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ASSET ALLOCATION IN THE CURRENT ENVIRONMENT

The Best Offense is a Good Defense

June 2004

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This is the fourth 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 prevailing uncertainties. Since we expect to add more such papers over time, we have decided to name the series "Asset Allocation in the Current Environment" so that these papers are readily identifiable in the research section of our website. The previous papers in the series are *Asset Allocation in a Bear Market*, *How Will You Earn What You Spend*?, and *Where We Are Now and What You Should Do About It.*

As always, we welcome your feedback.

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Introduction

Notwithstanding the impressive rally in global equities, investors should remain focused on answering the question, "how will we earn what we spend?"[1] Over the next few months, asset allocation discussions should revolve around the question of how best to defend portfolios against a revival of the equity bear market.

Anatomy of the Bear Market

Although we are convinced the bear market *will* revive, we do not know when, and in fact we suspect investors may have time to prepare their defenses. Our conviction about the longer term is based (as usual) on investment history and investment mathematics.

History 101

As Exhibits 1 and 2 indicate, the secular bear market in U.S. and global equities continues to follow a familiar and somewhat predictable course: first the vicious, agonizing decline, punctuated by modest rallies (March 2000 to October 2002); then a broad-based, cyclical recovery from the bear-market trough (October 2002 to present), led in the United States by low-quality, speculative stocks.

What next? Historical precedent indicates the likelihood of a ragged plateau, leading to another decline into the valley, and then a long, frustrating trading range at the end of which comes a final, sickening sell-off that results in "patient, long-term" investors throwing in the towel in disgust. But is this what we should actually expect to occur? After all, history is instructive, but not prescriptive: conditions change; every period is different. However, the psychology of greed and fear persists, and the fundamental drivers of return remain constant. On balance, therefore, we think the roadmap outlined by historical precedent is as plausible as any competing vision of the murky future.

By historical standards, the peak-to-trough decline in equity markets in the period 2000-02 was certainly a doozy (see Exhibit 3), but then so was the boom that preceded the bust. Nevertheless, investors should note two key points: first, buy-and-hold investing has *not* been discredited by the bear market. What has been discredited is the ignorant fantasy that equities can only appreciate, except over very short periods. An informed buy-and-hold investor, with a long time horizon, expects to win big sometimes, lose big sometimes, and sometimes just trudge along, but has concluded that it is impossible to know just when the steepest ups and downs will occur, and is prepared to hang on for the ride. Exhibit 4 shows how manic this ride has been for U.S. equity investors since January 1, 1995. The first five years were, of course, glorious, as $100 invested in the S&P 500 became $312.30—after inflation—by the end of 1999. Then a large chunk of these gains evaporated during the bust, but the real value has since rebounded to $227.77. Most

[1] The first paper in this series was titled *How Will You Earn What You Spend?* (May 2002). Subsequent papers are: *Asset Allocation in a Bear Market* (August 2002) and *Where We Are Now and What You Should Do About It* (June 2003).

significant, however, is that this cumulative real value of $100 invested on January 1, 1995, has never fallen below a steady-state annualized return of 5.75%, which is our long-term assumption for the real compound return of U.S. equities. Even a portfolio allocated 70% to U.S. equities and 30% to U.S. bonds (rebalanced quarterly) outperformed a 5.75% real compound return (see Exhibit 5), and is in fact now worth about 5% less than the all-equity portfolio, having appreciated less during the boom, but depreciated less during the bust.

Global equity investors have not fared as well. The steady drag of Japanese equity market depreciation and US$ appreciation prevented dollar-based investors in global equity index funds from keeping pace with the S&P 500 during the boom years, while the subsequent bear market wiped out virtually all their preceding gains. As Exhibits 6 and 7 show, both the MSCI World equity index and a 70% global equity/30% global bond portfolio have yet to recover sufficiently to match a 5.75% annualized return.

As discussed in our recent paper, *Policy Portfolios, Tactical Asset Allocation and Opportunistic Investing*, we do *not* believe investors should construct portfolios according to mechanistic rules and then take a passive approach to their subsequent management. So we would not advocate a simple buy-and-hold approach to investing—except, perhaps, for patient, long-term, taxable investors who draw little or no money from their portfolios for spending purposes. Our point here is only that the virtues and limitations of buy-and-hold investing should not be weighed on the basis of recent market gyrations, that this approach has not proved as disastrous as some commentators have represented, and that it certainly remains superior to the momentum investing so common among retail investors.

The second key observation is that there were places to shelter (other than bonds, cash, and commodities) during the sell-off following the March 2000 peak in the major equity indices. As Exhibit 3 shows, emerging markets and small- to mid-cap value stocks have generated positive returns since early 2000, mostly as a result of stellar returns in the past 18 months, but also because they had performed relatively poorly in the late 1990s. This suggests one line of defense against further declines: focus on quality (avoid junk) and on relative valuations across and within markets, since these are likely to shift—sometimes rapidly—during the volatile years ahead.

History also suggests that investors should not be spooked by the prospect of central bank tightening. When central banks first start turning the screws on a booming economy, the stock market usually continues upwards because its primary focus is on rising earnings rather than on rising rates. Today, the U.S. and U.K. markets already discount expectations of higher interest rates and inflation (although not an inflationary spiral); any indications that inflation will remain reasonably contained—for example, a decline in the price of oil—might well serve as a catalyst for greater enthusiasm about equities. On the other hand, history may not serve as a reliable guide to the trajectory of corporate earnings during a period of rising interest rates when the largest sector of the economy is the financial sector. One reason the Fed has kept its foot on the gas pedal so long—in contrast to the more aggressive actions of the Bank of England—may be in agreement with PIMCO's Bill Gross that "In a financed-based economy . . . the only real way to keep an economy going is via cheap money, more and more tax cuts, and/or additional leverage." About 37% of U.S. corporate profits this year will be attributable to finance companies[2] (which constitute at least a quarter of the market). Just what percentage of those earnings may be attributable to variations on the "carry trade" is subject to conjecture, but we do know that finance company earnings are more likely to be casualties than beneficiaries of higher short-term rates.

On balance, however, we would not expect Fed tightening to hurt the U.S. stock market this year since a higher Fed funds rate is already fully discounted and the economy will remain awash in liquidity for the foreseeable future. Moreover, U.S. equities (which are still setting the pace for world markets in general) rarely fail to advance during a presidential election year, with returns concentrated in the second rather than in the first half of the year. Finally, in 14 of 15 bear market rallies in U.S. equities since 1926, the market has continued to advance during the second year of the rally, the sole exception being the rally following the 1932 trough (see Exhibit 8).

As regards the bond market, we are astonished to find that despite our eloquent arguments to the contrary last year (see our 2003 report *Fixed Income Investing in a Rising Interest Rate Environment*), many of our clients seem to believe that (a) they can predict the direction of interest rates along the yield curve and (b) intermediate- and long-term bonds perform badly when the Fed raises short-term rates. We dispute both these propositions and although we would agree that bonds do not now offer compelling value, we would also note that shifting assets from bonds to equities can hardly be construed as defensive.

Investment Math 101

Rather than poring over tea leaves and extrapolating guesses from historical patterns, however, it may be more useful simply to ask: what are U.S. equities priced to return? Exhibits 9 and 10 suggest different ways to answer this question over different time horizons. Exhibit 9 takes a five-year view (of the S&P 500) and simply asks: what price change is implicit in earnings growth of *x*, and a market multiple (five years from now) of *y*? If we accept analysts' current estimate of five-year annual earnings growth of 12.4% (which is extraordinarily optimistic), and assume no change in the market multiple, then of course the annual price change would be 12.4%. However, assume annual earnings growth of 5.7%, which is the 1960-2003 average, and a regression in the P/E multiple to its 1960-2004 average of 17.5, and the annual price change of the index shrinks to 1.8%. Which is more likely? Well, 12.4% earnings growth over five years seems implausible, implying a future without accidents, recessions, and little or no impact from Fed tightening. If the Fed has miscalculated, and has inadvertently sown the seeds of an inflationary spiral, then *nominal* earnings *could* grow at 12.4% per year; under such circumstances, however, the market multiple would be slashed, offsetting any gains from earnings growth. In short, although we cannot predict the S&P 500's return over the next five years, we can say that lots of things need to go right, and almost nothing wrong, for nominal annual returns to reach double digits over this time horizon. And our history lesson, which has already taught us to doubt we have seen the last of the bear market, reinforces this view.

[2] Down from a peak of 47% in 2001. As referenced here, "finance companies" includes companies like GM, Ford, and GE whose profits are more heavily dependent on their financial than on their manufacturing activities.

Exhibit 10 is indeterminate as to time horizon, but perhaps for that reason most useful to long-term investors as a guide to estimating future U.S. equity returns from this point forward. The exhibit indicates that if one eliminates expansion or contraction of the market multiple from the equation, realized real returns in every period correspond very closely—as logic would suggest they should—to the sum of real compound earnings growth and average dividend yield. Today, the S&P 500's dividend yield is 1.6%, but the payout is a historically low 34.6%.[3] If we assume a payout ratio in line with the historical average of 49.6% (since 1960), then in the future we might expect a higher average dividend yield than today's rate—say, 3.0% (which is close to the average since 1960). If we add to this a generous estimate of real compound earnings growth of 2.0%, we get to a real average annual compound return estimate of 5.0%—assuming no expansion or contraction of the market multiple. There is the rub. No argument about low interest rates or low inflation can expunge the simple fact that the current multiple is more than one standard deviation above the long-term average (see Exhibit 9). Of course the multiple *could* expand, but investors have no good reason for thinking it *should* expand; on the contrary, history teaches us to expect it will contract.

To sum up the case for and against U.S. equities: although we agree with the prevailing consensus that strong earnings, ample liquidity, and a hyper-cautious Fed all provide reasons to be reasonably optimistic about U.S. equities in the short term—with the focus perhaps shifting from lower- to higher-quality stocks as investors pay more attention to the quality of underlying earnings and dividend[4] growth—we are less sanguine about their longer-term prospects. Even if we assume the U.S. authorities avoid the kind of policy mistakes[5] that prolonged and exacerbated the U.S. bear market of the 1930s and the Japanese bear market of 1990-2003, history suggests that the equity bear market dating from March 2000 will wreak some further damage before it ambles back into hibernation.

Playing Good Defense

Our analysis has focused on the United States because the world economy and markets continue to revolve around the U.S. core. We suspect this U.S.-centrism will gradually diminish over the next several decades, as European companies become increasingly competitive, Japan emerges from its long slump, and the vast markets of India and China increase their share of global GDP and stimulate growth across Asia. The huge U.S. current account deficit will probably worry investors for years to come, before starting to shrink as a result of some combination of a weaker dollar and the rising relative strength of non-U.S. markets. By and large, non-U.S. equity markets are also more attractively valued than U.S. equities (see Exhibits 12 through 16) and so we see no reason why investors should persistently underweight these markets relative to their share of the global equity market (see Exhibit 17, which also illustrates the perils of formulaic investing without regard to market prices). In addition, we continue to advocate meaningful allocations to emerging

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[3] According to Ned Davis Research, the lowest payout ratio on record is about 30% in late 2000.

[4] Yes, dividends! We agree with Peter Bernstein's recent rumination that dividends, long despised and neglected by investors despite their critical contribution to historical total returns, may gradually return to center stage as a focus of investors' attention ("Dividends and the Frozen Orange Juice Syndrome," *Economics and Portfolio Strategy*, May 15, 2004).

[5] There are some, of course, who believe that comparable policy mistakes have already been committed by the Federal Reserve.

markets equities, where valuations are relatively attractive at the same time as growth is strong and underlying economic conditions have significantly improved in the past five years (see Exhibit 18). However, we would not extend this enthusiasm to emerging markets bonds, which have performed extremely well in recent years, simply because investors are no longer paid an adequate risk premium (see Exhibit 19) for holding these intrinsically risky securities. The same can be said for U.S. high-yield bonds (see Exhibit 20).

This reflects a more general valuation problem: almost no asset class currently offers compelling value—emerging markets equities, Japanese equities, and the global buyout market perhaps come closest, but seem fairly rather than conspicuously undervalued.[6] This is a direct consequence of the excess liquidity (i.e., in excess of the requirements of the real economy) caused by the U.S. Federal Reserve's aggressive monetary stimulus, which has inflated the value of global financial assets. Indeed, the gradual diminution of this liquidity is likely to be the proximate cause of the next serious decline in the price of financial assets, regardless of the coincident performance of the real economy.

As a result, we continue to believe investors should focus on earning returns more from active manager risk and less from beta (i.e., market or asset class) risk. This implies allocations to asset classes like hedge funds and private markets where market influences have far less impact on returns than do the specific managers selected. It also implies a bias in favor of active managers in traditional equities, despite our concern that most investors' selection processes are woefully inadequate and ineffective. In particular, investors should avoid the habitual mistake of accidentally underweighting larger-cap equities in their U.S. equity portfolios simply because their active managers systematically do so. A U.S. equity portfolio that is underweight large-cap is probably underweight high-quality stocks, and we would favor *overweighting* quality today. As regards to manager selection (where we have waged rhetorical war for many years), we would repeat only that good managers are usually best hired after a period of relatively *poor* performance, and should not be hired at all if the investor is unwilling or unable to rebalance from winners to losers.

Finally, with tiresome insistence, we reiterate our familiar mantras: Buy cheap. Diversify. Rebalance. Insure against catastrophe. When buying cheap is particularly difficult, as today, diversifying and rebalancing become more important than ever. And insuring against catastrophe means maintaining core bond holdings—high-quality, non-callable, intermediate- to long-term bonds—in the teeth of rising interest rates. The yield curve already discounts rising rates and higher inflation, and so shortening duration because the Fed plans to raise short-term rates is simply a bet against the collective intelligence of the bond market—which should always give one pause.

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 diversification into "real assets," despite some short-term concerns about the recent surge in commodity prices.

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[6] Please refer to our monthly valuation matrix and "Notes on Current Valuations" (available on the Market Update page of www.cambridgeassociates.com.) for a detailed discussion of current valuations.

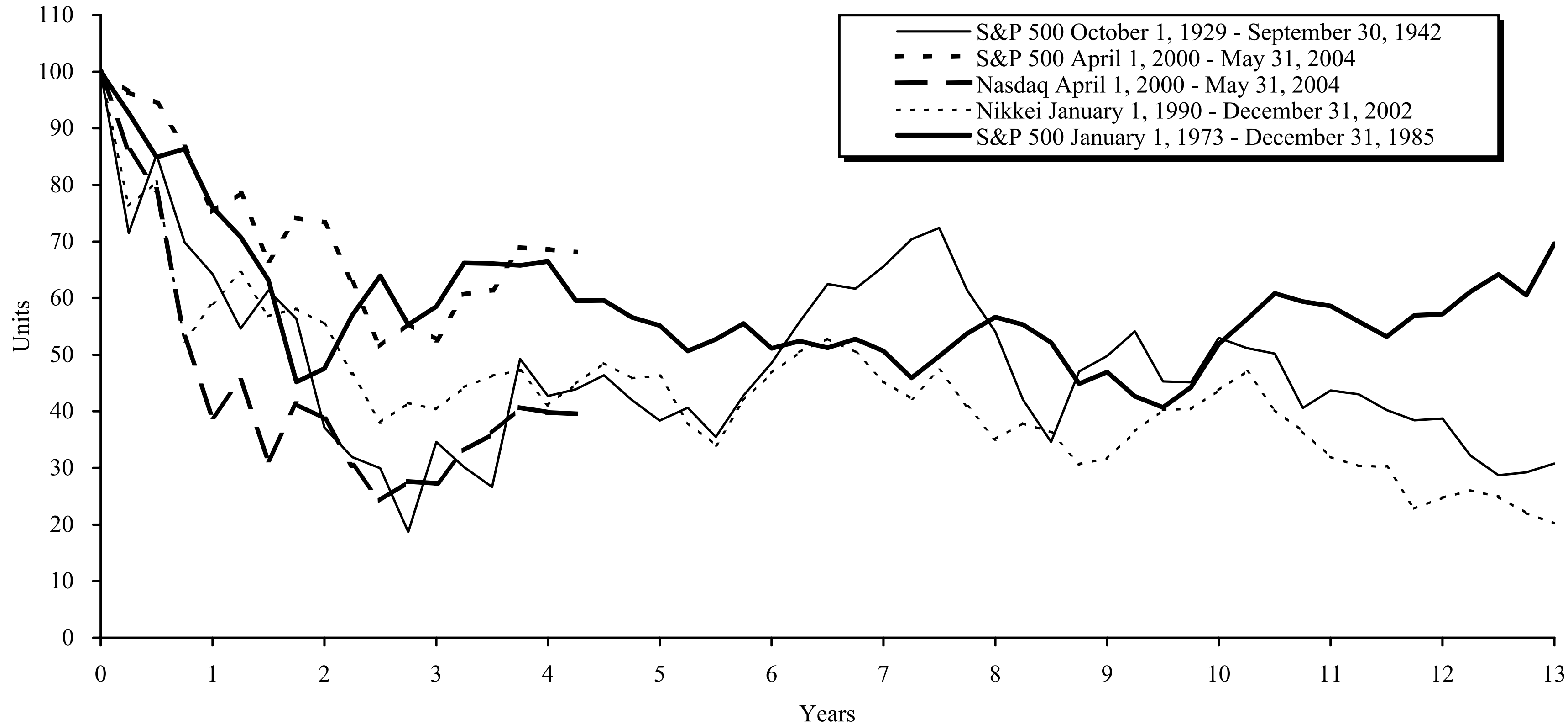
An alternative view—which has vociferous partisans within Cambridge Associates—is that the U.S. Federal Reserve's easy money policy has created a house of (credit) cards perched on a mountain of debt. As a result, the Fed will be damned if it raises rates, since this would imperil the whole shaky edifice, and damned if it does not, since this would stoke already smoldering inflationary fires. As investors increasingly recognize this trap and fear its implications (the argument goes), they will reduce both dollar-denominated assets and the dollar itself. Also undermining the dollar is the current account deficit, now at a record $580 billion (annualized), financed primarily by foreign central banks, who are thereby importing the Fed's easy money policy into their own economies—which everyone agrees is unsustainable, although just how long it might be sustained is a matter of considerable debate. The pro-gold faction warns that these pressures will result in degradation of the purchasing power of paper money (and possibly the replacement of the present dollar system) and advocate gold as the safest haven against this outcome. As we have noted before, however, the "house" regards less dramatic outcomes as more plausible and the potential opportunity cost of the gold hedge a formidable barrier to most investors.

EXHIBITS

Exhibit 1

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

In Real Terms
(Base Value = 100)



Sources: Bureau of Labor Statistics, Global Financial Data, Standard & Poor's, Thomson Datastream, and *The Wall Street Journal.*

Notes: All units are in local currency unless otherwise noted. Real returns for May 2004 are based on CPI-U data for April 30, 2004.
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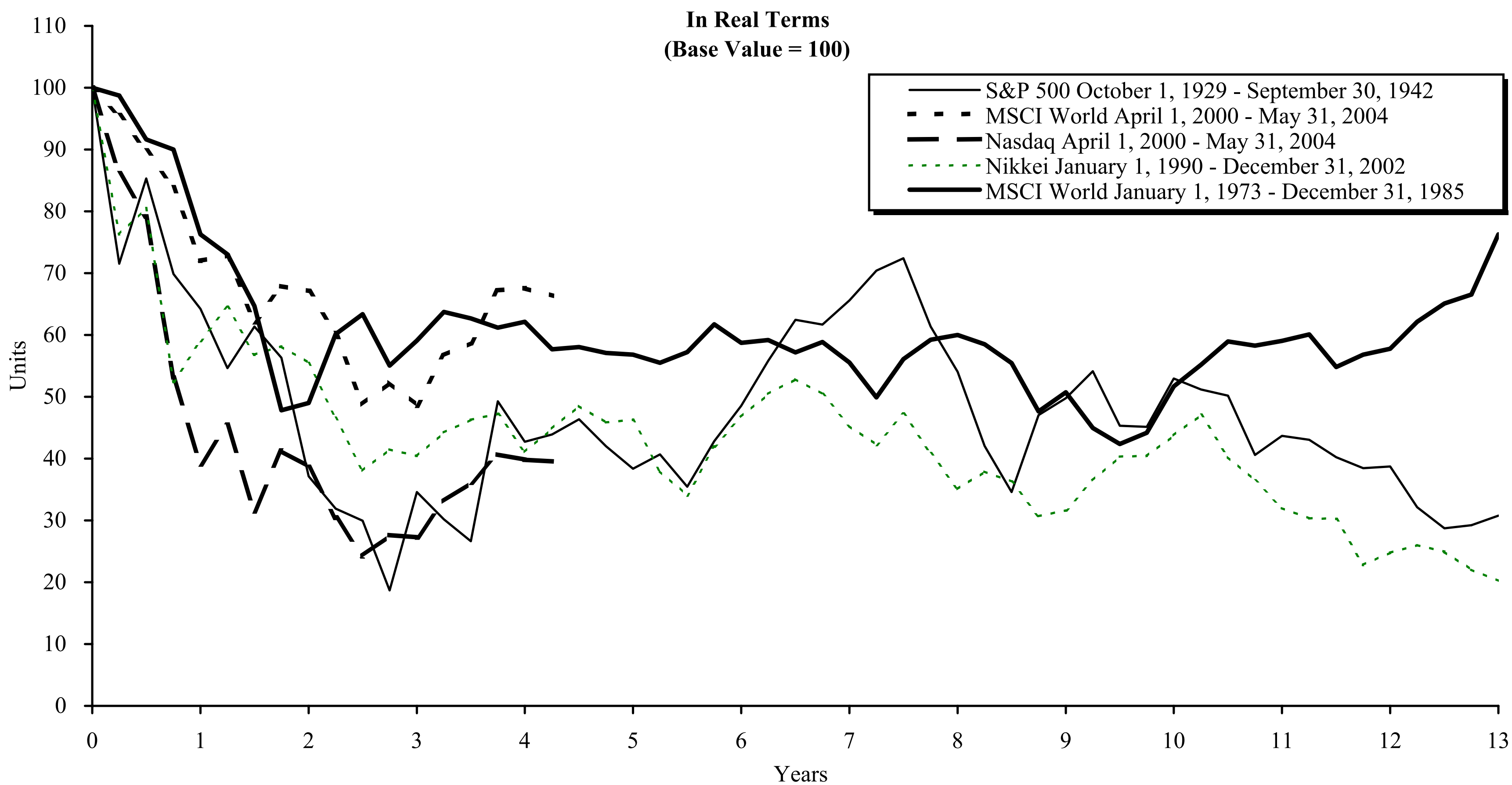
Exhibit 2

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 express or implied warranties.

Notes: All units are in local currency except for the MSCI World, which has units denominated in U.S. dollars. Real returns for May 2004 are based on CPI-U data for April 30, 2004.

Exhibit 3

ANATOMY OF A GLOBAL BEAR MARKET

January 1, 2000 - May 31, 2004

In Local Currency

	Average Annual Compound Return (%)	Cumulative Value of 100 Units	Highest Monthly Close	Date	Lowest Monthly Close	Date	Percentage Decline (%)	May 31, 2004 Close	Subsequent Recovery (%)
S&P 500	-4.5	81.5	1,517.7	8/31/00	815.3	9/30/02	-46.3	1,120.7	37.5
Nasdaq Composite*	-15.0	48.8	4,696.7	2/29/00	1,172.1	9/30/02	-75.0	1,986.7	69.5
Russell 1000® Growth	-11.4	58.6	601.4	8/31/00	226.2	9/30/02	-62.4	313.4	38.6
Russell 1000® Value	2.7	112.7	369.4	2/29/04	259.5	9/30/02	N/A	358.7	N/A
Dow Jones U.S. TopCap Growth	-15.2	48.3	2,291.6	3/31/00	708.5	9/30/02	-69.1	1,014.5	43.2
Dow Jones U.S. TopCap Value	4.2	120.1	1,374.0	12/31/00	986.0	9/30/02	-28.2	1,332.1	35.1
Russell 2000® Growth	-6.4	74.6	3,080.6	2/29/00	1,140.4	9/30/02	-63.0	1,843.3	61.6
Russell 2000® Value	15.1	185.9	3,098.2	3/31/04	1,708.1	1/31/00	N/A	2,966.7	N/A
Dow Jones U.S. Small Cap Growth	-6.9	72.9	2,506.9	2/29/00	822.3	9/30/02	-67.2	1,365.1	66.0
Dow Jones U.S. Small Cap Value	17.0	200.0	1,851.7	3/31/04	913.4	2/29/00	N/A	1,755.3	N/A
MSCI EAFE	-7.2	71.7	1,115.0	3/31/00	537.3	3/31/03	-51.8	720.1	34.0
MSCI United Kingdom	-5.7	77.3	1,933.5	8/31/00	1,072.7	1/31/03	-44.5	1,337.9	24.7
MSCI Europe ex U.K.	-8.5	67.5	1,382.8	8/31/00	586.3	3/31/03	-57.6	811.4	38.4
MSCI Japan	-7.7	70.2	1,023.4	3/31/00	479.3	4/30/03	-53.2	687.1	43.3
MSCI Pacific ex Japan	-1.2	94.6	944.0	3/31/00	649.5	2/28/03	-31.2	820.7	26.4
MSCI Emerging Markets	1.9	108.8	22,686.5	2/29/04	12,757.1	9/30/01	N/A	20,636.0	N/A
MSCI World	-6.3	75.0	1,144.8	3/31/00	595.1	3/31/03	-48.0	790.3	32.8

Sources: Dow Jones & Company, Inc., Morgan Stanley Capital International, Standard & Poor's, Thomson Datastream, and *The Wall Street Journal.* MSCI data provided "as is" without any express or implied warranties.

Note: N/A implies that the series has recovered to the level of the previous peak.
*Price index only.

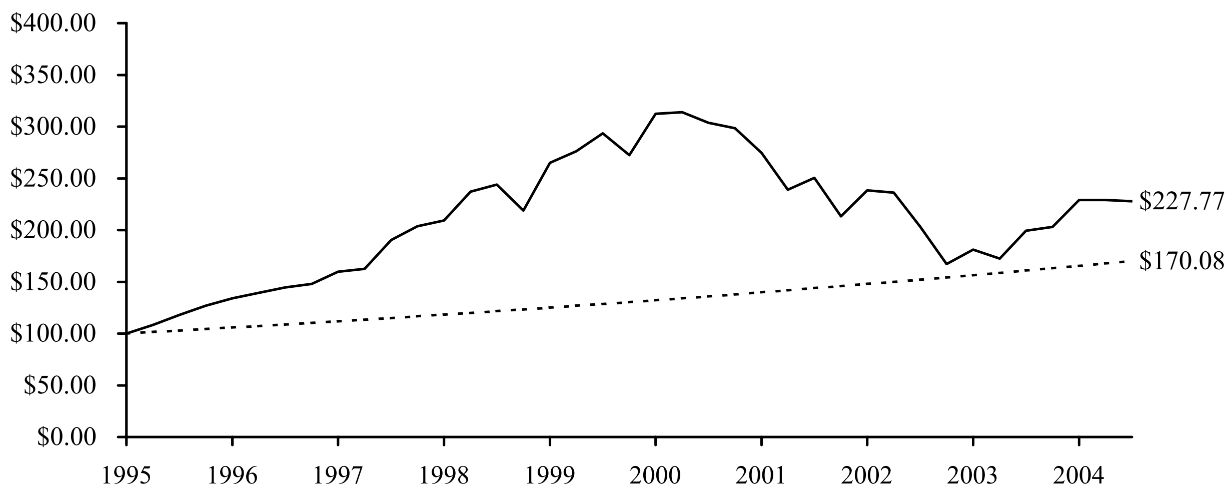
Exhibit 4

REAL CUMULATIVE WEALTH OF THE S&P 500 INDEX

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

January 1, 1995 - December 31, 1999

January 1, 1995 - May 31, 2004



Sources: Bureau of Labor Statistics and Standard & Poor's.

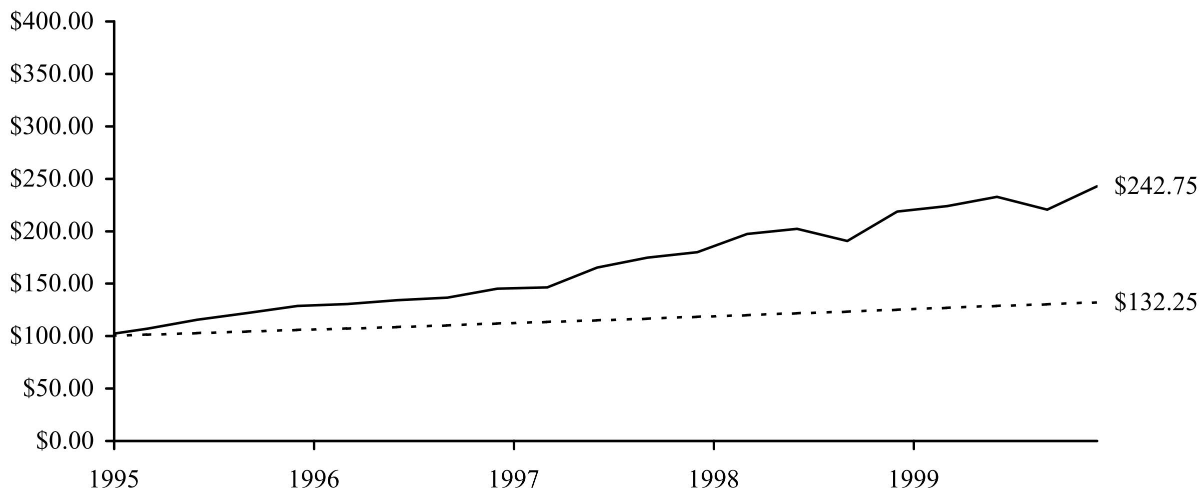
Notes: The solid lines represents the real cumulative wealth of the S&P 500 based on real quarterly returns. The dotted lines represent the cumulative wealth given a constant average annual compound return of 5.75% (1.41% per quarter). Real returns for May 31, 2004 are based on CPI-U data as of April 30, 2004.

Exhibit 5

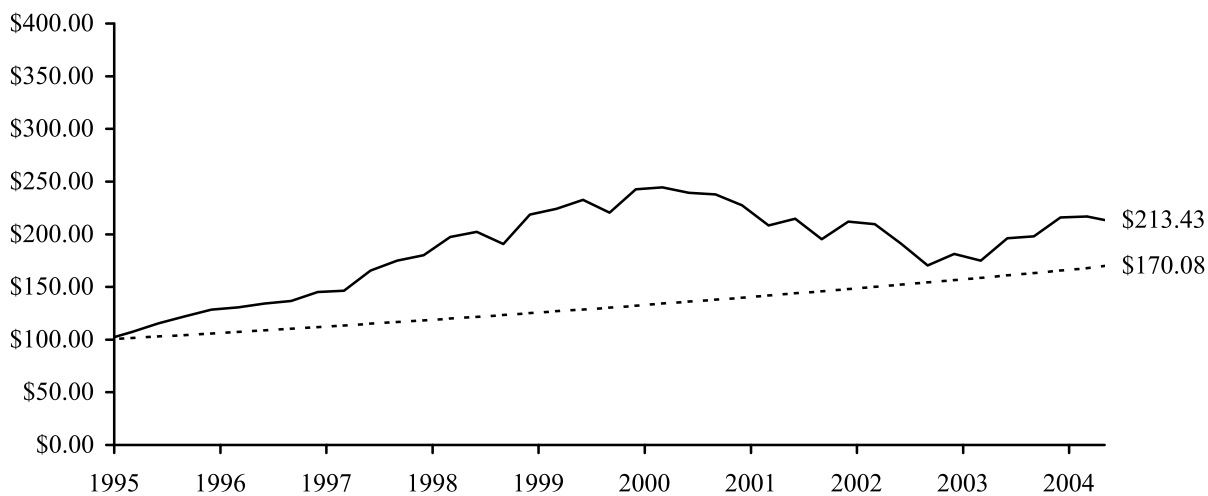
REAL CUMULATIVE WEALTH OF A REBALANCED PORTFOLIO CONTAINING 70% S&P 500 AND 30% BONDS

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

January 1, 1995 - December 31, 1999



January 1, 1995 - May 31, 2004



Sources: Bureau of Labor Statistics, Lehman Brothers, Inc., and Standard & Poor's.

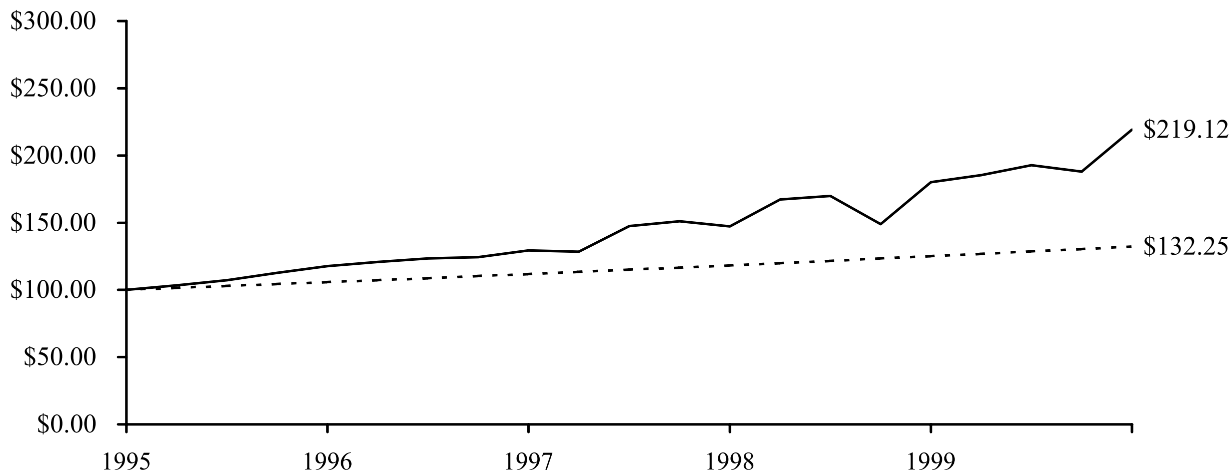
Notes: The solid lines represents the real cumulative wealth of a portfolio containing 70% S&P 500/30% Lehman Brothers Government/Credit Bond Index, based on real quarterly returns. The dotted lines represent the cumulative wealth given a constant average annual compound return of 5.75% (1.41% per quarter). Real returns for May 31, 2004 are based on CPI-U data as of April 30, 2004.

Exhibit 6

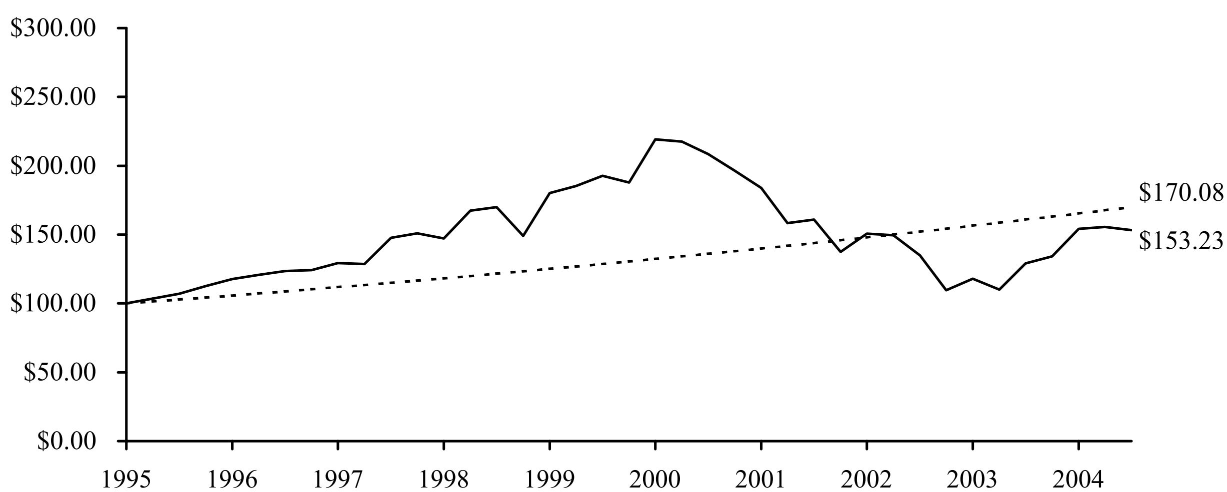
REAL CUMULATIVE WEALTH OF THE MSCI WORLD INDEX

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

January 1, 1995 - December 31, 1999



January 1, 1995 - May 31, 2004



Sources: Bureau of Labor Statistics and Morgan Stanley Capital International. MSCI data provided "as is" without any express or implied warranties.

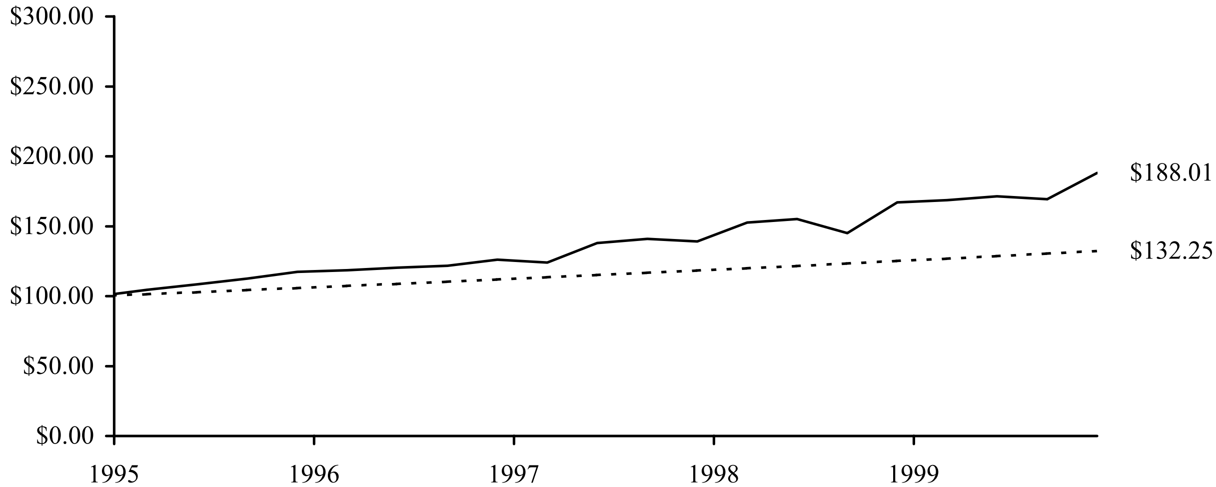
Notes: The solid lines represents the real cumulative wealth of the MSCI World Index based on real quarterly returns. The dotted lines represent the cumulative wealth given a constant average annual compound return of 5.75% (1.41% per quarter). Real returns for May 31, 2004 are based on CPI-U data as of April 30, 2004.

Exhibit 7

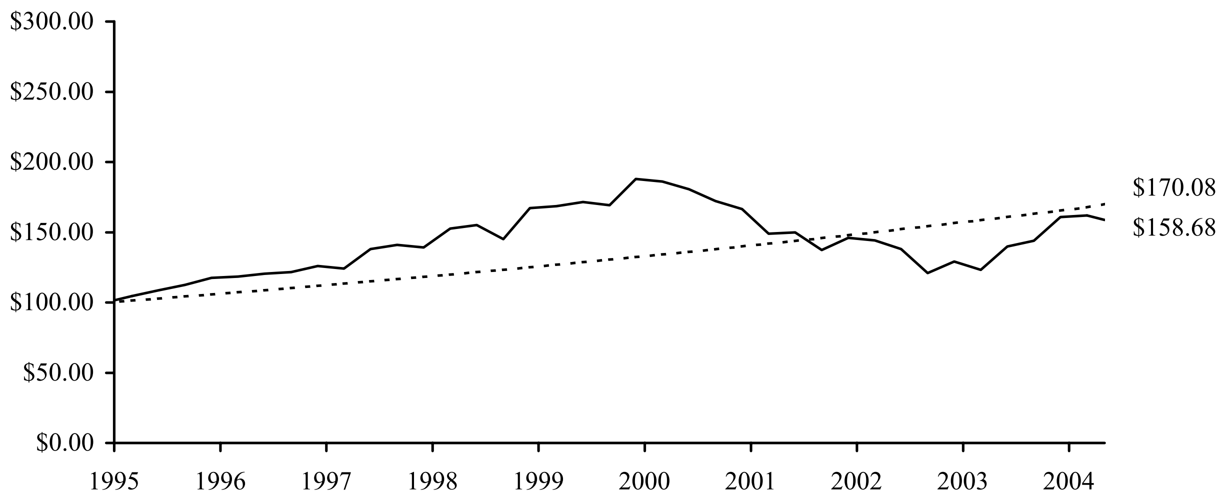
REAL CUMULATIVE WEALTH OF A REBALANCED PORTFOLIO CONTAINING 70% MSCI WORLD AND 30% GLOBAL BONDS

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

January 1, 1995 - December 31, 1999



January 1, 1995 - May 31, 2004



Sources: Bureau of Labor Statistics, Lehman Brothers, Inc., and Morgan Stanley Capital International. MSCI data provided "as is" without any express or implied warranties.

Notes: The solid lines represents the real cumulative wealth of a portfolio containing 70% MSCI World/30% Lehman Brothers Global Aggregate Bond Index, based on real quarterly returns. The dotted lines represent the cumulative wealth given a constant average annual compound return of 5.75% (1.41% per quarter). Real returns for May 31, 2004 are based on CPI-U data as of April 30, 2004.

Exhibit 8

FIFTEEN BEAR MARKET RALLIES IN U.S. EQUITIES

1926-2004

Equity Market Peaks & Troughs						Bear Market Statistics		Cumulative Performance From Bear Market Low								
								1 Year Later			2 Years Later			3 Years Later		
Date of Market Peak	Market Peak Level	Peak P/E	Date of Market Trough	Market Trough Level	Trough P/E	Peak To Trough Perf. (%)	Duration of Bear Mkt (mos.)	Perf. (%)	P/E	Earnings Growth (%)	Perf. (%)	P/E	Earnings Growth (%)	Perf. (%)	P/E	Earnings Growth (%)
9/7/29	31.92	20.8	7/8/32	4.41	8.6	-86	34.0	172.0	24.4	-16.7	124.0	21.4	-8.8	141.0	12.5	58.8
7/18/33	12.20	28.5	3/14/35	8.06	12.4	-34	20.0	81.0	18.7	20.0	127.0	16.8	66.2	34.0	10.8	57.4
3/10/37	18.68	17.3	3/31/38	8.50	8.8	-54	12.5	29.0	17.5	-26.8	44.0	12.3	2.1	17.0	9.4	9.3
11/9/38	13.79	22.0	4/28/42	7.47	7.3	-46	41.5	54.0	10.6	5.9	59.0	12.8	-9.2	98.0	14.7	-4.6
5/29/46	19.25	22.4	6/13/49	13.55	5.7	-30	36.5	42.0	7.4	3.8	59.0	8.0	15.2	80.0	10.1	-1.4
8/2/56	49.75	14.0	10/22/57	38.98	11.3	-22	14.5	31.0	17.7	-16.1	44.0	16.7	-0.6	37.0	16.4	-4.8
12/12/61	72.64	23.1	6/26/62	52.32	15.1	-28	6.5	33.0	18.3	10.7	56.0	18.5	24.8	59.0	17.6	39.5
2/9/66	94.06	18.0	10/7/66	73.20	13.3	-22	8.0	33.0	18.1	-3.8	42.0	17.9	2.7	27.0	16.0	6.9
11/29/68	108.37	18.9	5/26/70	69.29	12.5	-36	18.0	44.0	19.2	-4.9	60.0	18.2	6.5	56.0	15.1	27.5
1/11/73	120.24	18.7	10/3/74	62.28	6.8	-48	20.5	38.0	10.9	-14.8	67.0	11.0	4.8	55.0	9.0	17.6
9/21/76	107.83	11.3	3/6/78	86.90	8.0	-19	17.5	13.0	7.6	18.9	25.0	7.6	38.8	49.0	8.8	34.4
11/28/80	140.52	9.5	8/12/82	102.42	7.3	-27	20.5	58.0	13.0	-8.2	62.0	9.3	16.8	83.0	12.4	10.9
8/25/87	336.77	21.9	12/4/87	223.92	13.2	-34	3.5	21.0	11.6	38.1	57.0	14.7	36.6	46.0	14.7	26.7
7/16/90	368.95	17.2	10/11/90	295.46	13.6	-20	3.0	29.0	21.7	-18.0	36.0	23.2	-17.0	56.0	22.5	-6.1
3/24/00	1527.46	30.0	10/9/02	776.76	25.6	-49	30.5	33.7	27.0	24.5	---	---	---	---	---	---
				Average		-37.0	19.1	47.4	16.2	0.8	61.6	14.9	12.8	59.9	13.6	19.4
				Median		-33.5	18.0	33.7	17.7	-3.8	58.0	15.7	5.7	55.5	13.6	14.2

Sources: The Leuthold Group and Robert J. Shiller.

Notes: The price-earnings valuation data represent the market peak/trough price divided by beginning of month earnings for performance dated 1st through 15th and end-of-month earnings for performance dated 16th through 31st. For one-, two-, and three-year P/E levels, the price is month end, based on the rounding convention used with earnings (1st through 15th/16th through 31st).

Exhibit 9

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

As of May 31, 2004

		Five-Year Average Annual Earnings Growth Rate Assumptions		
		Average Earnings Growth (1960-03) *5.7%*	Forward Estimate *12.4%*	Average of Previous Five Years *6.5%*
P/E at the End of Five Years		**Five-Year Average Annual Compound Price Appreciation (%)**		
Current Normalized P/E Ratio	*26.2*	10.5	17.4	11.3
Current P/E	*21.0*	5.7	12.4	6.5
12-month forward P/E estimate	*16.5*	0.7	7.0	1.5
Average P/E Ratio (1960-05/31/2004)	*17.5*	1.8	8.3	2.6
Average plus one Standard Deviation	*24.7*	9.1	16.0	10.0
Average minus one Standard Deviation	*10.2*	-8.5	-2.7	-7.7

Sample Interpretation:
Given a particular earnings growth assumption and price-earnings ratio, this exhibit illustrates the expected average annual price change for the S&P 500. For example, if earnings grew by 12.4% over the next five years (current I/B/E/S consensus estimate), and the price-earnings ratio at the end of five years is equivalent to the current normalized price-earnings of 26.2, then the price of the S&P 500 would increase by 17.4% annually, over the next five years.

Sources: Calculated from data provided by Bureau of Labor Statistics, Puglisi & Co., Standard & Poor's, Standard & Poor's Compustat, and *The Wall Street Journal.*

Notes: Based on May 31, 2004, S&P 500 price of $1,121 and preliminary S&P 500 earnings per share of $53. The price-earnings ratio using normalized earnings is the real price divided by the trailing ten-year average of real earnings. I/B/E/S earnings estimates have historically been twice as high as actual earnings.
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Exhibit 10

U.S. EQUITY REALIZED AND COMPONENT RETURNS

				Realized Returns			Component Returns[2]		
				Real AACR (%)					
Period[1]	Duration In Years	Beginning P/E	End P/E	Equities	Bonds	Equity Risk Premium (%)	Avg. Div Yld	Real Compound Earnings Growth	Estimated AACR
1901-87	87	14.3	14.1	6.1	1.7	4.4	4.8	1.1	5.9
1902-69	68	15.9	15.9	6.5	1.4	5.2	5.0	1.4	6.4
1903-54	52	12.8	13.0	6.4	2.4	4.0	5.5	0.7	6.2
1904-55	52	12.4	12.6	7.3	2.5	4.9	5.5	1.7	7.1
1905-86	82	16.8	16.7	6.1	1.7	4.4	4.9	1.1	6.0
1908-53	46	9.9	9.9	6.4	2.4	4.0	5.6	0.6	6.3
1909-90	82	15.6	15.5	6.1	1.7	4.4	4.8	1.1	5.9
1910-56	47	13.6	13.7	6.5	1.9	4.7	5.6	0.8	6.4
1912-89	78	15.4	15.4	6.3	1.6	4.7	4.8	1.4	6.2
1920-80	61	9.6	9.2	6.9	1.4	5.5	4.7	2.1	6.8
1921-77	57	8.5	8.7	7.5	2.2	5.3	4.7	2.6	7.2
1925-76	52	10.9	10.8	7.0	1.6	5.4	4.6	2.2	6.8
1926-84	59	10.0	10.1	6.2	1.2	5.0	4.6	1.4	6.0
1927-82	56	10.9	11.1	5.9	0.8	5.1	4.6	1.1	5.7
1928-69	42	15.9	15.9	7.0	1.0	6.0	4.7	2.1	6.8
1934-92	59	22.9	22.8	6.9	1.2	5.8	4.3	2.4	6.7
1935-96	62	19.4	19.1	7.6	1.3	6.3	4.2	3.1	7.3
1940-83	44	11.8	11.8	6.0	-1.2	7.2	4.4	1.4	5.8
1945-85	41	14.3	14.5	6.8	-0.3	7.1	4.2	2.3	6.5
Average	59	13.7	13.7	6.6	1.4	5.2	4.8	1.6	6.4
1900-2003	104	14.3	28.3	6.6	2.4	4.2	4.4	1.3	5.7
1900-1951	52	14.3	9.7	5.9	2.4	3.5	5.4	0.9	6.4
1952-2003	52	11.1	28.3	7.4	2.5	4.9	3.4	1.6	5.0

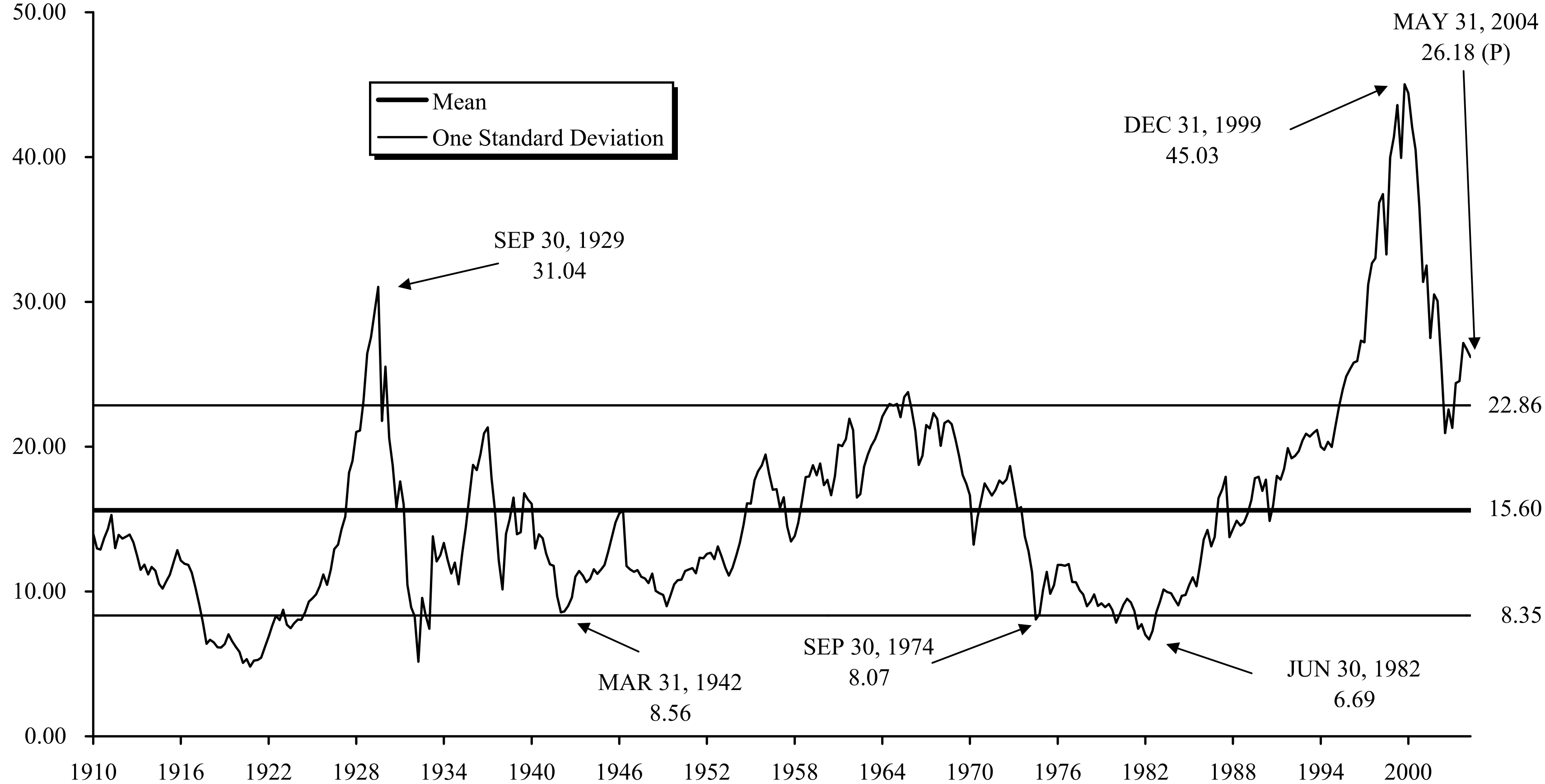
Sources: Calculated from data provided by Bureau of Labor Statistics, *Common-Stock Indexes* (Cowles Commission), Robert Shiller, Standard & Poor's, Standard & Poor's Compustat, and *The Wall Street Journal.*

[1] Period Criteria: Duration of at least 40 years; no two periods can begin or end in same year; P/E ratio same at beginning and end or within 0.5.

[2] Component returns are based on what investors would have earned based on the average dividend yield over the period plus compound real earnings growth. While this is a common proxy for estimating future equity returns, we are using it to determine how much multiple expansion contributed to actual returns; hence the use of compound (geometric) rather than arithmetic averages.

Exhibit 11

S&P 500 NORMALIZED REAL PRICE-EARNINGS RATIOS SINCE 1910



Sources: Calculated from data provided by Bureau of Labor Statistics, *Irrational Exuberance* (Robert J. Shiller), Standard & Poor's, Standard & Poor's Compustat, and *The Wall Street Journal.*

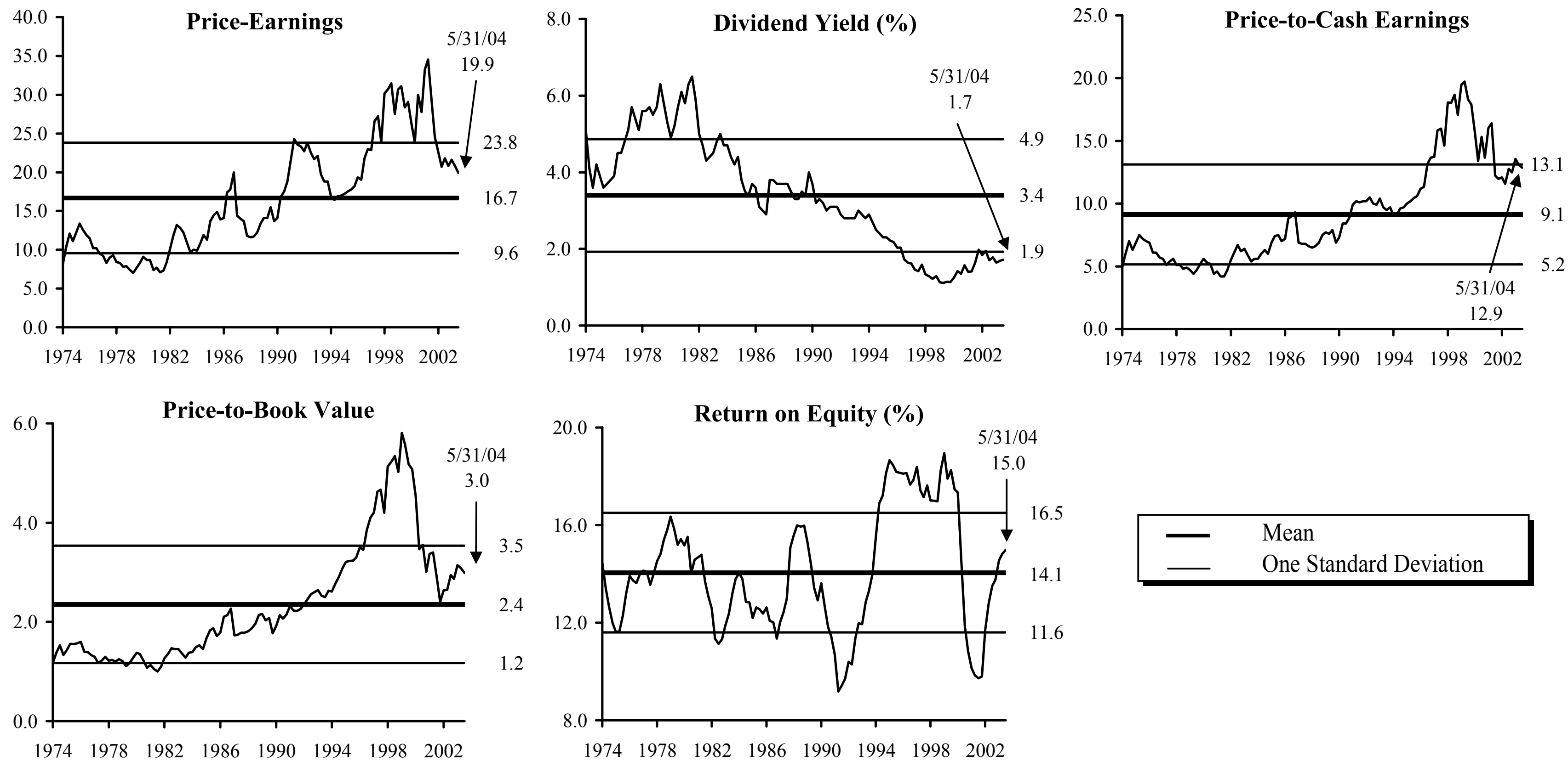
Notes: (P) Preliminary. Normalized real price-earnings ratios for the S&P 500 are calculated by dividing the current index value by the annualized average real earnings for the trailing ten years. CPI-U data are through April 30, 2004. Graph represents quarterly data through 2004. Data for 2004 are through May 31.

Exhibit 12

GLOBAL EQUITY MARKET VALUATIONS

MSCI United States

December 31, 1974 - May 31, 2004



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

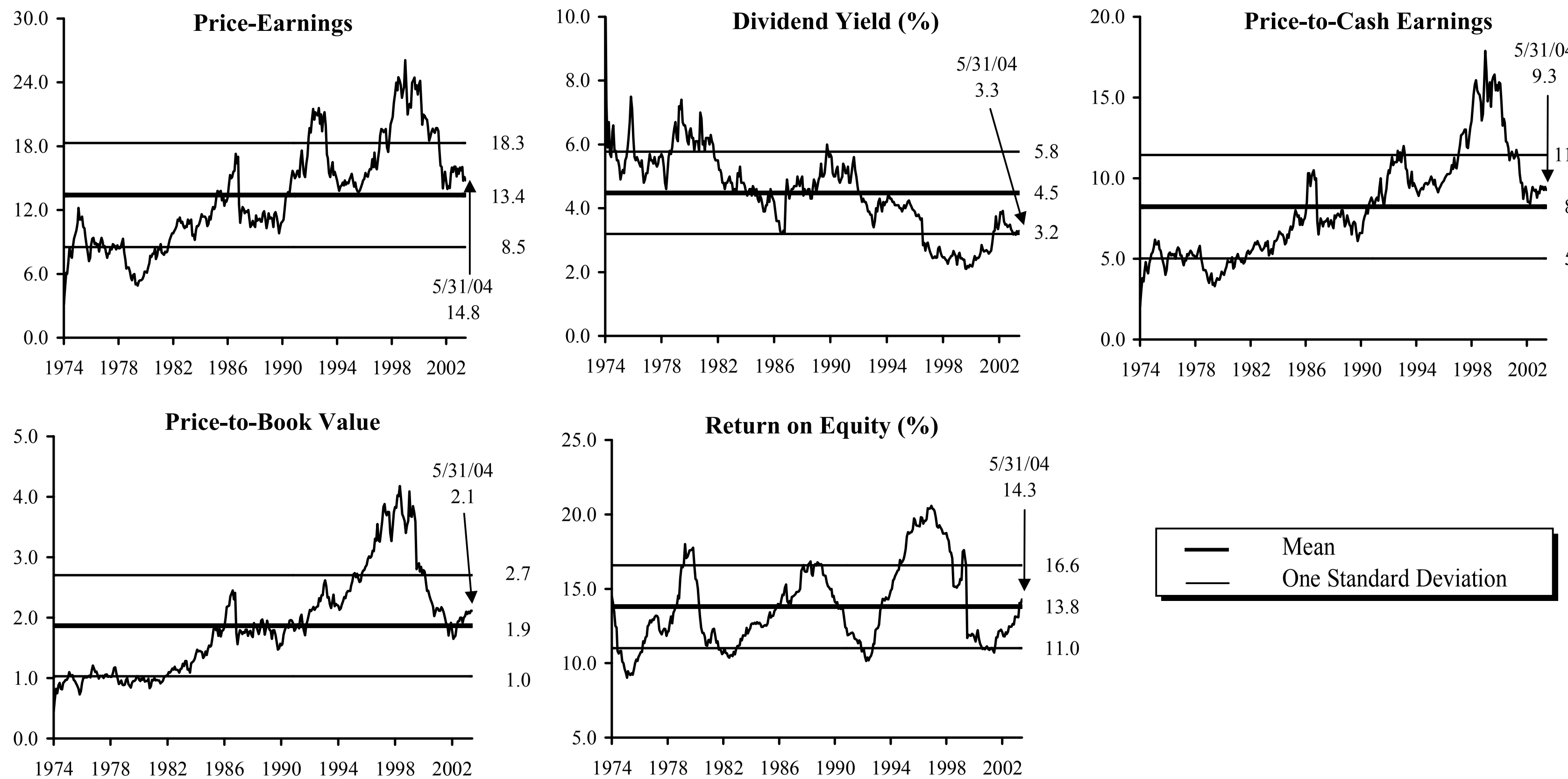
Notes: ROE is calculated by dividing the earnings per share by the book value per share. Book value per share is calculated by dividing the index price by its price-book ratio. Earnings per share is calculated by dividing the price index by its price-earnings ratio.

Exhibit 13

GLOBAL EQUITY MARKET VALUATIONS

MSCI United Kingdom

December 31, 1974 - May 31, 2004



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

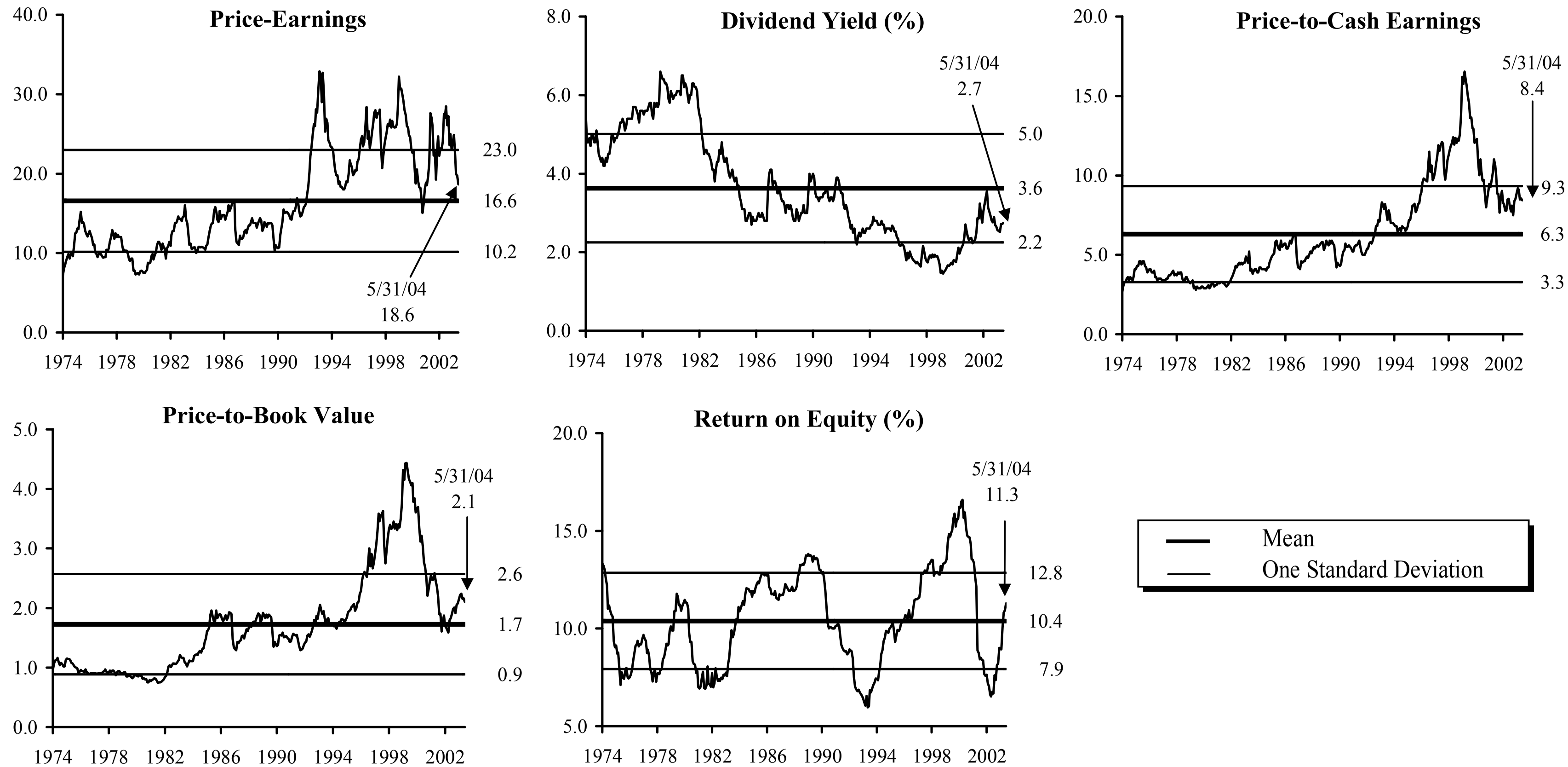
Notes: ROE is calculated by dividing the earnings per share by the book value per share. Book value per share is calculated by dividing the index price by its price-book ratio. Earnings per share is calculated by dividing the price index by its price-earnings ratio.

Exhibit 14

GLOBAL EQUITY MARKET VALUATIONS

MSCI Europe ex U.K.

December 31, 1974 - May 31, 2004



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

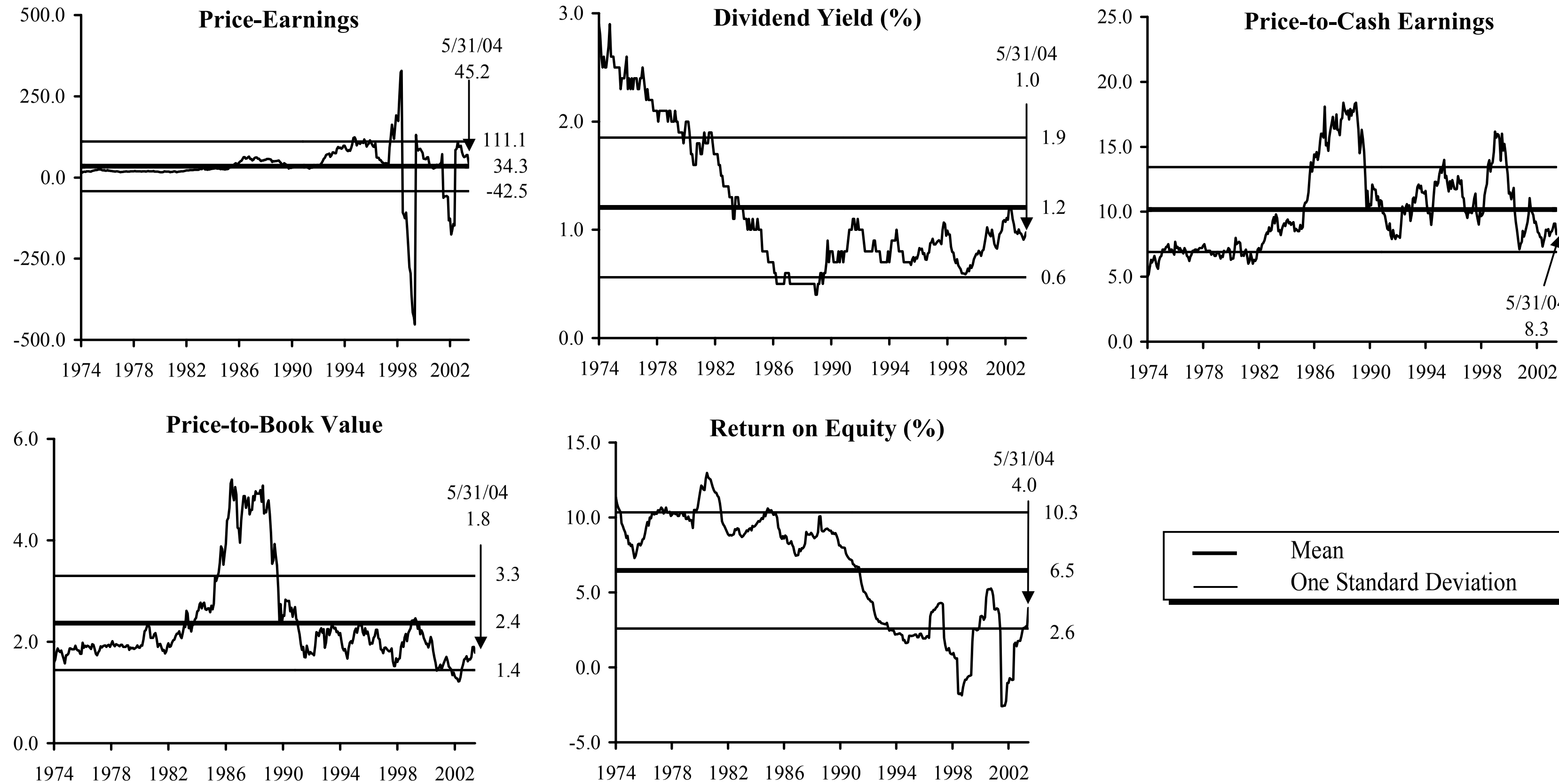
Notes: ROE is calculated by dividing the earnings per share by the book value per share. Book value per share is calculated by dividing the index price by its price-book ratio. Earnings per share is calculated by dividing the price index by its price-earnings ratio.

Exhibit 15

GLOBAL EQUITY MARKET VALUATIONS

MSCI Japan

December 31, 1974 - May 31, 2004



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

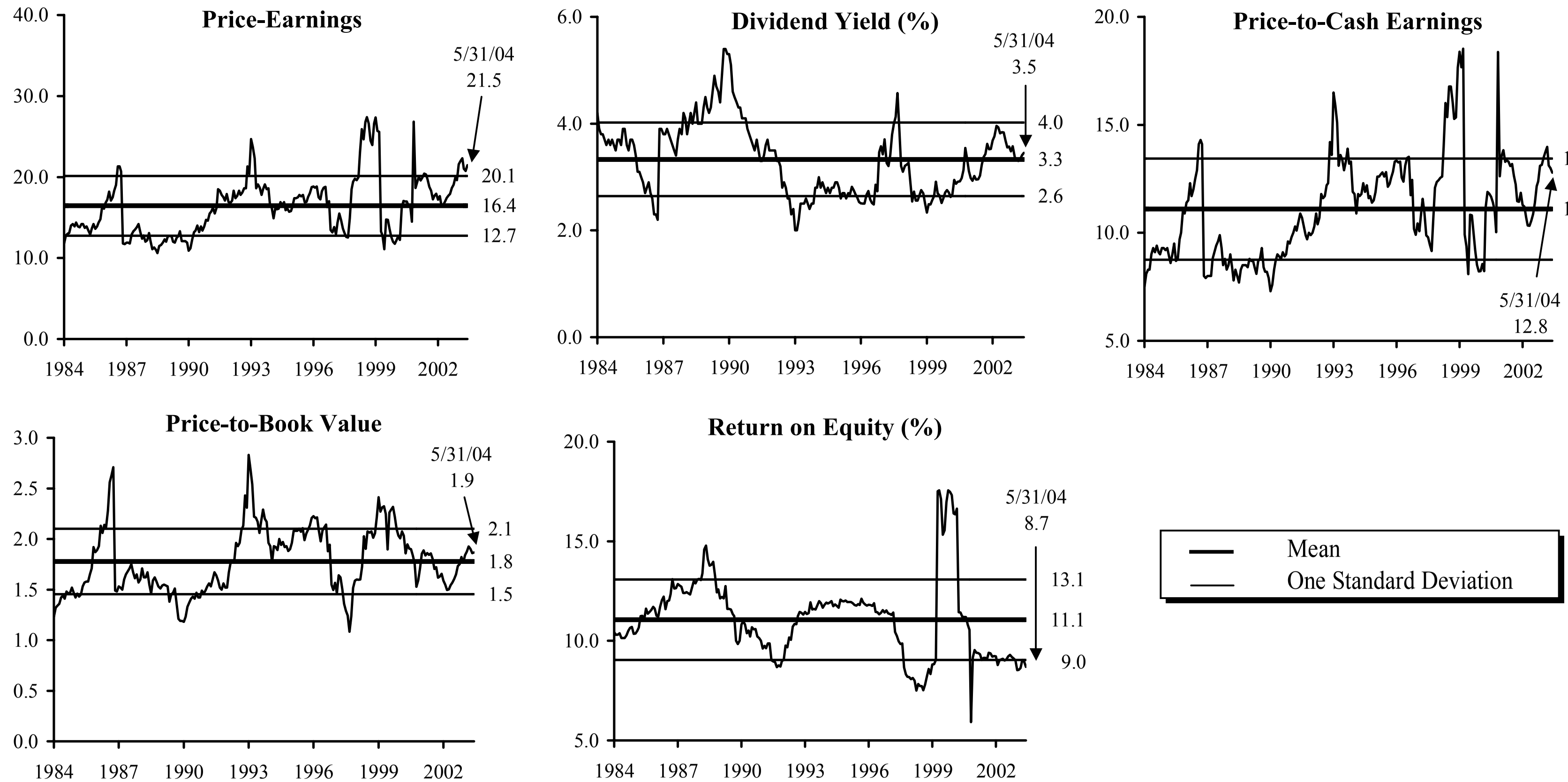
Notes: ROE is calculated by dividing the earnings per share by the book value per share. Book value per share is calculated by dividing the index price by its price-book ratio. Earnings per share is calculated by dividing the price index by its price-earnings ratio.

Exhibit 16

GLOBAL EQUITY MARKET VALUATIONS

MSCI Pacific ex Japan

December 31, 1984 - May 31, 2004



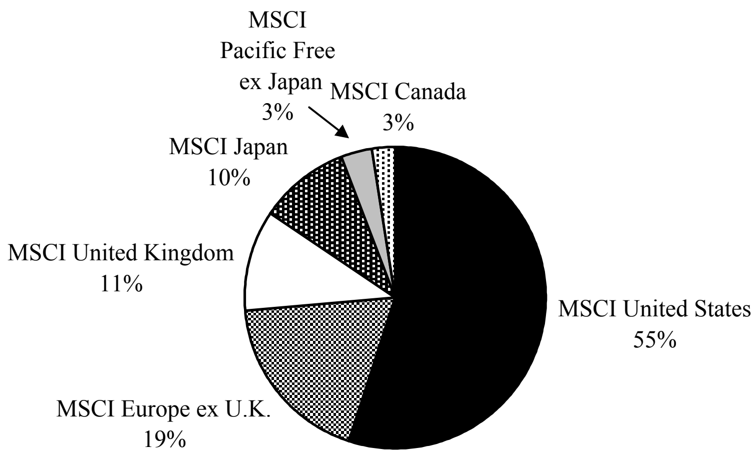
Sources: Morgan Stanley Capital International and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: ROE is calculated by dividing the earnings per share by the book value per share. Book value per share is calculated by dividing the index price by its price-book ratio. Earnings per share is calculated by dividing the price index by its price-earnings ratio.

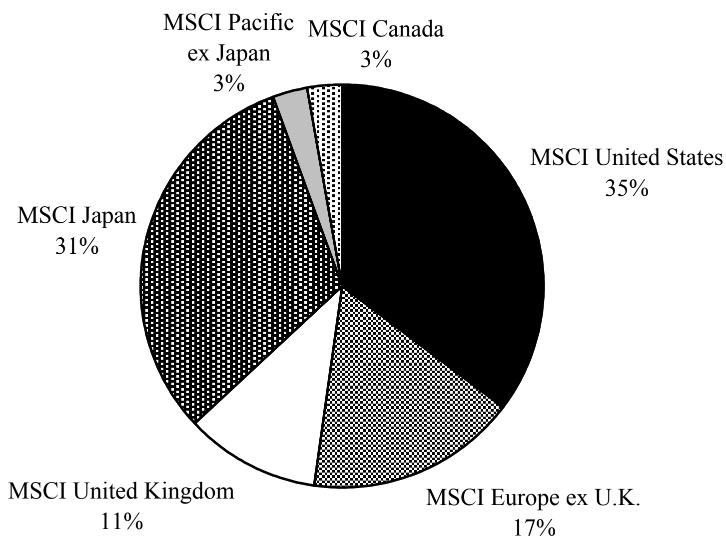
Exhibit 17

GROWTH AND WEIGHTING OF MSCI WORLD EQUITY MARKET INDICES

May 31, 2004
Total Market Cap $18.1 Trillion



December 31, 1990
Total Market Cap $4.9 Trillion



Sources: Morgan Stanley Capital International and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.
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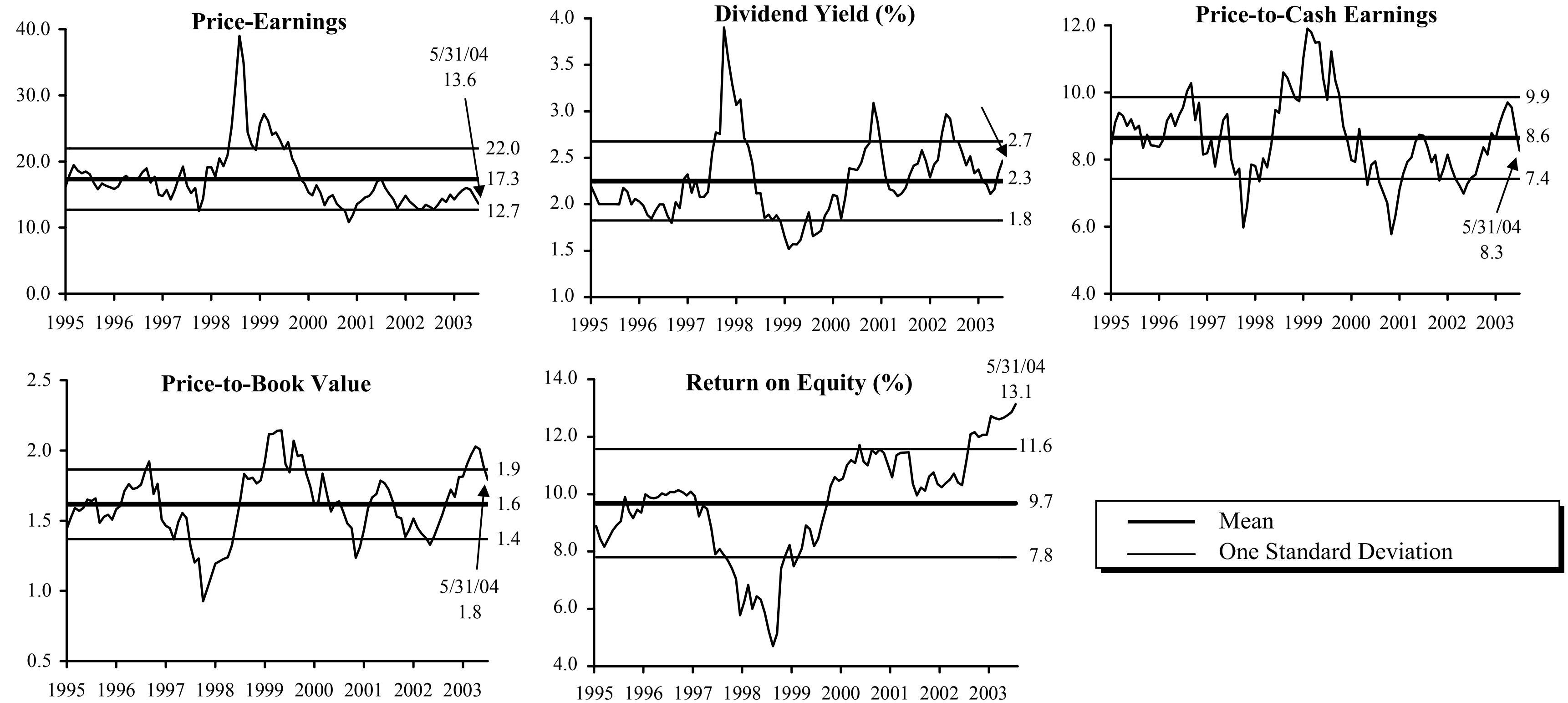
Exhibit 18

GLOBAL EQUITY MARKET VALUATIONS

MSCI Emerging Markets

November 30, 1995 - May 31, 2004



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

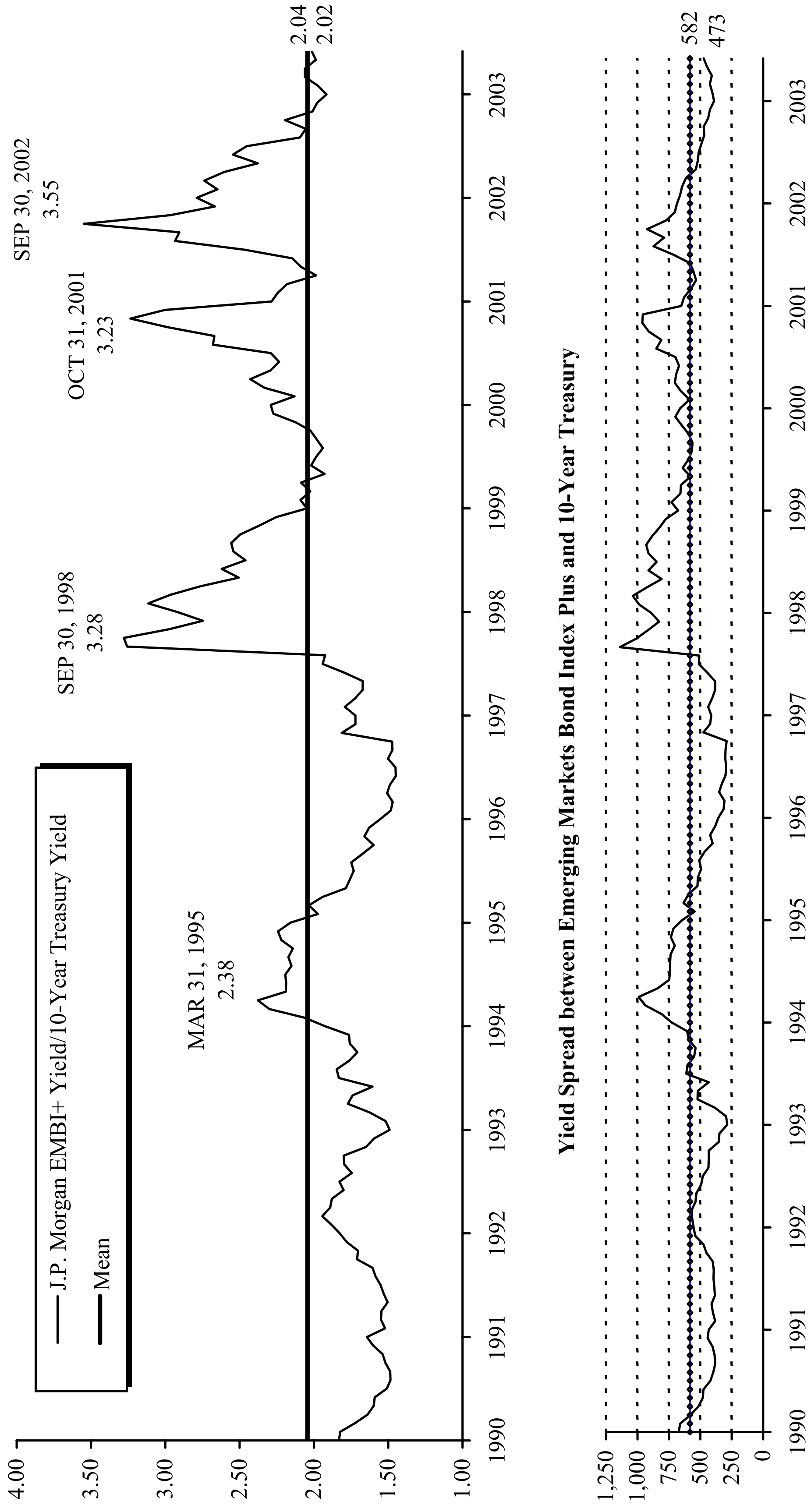
Notes: ROE is calculated by dividing the earnings per share by the book value per share. Book value per share is calculated by dividing the index price by its price-book ratio. Earnings per share is calculated by dividing the price index by its price-earnings ratio. As of January 29, 2004, MSCI renamed all regional Emerging Markets and All Country Indices so that the suffix "free" no longer appears in the index name.

385q

Exhibit 19

RATIO OF J.P. MORGAN EMERGING MARKETS BOND INDEX PLUS YIELDS TO YIELDS OF TEN-YEAR TREASURIES

December 31, 1990 - May 31, 2004

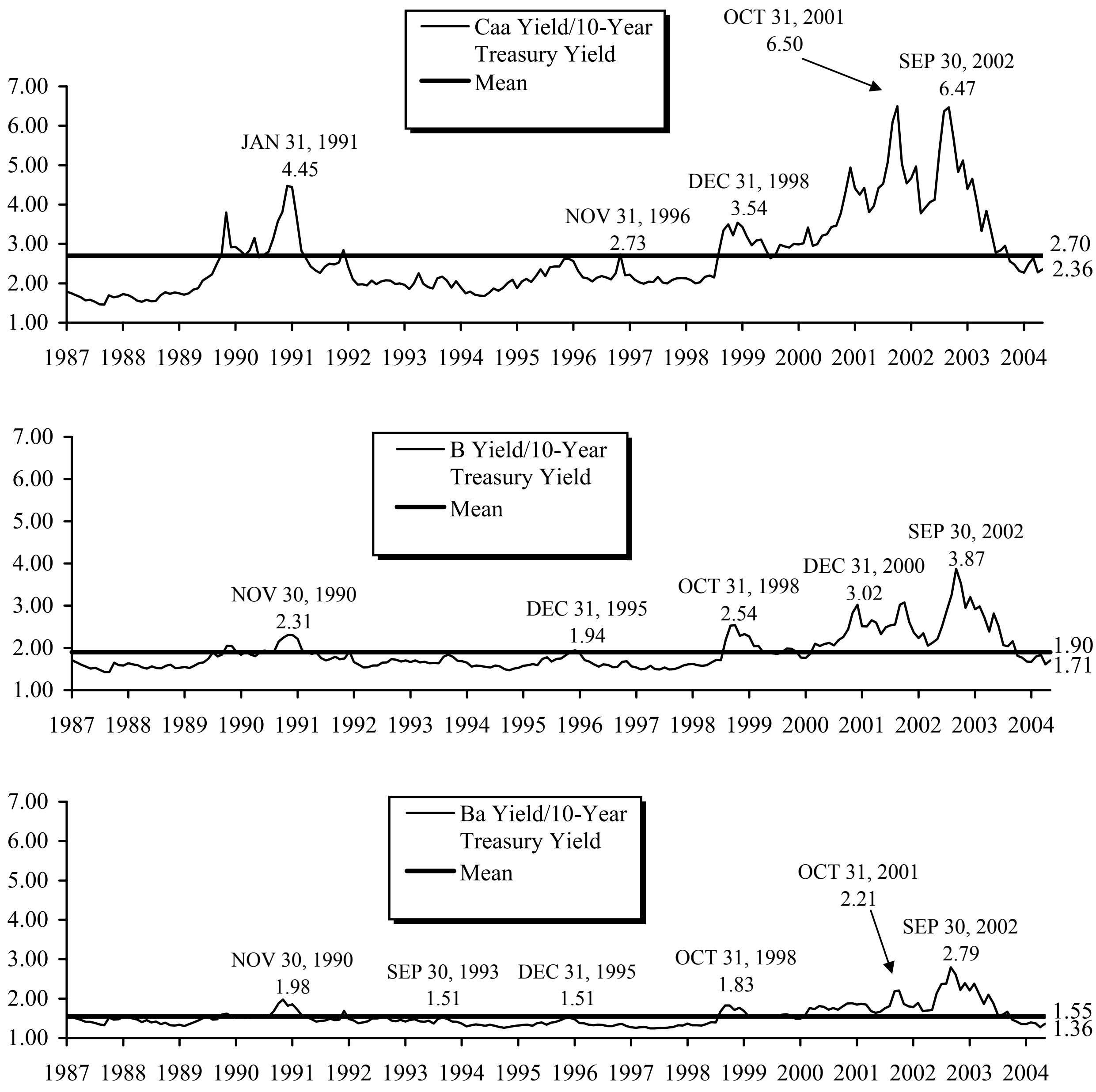


Sources: J.P. Morgan Securities, Inc. and Thomson Datastream.
384m

Exhibit 20

RATIO OF HIGH-YIELD BOND YIELDS TO YIELDS OF TEN-YEAR TREASURIES

January 31, 1987 - May 31, 2004



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

Note: Yield ratios are based on the ratio 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.
233m