

# Asset Allocation: Theory and Practice in Today's Markets



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# Your Investing Enemies

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- ◆ Gut Instincts
- ◆ Intuition
- ◆ Friends and Family
- ◆ Improper goal setting (or lack thereof ...)
  - Goals should generally seek to:
    - *Improve long-term return potential*
    - *Reduce impact of volatility and risk*

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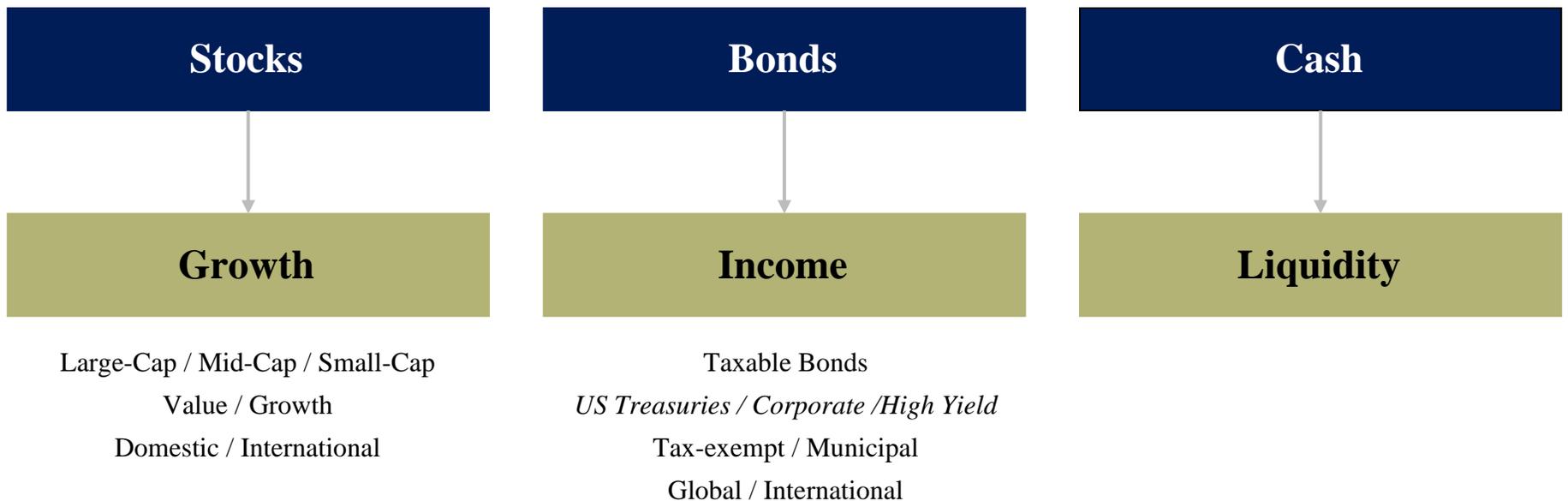
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# The Premise of Asset Allocation

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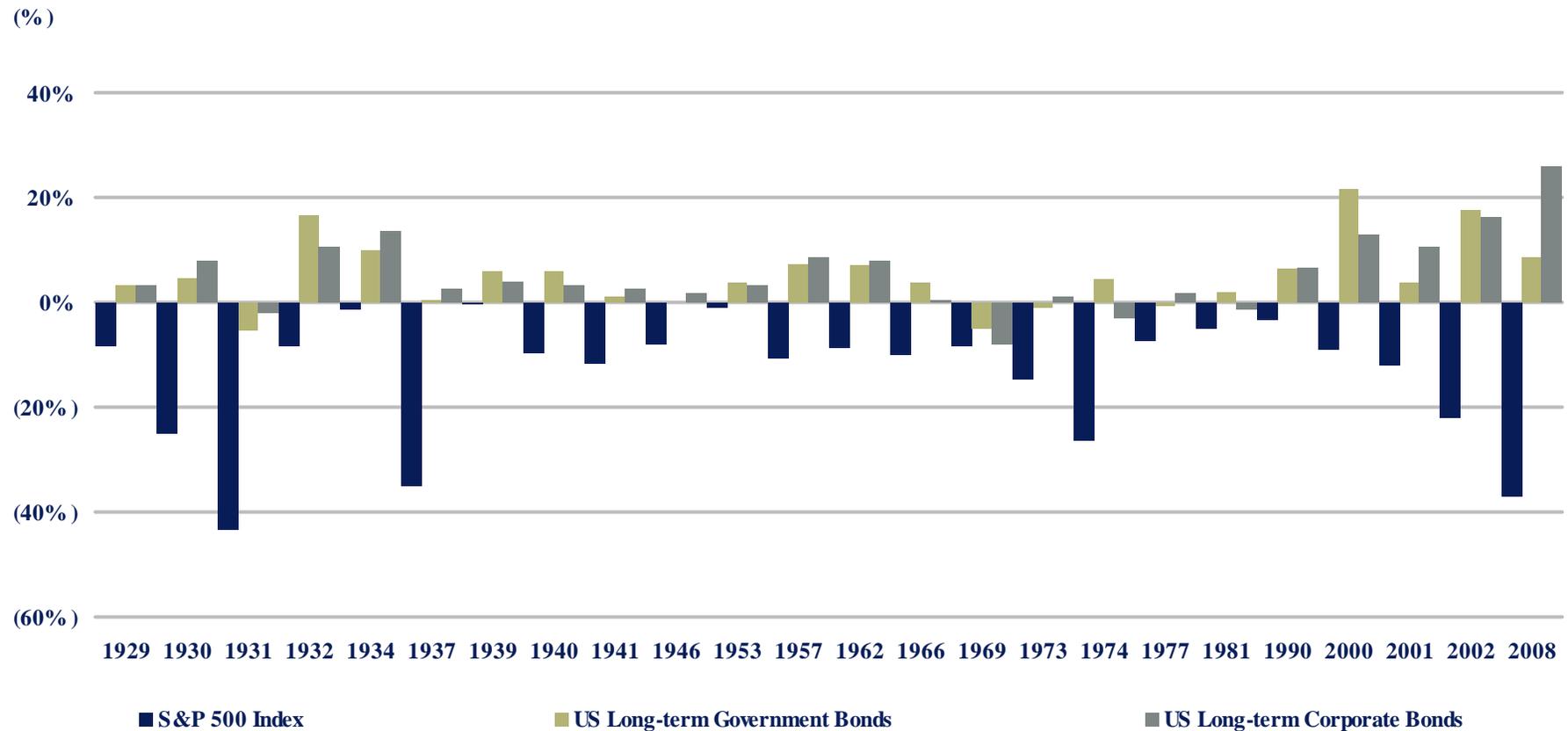
- ◆ Capitalize on low-correlation of asset classes
  - Mitigate single-class investment risk
  - Seek to offset losses in one asset class with gains in another
- ◆ Avoid market timing and its pitfalls
- ◆ Diversify among three main asset classes



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# Low-Correlation of Asset Classes

## When Stocks Fell, Bonds were Typically Positive



Source: Ibbotson Associates, Morningstar. Selected years shown represent all calendar years from 1929–2009 in which the S&P 500 Index had a negative total return. US Long-term Government Bonds are represented by the 20-year US Government Bond and US Long-term Corporate Bonds are represented by the Citigroup US Broad Investment Grade Index. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures section at the end of this material, which is an important part of this presentation

# Comparative Equity Returns

## The Callan periodic table of investment returns

### Annual Returns for Key Indices (1991–2010) Ranked in Order of Performance

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MSCI Emerging Markets Value 59.91%	Russell 2000 Value 29.14%	MSCI Emerging Markets Value 74.84%	MSCI EAFE Growth 7.78%	S&P/Citi 500 Growth 38.13%	S&P/Citi 500 Growth 23.97%	S&P/Citi 500 Growth 36.52%	S&P/Citi 500 Growth 42.16%	MSCI Emerging Markets Value 66.42%	Russell 2000 Value 22.83%	Russell 2000 Value 14.02%	BC Agg 10.26%	MSCI Emerging Markets Value 56.28%	MSCI Emerging Markets Value 25.95%	MSCI Emerging Markets Value 34.54%	MSCI Emerging Markets Value 32.59%	MSCI Emerging Markets Value 39.78%	BC Agg 5.24%	MSCI Emerging Markets Value 79.02%	Russell 2000 Growth 29.09%
Russell 2000 Growth 51.19%	Russell 2000 Value 18.41%	MSCI EAFE Growth 32.57%	S&P/Citi 500 Growth 3.13%	S&P 500 Value 37.58%	S&P 500 Value 22.96%	S&P 500 Value 33.36%	S&P 500 Value 28.58%	Russell 2000 Growth 43.09%	BC Agg 11.63%	BC Agg 8.43%	MSCI Emerging Markets Value -6.00%	Russell 2000 Growth 48.54%	Russell 2000 Value 22.25%	MSCI EAFE Growth 13.54%	MSCI EAFE Value 26.34%	MSCI EAFE Growth 11.17%	Russell 2000 Value -28.92%	Russell 2000 Growth 34.47%	Russell 2000 Value 26.85%
Russell 2000 Value 46.04%	MSCI Emerging Markets Value 11.40%	Russell 2000 Value 23.77%	S&P 500 Value 1.32%	S&P/Citi 500 Value 36.99%	S&P/Citi 500 Value 22.00%	Russell 2000 Value 31.78%	MSCI EAFE Value 20.00%	S&P/Citi 500 Value 28.24%	S&P/Citi 500 Value 6.08%	Russell 2000 Value 2.49%	Russell 2000 Value -11.43%	Russell 2000 Value 47.25%	MSCI EAFE Value 20.25%	S&P/Citi 500 Value 5.82%	Russell 2000 Value 23.48%	S&P/Citi 500 Growth 9.13%	Russell 2000 Value -33.79%	MSCI EAFE Value 31.78%	Russell 2000 Value 24.50%
Russell 2000 Value 41.70%	S&P/Citi 500 Value 10.52%	Russell 2000 Value 18.88%	S&P/Citi 500 Value -0.64%	Russell 2000 Growth 31.04%	Russell 2000 Value 21.37%	Russell 2000 Value 29.98%	S&P/Citi 500 Value 14.69%	MSCI EAFE Value 26.96%	Russell 2000 Value -3.02%	MSCI Emerging Markets Value -2.37%	MSCI EAFE Value -15.94%	Russell 2000 Value 46.03%	Russell 2000 Value 18.33%	S&P 500 Value 4.91%	Russell 2000 Value 20.81%	Russell 2000 Growth 7.05%	S&P/Citi 500 Growth -34.92%	S&P/Citi 500 Growth 31.57%	MSCI Emerging Markets Value 19.20%
S&P/Citi 500 Growth 38.37%	Russell 2000 Growth 7.77%	S&P/Citi 500 Value 18.61%	Russell 2000 Value -1.54%	Russell 2000 Value 28.45%	Russell 2000 Value 16.49%	Russell 2000 Value 22.36%	BC Agg 8.70%	Russell 2000 Value 21.26%	S&P 500 Value -9.11%	Russell 2000 Growth -9.23%	Russell 2000 Value -20.48%	MSCI EAFE Value 38.59%	S&P/Citi 500 Value 15.71%	Russell 2000 Value 4.71%	Russell 2000 Value 18.37%	BC Agg 6.97%	S&P 500 Value -37.00%	Russell 2000 Value 27.17%	S&P/Citi 500 Value 15.10%
S&P 500 Value 30.47%	S&P 500 Value 7.62%	Russell 2000 Growth 13.37%	Russell 2000 Value -1.82%	Russell 2000 Value 25.75%	Russell 2000 Growth 11.26%	Russell 2000 Growth 12.95%	Russell 2000 Growth 1.23%	S&P 500 Value 21.04%	MSCI EAFE Value -14.17%	S&P/Citi 500 Value -11.71%	S&P/Citi 500 Value -20.85%	S&P/Citi 500 Value 31.79%	Russell 2000 Growth 14.31%	Russell 2000 Value 4.55%	S&P 500 Value 15.79%	S&P 500 Value 5.49%	Russell 2000 Growth -38.54%	S&P 500 Value 26.47%	S&P 500 Value 15.06%
S&P/Citi 500 Value 22.56%	BC Agg 7.40%	S&P 500 Value 10.08%	Russell 2000 Growth -2.43%	BC Agg 18.46%	MSCI EAFE 6.05%	BC Agg 9.64%	Russell 2000 Value -2.55%	S&P/Citi 500 Value 12.73%	S&P/Citi 500 Growth -22.08%	S&P 500 Value -11.89%	S&P 500 Value -22.10%	S&P 500 Value 28.68%	S&P 500 Value 10.88%	Russell 2000 Growth 4.15%	Russell 2000 Growth 13.35%	S&P/Citi 500 Value 1.99%	S&P/Citi 500 Value -39.22%	S&P/Citi 500 Value 21.17%	S&P/Citi 500 Growth 15.05%
BC Agg 16.00%	S&P/Citi 500 Growth 5.06%	BC Agg 9.75%	BC Agg -2.92%	MSCI EAFE 11.21%	MSCI Emerging Markets 6.03%	MSCI EAFE 1.78%	Russell 2000 Value -6.45%	BC Agg -0.82%	Russell 2000 Growth -22.43%	S&P/Citi 500 Growth -12.73%	S&P/Citi 500 Growth -23.59%	S&P/Citi 500 Value 25.66%	S&P/Citi 500 Growth 6.13%	S&P/Citi 500 Value 4.00%	S&P/Citi 500 Value 11.01%	Russell 2000 Growth -1.57%	MSCI EAFE -43.38%	Russell 2000 Value 20.58%	MSCI EAFE 7.75%
MSCI EAFE 12.14%	MSCI EAFE -12.18%	S&P/Citi 500 Growth 1.68%	MSCI Emerging Markets -7.32%	MSCI Emerging Markets -5.21%	BC Agg 3.64%	MSCI Emerging Markets -11.59%	MSCI Emerging Markets -25.34%	Russell 2000 Value -1.49%	MSCI Emerging Markets -30.61%	MSCI EAFE -21.44%	Russell 2000 Growth -30.26%	BC Agg 4.10%	BC Agg 4.34%	BC Agg 2.43%	BC Agg 4.33%	Russell 2000 Value -9.78%	MSCI Emerging Markets -53.18%	BC Agg 5.93%	BC Agg 6.54%

- **S&P 500** measures the performance of large capitalization US stocks. The S&P 500 is a market-value-weighted index of 500 stocks that are traded on the NYSE, AMEX and NASDAQ. The weightings make each company's influence on the Index performance directly proportional to that company's market value.
- **S&P/Citigroup 500 Growth** and ● **S&P/Citigroup 500 Value** measure the performance of the growth and value styles of investing in large cap US stocks. The indices are constructed by dividing the market capitalization of the S&P 500 Index into Growth and Value indices, using style "factors" to make the assignment. The Value index contains those S&P 500 securities with a greater-than-average value orientation, while the Growth index contains those securities with a greater-than-average growth orientation. The indices are market-capitalization-weighted. The constituent securities are not mutually exclusive.
- **Russell 2000** measures the performance of small capitalization US stocks. The Russell 2000 is a market-value-weighted index of the 2,000 smallest stocks in the broad-market Russell 3000 Index. These securities are traded on the NYSE, AMEX and NASDAQ.
- **Russell 2000 Value** and ● **Russell 2000 Growth** measure the performance of the growth and value styles of investing in small cap US stocks. The indices are constructed by dividing the market capitalization of the Russell 2000 Index into Growth and Value indices, using style "factors" to make the assignment. The Value index contains those Russell 2000 securities with a greater-than-average value orientation, while the Growth index contains those securities with a greater-than-average growth orientation. Securities in the Value index generally have lower price-to-book and price-earnings ratios than those in the Growth index. The indices are market-capitalization-weighted. The constituent securities are not mutually exclusive.
- **MSCI EAFE** is a Morgan Stanley Capital International Index that is designed to measure the performance of the developed stock markets of Europe, Australasia and the Far East.
- **MSCI Emerging Markets** is a Morgan Stanley Capital International Index that is designed to measure the performance of equity markets in 21 emerging countries around the world.
- **BC Agg** is the Barclays Capital Aggregate Bond Index (formerly the Lehman Brothers Aggregate Bond Index). This index includes US government, corporate and mortgage-backed securities with maturities of at least one year.

Source: Russell Investment Group, Standard & Poor's, MSCI, FTSE NAREIT, Neuberger Berman.  
 1. Data represented prior to December 31, 2005 was the S&P 500 / Barra Value and Growth Indexes; data thereafter represented by the S&P 500 / Citigroup Value and Growth Indexes.  
 This is for illustrative purposes only and not indicative of any investment. The data presented herein represents securities industry market data as of the dates specified. It does not represent Neuberger Berman performance nor does it reflect the fees and expenses associated with managing a portfolio. The material is based upon information that we consider reliable, but we do not represent that it is accurate or complete, and it should not be relied on as such. This material is not intended to be a formal research report and should not be construed as an offer to sell or the solicitation of an offer to buy any security. Indices are managed and the figures for the indices presented herein include reinvestment of all dividends and capital gain distributions and do not reflect any fees or expenses. Investors cannot invest directly in an index. Past performance is not indicative of future results. See Market Index Descriptions in the disclosures at the end of this presentation.

# Market Timing can Significantly Lower your Returns

## Annualized Returns for Hypothetical \$10,000 Investment in the S&P 500 (20 Years Ending September 30, 2011)

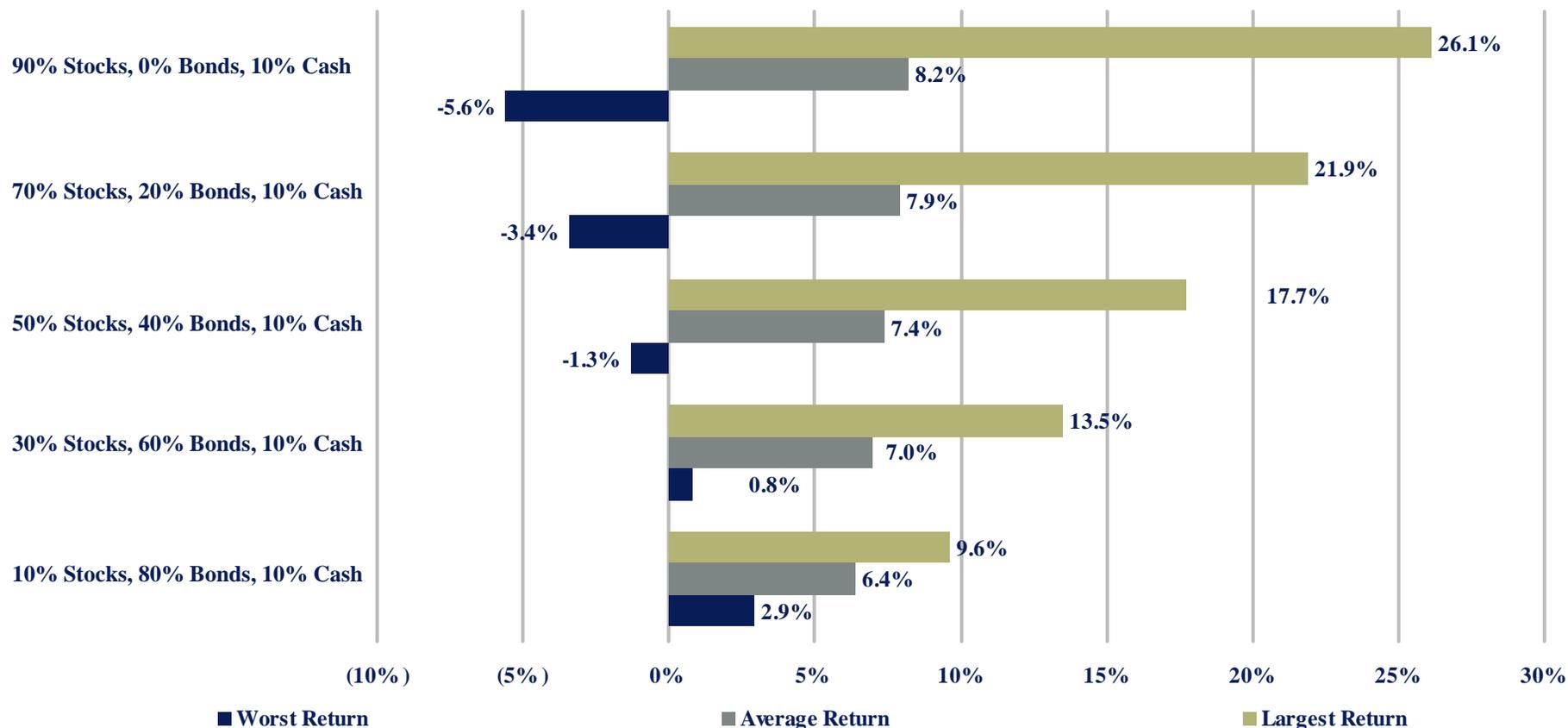
	End Value	Return
Fully invested	\$43,631	7.6 %
Minus 10 best days	\$21,774	4.0 %
Minus 20 best days	\$13,568	1.5 %
Minus 30 best days	\$8,991	-0.5 %

Source: Standard & Poor's, Neuberger Berman.

The hypothetical results presented herein are based on historical index data. The results do not represent the performance of any Neuberger Berman managed account or product and do not reflect the fees and expenses associated with managing a portfolio. These returns are used for discussion purposes only. They are not intended to represent, and should not be construed to represent a prediction of future rates of return. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures section at the end of this material, which is an important part of this presentation

# Asset Allocation: Risk and Reward

## 5-Year Returns for 20 Years Ended 9/30/2011



*Source: Ibbotson Associates, Morningstar. Portfolios rebalanced annually. Stocks are represented by the S&P 500 Index which is an unmanaged group of securities and considered to be representative of the stock market in general; Bonds are represented by the 5-year US Government Bond; Cash is represented by the 30-day US Treasury Bill. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures section at the end of this material, which is an important part of this presentation*

# Sample Guidelines: *A simple but elegant framework*

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	Strategic Mix	Allowable Range
<b>Equities</b>	<b>60%</b>	<b>55–65%</b>
Large Cap Stocks	35%	30–40%
Small Cap Stocks	10%	5–15%
International Stocks	15%	10–20%
<b>Bonds</b>	<b>35%</b>	<b>30–40%</b>
<b>Cash</b>	<b>5%</b>	<b>0–10%</b>

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# Asset Allocation: Key to Wise Investing

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- ◆ Determine your investment objectives
  - Current holdings
  - Long-term goals
  - Time horizons
- ◆ Seriously gauge your risk tolerance
- ◆ Construct optimal asset allocations
- ◆ Diversify within those classes
- ◆ Monitor and rebalance
- ◆ Enlist expertise of an investment professional
- ◆ *Stick to your personal investment plan*
- ◆ Avoid emotional pulls of short-term volatility

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**Economic and Market Outlook**  
**October, 2011**

# Macroeconomic and Investment Strategy Overview

## Scenario: Muted Recovery

- ◆ Modestly higher interest rates
- ◆ Modestly stronger US Dollar (vs. Euro and Yen)
- ◆ Very soft developed market economies
- ◆ Rising corporate earnings
- ◆ Good operational / margin leverage
- ◆ Rising dividends
- ◆ Improved liquidity
- ◆ More frequent volatility
- ◆ Recovering securities issuance
- ◆ Periodic access to financing
- ◆ Potential reversal in consumer/corporate deleveraging
- ◆ More private equity activity in the middle market
- ◆ Credit failure in leveraged commercial real estate
- ◆ M&A activity pickup

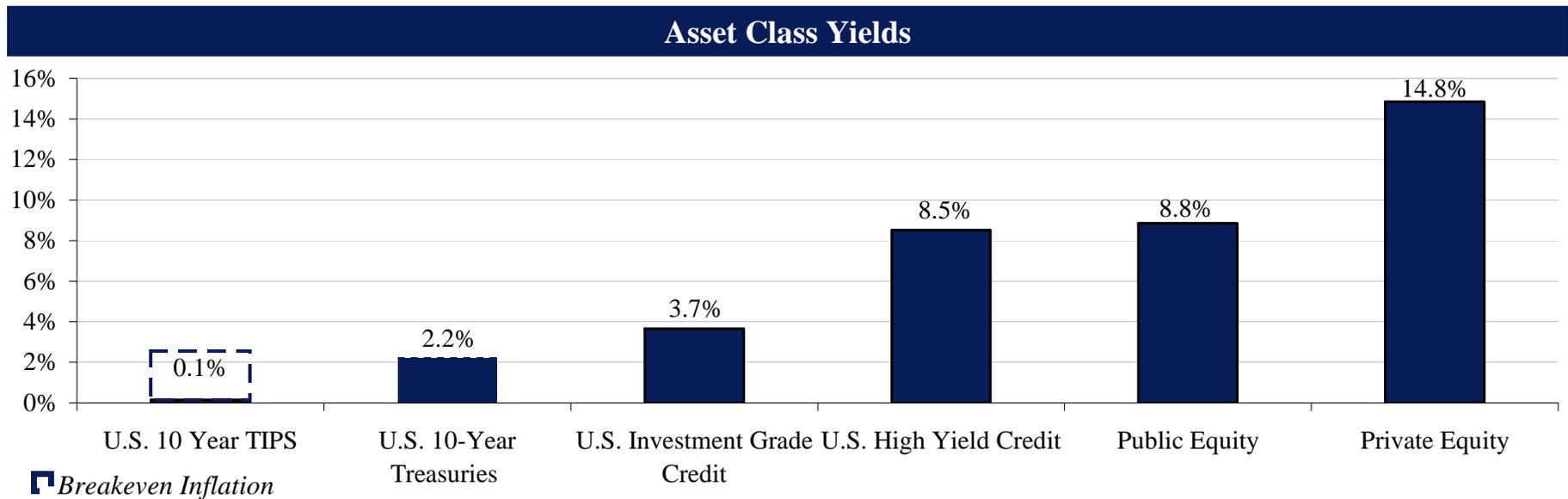
## Portfolio Positioning Considerations

- ◆ More equities vs. credit
- ◆ Cautious on small caps
- ◆ Focus on US multinational equities
- ◆ Adding to emerging market equities
- ◆ More credit risk than duration risk
- ◆ Underweight developed market investment grade and sovereign debt
- ◆ More distressed real estate, less core real estate
- ◆ Neutral on commodities
- ◆ More tactical asset allocation devices, less monolithic asset class devices
- ◆ Higher tracking error equity managers (attractive excess return potential)

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# Relative Value: Equity vs. Fixed Income – US

- ◆ Figures for investment-grade and high-yield credit are their respective current yields
- ◆ Figure for public equity is the earnings yield (projected earnings divided by current price)
- ◆ Figure for private equity reflects the public equity yield plus an assumed 6% historical risk premium
- ◆ The implied breakeven inflation rate is 2.1%, based on the current yields on 10-year Treasuries and TIPS



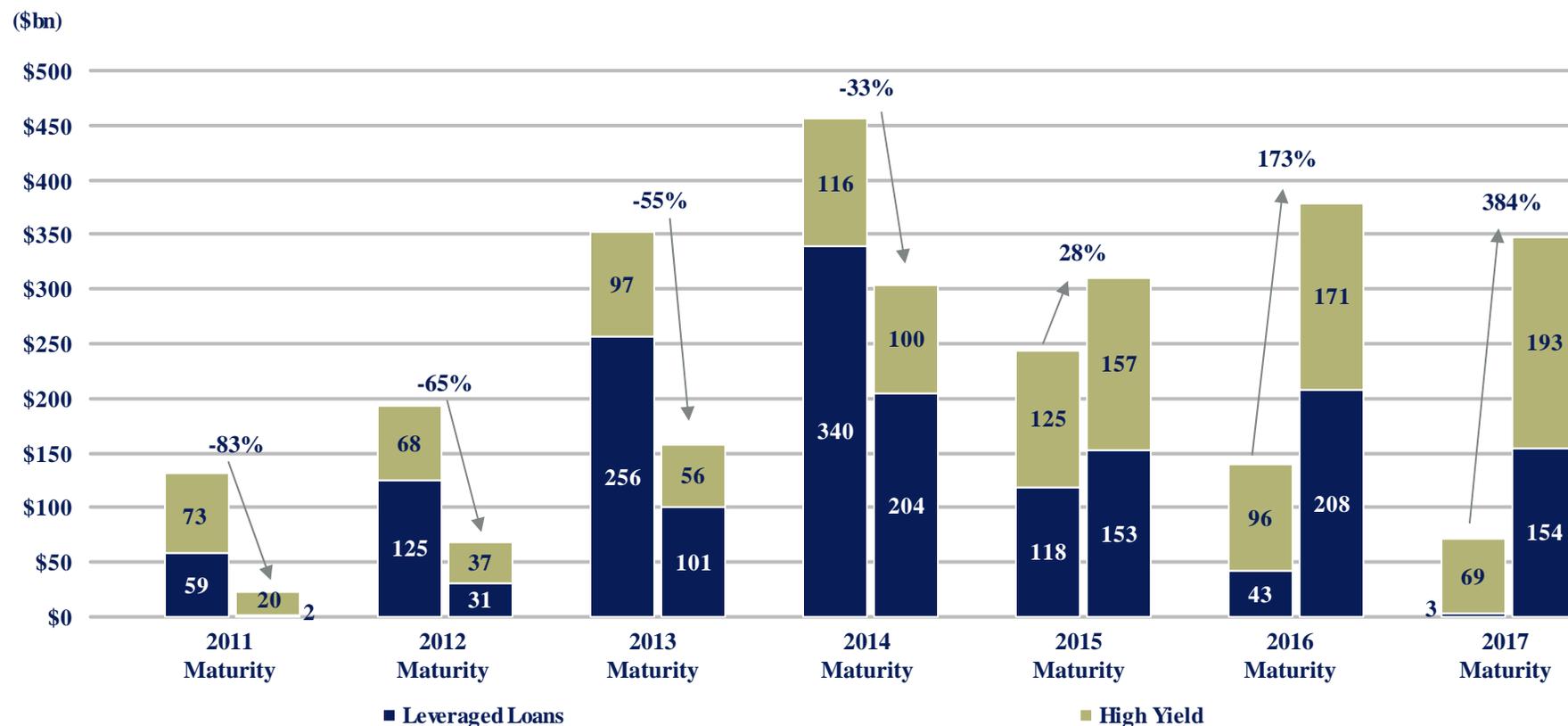
As of August 31, 2011. Sources: Bloomberg, Barclays, Neuberger Berman LLC.

For illustrative purposes only. Market return valuations and yield profile data is presented solely for illustrative purposes and should not be viewed as a forecast or guarantee of future results. The results are shown solely to illustrate the return of various asset classes based on current market data and earnings data. There is no assurance that such valuations or profiles will be realized and market results may be significantly different than and profiles or valuations shown. Breakeven Inflation is the difference between the yield on the generic US 10-Year Treasury Index and yield on US 10-Year TIPS Index. US 10-Year Treasuries is the yield-to-maturity on the generic US 10-Year Treasury Index. US Investment-Grade Credit is the yield-to-worst on the Barclays Capital US Corporate Investment Grade Index. US High Yield Credit is the yield-to-worst on the Barclays Capital US Corporate High Yield Index. Public equities valuation is calculated as the estimated 12-month forward earnings divided by current price of the S&P 500 Index. The 12-month forward earnings estimates are based on Bloomberg estimates of earnings per share before Abnormal/exceptional/Non recurring Items for S&P 500 Index. These estimates also excludes Extraordinary Items. Private equity valuations reflect Public equities valuation plus an assumed 6% premium. Historical trends and valuations do not imply, forecast or guarantee future results. Third-party economic or market estimates discussed herein may or may not be realized and no representation is being given regarding such estimates. Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures at the end of this presentation, which are an important part of this presentation.

# Refinancing Overhang

A large overhang exists despite amend, extend and refinancing activities – this may cause significant default volume in 2013 through 2017

## Refinancing Overhang Progression: December 31, 2008–July 29, 2011<sup>1,2</sup>



Source: Credit Suisse Leveraged Finance Strategy Update: August 1, 2011.

1. The sum of maturities for HY from 2011–2017 does not comprise the total market because a number of HY loans issued in 2011 may have maturities extending beyond 8 years.

2. Institutional US and Western Europe Leveraged Loan Market data includes non-inv. grade fully-drawn institutional term loans (TLb's, TLC's TLD's, delayed-draw and other tranches held by inst. investors).

# Sovereign Debt and Deficit

## National Debt and Annual Fiscal Deficit as Percentage of GDP of Select Countries

Country	Govt. Debt as % of GDP	Surplus/Deficit as % of GDP	5- Year Sovereign CDS (BPS)
United States	91.6%	-8.4%	49
Australia	22.3%	-5.9%	67
United Kingdom	77.2%	-10.4%	74
Germany	80.0%	-3.3%	75
Japan	220.3%	-8.1%	103
Qatar	17.8%	N/A	104
Saudi Arabia	10.8%	N/A	107
China	17.7%	-2.0%	109
South Africa	35.7%	0.2%	113
Brazil	66.1%	-1.9%	142
France	84.3%	-7.0%	153
Russia	9.9%	5.3%	188
Spain	60.1%	-9.2%	261
Italy	119.0%	-4.6%	360
Argentina	N/A	0.1%	398
Ireland	96.1%	-32.4%	758
Portugal	83.3%	-9.1%	900
Greece	142.0%	-10.5%	2175

Source: Bloomberg, IMF.

Note: Govt. Debt as percentage of GDP figures are based on IMF April 2011 World Economic Outlook. Sovereign CDS reflects the Bloomberg prices as of August 31, 2011. All deficit as percentage of GDP figures are for 2010 provided by Bloomberg.

# NB Asset Allocation Committee – Market Views

Q4 2011

## Market Views Based on 1-Year Outlook for Each Asset Class

Asset Class	Below Normal Return Outlook	Long-Term (10-Yr+) Annual Return Outlook	Above Normal Return Outlook	Change from Previous Outlook
<b>Fixed Income</b>				
Investment Grade Fixed Income	◆			□
U.S. TIPS	◆			□
High Yield Corporates			◆	↑
Developed International Fixed Income	◆			□
Emerging Market Fixed Income		◆		□
<b>Equity</b>				
U.S. All Cap Core			◆	□
U.S. Large Cap			◆	□
U.S. Small Cap	◆			□
Master Limited Partnerships		◆		□
Developed International Equities	◆			□
Emerging Market Equities		◆		□
Public Real Estate		◆		□
<b>Real and Alternative Assets</b>				
Commodities		◆		□
Lower Volatility Hedge Funds			◆	□
Macro Hedge Funds			◆	□
Private Equity		◆		□

↑ Return forecast higher than previous quarter

□ Return forecast essentially unchanged

↓ Return forecast lower

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## Appendix

# Asset Class Benchmarks and Definitions

Asset Class	Benchmark	Definition of Benchmark
Cash	Barclays 3–6 Month Treasury Index	The 3–6 month US Short Treasury Bill Index is comprised of all treasuries with 3–6 month maturities purchased at the beginning of each month and held for a full month. At the end of the month, issues with less than 3 months to maturity are sold and rolled into newly selected issues.
Non-dollar Cash	Inverse US Dollar Index	A trade-weighted non-dollar index. The inverse US dollar index will rise as the dollar weakens relative to other currencies and fall as the dollar strengthens relative to other currencies.
USD Investment Grade Fixed Income	Barclays US Aggregate Bond	Represents securities that are US domestic, taxable, and dollar denominated. The index covers the US investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
USD Government / Credit Fixed Income	Barclays US Government / Credit	The Government Index includes treasuries (i.e., public obligations of the US Treasury that have remaining maturities of more than 1-year) and agencies (i.e., publicly issued debt of US Government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the US Government). The Credit Index includes publicly issued US corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.
USD High Yield Fixed Income	Barclays US High Yield Bond	The Barclays High Yield Bond Index covers the universe of fixed rate, noninvestment grade debt. Criteria to be included in the index are as follows: All bonds must be dollar-denominated and nonconvertible, all bonds must have at least 1-year remaining to maturity and an outstanding par value of at least \$100mn, pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets are excluded, but Yankee and global bonds (SEC registered) of issuers in non-emerging countries are included, original issue zeroes and step-up coupon structures are also included. In general, all securities must be rated Ba1 or lower by Moody's Investors Service, including defaulted issues. If no Moody's rating is available, bonds must be rated BB+ or lower by S&P; and if no S&P rating is available, bonds must be rated below investment grade by Fitch Investor's Service.
Non-USD Investment Grade Fixed Income	Barclays Global Aggregate ex. USD	The Global Aggregate Bond Index Ex US was designed to measure the performance and risk of all components of the investment-grade, fixed-rate global bond markets in all currencies with the exception of USD. Index Criteria: Maturity: 1-year or greater, Liquidity: Generally \$300mn equivalent outstanding, Coupon reinvestment: Intra-month cash flow contribute to coupon return but are not reinvested during the month and do not earn a reinvestment return.
US Large Cap Equity	Russell 1000 Total Return	Russell 1000 Index measures the performance of the 1,000 largest companies in the Russell 3000 Index, which represents approximately 92% of the total market capitalization of the Russell 3000 Index. As of the latest reconstitution, the average market capitalization was approximately \$13.0bn; the median market capitalization was approximately \$4.6bn. The smallest company in the index had an approximate market capitalization of \$1.8bn.
US Large Cap Growth	Russell 1000 Growth Total Return	Measures the performance of those Russell 1000 Index companies with higher price-to-book ratios and higher forecasted growth values. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories.
US Large Cap Value	Russell 1000 Value Total Return	Measures the performance of those Russell 1000 Index companies with lower price-to-book ratios and lower forecasted growth values. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories.
US Mid Cap Equity	Russell Mid Cap Total Return	Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000 Index. As of the latest reconstitution, the average market capitalization was approximately \$4.7bn; the median market capitalization was approximately \$3.6bn. The largest company in the index had an approximate market capitalization of \$13.7bn.

# Asset Class Benchmarks and Definitions (Cont'd)

Asset Class	Benchmark	Definition of Benchmark
US Small Cap Equity	Russell 2000 Total Return	Measures the performance of the 2,000 smallest companies in the Russell 3000 Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories.
Non-US Developed Market Equity	MSCI – EAFE Total Return (Europe, Australia, Far East)	A free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. As of April 2002 the MSCI EAFE Index consisted of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the UK. The index is translated into US dollars.
Non-US Emerging Equity	MSCI Emerging Markets Free	The MSCI EMF (Emerging Markets Free) Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. As of April 2002, the MSCI EMF Index consisted of the following 26 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, Turkey and Venezuela. The index is translated into US dollars.
Multi-Market Directional Hedge Funds	HFRI Macro Index	Macro involves investing by making leveraged bets on anticipated price movements of stock markets, interest rates, foreign exchange and physical commodities. Macro managers employ a “top-down” global approach, and may invest in any markets using any instruments to participate in expected market movements. These movements may result from forecasted shifts in world economies, political fortunes or global supply and demand for resources, both physical and financial. Exchange-traded and over-the-counter derivatives are often used to magnify these price movements.
Market Neutral Arbitrage Hedge Funds	Average of HFRI Equity Market Neutral, Fixed-Income Arbitrage, and Convertible Arbitrage Indexes.	Equity Market Neutral investing seeks to profit by exploiting pricing inefficiencies between related equity securities, neutralizing exposure to market risk by combining long and short positions. Fixed Income Arbitrage is a market neutral hedging strategy that seeks to profit by exploiting pricing inefficiencies between related fixed income securities while neutralizing exposure to interest rate risk. Fixed Income Arbitrage is a generic description of a variety of strategies involving investment in fixed income instruments, and weighted in an attempt to eliminate or reduce exposure to changes in the yield curve. Convertible Arbitrage involves purchasing a portfolio of convertible securities, generally convertible bonds, and hedging a portion of the equity risk by selling short the underlying common stock.
Private Equity	Thomson Private Equity Index	The Thomson private equity benchmark is a capitalization- weighted composite IRR of the buyout, venture, and special situations fund performances reported to the Thomson Corporation; all historical IRRs are subject to, and regularly undergo, revision.
Real Estate	NAREIT Equity Index	An index that consists of all Real Estate Investment Trusts that currently trade on the New York Stock Exchange, the NASDAQ National Market System and the American Stock Exchange.
Commodities	Dow Jones – AIG Commodity Index	The Dow Jones – AIG Commodity Index (DJ-AIGCI) is composed of futures contracts on 20 physical commodities. The DJ-AIGCI is composed of commodities traded on US exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME). To determine its component weightings, the DJ-AIGCI relies primarily on liquidity data, or the relative amount of trading activity of a particular commodity. The DJ-AIGCI relies on data that is both exogenous to the futures markets (production) and endogenous to those markets (liquidity) in determining relative weightings. All data used in both the liquidity and production calculations is averaged over a 5-year period.

# Appendix: Index Definitions

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- ◆ **S&P 500 Index:** Consists of 500 stocks chosen for market size, liquidity, and industry group representation. It is a market value weighted index (stock price times number of shares outstanding), with each stock's weight in the Index proportionate to its market value. The "500" is one of the most widely used benchmarks of US equity performance. As of September 16, 2005, S&P switched to a float-adjusted format, which weights only those shares that are available to investors, not all of a company's outstanding shares. The value of the index now reflects the value available in the public markets
- ◆ **S&P Barra Growth Index:** A capitalization-weighted index of all the stocks in the S&P 500 that have high price-to-book ratios. It is designed so that approximately 50% of the S&P 500 market capitalization is in the Growth index
- ◆ **S&P Barra Value Index:** A capitalization-weighted index of all the stocks in the S&P 500 that have low price-to-book ratios. It is designed so that approximately 50% of the S&P 500 market capitalization is in the Value index
- ◆ **Russell 1000® Index:** Measures the performance of the 1,000 largest companies in the Russell 3000® Index, which represents approximately 92% of the total market capitalization of the Russell 3000® Index. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories
- ◆ **Russell 1000® Growth Index:** Measures the performance of those Russell 1000® Index companies with higher price-to-book ratios and higher forecasted growth values. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories
- ◆ **Russell 1000® Value Index:** Measures the performance of those Russell 1000® Index companies with lower price-to-book ratios and lower forecasted growth values. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories
- ◆ **Russell 2000® Index:** Measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000® Index. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories
- ◆ **Russell 2000® Growth Index:** Measures the performance of those Russell 2000® Index companies with higher price-to-book ratios and higher forecasted growth values. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories
- ◆ **Russell 2000® Value Index:** Measures the performance of those Russell 2000® Index companies with lower price-to-book ratios and lower forecasted growth values. The index is market cap-weighted and includes only common stocks incorporated in the US and its territories
- ◆ **Russell 3000® Index:** Measures the performance of the 3,000 largest US companies based on total market capitalization, which represents approximately 98% of the investable US equity market. All Russell indexes are subsets of the Russell 3000® Index

# Appendix: Index Definitions (Cont'd)

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- ◆ **MSCI EAFE® Index (Europe, Australasia, Far East):** A free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US and Canada. As of April 2002 the MSCI EAFE Index consisted of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the UK. The index is translated into US dollars
- ◆ **Dimensional Fund Advisors (DFA) Small Company Fund:** Used in Ibbotson data series to represent small-company stocks over certain time periods, the Fund invests in a broadly diversified cross section of small companies
- ◆ **Barclays Capital US Aggregate Index:** Represents securities that are US domestic, taxable, and dollar denominated. The index covers the US investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities
- ◆ **Barclays Capital US Credit Index:** Represents publicly issued US corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered and be an investment grade credit security. This index is the US Credit component of the US Government / Credit index
- ◆ **Barclays Capital 5–10-Year US Credit Index:** Represents publicly issued US corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered and investment grade. This index represents the 5–10 year maturity range in the US Credit component of the US Government / Credit index. Bonds included in the index must have a maturity from 5 up to (but not including) 10 years
- ◆ **Barclays Capital 10-Year Municipal Bond Index:** Rules-based and market-value weighted index engineered for the long-term tax-exempt bond market. This index is the 10-year (8–12) component of the Municipal Bond index. To be included in the index, bonds must have a minimum credit rating of at least Baa, an outstanding par value of at least \$5mn and be issued as part of a transaction of at least \$50mn. Bonds must have a dated-date after December 31, 1990 and be at least 1-year from their maturity date
- ◆ **Citigroup US Broad Investment-Grade (USBIG) Bond IndexSM:** The USBIG index is market-capitalization-weighted and includes fixed-rate Treasury, government-sponsored, mortgage, asset-backed, and investment-grade issues (BBB- / Baa3) issues with a maturity of 1-year or longer and a minimum amount outstanding of \$1bn for Treasuries, \$5bn for mortgages, and \$200mn for credit, asset-backed, and government-sponsored issues
- ◆ **Citigroup Three-Month US Treasury Bill Index SM:** This index measures monthly return equivalents of yield averages that are not marked to market. The Three-Month Treasury-Bill Index is an average of the last three three-month Treasury bill issues. Returns for the index are calculated on a monthly basis only

# Additional Disclosure

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# Additional Disclosure (continued)

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