
RESEARCH REPORT

Fourth Quarter 2003

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- ✓ Are We Being Too Pessimistic?
- ✓ No Way to Lose in 2003
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- ✓ The Silver Lining's Cloud



Are We Being Too Pessimistic?

Portfolio Strategy

December 2003

Calendar year 2003 brought welcome relief to equity investors. After experiencing the worst bear market since the Great Depression, the S&P 500's 29% return for the year was a much-needed salve, ending the three-year losing streak. Equity investors who ventured beyond the S&P 500 performed even better. Nevertheless, over the past few years, we have expressed in this report our concerns that the

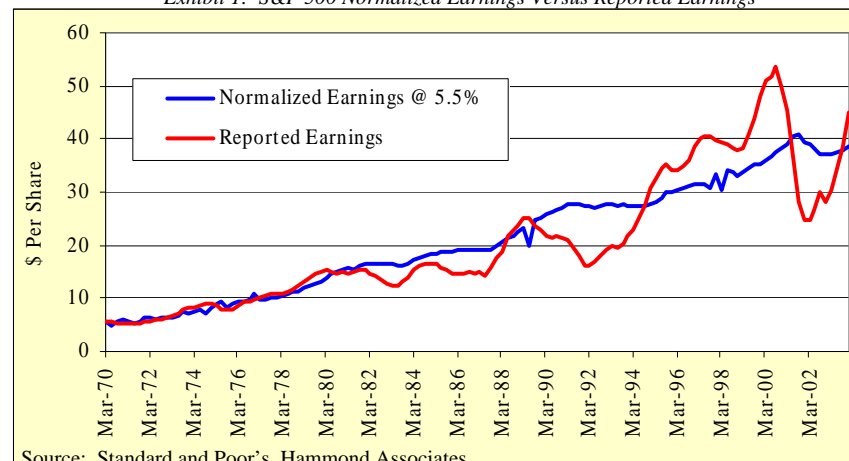
equity market is priced to provide disappointing returns in the future. The market's performance in 2003 will undoubtedly raise questions about whether we are too pessimistic about the market's future prospects. As a result, we have critically examined our assumptions to identify reasons why they may be wrong. The arguments herein are based on long-term factors (~10 years). We will not address any of the factors that could lead to a cyclical bull market over the near term. The bottom line is that, while we remain cognizant of our forecast's fallibility, we still believe that our cautious outlook is warranted. We continue to recommend that clients diversify broadly, reducing, but not abandoning, domestic public equities.

Earnings Power of the S&P 500

Our concern for the equity market stems predominantly from current valuations, particularly the P/E ratio. The risk in our outlook is that earnings (the "E") will be higher than expected, and this risk isn't easy to gauge. Reported earnings at any point are not likely to be reflective of long-term earnings power because of cyclical factors. For instance, in 2002 the P/E ratio on reported earnings hit the mid-40s because of the recession and asset write-offs. Using the P/E at that point as the basis for valuing the market would have led to overly pessimistic conclusions because earnings were cyclically depressed, and subsequently rebounded. On the flip side, using reported earnings in 1999/2000 led to overly optimistic conclusions because earnings were at cyclical highs due to the economic boom and further overstated due to fraud, misleading pension accounting, and stock options.

We have normalized earnings by applying an assumed average profit margin of 5.5% (historical since 1956) to sales. Sales are far less volatile than earnings, so adjusting the P/E ratio in this way dampens the cyclicity in earnings. Based on a 5.5% profit margin, the trailing P/E ratio is 29, which represents an earnings yield of 3.6% on a forward basis. Based on the theory that the expected real return on stocks is equal to the earnings yield, stocks are priced to provide a real return of 3.6% (assuming the P/E ratio remains at 29), only 1.4 percentage points above the 2.2% yield on long-term TIPS.

Exhibit 1: S&P 500 Normalized Earnings Versus Reported Earnings



Source: Standard and Poor's, Hammond Associates

This view is highly sensitive to the profit margin assumption. If investors desire a 2.5% equity risk premium over TIPS, stocks are 23% overvalued so long as profit margins average 5.5%. However, if margins are 6.0% in the future, stocks are only overvalued by 16%. If 7.0% profit margins are the future norm, the market is fairly valued. If the current profit margin based on forward operating earnings of 8.0% proves to be the average, stocks are *undervalued* by 12%! The central question is whether 5.5% is the appropriate future profit margin assumption. Below are some arguments for 5.5% being too low, plus our rebuttal of each:

- **Before 1980 the average profit margin was 6.0%, and that is more representative of what should be expected in the future.** Profit margins were understated in the 1980s and the early 1990s because of inflation. High inflation led to high nominal interest rates. Since interest is expensed, this led to lower net income. In reality however, high interest rates caused by high inflation overstate the true interest expense because companies pay back debt principal with cheaper dollars. (In real terms, a dollar borrowed in 1980 could have been paid back with \$0.58 in 1990.) If high inflation was the cause of lower profit margins, it is a strong case for using a 6.0% profit margin.

To us, this is the most compelling case for higher than average profit margins in the future. Another possible explanation for the drop in profit margins in the 1980s and 1990s is the substantial increase in executive pay. This shows no signs of slacking in the future.

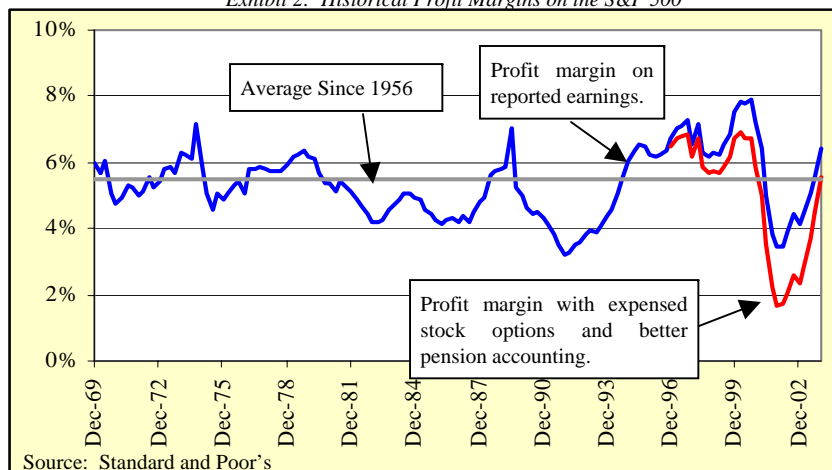
- **The shift towards a service-based economy will allow profit margins to grow.** The highly competitive manufacturing environment robbed companies of pricing power, particularly in light of competition from abroad. Furthermore, labor unions have a lesser role in service industries than manufacturing. Now that the bulk of the economy is service-based, where companies have greater pricing power, the profit margin for the S&P 500 will be higher in the future.

Competition in service industries is probably just as fierce as manufacturing, perhaps even worse. Service industries often have lower barriers to entry, which makes it easier for startups with a good idea to capture market share. And foreign competition may be just as problematic in some service sectors as in manufacturing due to the cheap, highly educated labor pool in some emerging market countries. While specific service companies and industries may generate above average profit margins (e.g., Microsoft), it's hard to make that case for the market as a whole.

- **Productivity growth spurred by the technology revolution will allow companies to permanently increase profit margins.** In the past, much of the productivity growth benefits went to workers in the form of wages, and to consumers in the form of lower prices. In the future, more of the productivity growth will pass to the bottom lines of corporate America. Globalization and technology have allowed companies to keep a lid on labor costs (call centers in India and factories in China), which will lead to unprecedented profitability for corporate America.

Competition is likely to nullify any abnormal productivity growth. High profit margins attract competitors.

Exhibit 2: Historical Profit Margins on the S&P 500



Profit margins based on reported earnings are expected to exceed 5.5% over the next couple of years. Based on estimated fourth quarter reported earnings, the S&P 500 posted a profit margin of 6.4% for 2003. The profit margin for 2004 is expected to be 6.3%. Are profit margins moving to a new, higher mean, or are we witnessing another cyclical peak in earnings, aided by massive asset write-offs and cost cutting in 2001 and 2002? We suspect it's the latter, but the question will not be answerable for years. One hint in the meantime will be the dividend yield. Now that capital gain and dividend tax rates are the same, companies no longer have a strong disincentive to pay dividends. If the dividend yield rises back to 3% over the next few years because of higher payouts, we will have more confidence that the earnings are real and sustainable.

Required Risk Premium

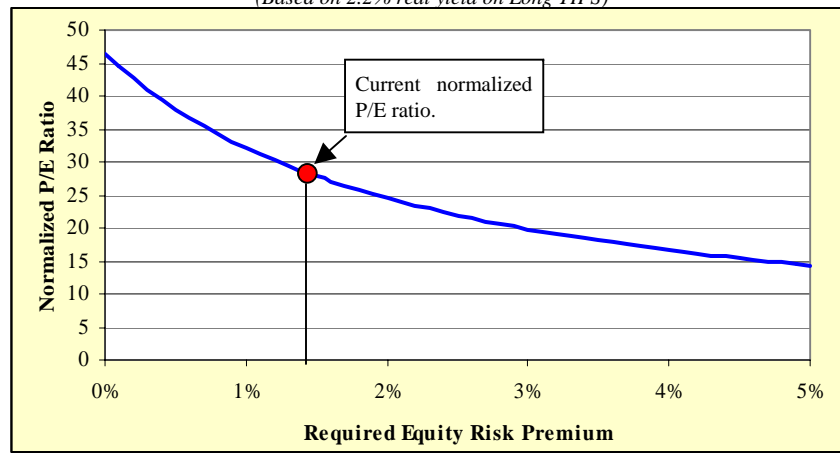
Since 1900, stocks have outperformed long bonds by 5 percentage points. Recent studies have suggested that the actual *risk* premium for this period was in the neighborhood of 3 to 4 percentage points, with the remaining excess return arising from stocks performing better than expected (mainly due to the increase in valuations). What should investors require in the future?

We believe that it's appropriate for investors to demand a lower equity risk premium than has been realized historically. Post-WWII, the economy has been far less volatile than in the 19th and early 20th centuries. Booms and busts were far more prevalent when the US itself was an emerging market. As the US took over global economic leadership in the first half of the 20th century, it follows that investors would lower their required risk premium for US equities. Furthermore, institutional investors' gradual increase in global equity allocations over the past five decades suggests that they have become far more comfortable with taking equity risk, due perhaps to the "Stocks for the Long Run" argument. Increasing investor comfort with an asset class should result in a lower risk premium.

What is the right premium? It's hard to say. A 2% risk premium would result in a 27 percentage point cumulative real return premium over 10 years versus TIPS (51% vs. 24%). Is that enough to justify taking equity risk? It seems reasonable to us, but the only thing that matters is if the weighted-average investor thinks so.

At a 2% risk premium and a 5.5% profit margin, stocks are only 14% overvalued (and should trade at a 24 P/E based on current long-term TIPS yields). At a 6% profit margin and 2% risk premium, stocks are only 6% overvalued. Bear in mind that at a 2% risk premium, stocks are priced to earn 4.2% in real terms in the future (2.2% TIPS yield + 2%), less than the spending rate for most higher education institutions. Incidentally, to reach the historical return premium of 5%, stocks need to *fall by half*, to a P/E of 14. Exhibit 3 shows the fair value P/E for a range of required equity risk premiums.

Exhibit 3: Fair Value Normalized P/E Ratio at Varying Equity Risk Premiums
(Based on 2.2% real yield on Long TIPS)



We're in a New Economy

Another factor that could cause better than expected stock market performance is if there is a productivity-fed economic boom. While we remain skeptical of the “New Economy” argument, it cannot be ignored. There have been times in history when economies have made structural shifts to new, higher growth levels. The most telling example was the invention of steam power and electricity, which led to the industrial revolution in the 19th century. Prior to the 19th century, economic growth was, for the most part, limited to population growth. Technological innovation and adoption was too slow to drive rapid productivity growth. Since 1855, productivity growth in the US has been close to 2%. Since 1996, productivity growth has topped 3%. Will the technology revolution allow the productivity growth experienced since the mid-1990s to persist or lead to even higher growth? It's possible, but our best guess is that productivity growth reverts to 2%. It seems unlikely that even faster computers, better software, and the Internet can result in higher productivity growth than what resulted from the invention of steam power, railroads, electricity, the telephone, automobiles, and air flight.

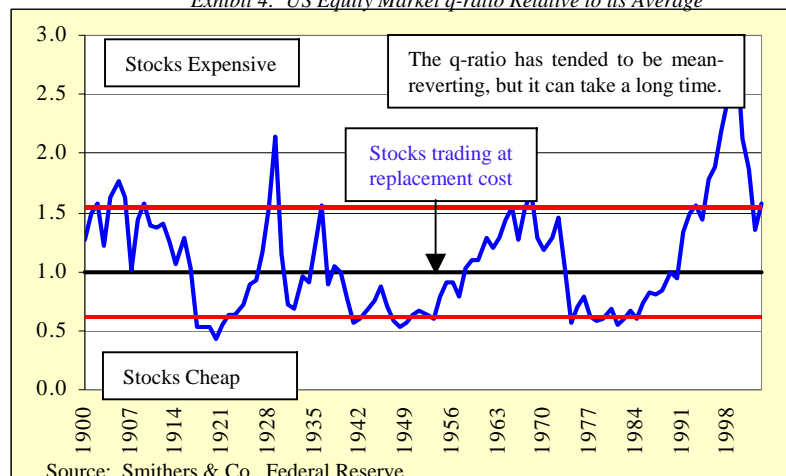
Even if productivity is permanently higher, it is not likely to be a windfall for stocks. If we assume that profits remain at a stable share of GDP, there should be a one-to-one relationship between productivity growth and earnings growth. If the productivity growth of 3% since the mid-1990s continues over the next 10 years, it would result in 4% GDP growth (assuming 1% population growth) rather than our baseline expectation of 3%. That means earnings should grow 1% faster than our baseline, and, therefore, stocks should earn 1% more than expected. It's possible that we are in a New Economy, but even so, it shouldn't help stock returns by that much over a long horizon.

The q-ratio Suffers from Measurement Bias

The last point we will address are criticisms of the *q*-ratio as a market valuation metric. James Tobin first introduced the idea of *q*, which posited that stocks should trade a market capitalization equal to the replacement cost of the assets less liabilities. When stocks trade significantly above replacement cost, business investment should rise, leading to competition and lower profit margins, driving stock prices down. When stocks are trading below replacement cost, there is little incentive for businesses to invest, so competition declines and profit margins increase, resulting in higher stock prices.

Andrew Smithers' and Stephen Wright's calculation of the *q*-ratio suggests that the market is about 38% overvalued. Critics of the *q*-ratio make valid arguments for its deficiencies. First and foremost is that the denominator—the net worth of Corporate America—may not be accurately measurable.

Exhibit 4: US Equity Market q-ratio Relative to its Average



Smithers and Wright use Federal Reserve data to calculate the *q*-ratio. The Federal Reserve estimates US corporate net worth at replacement cost. Comparing the value of publicly traded equities to corporate net worth shows whether markets are trading above or below replacement cost. How much confidence can be placed in estimates of something so hard to measure? Smithers and Wright do not, in fact, believe that the Fed's corporate net worth data are accurate. As evidence, they point out that the Fed data reports that, on average, stocks have traded at 63% of the reported replacement cost since 1900, which, if true, means that stocks have been undervalued by 59% $[(1-0.63)/0.63]$ on average since 1900. So, stocks have either been persistently undervalued by the market or the Fed data overstates assets. Smithers and Wright believe that the Fed overstates assets. In particular, they hypothesize that the Fed under depreciates assets. To adjust for this, they divide the

current Fed-derived q -ratio by the historical average of 0.63. Currently, stocks are trading at 0.99 times the Fed's reported replacement cost, leading to a q -ratio of 1.58 relative to the average of 0.63 (0.99/0.63). In the past, a q -ratio at this lofty level portended a 10-year real return of only 1.1%. Implicit in the assumption that the historical average is an appropriate basis is that the Fed's mis-measurement of assets has been constant through time. Is Smithers' and Wright's methodology valid? Empirical analysis suggests that their methodology has merit because their q -ratio mean reverts. Furthermore, their q -ratio has been a fairly good predictor of future returns, as shown in Exhibit 5.

Exhibit 5: Predictive Ability of the q -ratio (1900-2002)

q -ratio at Beginning of Period		Subsequent Annualized Real Return (%)			
		3 Years	5 Years	10 Years	20 Years
>1.55	Average	0.6	0.9	1.1	4.0
	Range	-28.4 to 23.7	-11.1 to 19.4	-3.1 to 4.2	1.8 to 10.4
1.20 to 1.55	Average	1.6	2.4	1.3	2.8
	Range	-29.4 to 25.9	-13.3 to 23.8	-4.5 to 8.5	0.3 to 11.8
0.85 to 1.20	Average	6.0	4.3	6.2	6.5
	Range	-8.1 to 26.9	-14.8 to 12.4	-1.4 to 15.6	1.5 to 13.0
0.60 to 0.85	Average	11.7	12.1	9.3	8.6
	Range	-2.0 to 30.7	-1.7 to 25.4	-0.1 to 17.0	2.6 to 13.4
<0.6	Average	12.1	11.7	11.5	8.7
	Range	-2.6 to 27.1	2.4 to 22.4	2.9 to 18.2	4.5 to 15.4

Source: Smithers & Co.

Even if we are able to accurately measure the cost to replace physical corporate assets, what about intangible assets such as patents, trademarks, and human capital that don't show up on balance sheets? To be sure, some companies are able to use intangible assets to earn above average profits. Coca-Cola's brand name has real value, and competitors cannot easily replicate that brand name, particularly in the short term. Likewise, some of Pfizer's drug patents have real value, giving them the power to earn monopolistic profits. Some companies could have superior management or processes that allow for above average profits.

The q -ratio is clearly inappropriate for many individual companies, but can it be relied upon in the aggregate in light of intangible assets? Smithers and Wright argue that it is valid in the aggregate, because intangible assets possessed by some companies are offset by intangible liabilities of others. For every company out there with a dominant brand name, there may be several competitors with below average profit margins because they have to fight against a dominant brand. Therefore, in aggregate, intangible assets are zero. We wouldn't go so far to say that intangible assets in aggregate are equal to zero. Assuming that they are positive in aggregate, our guess is that they are a fairly small percentage (<5%?) of physical assets. The cost of maintenance (e.g., advertising and R&D) and competition should keep intangible assets from becoming too high relative to tangible assets.

If the q -ratio were the only factor that pointed to a richly priced market, we would discount it because of the potential errors in the calculation. As it stands, the q -ratio is just one more piece of evidence suggesting that returns will be disappointing in the future.

Conclusion

Looking around, we still believe it's tough to make a case for robust equity returns. While valid arguments can be made for continued strong returns, they appear to fall into the "this time it is different" camp. While this time may, in fact, be different in many respects (albeit not necessarily better), we believe it is prudent for institutions to consider a scenario whereby returns for domestic public equities could be far lower in the future than in the past. And with lower returns, it may not make sense to place the heavy emphasis on publicly traded equity investments that has been beneficial in the past.

Our best guess is that there will be P/E contraction to between 16 and 22 over the next 10 years and US stocks will earn 0% to 3% in real terms. However, a combination of higher profit margins, lower required risk premiums (supporting high P/E levels), and a New Economy could mean that these stocks earn a real return in the neighborhood of 3% to 6% over the next 10 years. This is certainly not what investors were accustomed to in the 1980s and 1990s, but better than bonds. One possibility that should not be ignored is that we are *too optimistic*, and stocks post negative real returns over the next 10 years, possibly for one or more of the following reasons—(1) profits fail to keep pace with economic growth¹, (2) the demographic shift in the US reduces the supply of capital, pushing P/Es down², or (3) the deflation of US asset bubbles and heavy debt loads send the US economy and equities down Japan's path.

What does all of this tell us about 2004? Not much. As Benjamin Graham observed: "In the short run, the market is a voting machine, but in the long run it is a weighing machine." Investors don't always vote rationally over the short run. As evidence, the market was more overvalued at the beginning of 1998 than it is today, but that didn't stop it from earning 29% in 1998 and 21% in 1999. We wouldn't be too surprised to see the market put in another good year in 2004 because it has a tailwind from liquidity, momentum, and the Presidential election cycle. But, any outsized gains during 2004 are likely to come at the expense of returns in 2005 and beyond.

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¹ See Bernstein, William D., Robert D. Arnott. "Earnings Growth: The Two Percent Dilution." *Financial Analysts Journal*, May/June 2003

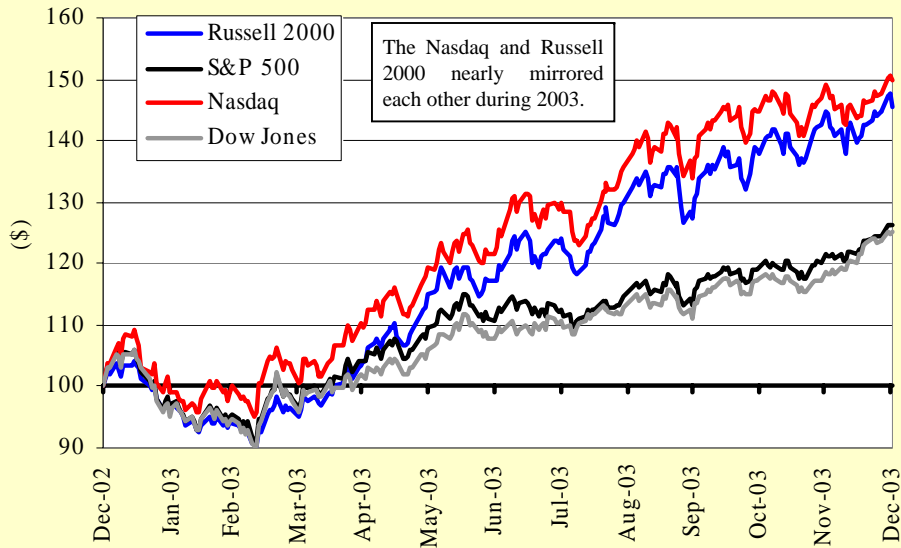
² See Arnott, Robert D., Casscells, Ann. "Demographics and Capital Market Returns." *Financial Analysts Journal*, March/April 2003

Fourth Quarter Executive Summary

- Equity markets produced stunning returns in 2003. The S&P 500 earned 29% for the year, avoiding a fourth consecutive loss year. Even better returns were available for investors who ventured beyond the S&P 500. Small-cap stocks surged 47% and REITS gained 36%. International equities, aided by a weak dollar, posted equally impressive results. International developed markets and emerging markets earned 39% and 56%, respectively.
- The economy's performance during the third quarter topped even the most optimistic expectations. GDP grew at an 8.2% annualized rate, the best showing for a quarter since 1983. Economists expect fourth quarter growth of 4%. If realized, growth for 2003 will be 3.1%. Economists forecast growth of 4.5% for 2004. A question for 2004 will be whether the job market and income growth will improve enough to keep consumers spending after the tax cuts run out. We remain concerned about a looming hangover from the spending binge of the last decade. While the reckoning day may not come in 2004, the imbalances must be corrected eventually.
- Treasury yields finished 2003 higher than where they started. The yield on 10-year T-Notes increased from 3.8% to 4.3% during the year. The increase in yields appears to have been driven by higher inflation expectations. In 2004, we expect the Lehman Aggregate Bond index to earn 2% to 4%. With higher breakeven inflation rates, TIPS are not as attractive relative to nominal bonds as they were at the beginning of the year. Still, we prefer TIPS over nominal bonds because the risk of unexpectedly high inflation seems greater than unexpectedly low inflation. With low credit spreads, there is little reason to take significant credit risk, especially for institutions with substantial equity allocations.
- As we expected, the dollar continued to slide in 2003. With the current account deficit near 5% of GDP (and expected to worsen in 2004), the trade-weighted dollar still needs to fall substantially. We believe that the trade-weighted dollar will likely fall by another 10% or more.
- The S&P 500's gain in 2003 made an already expensive market more so. The pockets of opportunity that existed within the US equity market (small-caps and value) have been mostly priced away. Despite the high valuations, the market appears to have the wind at its back for 2004. Momentum, liquidity, the economy, and the Presidential election cycle are on the market's side. Our best guess is that the S&P 500 earns 5% to 10% in 2004, but there's significant chance of a double-digit loss. Over the next decade, we fear that the market will earn a return in the low single digits.
- International equities are beginning to look expensive in absolute terms, but still represent a better value than US equities. We expect internationals to outperform for a third consecutive year in 2004.
- 2003 was the slowest year for private equity commitments since 1991. Distressed debt was the best performing sector in 2003. Looking forward, there remain opportunities for control-oriented distressed investments. In addition, it could be time to consider making commitments to venture capital funds. The uninvested overhang is falling, and the investment periods for funds raised during the boom years are approaching expiration.
- Real estate performed well in 2003 as falling capitalization rates helped to mask deteriorating fundamentals. Overall, we are cautious on core real estate. We are emphasizing distressed and value-added real estate investments instead. Other areas of interest are hard assets, such as oil & gas, timberland, and other commodity-based investments. A continued weakening of the dollar should benefit hard assets. Furthermore, demands from rapidly growing, but resource-poor, China could put upward pressure on prices.
- Hedge fund inflows are on pace to reach \$60 billion in 2003, double the previous record that occurred in 2001. The fact that hedge funds are becoming more mainstream may not bode well for future returns. As trades predicated on profiting from relatively small pricing inefficiencies become more crowded, future returns are likely to fall below past levels.

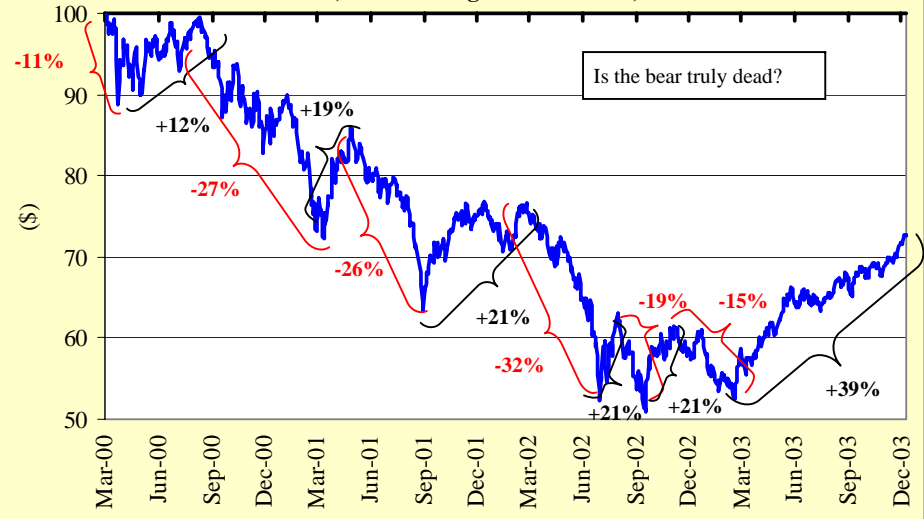
Equities Recover Some Lost Ground

Growth of \$100 During 2003



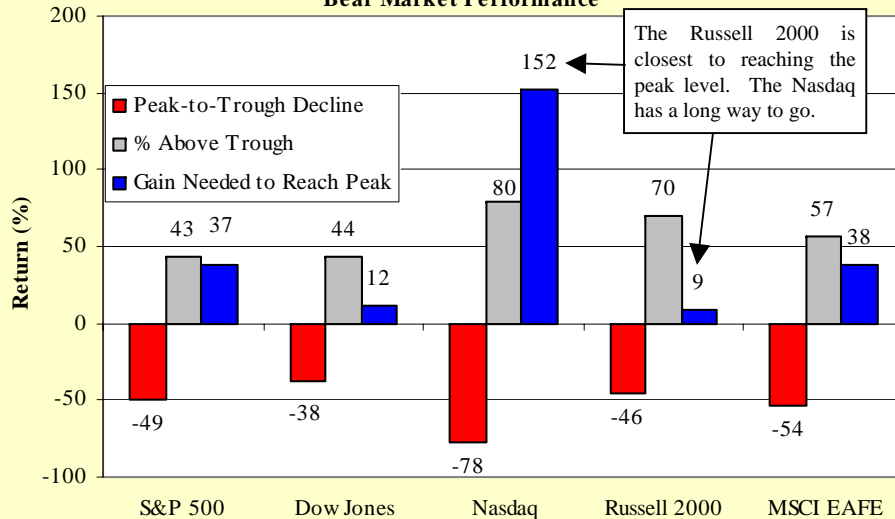
S&P 500 Growth of \$100

March 24, 2000 Through December 31, 2003



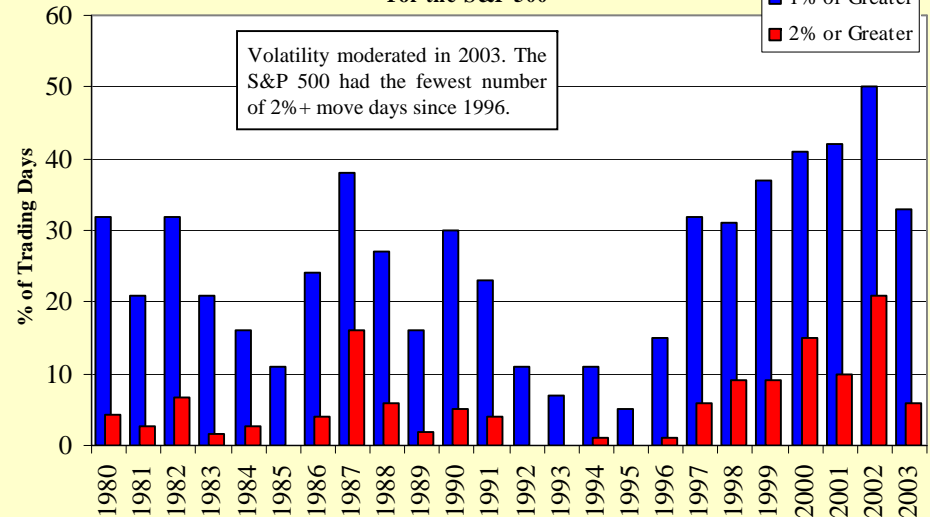
Returns exclude dividends

Bear Market Performance



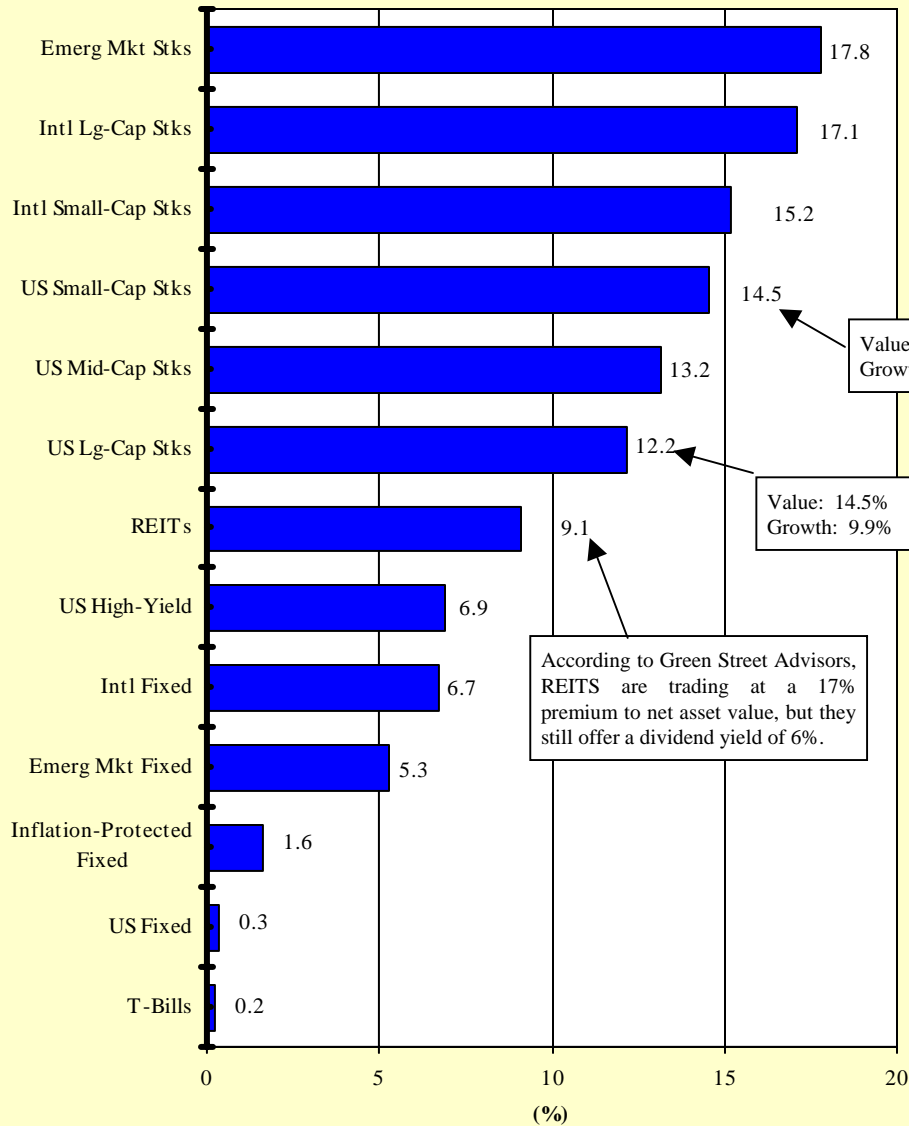
Returns exclude dividends

Percentage of Trading Days with 1% and 2% Moves For the S&P 500



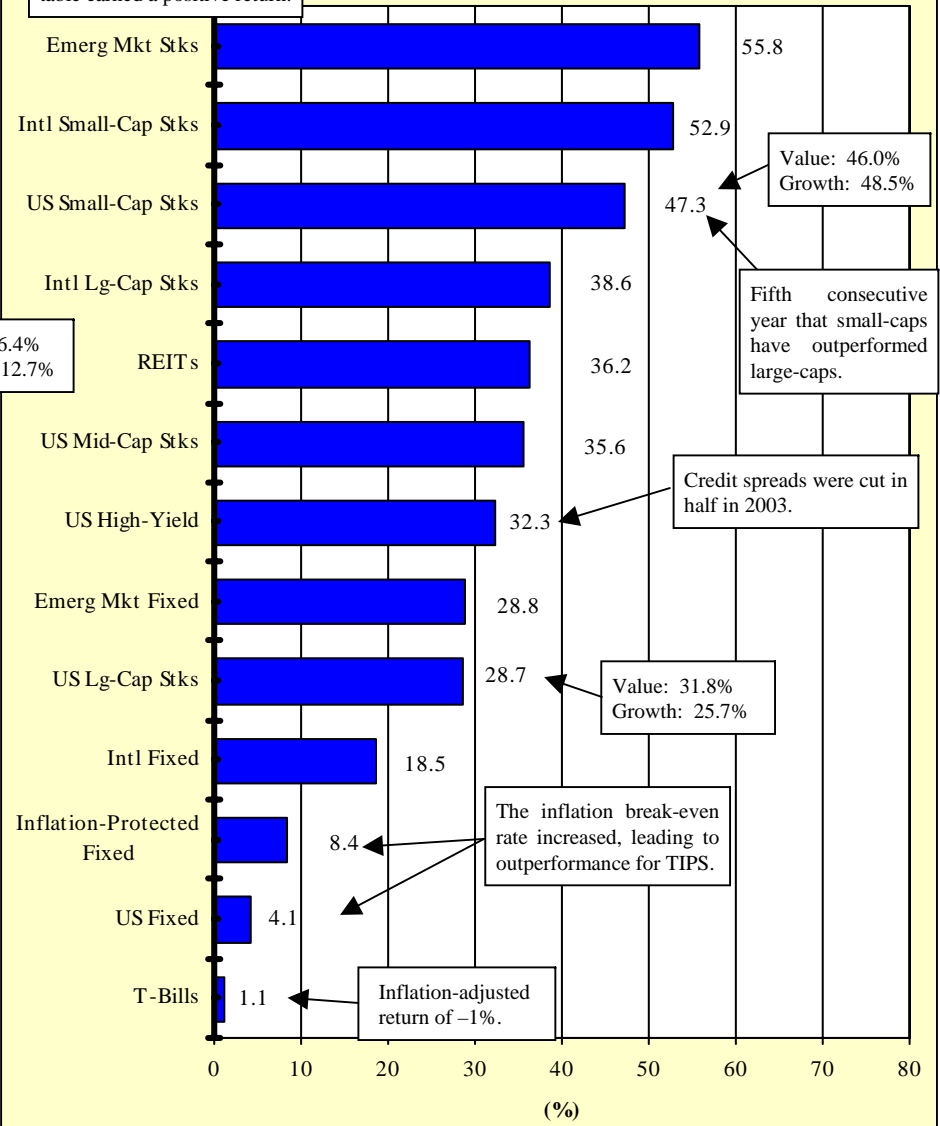
No Way to Lose in 2003

Fourth Quarter 2003 Performance (%)



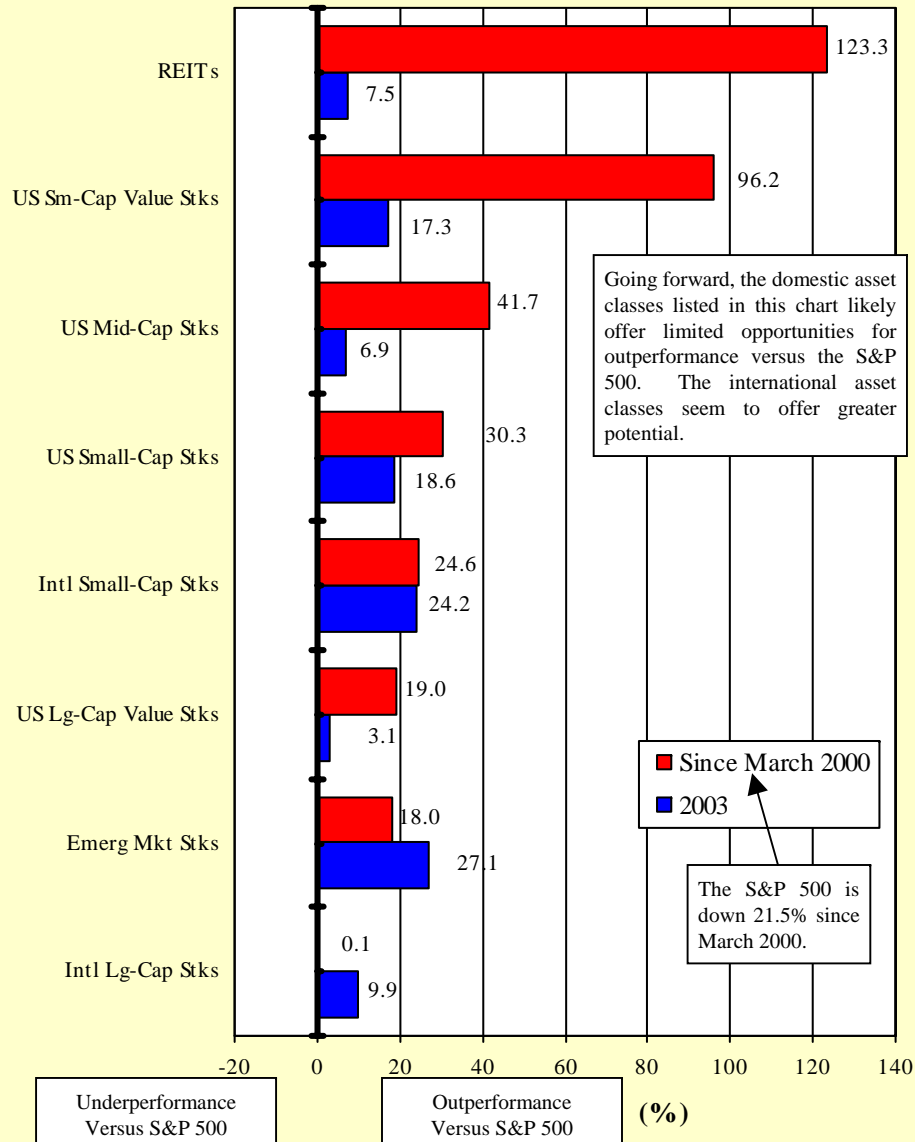
2003 marked the first year since 1996 that all of the asset classes listed in this table earned a positive return.

2003 Performance (%)

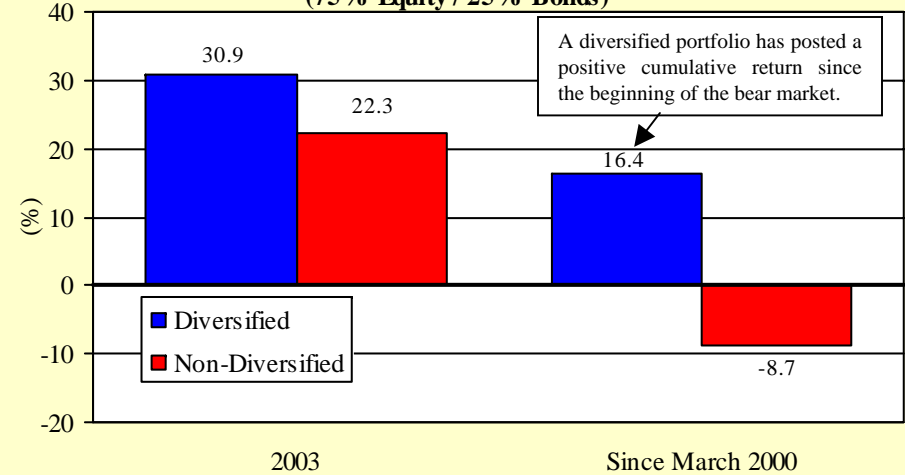


Diversification Again Proves Beneficial

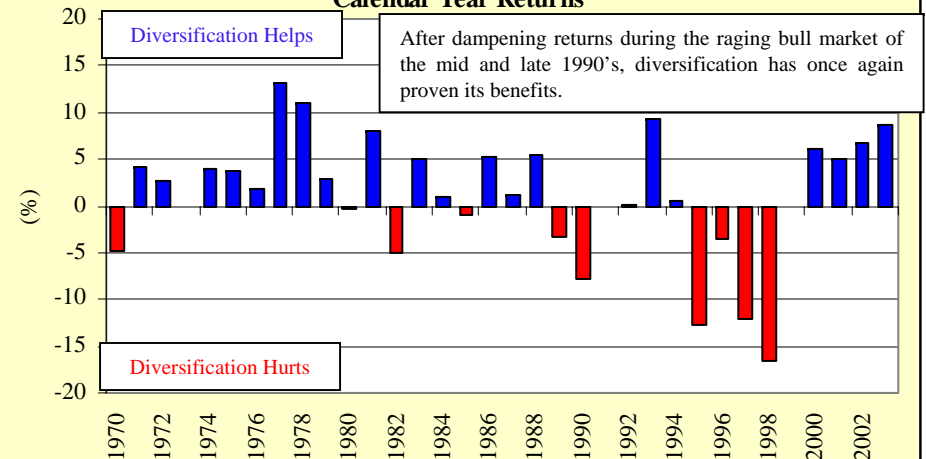
Cumulative Returns Relative to the S&P 500



Returns of Diversified Versus Non-Diversified Portfolios¹
(75% Equity / 25% Bonds)



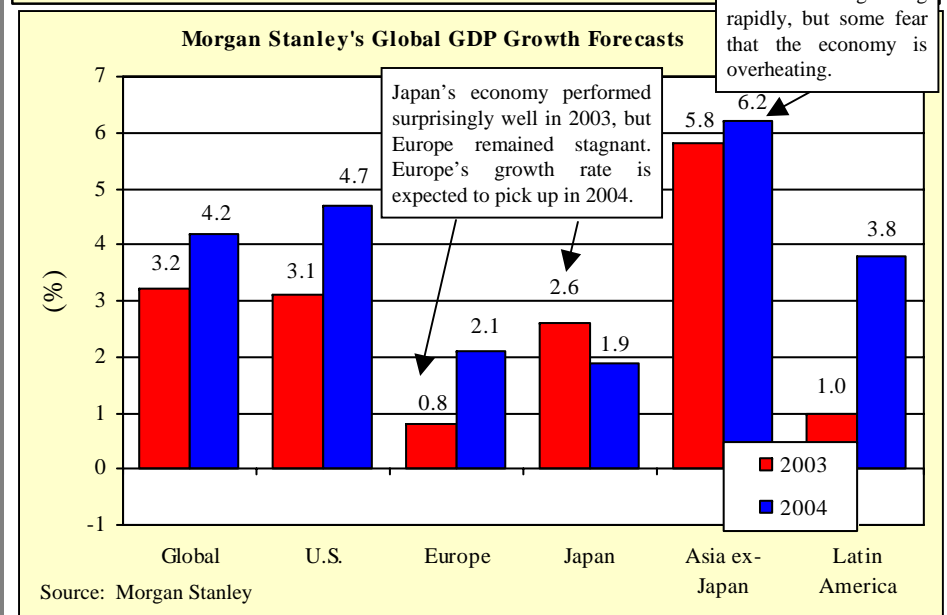
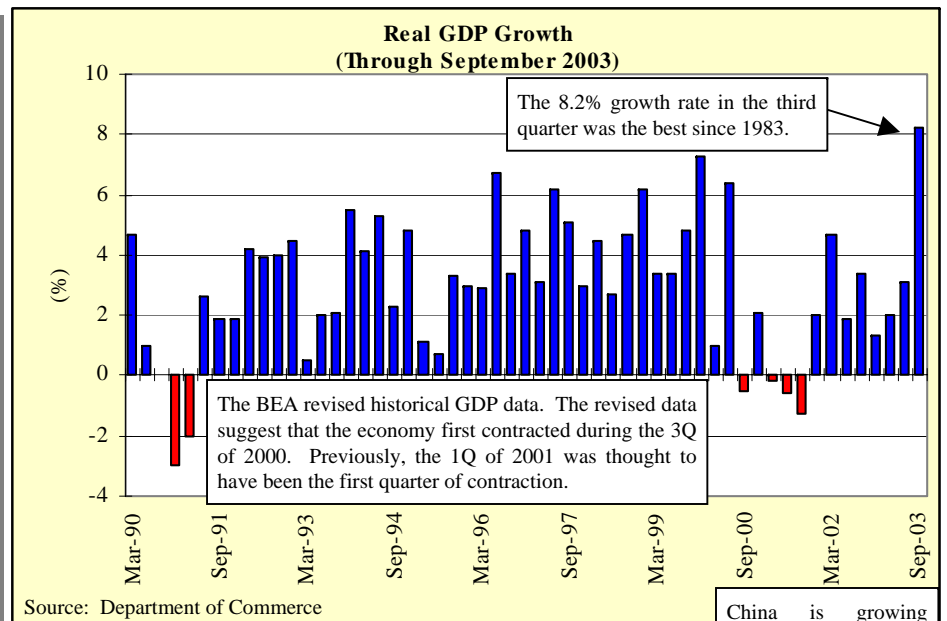
Diversified Minus Non-Diversified¹
Calendar Year Returns



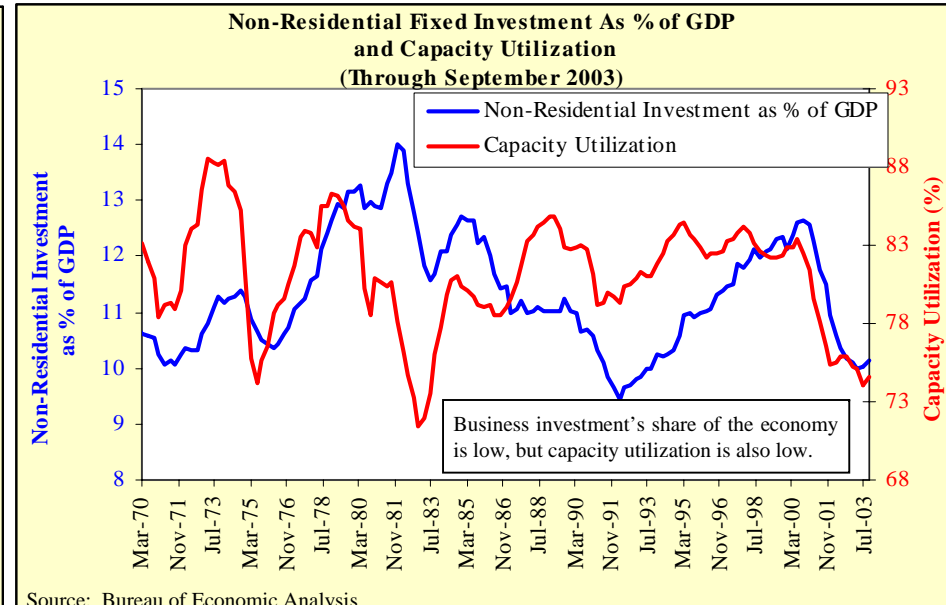
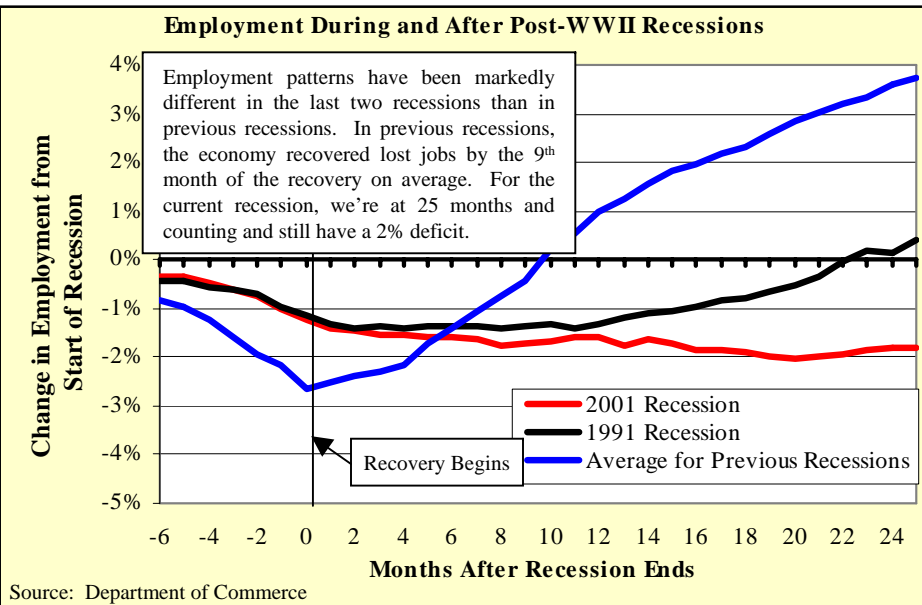
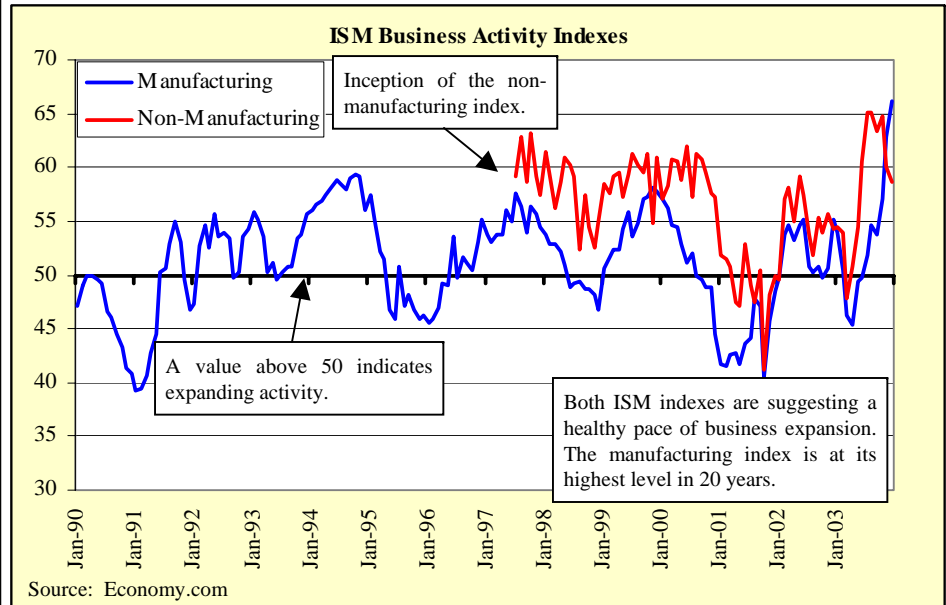
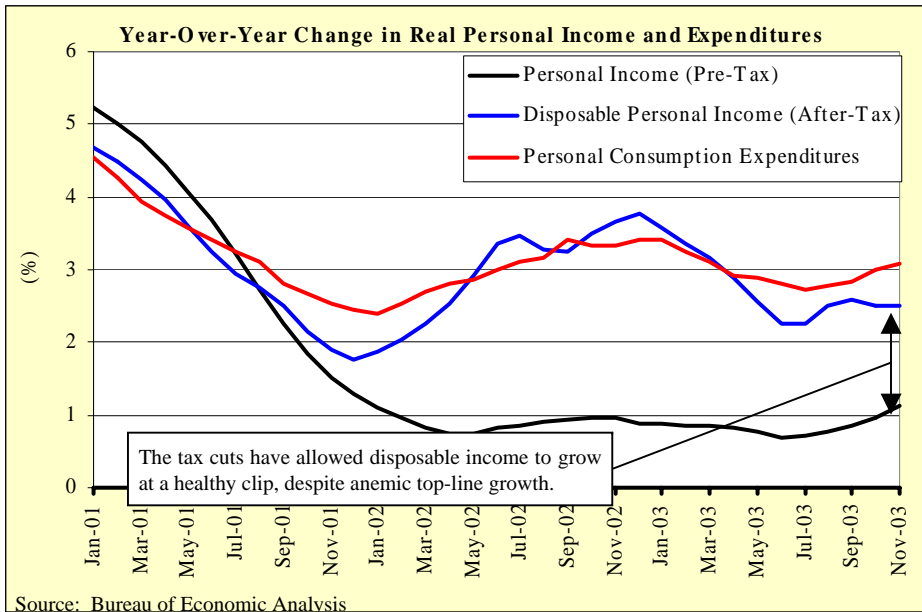
¹The results of the diversified and non-diversified portfolios are shown for informational purposes only. The portfolios do not represent advice given to Hammond Associates' clients. The non-diversified portfolio is comprised of 75% S&P 500 and 25% Lehman Aggregate Bond. The diversified portfolio is comprised of 16% S&P 500, 8% S&P 500 / BARRA Value, 7% S&P MidCap 400, 11% Russell 2000, 5% Russell 2000 Value, 7% Wilshire REIT, 7% MSCI EAFE, 7% Citigroup EMI EPAC, 7% MSCI EMF, 13% Lehman Aggregate Bond, and 12% Lehman TIPS.

The Economy Picks Up Steam

- The economy's performance during the third quarter topped even the most optimistic expectations. GDP grew at an 8.2% annualized rate, the best showing for a quarter since 1983. Economists expect fourth quarter growth of 4%. If realized, growth for 2003 will be 3.1%.
- 2004 growth is expected to be robust. Economists polled by *The Economist* forecast growth of 4.5% in 2004.
- Business investment was strong during the third quarter, growing at a 13% annual rate. Business investment should continue to firm because investment has been so depressed over the past two years. However, a rebound to levels seen during the late 1990s is unlikely, especially given the excess capacity in the economy.
- The employment situation remains weak. The economy has created 278,000 jobs over the last five months, but that is less than the 150,000 jobs *per month* economists say are needed just to absorb new workers. Total non-farm payroll is still almost 2% less (2.4 million jobs) than where it stood at the beginning of the recession.
- Consumers continue to spend despite the poor job market. The tax cuts have had their desired affect, supporting spending during the recession and the "jobless recovery." About \$100 billion more in tax cuts is in the pipeline for 2004 (about 1% of GDP). Over half of that is expected to come in higher tax refunds because last spring's tax cuts were made retroactive to the beginning of 2003. Assuming US consumers continue their apparent practice of spending every dime of tax cuts, this should keep spending strong through at least the first half of 2004.
- A question for 2004 will be whether the job market and income growth will improve enough to keep consumers spending after the tax cuts have run out.

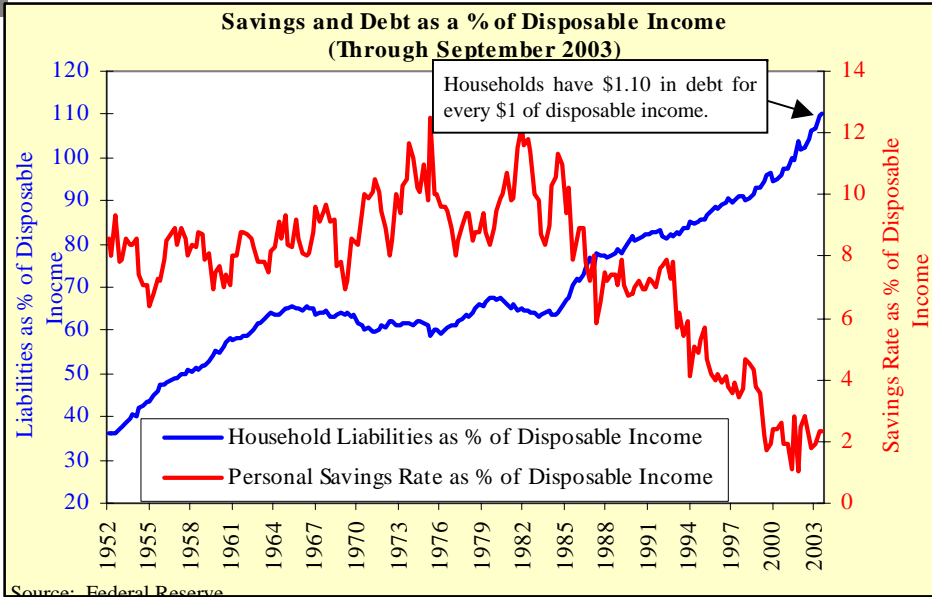
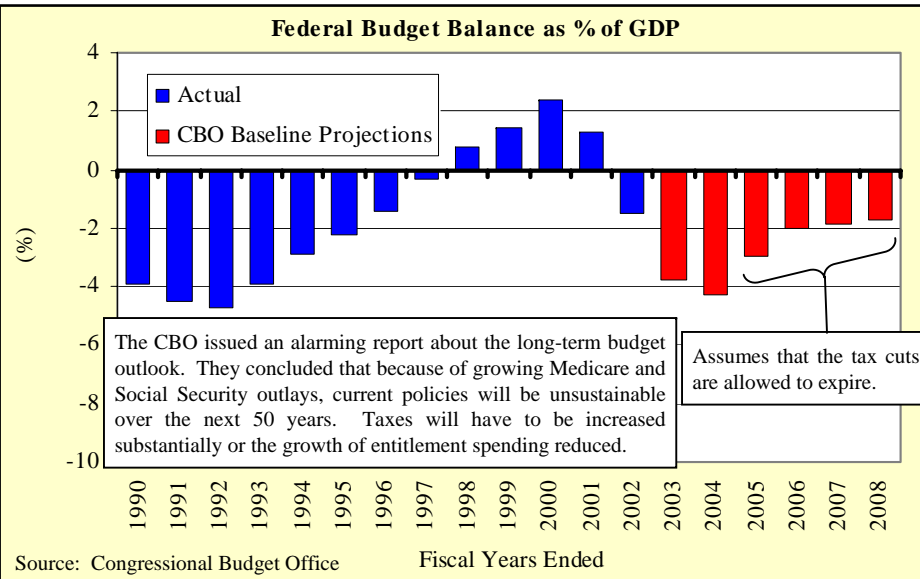
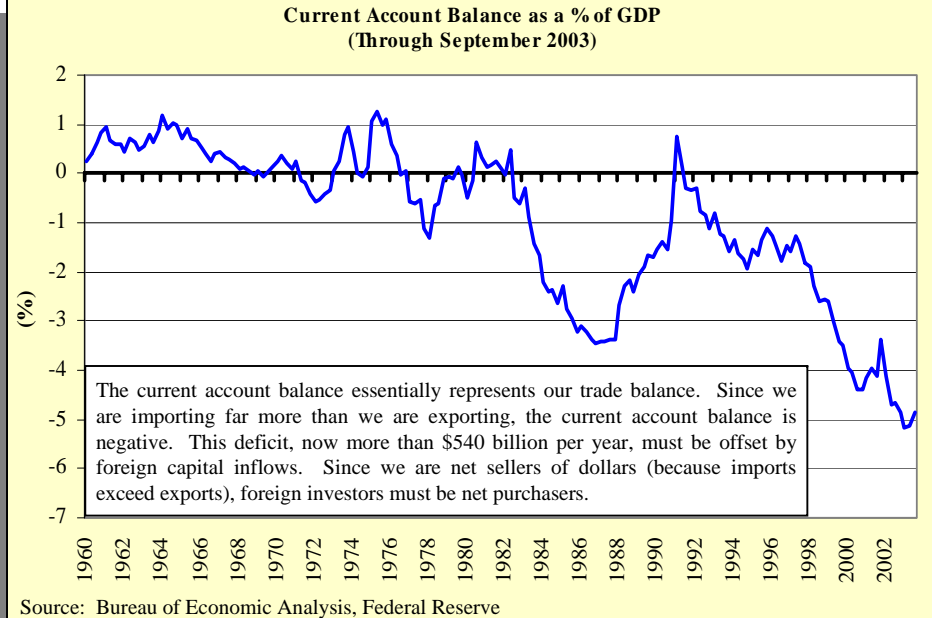


The Economy Picks Up Steam (cont.)



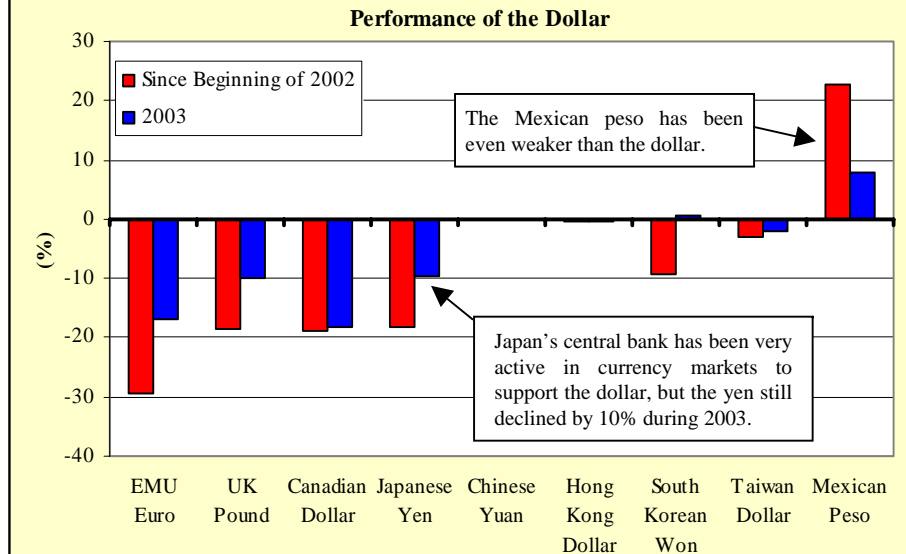
Imbalances Remain in the Economy

- While 2004 looks to be a good year for the economy, we remain concerned of a looming hangover from the spending binge of the last decade.
- Personal savings rates are miniscule, despite baby boomers' approaching retirement. Household debt as a percentage of disposable income is at record levels, and total debt service as a percentage of disposable income is higher than in the 1980s when interest rates were almost twice their current level. The Federal government is returning to deficit spending, and the US economy needs to attract more than \$500 billion of foreign capital each year to offset the current account deficit.
- While the reckoning day may not come in 2004, the imbalances in the economy are unsustainable. We expect that GDP growth will be below the historical average of 3% over the next decade as the economy is de-levered.

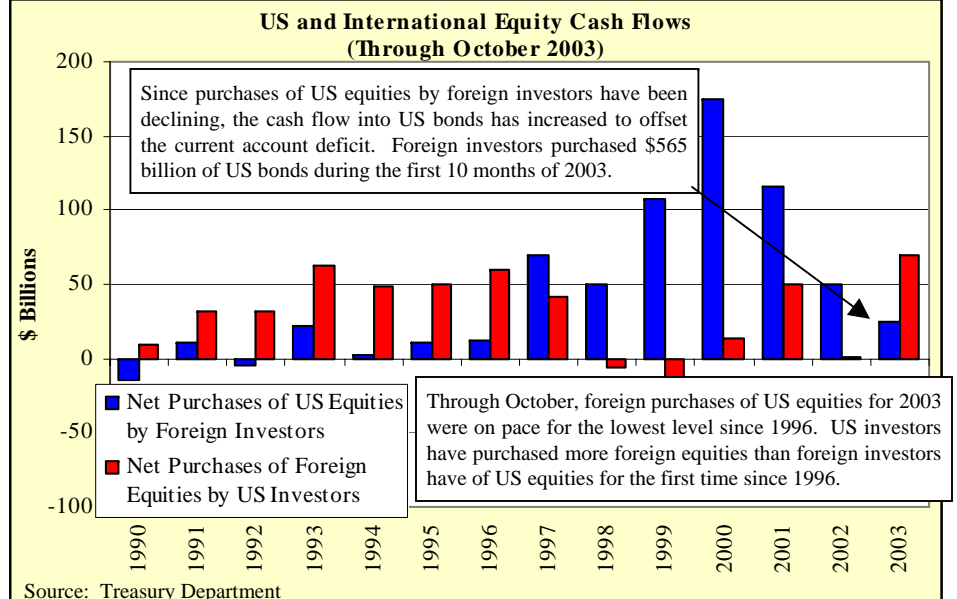


The Dollar's Decline is Likely to Continue

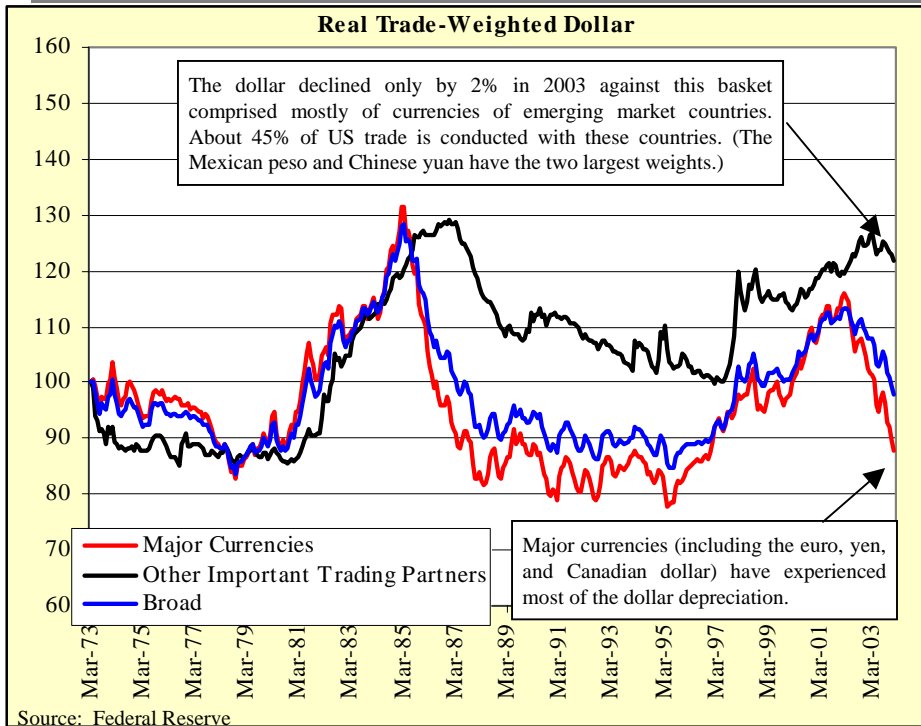
- As we expected, the dollar continued to slide in 2003. The greenback fell 17% versus the euro and 10% against the yen.
- With the current account deficit still around 5% of GDP (and expected to worsen in 2004), the trade-weighted dollar needs to fall substantially more. We believe it is likely that the trade-weighted dollar will fall by another 10% or more.
- Which currencies will the dollar fall against? The dollar needs to depreciate against Asian currencies, particularly the Chinese yuan. If Asian central banks continue to keep their currencies from appreciating, it seems that the dollar will have to continue its descent against the euro and other free-floating currencies.



Source: Federal Reserve



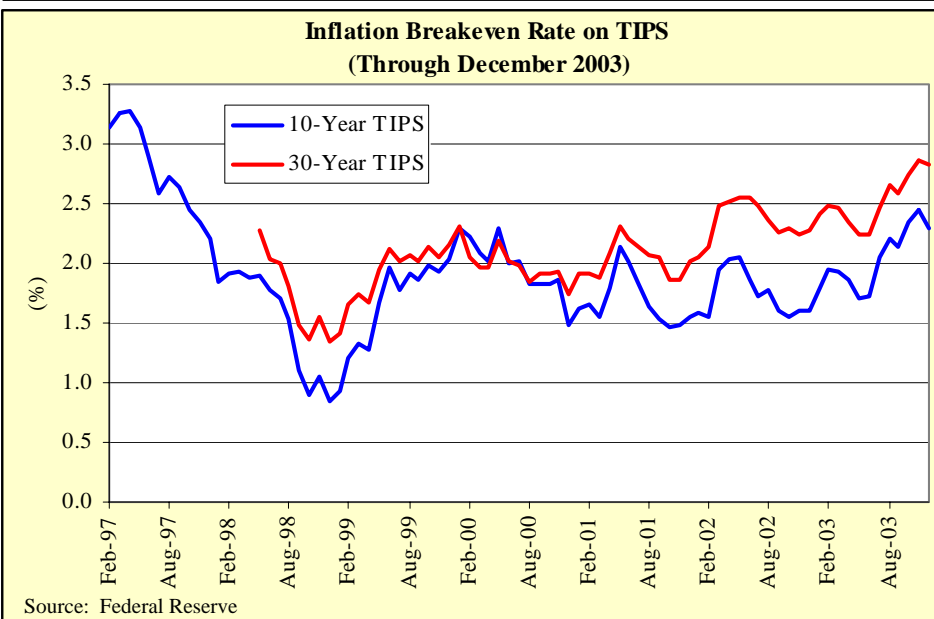
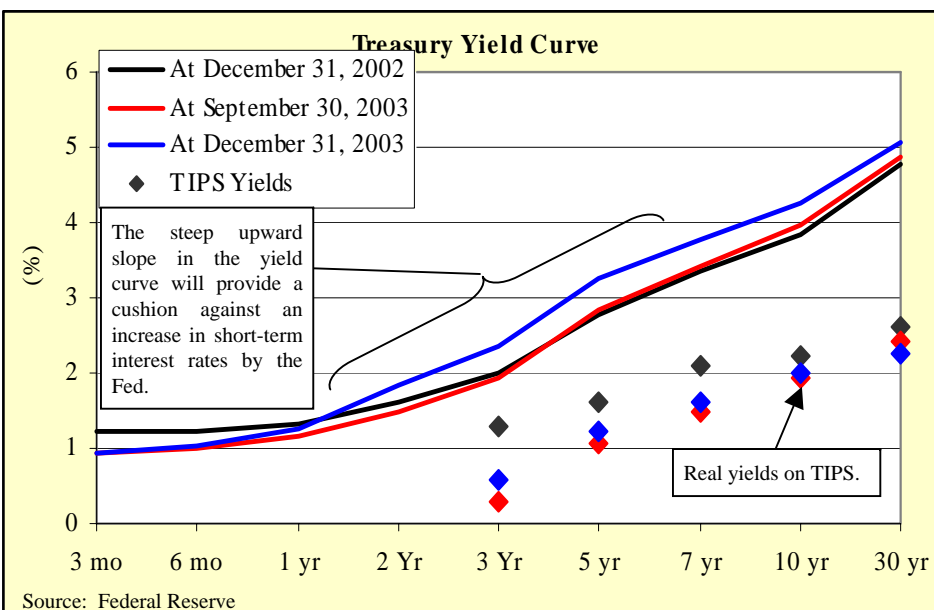
Source: Treasury Department



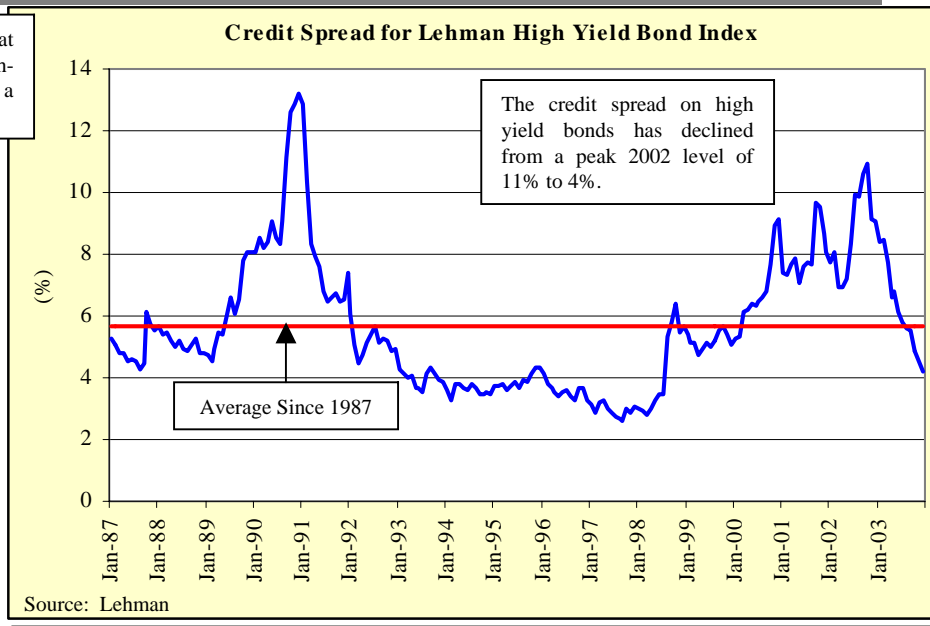
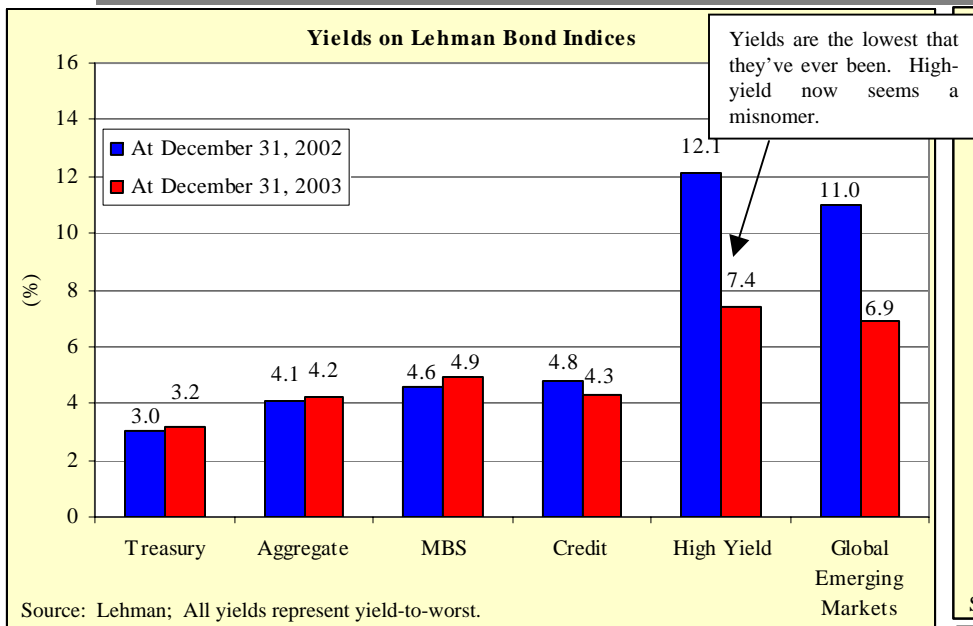
Source: Federal Reserve

Fixed Income: A Flight to Junk

- Treasury yields finished 2003 higher than where they started. The yield on 10-year T-Notes increased from 3.8% to 4.3% during the year. The increase in yields appears to have been driven by higher inflation expectations. The breakeven inflation rate versus 10-year TIPS increased from 1.6% to 2.3%, just below our long-term inflation expectation of 2.5%. The breakeven inflation rate on 30-year TIPS increased from 2.3% to 2.8%.
- The real yield of 2.2% on long-term TIPS is approximately equal to the real return provided by long government bonds since 1926. This, coupled with the 2.8% inflation breakeven rate on 30-year nominal Treasuries, suggests that Treasury bonds are priced fairly, provided that inflation remains tame.
- A major trend in 2003 was the flight to junk. The yield premium on high-yield bonds over Treasuries, which began the year at a plump 9 percentage points, fell to 4 percentage points. With the credit spread now well below the historical average, high-yield bonds appear overvalued. Investment-grade corporate bonds also look pricey, as their spread to Treasuries contracted to 1%.
- Fed Funds futures are predicting that the FOMC will begin tightening in late summer or early fall.
- We expect the Lehman Aggregate Bond index to earn 2% to 4% in 2004. With higher breakeven inflation rates, TIPS are not as attractive relative to nominal bonds as they were at the beginning of the year. Still, we prefer TIPS over nominal bonds because the risk of unexpectedly high inflation seems greater than unexpectedly low inflation. With low credit spreads, there is little reason to take significant credit risk, especially for institutions with substantial equity allocations.



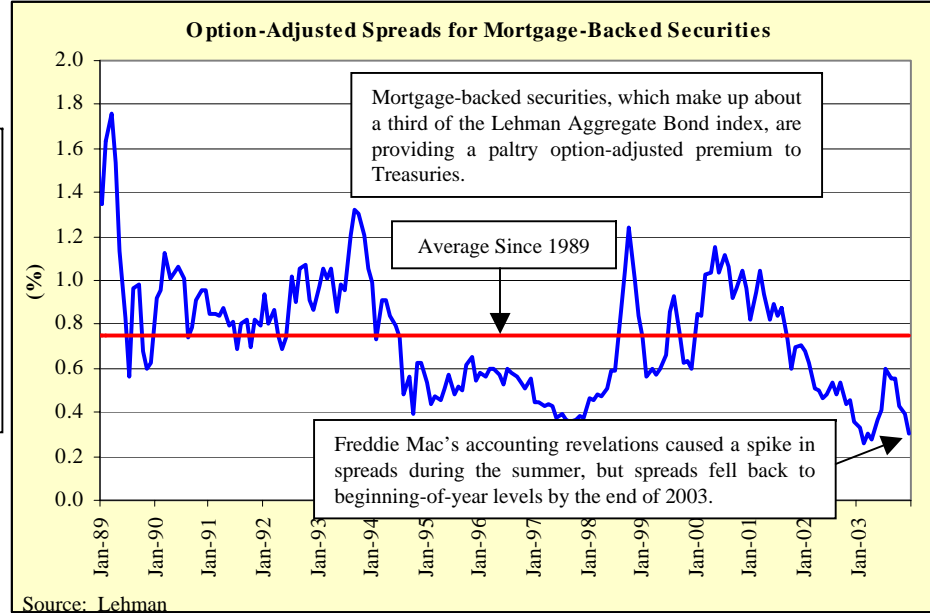
Fixed Income: A Flight to Junk (cont.)



Effect of Interest Rate Changes on 10-Year Bond Total Return (4.25% Coupon, 11/2013 Maturity, Current YTM = 4.3%)

Ending Yield	Total Return Over Horizon		
	1 Yr (%)	3 Yr (%)	5 Yr (%)
3.0	14.4	7.2	5.4
3.5	10.2	6.0	4.9
4.0	6.3	4.9	4.5
4.3	4.3	4.3	4.3
4.5	2.5	3.7	4.0
5.0	(1.2)	2.6	3.6
6.0	(8.0)	0.4	2.7
7.0	(14.3)	(1.8)	1.8

If the yield on the last issued 10-year T-Note rises to 5% over the next year from the current yield of 4.3%, the total return for the bond would be -1.2%. If the yield rises to 5% over the next five years, the annualized total return for the five-year holding period would be +3.6%.

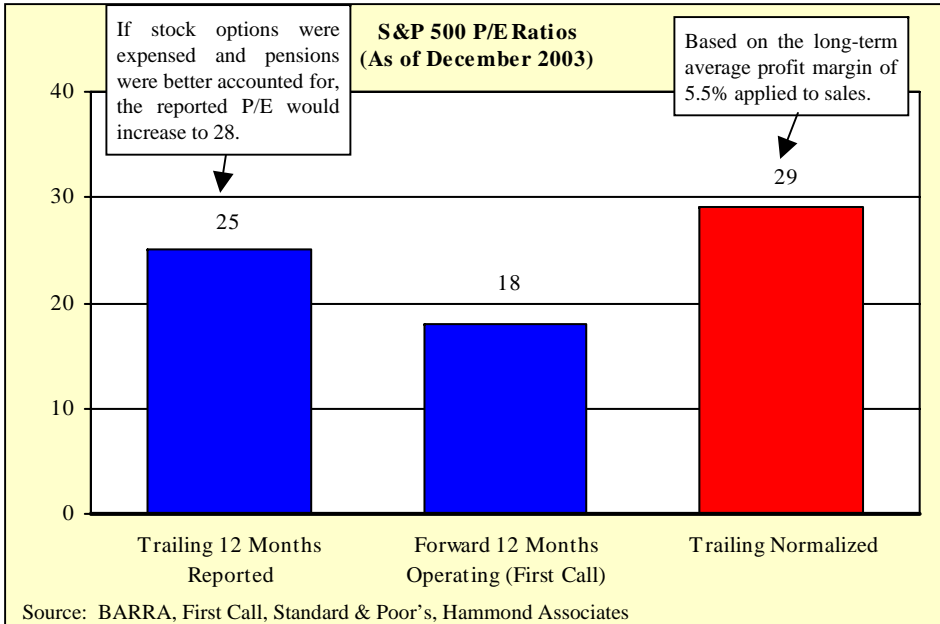


The 10-year bond should outperform cash in 2004 as long as the yield remains below 4.7%.

The Lehman Aggregate Bond index would change less in reaction to changing interest rates than the 10-year Treasury Bond. The 10-year bond has a duration of 8 years, while the Lehman Aggregate index has a duration of 4 years.

The Silver Lining's Cloud

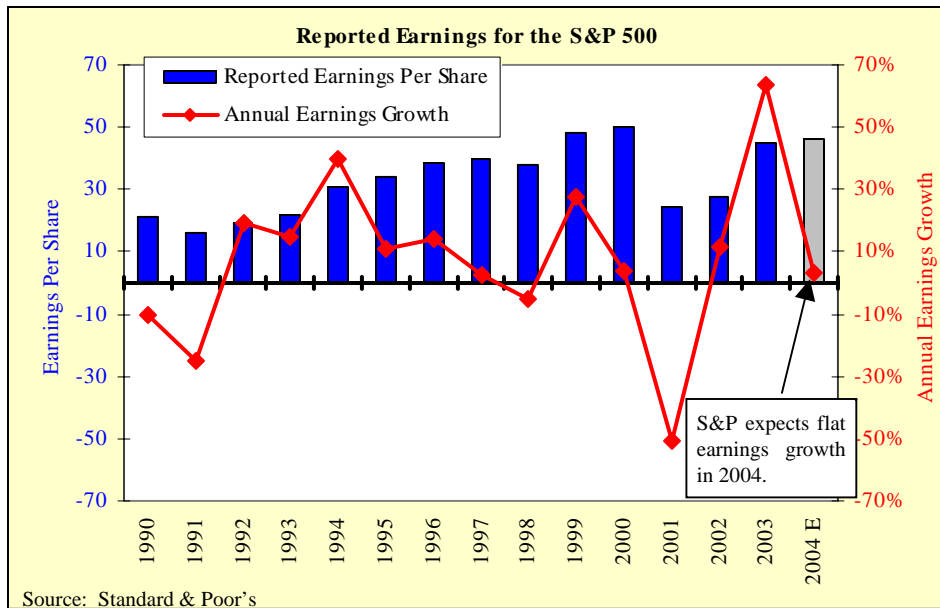
- The S&P 500's 29% gain in 2003 made an already expensive market more so. The normalized P/E ratio on the index is back to the end of 2001 level.
- With a normalized P/E ratio of 29, the S&P 500 is priced to provide a real return of 3.6% in the future (based on forward sales), which represents only a 1.4 percentage point premium to long-term TIPS.
- The pockets of opportunity that existed within the US equity market have mostly been priced away. After five consecutive years of outperformance, small-caps now appear fairly valued, perhaps even overvalued, relative to the S&P 500. Value stocks are priced to provide only a modest premium to growth stocks.
- Despite the poor fundamentals, the market appears to have the wind at its back for 2004. Momentum, liquidity, and the Presidential election cycle are on its side. Our best guess is that the S&P 500 earns 5% to 10% in 2004, but there's significant chance of double-digit losses.



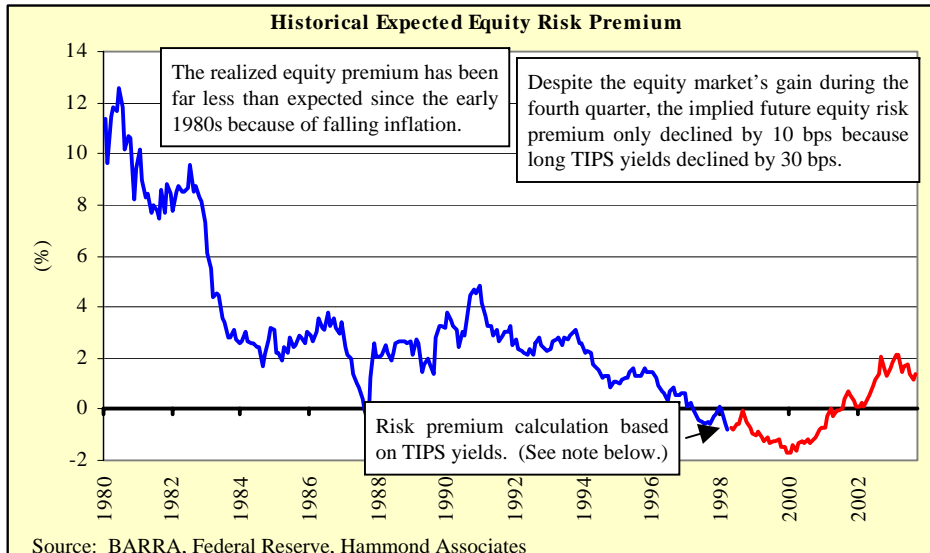
Expected Annualized Real Return on S&P 500 Over Next 10 Years

Annualized GDP Growth	Normalized P/E Ratio at Year 10					
	10x	15x	20x	25x	30x	40x
2.0%	(5.7%)	(2.2%)	0.4%	2.5%	4.2%	7.1%
2.5%	(5.2%)	(1.7%)	0.9%	3.0%	4.8%	7.6%
3.0%	(4.8%)	(1.2%)	1.4%	3.5%	5.3%	8.1%
3.5%	(4.3%)	(0.7%)	1.9%	4.0%	6.3%	8.7%
4.0%	(3.8%)	(0.2%)	2.4%	4.6%	6.8%	9.2%

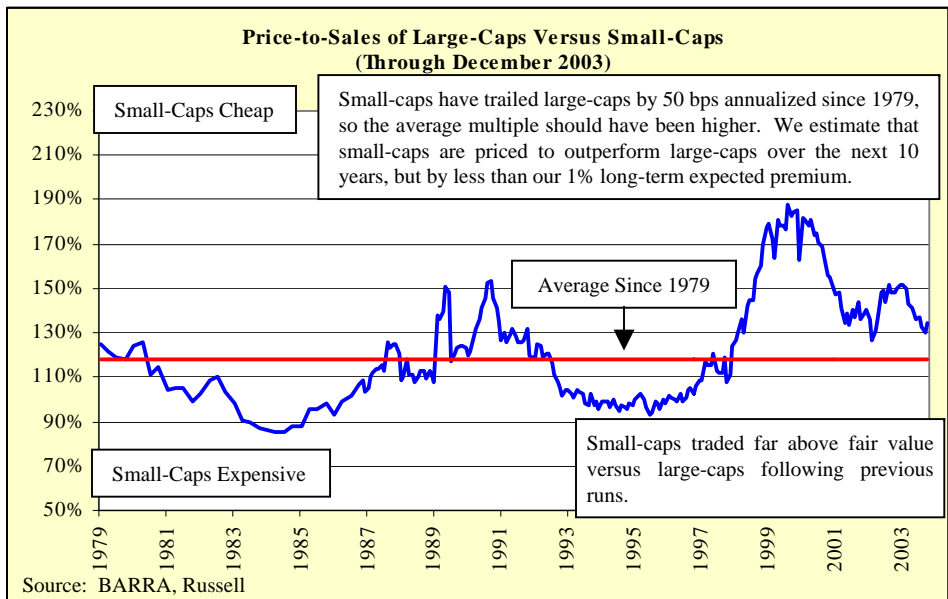
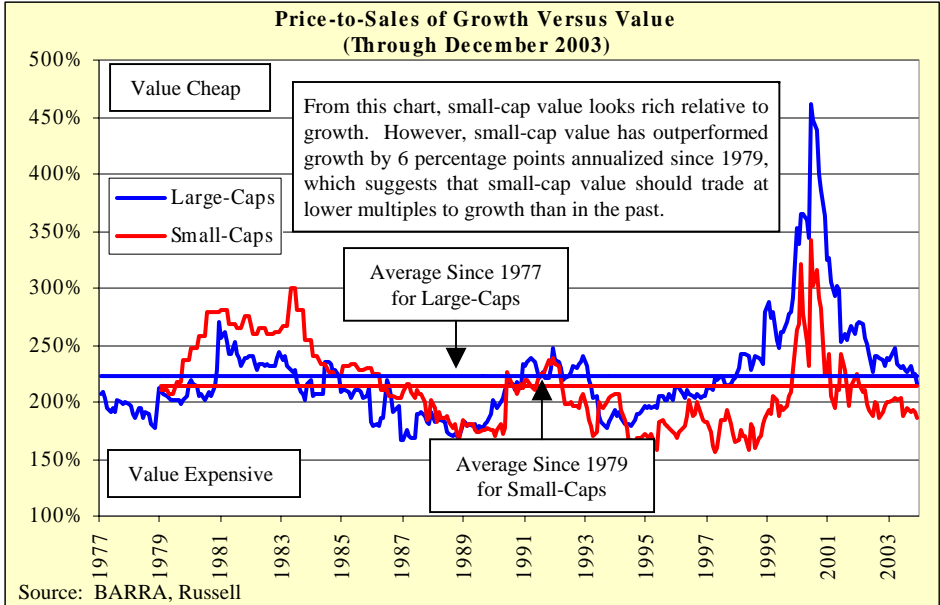
This model assumes that earnings grow at the same rate as GDP. Historically, earnings growth has trailed GDP growth by about 1% annualized.



The Silver Lining's Cloud (cont.)



Note: To estimate the expected equity risk premium priced into stocks, an estimate of the long-term *real* interest rate is required. However, prior to the introduction of inflation-protected bonds in 1997, the real interest rate was not observable. To estimate the real interest rate prior to 1997, we deducted the three-year annualized change in the CPI from the long-bond yield.



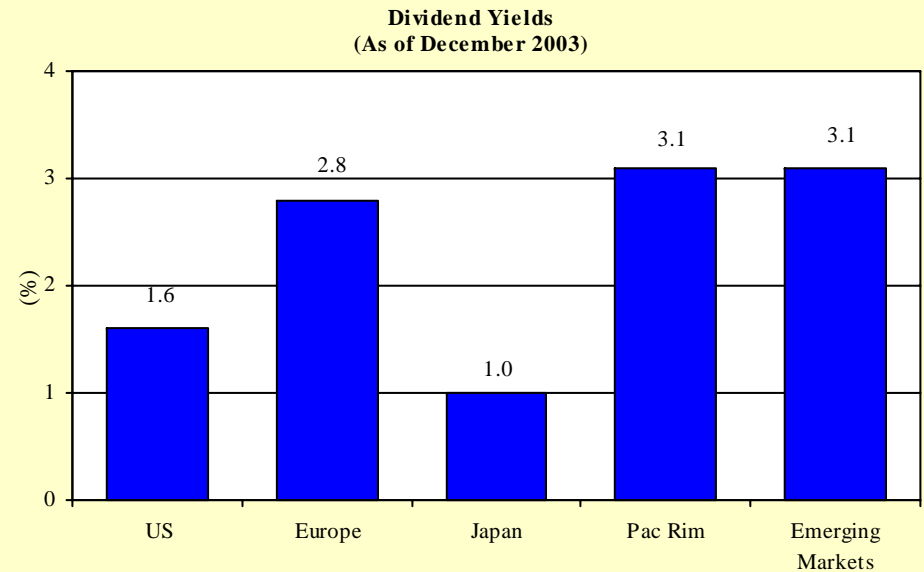
Price Change Required for the S&P 500 to Reach Fair Value						
Expected Long-Term Profit Margin	Required Equity Risk Premium Over TIPS (2.2% Long-Term Real Yield on TIPS)					
	1.0%	1.5%	2.0%	2.5%	3.0%	4.0%
4.5%	(8%)	(20%)	(29%)	(37%)	(43%)	(52%)
5.0%	3%	(11%)	(22%)	(30%)	(37%)	(47%)
5.5%	13%	(2%)	(14%)	(23%)	(30%)	(41%)
6.0%	23%	7%	(6%)	(16%)	(24%)	(36%)
7.0%	44%	24%	10%	(2%)	(11%)	(25%)
8.0%	64%	42%	25%	12%	1%	(15%)

Average profit margin since 1956.

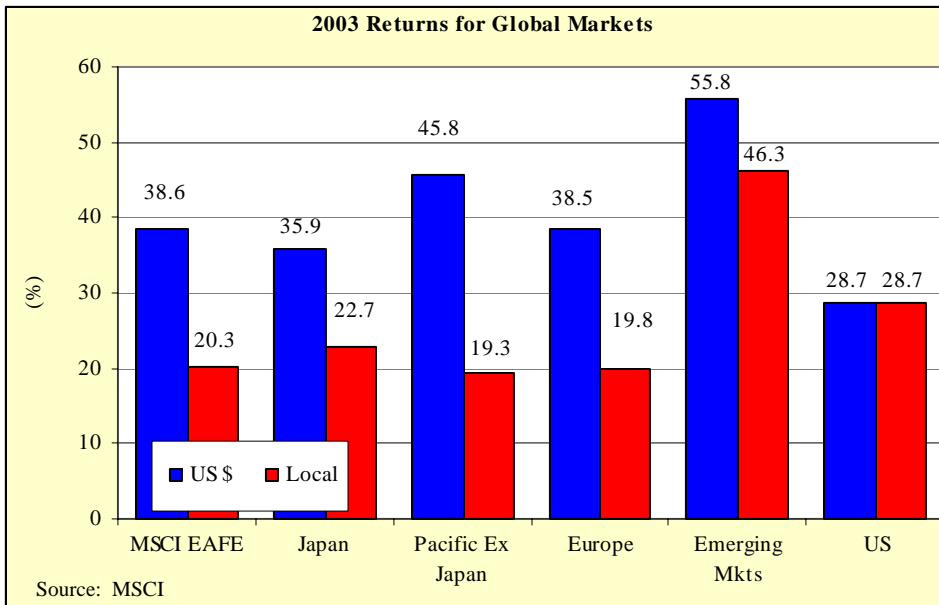
Depending on investors' required equity risk premium and on future average profit margins, we believe that stocks are somewhere between 6% and 30% overvalued.

International Equities Are Expensive, But Relatively Cheap

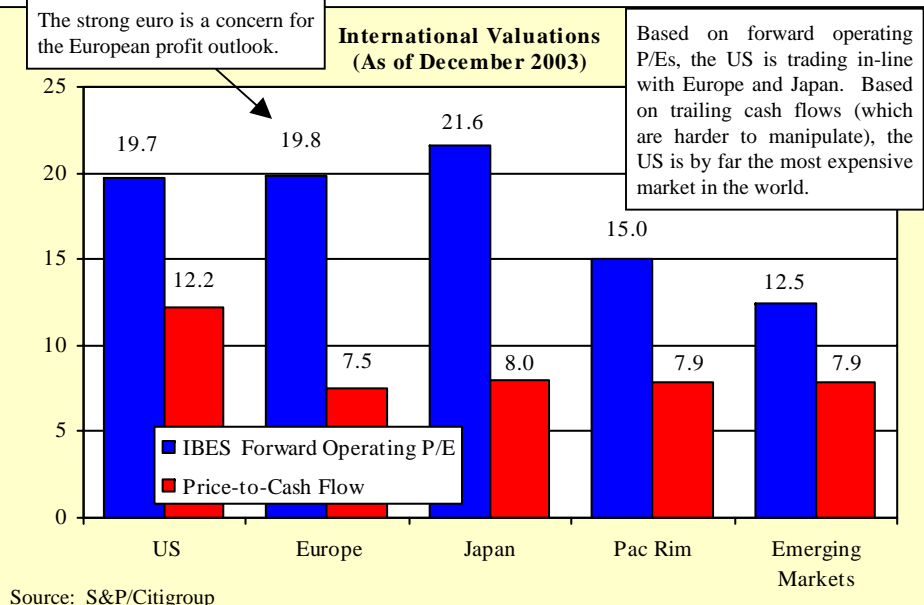
- The weak dollar continued to be a boon for investors in international equities in 2003. Emerging markets were the biggest winners as assets flooded into their markets.
- As a result of the 2003 performance, developed market equities are beginning to look pricey again. Emerging markets, which were a bargain a year ago, appear fairly valued to slightly overvalued.
- Nevertheless, relative to US equities, international equities are still very attractively priced. The dividend yield on EAFE is 2.5%, versus 1.6% for the S&P 500. Emerging markets' dividend yield still exceeds 3%.
- Internationals are beginning to look expensive in absolute terms, but still represent a better value than US equities. We expect internationals to outperform for a third consecutive year in 2004.



Source: S&P/Citigroup



Source: MSCI

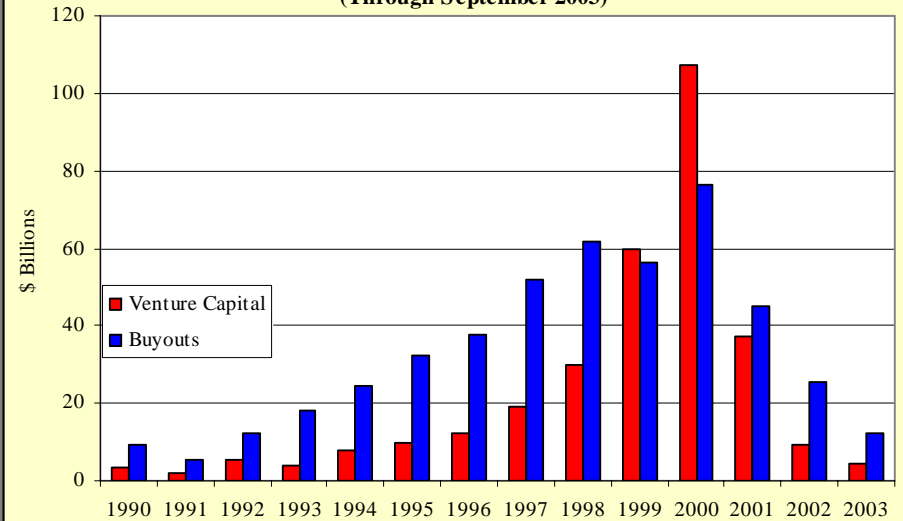


Source: S&P/Citigroup

Private Equity Commitments Slow, Performance Improving

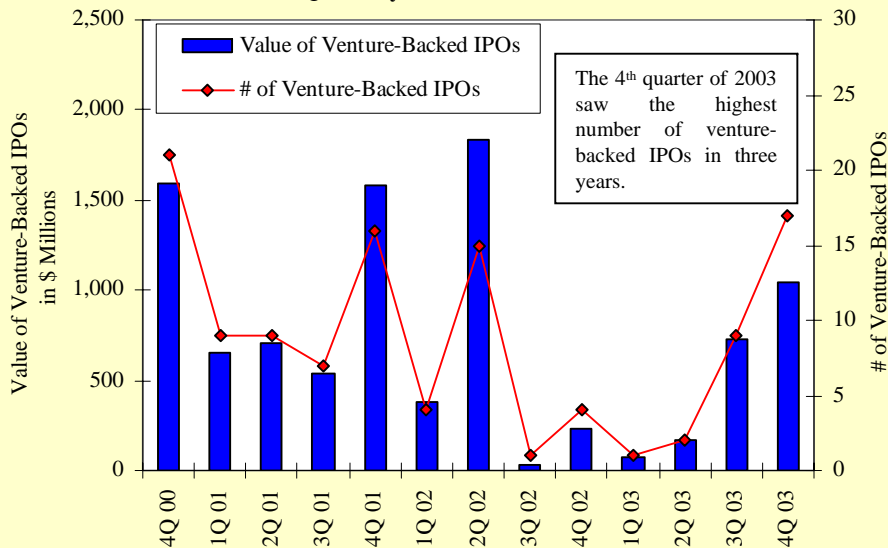
- 2003 was the slowest year for private equity commitments since 1991. While commitments continue to fall, performance has been firming. Venture Economics reported that buyout funds generated a 12% return for 2003 through September. Venture capital performance remains negative with a 9% decline through September, but that is a big improvement over the 30% decline in both 2001 and 2002.
- Distressed debt was the best performing sector in 2003. Venture Economics does not track distressed debt funds separately. Anecdotally, we have seen IRRs for funds in the mid to high double-digits.
- Looking forward, there remain opportunities for control-oriented distressed investments. In addition, it may be time to consider making commitments to venture capital funds. The uninvested overhang is falling, and the investment periods for funds raised during the boom years are approaching expiration, which will further reduce the supply of capital.

Private Equity Commitments by Year
(Through September 2003)



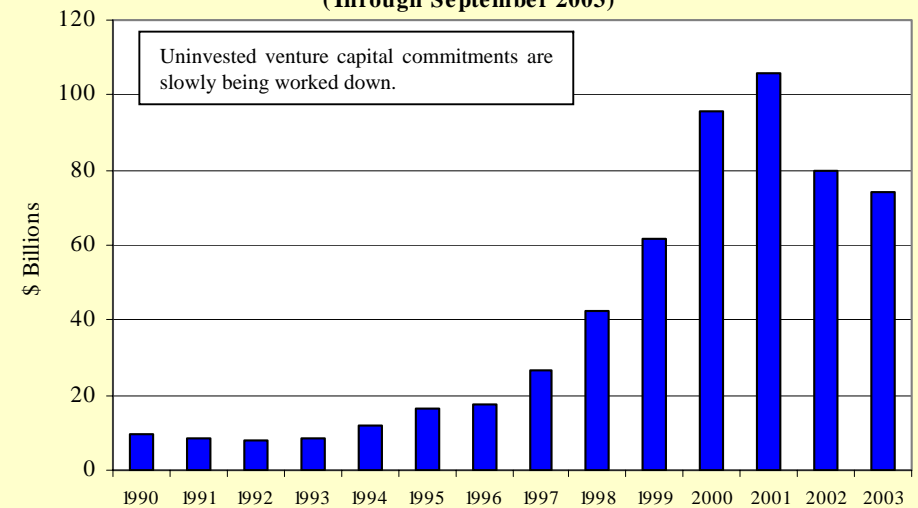
Source: Venture Economics

Quarterly Venture-Backed IPOs



Source: Venture Economics, Hammond Associates

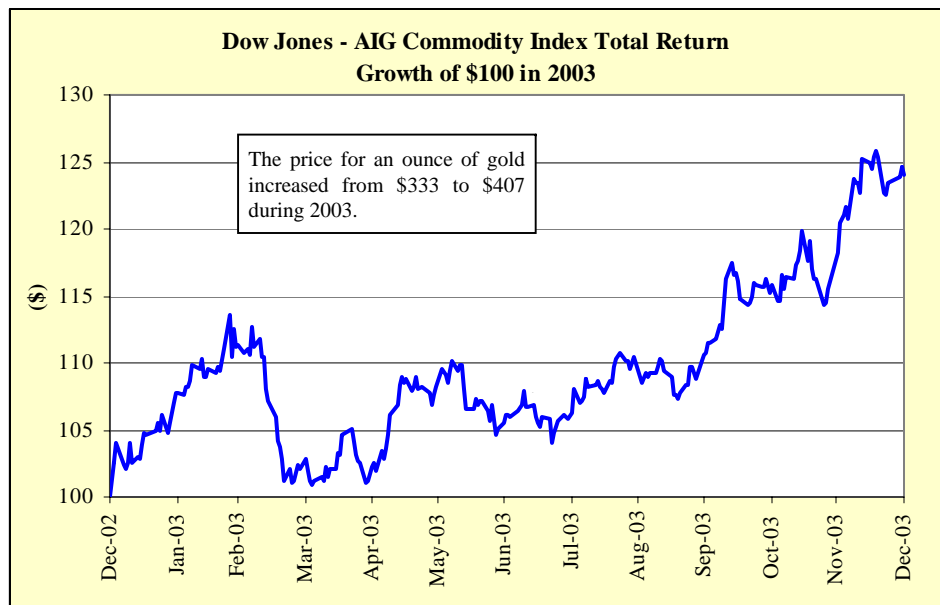
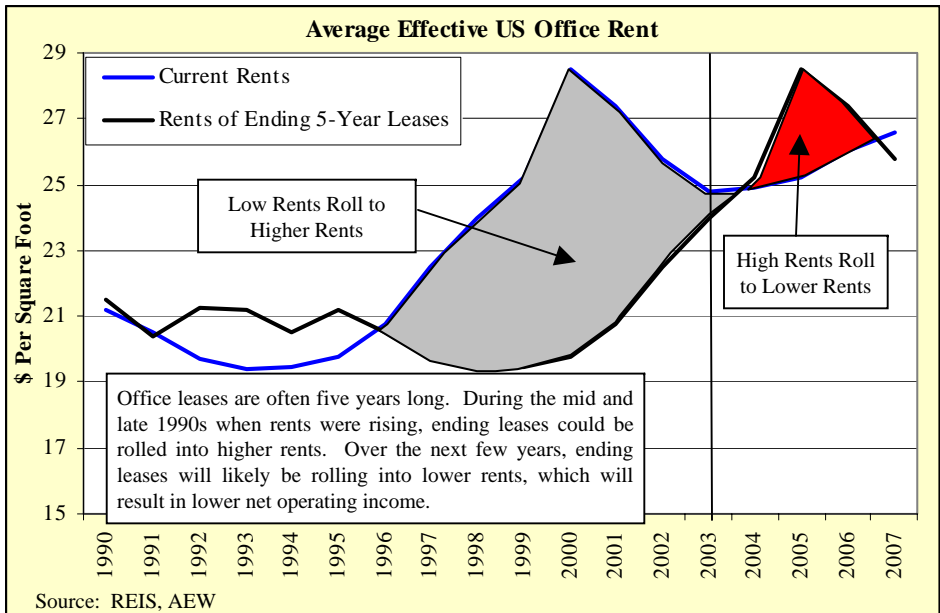
Uninvested Venture Capital Commitments
(Through September 2003)



Source: Venture Economics, Hammond Associates

Real Estate Fundamentals Deteriorating

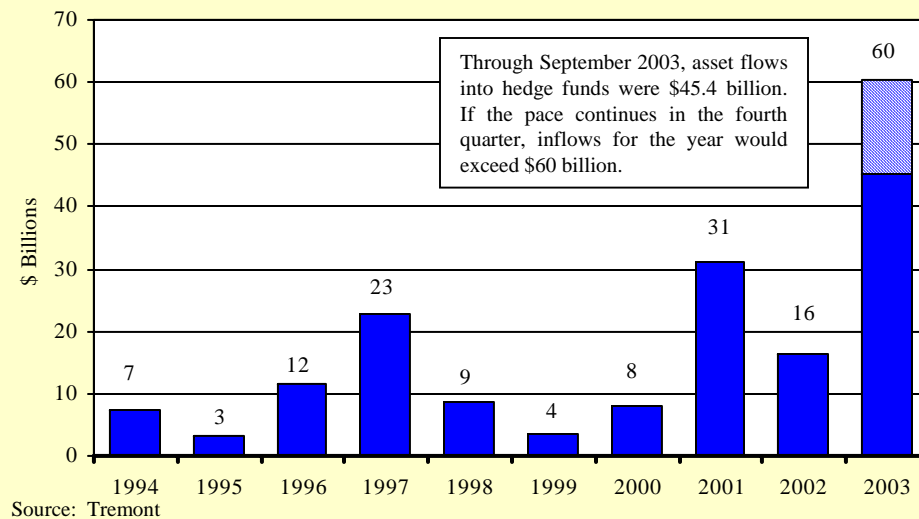
- Real estate performed well in 2003 as falling capitalization rates (net operating income as a percentage of value) helped to mask deteriorating fundamentals.
- The real estate market is showing discernable weakness across three of the four major property types—office, industrial, and apartments—and seemingly unsustainable strength in retail. Office vacancies are at 17%, similar to the levels of the early 1990s. Vacancies in the industrial sector are currently at an all-time high of 12%.
- Going forward, a concern is declining net operating income. Leases signed during the boom of the late 1990s are expiring, which will put space back on the market. Furthermore, rent rolls taking place over the next few years as old leases expire will be renewed at lower rates. Since the recovery is not adding jobs at a pace anywhere near past recoveries, rents could remain weak for an indefinite period. A positive aspect of today's market is that, with low interest rates, real estate is offering a healthy spread to Treasuries.
- Overall, we are cautious on core real estate. We are emphasizing distressed and value-added real estate investments instead.
- Other areas of interest are hard assets, such as oil & gas, timberland, and other commodity-based investments. Hard assets were stellar performers in 2003, due in part to the weak dollar, and they still have considerable appeal. A continued weakening of the dollar should benefit hard assets. Furthermore, demands from rapidly growing, but resource-poor, China may put upward pressure on prices.



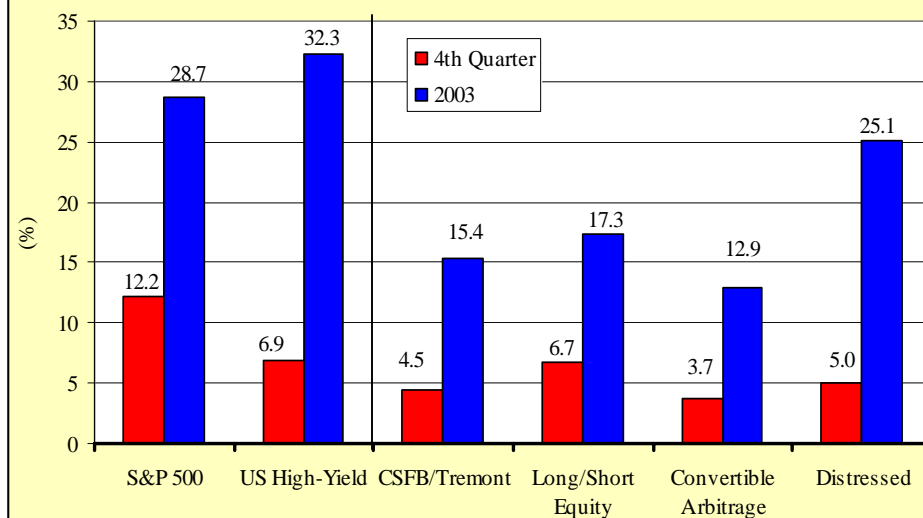
Hedge Funds: More Means Less?

- Based on Tremont's estimate through the 3rd quarter, hedge funds were on pace to receive inflows on the order of \$60 billion in 2003, double the previous record that occurred in 2001 and 10% of the estimated size of the entire industry at the beginning of the year. The inflows are consistent with increased institutional interest in absolute returns.
- The fact that hedge funds are becoming more mainstream may have implications for future returns. As trades predicated on profiting from relatively small pricing inefficiencies become more crowded, future returns are likely to fall below past levels.
- The hedge fund landscape is becoming increasingly competitive and the importance of manager selection will be ever more important. We believe that the average hedge fund will produce results that fall short of most institutional goal returns. The subset of extraordinary managers, on the other hand, are likely to be accretive to overall portfolio performance.
- Hedge funds, as represented by the CSFB/Tremont Hedge Fund Index, earned 15% in 2003. In particular, strong returns were generated by long/short equity (17%) and distressed managers (25%). The results for these strategies are not surprising considering their systematic drivers are equity and credit risks, as the S&P 500 and high-yield bonds jumped 29% and 32%, respectively, in 2003.
- Those hedge funds that kept pace with or exceeded traditional investments in 2003 may be waving a red flag—what drove the performance for the year, and what will happen to returns if the equity and credit markets retreat?

Asset Flows into Hedge Funds



Performance of CSFB/Tremont Hedge Fund Indexes (%)



Active Managers Underperformed in 2003

*% of Surviving Mutual Funds that Have Outperformed Their Index
(As of 12/31/03)*

<i>Asset Class</i>	<i>Index</i>	<i>1 Year (%)</i>	<i>3 Years (%)</i>	<i>5 Years (%)</i>	<i>10 Years (%)</i>	<i>20 Years (%)</i>
US Large-Cap Growth	Russell 1000 Growth	37	47	71	33	30
US Large-Cap Blend	S&P 500	28	40	49	15	12
US Large-Cap Value	Russell 1000 Value	32	35	36	16	10
US Mid-Cap Blend	S&P 400	44	41	41	17	0
US Small-Cap Growth	Russell 2000 Growth	29	51	82	82	83
US Small-Cap Blend	Russell 2000	28	69	86	74	73
US Small-Cap Value	Russell 2000 Value	26	47	53	54	99
International Large Cap	MSCI EAFE	42	46	68	56	20
Emerging Market Equities	MSCI EMF	50	52	56	63	N/A

Large-cap and mid-cap managers have posted disappointing long-term results.

Small-cap managers have performed well, but survivorship bias is likely skewing the results.

Numbers in red indicate that two-thirds of managers underperformed the index, numbers in blue indicate that two-thirds of the managers outperformed the index.

Active managers struggled in 2003. Cash balances were likely one cause.

In order to measure the potential affects of survivorship bias on mutual fund universes, we examined historical Morningstar data. We calculated the average return for 1996 in several Morningstar categories using their year-end 1996 software. (We used 1996 because that was the first calendar year-end that Morningstar classified funds into categories.) We then calculated the category average return for 1996 using the December 2003 Morningstar software.

<i>Morningstar Category Average Returns for 1996</i>			
<i>Asset Class</i>	<i>As Reported in 1996</i>	<i>As Reported in 2003</i>	<i>Difference</i>
US Large-Cap Growth	21.1	20.0	(1.1)
US Large-Cap Blend	20.6	21.1	0.5
US Large-Cap Value	19.9	20.6	0.7
US Mid-Cap Blend	19.1	20.7	1.6
US Small-Cap Growth	17.3	19.8	2.5
US Small-Cap Blend	21.2	22.1	0.9
US Small-Cap Value	22.1	23.6	1.5
Foreign Equities	12.4	14.7	2.3
Emerging Market Equities	12.3	14.4	2.1

The average return for 1996 did not increase very much for large-cap blend and value between 1996 and 2003 and actually fell for large-cap growth.

The return for mid-cap, small-cap, and foreign stocks increased substantially. The worst offender was small-cap growth. The small-cap growth return for 1996 as reported in 2003 was 2.5 percentage points higher than the 1996 return as reported in 1996.

To receive a copy of our Research Note "Impact of Survivorship Bias on Peer Ranking Comparisons," please indicate your interest on the back page of this report and fax the page to us.

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