets will offer many future clues as to the appropriate investment response to zero real T-Bill rates; we pledge to look closely for those clues.

Investors will have to learn to accept this important change in the investment landscape. As typical for major changes, we expect most investors will respond slowly and reluctantly.

We believe the collapse in nominal and after-inflation yields portends a long period of sub-par performance for the financial service companies and their associated stocks. There are fewer gross interest dollars to spread among the intermediaries. There is also a strong probability that the long period of excess real interest rates and financial service stock performance has created an excess of financial service capacity. Many non-financial companies, such as GE and GM, have established major financial service operations to capitalize on the profitability of this industry. Perhaps the best measure of the excess lending capacity are the high number of calls and mailings each of us receives weekly offering us new credit cards or mortgage re-financing.

There is likely to be increasing pressure on the managements of financial service companies to maintain their historic rates of return. Generally speaking, there are two means by which these companies can maintain their historic returns on equity capital: increase the leverage or reduce credit quality to maintain spreads. The poster child for increasing leverage is arguably the aforementioned Fannie Mae, the nation's largest mortgage intermediary. Fannie Mae is an interesting creature, as a Government-Sponsored Enterprise (GSE); Fannie Mae carries the implied backing of the U.S. Treasury. Fannie Mae has used the implied backing of the government to leverage the balance sheet to an extreme position. At the end of 1993, Fannie Mae had $210 billion of debt backed by $8 billion of owner's equity. By the end of 2003, Fannie Mae's debt had grown 4.6 times to $962 billion while equity had increased only 2.75 times, to $22 billion. At the end of 2003, equity represented 2.3% of total debt outstanding.

Fixed income managers face the predicament most feared by investment managers- high past returns and poor expected future returns. Mr. Gross of PIMCO faces this problem. The best estimate of his forward returns is the yield-to-maturity of his benchmark, the Lehman Brothers Bond Index. That benchmark offers a yield-to-maturity of 3.5%. Even if Mr. Gross can continue to outperform his index; this means he will earn 3.5+% per year over the intermediate term, or less than half his return of the last ten years. Not only does Mr. Gross face possibly disappointing results, he also may face pressure to reduce his management fees.

The investment managers of money market funds are also likely to experience pressure to reduce fees. T-Bill yields of 1% do not support the same fee structure as when yields are 6%.

Investors in the money market funds may face a major asset-liability mismatch. As of yearend 2003, despite the decline in yields money market funds had actually grown to total about $2 trillion, or 27% of the $7.4 trillion invested in mutual funds according to the Investment Company Institute. Today money market funds are yielding an estimated $20 billion per year versus $100 billion per year at the end of 1999. Those investors holding money market funds today for the purpose of funding their long-term retirement needs are likely to be forced to amend their asset mix towards stocks and bonds.

The decline in yields has forced many pension funds into a higher unfunded liability position. The decline in yields has reduced expected returns. The decline in yields has also reduced the discount rate; future liabilities are now greater in present terms.

Whereas the decline in real and nominal interest rates may make the future much tougher for financial intermediaries, fixed income managers, and retirees, there will be winners under this altered environment.

The first and most obvious winners are borrowers of any kind. No longer is the borrower paying an excessive rate of interest.

The list of borrowers is long and includes the U.S. government, state and local governments, homeowners, consumers and businesses. Excluded from those borrowers likely to benefit are financial intermediaries. As asserted earlier, financial intermediaries are likely to suffer when gross interest dollars decline. Zero "real" interest rate should affect stock market valuations. Stocks can be capitalized at higher price-earnings ratios under periods of low nominal and real interest rates.

Zero "real" interest rates should re-arrange relative performance among economic sectors. Our first cut is that the financial service sector will likely underperform all other sectors. The history of the S&P 500 excluding the financial service sector supports this conclusion. From 1984-2003, the S&P 500 index, excluding the financial service stocks, earned a price-only compound return of 8.9% versus the 17.7% price-only compound return for the financial service index of the S&P 500. It is likely that, even if the financial service stocks perform poorly, the rest of the S&P 500 stocks should enjoy normal or better forward returns.

Stock market leadership generally resides with those companies able to earn high sustained returns on capital and achieve above-average secular growth rates. It seems clear that the financial service companies will not be among this leading group. Notwithstanding the severe price decline suffered by the Nasdaq in 2001-02, it is likely that innovative medical and web-oriented technology companies have the greatest chances of achieving leadership status.

Conclusion

The Nasdaq boom-bust cycle was too abbreviated to create a lasting effect on the financial markets. T-Bills yields have been a major area of excessive returns but no longer offer a premium return over inflation. The investment community will slowly adapt to this changed interest-rate environment.

Investors who have mismatched their assets and liabilities by investing too heavily in money market funds will be forced to shift their mix of assets towards stocks and bonds.

The superstar stocks of the last 20 years have been financial service companies. The financial service companies are likely to struggle in this environment of low nominal and real interest rates. The superstar stocks of tomorrow will be those companies with opportunities to invest their equity capital at high returns in growing businesses.

We hope our readers do not mistakenly assume that we are forecasting that nominal T-Bill rates will remain at 1% or that low interest rates will prevent shocks to the economic system. We expect T-Bill yields to rise and fall based on supply/demand factors as well as inflation expectations. Low real and nominal interest rates may mitigate but not prevent shocks to the economic system if one or more of the doomsday forecasts come to pass, such as a collapse in the dollar or consumer or inflation/deflation. Such risks are always present in our economic system. If such events occur we will analyze and deal with them.

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