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CAMBRIDGE ASSOCIATES LLC

U.S. MARKET COMMENT: ASSET ALLOCATION IN A BEAR MARKET

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CONTENTS

ASSET ALLOCATION IN A BEAR MARKET

Introduction

A recent *New Yorker* cartoon depicts a robed, bearded, sandaled ascetic toting a sign that proclaims: "The End is Nighish." That's pretty much how we feel about the equity bear market, but unfortunately we have no idea how long the "ish" tail might be. We would like to agree with those who believe the U.S. market bottomed out on July 23, 2002—we have no emotional or intellectual stake in bearishness—but the signs and portents prevent us from doing so.

Cyclical bear markets are reasonably amenable to analysis because they are relatively frequent and tend to unfold according to certain patterns. However, *secular* bear markets are less common, less uniform, and less predictable because their evolution usually coincides with (or causes) larger shifts in the economic landscape that leave investors struggling to find their bearings in unmapped territory. Although that's where we are today, most pundits continue to use standard GPS equipment whose signals may be scrambled by prevailing atmospheric conditions.

Bottom Fishing

However, we are by no means blind to some promising developments:

- July's high-volume stampede out of equities was characteristic of a climatic sell-off.
- Trim Tabs estimates that U.S. equity mutual funds suffered $68 billion in net redemptions.
- Foreign investors have evinced similar disillusionment with U.S. assets. Having poured money into U.S. equities at the top of the market, foreigners are now net sellers, to the tune of an estimated $30 billion to $50 billion per month.
- In August, the market has shown considerable resilience in the face of some disappointing economic data and the Fed's decision not to cut interest rates. In addition, that decision presumably indicates that the Fed has some measure of confidence in the nascent recovery, despite headline economic gloom.
- There is now increasing evidence that corporate earnings have started to pick up and analysts are starting to revise their estimates upwards.

- The dog didn't bark on August 14: this was the deadline for most CEOs and CFOs to personally guarantee the integrity of their companies' accounts, which the vast majority did without having to restate past years' earnings.
- Many long/short hedge funds, frustrated by the impotence of fundamental stock analysis to generate positive returns this year, now have very low net equity exposure.
- Credit markets are paralyzed.
- Corporate announcements of stock buybacks increased sharply in response to the July sell-off, with more than 140 companies launching such programs in July. How many will actually follow through within the next year or so is another question, but they do have the wherewithal: non-finance companies' short-term bank deposits had risen to $233 billion by the end of 2001, compared to less than $100 billion during most of the preceding decade.
- Similarly, corporate insiders have recently started to nibble at their companies' shares, in contrast to the steady drumbeat of net selling during the first half of the year.
- Political posturing over corporate greed and malfeasance is proliferating.

On balance, however, these strike us more like a bell ending a tough interim round in a protracted slug-fest. Cyclical bear markets are three-round amateur contests—they may be vicious, but at least they don't last too long. Secular bear markets last a full, professional 12 to 15 rounds, and we suspect this one has a ways to go. Before it's over we would expect bear market excess and despair proportional to the preceding bull market ebullience and euphoria, and the fulfillment of some of the following conditions:

- Many false pronouncements that "this is the bottom." By the time one reaches the bottom of a secular bear market, no one is listening anymore. The doomsayers of the bull market became all too familiar with this phenomenon.
- Despite improving earnings and solid prospects, many companies' stock prices keep going down or going nowhere until they are selling below book value and at substantially lower P/E multiples. Undoubtedly some bargains can already be found in the rubble, but stocks in general are far from this point.
- More generally, we would expect equity market valuations to make as little sense as they did in 1999—and to see them rationalized by an unbridled pessimism that echoes the loony optimism of the late 1990s. Byron Wien of Morgan Stanley recently wrote: "You would have to have a breakdown of interest-sensitive valuation models to get too bearish on this market." Yes, exactly—we *would* expect most valuation models to seem as broken as they did in 1999.

- A baffled incomprehension as to why the stock market remains so weak despite ample evidence of *economic* recovery. This is a subject we have addressed before (September 1999): "From the perspective of the disinterested statistician, economies and markets appear unrelated. This is because a healthy economy is a necessary *but not a sufficient* basis for strong equity market performance." For example, if S&P 500 earnings were to grow at 13.6% annually over the next five years—the current I/B/E/S consensus estimate, which is aggressive but not unreasonable from a depressed base—but the market P/E (on normalized earnings) were to slide from its current 20.2 to the long-term average of 17.2, the annual return (price change only) would be 0.3% (see Table A).

- Significant consolidation in the information technology sector. This has yet to occur because the CEOs of companies still in business believe their stock price is too low. Before the end is reached, they should start to realize that the March 2000 price of $95 is irrelevant and that selling now at $8 per share is better than watching the stock go to $2 per share. This is what happened to the energy sector in the 1980s.

- Further consolidation in financial services. Hundreds (perhaps thousands) of equity mutual funds will have to fold or merge as depletion in assets under management destroys profit margins. How do you rebuild assets without massive distribution capabilities? How can you finance massive distribution capabilities if you're not making any money?

- Some sort of ambush that catches most long/short equity hedge funds on the wrong side of the market, resulting in disgust and disillusion among the momentum investors for whom they have become the fad *du jour*.

- Having lost all hope of recouping their losses, retail investors abandon equities, swallow the bitter cud of despair, and switch from CNBC to Fox Sports News. Bridgewater estimates that the average equity fund investor is now underwater on investments made since 1995; other analyses suggest that retail investors still have some "house" money on the table. Ned Davis estimates that household equity holdings (net of their indirect pension fund exposure) has dropped from 46% in March 2000 to 35% (as of March 31, 2002), still far above the 50-year mean of 25%. Although it seems mean-spirited, we fear the end will only be truly nigh when both the house money and a chunk of the original stake are burned up and gone.

Assessing the Damage

From its March 24, 2000 peak to the lows of July 23, 2002, the S&P lost 47.8%. This loss is exceeded in the past century only by the 86.2% decline from 1929-32, the 54.5% decline from 1937-38, and the 48.2% decline from 1973-74. Tables B-H indicate the breadth of the market decline. Table B shows the percentage of stocks declining at least 10%, 30%, and 50% from their 12-month high price. In a protracted bear market, however, this time horizon fails to reflect how many stocks are selling below their highs—which in many cases were as far back as 1998—and so we have extended the analysis to 60 months. The results are both instructive and startling, although somewhat limited by the fact that the data extend back only to 1977 for the S&P 500 and 1986 for Nasdaq stocks. By the end of July, more than 35% of S&P 500 companies were selling at prices at least 50% lower than their 60-month high—a higher percentage than at any previous time during the period covered. Surprisingly, the 58.2% of Nasdaq companies down at least 50% from their 60-month high is not a record, although mighty close (the record 61.9% was set in October 1990). However, the 20.4% of Nasdaq companies down at least 90% from their 60-month high is by far the largest percentage since 1986—wreckage on a scale worthy of a secular bear market.

Returns and Retracements—Where *Should* We Be?

In the first half of the 1990s, equity market returns were slightly below average: the S&P 500's nominal average annual compound return (AACR) for 1990-94 was 8.70% and the real AACR, 5.03%. At the same time, valuations remained relatively modest: the P/E of the S&P 500 rose to 21.4 in 1991 because earnings were depressed by the 1990-91 recession, but then dropped back to 14.1 as earnings recovered and interest rates declined. From 1995-99, however, the nominal AACR of the S&P 500 was 28.55%, its real AACR was 25.58%, and the multiple expanded to 28.9. Boom times.

What might equity investors have reasonably expected for the period 1995-99? One answer is that equity market returns are so variable, even over periods as long as 20 or 25 years, that investors should never assume much of anything. But that's not very helpful to people trying to understand how best to deploy capital. So a better approach is to assume that if valuations are not highly inflated or deflated, one should use the long-term expected return as a reasonable default. Since our long-term real AACR assumption is 6.75%, what would be the cumulative return by December 31, 1999 if one had earned that rate over the preceding five years? How does that compare to the actual results? And extrapolating both hypothetical and actual returns forward from 1999 to date, where are we today?

The answers are shown in Table H. If the S&P 500 had returned 6.75% real AACR from 1995-99, $100 would have grown to $138.62. In fact, $100 invested on January 1, 1995 grew to an inflation-adjusted $312.30 by December 31, 1999. However, by July 31, 2002, that $312.30 would have shrunk to $187.16, which still compares favorably to the $164.11 realized by compounding at 6.75%. Unfortunately, this suggests some air remains in the balloon, while precedent suggests the market will give back all of the "excess" returns earned during the 1995-99 bubble and perhaps more.

Current Valuations

Finally, we continue to rate the S&P 500 "overvalued" because the valuation placed on earnings, whether trailing 12-month, normalized, or forward, remains high by historical standards (see "Notes on Current Valuations" on our website for discussion in detail). High valuations do *not* preclude the possibility of significant rallies, which routinely punctuate bear markets, but they do act as a gravitational force that any rally must pull against, and they constitute the most important unresolved legacy of the bull market. Our dividend discount model is more sanguine, rating the S&P 500 as closer to fair value, and similar models at Morgan Stanley and Goldman Sachs indicate undervaluation. However, until U.S. equities sell at a modest, average, multiple of sustainable earnings, we think they remain at risk.

Conclusions

Some of the salient features of the late 1990's boom have disappeared: the dot-com and IPO manias, the unswerving faith in the exponential growth potential of tech and telecom stocks, day trading, and so on. Others are badly shaken but not yet in ruins: margin debt outstanding has declined precipitously, but remains relatively high by historical standards; the same may be said of investors' allocations to equities as percentage of their financial assets. Finally, equity market valuations have failed to revert even to average historical levels—except for those predicated on current interest rates and stock/bond comparisons, which we regard as the least robust form of valuation analysis for long-term investors.

Many commentators have noted that markets tend to overshoot during both booms and busts, as investor psychology swings between greed and fear. We agree, but would settle for dissipation of all the cumulative excess of 1995-2000, particularly the mean reversion of unrealistic valuations.

Asset Allocation Recommendations

Although the blame game will drag on into November's mid-term elections, we suspect the bull market in corporate perfidy has peaked. However, we would expect continued volatility and the periodic recurrence of financial shocks of the sort that have afflicted global markets with increased regularity since the new era of globalization began.[1] As always, we have little conviction in anyone's predictions (including our own) as to what the market might do in the next year or two, and so we advise strongly against betting the ranch on any one outcome.

[1] A World Bank report of October 1999 notes the eruption of more than 65 serious financial crises during the preceding decade compared to 45 during the 1980s.

The implications for asset allocation are essentially the same as outlined in our May 2002 paper, *How Will You Earn What You Spend?*:

- Investors with undiversified portfolios highly concentrated in U.S. equities should use rallies to diversify their portfolios into other equity assets.
- These would include real estate, both public and private. In May, we noted that REITs were trading at a modest premium to net asset value (NAV), and fully expected this premium would expand as investors became increasingly enamored of the REITs' relative stability and strong cash flow. This has not happened and REITs now trade at a modest discount to NAV, making them reasonably valued in absolute terms and very attractive relative to, say, the S&P 500.
- Those comfortable with their policy allocation to U.S. equities should be assiduously rebalancing—don't try to second-guess the market.
- The great reversion to value having run its course, we would not overweight value equities in favor of growth, nor vice-versa.
- However, a form of value we would favor is high-yield and distressed debt—with the caveat that these will perform badly if the economy in general, and corporate earnings in particular, suffer significant deterioration.
- Investors should also maintain or increase allocations to non-U.S. equities, including emerging markets, for the purpose of diversification and as a hedge against US$ devaluation, and on the basis of relative valuations.
- Hedge funds have generally disappointed investors this year: arbitrage funds have had difficulty finding much to arbitrage, while long/short managers have demonstrated once again the rarity of stock-picking genius. We would again caution investors that hedge funds are neither a safe haven in a bear market, nor a sure source of high returns with low risk. Few managers have sufficient skill to add consistent value net of their very high fees, and most will fold their tents as investors become disillusioned with mediocre results. Hedge funds investors should have a very clear idea of their program objectives and compelling evidence that these can be achieved in what has become a small room jam-packed with others jostling for a piece of the same pie.
- Maintain a core allocation to high-quality, intermediate- or long-term bonds as a hedge against the possibility of deflation. For all the Federal Reserve's soothing words about the improbability of deflation and the ease with which it can be countered, the very high indebtedness of U.S.

corporations and individuals presents a higher-than-average possibility of a deflationary spiral if the economy were to weaken materially, impairing corporations' and individuals' capacity to service their debt.

- Continue to deploy capital gradually, judiciously into non-marketable equities, both U.S. and non-U.S., not on the basis of a pre-defined level of annual commitments, but only as compelling investment opportunities become available. Exercise patience and selectivity, with diversification across time and across sub-asset classes.

Table A

HOW MUCH WOULD THE S&P 500 APPRECIATE UNDER THE FOLLOWING EARNINGS GROWTH AND P/E ASSUMPTIONS?

As of July 31, 2002

		Five-Year Average Annual Earnings Growth Rate Assumptions		
		Average Earnings Growth (1960-01)	I/B/E/S Estimate	Average of Previous Five Years
		4.7%	*13.6%*	*-6.8%*
P/E at the End of Five Years		**Five-Year Average Annual Compound Price Appreciation (%)**		
Current Normalized P/E Ratio	*20.2*	-4.6	3.5	-15.1
Current P/E	*32.2*	4.7	13.6	-6.8
I/B/E/S 12-month forward P/E estimate	*16.7*	-8.2	-0.4	-18.3
Average P/E Ratio (1960-7/31/2002)	*17.2*	-7.6	0.3	-17.8
Average plus one Standard Deviation	*24.8*	-0.6	7.9	-11.5
Average minus one Standard Deviation	*9.7*	-17.7	-10.7	-26.7

Sources: Calculated from data provided by Standard & Poor's, Standard & Poor's Compustat, Thomson Financial, and *The Wall Street Journal*.

Notes: Based on July 31, 2002, S&P 500 price of $912 and preliminary S&P 500 earnings per share of $28. Normalized price-earnings ratios for the S&P 500 are calculated by dividing the current index value by the earnings, which have been calculated from the trendline of earnings from January 1, 1960 through July 31, 2002. I/B/E/S earnings estimates have historically been twice as high as actual earnings.
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Table B

PERCENTAGE OF CAMBRIDGE ASSOCIATES' INDEX EQUITIES DECLINING 10%+, 30%+ AND 50%+ FROM 12-MONTH HIGH

December 31, 1979 - July 31, 2002

	All-Cap	Small-Cap	Mid-Cap	Large-Cap
% of Number of Companies Declining At Least 10%				
	87.8	**89.1**	**84.8**	**86.5**
Historical Distribution				
High	98.3	98.1	99.0	99.5
25th Percentile	74.6	77.7	72.9	69.9
Median	64.8	68.8	58.3	51.8
75th Percentile	52.0	57.6	43.2	30.5
Low	32.9	35.8	22.0	11.6
% of Number of Companies Declining At Least 30%				
	45.3	**49.8**	**36.2**	**36.5**
Historical Distribution				
High	64.0	69.7	56.2	40.5
25th Percentile	31.9	35.9	24.6	16.0
Median	20.3	24.8	12.2	5.0
75th Percentile	13.7	17.5	6.6	2.5
Low	3.5	4.6	1.6	0.0
% of Number of Companies Declining At Least 50%				
	21.8	**25.9**	**14.7**	**9.0**
Historical Distribution				
High	28.5	33.3	19.5	20.0
25th Percentile	10.3	12.9	4.4	1.5
Median	5.1	7.1	1.6	0.5
75th Percentile	2.9	3.8	1.0	0.0
Low	0.4	0.6	0.0	0.0

Source: Calculated from data provided by Standard & Poor's Compustat.

Notes: Historical data is based on annual data rolling quarterly since December 31, 1979. Analyses represent price declines. For the purposes of these analyses, the All-Cap index is defined as the largest 3,000 issues in the Compustat universe. Large capitalization equities are defined as the largest 200 issues in the All-Cap index. Mid-capitalization equities are defined as the next largest 800 issues. Small-capitalization equities are defined as the remaining 2,000 issues in the All-Cap index.
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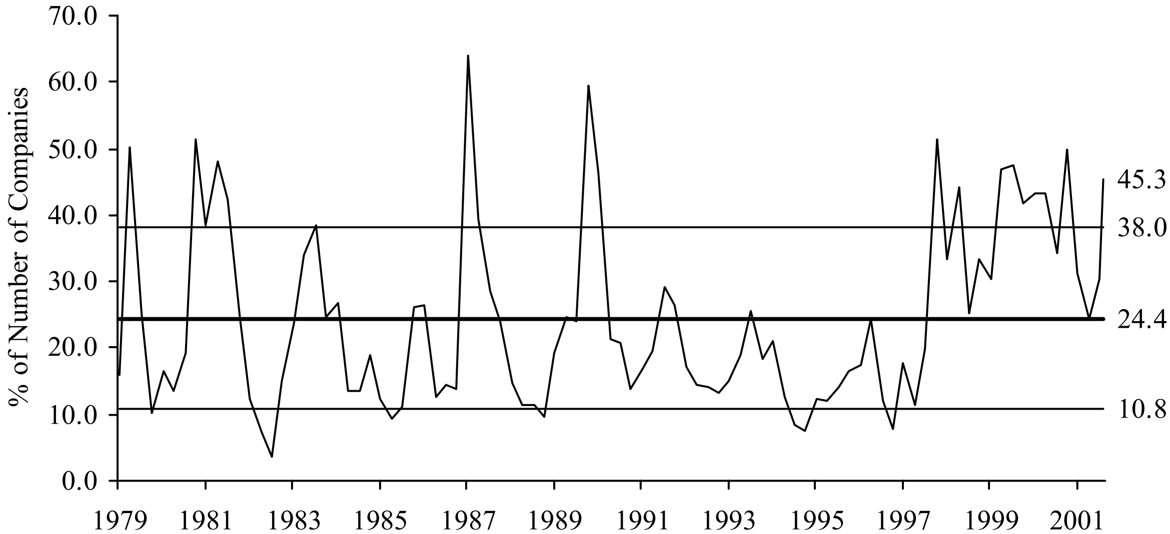
Table C

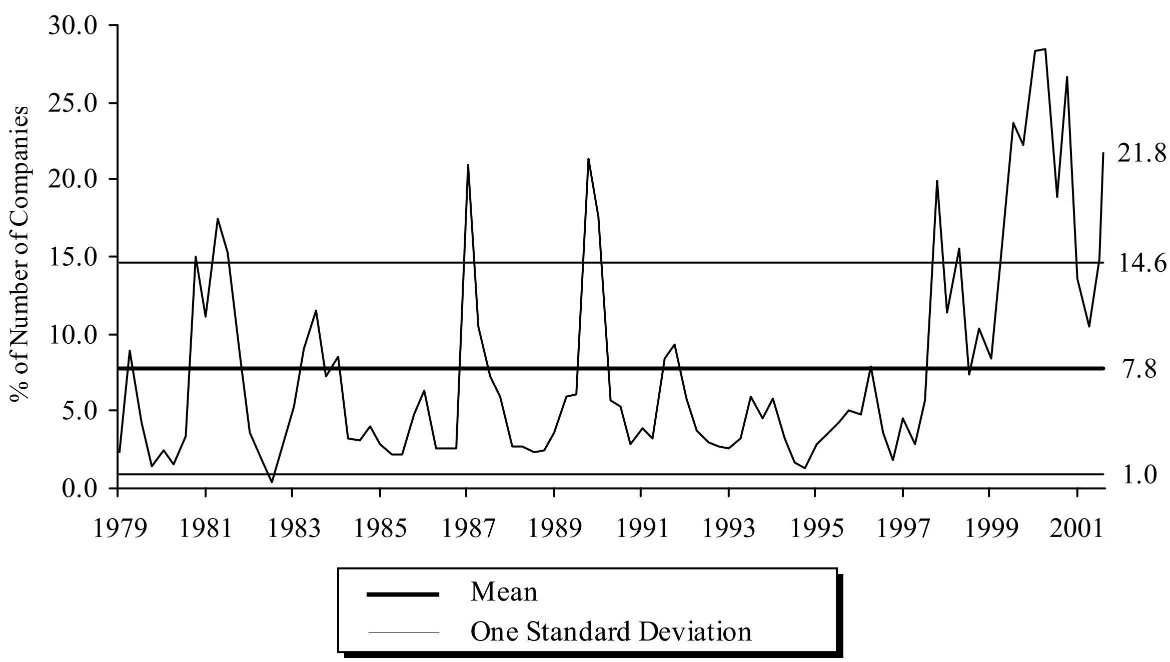
CAMBRIDGE ASSOCIATES' ALL-CAP INDEX DECLINING 30%+ AND 50%+ FROM 12-MONTH HIGH

December 31, 1979 - July 31, 2002

Declining 30% + from 12-month High



Declining 50% + from 12-month High



Source: Calculated from data provided by Standard & Poor's Compustat.

Notes: Analyses are based on stock prices only. Historical analyses are based on quarterly data. For the purposes of these analyses, the All-Cap index is defined as the largest 3,000 issues in the Compustat universe.

Table D

PERCENTAGE OF S&P 500 INDEX EQUITIES DECLINING 10%+, 30%+, 50%+ AND 90%+ FROM 60-MONTH HIGH

January 31, 1977 - July 31, 2002

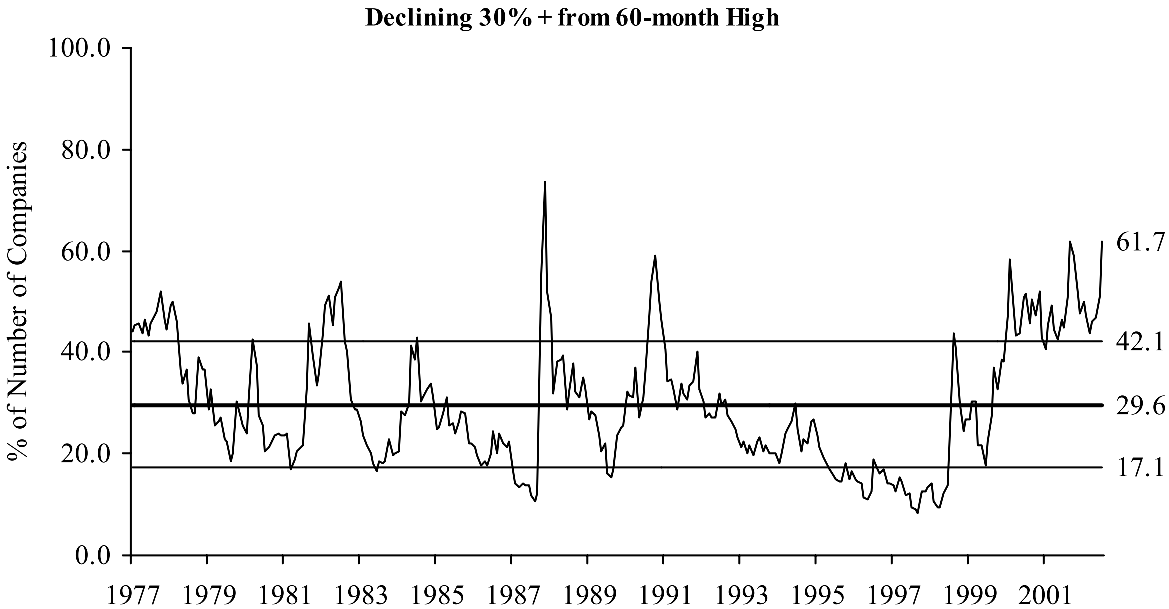
% of Number of Companies Declining At Least 10%	
	91.1
Historical Distribution	
High	99.2
25th Percentile	77.4
Median	63.9
75th Percentile	51.2
Low	24.8
% of Number of Companies Declining At Least 30%	
	61.7
Historical Distribution	
High	73.8
25th Percentile	38.6
Median	27.1
75th Percentile	20.2
Low	8.2
% of Number of Companies Declining At Least 50%	
	35.4
Historical Distribution	
High	35.4
25th Percentile	13.2
Median	9.6
75th Percentile	6.7
Low	1.7
% of Number of Companies Declining At Least 90%	
	6.6
Historical Distribution	
High	6.6
25th Percentile	0.4
Median	0.0
75th Percentile	0.0
Low	0.0

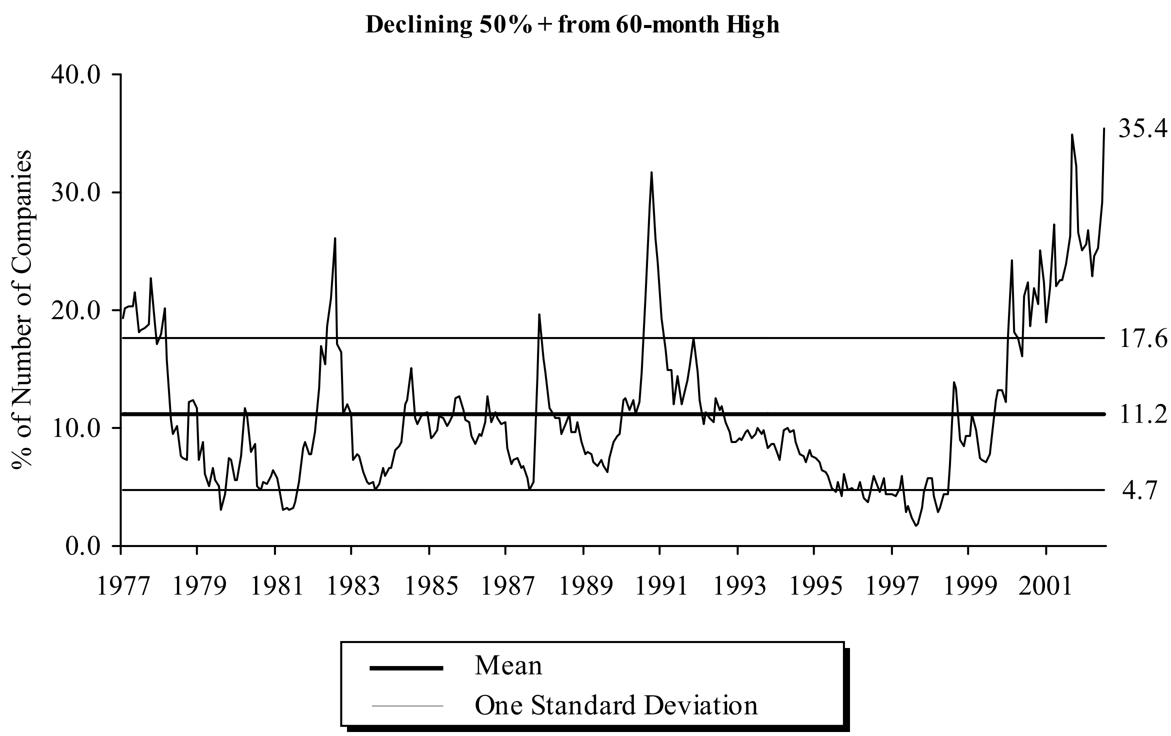
Source: Ned Davis Research.

Table E

S&P 500 INDEX DECLINING 30%+ AND 50%+ FROM 60-MONTH HIGH

January 31, 1977 - July 31, 2002





Source: Ned Davis Research.

Table F

PERCENTAGE OF NASDAQ EQUITIES DECLINING 10%+, 30%+, 50%+ AND 90%+ FROM 60-MONTH HIGH

January 31, 1986 - July 31, 2002

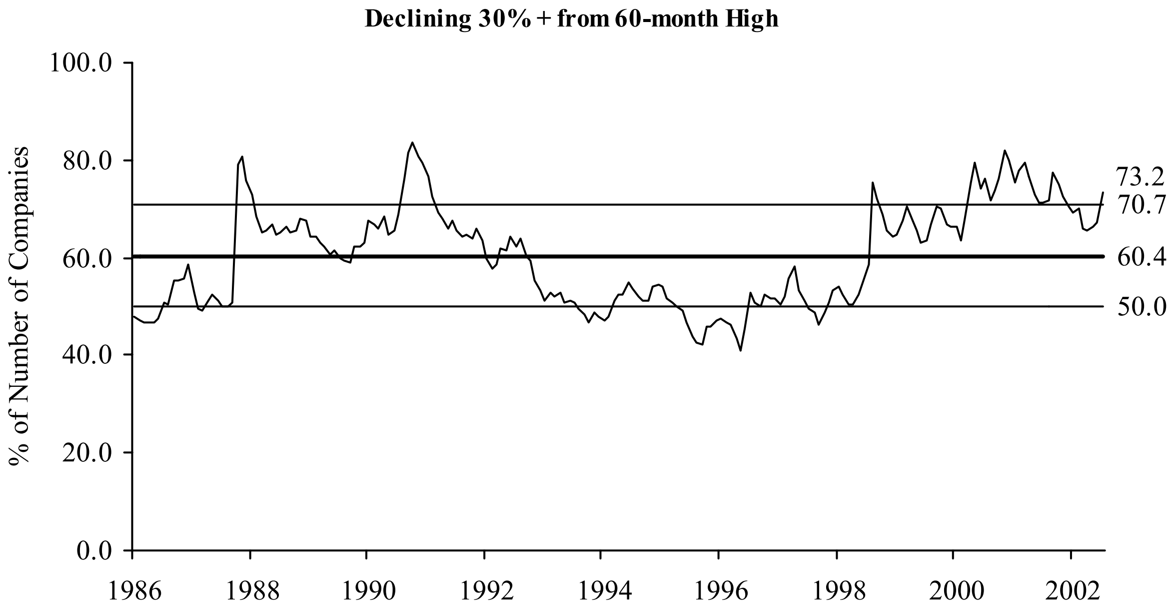
% of Number of Companies Declining At Least 10%	
	92.0
Historical Distribution	
High	97.4
25th Percentile	87.5
Median	81.9
75th Percentile	72.9
Low	60.9
% of Number of Companies Declining At Least 30%	
	73.2
Historical Distribution	
High	83.5
25th Percentile	67.6
Median	61.4
75th Percentile	51.2
Low	41.1
% of Number of Companies Declining At Least 50%	
	58.2
Historical Distribution	
High	61.9
25th Percentile	49.0
Median	41.4
75th Percentile	33.7
Low	25.8
% of Number of Companies Declining At Least 90%	
	20.4
Historical Distribution	
High	20.4
25th Percentile	9.0
Median	6.5
75th Percentile	4.5
Low	2.7

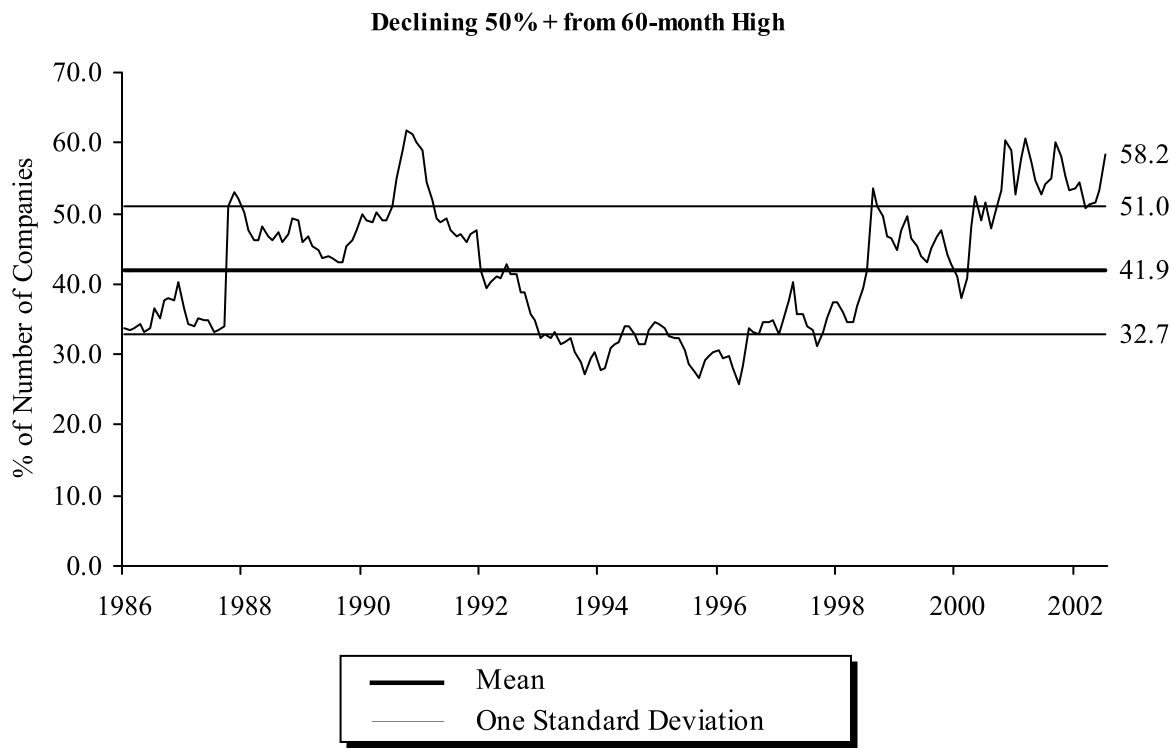
Source: Ned Davis Research.

Table G

NASDAQ DECLINING 30%+ AND 50%+ FROM 60-MONTH HIGH

January 31, 1986 - July 31, 2002





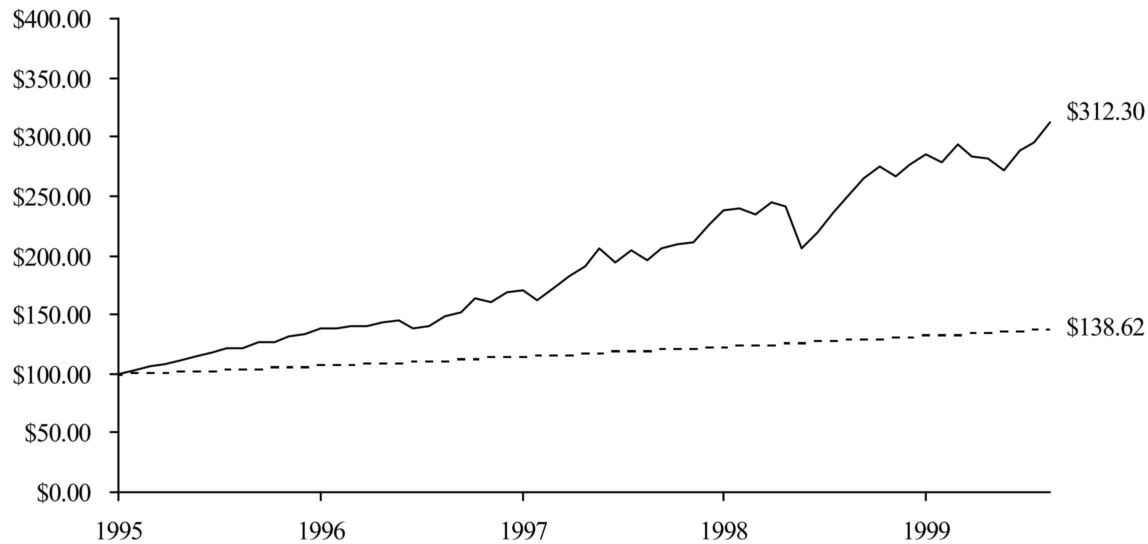
Source: Ned Davis Research.

Table H

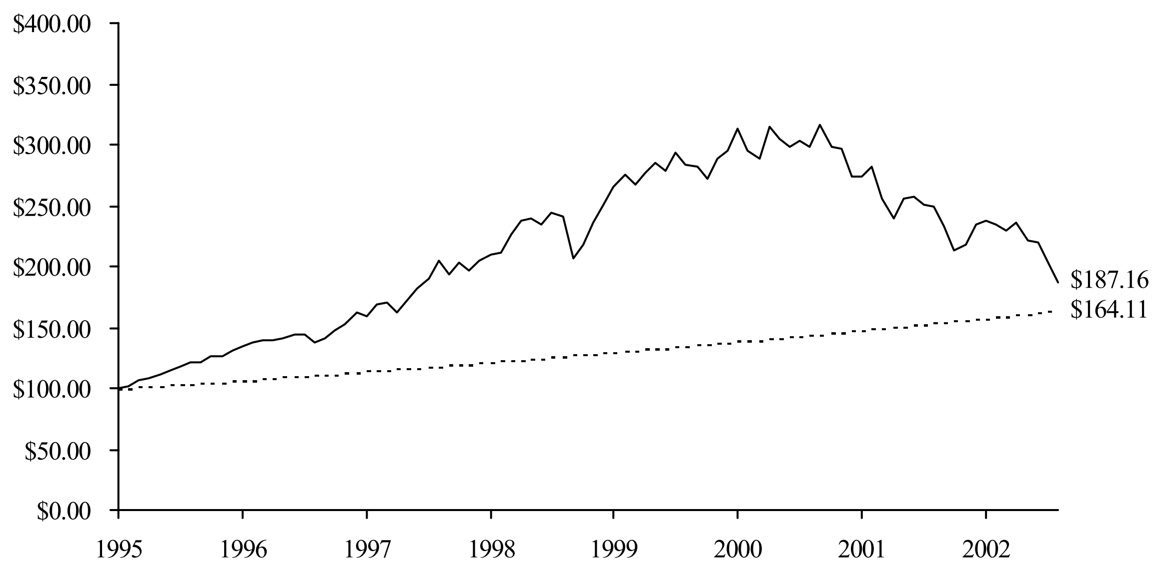
CUMULATIVE WEALTH OF THE S&P 500 INDEX

Cumulative Wealth Index
(December 31, 1994 = $100)

January 1, 1995 - December 31, 1999



January 1, 1995 - July 31, 2002



Sources: Standard & Poor's and Thomson Financial Datastream.

Notes: The solid lines represent the cumulative wealth of the S&P 500 based on real monthly returns. The dotted lines represent the cumulative wealth given a constant average annual compound return of 6.75% (0.55%/mo).