



C A M B R I D G E A S S O C I A T E S L L C

## ASSET ALLOCATION IN THE CURRENT ENVIRONMENT

### It's Getting Late—Risks Are Rising

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This is the fifth in what has evolved into a series of occasional papers on the evolution of the secular bear market in equities and our thoughts on how investors can best cope with the prevailing uncertainties. These papers are grouped together in the research section of our website under the name “Asset Allocation in the Current Environment.” We also provide updates to our views on asset allocation on a quarterly basis in *Market Update: Expanded Quarterly Edition*.

As always, we welcome your feedback.

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## Introduction

Equity markets have shown impressive resilience over the last four years, despite a number of significant, but short-lived setbacks.<sup>1</sup> Although we remain convinced that we are in a secular bear market<sup>2</sup> that will revive at some point, we continue to be surprised by the duration of the cyclical bull market rally. We never know, of course, what the markets are going to do, and in hindsight, have been too cautious and defensive in our view of global equities since mid-2006. However, we are increasingly concerned about the possibility of a severe decline that catches most investors over-exposed and under-prepared. Our perspective is based, as usual, on a careful review of capital markets history, valuations, and the pricing of risk.

## Where are We Now?

The secular bear market has followed a similar pattern to historical severe bear markets across the globe: a vicious prolonged decline punctuated by modest rallies (March 2000 through March 2003) followed by a broad-based, cyclical recovery from the bear market trough (March 2003 to present, with the most recent peak reached on February 26, 2007) (Table A). This cyclical bull market has been explosive for emerging markets and Asia ex Japan equities, but most other developed equity markets have struggled to pull back to March 2000 highs and remain below their high-water mark when adjusted for inflation (Table B). Given the magnitude of the preceding bull market and the fact that we have not yet seen symmetry on the downside, we think this is a relatively typical cyclical rebound within a secular bear market. Secular bear markets typically end amid very low valuations, a belief that equities will never again produce the type of returns experienced in the good old days, and with investors scratching their heads as to why the economy is going great guns, but equity markets are not reflecting these good conditions. In short, we would not expect the secular bear market to end until we see some significant negative sentiment signaling investor capitulation.

Even with the strong global equity rally of the last four years, global markets, as represented by the MSCI All Country World Index (ACWI) are essentially flat since the peak on March 27, 2000, and remain below that high-water mark adjusted for inflation. While this cyclical bull has been longer than most, particularly relative to those that have occurred during secular bear markets, its magnitude has been comparable. The current rally in the S&P 500 has lasted over four years and is the fifth longest on record since 1928. Cyclical bull markets, defined as those with appreciation of 20% or greater, have lasted about two-and-a-half years on average, with an average increase of 105.1%, or 83.2% in inflation-adjusted terms, based on S&P 500 data since 1928. As would be expected, cyclical bull markets tend to be shorter and of less magnitude when they occur during secular bear markets. The average bull market increase has been 61.3% in nominal terms and 53.4% in real terms during secular bear markets, which pales in comparison to the 189.3% nominal and 141.1% real average gain during secular bull markets (Table C).

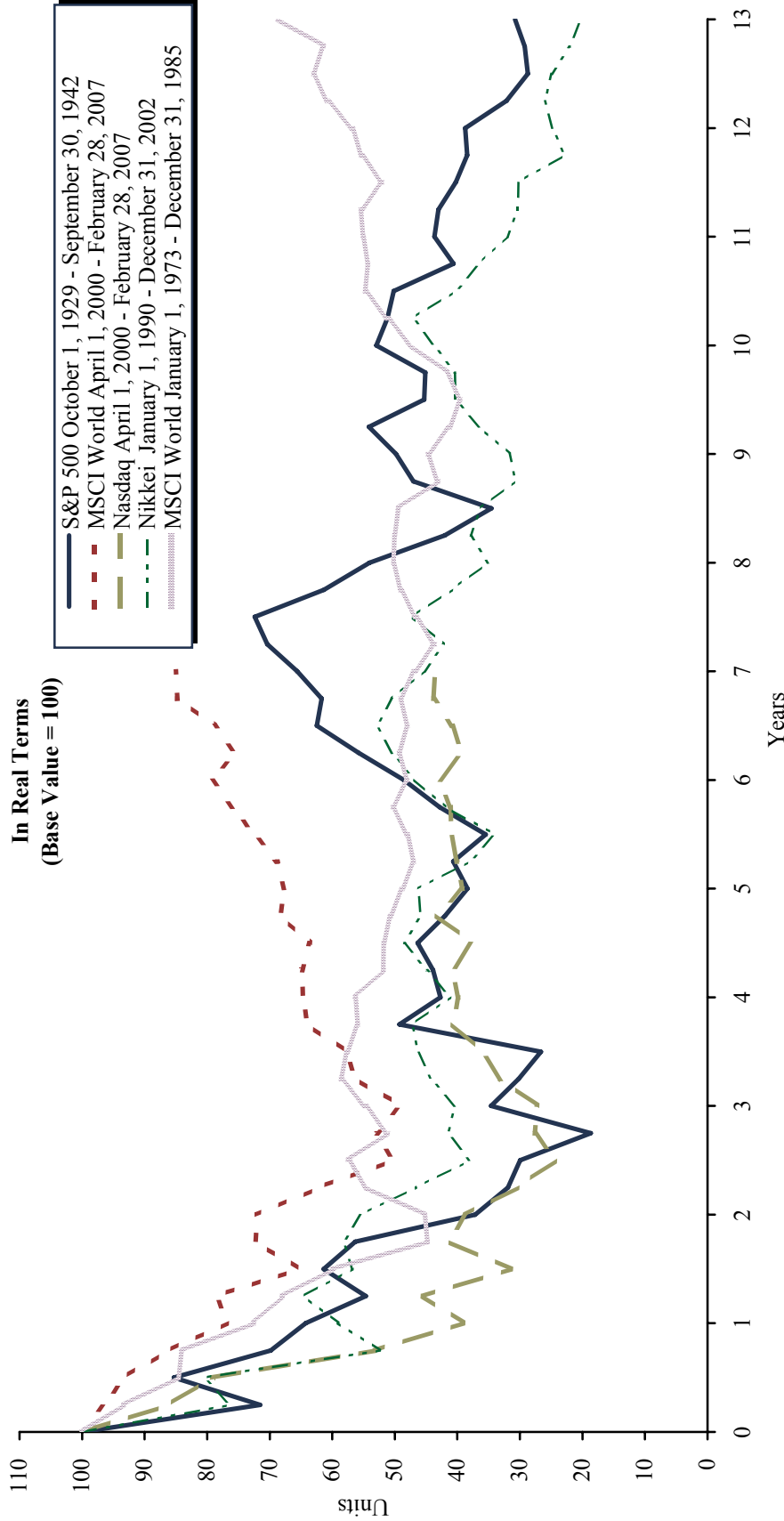
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<sup>1</sup> The 6.4% peak to trough decline (thus far) from February 27 through March 5 was the fourth market setback of greater than 6% since global markets bottomed in March 2003, when the cyclical bull market in global equities began.

<sup>2</sup> We define a secular bear market as contractions that tend to last for a decade or more, as it takes quite a long time for the forces that bring markets to extreme values to unwind.

Table A

**CUMULATIVE WEALTH DURING VARIOUS BEAR MARKETS FOR THE S&P 500, MSCI WORLD, NASDAQ AND NIKKEI INDICES**



Sources: Bureau of Labor Statistics, Global Financial Data, Morgan Stanley Capital International, Standard & Poor's, Thomson Datastream, and *The Wall Street Journal*. MSCI data provided "as is" without any expressed or implied warranties.

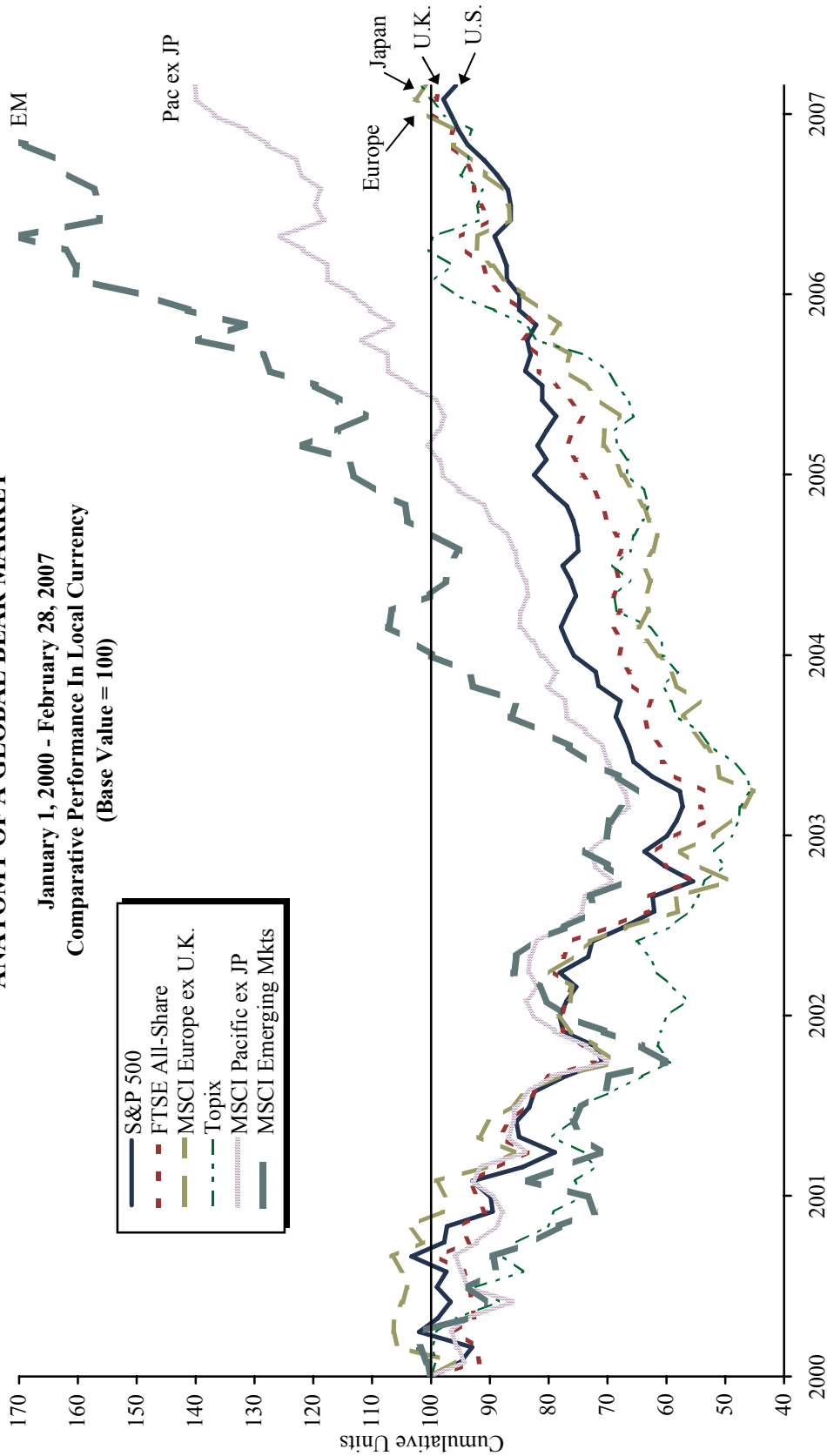
Notes: All units are in local currency. Cumulative wealth calculations for MSCI World use CPI-G7 data through January 2007.

Table B

ANATOMY OF A GLOBAL BEAR MARKET

January 1, 2000 - February 28, 2007

Comparative Performance In Local Currency  
(Base Value = 100)



Sources: Morgan Stanley Capital International, FTSE International Limited, Standard and Poor's, and Thomson Datastream. MSCI data provided "as is" without any expressed or implied warranties.

Note: Cumulative units are based on local currency price returns.

Table C

## MAGNITUDE AND DURATION OF S&amp;P 500 CYCLICAL BULL MARKETS

## Cyclical Bull Market Rallies Amid Secular Bear Markets

|                | <u>Low Date</u>   | <u>High Date</u>  | <u>% Gain</u> | <u>Real % Gain</u> | <u># Days</u> |
|----------------|-------------------|-------------------|---------------|--------------------|---------------|
|                | 11/13/1929        | 04/10/1930        | 46.8          | 50.2               | 148           |
|                | 12/16/1930        | 02/24/1931        | 25.8          | 29.0               | 70            |
|                | 06/02/1931        | 06/27/1931        | 27.1          | 28.7               | 25            |
|                | 10/05/1931        | 11/09/1931        | 30.6          | 31.5               | 35            |
|                | 06/01/1932        | 09/07/1932        | 111.6         | 114.7              | 98            |
|                | 02/27/1933        | 07/18/1933        | 120.6         | 113.9              | 141           |
|                | 10/21/1933        | 02/06/1934        | 37.9          | 37.9               | 108           |
|                | 03/14/1935        | 03/06/1937        | 131.8         | 125.2              | 723           |
|                | 03/31/1938        | 11/09/1938        | 62.2          | 63.4               | 223           |
|                | 04/08/1939        | 10/25/1939        | 29.8          | 28.8               | 200           |
|                | 06/10/1940        | 11/09/1940        | 26.8          | 26.8               | 152           |
|                | 10/07/1966        | 11/29/1968        | 48.1          | 36.8               | 784           |
|                | 05/26/1970        | 01/11/1973        | 73.5          | 57.6               | 961           |
|                | 10/03/1974        | 11/28/1980        | 125.6         | 33.5               | 2,248         |
|                | 09/21/2001        | 01/04/2002        | 21.4          | 22.5               | 105           |
| <b>Average</b> |                   |                   | <b>61.3</b>   | <b>53.4</b>        | <b>401</b>    |
| <b>Current</b> | <b>10/09/2002</b> | <b>02/20/2007</b> | <b>87.9</b>   | <b>67.1</b>        | <b>1,595</b>  |

## Cyclical Bull Market Rallies Amid Secular Bull Markets

|  | <u>Low Date</u> | <u>High Date</u> | <u>% Gain</u> | <u>Real % Gain</u> | <u># Days</u> |
|--|-----------------|------------------|---------------|--------------------|---------------|
|  | 02/20/1928      | 09/07/1929       | 88.3          | 86.1               | 565           |
|  | 04/28/1942      | 05/29/1946       | 157.7         | 124.3              | 1,492         |
|  | 05/17/1947      | 06/15/1948       | 24.4          | 13.1               | 395           |
|  | 06/13/1949      | 08/02/1956       | 267.1         | 218.9              | 2,607         |
|  | 10/22/1957      | 12/12/1961       | 86.4          | 75.8               | 1,512         |
|  | 06/26/1962      | 02/09/1966       | 79.8          | 70.7               | 1,324         |
|  | 08/12/1982      | 08/25/1987       | 228.8         | 180.2              | 1,839         |
|  | 12/04/1987      | 03/24/2000       | 582.2         | 359.8              | 4,494         |
| <b>Average</b>                                     |                 |                  | <b>189.3</b>  | <b>141.1</b>       | <b>1,779</b>  |
| <b>Average of all Cyclical Bull Market Rallies</b> |                 |                  | <b>105.1</b>  | <b>83.2</b>        | <b>910</b>    |

Sources: Ned Davis Research, Inc., Standard and Poor's, and Bureau of Labor Statistics.

Note: Cyclical bull markets are defined as rallies of at least 20% in nominal terms without a decline of 20% or greater.

## The Backdrop: What We Don't Know

We never purport to know in what direction and with what speed the economy will move. However, we do know that it is getting late in the economic cycle, risks are rising, and markets continue to price in a soft landing for the U.S. and global economies, although expectations have moderated in recent weeks.

Markets experienced a similar, but sharper reassessment of economic strength late last spring when the MSCI ACWI tumbled 11.4% between May 9 and June 13, amid expectations that inflation and rising interest rates would weigh on global growth. However, between late 2006 and early February of this year, U.S. economic growth has surprised to the upside, providing stock markets with a significant tailwind. Since bottoming on June 13, 2006, markets advanced 23.6% with very little volatility through the recent peak on February 20, 2007 (Table D). More recently, economic news has begun to disappoint. Fourth quarter 2006 GDP has been revised down from 3.5% to 2.5%, durable goods orders have shown a modest decline, new home sales have fallen sharply, and of course, the sub-prime mortgage market has collapsed. The housing market has provided important support to the U.S. economy as housing-related industries have directly benefited from the boom, and consumer spending has been buoyed by the access to capital provided by home equity withdrawals, the demand to furnish and improve the growing inventory of homes, and the growth of employment in the housing sector of the economy. Therefore, it is not surprising that the markets have been sensitive to any negative news on the housing front.

Today, there are three central viewpoints held by market pundits:

1. The housing downturn is just gathering steam, so look out below when U.S. consumers will be forced to retrench! Economic growth will weaken and profits will suffer globally.
2. The housing bust is probably over and really is not that significant in the scheme of things. While U.S. growth has flattened, it has shifted to a more sustainable level that can persist for several years. Fed easing and rising wages will continue to support higher capital expenditures, which in turn will, of course, eventually lead to rising prices and interest rates. Robust global growth will offset any U.S. weakness and improve U.S. growth fundamentals. Although this scenario delays the day of reckoning, it is also bad for equity markets, as it implies rising inflation that, necessitates further Fed tightening.
3. Global growth will remain strong, but the secular winds of disinflation blowing in from Asia will keep a lid on inflation. In other words, we are in the midst of what history tells us is one of the best economic scenarios for equities—a deflationary boom.<sup>3</sup>

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<sup>3</sup> However, most proponents of the deflationary boom scenario, including *The Bank Credit Analyst*, which is a pre-eminent example, admit that while a disinflationary boom provides a backdrop for a prolonged expansion, it is likely to come to an ugly conclusion. This occurs as central banks increase liquidity to keep up with the higher demand created by the supply-driven boom in order to prevent disinflation from turning into deflation. This increase in liquidity in turn inevitably creates asset bubbles that are the probable cause of the end of the expansion. In other words, it is likely that the expansion will end badly, but the end is pushed out further into the future, rather than the more immediate (e.g., any time within the next two years) time horizon presaged by the other two scenarios.

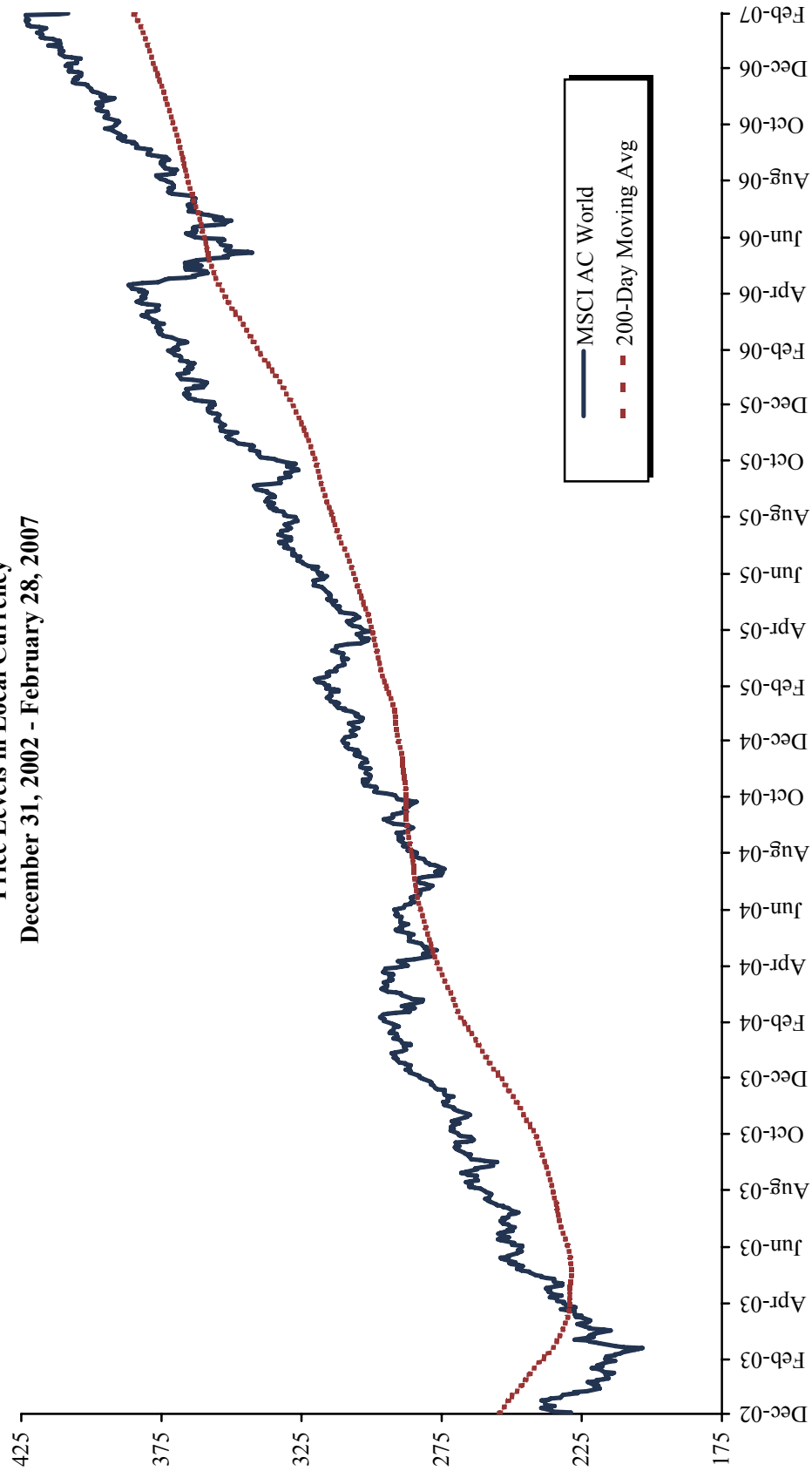


Clearly, based on the strong performance of the stock market, scenario three was the dominant view through the end of February. Today, this view still has a large constituency, but the bears are gaining traction. Pundits are closely monitoring the housing market and sub-prime market for indications of spillover into the broader economy. To date, the impact has been largely contained, as the economy, and more narrowly, corporate profits, continue to expand, albeit at a slower pace, and credit spreads generally remain very tight even as lending standards in the sub-prime market have tightened and are under increasing scrutiny.

There is significant debate among commentators as to whether inflation has been successfully contained, and is in fact dropping due to the ability to outsource to low-cost emerging markets, or whether it is about to become more virulent than most expect because growth will remain robust and global capacity utilization is now getting tight. We have 100% confidence in our view on the outlook for inflation (and by extension, interest rates), and have been completely consistent in this regard forever: we're clueless, you're clueless, and everyone is clueless. (Of course, because forecasts are all over the map, someone *must* inevitably get it right and be hailed as a genius.) *The Wall Street Journal's* semi-annual survey of economists' views on interest rates serves as a case in point—since 1982, surveyed economists have been wrong about the *direction* of interest rates 66% of the time.

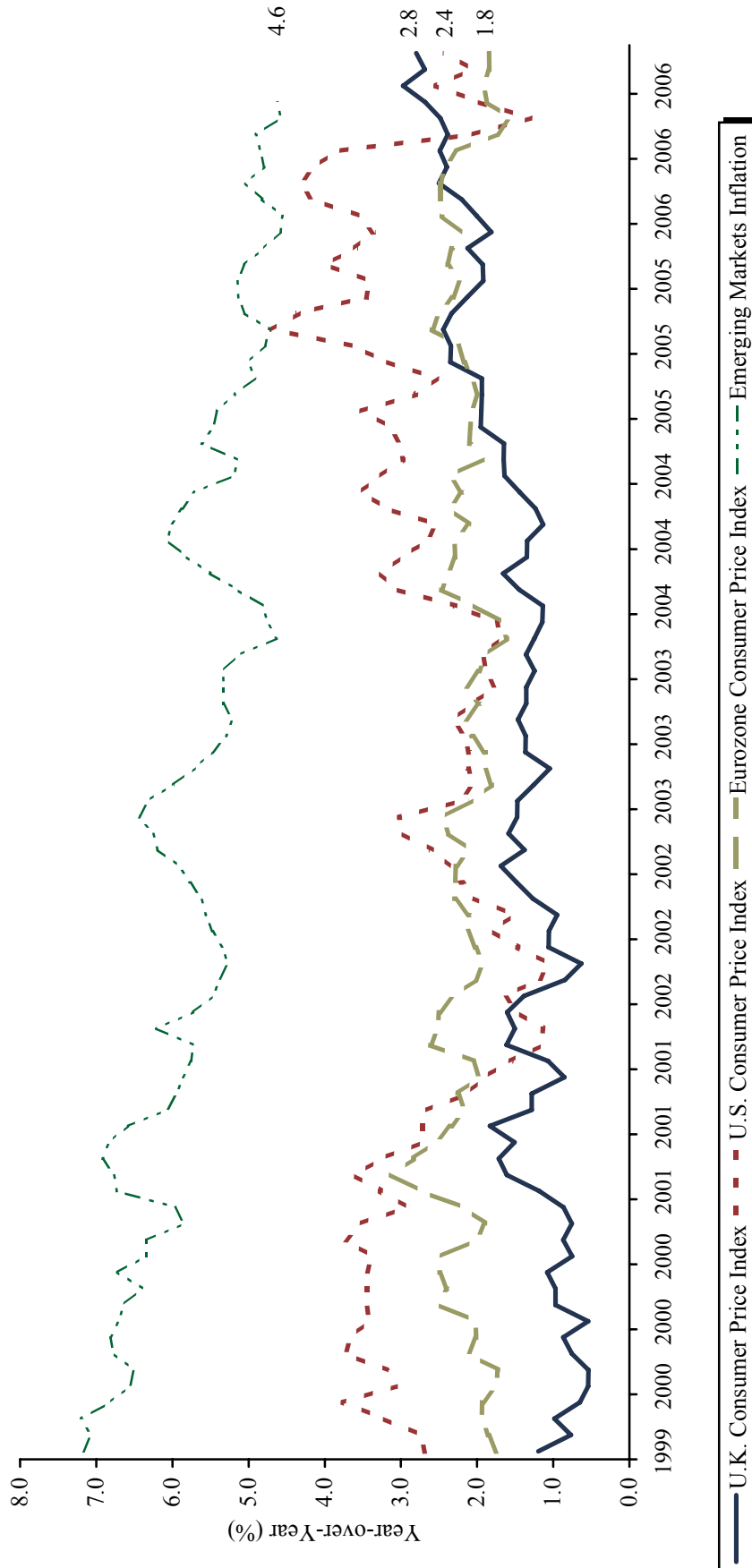
So far, five years into a globally synchronized economic expansion, inflation has remained contained, although it has ticked up in recent months in the United States, Europe, and most notably, the United Kingdom (Table E). Central banks around the globe have tightened monetary conditions, although liquidity continues to be plentiful, and monetary conditions remain at relatively neutral to accommodative levels in most economies. As noted above, we have no crystal ball on inflation and would only note that *rising* inflation is certainly a plausible risk not currently discounted in market valuations.

**Table D**  
**MSCI ALL COUNTRY WORLD INDEX**  
**Price Levels in Local Currency**  
**December 31, 2002 - February 28, 2007**



Sources: Morgan Stanley Capital International and Thomson Datastream. MSCI data provided "as is" without any expressed or implied warranties.

**Table E**  
**GLOBAL INFLATION RATES**



Sources: Bureau of Labor Statistics, International Monetary Fund, and Thomson Datastream.

Note: Charts show monthly year-over-year rates of inflation from December 1999 through February 2007, except for emerging markets inflation, which is through November 2006.

## The Backdrop: What Do We Know?

The markets are not pricing in much margin of error, it is late in the cycle, and many signs point to an end to the expansion we have enjoyed over the last five years. A review of historical evidence should make the risks clear.

First, we know that this is the eighth prolonged yield curve inversion in the United States since 1960. A recession followed six of the prior seven yield curve inversions and a profit recession followed the seventh (Table F). On average, a recession has followed 15 months after the yield curve first inverts. We are now at 13 months and counting. Of course, there are those arguing that “it’s different this time” because overseas central banks, most notably the Bank of China and Bank of Japan, are gobbling up U.S. Treasuries to sterilize dollar inflows, while pension funds everywhere have found religion on duration matching their liabilities and are buying long bonds accordingly. In 2000, when the curve last inverted, the optimists argued that this was due to the disappearance of long Treasuries because of the budget surplus and that recession was not imminent. We know how that turned out. Today’s rationalizations are no more plausible; given the historical record, investors should presume that Greenspan is right in his assessment that a recession may be on the horizon.

Furthermore, we know that a full-blown economic recession is not necessary for corporate profits to contract, as earnings are far more volatile than the economy as a whole. Since 1950, there have been 16 profit recessions in the United States (i.e., periods of negative year-over-year growth), compared to nine official economic recessions (Table G). While analysts have gradually ratcheted down earnings expectations to mid to high single digits, they are not yet pricing in any earnings contraction.

We also know that earnings growth and profitability in all major developed and emerging markets have seen their returns on equity (ROE) skyrocket to levels that historically have signaled market peaks, while earnings growth has come down from peak rates, but remains strong (Table H). Global year-over-year real earnings growth has now been above 10% for 45 consecutive months, during which time total profits have essentially doubled. The best previous performance was in the mid-1990s, when real profits rose 41.4% during a 25-month stretch of double-digit growth. To regard equities as attractive today, you have to make the case that these high levels of earnings growth and ROE are sustainable indefinitely.<sup>4</sup> While this is certainly not impossible, it would be unprecedented and would call into question the basic assumptions that high profit margins are self-correcting by stimulating additional competition. It is also worth noting that insider sales ramped up toward the end of 2006, with executives selling more than \$63 of shares for every \$1 bought in November—the highest ratio since January 1987. While insider sales have ebbed slightly this year, they remain very high, which suggests corporate executives are not too enthusiastic about profits going forward.

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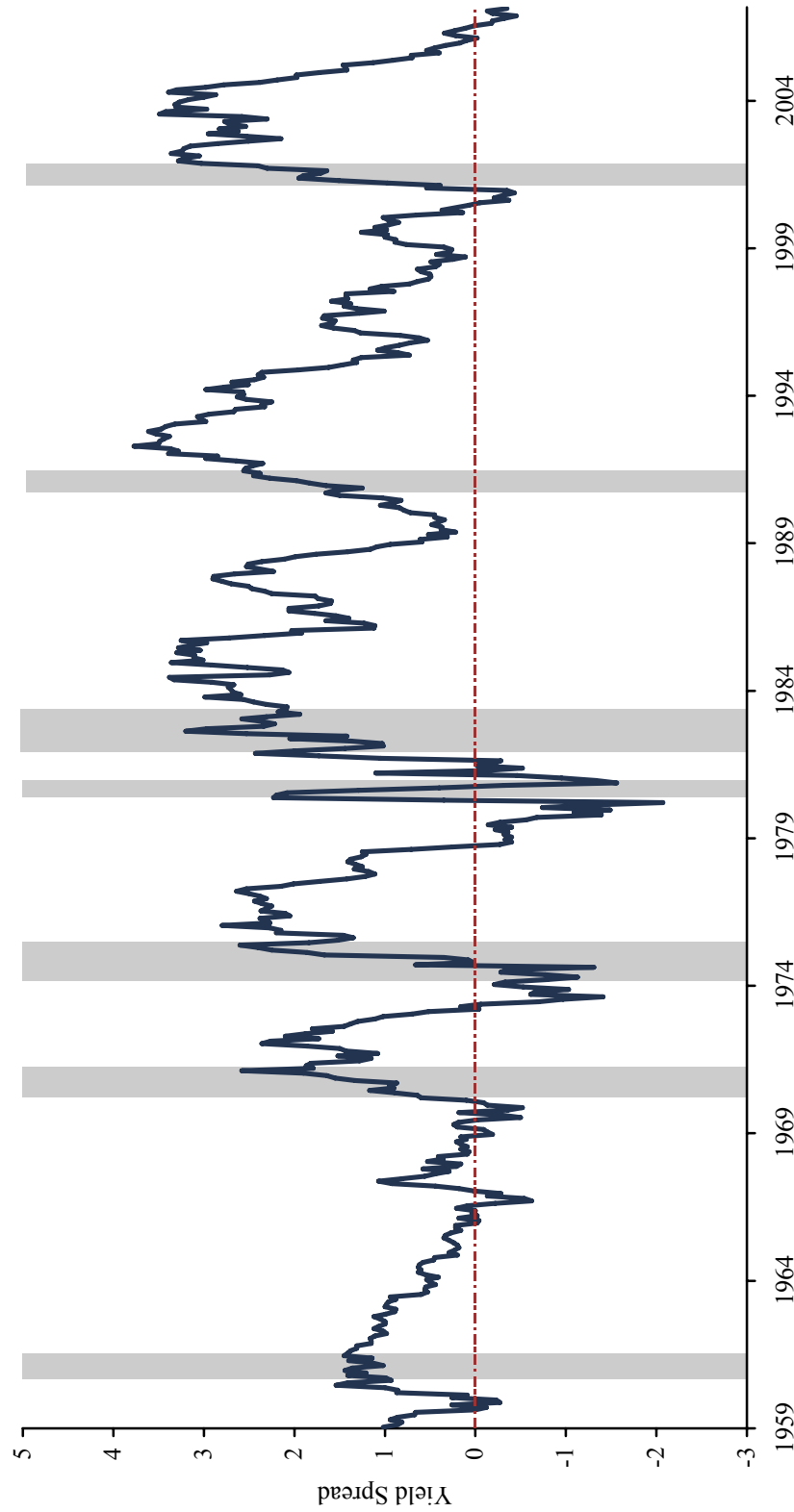
<sup>4</sup> Please see our September 2006 U.S. Market Commentary: *Deconstructing the Bullish Case on U.S. Equities*. While this analysis focused on the U.S. equity market, the conclusions are applicable to global markets due to similar conditions worldwide, as well as the pre-eminent status of the U.S. economy and financial markets.

Our preferred valuation metric for equities, the normalized real P/E ratio, incorporates the impact of earnings cyclicality, providing a more robust estimate of sustainable earnings, and in turn, a more reliable indicator of future risk than standard price-earnings (P/E) metrics.<sup>5</sup> We also normalize P/E ratios using an adjustment that scales P/Es based on how far away ROE is from a sustainable level. Both normalized P/E metrics show similar trends and indicate that global equities remain overvalued. Those observers that believe the market is fairly valued base this view on P/E ratios that use trailing 12-month reported earnings, or even 12-month forward earnings estimates, which are persistently upward biased. The trailing 12-month P/E ratio of the MSCI World Index, for example, is now “only” 16.8, compared to 26.8 for the real normalized P/E and 22.5 for the ROE-adjusted P/E (Table I).

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<sup>5</sup> For more details on the better track record of real P/Es as predictive measures, please see our January 2003 U.S. Market Commentary: *U.S. Equity Valuations: Improving But Not Enough*.

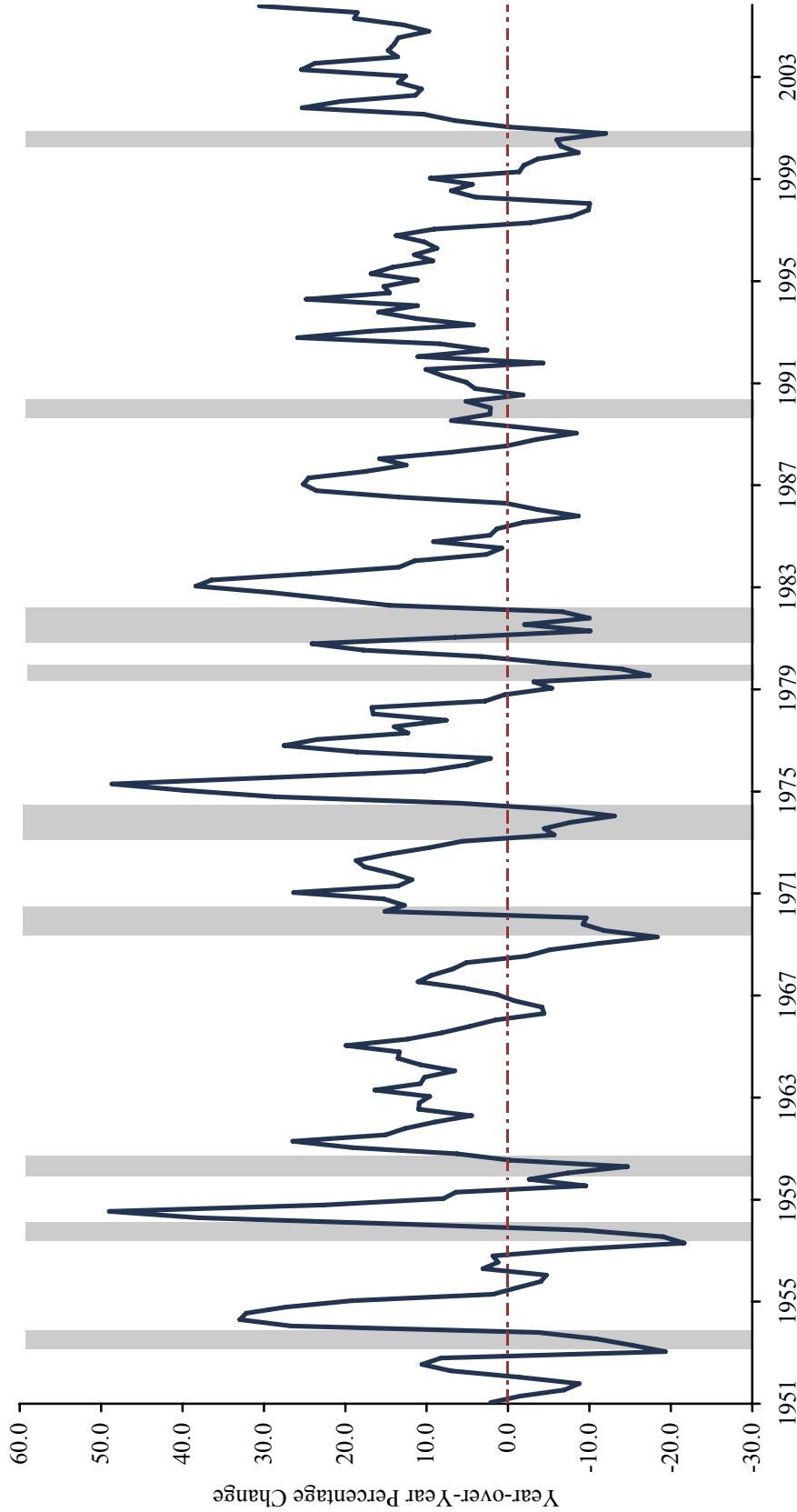
**Table F**  
**U.S. YIELD CURVE DURING RECESSIONS**



Sources: Thomson Datastream, Global Financial Data, and National Bureau of Economic Research.

Notes: Graph represents difference between the Ten-Year Treasury Bond yield and Six-Month Treasury Bill Secondary Market yield. Shaded regions represent NBER recessions.

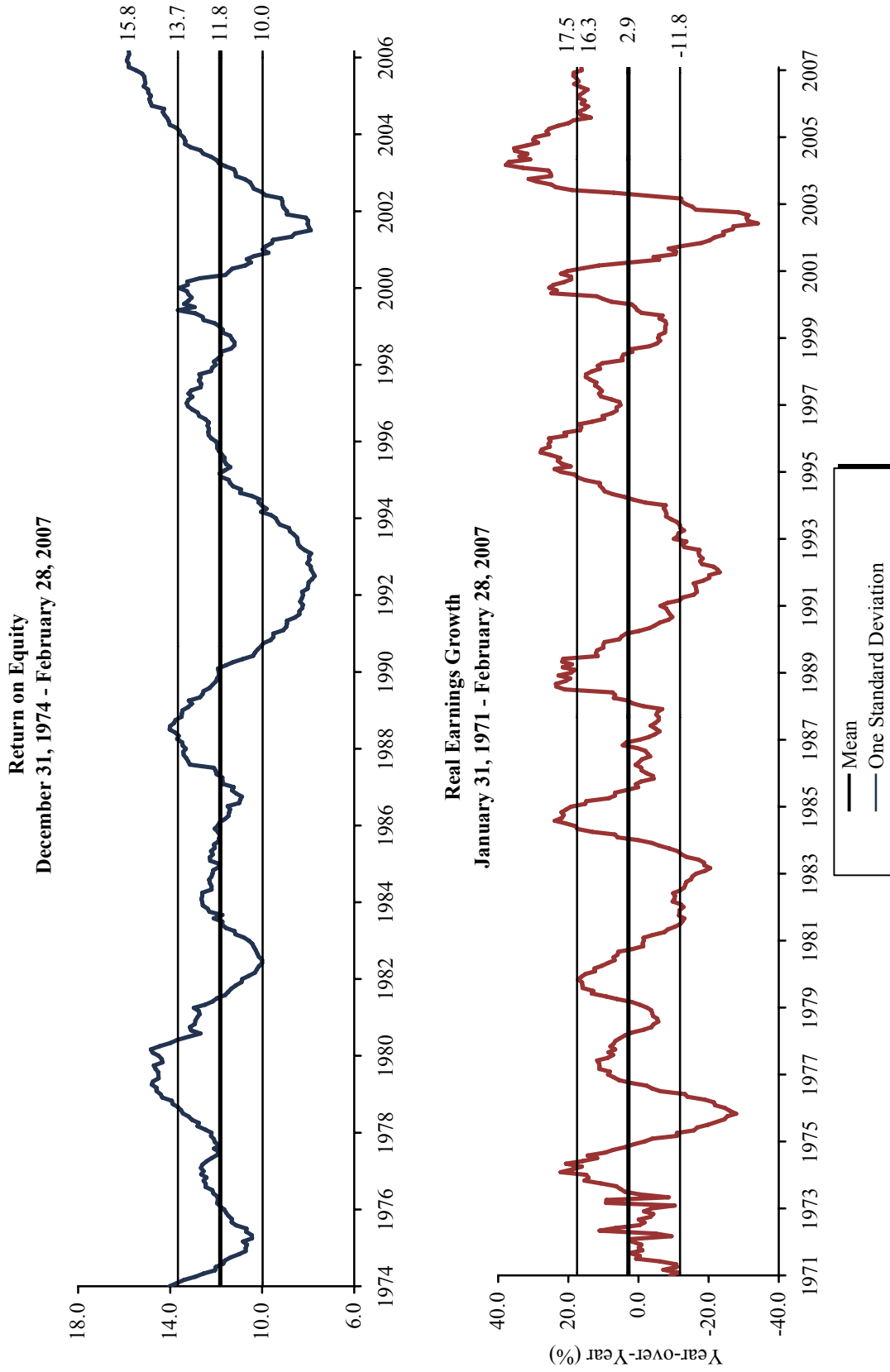
**Table G**  
**U.S. CORPORATE PROFIT GROWTH DURING RECESSIONS**



Sources: Thomson Datastream and National Bureau of Economic Research.

Notes: Graph represents year-over-year change in corporate profits through September 30, 2006. Shaded regions represent NBER recessions.

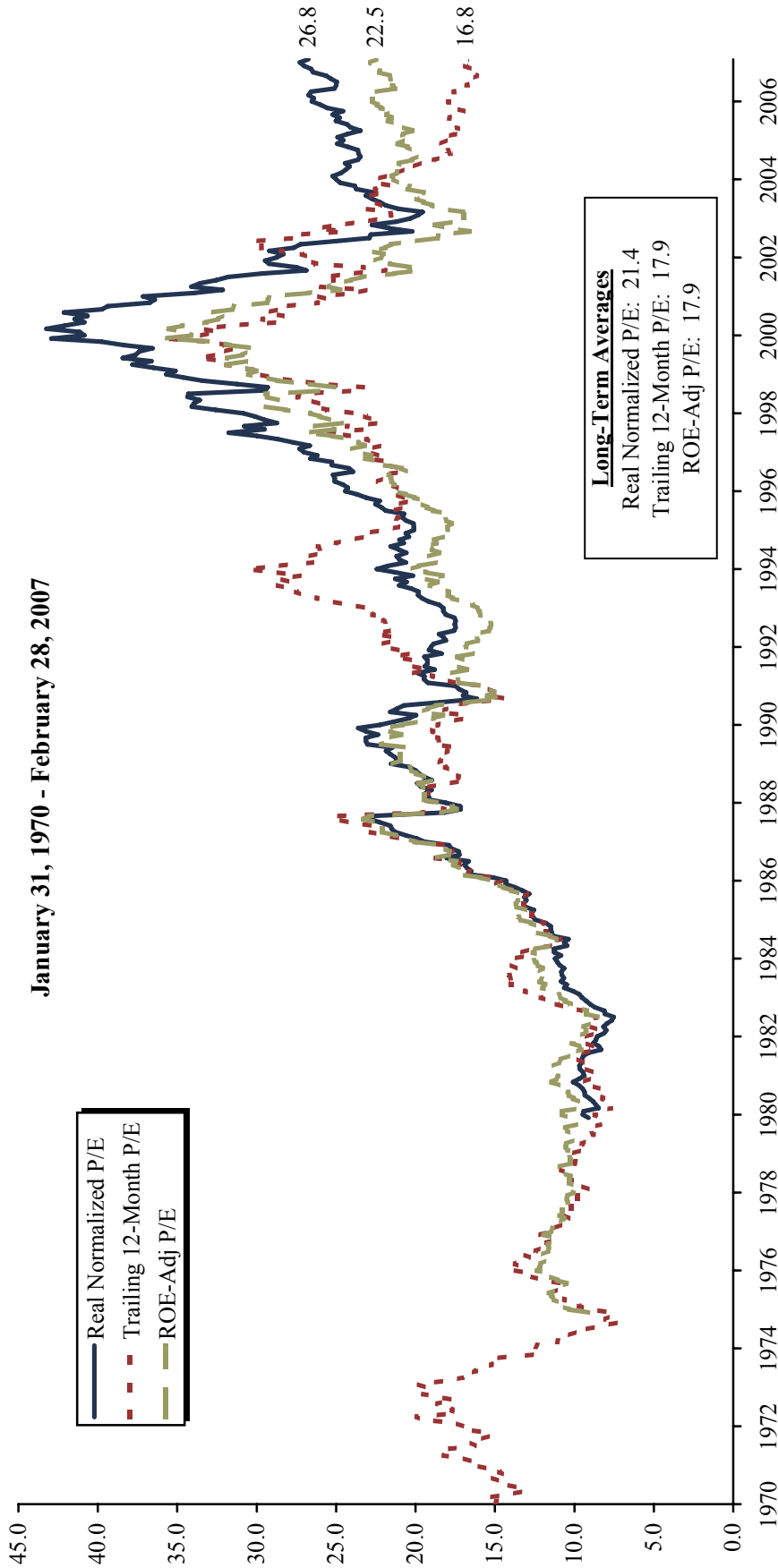
**Table H**  
**MSCI WORLD RETURN ON EQUITY AND REAL EARNINGS GROWTH**



Sources: Morgan Stanley Capital International and Thomson Datastream. MSCI data provided "as is" without any expressed or implied warranties.  
Notes: Real earnings growth rates for the MSCI World Index are adjusted by G7-CPI data. G7-CPI data are through January 31, 2007.



**Table I**  
**MSCI WORLD PRICE-EARNINGS RATIOS**  
**January 31, 1970 - February 28, 2007**



Sources: Morgan Stanley Capital International and Thomson Datastream. MSCI data provided "as is" without any expressed or implied warranties.

Notes: Real normalized price-earnings (P/E) ratios for the MSCI World Index are calculated by adjusting price levels and earnings by G7-CPI data and dividing the real index value by the average real earnings for the trailing ten years. The return on equity (ROE)-adjusted P/E ratio is the current P/E based on trailing 12-month earnings multiplied by the ratio of the current ROE to the historical average ROE of 11.8. G7-CPI data are through January 31, 2007.

## What Else Do We Know?

While valuations remain high, markets do not fall of their own weight. Equity prices are obviously also influenced by supply and demand. Prices have been supported by buybacks and acquisitions, which have caused a net reduction in shares outstanding since year-end 2004 (Table J). Global merger and acquisition activity has been quite high (Table K), largely supported by leveraged buyout (LBO) activity. U.S. buyout funds have raised \$381.4 billion in 2005 and 2006 alone, compared to a total of \$418 billion from 1980 through 2004 (Table L). Research by Henry McVey and David McNellis of Morgan Stanley<sup>6</sup> finds that the supply of U.S. equities decreased by about \$700 billion last year (driven by share buybacks), while demand on the part of traditional and alternative sources was as much as \$620 billion when conservative estimates of leverage are considered.

Global equity markets over the past few years have clearly benefited from a seemingly unlimited supply of credit. Traditional sources of liquidity, such as accommodative central bank policies, rapid high-yield debt issuance, and investment by LBO funds have been strong. A wide range of newer credit vehicles has also exploded onto the scene. For example, credit derivatives, which barely existed at the start of 2000, have a notional value in excess of \$26 trillion, or 60% of world GDP as of June 2006, according to the International Swaps and Derivatives Association. CDO issuance, which was virtually nonexistent in the mid-1990s increased to roughly \$500 billion in 2006.

The quality of new debt issues, meanwhile, has sharply declined, particularly in the United States, as high-yield bond issuance has escalated, while the quality of the debt has deteriorated. On a global basis, the value of corporate bonds outstanding has nearly doubled since the start of 2000, while high-yield bonds' share has increased from 12% to 16% over that period (Tables M and N). In the United States, credit quality has deteriorated much more significantly, as the lowest-rated tranche of high-yield issues (CCC) never made up more than 10.8% of total U.S. high-yield issuance for the year from 1984 (when our data begin) through 2003, while over the past three years, CCC-rated credits have made up 19.7%, 18.6%, and 17.8% of new high-yield issues. Further, from 1984 through 2002, total U.S. issuance of CCC-rated debt was \$52.6 billion; over the past four years CCC issuance has totaled \$94 billion.

So here are four other things we know:

1. Regardless of valuations, when there is abundant liquidity, this liquidity *will* drive prices higher.
2. Liquidity can and does evaporate with startling speed—like rain on a hot sidewalk.
3. Of the 9,000 or so hedge funds out there, 8,970 all fervently believe they can make it out the exit when the evaporation begins. History tells us they are sadly deluded.
4. The evaporation can be triggered by events that seem only distantly related to the health of U.S. equities—like a sell-off in a thinly traded, rigged market like Shanghai. There are many sources of de facto liquidity reduction outside of the obvious central bank tightening.

Liquidity driven markets are by definition risky. Investors should not object to incurring market risk; however, they should only do so when justified by market pricing. Today, all signs indicate that

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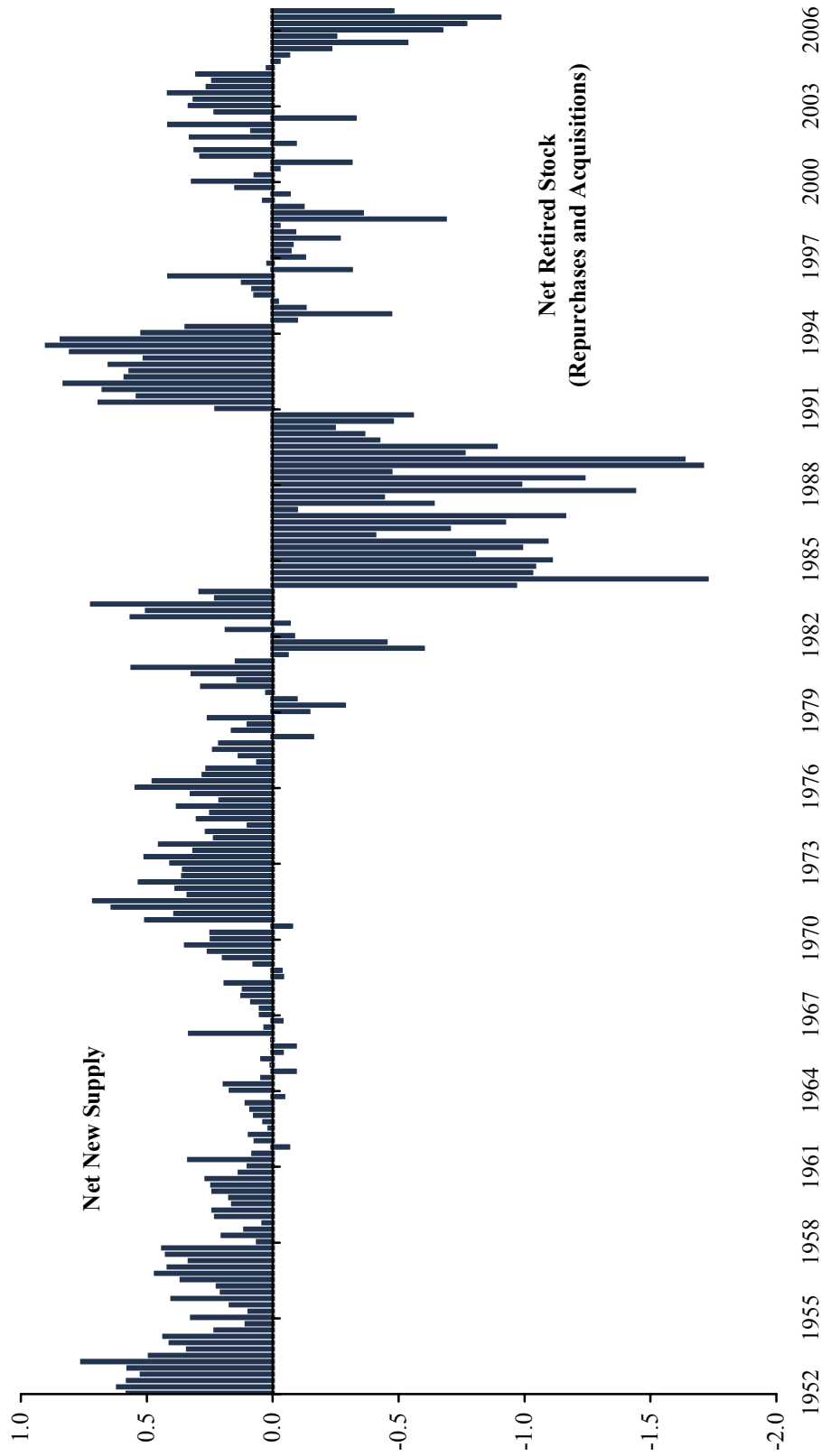
<sup>6</sup> “Liquidity: Something, Not Everything,” by Henry McVey and David McNellis, Morgan Stanley, March 1, 2007.

investors are not getting paid a sufficient premium for owning risky assets to provide an adequate cushion against disappointment. This is most clearly illustrated by bond yield spreads, as high-yield bond spreads remain near record lows relative to Treasuries (Table O). This is also shown in equity markets, as volatility has been extremely low (as measured by the U.S. VIX)—although it picked up following the market slide on February 27 (Table P).

Just as stock markets are pricing in a continuation of the ideal conditions that have prevailed over the last several years, so are bond markets. Default rates on global high-yield bonds have sunk to 1.1%, the lowest default rate on record since our data series began in 1986 (Table Q). Like earnings, credit expansions and contractions historically have been cyclical. We have seen time and time again that expansions in high-yield credit issuance accompanied by narrowing credit spreads and deteriorating credit quality have been followed by a wave of defaults (and rich opportunities for distressed investors). While we cannot know when this credit cycle will peak and when defaults will occur, if history is any guide, we can be confident that it *will* occur and is likely to be more severe than the relatively short-lived distressed cycle of 2001-02 given the relative strength of this credit expansion. Historically, defaults on B-rated and CCC-rated debt have started to escalate two to three years following their issuance. On average, by year three, 16.1% of B-rated bonds and 36.9% of CCC-rated bonds have defaulted (Table R).

Table J

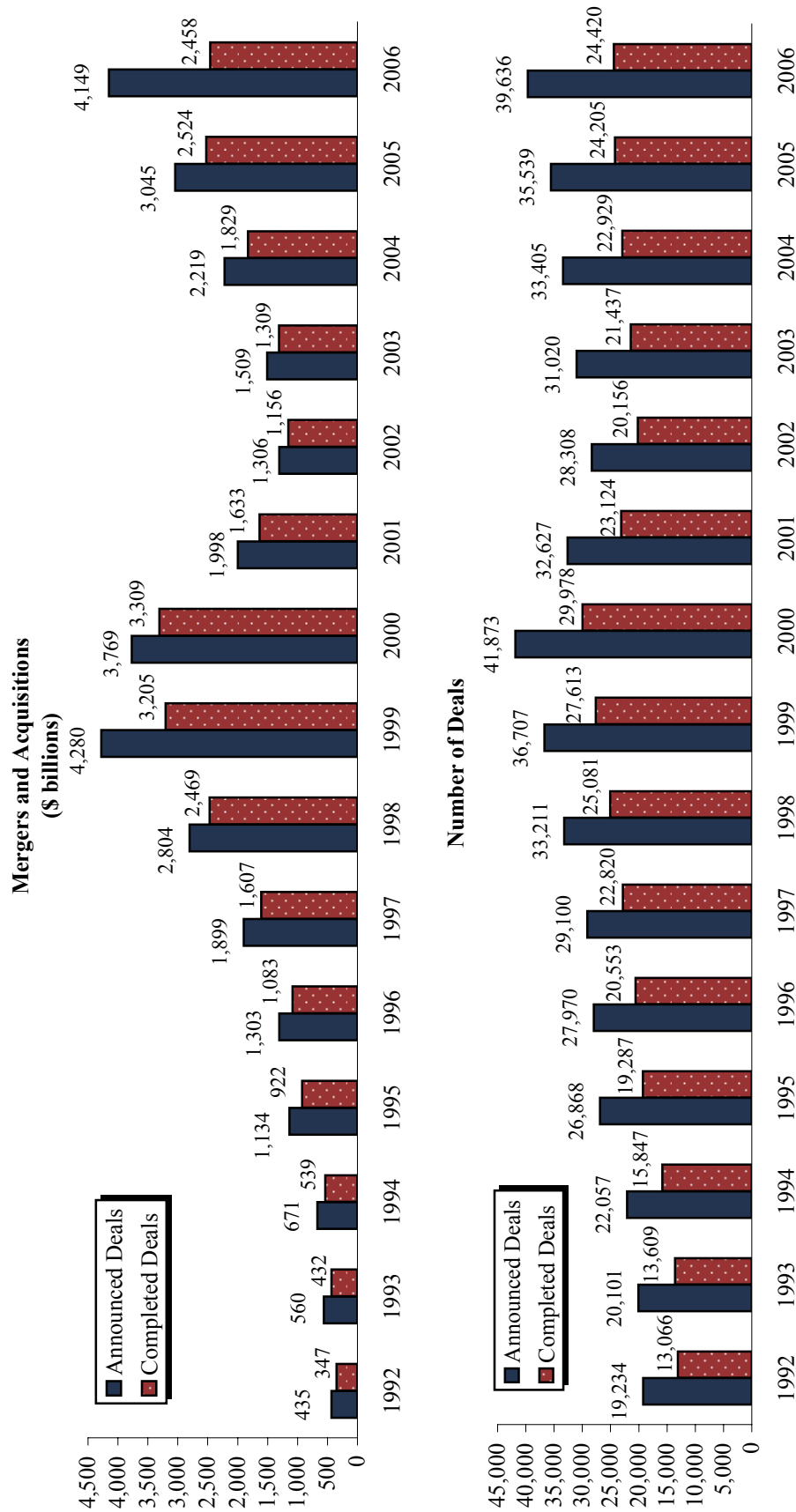
NET STOCK SALES AND PURCHASES AS A PERCENTAGE OF NYSE MARKET CAPITALIZATION



Sources: Ned Davis Research, Inc. and Federal Reserve Board.

Note: Graph represents quarterly data through December 31, 2006.

**Table K**  
**GLOBAL MERGER AND ACQUISITION ACTIVITY**



Source: Securities Data Company, Inc.

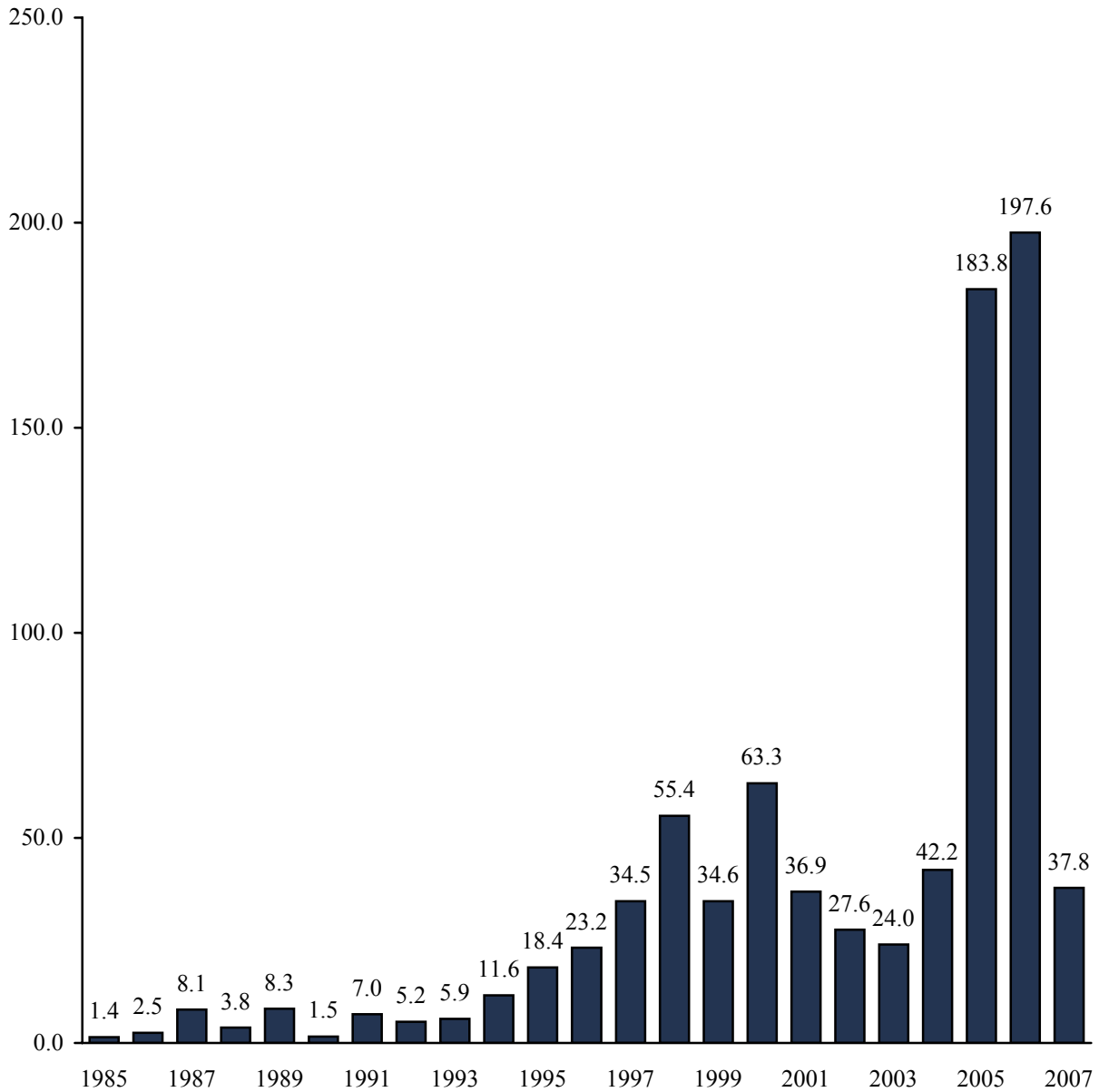
Notes: All activity includes cross-border transactions. Data exclude equity carveouts, open market repurchases, and exchange offers.

Table L

## CAPITAL COMMITMENTS TO U.S. LEVERAGED BUYOUT FUNDS

January 1, 1985 - February 28, 2007

(\$ billions)

Source: *Buyouts*.

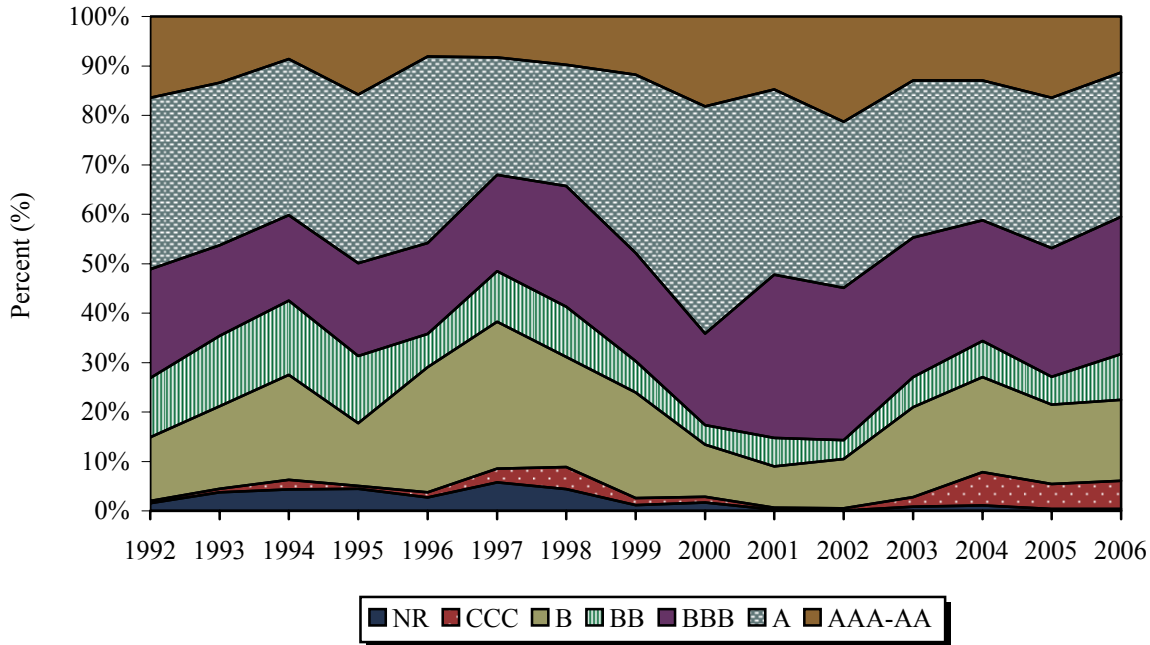
Note: Data for 2007 are through February 28, 2007.

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Table M

**GLOBAL CORPORATE BOND NEW ISSUE QUALITY DISTRIBUTION**

January 1, 1992 - December 31, 2006



Percent of Issues (%)

|        | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| AAA-AA | 16.5 | 13.4 | 8.6  | 15.8 | 8.1  | 8.3  | 9.7  | 11.8 | 18.2 | 14.8 | 21.3 | 12.9 | 12.9 | 16.5 | 11.3 |
| A      | 34.7 | 32.9 | 31.6 | 34.1 | 37.7 | 23.7 | 24.5 | 36.1 | 46.0 | 37.5 | 33.6 | 31.8 | 28.3 | 30.4 | 29.2 |
| BBB    | 22.0 | 18.3 | 17.2 | 18.8 | 18.4 | 19.5 | 24.4 | 21.9 | 18.5 | 33.0 | 30.8 | 28.2 | 24.4 | 26.0 | 27.7 |
| BB     | 12.0 | 14.3 | 15.0 | 13.6 | 6.7  | 10.2 | 10.2 | 6.3  | 3.9  | 5.8  | 3.8  | 6.1  | 7.3  | 5.7  | 9.3  |
| B      | 12.9 | 16.7 | 21.2 | 12.7 | 25.3 | 29.7 | 22.3 | 21.4 | 10.6 | 8.3  | 9.9  | 18.1 | 19.2 | 16.0 | 16.4 |
| CCC    | 0.4  | 0.7  | 2.0  | 0.6  | 1.0  | 2.8  | 4.5  | 1.4  | 1.2  | 0.4  | 0.5  | 2.0  | 6.8  | 5.0  | 5.6  |
| NR     | 1.6  | 3.8  | 4.3  | 4.4  | 2.7  | 5.7  | 4.4  | 1.1  | 1.7  | 0.3  | 0.1  | 0.9  | 1.1  | 0.4  | 0.4  |

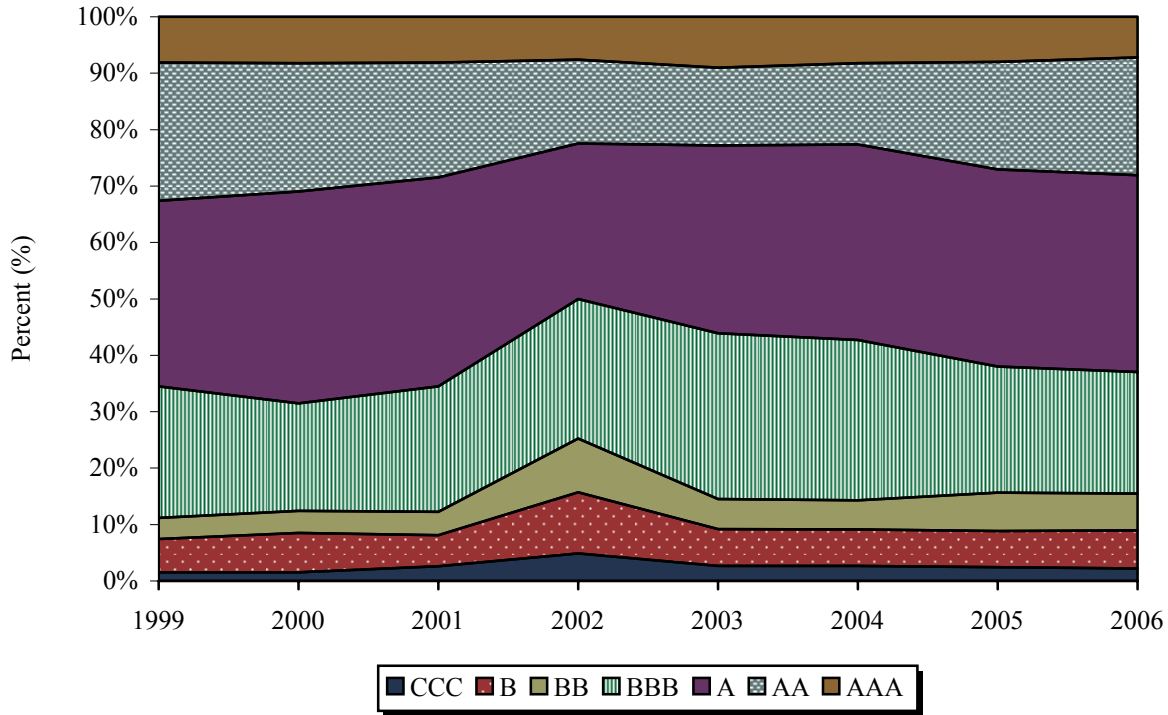
Source: Merrill Lynch & Co.

Note: Percentages may not total 100% due to rounding.

**Table N**

**GLOBAL CORPORATE BOND OUTSTANDING QUALITY DISTRIBUTION**

**January 1, 1999 - December 31, 2006**



**Percent Outstanding (%)**

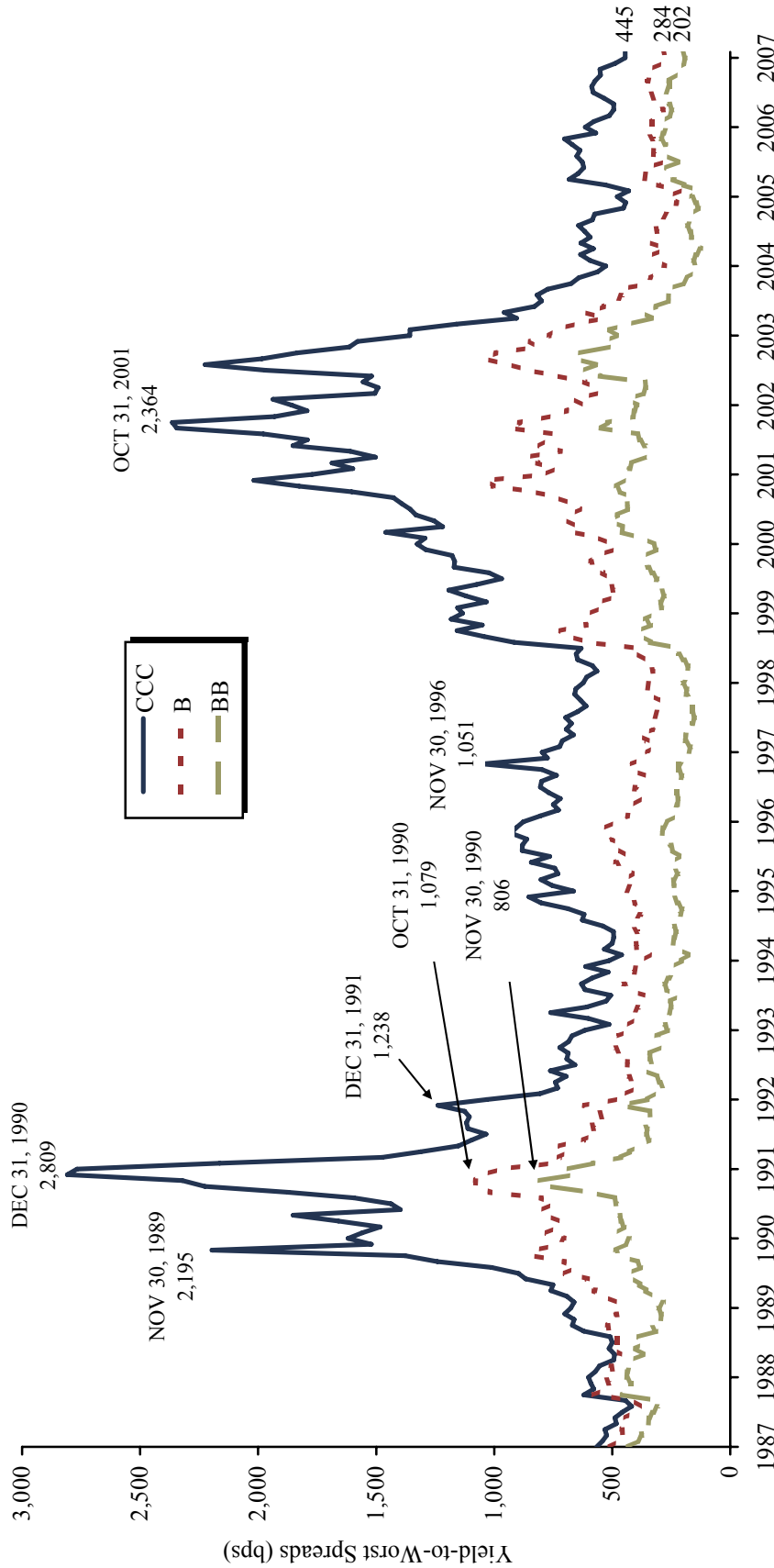
|     | <u>1999</u> | <u>2000</u> | <u>2001</u> | <u>2002</u> | <u>2003</u> | <u>2004</u> | <u>2005</u> | <u>2006</u> |
|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AAA | 8.1         | 8.2         | 8.1         | 7.6         | 9.0         | 8.3         | 8.0         | 7.2         |
| AA  | 24.5        | 22.7        | 20.4        | 14.9        | 13.8        | 14.4        | 19.1        | 20.9        |
| A   | 32.9        | 37.6        | 37.0        | 27.6        | 33.3        | 34.7        | 35.0        | 34.9        |
| BBB | 23.3        | 19.1        | 22.2        | 24.7        | 29.4        | 28.4        | 22.3        | 21.5        |
| BB  | 3.7         | 3.9         | 4.2         | 9.6         | 5.3         | 5.2         | 6.8         | 6.5         |
| B   | 5.9         | 7.0         | 5.5         | 10.8        | 6.5         | 6.4         | 6.4         | 6.8         |
| CCC | 1.5         | 1.5         | 2.6         | 4.9         | 2.7         | 2.7         | 2.5         | 2.2         |

Source: Merrill Lynch & Co.

Note: Percentages may not total 100% due to rounding.



**Table O**  
**YIELD SPREADS FOR SELECTED U.S. HIGH-YIELD BOND RATING CATEGORIES RELATIVE TO TEN-YEAR TREASURIES**  
**January 31, 1987 - February 28, 2007**



Sources: Lehman Brothers High-Yield Bond Department and Thomson Datastream.

Notes: Yield spreads are based on the difference between the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) for each high-yield rating category and the yield-to-maturity for ten-year Treasury securities. Quality ratings are shown in the equivalent S&P rating category.

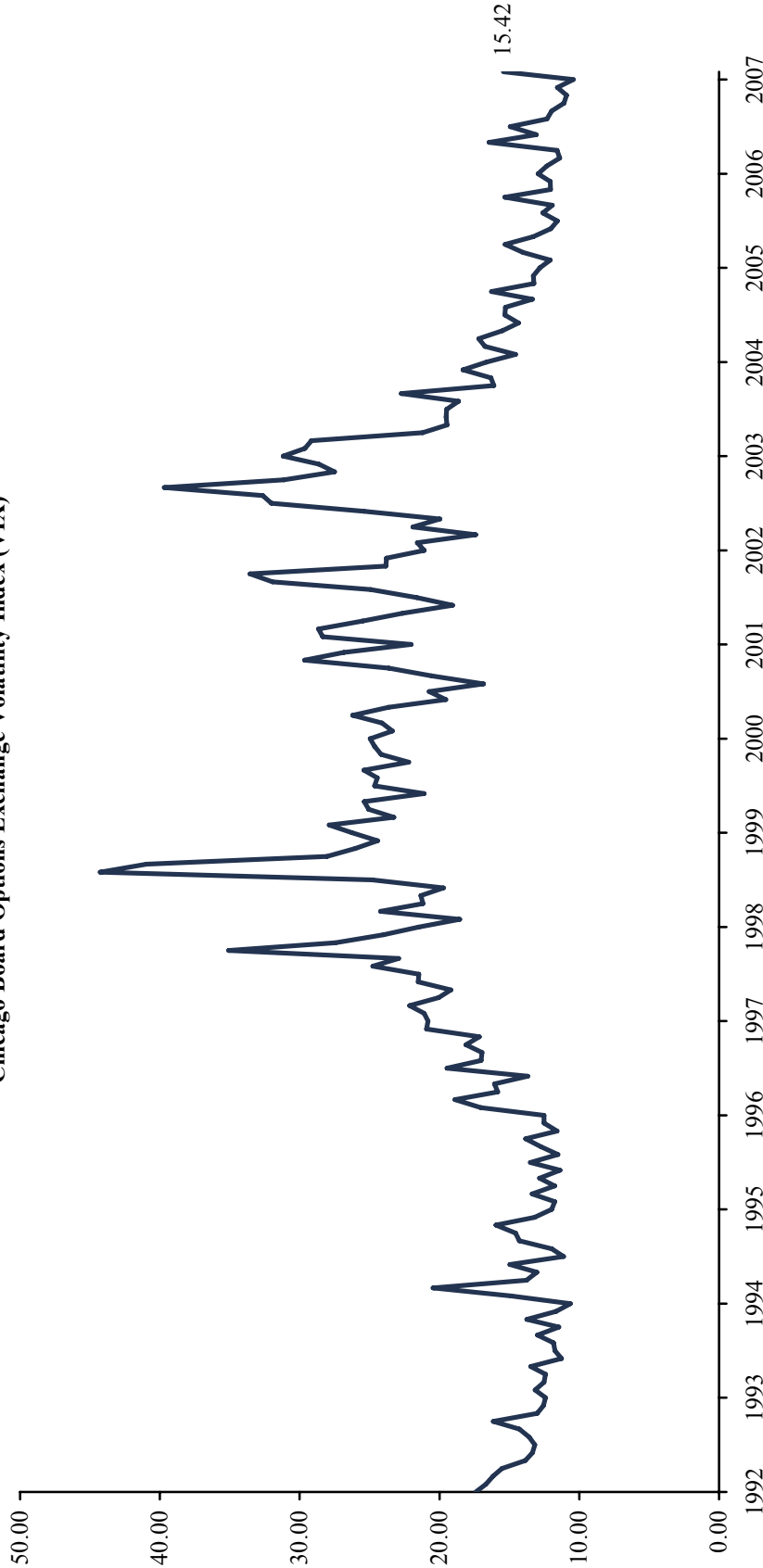
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Table P

**HISTORICAL VOLATILITY**

January 31, 1992 - February 28, 2007

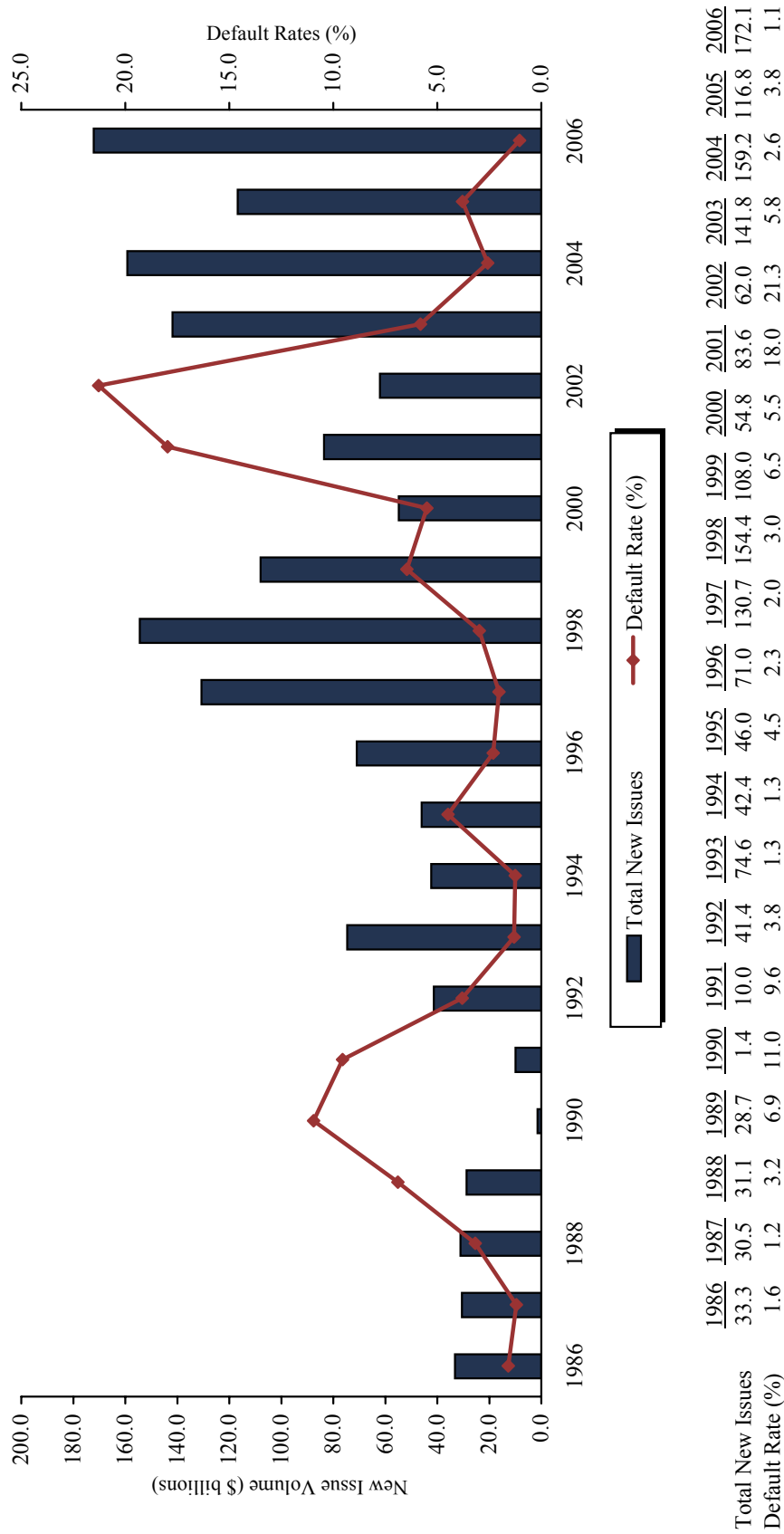
Chicago Board Options Exchange Volatility Index (VIX)



Source: The Bloomberg.

Notes: The VIX is a measure of the implied volatility of S&P 500 index options. The VIX estimates the expected volatility of the S&P 500 over the next 30 days, annualized.

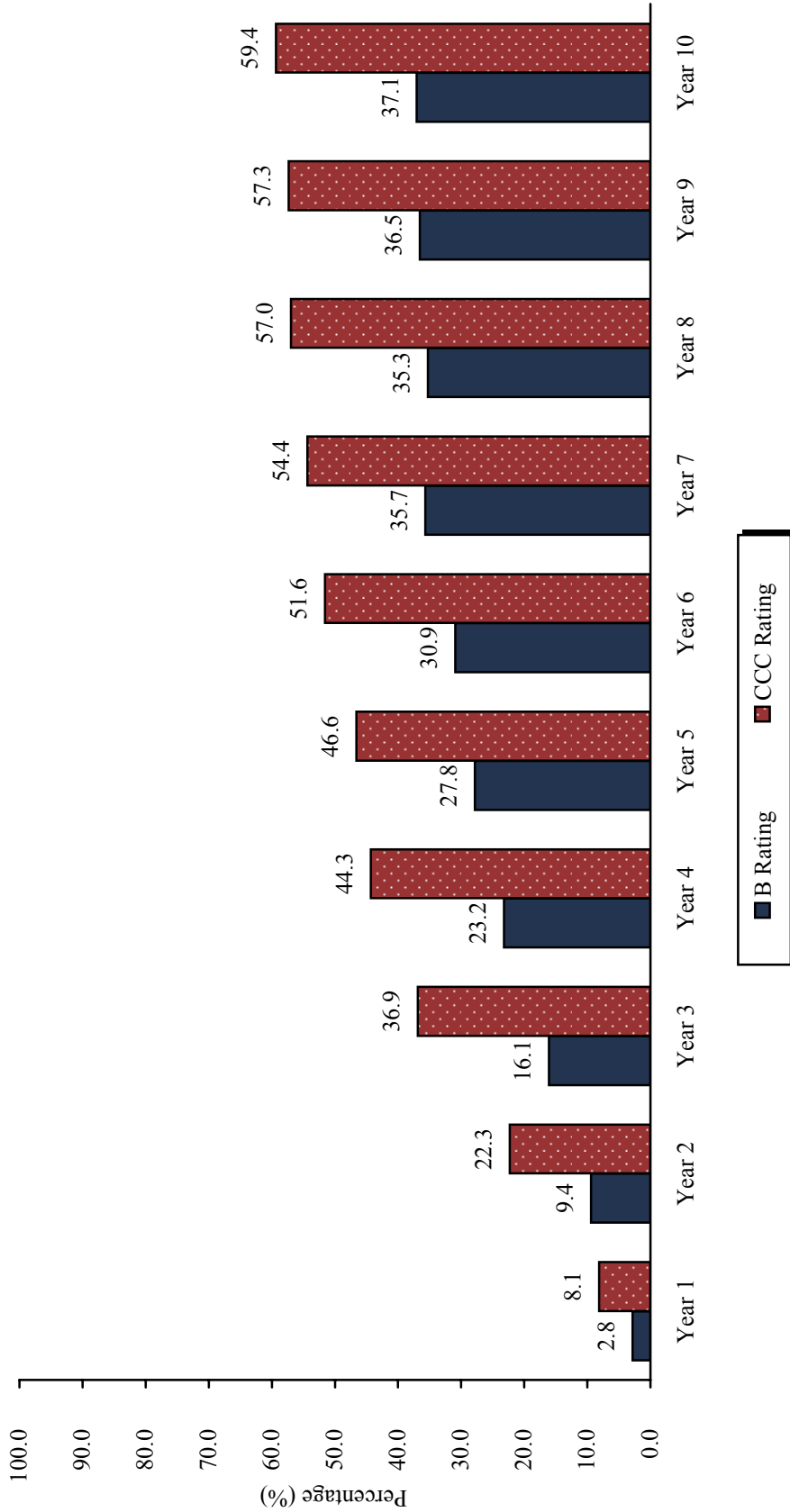
**Table Q**  
**PAR VALUE OF GLOBAL HIGH-YIELD NEW ISSUES AND**  
**DEFAULT RATES**  
**1986-2006**



Sources: Merrill Lynch & Company and Moody's Investors Service.

Note: New issue volume has included 144A high-yield new issues.

**Table R**  
**MORTALITY RATES (%) BY ORIGINAL RATING OF B AND CCC RATED U.S. CORPORATE BONDS**  
**1971-2006**



Sources: Edward I. Altman-NYU Salomon Center and Standard & Poor's.

Notes: Data are based on cumulative years after issuance. Corporate bonds are rated by S&P at issuance. These data are based on 1,955 issues.

## **The Dilemma**

In the current market environment, nothing is cheap, unless this implies that cash is cheap, as it is simply the obverse of everything else (Table S). However, the potential opportunity cost of holding cash can be high, particularly for institutional investors that aim to spend 5% and still preserve purchasing power. Even U.K. cash yields, which are among the highest in the developed world, yield only about 5.5%.



## The Best Offense Continues to Be a Good Defense

First, we repeat our familiar, yet important mantras:

*Diversify and rebalance.* When buying cheap is particularly difficult, as today, diversifying and rebalancing become more important than ever. Continue to seek “true” diversification across asset classes and risk levels, as opposed to the all-too-common tendency to spread allocations across investments that look different, but actually have similar economic bases of return.

*Insure against catastrophe.* And insuring against catastrophe means maintaining core bond holdings—high-quality, non-callable, intermediate- to long-term bonds—rather than indulging in pointless speculation as to the direction of interest rates. Investors seeking to add value relative to these core bond holdings should consider that low yields and a flood of cash have driven up bond prices and compressed credit spreads leaving few bond sectors particularly attractive today. In addition, mortgage- and asset-backed securities, which account for an increasing percentage of global bond markets (36.4% of the U.S. Lehman Aggregate Bond Index as of December 31, 2006), are no substitute for high quality insurance, despite high quality credit ratings. The behavior of mortgage securities is much less desirable than that of Treasuries when yields are shifting due to a phenomenon known as negative convexity. Thanks to refinancing homeowners, mortgage-backed securities become less sensitive to interest rate changes as yields fall (when portfolios benefit from duration the most) and more sensitive as yields rise (when long duration is most painful).

The catastrophe of runaway inflation seems implausible, since this implies that central bankers would allow the hard-fought gains of 25 years to be squandered; however, the risk of *cyclical* inflation remains, especially if the dollar weakens again and China’s voracious appetite for natural resources persists. Consequently, we continue to advocate gradual diversification into “real assets,” despite short-term concerns about relatively high commodity prices.

In the current environment, we also recommend the following:

*Overweight quality.* Quality is reasonably priced, relatively cheap, and defensive, with limited opportunity cost relative to cash, should markets continue to appreciate. If equities continue to do well, we would expect high-quality stocks to underperform, as they have since mid-2003, but if the market tanks, they should outperform the market, as has generally been the case historically (Tables T and U). High-quality stocks are also relatively cheap on a global basis.<sup>7</sup>

In practice, overweighting quality means reducing allocations to small- and mid-cap stocks, which have significantly run up over the last several years, and investing the proceeds in either a mega-cap U.S. index, which has a high correlation to quality, or in an active quality-oriented manager.

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<sup>7</sup> See our March 2007 Global Market Commentary: *In Search of Global Quality*.

*Perform a quality check* on portfolios to identify, and correct for, any unintended bets. Within equity mandates many investors could be caught with an unintended bet on low-quality assets since they may well have structural overweights to small- and mid-cap stocks relative to their weightings in broad-based global equity indexes. This is because active large-cap managers tend to hold roughly equal weights of securities relative to cap-weighted benchmarks, which results in a bias to smaller-capitalization shares; small- and mid-cap stocks have significantly outperformed their larger-cap peers in recent years; and investors have steadily increased allocations to micro-cap growth through venture capital and to small- to mid-cap stocks through buyout funds. Even long/short equity hedge funds appear to have a net long bias to small caps—according to research by Goldman Sachs at the end of 2006, hedge funds on average had 42% of their long assets invested in stocks with equity capitalizations less than \$2 billion. Based on their less than stellar performance during last spring’s market rout, they likely had a net long exposure to small-cap stocks. So, check your net exposures in hedge funds. (Of course, hedge fund exposures can change rapidly, and we are aware of many who have been migrating up the market capitalization spectrum in recent months, especially on the long side.) Throw in dedicated REIT managers, emerging markets managers, and global small-cap managers, and the potential for unintended low-quality, small-cap bets is clearly quite large.

To get a rough idea of how pervasive this situation might be among equity investors, we randomly selected ten U.S. client portfolios across a broad range of asset sizes to determine the degree to which the equity portfolio (including both public and private equities, but excluding absolute return investments) underweighted large cap, relative to index weightings. On average these portfolios underweighted large caps (defined as stocks with a market cap of greater than \$10 billion) by 14.5 percentage points relative to the 72.4% weighting in our custom global equity benchmark.<sup>8</sup> Allocations to large-cap stocks ranged from a low of 51.1% to a high of 64.9%, compared to the index weight of 72.4%. Eight of the ten investors had at least a ten percentage point underweight (Tables V-Y).

*Overweight Japan.* We also continue to like Japan as the single best developed equity market play. Our optimism on the Japanese market is based on two primary factors. First, Japan is in the relatively early stages of a secular recovery, following a deep and prolonged secular bear market that ended in 2003. Second, while P/E multiples, at 20.4, remain high relative to those of other developed markets, we expect profitability to continue to improve. Japanese ROE (10.2%) looks high on a historical basis, but is quite low relative to that of other developed markets both on an absolute basis and compared to normative ROEs of roughly 12%. Japanese corporations have also become much more responsive to investor pressure to increase returns than they once were, suggesting that further ROE improvement is likely. Indeed, if we normalize earnings for ROE cyclicality, Japanese P/Es are well below their long-term mean, and if we assume that ROEs will increase to 12, which has been the normalized rate in other developed markets, Japan’s ROE-adjusted P/Es are more attractive than those of all other developed markets, at 17.6 (Table Z).

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<sup>8</sup> The custom benchmark uses the Russell 3000® to represent U.S. equities and the MSCI ACWI ex U.S. to represent non-U.S. developed and emerging markets equities. We weighted these indices based on the 44.7% U.S./55.3% non-U.S. split in the MSCI ACWI at year-end 2006. We use this custom benchmark, rather than the MSCI ACWI in isolation, as MSCI indices do not include comprehensive coverage of investable small-cap securities, and therefore, under-represent smaller-capitalization shares. At year-end, the MSCI ACWI had only a 3.1% allocation to small-cap stocks. See *Notes on the Data for Tables V-Y* for more detail.



*Tread carefully in emerging markets equities.* If you think in terms of where to spend your “risk currency,” emerging markets equities remain one of the best places to take risk, as their valuations are still somewhat attractive in relative terms, and from a longer-term, secular perspective they continue to hold value. However, recognize that these are still high beta markets that will melt down in an equity sell-off.

*Get ready for the next distressed cycle.* If you do not already have any managers who can move into distressed securities when the time is right, such as multi-strategy hedge funds, or patient dedicated distressed managers, start identifying such managers now. Based on historical precedent, some time in the next couple of years—or who knows, maybe sooner, maybe later—a super-bumper crop of distressed securities will be selling at fire-sale prices. However, make sure that designated managers are sufficiently experienced and knowledgeable to understand that securities selling at \$0.50 on the dollar can actually go to nothing. The next distressed cycle is likely to be more severe than the last, which was pretty minor in historical terms, and early buyers could well get burned.

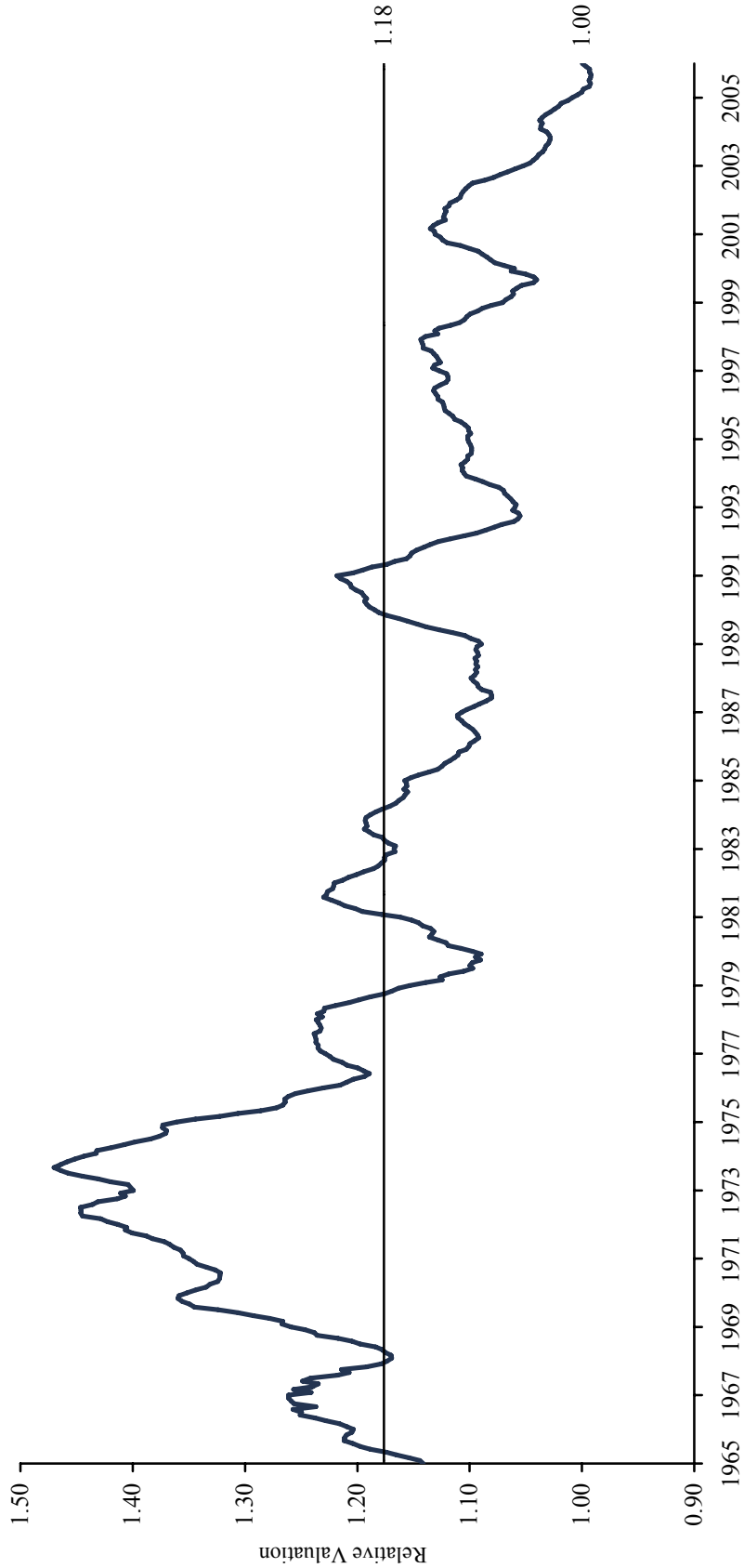
*Slowly deploy capital.* Given the paucity of attractive investment opportunities, those investors willing to risk some opportunity cost might also consider a go-slow approach to investing fresh (or surplus) capital. In contrast to 1999-2000, when there were significant pockets of undervalued assets outside the technology bubble (e.g., small-cap and value equities, hard assets), today *all* asset classes appear fully or overvalued.

In short, while recognizing that conditions could certainly remain benign for some time, absent any catalyst for change and the persistence of relatively easy money, we stress that current valuations discount only positive outcomes and that with risk premia at historically narrow spreads, investors should increasingly be risk averse rather than risk seeking.

Table T

**RELATIVE VALUATION OF QUALITY STOCKS:  
QUALITY EQUITY/S&P 500**

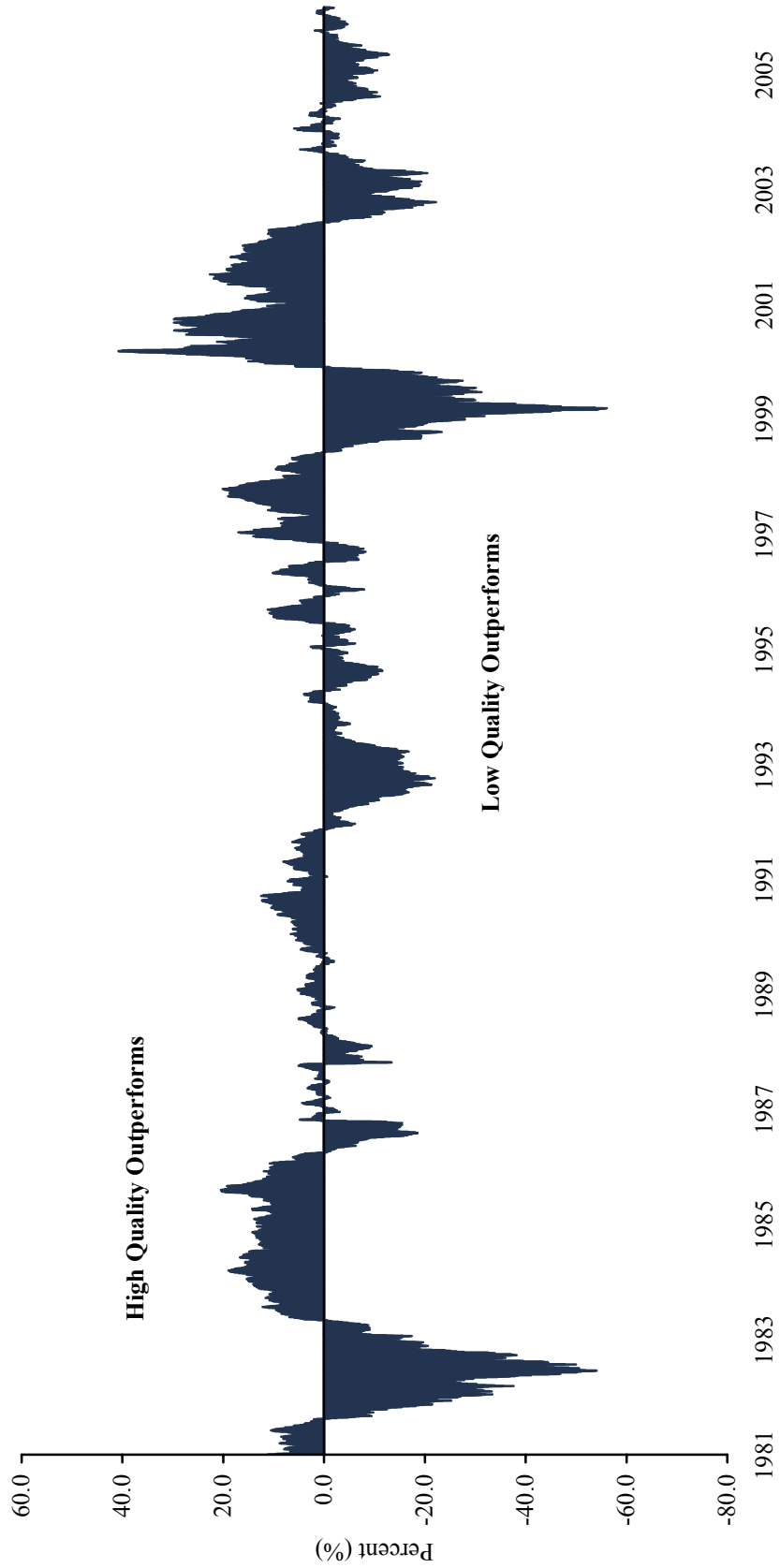
December 31, 1965 - December 31, 2006



Sources: GMO, Standard & Poor's, and Thomson Datastream.

Notes: Based on trailing 12-month reported earnings. GMO defines quality firms as those with high profitability, low leverage, and low earnings volatility.

**Table U**  
**U.S. EQUITY QUALITY CYCLE**



Source: Ned Davis Research, Inc.

Note: Quality returns are based on S&P Quality Rankings for stocks covered in NDR's institutional index of 1,500 U.S. equities. High quality is defined as stocks ranked B+ or higher by S&P, while low quality is stocks ranked B or worse. Graph represents daily year-over-year high-quality returns minus low-quality returns through February 28, 2007.

## NOTES ON THE DATA FOR TABLES V-Y

The following four exhibits provide analysis of the market capitalization breakdown of ten U.S.-based institutional global equity portfolios. This analysis is intended to identify the degree to which clients may be biased toward small- and mid-cap equities, which tend to be lower quality than large-cap equities. We randomly selected these portfolios among U.S. institutional clients for whom we do portfolio analytics, making sure that the portfolios were distributed across a broad range of asset sizes. The ten portfolios range in size from roughly \$30 million to \$1 billion.

We evaluated the equity portfolio using the three following classifications:

*Traditional Broad-Based Equity:* Includes all long-only, sector-diversified public equity managers. This excludes public equity managers investing in one or two economic sectors, the vast majority of which were dedicated REIT managers and natural resource equity managers. This category does include single country manager mandates, as long as they are broadly diversified across economic sectors. For the clients covered in this analysis, the vast majority of these managers had U.S. equity mandates, global ex U.S. equity mandates, and emerging markets equity mandates.

*All Public Equity:* In addition to the *Traditional Broad-Based Equity* segment of the portfolio, this classification includes long/short hedge funds, public equity managers investing in individual sectors or a narrow range of sectors, and distressed managers with a short lock-up period (e.g., less than three years). For investments in diversified real asset funds, we included only the REIT and natural resource equity components of these funds.

*All Public and Private Equity:* In addition to the *All Public Equity* portion of the portfolio, this classification includes venture capital and non-venture private equity (e.g., buyout funds, long lock-up distressed funds). In other words, this classification reflects the entire portfolio other than private hard assets (e.g., real estate, timber, and oil and gas partnerships), commodity futures, absolute return, fixed income, and cash allocations.

The following definitions were used for market capitalization breakdowns:

- Large cap: greater than \$10 billion
- Upper-Mid Cap: \$5 billion - \$10 billion
- Lower-Mid Cap: \$2 billion - \$5 billion
- Small Cap: less than \$2 billion

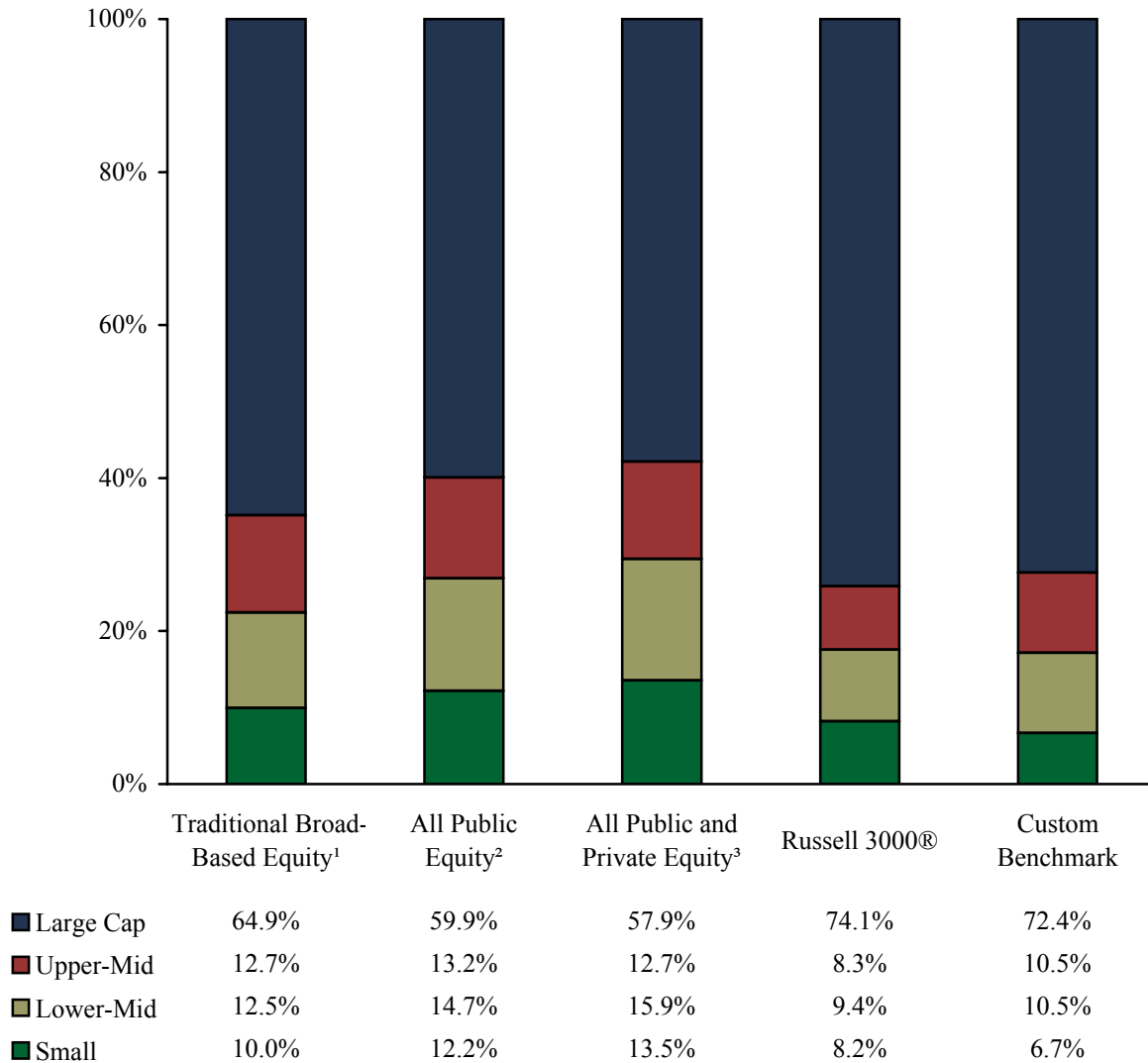
Custom Benchmark: Most U.S. investors utilize MSCI indices to benchmark their non-U.S. equity holdings. However, these benchmarks do not include comprehensive coverage of investable small-cap securities, as their stated objective is to cover 85% of the float-adjusted market capitalization of each market.<sup>1</sup> Therefore, rather than utilize the MSCI ACWI (which has only a 3% weight to small-cap shares) to measure the capitalization breakdown of global equity markets, we developed a custom index that should be more representative of U.S. investors' benchmarks, using the Russell 3000® to represent U.S. equities and the MSCI ACWI ex U.S. to represent non-U.S. developed and emerging markets equities. We weighted these indices based on the 44.7% U.S./55.3% non-U.S. split in the MSCI ACWI at year-end 2006. This custom index still underweights smaller-capitalization shares relative to the investable opportunity set, but in a less pronounced way. The less commonly used S&P/Citigroup Global Broad Market Index has a much broader representation of global equities as it includes all equities with a float-adjusted market capitalization of at least \$100 million that have traded at least \$25 million in the last 12 months. By means of comparison, the S&P/Citigroup Global Broad Market Index had a 12.7% weight in small-cap stocks, a 21.2% weight in mid-cap stocks, and a 66.0% weight in large-cap stocks, compared to 6.7%, 21.0%, and 72.4%, respectively, for our custom benchmark.

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<sup>1</sup> MSCI is in the process of expanding the coverage of their index family to include full representation of the investable float-adjusted market capitalization. They will begin calculating provisional indices as of May 31, 2007, and will begin distributing these indices on June 5, 2007. The transition to the new indices will be completed on May 30, 2008.

Table V

**AVERAGE PORTFOLIO MARKET CAPITALIZATIONS  
OF TEN CAMBRIDGE ASSOCIATES U.S. CLIENTS**



Sources: Frank Russell Company, Morgan Stanley Capital International, and Cambridge Associates LLC. MSCI data provided "as is" without any expressed or implied warranties.

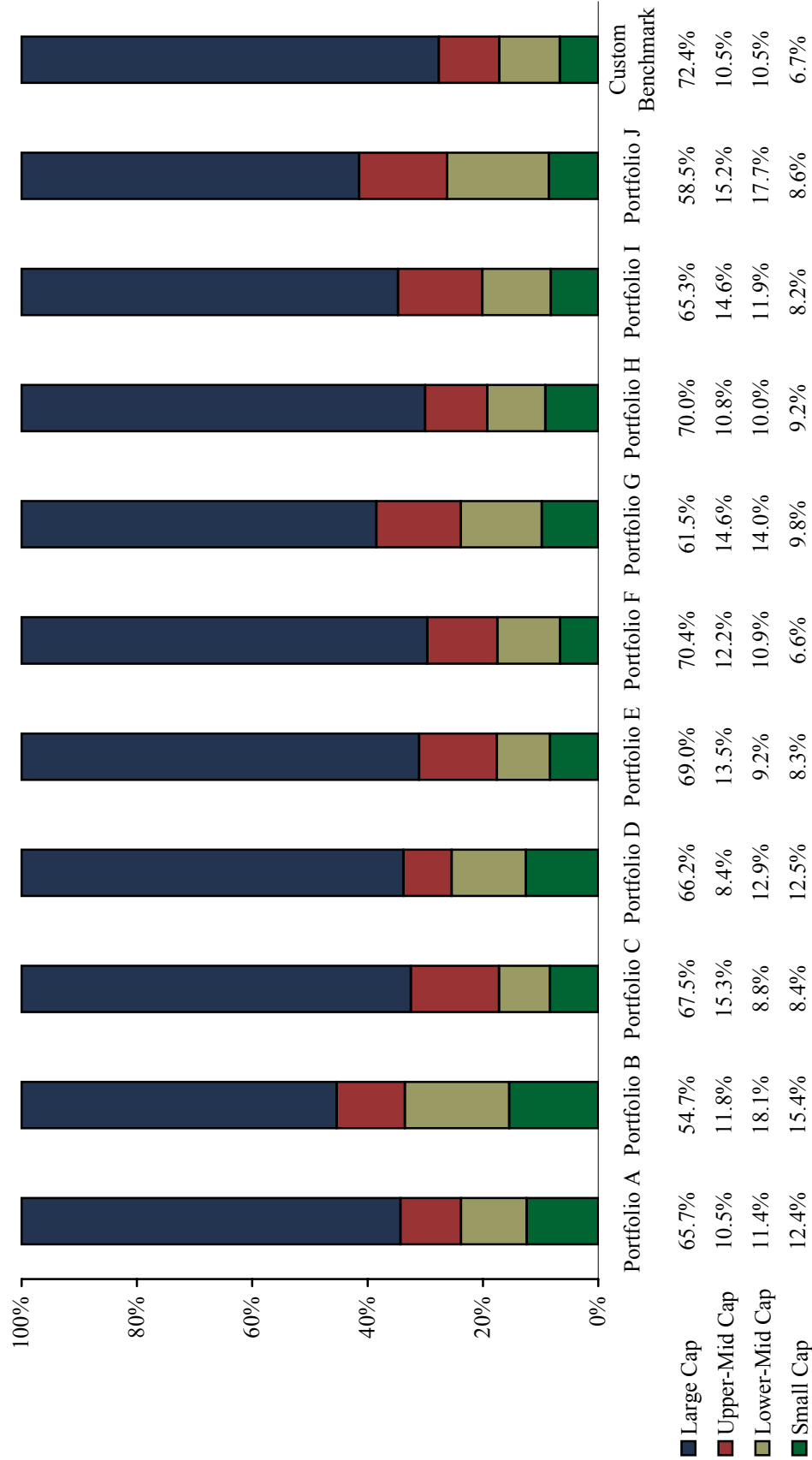
<sup>1</sup>Includes long-only managers of sector-diversified equity portfolios.

<sup>2</sup>Includes Long/Short Hedge Funds and dedicated investments in Natural Resources, REITs, and other sectors.

<sup>3</sup>Excludes Absolute Return Strategies.

Table W

**TRADITIONAL BROAD-BASED EQUITY PORTFOLIO CAPITALIZATIONS  
OF TEN CAMBRIDGE ASSOCIATES U.S. CLIENTS**



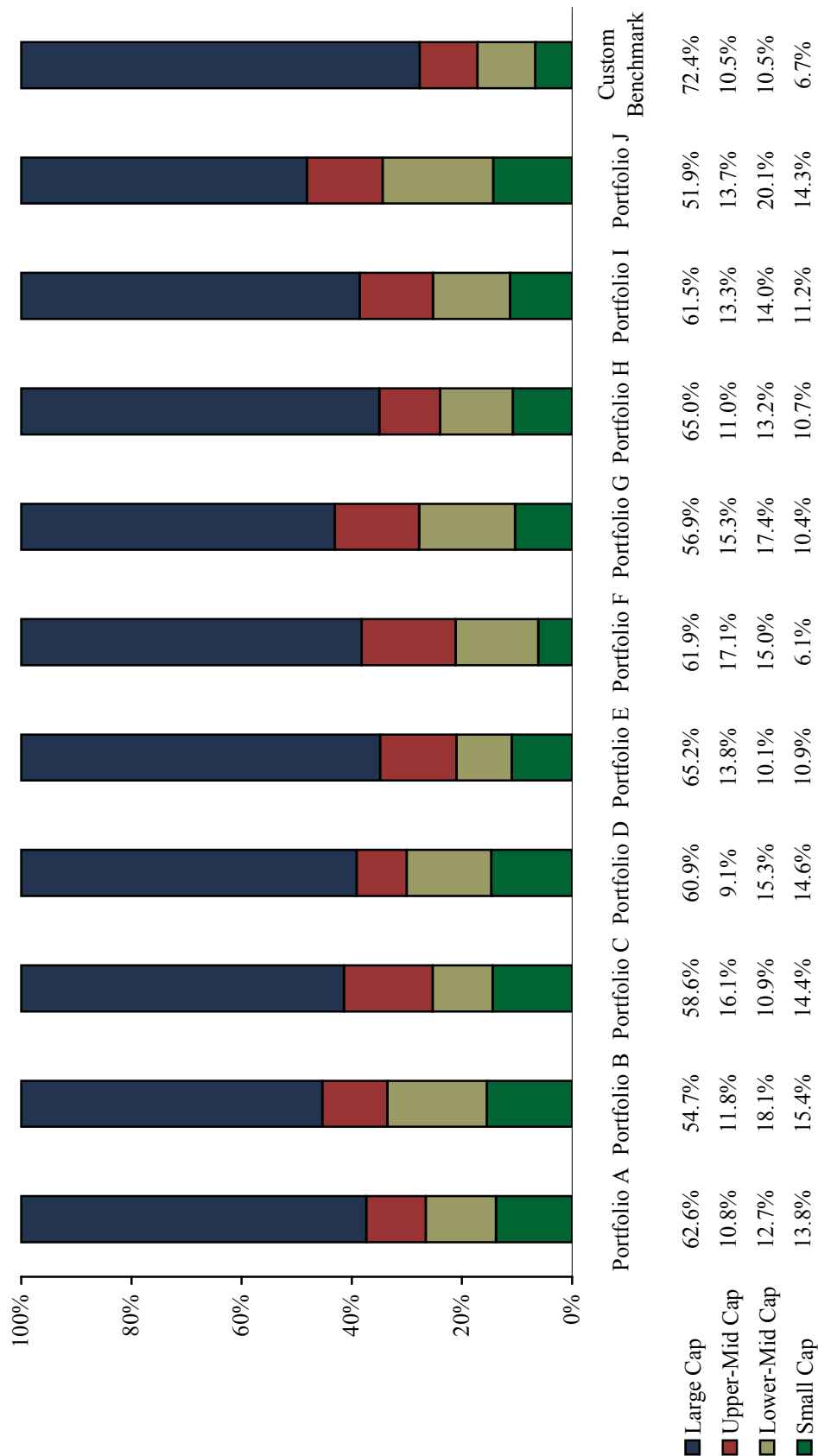
Sources: Frank Russell Company, Morgan Stanley Capital International, and Cambridge Associates LLC.

MSCI data provided "as is" without any expressed or implied warranties.

Notes: Analysis includes long-only managers of sector-diversified equity portfolios.

Table X

ALL PUBLIC EQUITY<sup>1</sup> CAPITALIZATIONS  
OF TEN CAMBRIDGE ASSOCIATES U.S. CLIENTS



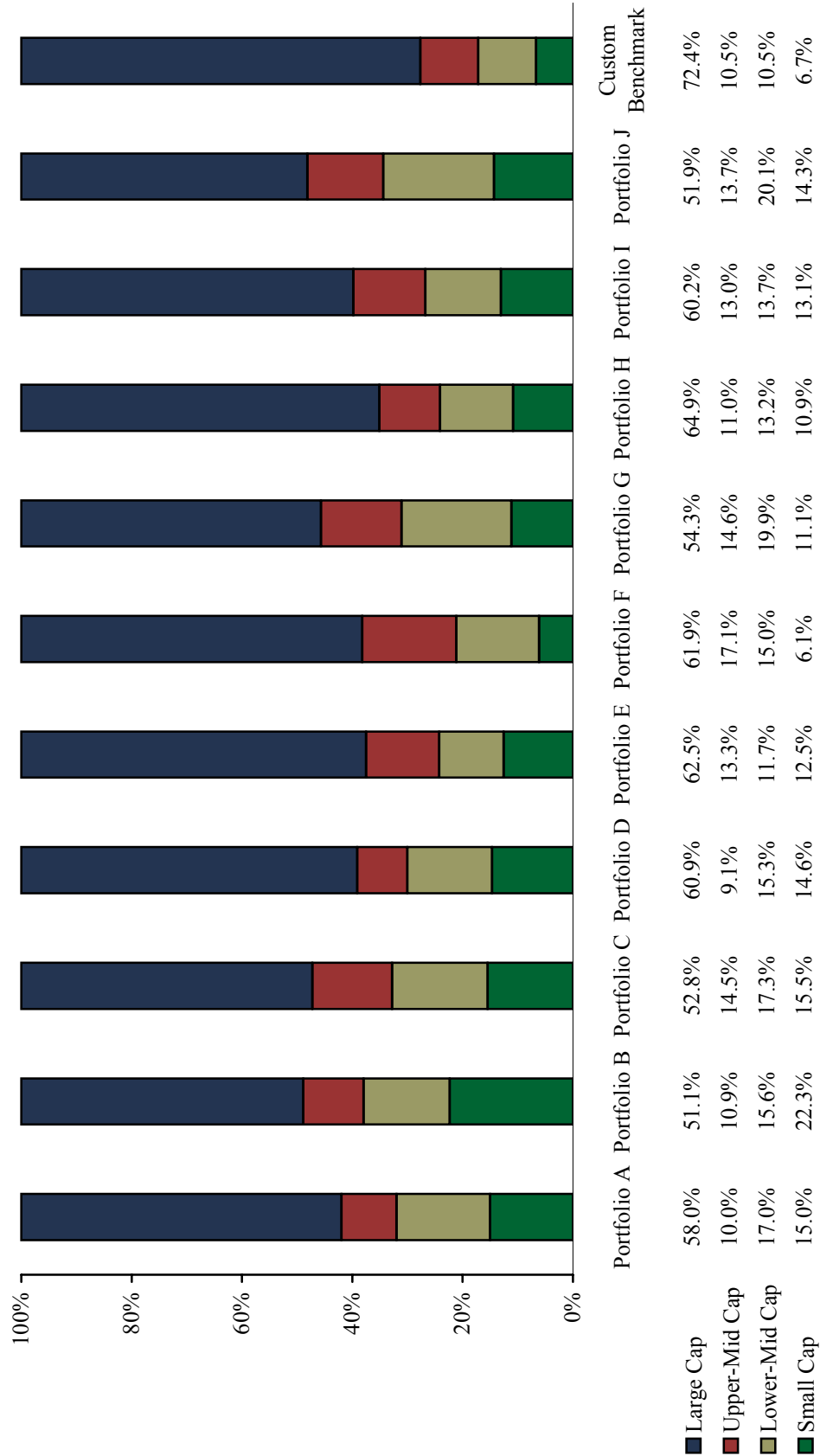
Sources: Frank Russell Company, Morgan Stanley Capital International, and Cambridge Associates LLC. MSCI data provided "as is" without any expressed or implied warranties.

<sup>1</sup>Includes long/short hedge funds and dedicated investments in natural resources, REITs, and other sectors.



Table Y

ALL PUBLIC AND PRIVATE EQUITY<sup>1</sup> CAPITALIZATIONS OF TEN CAMBRIDGE ASSOCIATES U.S. CLIENTS

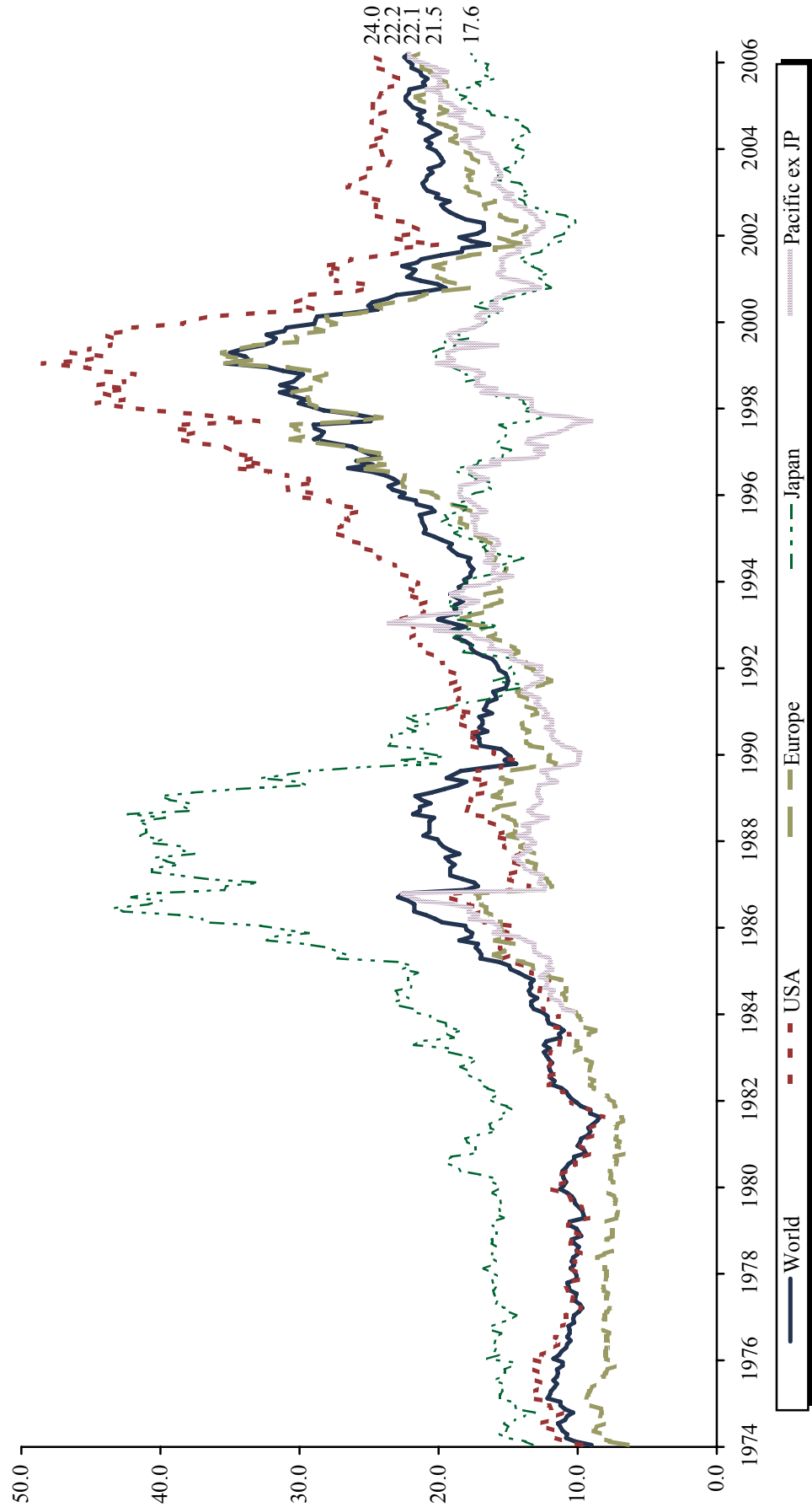


Sources: Frank Russell Company, Morgan Stanley Capital International, and Cambridge Associates LLC.

MSCI data provided "as is" without any expressed or implied warranties.

<sup>1</sup>Excludes Absolute Return Strategies.

**Table Z**  
**NORMALIZED RETURN ON EQUITY-ADJUSTED PRICE-EARNINGS RATIOS**  
 MSCI Developed Markets  
 December 31, 1974 - February 28, 2007



Sources: Morgan Stanley Capital International and Thomson Datastream. MSCI data provided "as is" without any expressed or implied warranties.

Notes: Return on equity (ROE) is calculated by dividing the index's price-book ratio by its price-earnings (P/E) ratio. The ROE-adjusted P/E ratio is the current P/E based on trailing 12-month earnings multiplied by the ratio of the current ROE to an assumed long-term historical average ROE of 12 for developed equity markets. Data for Pacific ex Japan begin December 1984.