

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

AGENDA

BOARD OF RETIREMENT INVESTMENT RETREAT

Thursday, September 26, 2013

Ventura Beach Marriott

2055 East Harbor Boulevard, Ventura, California 93001

- 8:30 a.m. *Continental Morning Breakfast*
- 9:00 a.m. **Introductions, Administrative Matters, and Review of Agenda**
Bill Wilson (Chair), Tracy Towner (Vice Chair) and Donald Kendig (Retirement Administrator)
- 9:10 a.m. **Infrastructure/Natural Resources/Water**
Kleinwort Benson Investors (leading firm in environment strategies) and *Macquarie Group* (industry's largest infrastructure and real asset manager) are featured in a panel discussion on the environment and investment opportunities
- 10:45 a.m. *Break*
- 11:00 a.m. **The "Opportunistic Bucket"**
Hewitt EnnisKnupp's alternatives expert will discuss the notion of implementing a separate policy allocation that enables temporary investments due to market dislocations and other transient opportunities
- 12:00 Noon **Working Lunch – Economy, Interest Rates, and Capital Markets**
PIMCO and *GMO*, two firms that are often outspoken for their market forecasts, will debate their views on the economy and investments
- 1:30 p.m. **Research on the Traditional Stock/Bond Investing**
Hewitt EnnisKnupp's head of research will review notable recent research on investing in the traditional asset classes and strategies for success
- 2:30 p.m. *Break*
- 2:45 p.m. **VCERA – General Interest Topics**
Donald Stracke will review a number of general interest topics, including a look at selected pages from the Greenwich and NCPERS 2012 public fund studies, how NEPC makes its asset class return and risk assumptions, general comparison of VCERA vs. other California public funds, and some initial thoughts on starting the relationship and the existing investment structure.
- 4:15 p.m. **Board Member Comments and Ideas for the Future**
Board commentary on the day's discussions, potential modifications to the investment information provided during future Board meetings, and determination on next steps of implementation
- 5:00 p.m. *Reception*
- 6:00 p.m. *Dinner*

BIOGRAPHIES

CONSULTANTS

John Lee

Hewitt EnnisKnupp

john.j.lee@aonhewitt.com

John J. Lee is a Partner and a lead investment consultant at Hewitt EnnisKnupp. He is the head of the firm's U.S. West regional consulting team and is located in the Newport Beach, California office. John is responsible for all aspects of investment consulting services, including investment manager analysis and monitoring, performance evaluation, asset allocation, investment manager searches, and investment policy development.

John has more than 19 years of investment consulting experience, and more than 21 years of experience in the investment industry. John's previous roles at the firm include leader of the firm's regional Client Advisory Group (in Chicago). He has also managed the Trust Services and Asset Transitions group. John has served on the firm's Advisory Councils for global equity and defined contribution research. He was group leader of the firm's international equity, custody services, and defined contribution services research teams.

Prior to joining the firm in early 1994, John worked at Motorola Corporation and First Investors Corporation. John has an A.B. degree in Economics from the University of Chicago and an M.B.A. degree from Kellogg School of Management at Northwestern University.

Kevin Chen

Hewitt EnnisKnupp

kevin.chen@aonhewitt.com

Kevin Chen is a Senior Investment Consultant based in our Los Angeles office. His primary responsibilities include client service, investment manager analysis, performance evaluation, investment policy development, and asset allocation research.

Kevin has over 10 years of experience in the investment industry. Before joining Hewitt EnnisKnupp, he worked for an investment manager conducting equity research within the health care and consumer staples sectors on a global basis. Most recently, Kevin helped develop and implement several endowments for the San Manuel Band of Mission Indians.

Kevin holds a Bachelor of Science degree in Business Administration/Finance from California State University, Northridge (CSUN). He is a CFA Level II candidate.

BIOGRAPHIES

SPEAKERS

Steve Falci, CFA BS, MBA, MA

Kleinwort Benson Investors

Head of Strategy Development – Sustainable Investment

Steven Falci oversees the development of Kleinwort Benson Investors sustainable investment products and strategic priorities. He joined the firm in 2008 in the newly created position of Vice President – Sustainable Investment. He is a senior investment professional with over 20 years of broad experience overseeing investment teams and managing assets at a large pension fund, an institutional asset manager and a mutual fund company. Prior to joining the firm, Steve was CIO, Equities with the Calvert Group, where he oversaw the equity and asset allocation portfolios for the largest family of socially responsible mutual funds in the US. Before joining the Calvert Group, Steve was Senior Vice President, Senior Portfolio Manager and Principal at Mellon Equity Associates. Steve has a BS and MBA from the Stern School of Business at New York University, an MA from Pittsburgh Theological Seminary and is a CFA charterholder.

Graeme Conway

Macquarie Infrastructure and Real Assets

graeme.conway@macquarie.com

Graeme Conway is a Senior Managing Director within Macquarie Infrastructure and Real Assets (MIRA) North America. Graeme leads the deal sourcing and execution of acquisitions for MIRA . He also sits on the MIRA (Americas) Executive Committee.

Graeme has over 15 years experience in infrastructure and has worked in markets around the world including Australia, Europe and North America. Graeme has led numerous transactions across the water, energy, storage and renewable energy sectors.

Graeme began his career with Macquarie in 1997 and has worked in advisory, project finance, structured finance and infrastructure funds management. In 2001, Graeme moved to the U.K., where he was instrumental in the establishment of Macquarie's first European infrastructure fund, MEIF1. Graeme subsequently established Macquarie Capital Advisory's European Utilities and Energy team and thereafter became Head of Macquarie Capital Europe. Graeme moved to MIRA's New York offices in 2012.

Graeme has a Bachelor of Engineering with First Class Honors and a Bachelor of Commerce in Finance and Management from University of Western Australia.

BIOGRAPHIES

SPEAKERS

Peter Hill

Hewitt EnnisKnupp

peter.hill@aonhewitt.com

Peter Hill, Partner, is the global head of Hewitt EnnisKnupp's Liquid Alternatives research team. Peter's team, which is part of the larger Global Investment Management team, monitors and evaluates hedge funds, commodities managers, and other opportunistic strategies. Peter has assisted public and private fund fiduciaries select and monitor absolute return investments that meet their specific risk tolerances and investment objectives. Peter serves on Hewitt EnnisKnupp's U.S. Investment Committee, the group tasked with vetting the firm's overarching investment beliefs. The U.S. Investment Committee also approves all research positions and papers developed by the firm, and monitors consultants' adherence to the firm's stated investment policy beliefs in the advice they provide to clients. Peter was instrumental in developing the firm's robust operational due diligence procedures that are applied within our manager evaluation process.

Peter assists fiduciaries of public and corporate pension funds implement absolute return strategies that are consistent with the return and risk objectives of their funds, and conducts due diligence on a large universe of hedge fund managers, including those with multi-strategy, event driven, relative value, and directional approaches. He oversees a team of 13 investment professionals in the execution of the firm's due diligence processes for liquid alternatives. In addition, he educates trustees of public funds on the unique merits and challenges of investing in hedge funds and opportunistic strategies.

Peter spent 19 years at Insight Investment latterly as Head of International Equities. In this role Peter was responsible for a team of 12 portfolio managers, running assets in excess of £3 billion invested across a range of global equity markets. Peter spent eight years at Norwich Union Insurance Group, including marketing their pooled pension fund product to pension plan trustees.

Peter has a degree in Mathematics and Statistics from Reading University. He attended the London Business School Investment (Derivatives) program in 1991, and attained the CII/Personal Finance Society's Advanced Financial Planning Certificate in 2005.

Josh Thimons

PIMCO

josh.thimons@pimco.com

Josh Thimons is a managing director and portfolio manager in the Newport Beach office, focusing on interest rate derivatives. Prior to joining PIMCO in 2010, he was a managing director for the Royal Bank of Scotland, where he managed an interest rate proprietary trading group in Chicago. Previously, he was a senior vice president in portfolio management for Citadel Investment Group, focusing on interest rate and volatility trading. Prior to this, he was a director for Merrill Lynch Capital Services, managing an over-the-counter interest rate options market making desk. He has 14 years of investment experience and holds an undergraduate degree and an MBA from the Wharton School of the University of Pennsylvania.

BIOGRAPHIES

SPEAKERS

Edmund Bellord

GMO

edmund.bellord@gmo.com

Edmund Bellord is a member of GMO's Asset Allocation team. Prior to joining GMO in 2008, he was a senior portfolio manager at State Street Global Advisors Capital Management. Previously, he worked at Mellon Capital Management as a strategist. Mr. Bellord earned his M.A. in Economics from the University of Edinburgh in Scotland and his MBA at the University of California in Berkeley.

Michael Sebastian

Hewitt EnnisKnupp

mike.sebastian@aonhewitt.com

Mike Sebastian, Partner, co-heads the firm's Investment Policy Services group. Additionally, he serves as a primary consultant for a select number of Hewitt EnnisKnupp retainer and project clients. Mike has co-authored a number of research articles published in the Journal of Portfolio Management, the Journal of Private Equity and the Journal of Investing, two of which received a Bernstein Fabozzi/Jacobs Levy award for outstanding research. He has spoken before industry groups on topics such as risk budgeting and performance benchmarking. Mike has served as an adjunct faculty member at Northwestern University, and is a member of the board of directors of the Midwest Finance Association.

Prior to joining EnnisKnupp in 1997, he was head teaching assistant for core finance for the Department of Finance at the University of Illinois in Urbana-Champaign.

Mike holds B.S. and M.S. degrees in finance from the University of Illinois at Urbana-Champaign.

Don C. Stracke, CFA, CAIA

Senior Consultant

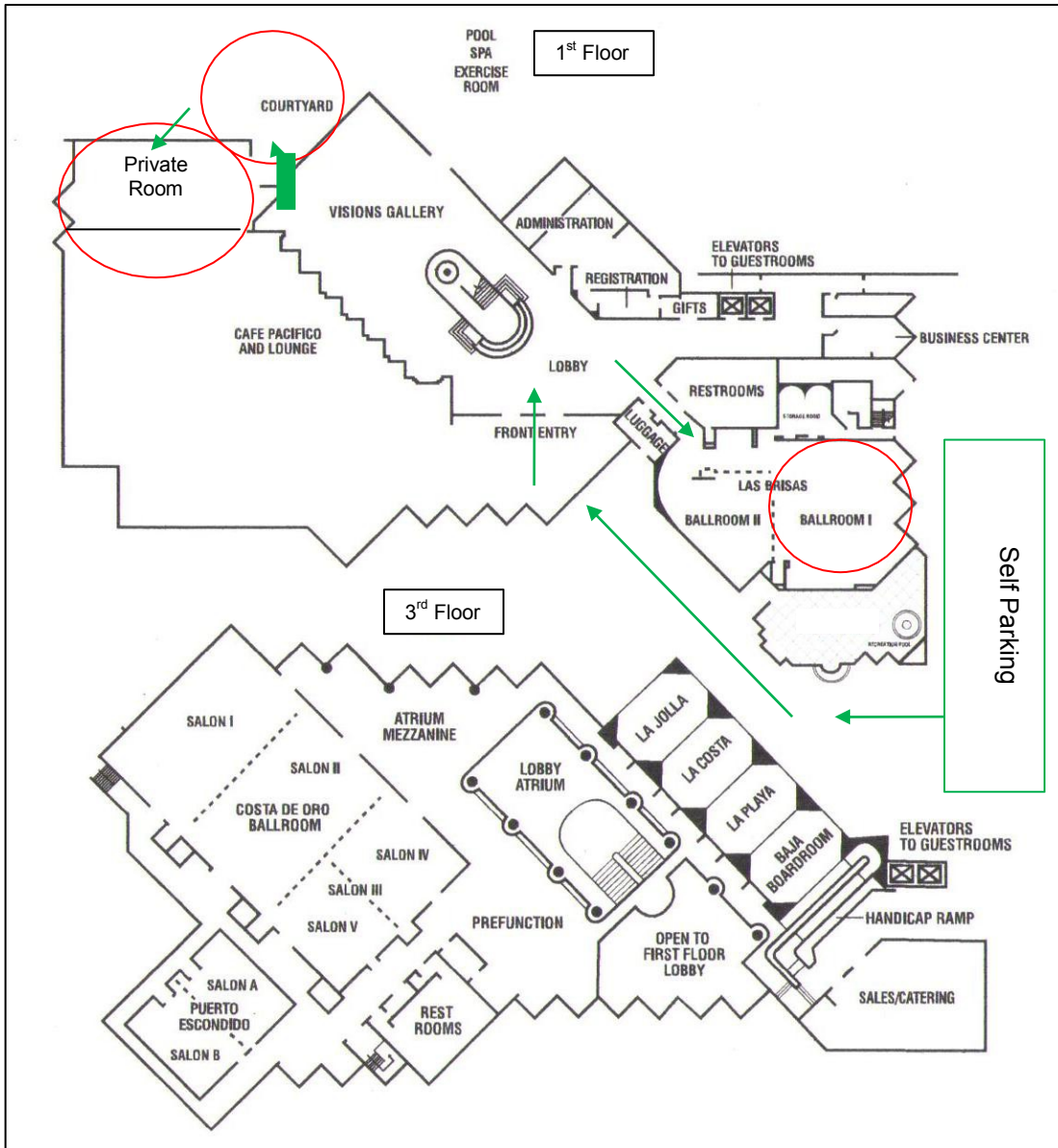
NEPC

Don began his investment career in 1985, and he joined NEPC in 2009. Working out of our Redwood City, CA office, his consulting responsibilities include exclusively Public Pension Funds. Don is a member of the Large Cap Equity Advisory Group and the Alternative Assets Committee.

Prior to joining NEPC, Don was the Director of Marketing/Client Service at Shenkman Capital Management and Attalus Capital. At both firms, he was responsible for the overall management and execution of sales, marketing, and client service and was a member of the executive committee. Prior to Attalus, Don spent seven years as the Director of Corporate Client Services for Dresdner RCM Global Investors. Don's previous work experience includes eight years at Bankers Trust, where he was an investment consultant working with some of the most sophisticated plan sponsors in the country in the areas of risk measurement and analysis, asset allocation, and manager search.

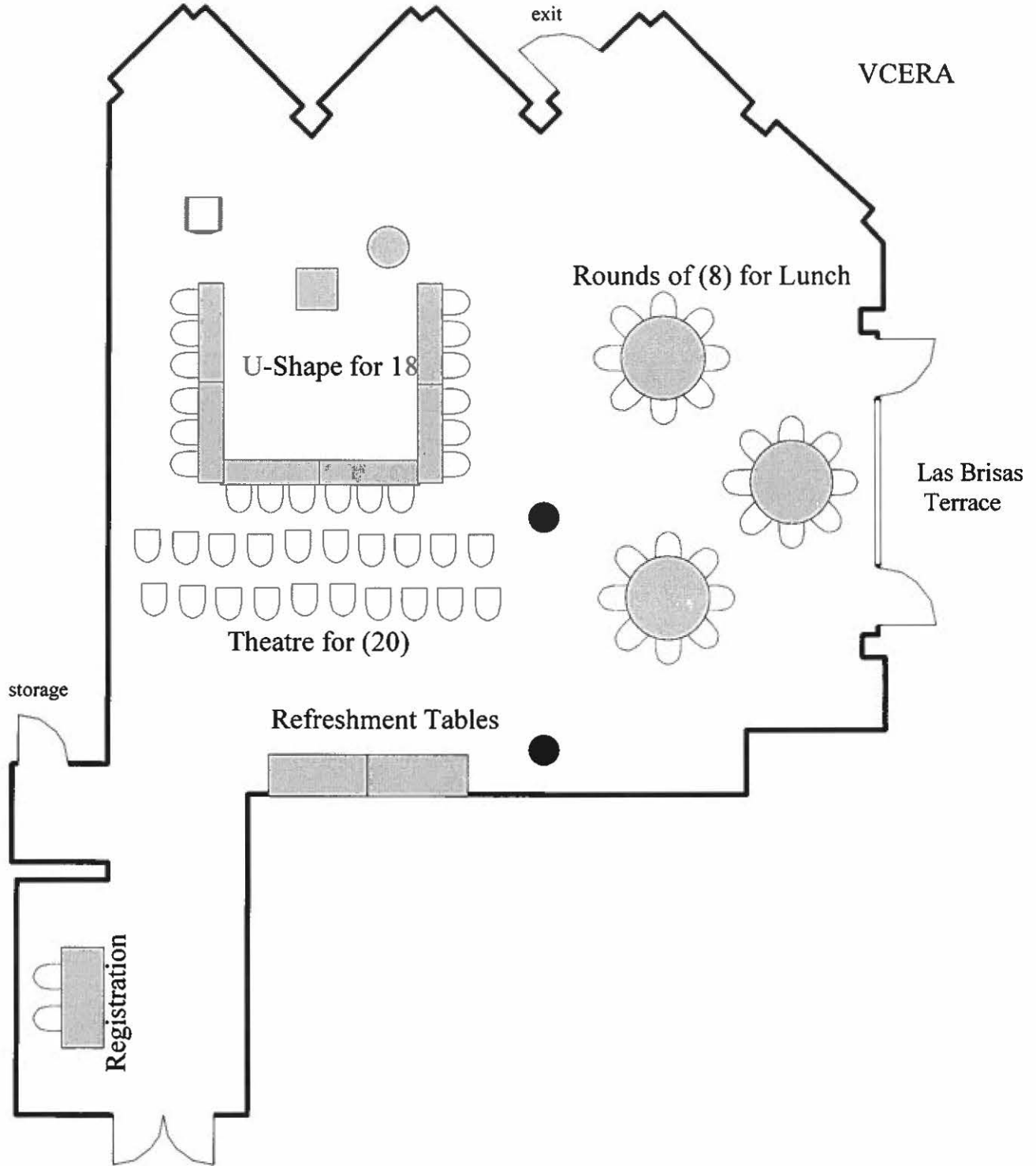
Don received his bachelor's degree from Farleigh Dickinson University and his M.B.A. from Rutgers University. In addition, he holds the Chartered Financial Analyst and the Chartered Alternative Investment Analyst designation.

HOTEL GUIDE





Las Brisas I



KBI Water Presentation

Steve Falci, CFA – Head of Strategy Development

Kieran Stover – SVP, Business Development

How do
you invest
in Water?

Where
does Water
fit in a
portfolio?

Performance

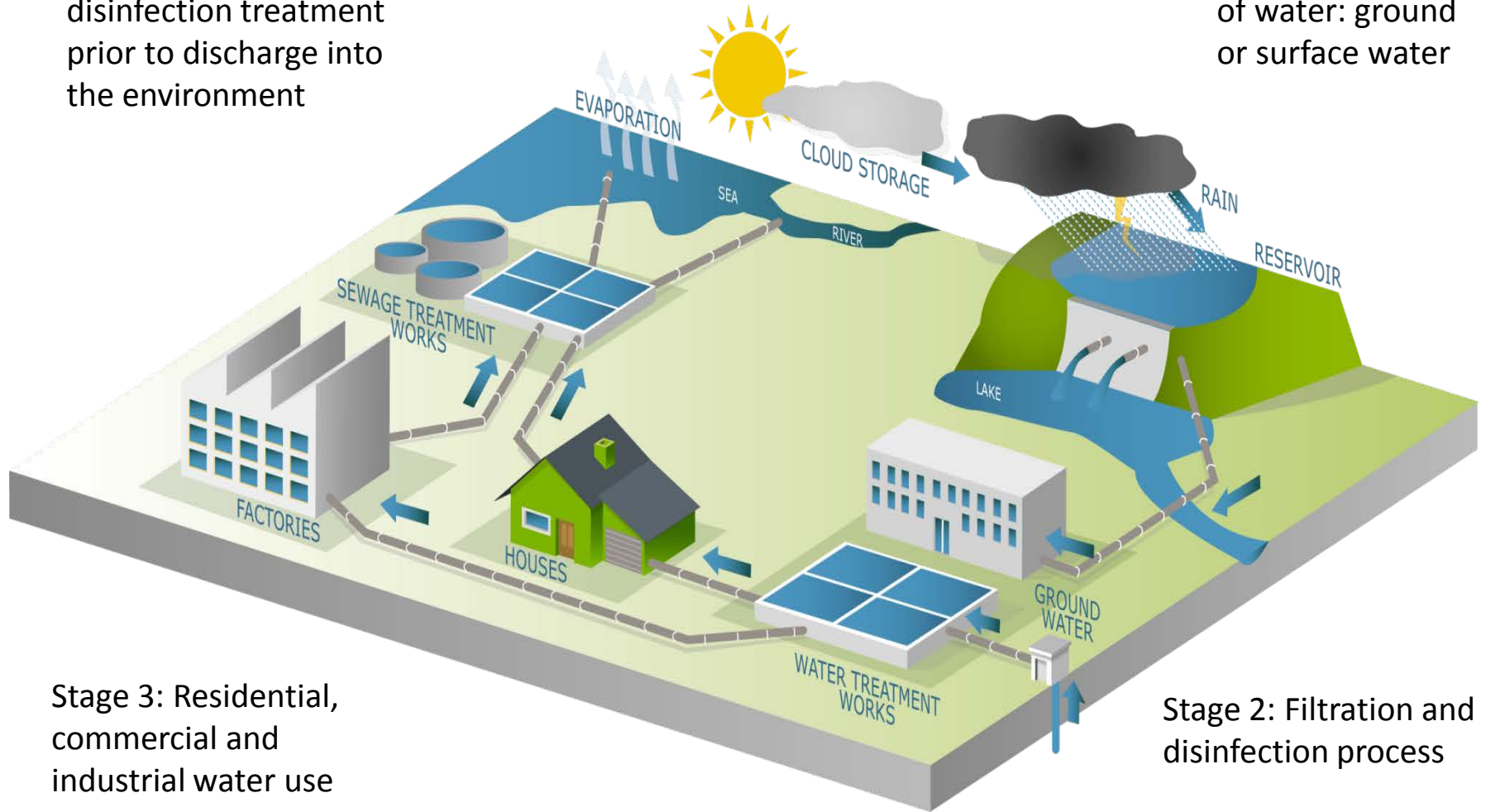
Additional
Slides

Why Invest
in Water?

What does KBI mean by investing in Water?

Stage 4: Secondary disinfection treatment prior to discharge into the environment

Stage 1: Sources of water: ground or surface water



Stage 3: Residential, commercial and industrial water use

Stage 2: Filtration and disinfection process

Examples of water usage



16.5 gallons of water to make 1 can of soda



37 gallons to produce 1 cup of coffee



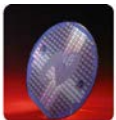
264 gallons of water to make 2.2lbs of rice



689 gallons of water to process one gallon of beer



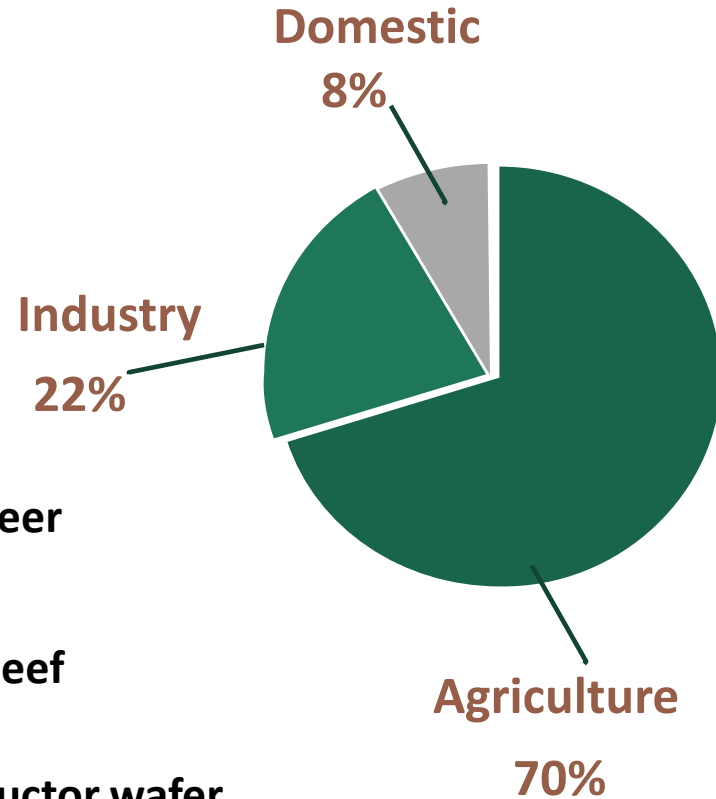
1,500 gallons of water to make one pound of beef



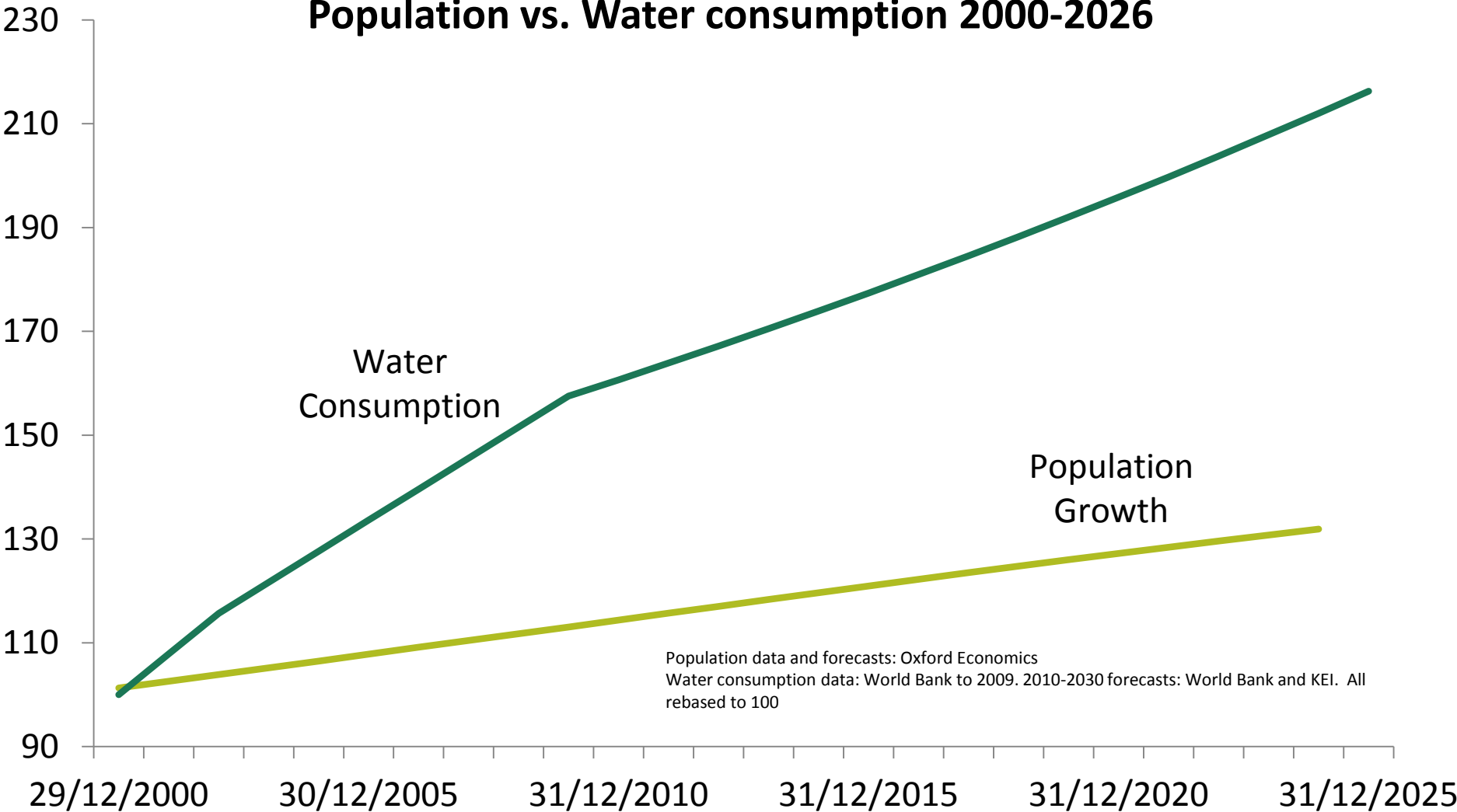
2,905 gallons of water to make one semi-conductor wafer



39,090 gallons of water to make one car

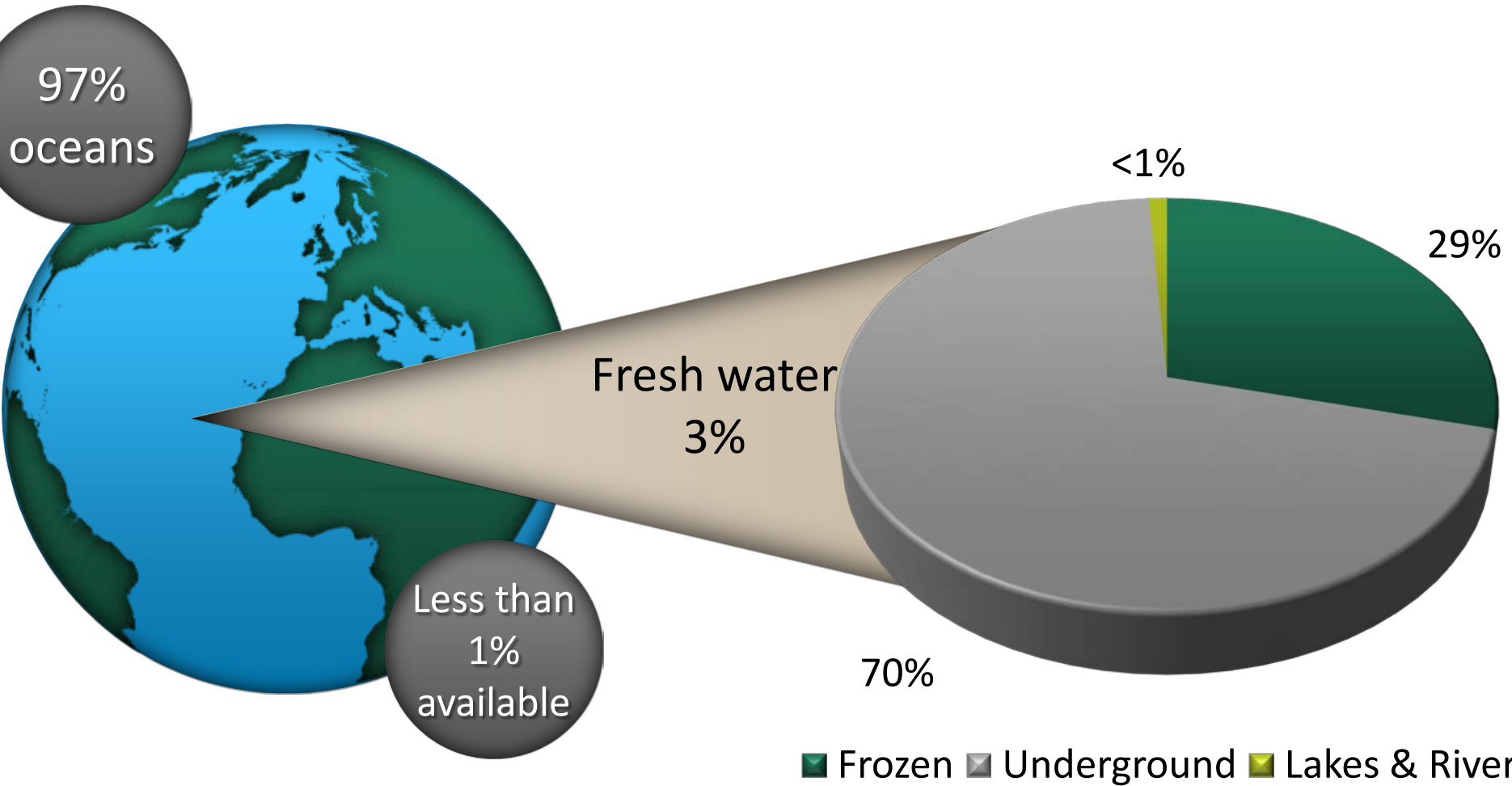


Population vs. Water consumption 2000-2026



Population data and forecasts: Oxford Economics
Water consumption data: World Bank to 2009. 2010-2030 forecasts: World Bank and KEI. All rebased to 100

Investment driver: water supply finite

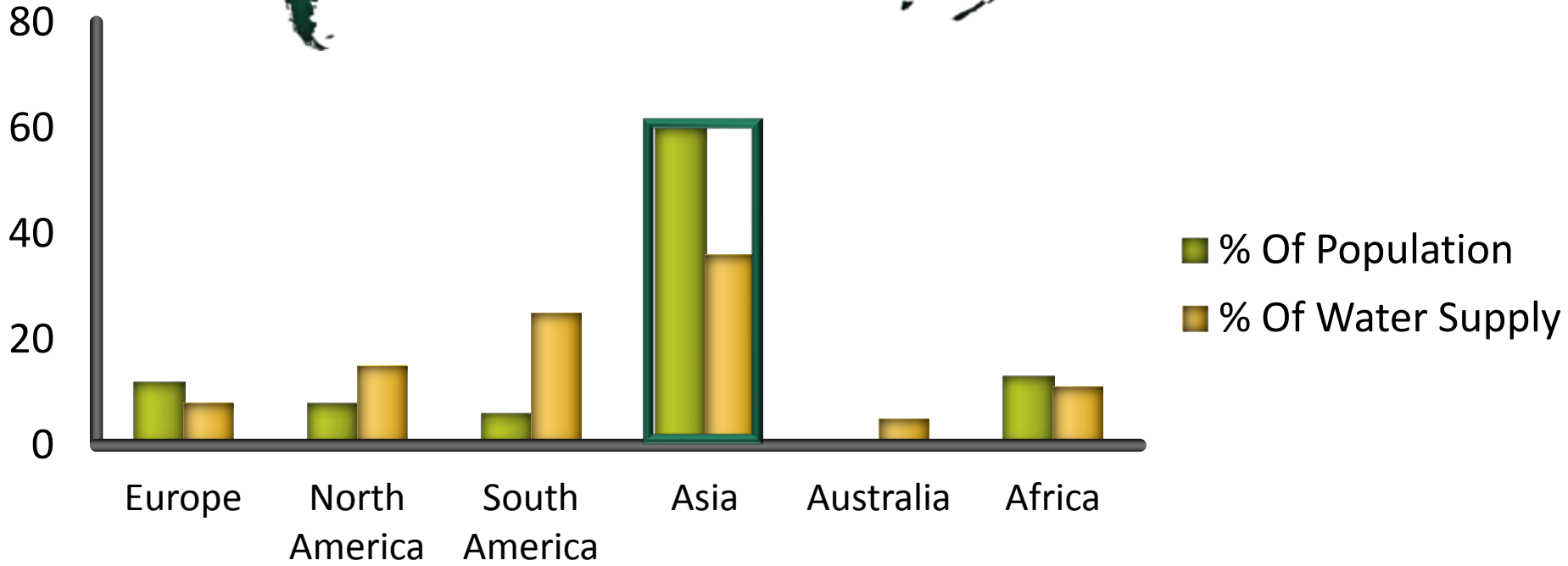


There is no substitute for water which is why it is the “Blue Gold” of this century

Investment driver: regional supply imbalances



36% of water supply
60% of population



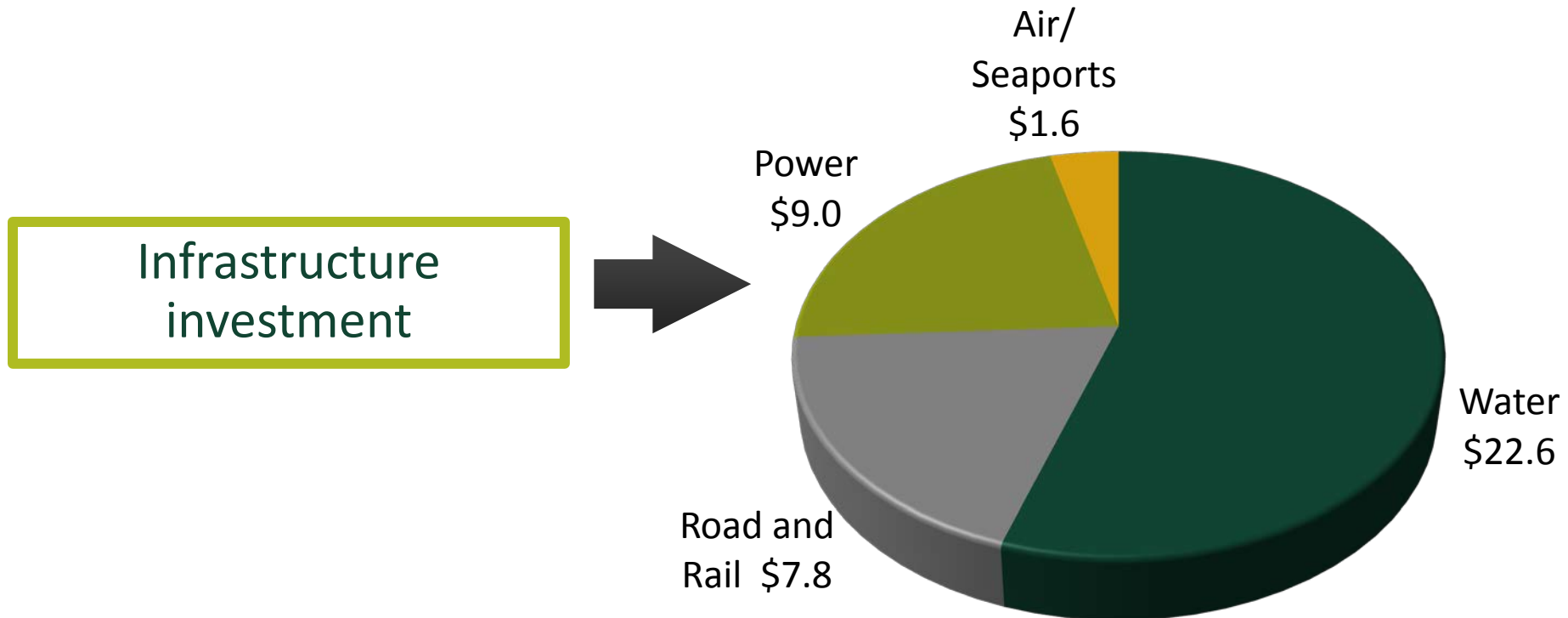


- EU Water Framework Directive
- EU Drinking water Directive
- Household Metering by 2020

- Environmental Protection Agency (EPA)
- Safe Drinking Water Act
- US Coastguard Ballast Water regulation

- 71 new standards for drinking water
- Network to monitor water quality
- 12th Fifth Year Plan priority

Required global infrastructure spend 2005-2030 (USD trn)



More than 50% of investment should be in water

Source: Booz Allen Hamilton, Global Infrastructure Partners, World Energy Outlook, Organization of Economic Cooperation and Development, Boeing, Drewry Shipping Consultants, U.S. Department of Transportation.

- Water Metering
- Irrigation
- Leak detection and repair
- Cleaning waste water and purification
- Desalinization
- Filtration and Disinfection





Utilities

- Regulated utilities
- Non-regulated utilities
- Emerging markets utilities

Infrastructure

- Pipes, plumbing
- Pumps and fluid control
- Irrigation equipment
- Construction
- Engineering and consulting

Technology

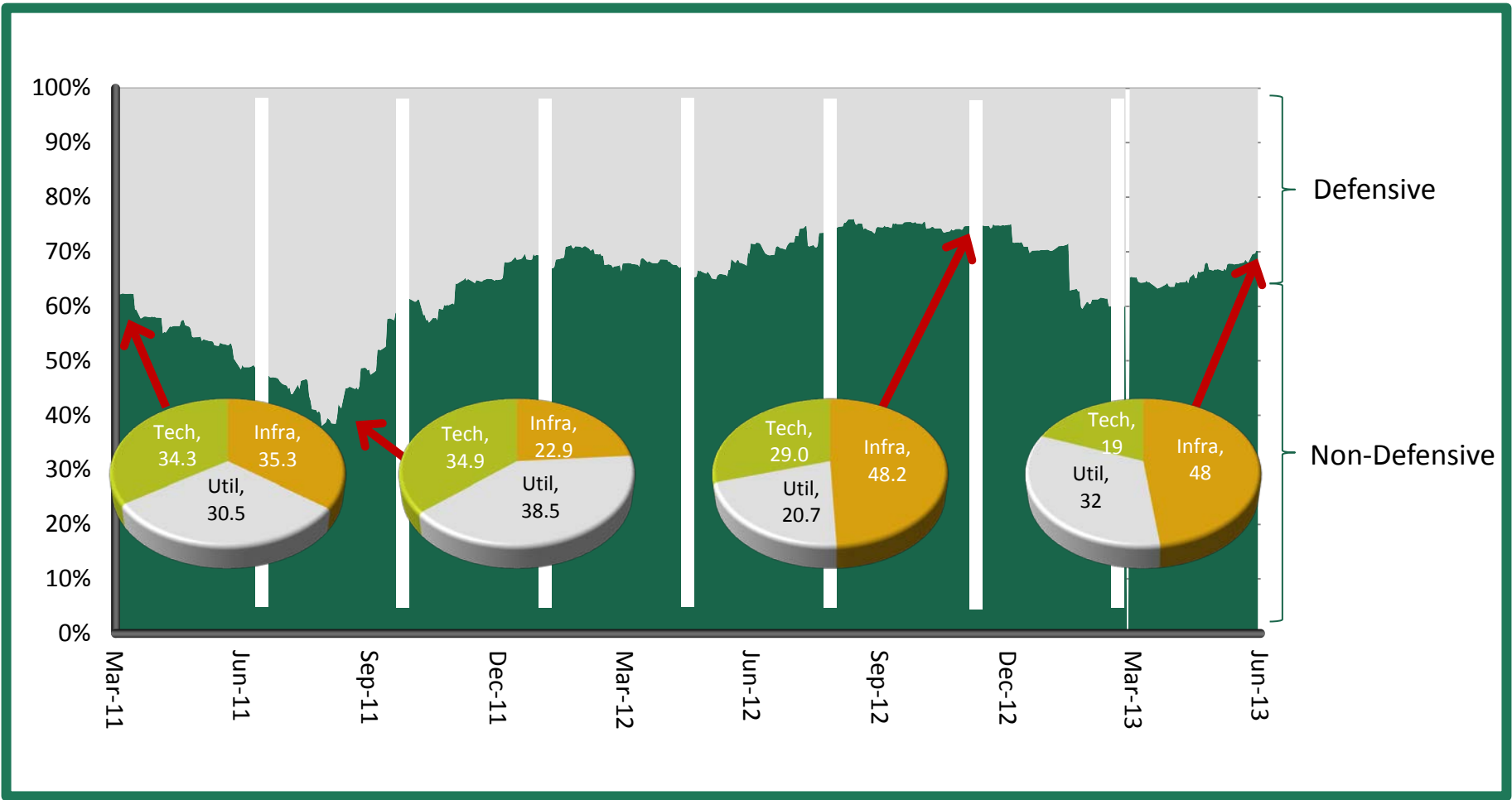
- Analytical equipment
- Water treatment
- Chemicals
- Meters



The listed stocks are a representative sample of stocks that may or may not be in the strategy. Size or profitability have not been used in determining the selection of stocks and their inclusion should not be construed as a stock recommendation.

Active management based on bottom-up and top-down analysis

■ Kleinwort Benson
 Investors

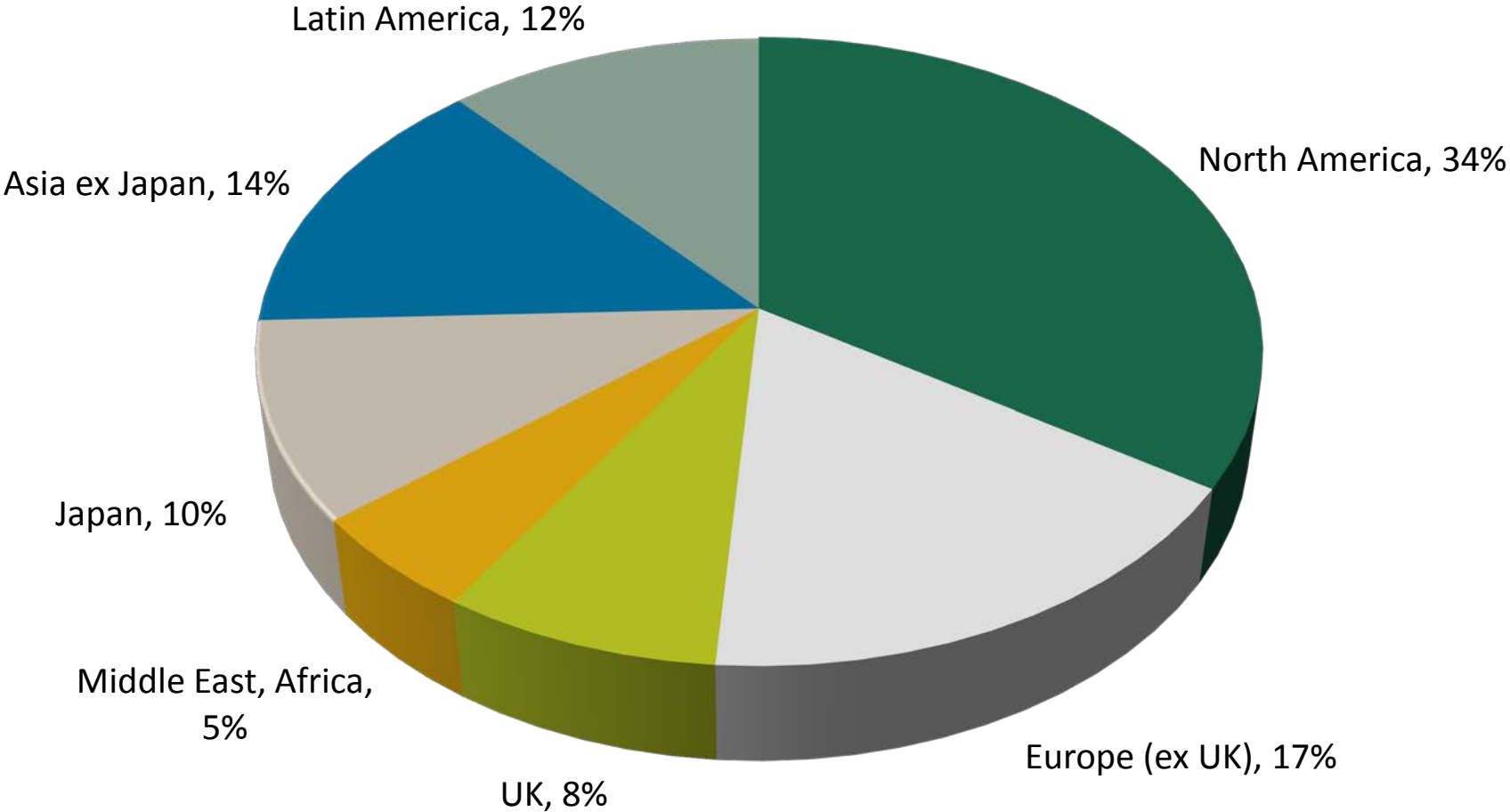


Source: Kleinwort Benson Investors as at June 30th 2013

Emerging market growth	China: 12 th '5 Year Plan' Urbanisation/Infrastructure Global Companies	China Everbright SABESP Danaher
Developed Market Rehabilitation	Chronic under-investment Ageing infrastructure	Xylem Pure Technologies
Regulatory Support	Metering, Testing, Filtration Supportive Utility Regulation Ballast water	Pentair American Water Works Calgon Carbon, Danaher
M&A Activity	Accretive acquisitions Strong balance sheet Targets	Pentair Flowserve Pure Technologies
Industrial Projects	Multi Year Cap Ex Secular Drivers Strong Leading Indicators	Flowserve Ebara Sulzer

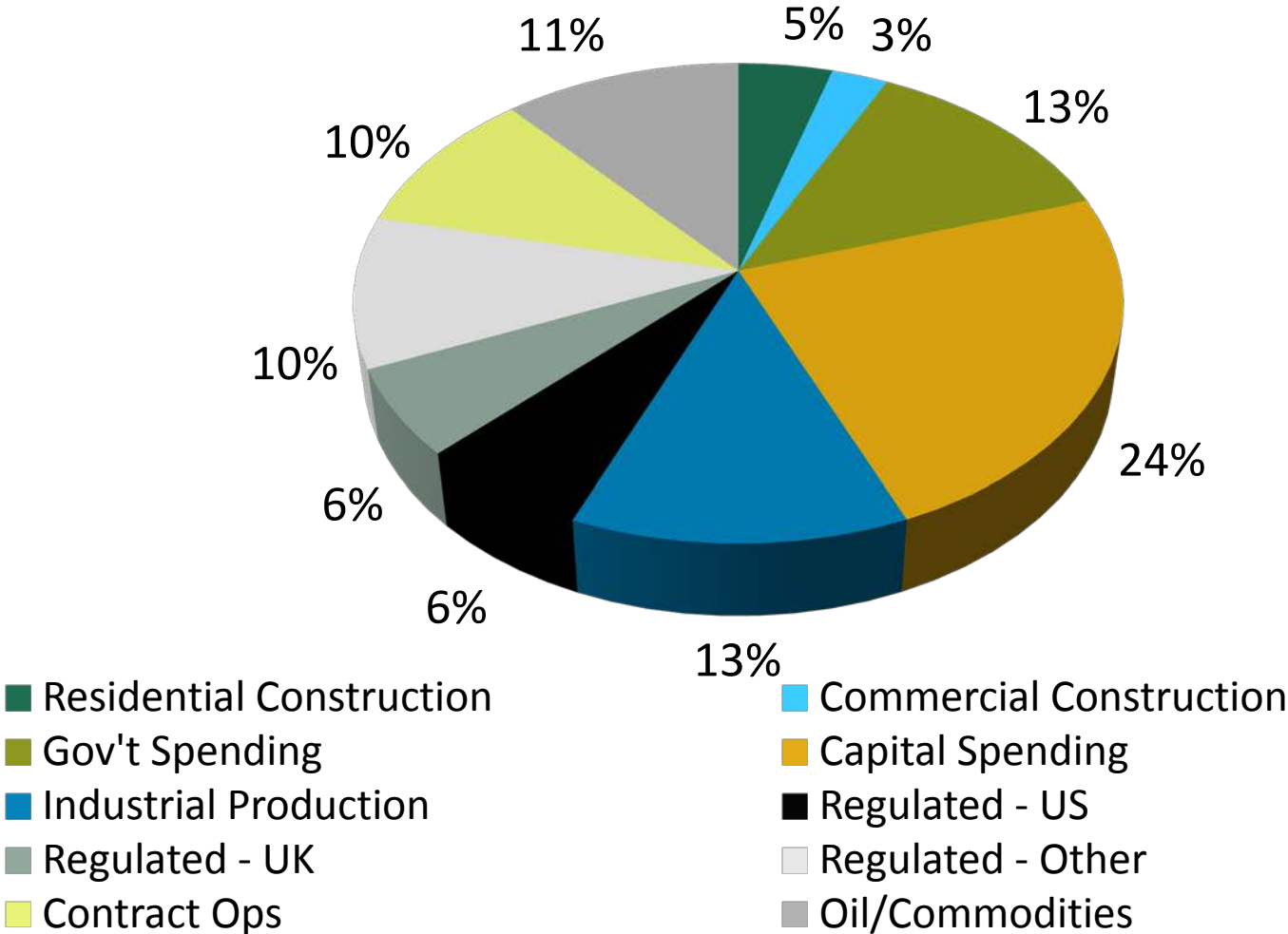
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Revenue Exposure



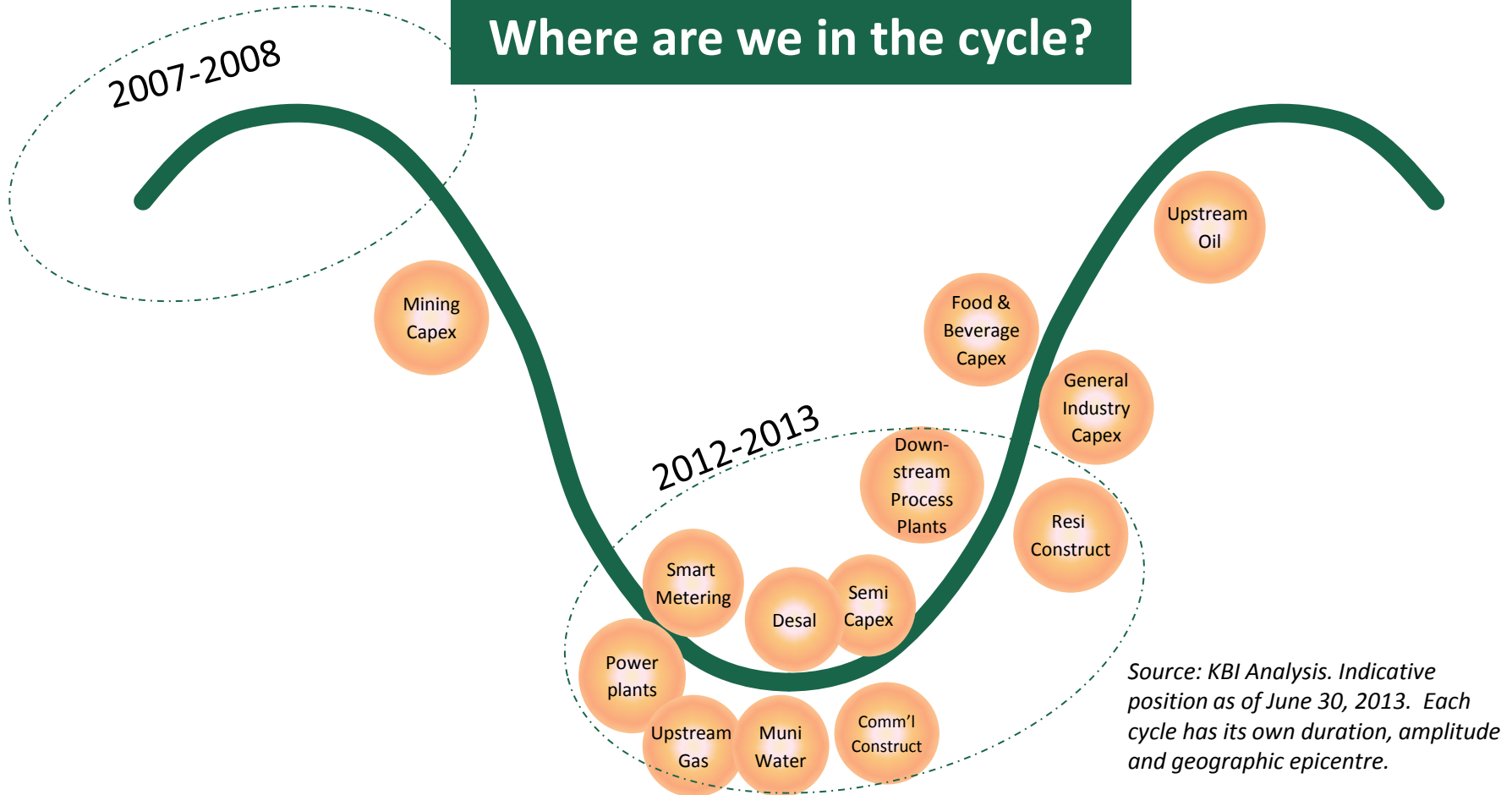
Source: Kleinwort Benson Investors as at June 30th 2013

Portfolio end-market drivers



Source: Kleinwort Benson Investors as at June 30th 2013

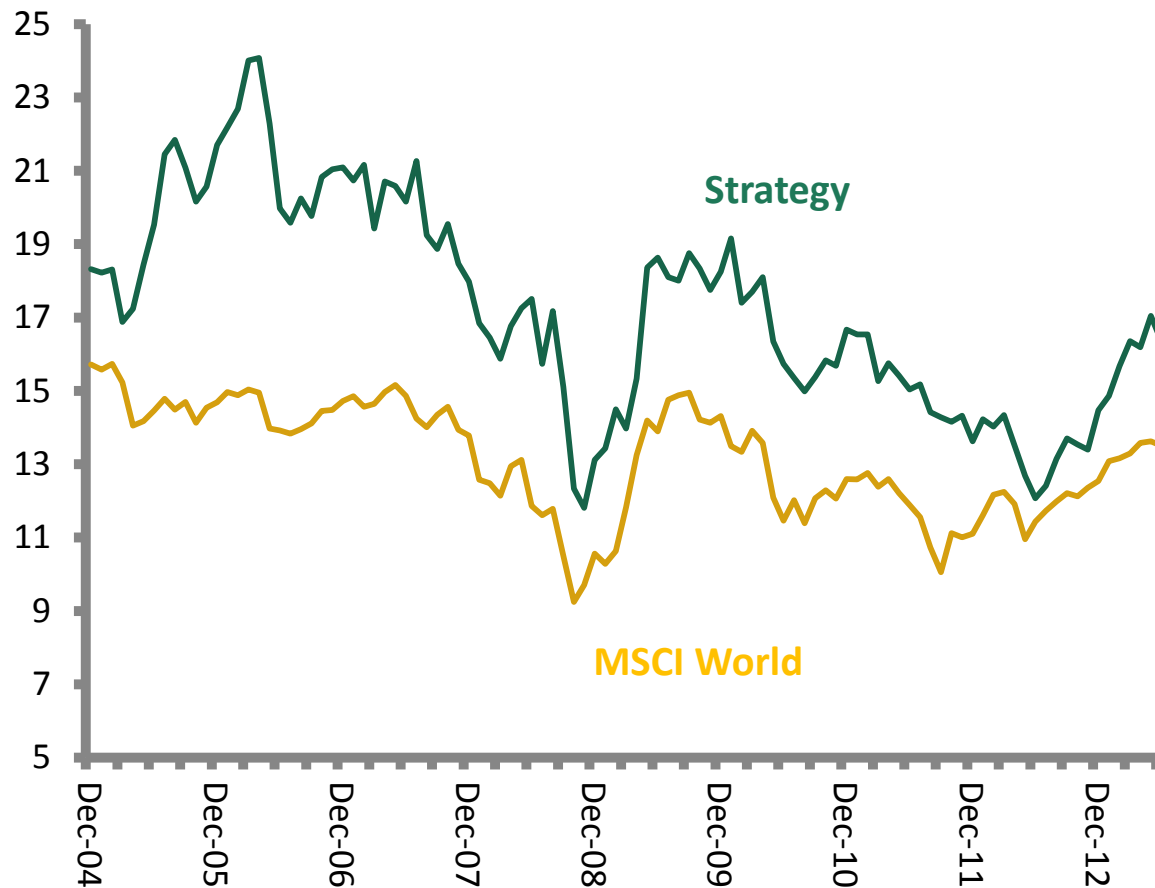
Water End Markets Where are we in the cycle?



Source: KBI Analysis. Indicative position as of June 30, 2013. Each cycle has its own duration, amplitude and geographic epicentre.

Outlook: strong EPS growth from here

KBI Water vs. MSCI: Valuation Forward P/E ratio (bottom up estimates)



Source: Kleinwort Benson Investors, 30th June 2013

Average multiple, but
strong earnings growth

Still expecting double
digit EPS growth in 2013
& 2014

How do
you invest
in Water?

Where
does Water
fit in a
portfolio?

Performance

Additional
Slides

Why Invest
in Water?

Investment Thesis:

Strategy Accesses:

Strategy Delivers:

KBI

Supply: < 1% of the world's water is available for use¹

Demand: expected to grow by more than 40% by 2030²

\$22 trillion investment will be spent on **required water infrastructure** through 2030³

Increased **Regulation** & **New Technologies**

A \$500 billion global market

Emerging Markets

Infrastructure spending

Natural resource scarcity

M&A

Small/mid cap stocks

Diversification - very small overlap with MSCI World

Moderate risk, Beta = 1.0

Active Management

A broad opportunity set of solution providers accessing a range of end markets

High conviction 40-50 stock portfolio.

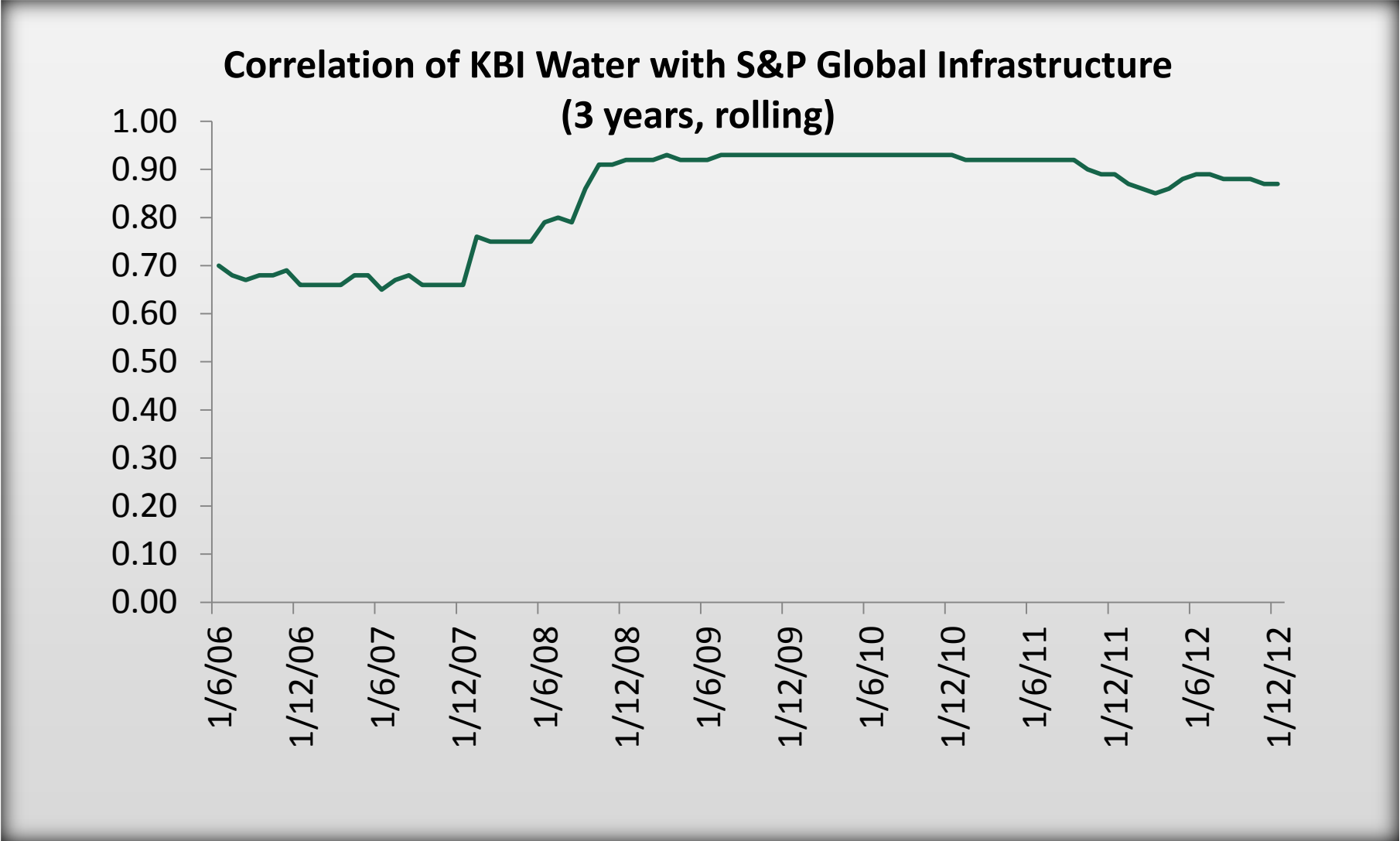
Outperformed global equities 10 of last 12 years⁴

Outperformed water index over 1,3,5 and 10 years⁵

Experienced specialist team

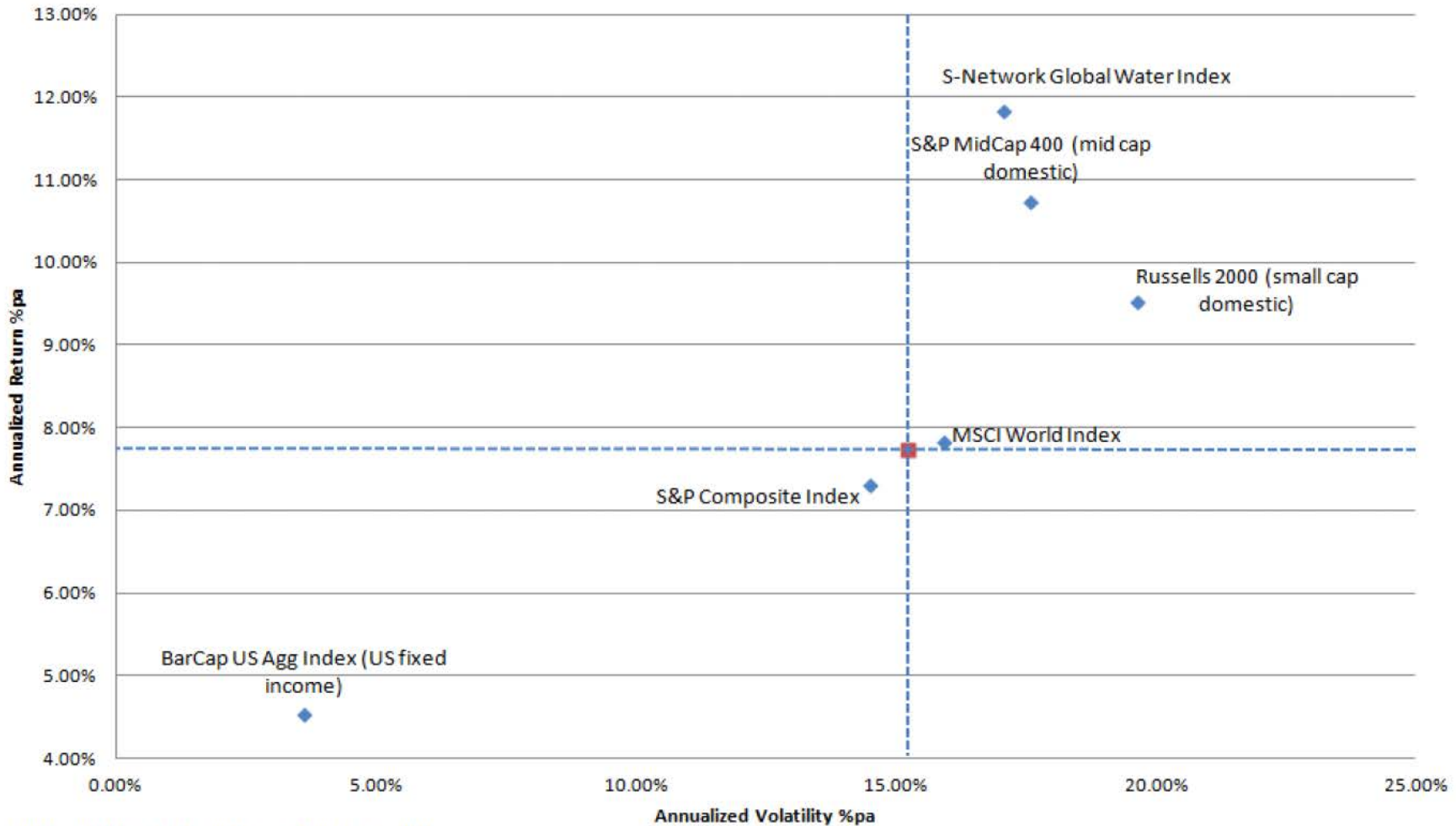
Managing this strategy since 2001

Early mover in water investing



The Trade-Off between Risk and Return

A Ten Year Analysis to 30 June 2013



Calculated by KBI with the Explica system using return data sourced from Thomson Reuters as of June 30,2013

A consistent long-term equity opportunity

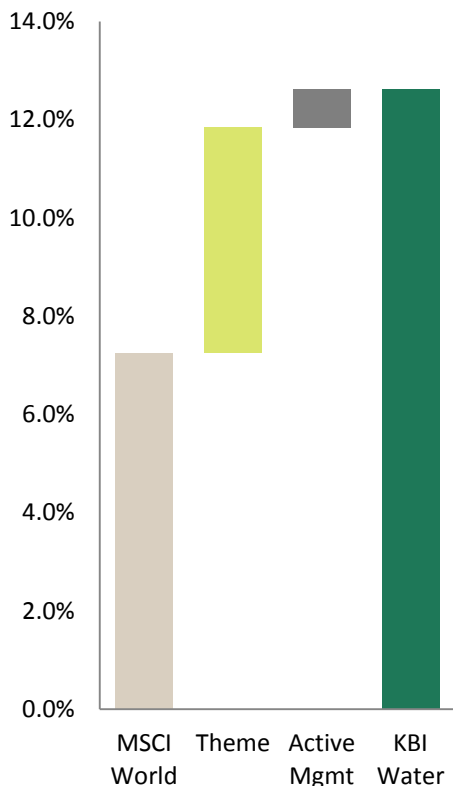
Rolling 3 Year returns over the last 10 years

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	10 yrs p.a.
MSCI EM 12.8	MSCI EM 22.8	MSCI EM 38.4	MSCI EM 31.0	MSCI EM 35.6	KBI Water -2.9	MSCI EM 5.4	Russell 2000 2.2	MSCI EM 20.4	Russell 2000 12.3	MSCI EM 16.9
Russell 2000 6.3	KBI Water 15.1	KBI Water 28.0	KBI Water 26.1	KBI Water 20.3	MSCI EM -4.6	KBI Water -2.9	MSCI EM -0.03	Russell 2000 15.6	Russell 1000 11.1	KBI Water 13.2
KBI Water 0.5	MSCI EAFE 12.3	MSCI EAFE 24.2	MSCI EAFE 20.4	MSCI EAFE 17.3	MSCI EAFE -6.9	MSCI World -5.1	Russell 1000 -2.4	Russell 1000 14.8	KBI Water 10.9	Russell 2000 9.7
MSCI EAFE -2.6	Russell 2000 11.5	Russell 2000 22.1	MSCI World 15.2	MSCI World 13.3	MSCI World -7.6	Russell 1000 -5.4	KBI Water -3.2	KBI Water 12.0	MSCI World 7.5	MSCI EAFE 8.7
MSCI World -3.5	MSCI World 7.4	MSCI World 19.3	Russell 2000 13.6	Russell 1000 9.1	Russell 2000 -8.3	MSCI EAFE -5.6	MSCI World -4.3	MSCI World 11.8	MSCI EM 5.0	MSCI World 8.1
Russell 1000 -3.8	Russell 1000 4.3	Russell 1000 15.4	Russell 1000 11.0	Russell 2000 6.8	Russell 1000 -8.7	Russell 2000 -6.1	MSCI EAFE -6.6	MSCI EAFE 8.2	MSCI EAFE 4.0	Russell 1000 7.5

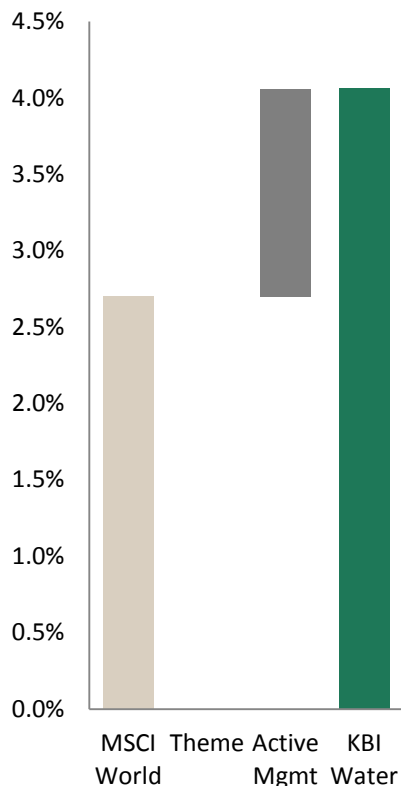
Source: Kleinwort Benson Investors and Datastream, Returns are rolling 3 yrs, gross of fees in USD as at 31st December 2012. MSCI benchmark returns assume the reinvestment of dividends after the deduction of withholding taxes.

Adding Value through Active Management

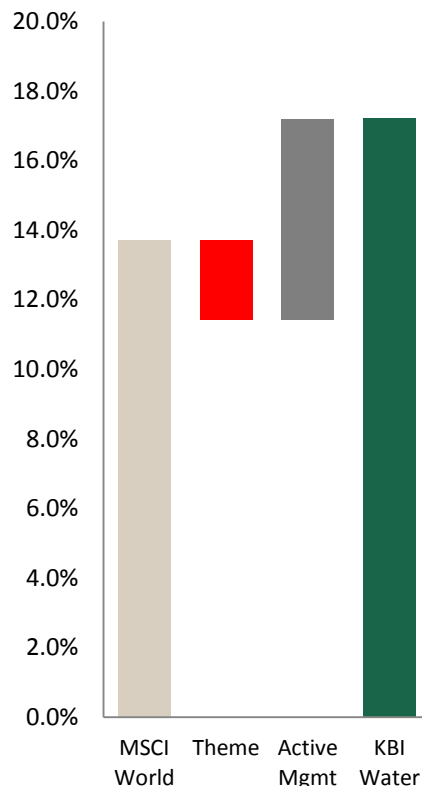
Ten Years
IR= .16



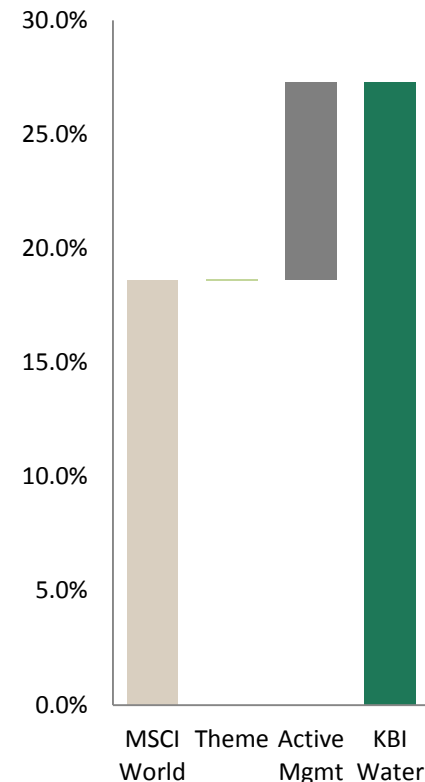
5 Years
IR=.27



3 Years
IR=1.54



1 Year



Source: Kleinwort Benson Investors and DataStream. MSCI benchmark returns assume the reinvestment of dividends after the deduction of withholding taxes. See performance disclaimer at end of presentation for further information . Returns are gross of fees in USD as of 30 June 2013. Water Stocks represented by the S-Network Global Water Index and Information Ratio is measured in relation to value added above the S-Network Global Water Index. 'The S-Network Global Water IndexesSM are calculated, distributed and marketed by S-Network Global Indexes, LLC which have been licensed for use. All content of the S-Network Global Water IndexesSM © 2011 are the intellectual property of S-Network Global Indexes, LLC.'

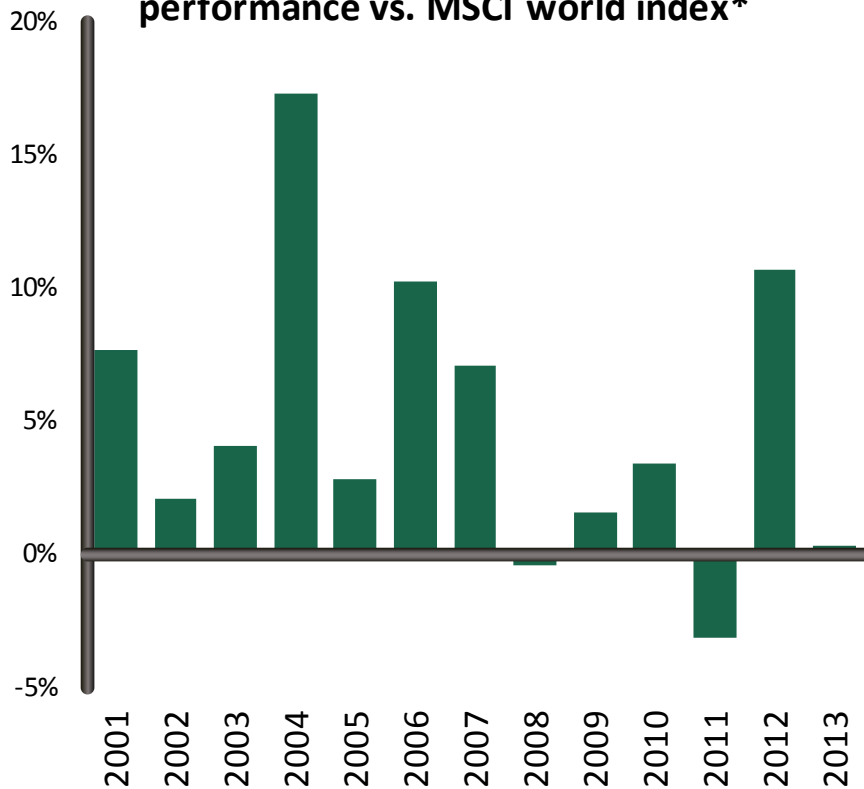


Water theme investing has provided sustainable outperformance for over a decade

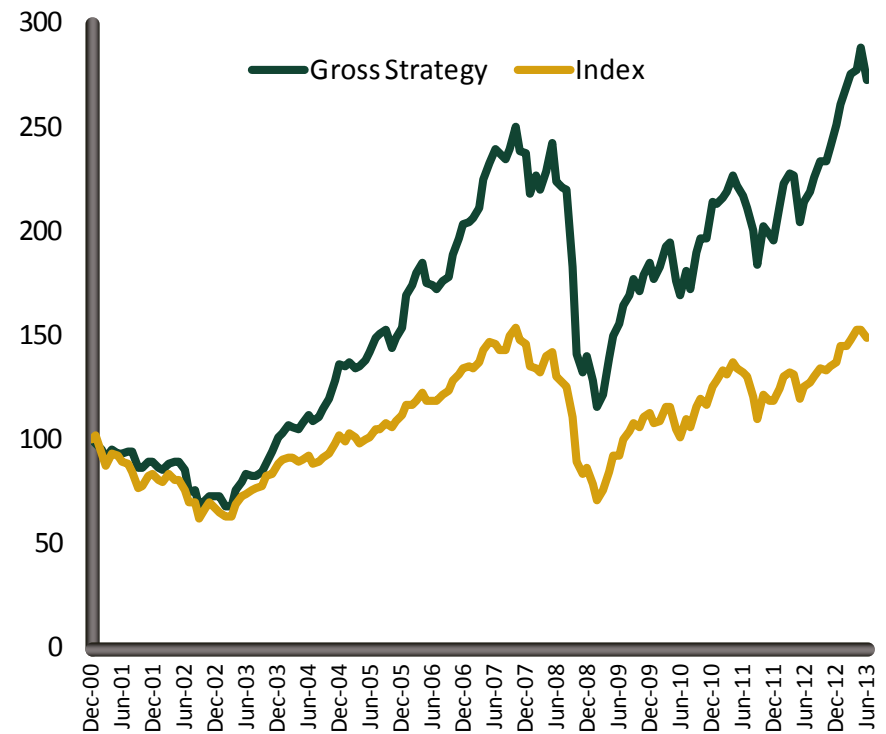
● Kleinwort Benson
□ Investors

Beta: 0.99
Excess Return: 5.0%

KBI Water strategy performance vs. MSCI world index*



KBI Water strategy performance vs. MSCI world index*



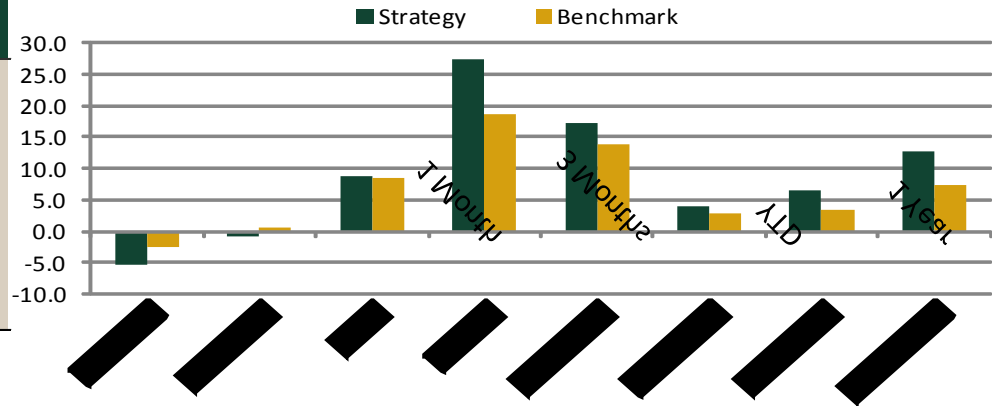
Source: Kleinwort Benson Investors, based on monthly gross performance from January 2001 to June 30th 2013,
 *Gross returns, KBI less MSCI World, in US\$. See performance disclaimer at end of presentation for further information.

Strategy Performance Report

Strategy: **Water**
 Benchmark: MSCI World (NR) Index
 Strategy Inception: 5 December 2000
 Base Currency: US Dollar

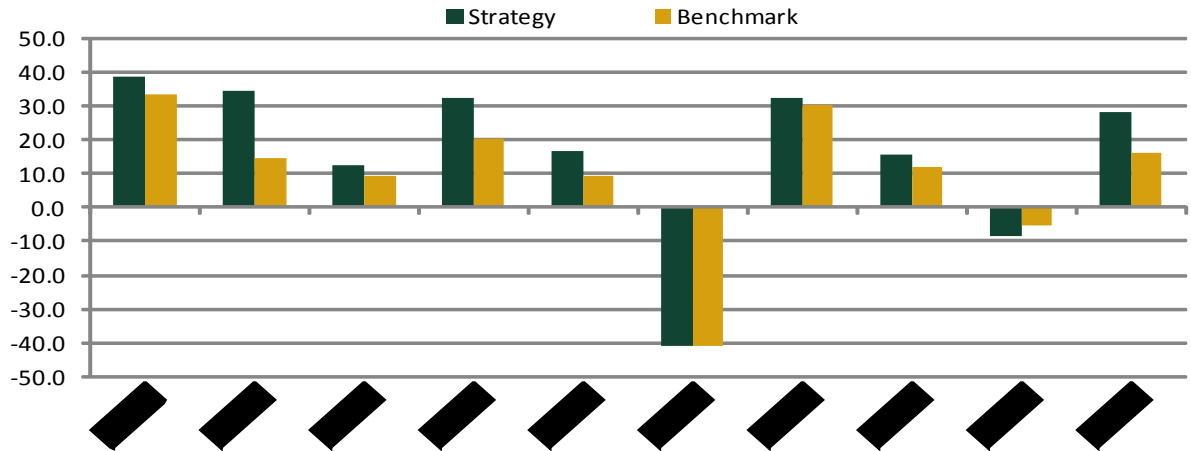
Reporting Date: **30 June 2013**
 Live Term (Yrs): 12.6
 Return Type: Gross
 Reporting Currency: US Dollar

Period	Cumulative Performance (%)				
	Strategy	Benchmark	Excess	TE	IR
1 Month	-5.4	-2.5	-3.0	-	-
3 Months	-1.0	0.6	-1.6	-	-
YTD	8.8	8.4	0.3	-	-
1 Year	27.3	18.6	7.3	-	-
3 Years pa	17.2	13.7	3.1	5.55	0.55
5 Years pa	4.1	2.7	1.3	6.54	0.20
7 Years pa	6.6	3.4	3.1	6.54	0.48
10 Years pa	12.6	7.2	5.0	6.59	0.76



Period	Volatility (%)	
	Strategy	Benchmark
3 Years pa	16.13	15.22
5 Years pa	22.13	20.15
10 Years pa	18.08	15.92

Year	Calendar Year Performance (%)		
	Strategy	Benchmark	Excess
2003	38.5	33.1	4.0
2004	34.6	14.7	17.3
2005	12.5	9.5	2.8
2006	32.4	20.1	10.2
2007	16.7	9.0	7.0
2008	-40.9	-40.7	-0.4
2009	32.1	30.0	1.6
2010	15.6	11.8	3.4
2011	-8.5	-5.5	-3.1
2012	28.2	15.8	10.6



Source: KBI, Datastream, Bloomberg. Returns are gross of fees in USD to 30th June 2013. MSCI World Net Return benchmark returns assume the reinvestment of dividends after the deduction of withholding taxes. See disclaimers for further information.



Global client base

Specialised investment firm

Passionate belief in products and processes

Part of Kleinwort Benson Group

● Kleinwort Benson
 Investors

Pioneers in dividend-based investment

Meet highest international regulatory standards

AUM: US\$5.2bn/
€4bn/£3.4bn*

Pioneers in environmental equity investing

Representative clients

Kleinwort Benson
 Investors



Norfolk County Retirement System



Painters and Allied Trades Union



Louisiana Firefighters



Louisiana Municipal Employees Retirement System



Austin Police



Public Employees Retirement Association of New Mexico

International experts

Companies

Industry conferences



Niche brokers

Industry consultants

Working in Dublin
Specialist investor research

Over 150 management meetings per year
Tier 1 access to investment conferences

KBI proprietary research

Define each theme
precisely:
Pure plays
or
Market leaders



Investment
universe

Set sector weights
Focus: Fundamentals
and valuation
Overlay: Top down
influences



Optimal sector
weights

Select stocks



Concentrated, high
conviction portfolio

Sector Analysis

Life cycle of sector
Structure of value chain
Sector Themes

Company Analysis

Management
Competitive advantage
Position in
value chain
Corporate governance

Financials

Quality balance sheet
Access to capital
Quality of earnings



Valuation

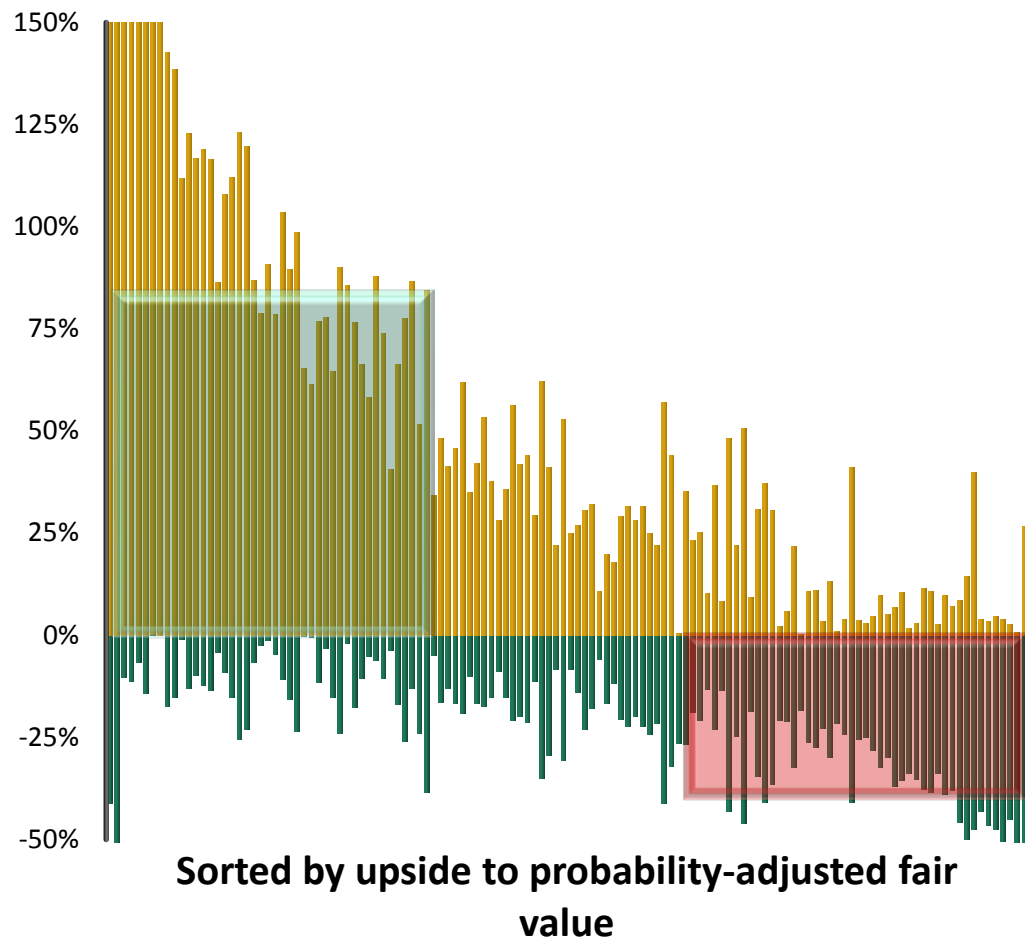
- Free cash flow models
- Valuation multiples



Portfolio construction

- Strong fundamentals,
- Attractive valuation,
- Sector exposure reflect theme drivers,
- Desired risk characteristics

Water Universe: Risk Reward by Stock



1. What do we own that we “shouldn’t”?

2. What do we not own that we “should”?

Are any themes emerging?



Noel O'Halloran, B.E., C.DiP A.F., A.S.I.P,
Director - Chief Investment Officer
25 years industry experience, 21 years with the firm

Noel joined the firm in 1992, was promoted to Head of Equities in 1996 and was appointed CIO in 2002. As CIO, he has overall responsibility for investment process and performance of the firm's assets under management across the various asset classes and specialist equity portfolios. The firm's team of investment professionals report to Noel. He has specifically managed equity portfolios across Irish, European, Asian and US equity markets. Prior to joining the firm, Noel worked for Irish Life Investment Managers as a US Equity Asset Manager. He is an engineer by profession having graduated with 1st Class honours degree from University College Cork. He is a member of the CFA Institute, the Society of Investment Analysts in Ireland and the UK Society of Investment Professionals.



Steven A. Falci, CFA, BS, MBA, MA
Head of Strategy Development – Sustainable Investment
27 years industry experience, 5 years with the firm

Steven Falci oversees the development of Kleinwort Benson Investors sustainable investment products and strategic priorities. He joined the firm in 2008 in the newly created position of Vice President – Sustainable Investment. He is a senior investment professional with over 25 years of broad experience overseeing investment teams and managing assets at a large pension fund, an institutional asset manager and a mutual fund company. Prior to joining the firm, Steve was CIO, Equities with the Calvert Group, where he oversaw the equity and asset allocation portfolios for the largest family of socially responsible mutual funds in the US. Before joining the Calvert Group, Steve was Senior Vice President, Senior Portfolio Manager and Principal at Mellon Equity Associates. Steve has a BS and MBA from the Stern School of Business at New York University, an MA from Pittsburgh Theological Seminary and is a CFA charter holder.



Catherine Ryan, BA International Business
Portfolio Manager- Environmental Strategies
13 years investment experience, 5 years with the firm

Catherine is a portfolio manager for the Kleinwort Benson Investors Water Strategy and is responsible for the development of investment strategy as well as the day to day management of the strategy. She joined the Environmental Strategies team in October 2009 and has been at the firm since 2008 when she joined to manage the firm's Irish equity portfolios. She has 12 years of investment management experience. Prior to joining the firm, Catherine worked for various fund management companies including Seneca Capital Management in San Francisco, Goodbody Stockbrokers and Pilot View Capital in Ireland. Catherine holds a BA International Business from Dublin City University and is a registered representative of the Irish Stock Exchange. Catherine has also completed Level 1 of the CFA programme.



Matthew Sheldon, CFA , BS, MBA
Portfolio Manager- Environmental Strategies
11 years investment experience, 2 years with the firm

Matt is a portfolio manager for the Kleinwort Benson Investors Water Strategy and is responsible for the development of investment strategy as well as the day to day management of the strategy. Matt joined the Environmental Strategies team in April 2011. He has extensive specialist knowledge and experience in investing in the water sector, including both global public listed equities and private equity. Prior to joining the firm, Matt worked at Water Asset Management where he was an Investment Analyst and at Wedge Capital Management where he was an Equity Analyst. Matt graduated summa cum laude from Tufts University with a BS in Chemical Engineering, holds an MBA in Finance from Columbia Business School and is a CFA charterholder.



Macquarie Infrastructure and Real Assets

Investing in Infrastructure: VCERA Retreat

September 26, 2013

Infrastructure can be categorized broadly into four key sectors

Utilities and
Energy



Transportation



Renewables
and Waste

Communications

Infrastructure can be categorized broadly into four key groups

Regulated



- Electricity Transmission & Distribution
- Gas Transmission & Distribution
- Water & Waste-Water

Contracted



- District Energy
- Midstream Energy
- Power Generation
- Communications Towers
- Storage
- Waste

Throughput



- Roads
- Tunnels
- Bridges
- Airports
- Rail Links
- Ports
- Waste

Social

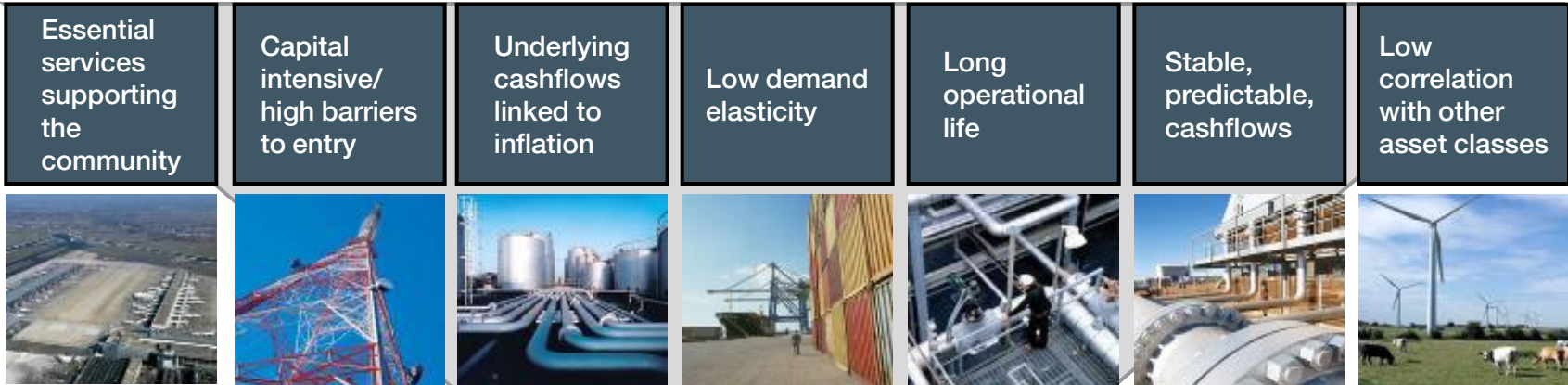


- Hospitals
- Aged Care
- Schools
- Courthouses
- Prisons

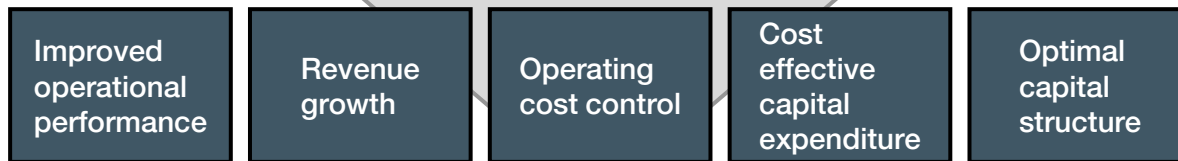
Characteristics of Infrastructure



Characteristics of Infrastructure



Active Management



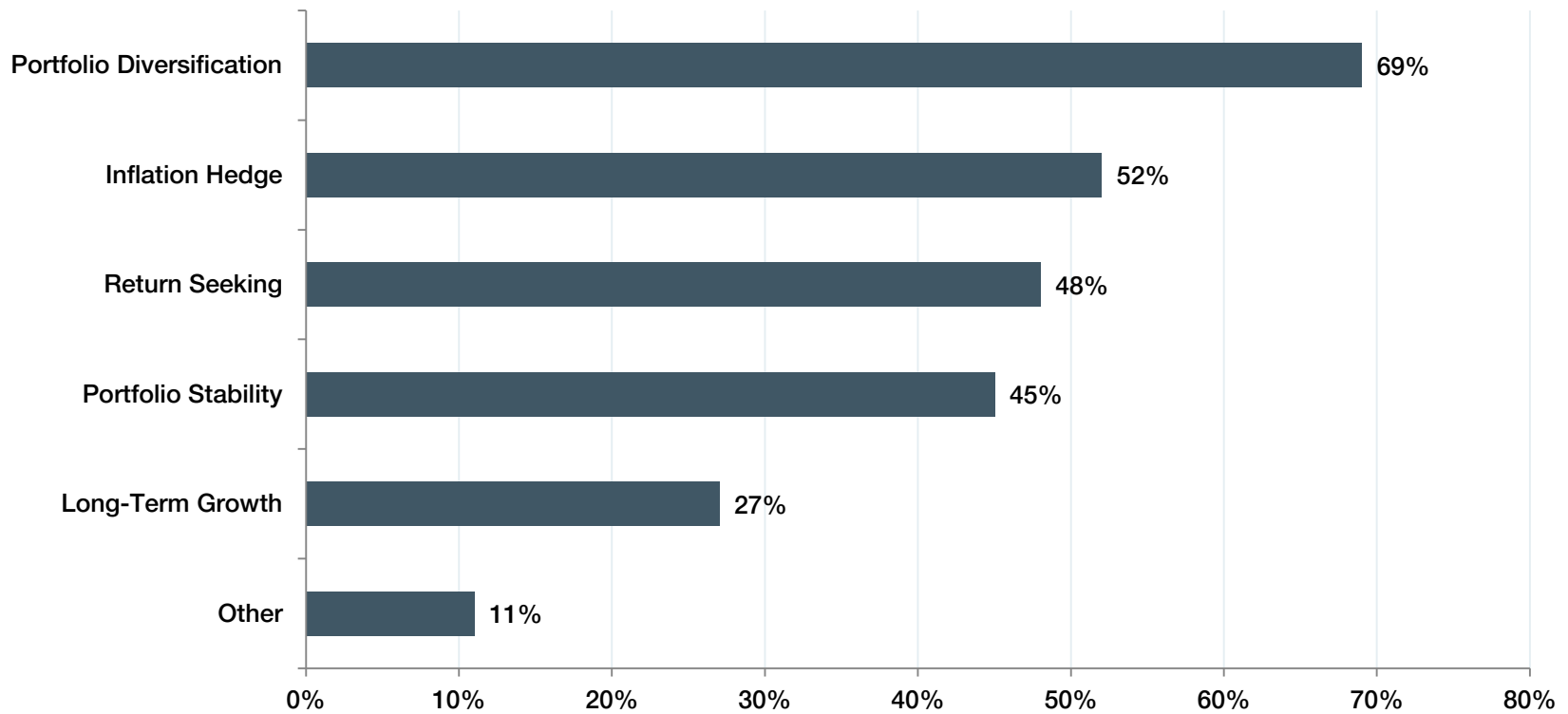
Benefit to Investors



Why Invest In Infrastructure?



Investors' Reasons for Investing in Infrastructure Opportunities¹



1. Preqin October 2012

Infrastructure can provide an effective hedge against inflation through inflation-linked revenue streams

Assets	Examples
Volume / Throughput Assets	<ul style="list-style-type: none">• Roads generally have long-term concessions that permit toll increases that are linked to inflation
Regulated Assets	<ul style="list-style-type: none">• Regulated utilities operate within a framework based on the company earning a return on its regulated capital base• The capital base reflects nominal capital invested in the business
Contracted Assets	<ul style="list-style-type: none">• Waste management companies enter into municipal contracts that often contain annual escalators linked to CPI metrics

Opportunities will arise through a range of factors

Large, Diverse Opportunity Set	<ul style="list-style-type: none">• Substantial private investment opportunity across all infrastructure sectors, with over 630 transactions announced in the United States and Canada since 2007• Need for an estimated \$6.5 trillion of investment from the public and private sectors through 2035
Corporate Repositioning & Distressed Sellers	<ul style="list-style-type: none">• Corporates and infrastructure funds are selling assets:<ul style="list-style-type: none">– Burdened with excessive leverage– Sales of non-core infrastructure assets– Assets sales follow strategic change
Governments Under Fiscal Strain	<ul style="list-style-type: none">• Municipalities, State and Federal governments are struggling to fully finance infrastructure requirements<ul style="list-style-type: none">– 22 U.S. States with deficits• Reduced ability to increase taxes in order to fund infrastructure investment

Investment opportunities driven by compelling macro and sector trends

Population Growth
and Urbanization

Historical Underinvestment

Limits on
Traditional Funding Sources

Utilities & Energy
Infrastructure

- Take-private of utilities in public markets
- Regional gathering transport capabilities must meet production at new large shale fields; large pipelines being built to take production to key demand centers
- Desire for energy diversification and legislative support driving renewable opportunities
- Need to upgrade existing road, rail and airport networks and build additional capacity on congested routes
- Government agencies under fiscal pressures looking to monetize existing assets
- Emerging opportunities in the airports sector led by the FAA Airport Privatization Program

Transportation
Infrastructure

Communications
Infrastructure

- Surging demand due to increased adoption and usage of wireless data devices
- High-quality communication assets exhibit multiple infrastructure characteristics

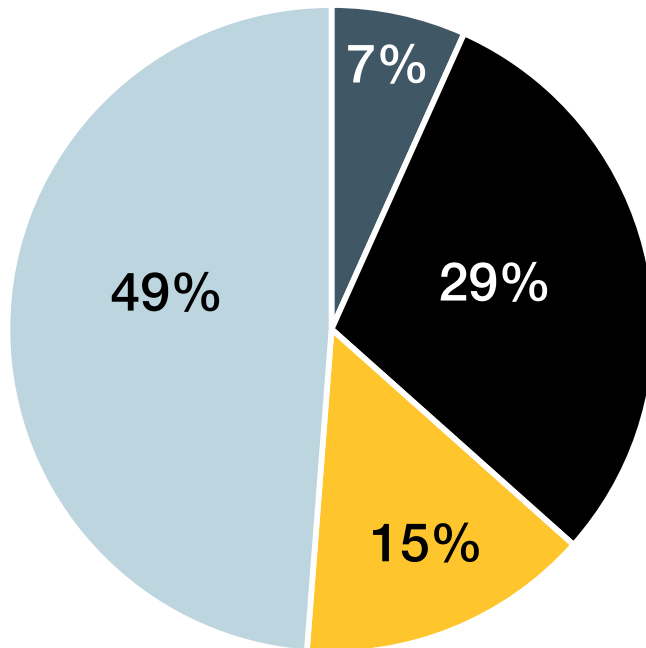
Waste
Management

- Concentrated market at the larger end with continued consolidation expected at the fragmented medium to smaller end
- Opportunities from exploiting landfill gas deposits at municipal solid waste disposal facilities via landfill gas to energy projects

Types of Opportunities MIRA Considered

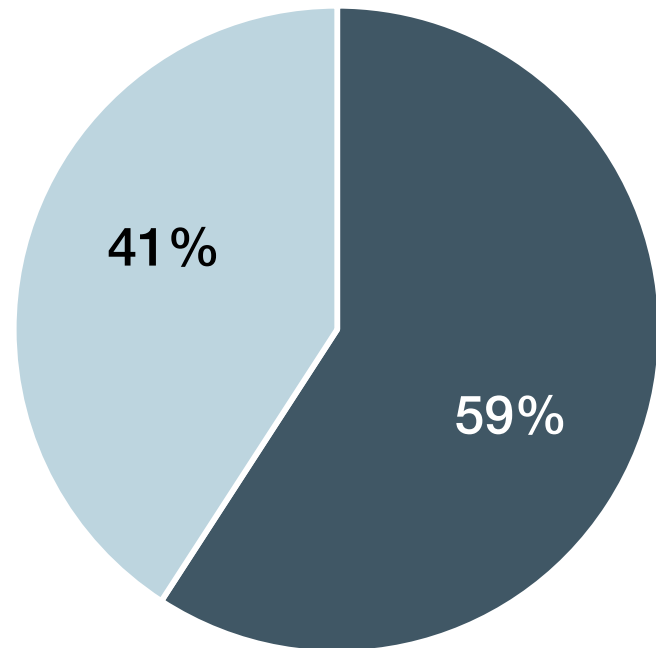


Process Type



- Take private
- Privatization
- Joint venture
- Other private

Project Stage



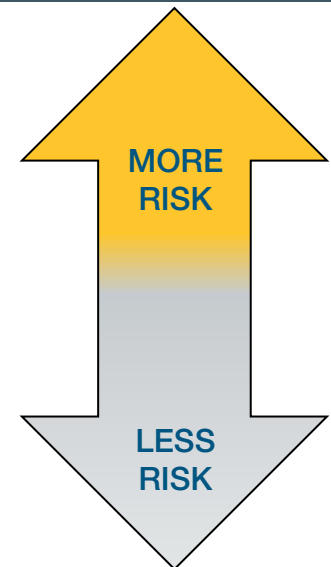
- Brownfield
- Development

Source: MIRA investment professionals
Includes opportunities reviewed from Jan 2012 through Feb 2013

- Stable cash flows from infrastructure assets can deliver a significant portion of returns through yield
- Timing and magnitude of yield is a function of asset stage, capex requirements and growth profile

Illustrative returns of infrastructure sub-sectors¹

Asset Type	Average Cash Yield	Target Returns
Ports / Marine Terminals	4 – 6%	13 – 17%
Waste Management	3 – 5%	12 – 19%
Midstream	5 – 10%	11 – 17%
Telecommunications Infrastructure	3 – 5%	13 – 17%
Toll Roads – Greenfield	5 – 10%	12 – 16%
Airports	4 – 9%	12 – 16%
Long-term Contracted Power Generation	4 – 12%	9 – 13%
Toll Roads - Mature	4 – 9%	8 – 12%
Regulated Assets	4 – 9%	9 – 13%
PFI / PPPs	6 – 12%	8 – 12%



1. Macquarie, December 2011. Yield and IRR estimates are illustrative only and may not be achieved for any given asset type or specific investment. Long-term contracted power generation includes renewable energy generation assets. Indicative cash yield from greenfield toll roads reflects expected yield following construction completion and initial traffic ramp-up.



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The Opportunity Capital Allocation – A Tool to Provide Maximum Flexibility with Implementation

Peter Hill
Partner

Hewitt ennisknupp

An Aon Company
Master Page No. 56

Opportunity Allocation: The Concept

- Asset allocation is the most important factor dictating long-term performance
- Constraints of a formal asset allocation policy should not impede investors from investing in attractive or innovative opportunities
- An **Opportunity Allocation** creates flexibility within the Investment Policy Statement to make investments that may not fit within a traditional asset allocation construct
- Strategies considered should offer a *compelling potential return enhancement and/or diversification benefits (risk reduction)*
- Optimal for investors with existing well-diversified portfolios that encompass both traditional and alternative asset classes and who are seeking additional flexibility

Rationale for Creation of an Opportunity Allocation

- From time to time, investors may be faced with *opportunities that are truly “opportunistic” in nature*
- *Not all investment opportunities fit neatly within clearly-defined asset class lines*
- *Commitments to potentially attractive investments may be relatively small and not warrant the creation of a dedicated target allocation at the present time*

An Opportunity Allocation provides maximum flexibility to access interesting and attractive opportunities, by removing some constraints of a formal asset allocation policy

Opportunity Allocation: Challenges and Desirable Investor Characteristics

- Challenges of an Opportunity Allocation include:
 - Complexity
 - Illiquidity
 - Sourcing of Funds
 - Defining Time/Objective
 - Higher Fees
 - Benchmarking

- A robust governance structure is critical to its success
 - High degree of comfort with various constituents developing and promoting new ideas
 - Nimble, but sound, decision-making process
 - Comfort with ideas that do not fit neatly into “traditional” investing
 - Willingness to be different than peers at times
 - Willingness and ability to allocate additional time to investigate and monitor new ideas
 - Ability to terminate managers as needed

Opportunity Allocation: Implementation

- Design as a *maximum* allocation as opposed to a *target*
- Suggest an allowable range of 0% to no more than 10%
- Opportunity Allocation policy target should 'float' to be generally in line with the actual allocation to the category over time
- Source of funds should be liquid public securities and linked to the role of the investment

Benchmarking the Opportunity Fund

The overarching objective of an Opportunity Allocation is to provide return enhancement and/or diversification relative to the opportunity cost of capital

- Suggest benchmarking the Opportunity Allocation, as a whole, to a blend of liquid return-seeking and risk-mitigating assets (i.e., stocks & bonds)
- An alternative approach is to use the weighted average of the underlying strategy benchmarks
- The underlying strategies can span the gamut in terms of risk and return characteristics
 - Utilize category or style-specific benchmarks
- Performance should be evaluated over a full market cycle, at two levels
 - Portfolio level: Is the overall Opportunity Allocation meeting stated goals
 - Strategy level: Are underlying strategies performing in line with expectations
- Important to also assess performance from a qualitative standpoint to ensure that stated goals are met

Evaluating Strategies for the Opportunity Allocation

- Potential strategies of interest should provide one or more of the following:
 - Superior expected returns relative to the rest of the portfolio
 - High degree of diversification relative to the rest of the portfolio
 - Attributes that the Policy portfolio does not capture

- Points of consideration when selecting strategies may include:
 - Impact on overall portfolio risk and return characteristics or “fit” within portfolio
 - Liquidity and lock-ups
 - Complexity
 - Leverage
 - Fees

- Ultimately, each investor will have their own “maximum tolerance” in terms of various risks introduced via an “opportunistic” investment

Developing a Framework for Opportunity Allocation Investments

- Given the unique nature of the allocation, there should be a clearly-defined framework to assess potential opportunities, including:
 - Rationale
 - Expected characteristics
 - Portfolio benefits
 - Risks
 - Source of funds
 - Benchmarks
 - Review procedures and exit strategy

- The nature of the strategies/asset classes that are candidates for this category may vary significantly

- Hence, the underlying due diligence should be customized to suit the unique attributes of each type of strategy/asset class

Opportunity Fund Framework Summary

- Recommend below summary framework be utilized when ideas for the Opportunity Allocation are considered

Investment Objective	<p><i>What risks are we trying to address or what opportunities are we trying to take advantage of?</i></p> <ul style="list-style-type: none"> ▪ Identify market risk/opportunity being targeted for more “opportunistic-type investments”, and/or ▪ Identify portfolio benefits that investment provides that long-term strategic asset allocation does not
New Investment Risks	<p><i>What risks (new or increased) do such investments bring?</i></p> <ul style="list-style-type: none"> ▪ Identify new sources of risk or increases in types of risk that would result from pursuing such a strategy ▪ Identify environments when strategy will not be successful ▪ Identify risk mitigating factors
Implementation Strategy	<p><i>What should be the focus of implementation?</i></p> <ul style="list-style-type: none"> ▪ Identify the precepts that will drive manager/strategy selection
Other Factors:	<ul style="list-style-type: none"> ▪ Fees ▪ Liquidity/Lock-up provisions ▪ Transparency ▪ Leverage ▪ Benchmarking

HEK Client Use of Opportunity Allocation

- HEK clients have used the Opportunity Allocation for several years now, though there has been a recent uptick in its adoption – typically 3 – 5% of fund assets

- Listed below are some examples of how clients have utilized an Opportunity Allocation:
 - Accommodate strategies not easily classified in traditional asset class terms
 - Absolute return, activist, tail risk hedging, real assets
 - Take advantage of dislocated markets at times of crisis
 - Convertible arbitrage in 2009, distressed investments 2009
 - Promote a level of confidence in decision makers with non-traditional strategies
 - Insurance linked securities funds (cat bonds, reinsurance)
 - Take advantage of timely new product offerings or capital raisings that are outside of traditional asset class boundaries
 - Hedge fund seeding (“Dodd-Frank” Act consequence)

- The investment universe for the Opportunity Allocation will continue to grow as periodic dislocations in segments of the financial markets are nearly certain to arise and new products are continually developed

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PIMCO Institute

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Presentation on:

Ventura County Employees Retirement Association

26 September 2013



Should we be afraid of the risks of hyperactive monetary policy?



Overview: A Fed in transition



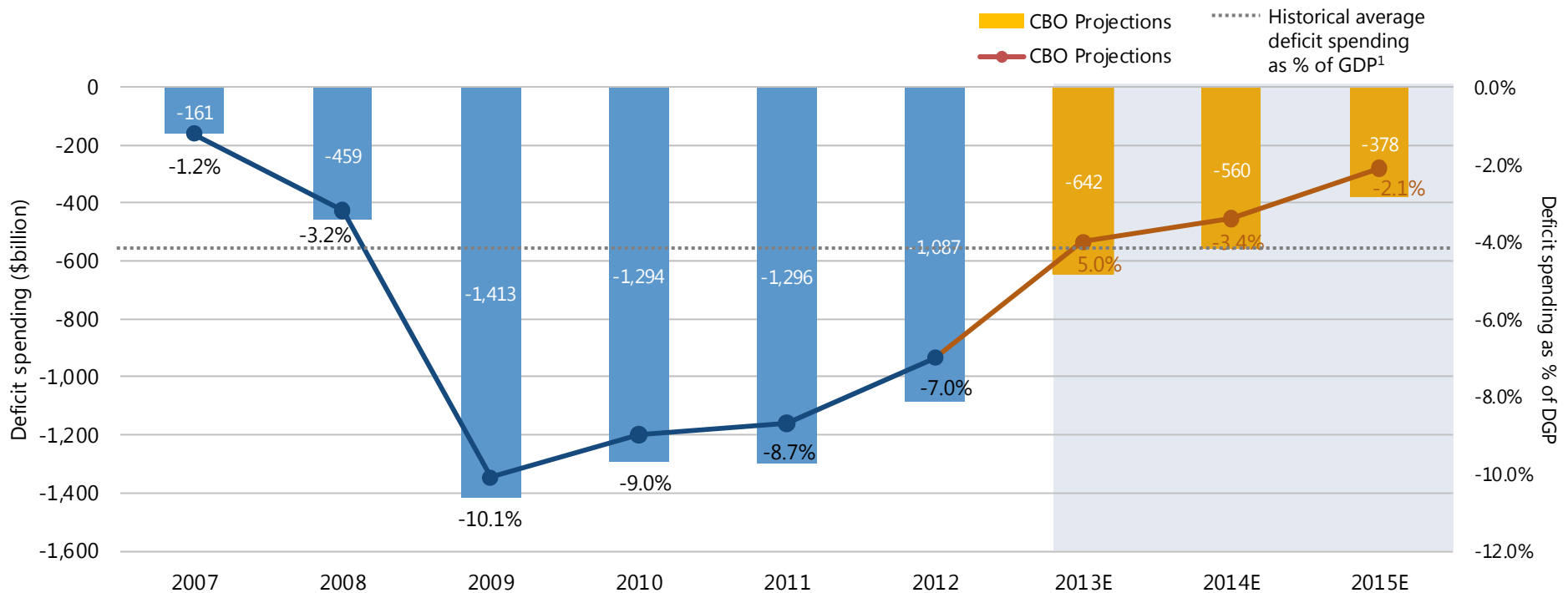
- Hyperactive monetary policy (HMP) is in full force for now, but we have reached an inflection point
- The benefits of HMP previously outweighed the costs; the balance is tipping
- Changes in the Fed's reaction function have emerged
- Changes in the Fed's leadership composition are imminent
- Eventually HMP will come to an end – the critical question for investors is whether the end is due to success or failure
- We believe the economy is not prepared to handle a withdrawal of policy accommodation – leading the Fed to re-engage or worse, accept inefficacy

Refer to Appendix for additional forecast and outlook information

Hyperactive fiscal policy is on the decline



- Post-crisis, fiscal expansion skyrocketed in order to compensate for massive private sector deleveraging
- With fiscal policy in retreat, monetary policy has been the only game in town



As of 1 September 2013

SOURCE: Congressional Budget Office (CBO)

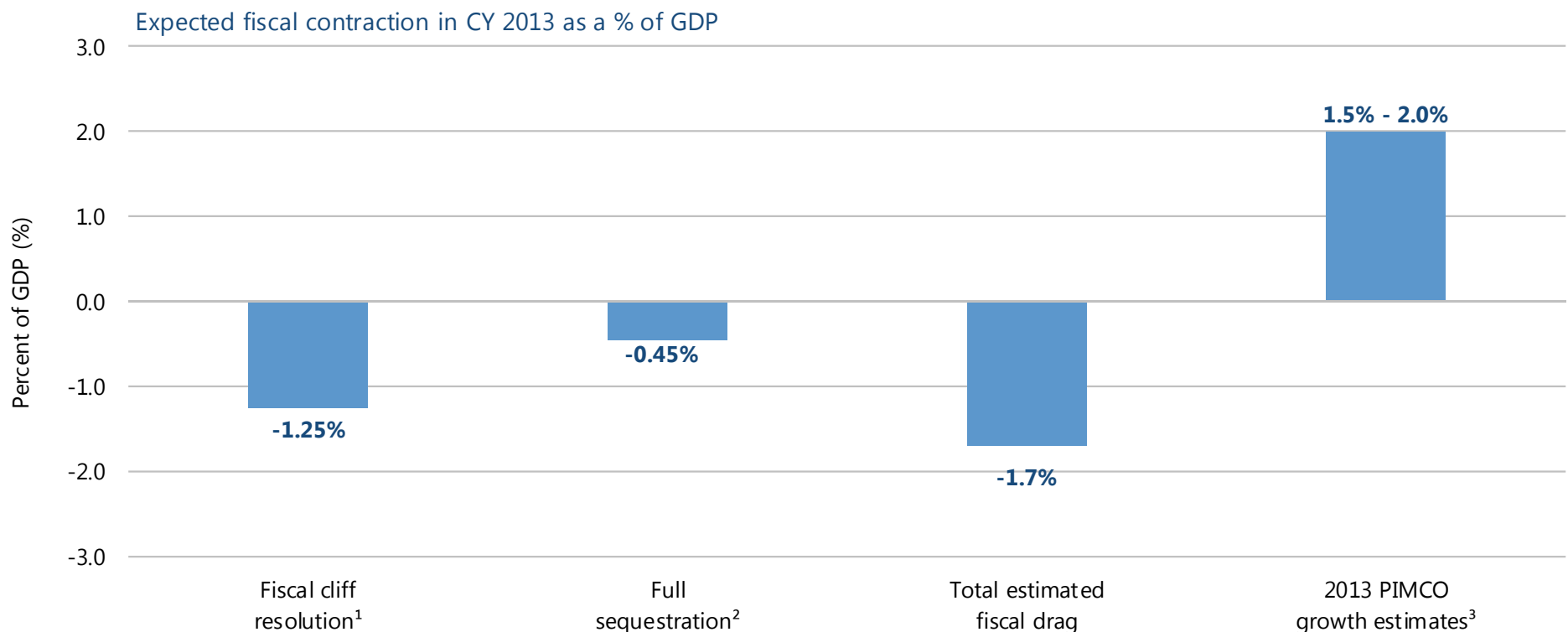
All years shown are fiscal year (October–September)

¹ Average since 1973–2012

2013 has seen significant fiscal contraction



- PIMCO estimates fiscal contraction of ~1.25% of GDP in 2013, resulting from the expiration of the payroll tax cut, an increase in upper income tax rates and a partial implementation of the sequester



As of 1 September 2013

SOURCE: PIMCO, Congressional Budget Office (CBO), Joint Committee on Taxation, Department of Commerce

¹ Includes multiplier effects

² Assumes full implementation of FY13 and FY14 sequester and reduced discretionary budget caps

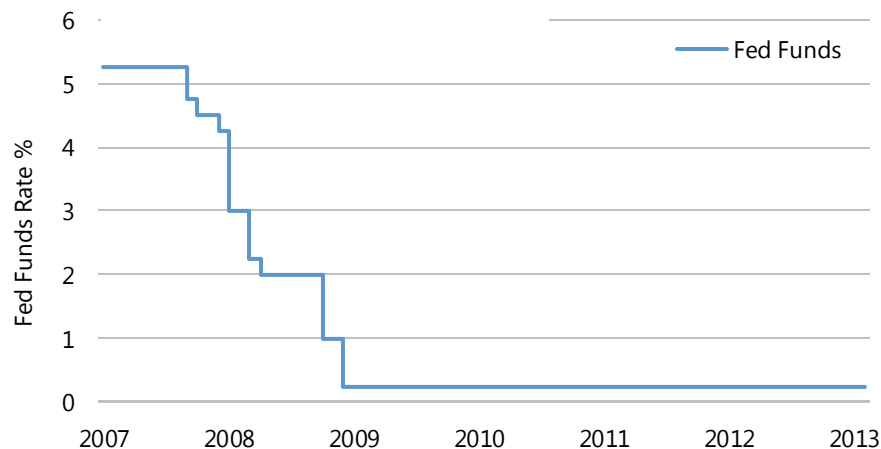
³ Includes fiscal contraction estimates

Refer to Appendix for additional forecast and outlook information

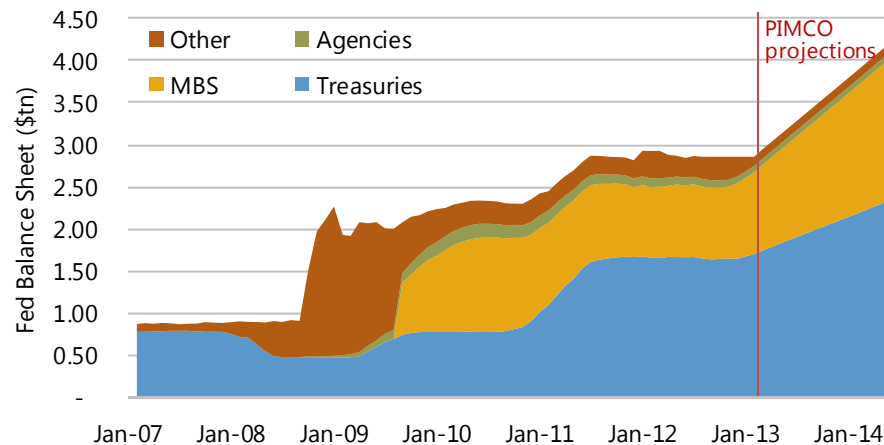
Hyperactive monetary policy: Pushing the envelope



1) Defensive posturing: Zero interest rate policy



2) Offensive attack: Escalating aggressiveness of QE



3) Soft power: Communication and forward guidance

Dec 2008	"0 to 1/4 percent"
Jan 2009	"for some time"
Mar 2009	"for an extended period"
Aug 2011	"at least through mid-2013"
Jan 2012	"at least through late 2014"
Sep 2012	"considerable time after economy strengthens" "at least through mid-2015"
Dec 2012	"considerable time after asset purchase program ends" "at least as long as the unemployment rate remains above 6.5%, inflation..." below 2.5%

4) Strategic repositioning: Prioritization of unemployment mandate over inflation mandate

Jun 2012	Two percent inflation target
Apr 2012	Janet Yellen introduces optimal control model
Nov 2012	In a speech on Fed communication, Janet Yellen indicates "...the FOMC can tolerate transitory deviations of inflation from its objective in order to more forcefully stabilize employment..."

As of 1 September 2013

Source: FOMC, Bloomberg, PIMCO

Refer to Appendix for additional forecast and outlook information

Cost/benefit analysis of the Fed's hyperactive monetary policy

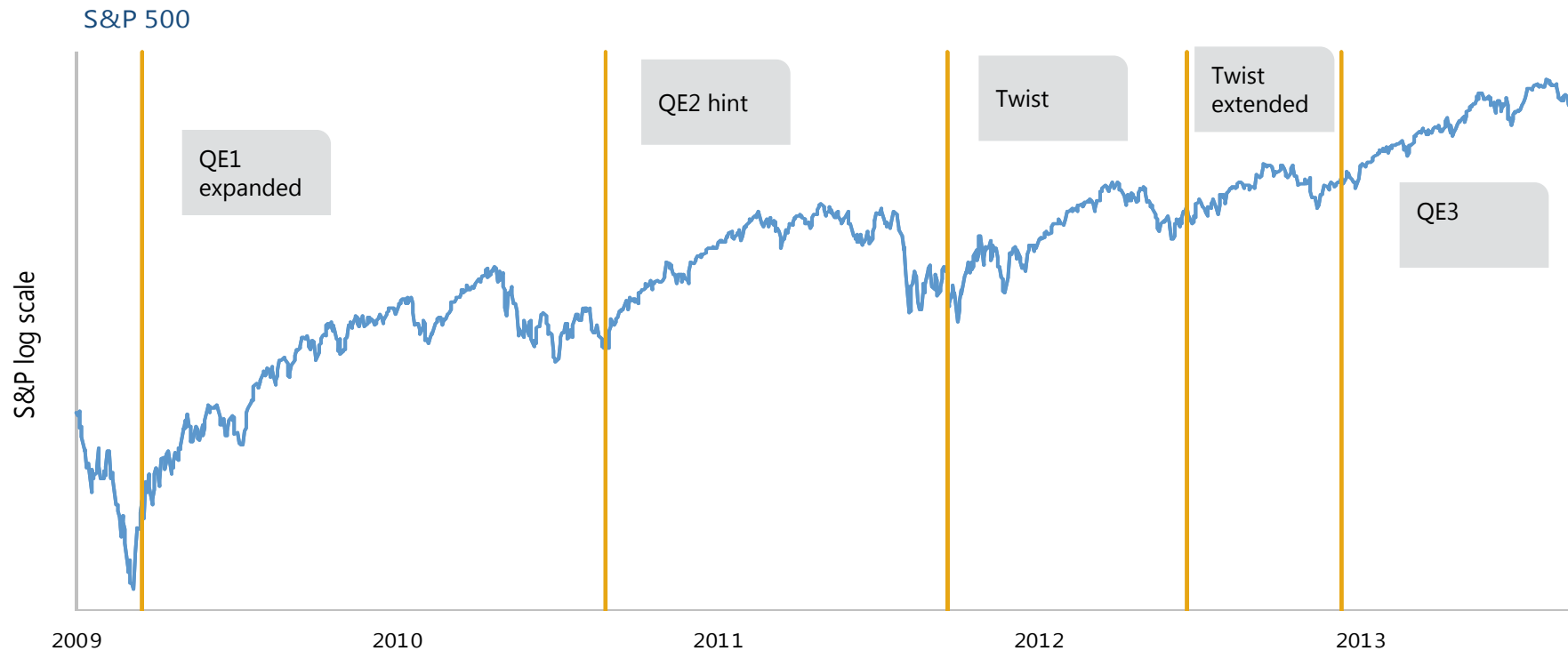


	Benefits	Costs
Inflation	<ul style="list-style-type: none"> Higher risk asset valuations Housing 	<ul style="list-style-type: none"> Potential for asset bubbles Commodity based inflation Inflation expectations
Leverage	<ul style="list-style-type: none"> Higher cyclical consumption 	<ul style="list-style-type: none"> Leading to lower structural GDP growth and misallocation of capital
Confidence in USD	<ul style="list-style-type: none"> Helps export competitiveness 	<ul style="list-style-type: none"> Risks the U.S. losing reserve currency status and the Fed losing credibility
Fiscal adjustment	<ul style="list-style-type: none"> Less urgency for fiscal reform 	<ul style="list-style-type: none"> Less urgency for fiscal reform
Financial stability	<ul style="list-style-type: none"> Financial innovation jumps-starts the economy 	<ul style="list-style-type: none"> Too much financial innovation leads to financial instability later
Policy uncertainty	<ul style="list-style-type: none"> Less cyclical policy uncertainty 	<ul style="list-style-type: none"> More secular policy uncertainty

Benefit: The good inflation | Risk assets



- The wealth effect spurs cyclical consumption:
 - Every \$1 increase in financial assets is associated with 3-5 cent increase in consumption
 - Every \$1 increase in housing prices is associated with 7-8 cent increase in consumption



As of 1 September 2013

Source: PIMCO, Bloomberg

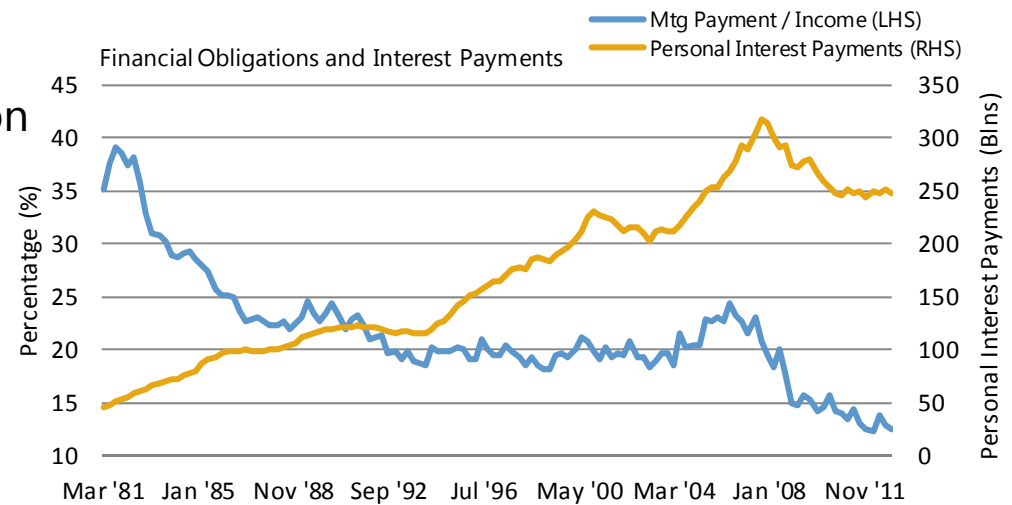
Twist/Operation Twist : "Operation Twist" describes a monetary process where the Fed buys and sells short-term and long-term bonds depending on their objective.

Refer to Appendix for additional index and outlook information

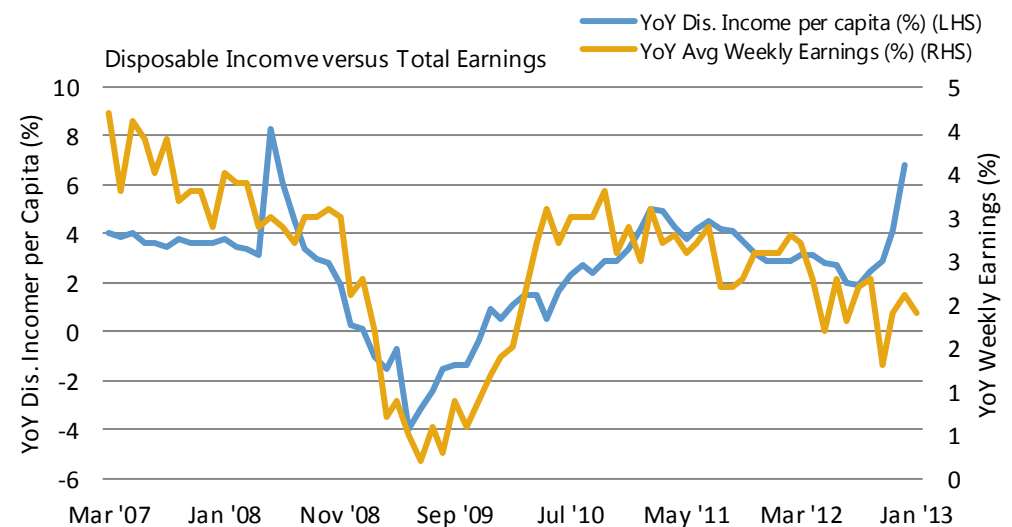
Benefit: The good leverage | Spurs cyclical consumption



- Lower debt service costs means more money available for near-term consumption



- Disposable income continues to increase despite stagnant wage growth

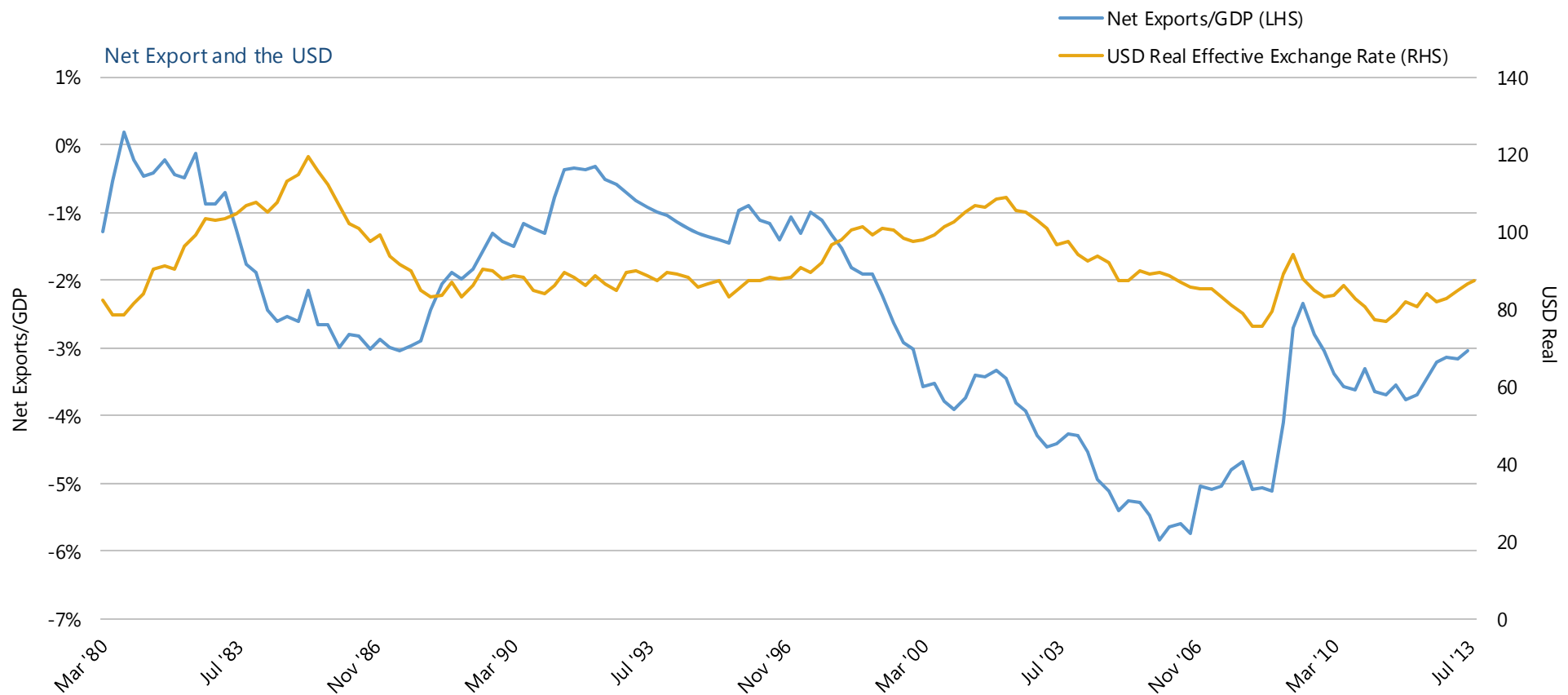


As of 1 September 2013
 Source: PIMCO, Bloomberg
 Refer to Appendix for additional outlook information

Benefit: Devaluation of the dollar | Helps export competitiveness



- Fed balance sheet expansion, at a minimum, helps the US stay competitive amidst the global currency war



As of 1 September 2013

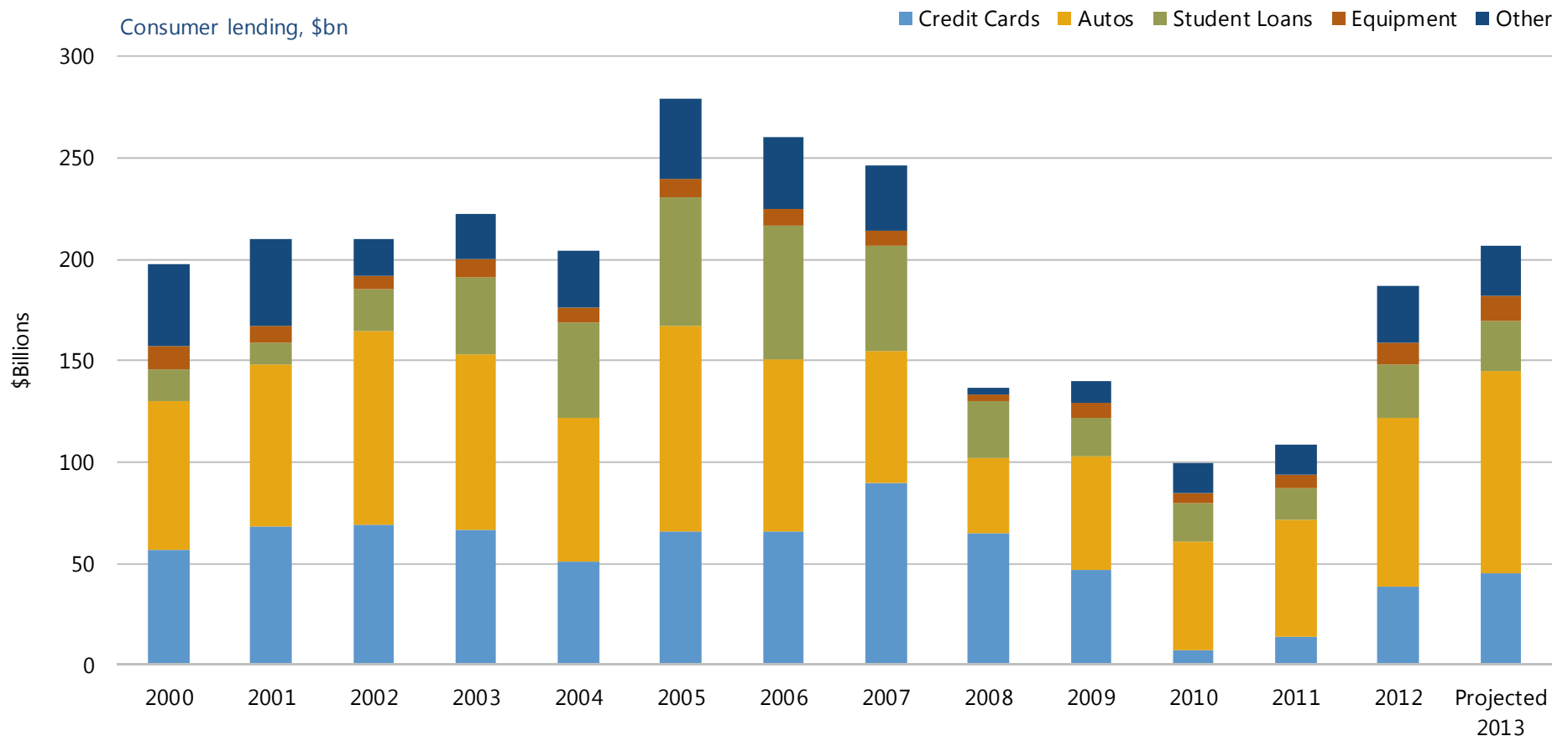
Source: PIMCO

Refer to Appendix for additional outlook information

Benefit: Financial stability | Assists financial innovation & intermediation



- CLO issuance approaching 2004 levels
- Consumer lending channels are normalizing, facilitated by the Fed's liquidity provision



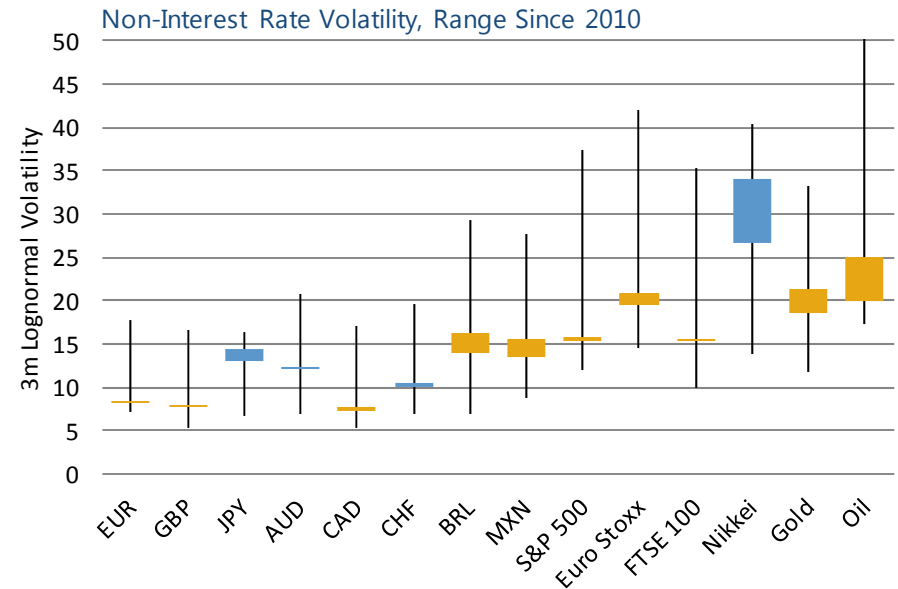
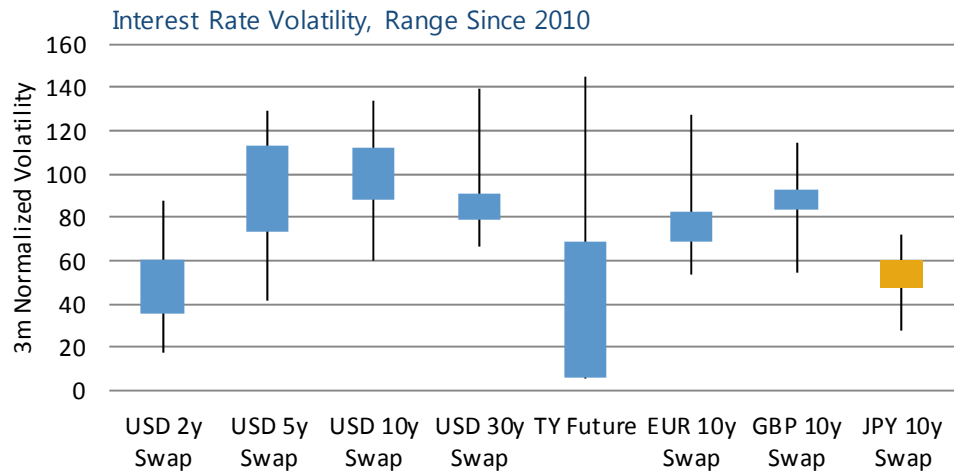
As of 1 September 2013
 Source: PIMCO; JPMorgan. Collateralized loan obligation (CLO)
 Refer to Appendix for additional outlook information

Benefit: Reduction in cyclical policy uncertainty



- The Fed's pro-active stance has backstopped financial conditions, lowering asset market volatility

Asset Market Volatility



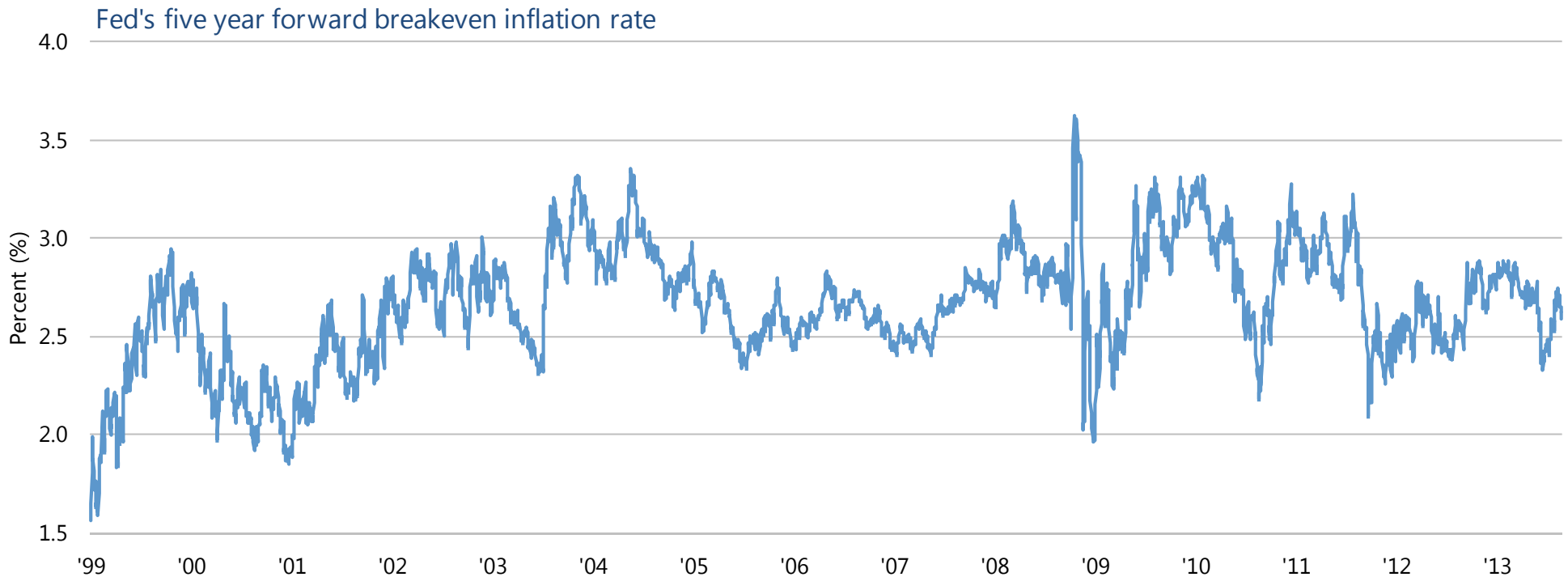
As of 1 September 2013
 Source: PIMCO, Bloomberg
 Refer to Appendix for additional outlook information

Cost: The bad inflation | Higher inflation expectations



Signals to watch for: 5yr5yr breakeven inflation

- Forward breakeven inflation is contained for now.



As of 1 September 2013

Source: Bloomberg

Refer to Appendix for additional outlook information

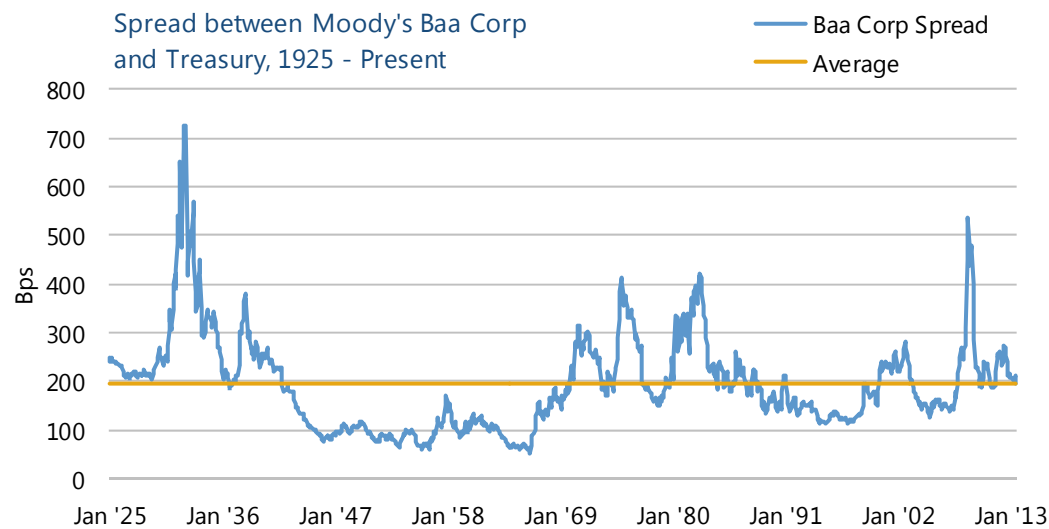
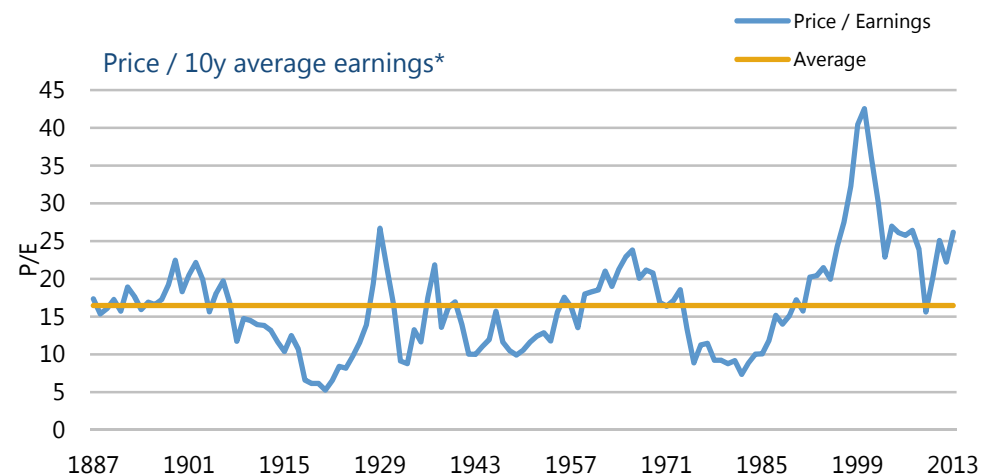
Cost: The bad inflation | Asset market bubbles



Signals to watch for:

- Equity multiples
- Credit spread levels
- House price / rent and income ratios
- Commodity prices versus marginal cost of production

- Concern over asset market bubbles is in our opinion the most important driver of the Fed's decision to put "tapering" on the table



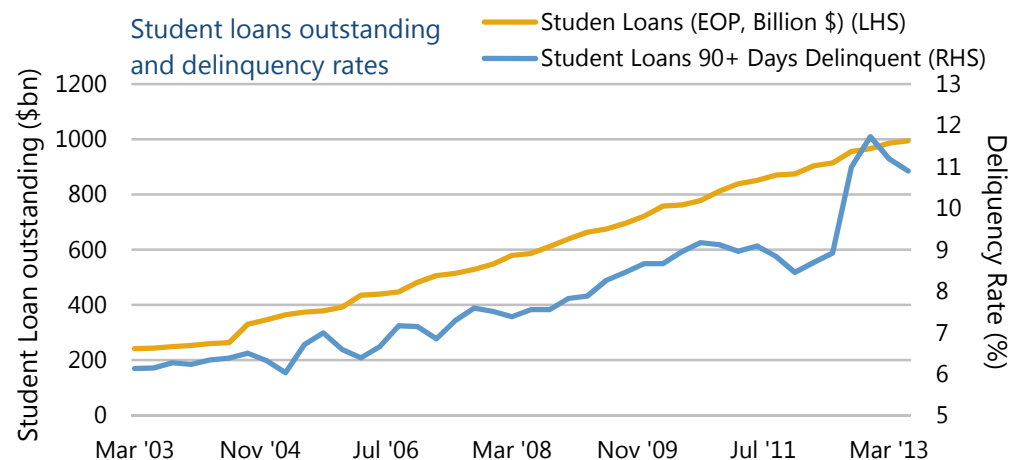
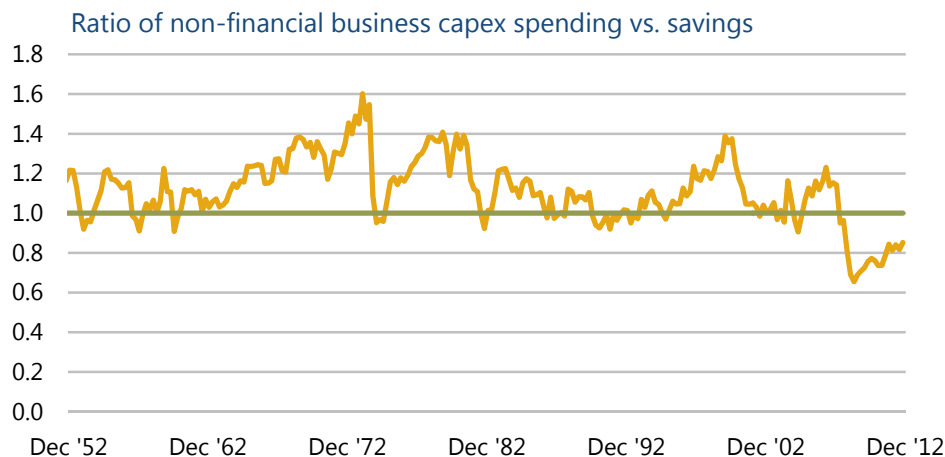
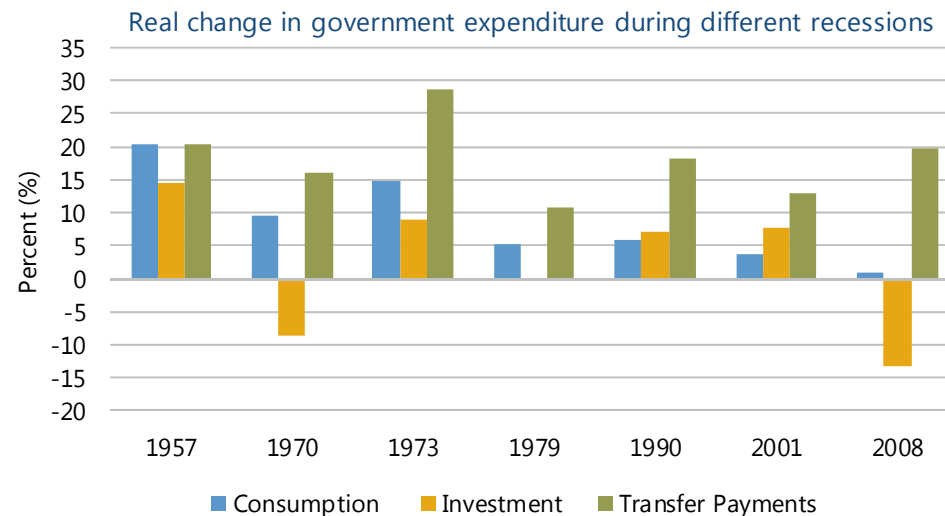
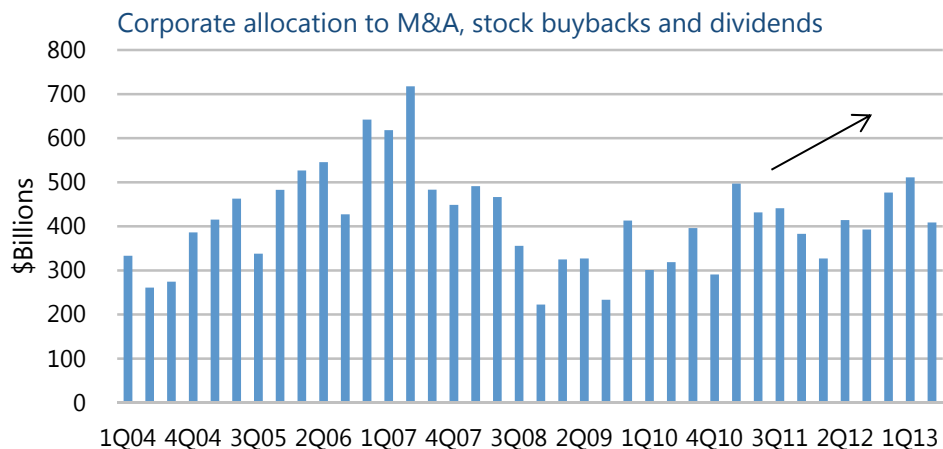
As of 1 September 2013

Source: Bloomberg

* S&P 500

Refer to Appendix for additional outlook information

Cost: The bad leverage and misallocation of capital



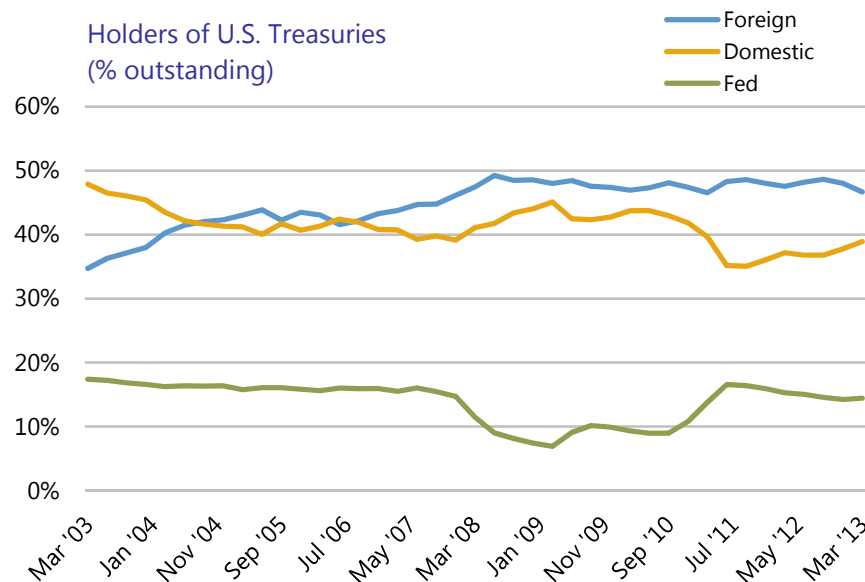
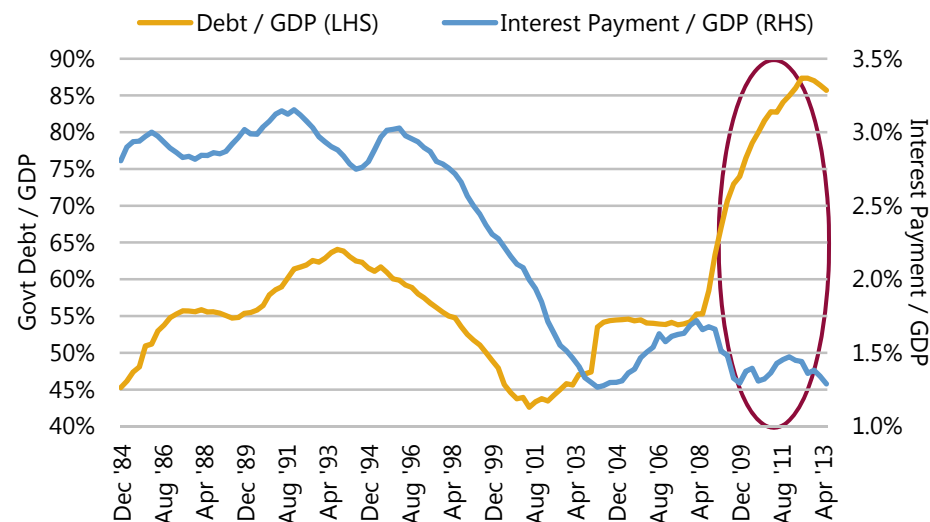
Source: Bloomberg
EOP: End of period
 Refer to Appendix for additional outlook information

Cost: Less urgency for fiscal reform



Signals to watch for:

- Debt service costs for U.S. government
 - Foreign holdings of Treasuries
-
- Decreases urgency for fiscal reform – interest cost remain low even as debt approaches highest post WW2 level relative to GDP
-
- So far Fed's purchases have displaced only domestic holders' share of Treasuries outstanding



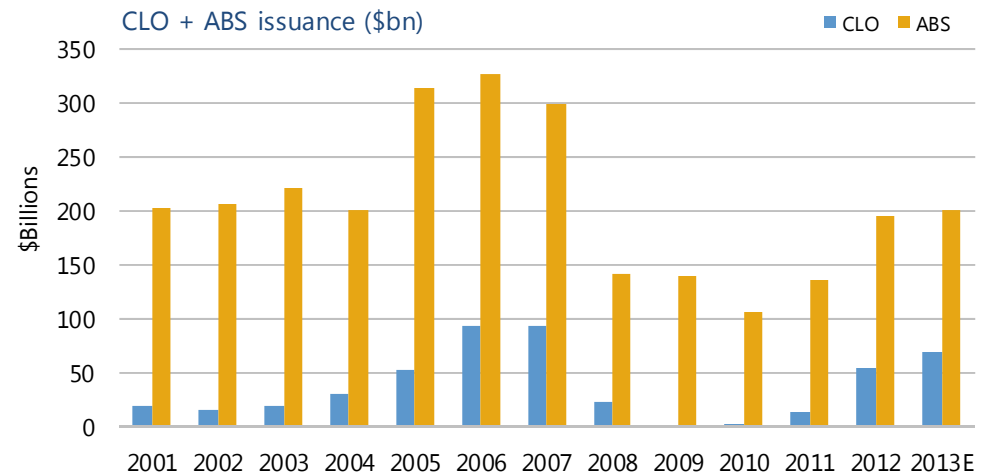
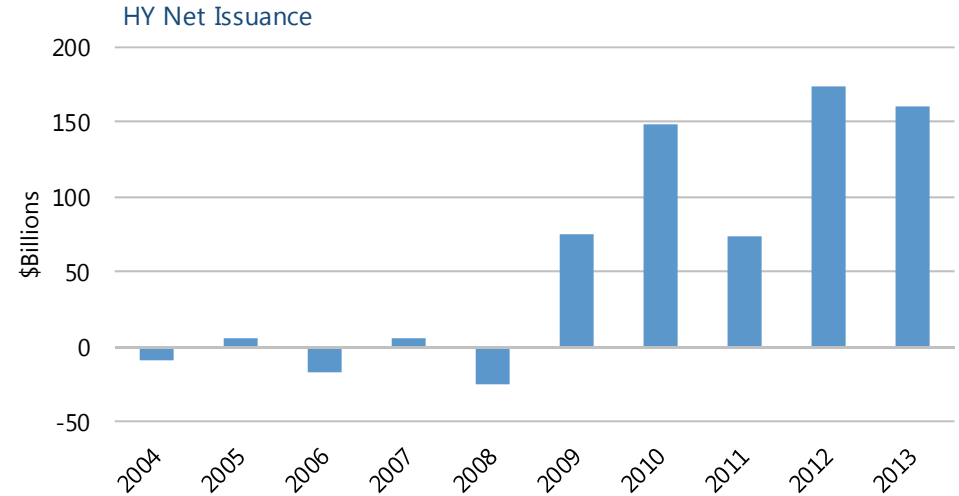
Source: Bloomberg
Refer to Appendix for additional outlook information

Cost: Too much financial innovation leads to financial instability later



Signals to watch for: Leveraged debt issuance

- High Yield net issuance at highest levels
- CLO issuance approaching 2004 levels



As of 1 September 2013
 Source: Bloomberg, JPM, PIMCO
 Refer to Appendix for additional outlook information

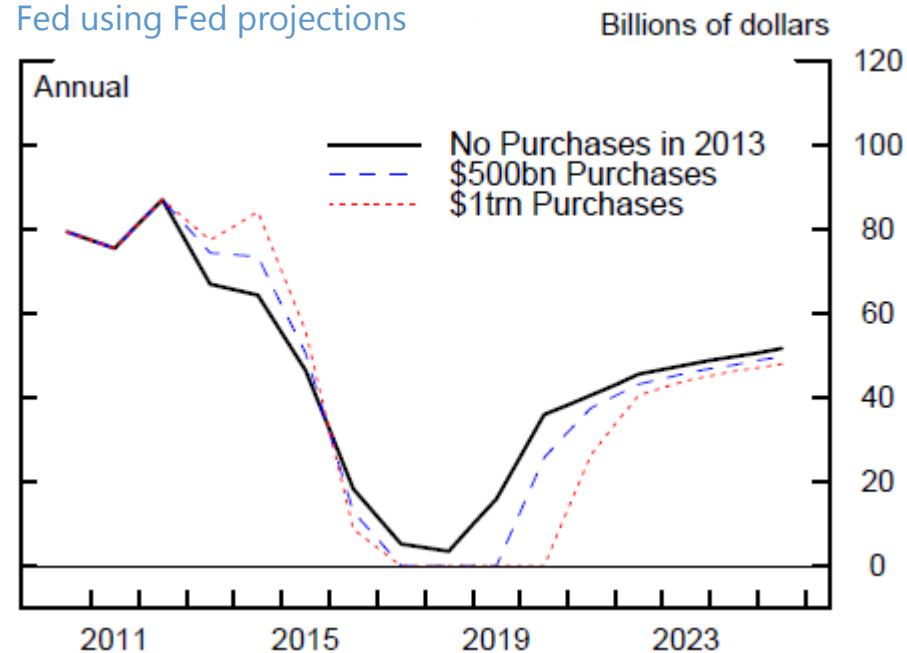
Cost: Potential loss of Fed's independence



Signals to watch for:

- Size of Fed balance sheet as % of GDP
- Sensitivity of Fed's balance sheet to rate shocks
- Markets demonstrating dependence on Fed easy policy and rhetoric rather than economic data

Remittances to Treasury from Fed using Fed projections



Source: Fed publication, "The Federal Reserve's Balance Sheet and Earnings: A primer and projects"
Refer to Appendix for additional outlook information

Cyclical cost/benefit analysis of Fed's hyperactive monetary policy



	<u>Cyclical Impact</u>	<u>Cyclical Cost (-) / Benefit (+) Analysis</u>
Inflation	<ul style="list-style-type: none"> The Fed has become increasingly concerned about asset market bubbles 	-
Leverage	<ul style="list-style-type: none"> No signs of significant investments from government and private sector that can improve future productivity 	-
Dollar devaluation	<ul style="list-style-type: none"> Dollar weakening has stopped and Emerging Markets seriously disrupted by Fed policy 	-
Fiscal adjustment	<ul style="list-style-type: none"> HMP reduces the need for fiscal reform in the short term. Fiscal policy less of a drag than it otherwise would be 	+
Financial innovation and stability	<ul style="list-style-type: none"> HMP helping consumer and corporate borrowers access capital markets, but concerns over excess financial leverage 	=
Policy uncertainty	<ul style="list-style-type: none"> Reduced asset market volatility 	+

As of 1 September 2013

The cost / benefit analysis at the Fed has shifted



Meeting Date	Communication
FOMC Minutes September 2012	<ul style="list-style-type: none">▪ “Participants again exchanged views on the likely benefits and costs of a new large-scale asset purchase program...most participants thought these risks could be managed...”
FOMC Statement May 2013	<ul style="list-style-type: none">▪ “The Committee is prepared to increase or reduce the pace of its purchases to maintain appropriate policy accommodation...”
FOMC Minutes June 2013	<ul style="list-style-type: none">▪ “...several members judged that a reduction in asset purchases would likely soon be warranted, in light of the cumulative decline in unemployment...in order to prevent the potential negative consequences of the program from exceeding its anticipating benefits...”

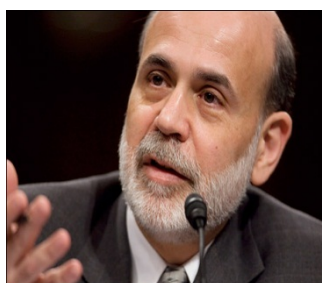
As of 1 September 2013
Source: PIMCO, FOMC
Refer to Appendix for additional forecast and outlook information

The reaction function of the Fed has shifted



- "...the FOMC can tolerate transitory deviations of inflation from its objective in order to more forcefully stabilize employment..."
- "A policy that reduces unemployment may, at times, result in inflation that could temporarily rise above its target."

-Fed Vice Chair Janet Yellen, November 2012



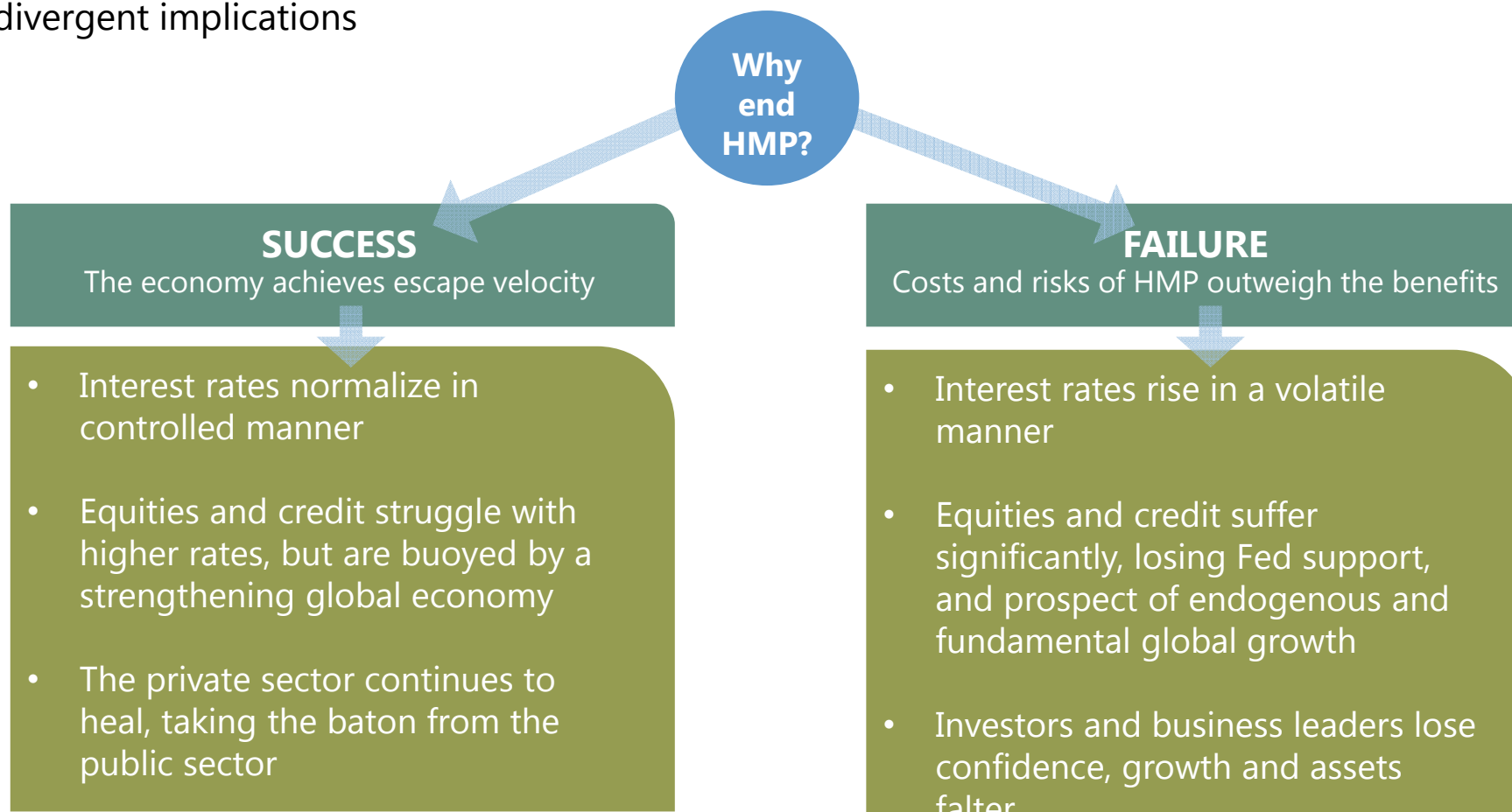
- "Our intent...was to use asset purchases as a way of achieving some near-term momentum..."
- "...slowing in the pace of purchases will be akin to letting up on the gas pedal as the car picks up speed"

-Fed Chairman Ben Bernanke, June 2013

Is the Fed slowing accommodation because of success or failure?



- Ultimately hyperactive monetary policy will end. The critical question is "Why"? The paths have divergent implications



As of 1 September 2013

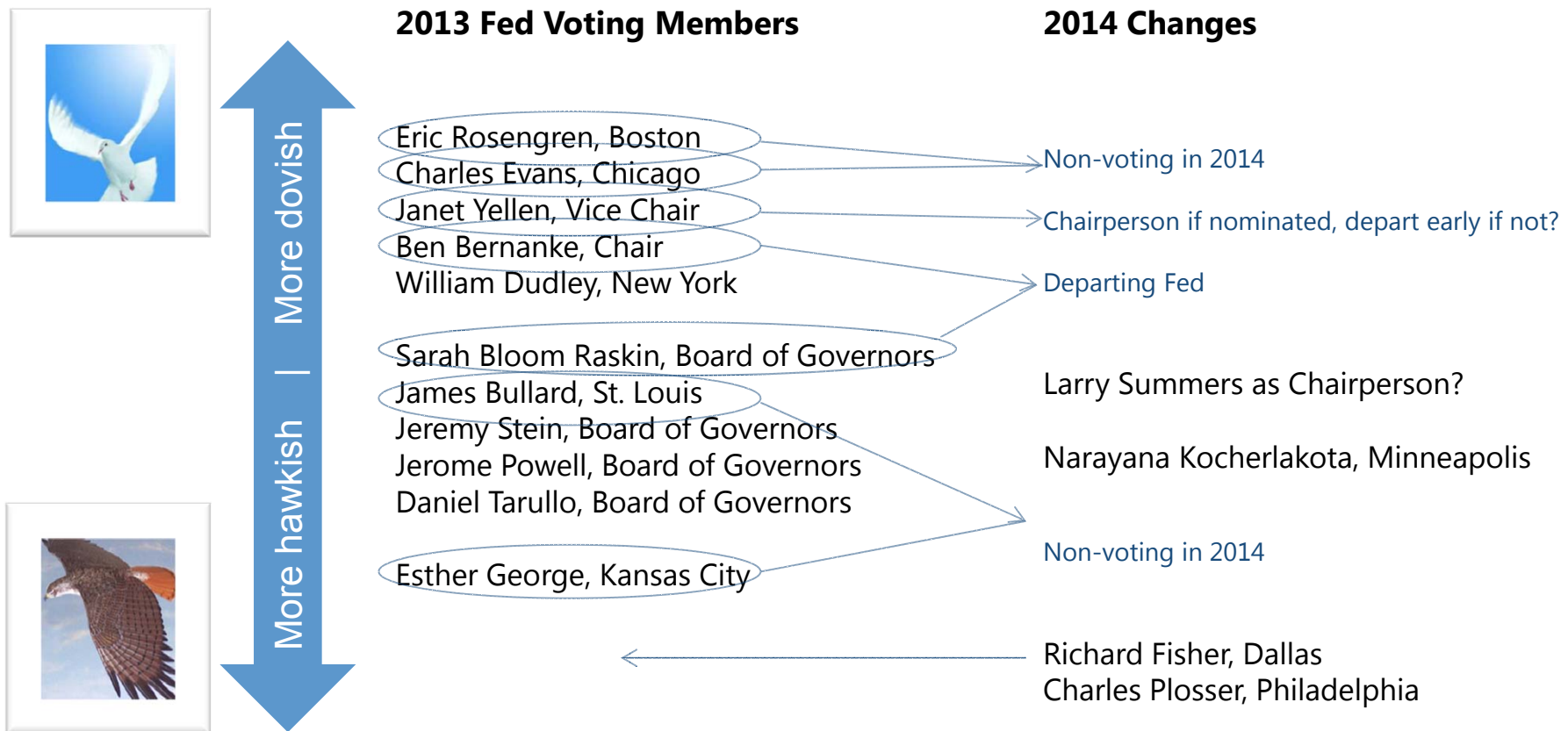
Source: PIMCO, FOMC

Refer to Appendix for additional forecast and outlook information

Policy uncertainty complicates matters



- The composition of the Fed in 2014 will be decidedly more hawkish than 2013, possibly losing 6 of its 7 most dovish members



As of 1 September 2013
 Source: PIMCO, FOMC
 Refer to Appendix for additional forecast and outlook information

Fiscal policy uncertainty lingers as well



"Dollar for dollar is the plan [in order to raise the debt ceiling]."

-Speaker Boehner, March 2013



"The only time the President gets serious is when Republicans use the debt ceiling to drag him kicking and screaming into negotiations."

-Senate Minority Leader Mitch McConnell, March 2013



"Republicans can act responsibly and raise the debt ceiling, or act irresponsibly and put the country through another economic crisis."

-President Obama, March 2013

PIMCO expectations for future monetary policy



- Our view is that absent a negative economic shock, the Fed will end its balance sheet expansion over the next 9 months
- However, the Fed is likely to maintain its commitment to zero interest rate policy much longer than the market expects and will use forward guidance to strengthen that commitment
- The Fed is unlikely to sell securities over the next 3-5 years, possibly never selling MBS holdings
- The possibility of Larry Summers as chair would present uncertainty (and volatility), as his monetary policy framework is not well understood

Policy question	Our view
What is the likelihood of Larry Summers as Fed Chair nominee?	80%
When will QE end?	Q2 2014
When will Fed Funds first be raised?	Q2 2016
Will the Fed expand usage of forward guidance?	Yes

As of 1 September 2013

Source: PIMCO

Refer to Appendix for additional forecast and outlook information

Overview: A Fed in transition



- Hyperactive monetary policy (HMP) is in full force for now, but we have reached an inflection point
- The benefits of HMP previously outweighed the costs; the balance is tipping
- Changes in the Fed's reaction function have emerged
- Changes in the Fed's leadership composition are imminent
- Eventually HMP will come to an end – the critical question for investors is whether the end is due to success or failure
- We believe the economy is not prepared to handle a withdrawal of policy accommodation – leading the Fed to re-engage or worse, accept inefficacy

Refer to Appendix for additional forecast and outlook information

Investment implications of a Fed in transition



Interest rate strategies

Overweight duration on the front end of the yield curve	The Fed policy rate is likely to remain near zero despite nearing end of balance sheet expansion
Underweight duration on the back end of the yield curve	Reduce risk where policy support is waning and long term fiscal imbalances create risk to investors
TIPS: Favor long maturities	Utilize inflation-linked bonds and other real assets to protect against the longer term inflationary risk of hyperactive monetary policy

Strategic positioning

Favor non-agency to agency MBS	<ol style="list-style-type: none">1) Non-agency MBS offer compelling loss-adjusted yields and are less directly dependent upon Fed accommodation2) Reduce agency MBS holdings as central bank actions leave sector fully priced and the Fed is soon to reduce purchases
Reduce credit risk	Fed policy withdrawal is likely to have a negative feedback loop to the real economy and risk assets, which have become dependent on monetary accommodation

Refer to Appendix for additional forecast and outlook information

Appendix



Past performance is not a guarantee or a reliable indicator of future results. All investments contain risk and may lose value.

FORECAST

Forecasts, estimates, and certain information contained herein are based upon proprietary research and should not be interpreted as investment advice, as an offer or solicitation, nor as the purchase or sale of any financial instrument. Forecasts and estimates have certain inherent limitations, and unlike an actual performance record, do not reflect actual trading, liquidity constraints, fees, and/or other costs. In addition, references to future results should not be construed as an estimate or promise of results that a client portfolio may achieve.

INVESTMENT STRATEGY

There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market.

OUTLOOK

Statements concerning financial market trends are based on current market conditions, which will fluctuate. There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Outlook and strategies are subject to change without notice.

RISK

Investing in the **bond market** is subject to certain risks, including market, interest rate, issuer, credit and inflation risk. Investing in **foreign-denominated and/or -domiciled securities** may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. **Sovereign securities** are generally backed by the issuing government. Obligations of U.S. government agencies and authorities are supported by varying degrees, but are generally not backed by the full faith of the U.S. government; portfolios that invest in such securities are not guaranteed and will fluctuate in value. **Inflation-linked bonds (ILBs)** issued by a government are fixed income securities whose principal value is periodically adjusted according to the rate of inflation; ILBs decline in value when real interest rates rise. Treasury Inflation-Protected Securities (TIPS) are ILBs issued by the U.S. government. **Mortgage- and asset-backed securities** may be sensitive to changes in interest rates, subject to early repayment risk, and while generally supported by a government, government-agency or private guarantor, there is no assurance that the guarantor will meet its obligations.

This material contains the current opinions of the manager and such opinions are subject to change without notice. Statements concerning financial market trends are based on current market conditions, which will fluctuate. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission. PIMCO and YOUR GLOBAL INVESTMENT AUTHORITY are trademarks or registered trademarks of Allianz Asset Management of America L.P. and Pacific Investment Management Company LLC, respectively, in the United States and throughout the world. ©2013, PIMCO.

Appendix



INDEX DESCRIPTIONS

The S&P 500 Index is an unmanaged market index generally considered representative of the stock market as a whole. The index focuses on the Large-Cap segment of the U.S. equities market.

It is not possible to invest directly in an unmanaged index.

GMO

North America | Europe | Asia-Pacific

Ventura County Employees' Retirement Association

September 26, 2013

John Allen
Edmund Bellord

Presenter



John Allen

Mr. Allen is a client relationship manager in GMO’s Berkeley Office. Prior to joining GMO in 2009, he was vice president of investments for a large family office. Previously, he worked in the investment banking group at Donaldson, Lufkin & Jenrette. He began his career in the business consulting group of Stern Stewart & Co. Mr. Allen earned his B.S. in Economics from the University of Virginia. He is a CFA charterholder as well as a CAIA charterholder.



Edmund Bellord

Mr. Bellord is a member of GMO’s asset allocation team. Prior to joining GMO in 2008, he was a senior portfolio manager at State Street Global Advisors Capital Management. Previously, he worked at Mellon Capital Management as a strategist. Mr. Bellord earned his M.A. in Economics from the University of Edinburgh in Scotland and his M.B.A. at the University of California in Berkeley.

GMO Overview

GMO's Edge:

We blend proven traditional judgments with innovative quantitative methods to identify undervalued securities and markets.

Success Factors:

Discipline, value orientation, investment research, risk control, size limitation.

Motivation/Focus:

Private partnership founded in 1977; investment management is our only business.

Stability:

GMO has low turnover of investment professionals.



Current Scale:

\$111 billion of assets under management, including:

Equities:	\$71 billion
Fixed Income:	\$11 billion
Natural Resources:	\$2 billion*
Asset Allocation:	\$55 billion**
Absolute Return:	\$13 billion**

More than 100 investment professionals and more than 500 employees worldwide.

Note: The asset breakout above may not include all underlying assets and thus may not add up to the total AUM figure shown.

* Natural Resources include: 1) GMO Renewable Resources assets; and 2) assets of GMO's Resources Strategy.

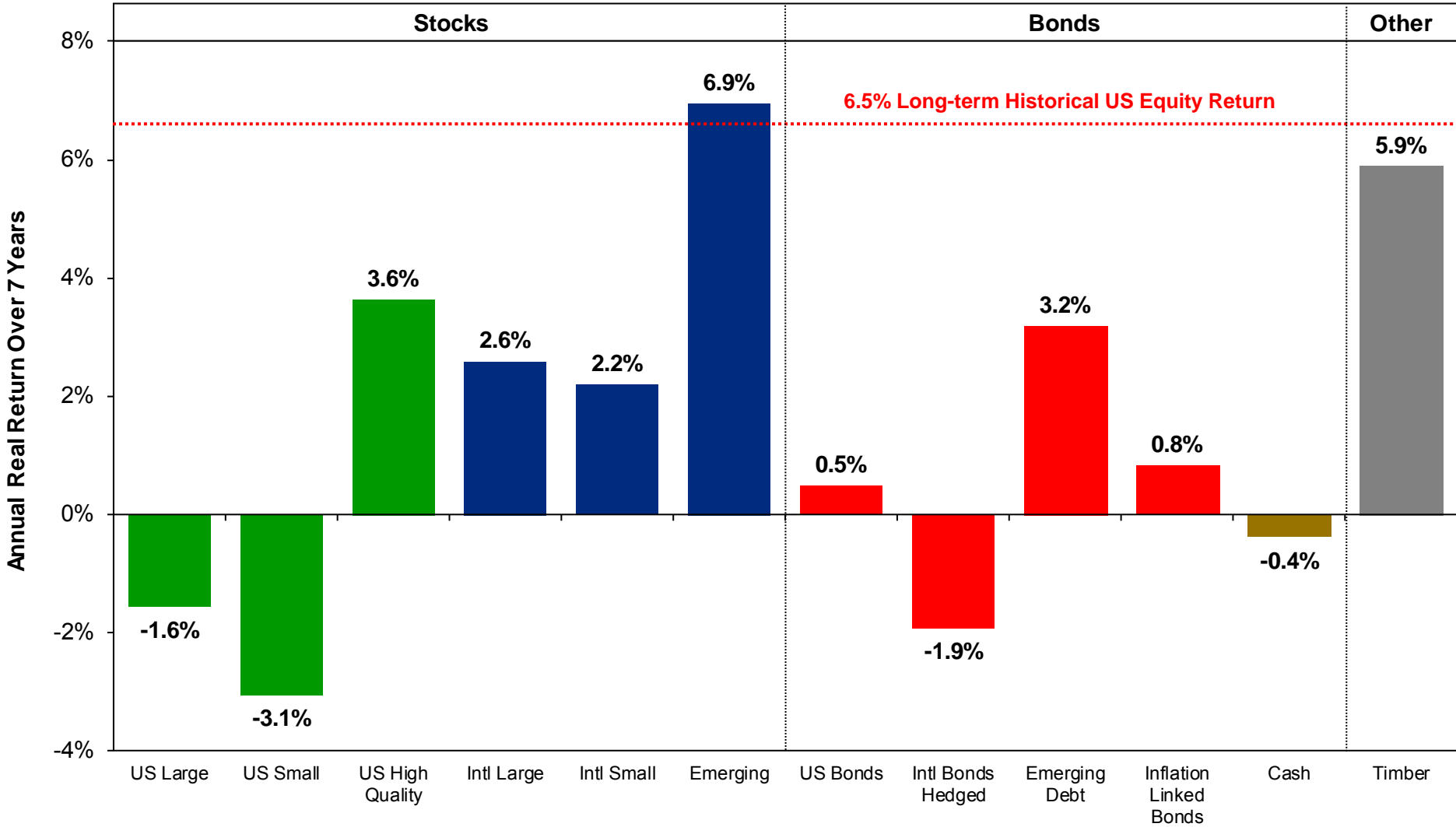
** Relevant Asset Allocation and Absolute Return assets are also accounted for within Equities and Fixed Income strategies.

Assets managed by GMO Renewable Resources, a joint venture, is not part of the GIPS compliant firm, GMO. GMO Renewable Resources has assets under management of \$1,743,116,316 as of 7/31/13.

GMO Asset Allocation

GMO 7-Year Asset Class Real Return Forecasts*

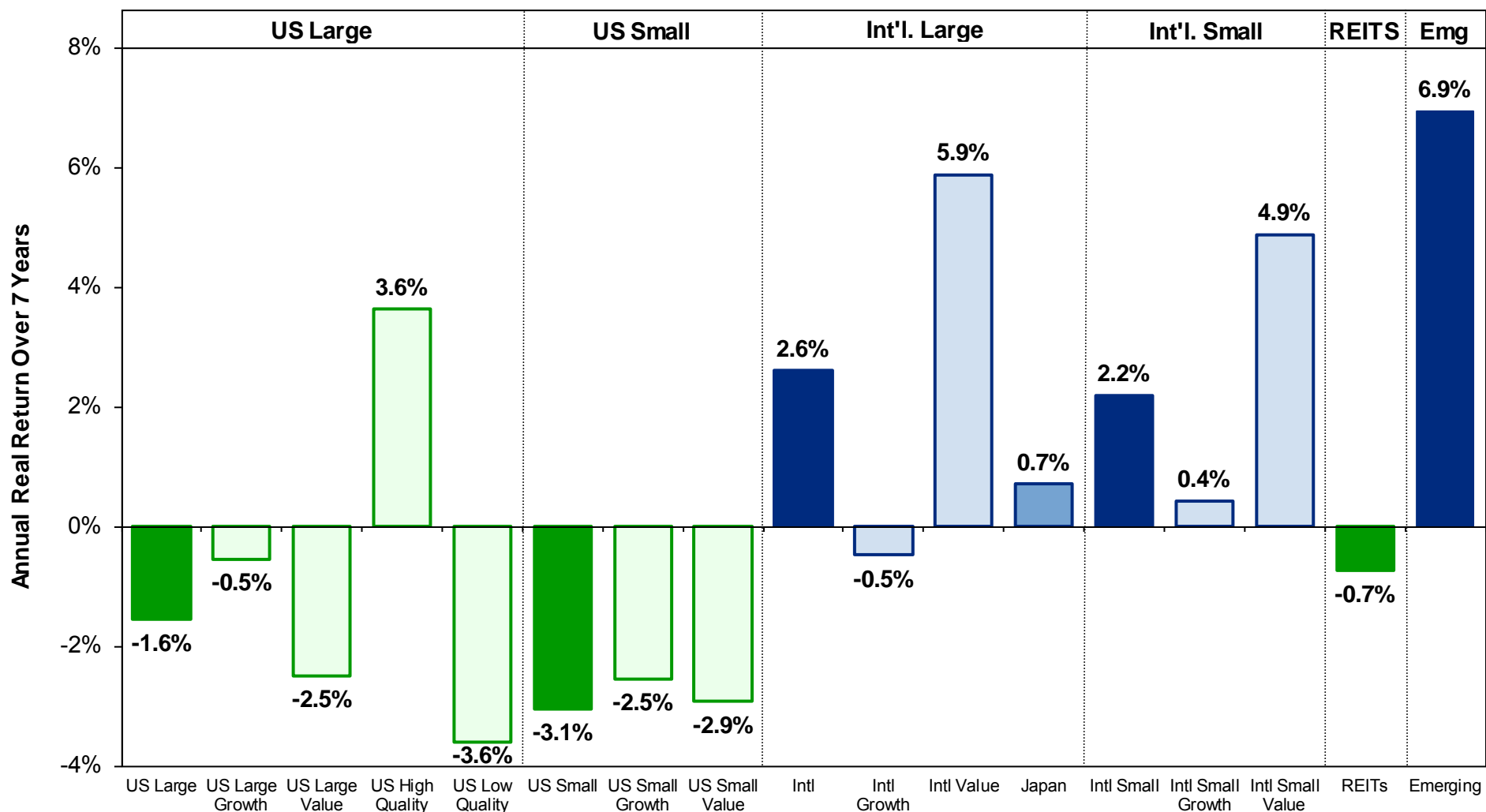
As of August 31, 2013



*The chart represents real return forecasts for several asset classes and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements. US inflation is assumed to mean revert to long-term inflation of 2.2% over 15 years.

GMO 7-Year Global Real Return Equity Forecasts*

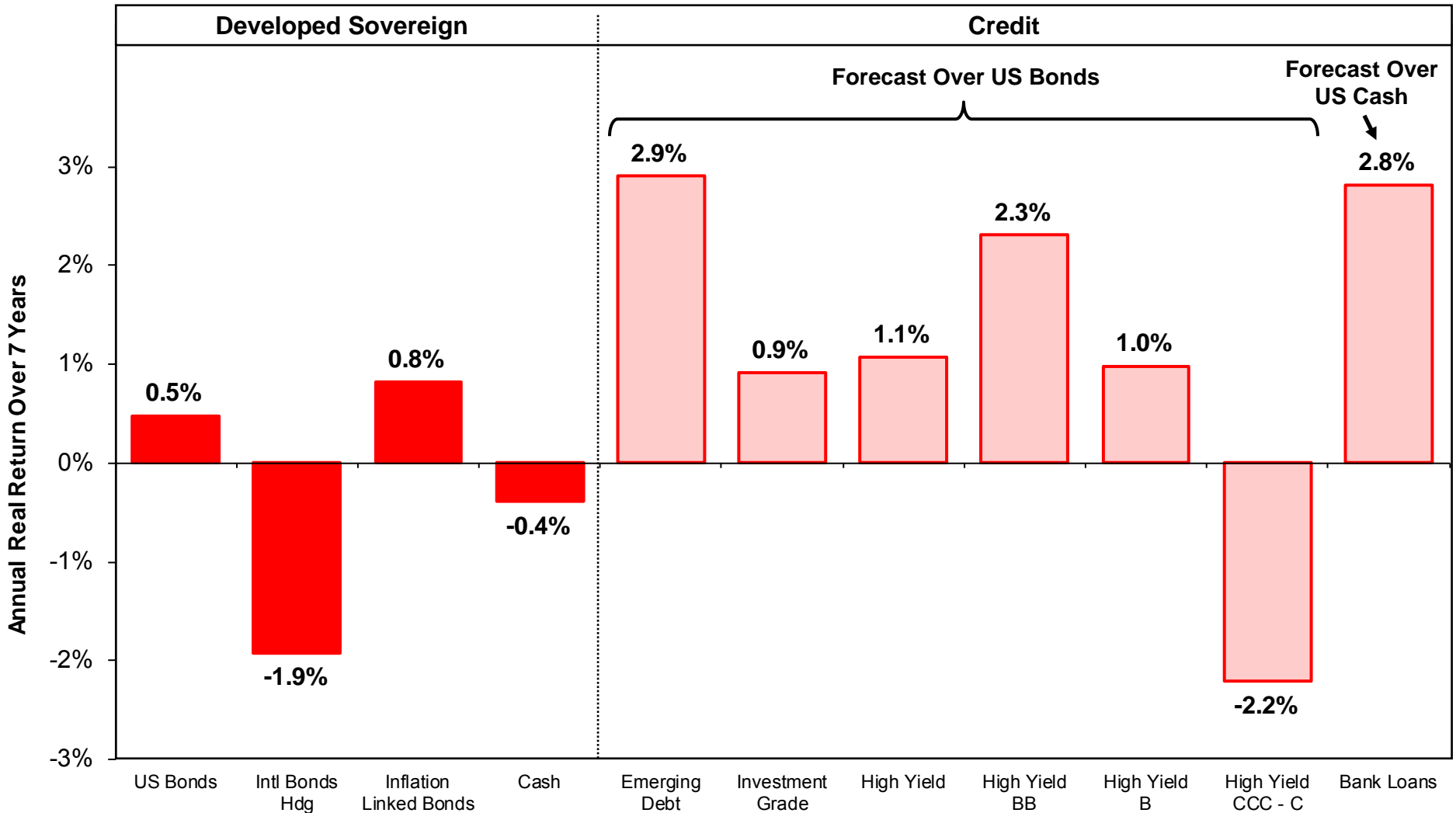
Value and growth within large and small stocks, and REITs, as of August 31, 2013



*The chart represents real return forecasts for several asset classes and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements. US inflation is assumed to mean revert to long-term inflation of 2.2% over 15 years.

GMO 7-Year Fixed Income Forecasts*

As of August 31, 2013

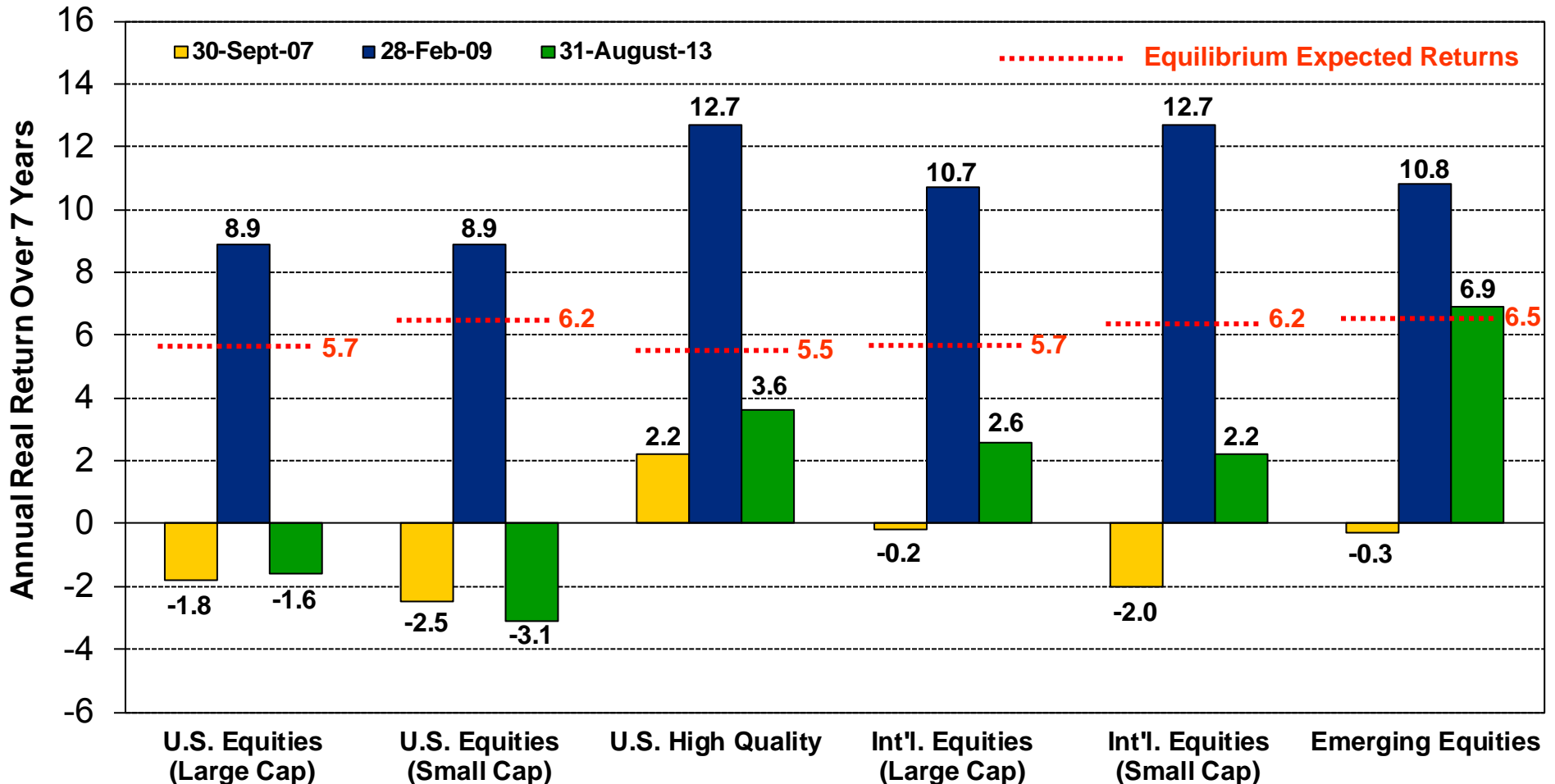


*The chart represents real return forecasts for several asset classes and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements. U.S. inflation is assumed to mean revert to long-term inflation of 2.2% over 15 years.

Evolution of Real Equity Valuations

As of August 31, 2013

GMO 7-Year Asset Class Return Forecasts*
Stocks

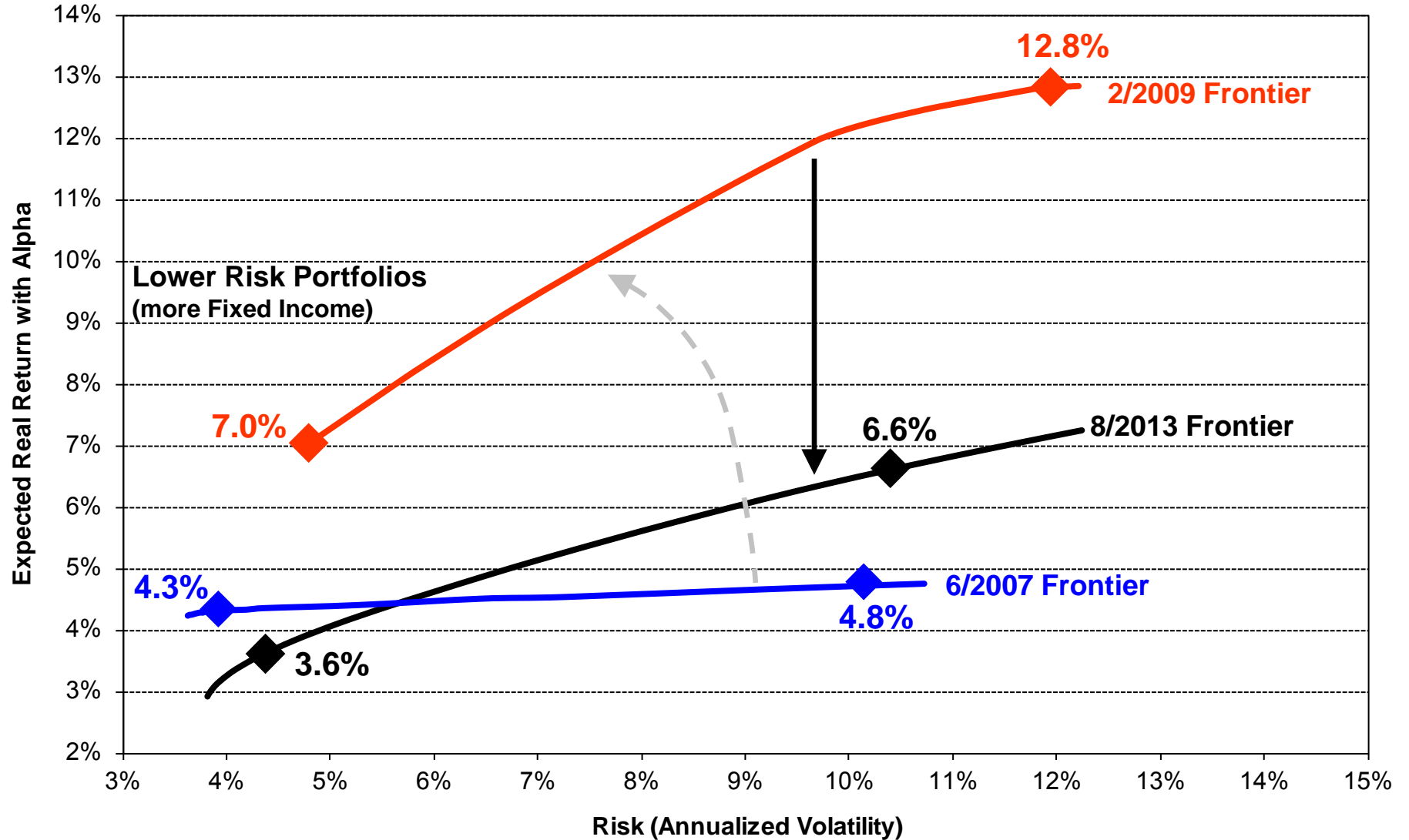


*The chart represents real return forecasts for several asset classes made as of the date stated and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements. Forecasts are tools used by GMO and do not necessarily reflect actual asset allocation portfolio construction.

Real Absolute Return Portfolios over Time

Still challenging...

Higher Risk Portfolios
(more Emerging and International)



Note: Based on GMO's 7-year asset class return forecasts. These forecasts above are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Actual results could differ materially from those anticipated in forward-looking statements.

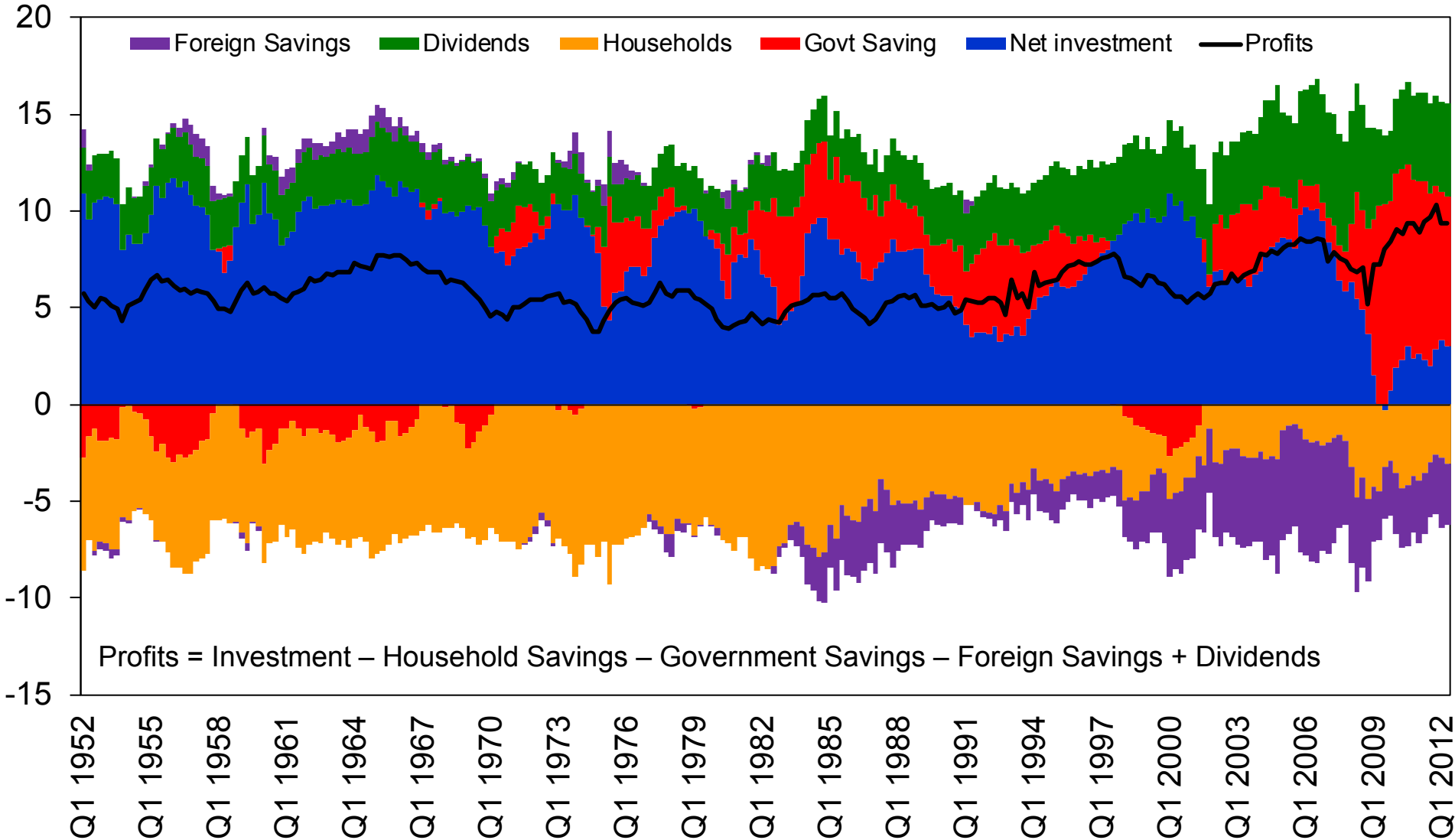
What Are Corporate Profits?

Macro-economically speaking:

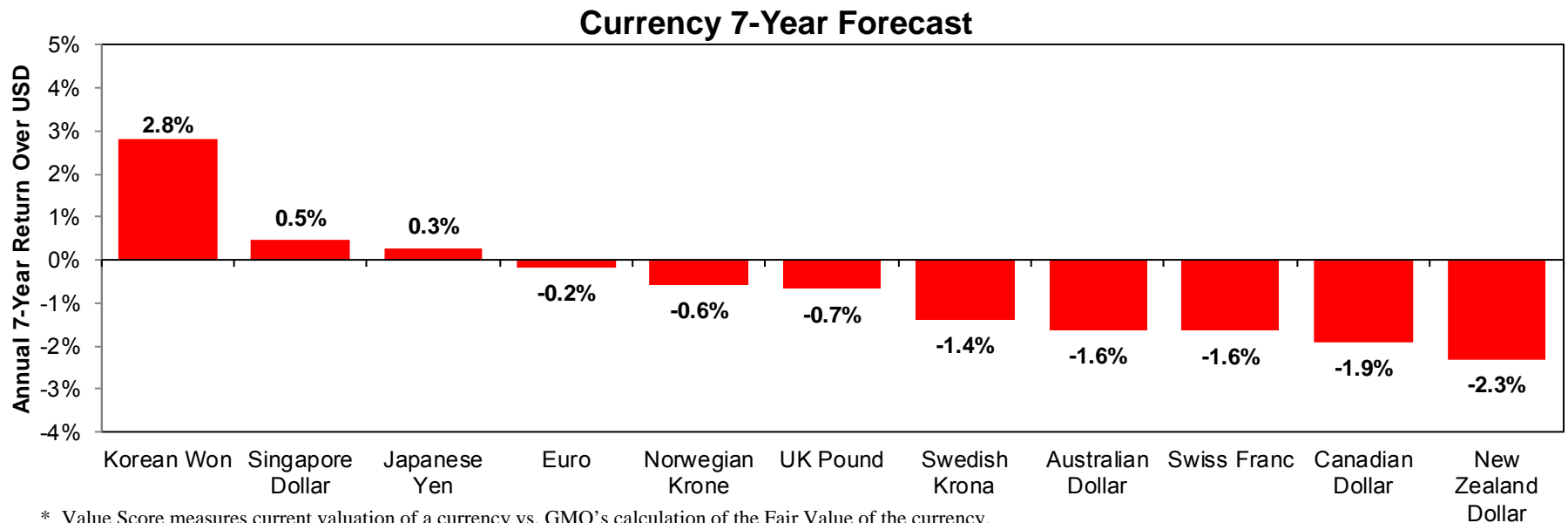
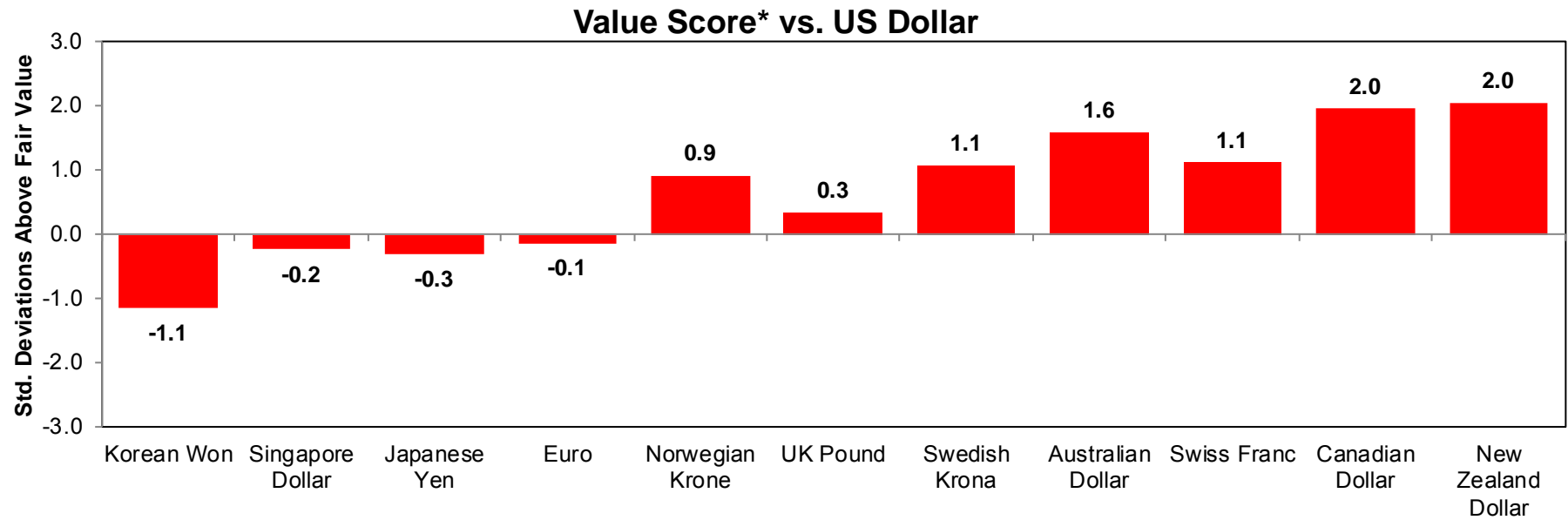
$$\begin{aligned} \text{Profits} = & \text{Net Investment} \\ & + \text{Dividends} \\ & - \text{Household Savings} \\ & - \text{Government Savings} \\ & - \text{Foreign Savings} \end{aligned}$$

Corporate Profits: The Macro Drivers

% of US GDP



Currency Forecasts

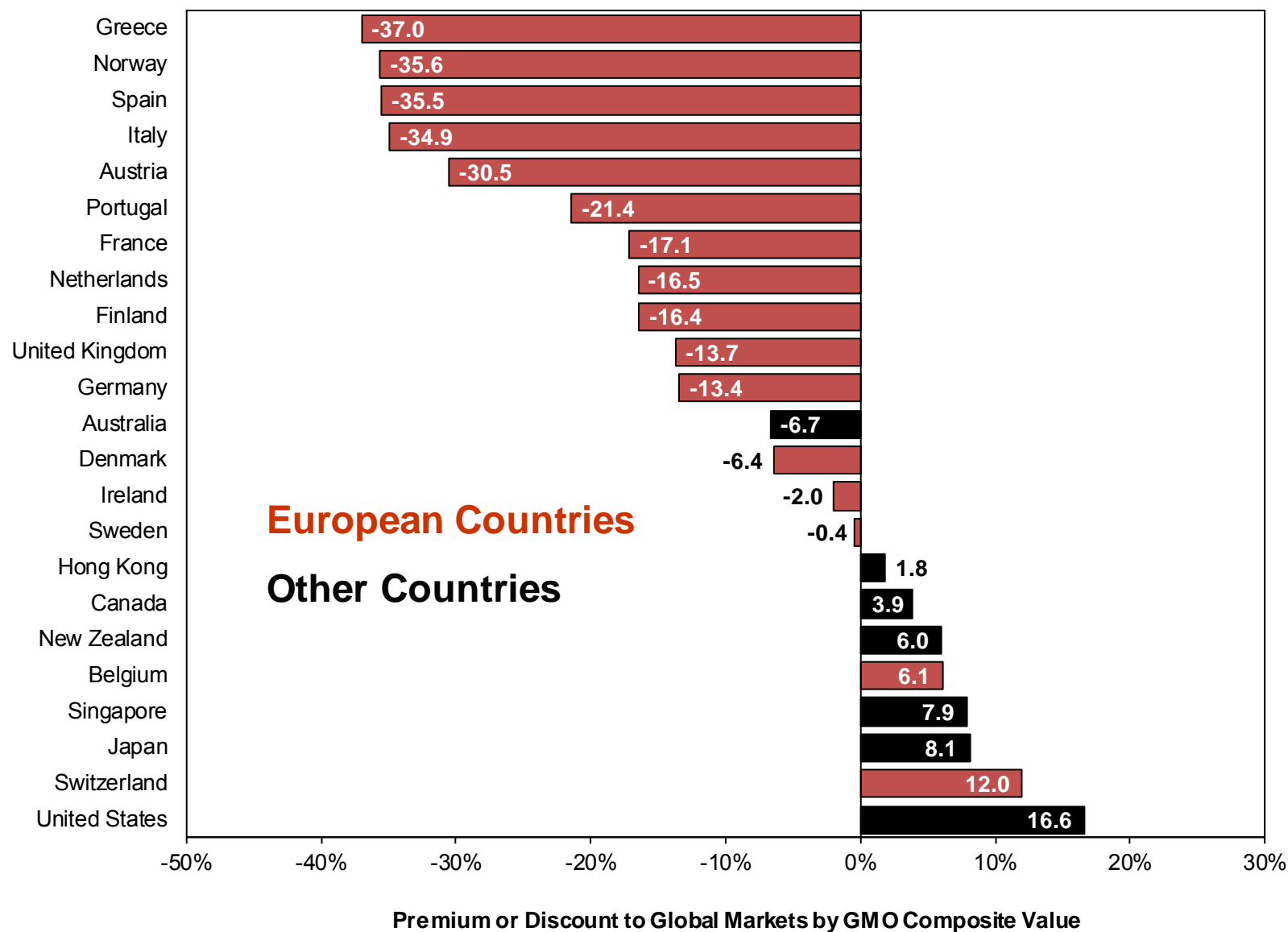


* Value Score measures current valuation of a currency vs. GMO's calculation of the Fair Value of the currency.

The chart represents currency forecasts for several currencies and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements.

Country Valuations Around the World

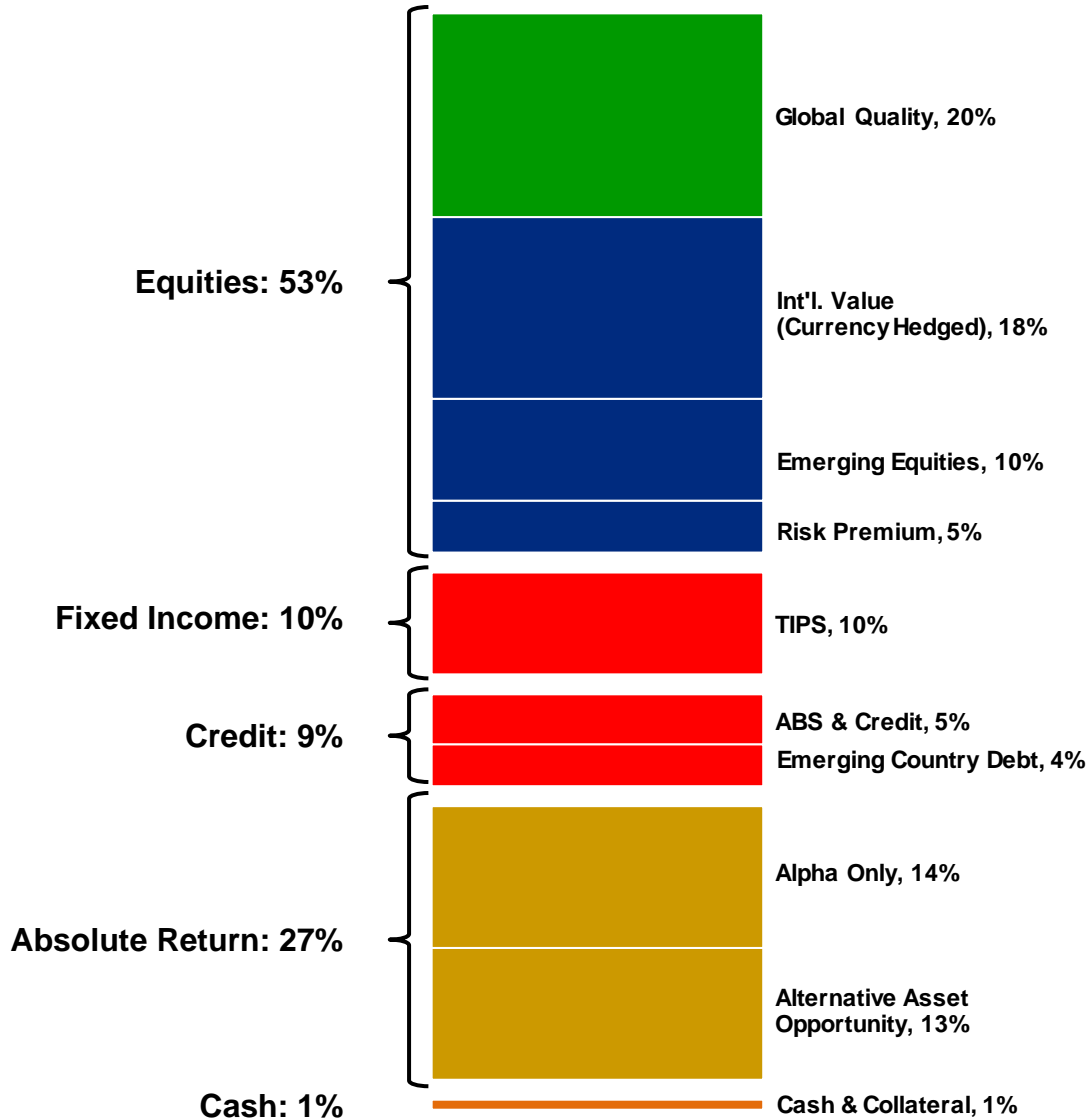
Europe is not burdened by high expectations



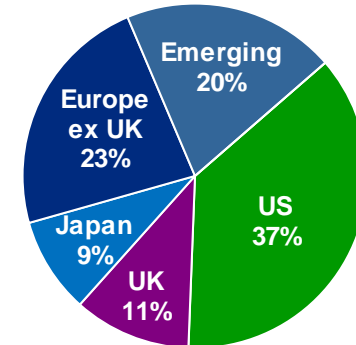
Benchmark-Free Allocation Strategy

Benchmark-Free Allocation Strategy

As of August 31, 2013



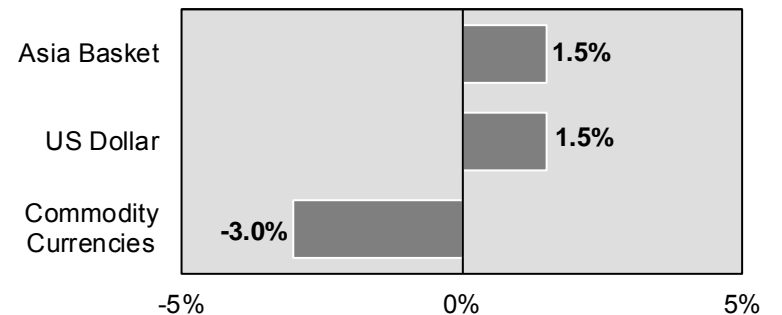
Equity Regions



Bond Portfolio

Bond Portfolio Duration	6 years
AAA	2%
AA	76%
A	3%
BBB	9%
Below Investment Grade	10%

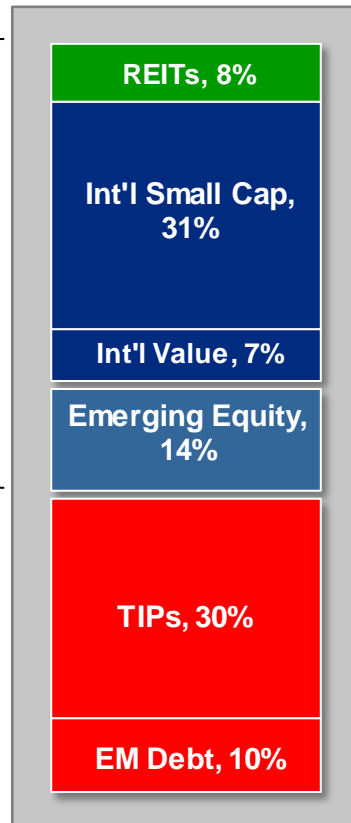
Currency



Must Be Unconventional and Dynamic

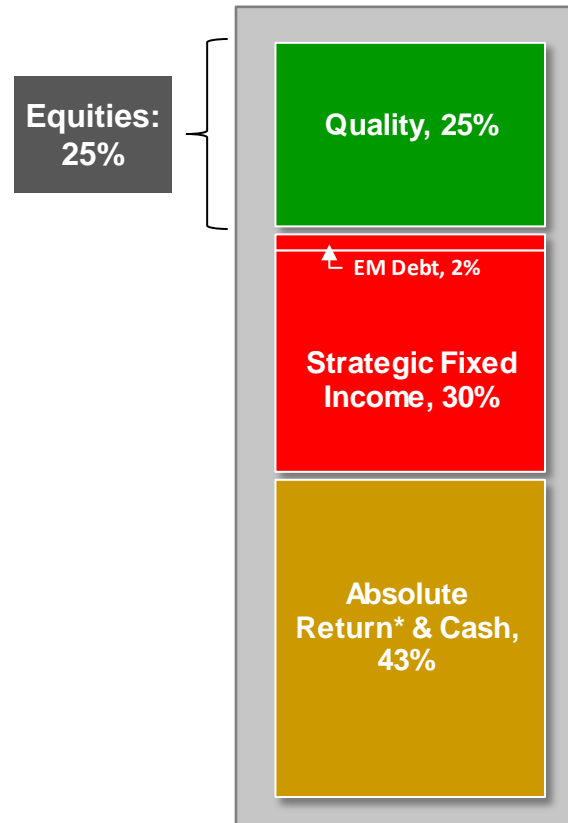
Benchmark-Free Allocation Strategy

July 2003:
Unconventional



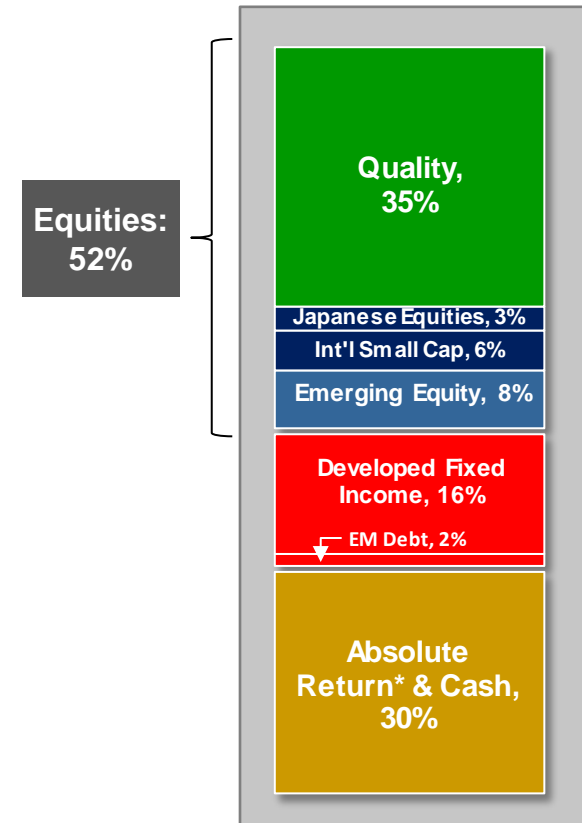
- Naked US Large Cap
- Naked Corporate and Nominal Treasuries

August 2008:
Defensive



- Pure Quality play in equity
- 75% in absolute return and bonds

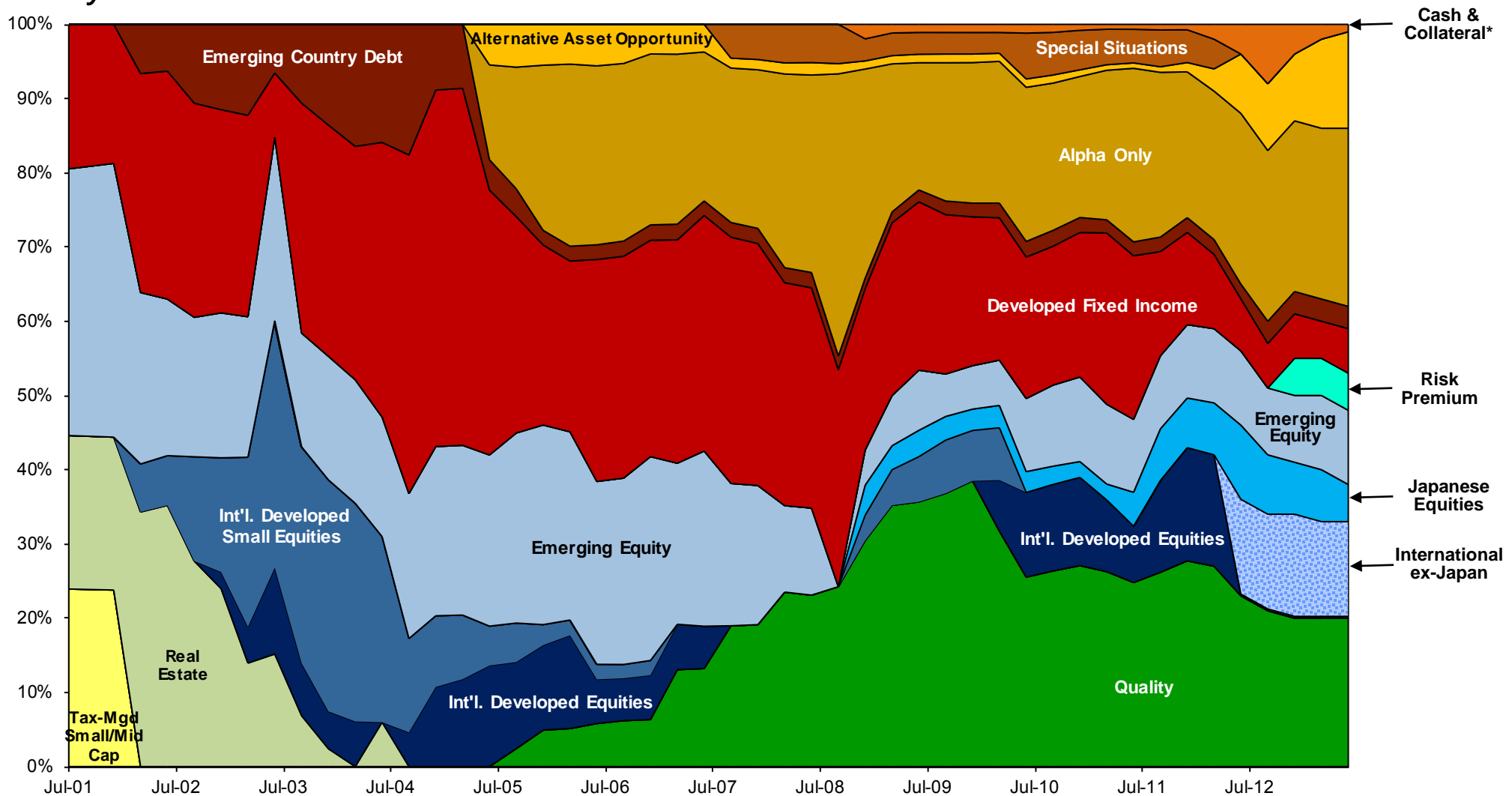
April 2009:
Re-investing when terrified



- Increased Equity Weight
- Dedicated Japan Equity Exposure

GMO Benchmark-Free Allocation Strategy – Allocation History

July 2001 – June 2013



Note: March 2013 allocations included a China Short position of -1%.

*Cash & Collateral includes World Opportunity Overlay and other securities.

Allocations from 7/31/2001-7/31/2003 reflect the allocations of two separately managed accounts within the composite. Beginning 8/1/2003 the allocations are based on a representative account with the strategy selected because it has the least number of restrictions and best represents the implementation of the strategy. The information above is supplemental to the GIPS compliant presentation that was made available on GMO's website in October 2012.

Investment Objectives – and Record

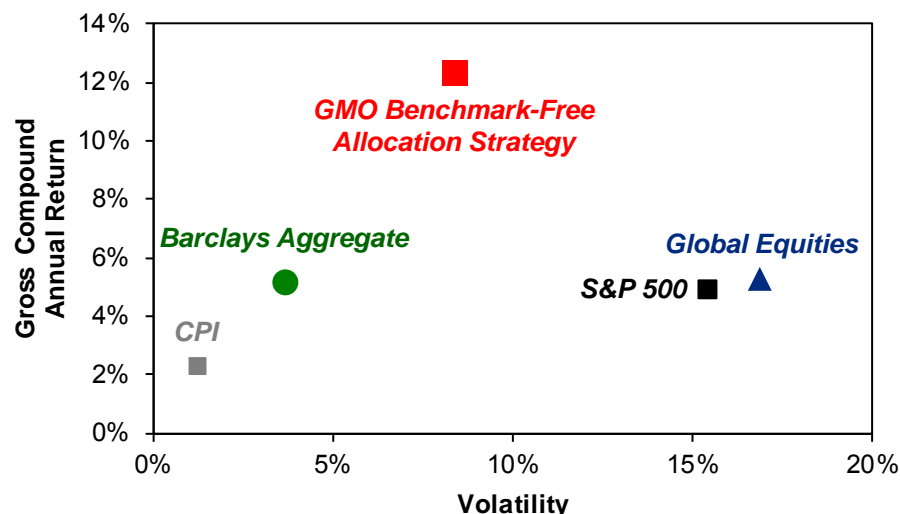
Benchmark-Free Allocation Strategy

Objectives:

- Seeks annualized excess returns of 5% (net of fees) above the Consumer Price Index over a complete market cycle
- Expected annualized volatility of 5% to 10% over a full market cycle

GMO Benchmark-Free Allocation Strategy*

July 2001 – July 2013



	Gross Cumulative Return	Gross Compound Annual Return	Annualized Volatility	Sharpe Ratio ¹
GMO Benchmark-Free Allocation Strategy	299.3%	12.2%	8.4%	1.26
Global Equities (MSCI ACWI)	85.2%	5.3%	16.9%	0.21
S&P 500	76.5%	4.9%	15.5%	0.21
Barclays U.S. Aggregate	82.7%	5.2%	3.6%	0.96

¹ Sharpe Ratio = (portfolio return less risk free rate)/volatility of annual returns

* Inception date: 7/31/2001

The performance of the Benchmark-Free Allocation Composite appearing in the chart above shows the past performance of the Benchmark-Free Allocation Composite (the "Composite"). Prior to January 1, 2012, the accounts in the Composite served predominately as the principal component (approximately 80%) of a broader real return strategy that also included a cash-benchmarked component. Since January 1, 2012, accounts in the composite have been managed as a standalone investment and has generally allocated a greater percentage of its assets to cash-benchmarked strategies.

Performance data quoted represents past performance and is not predictive of future performance. Returns are presented gross of management fees and any incentive fees if applicable. Gross returns include transaction costs, commissions, withholding taxes on foreign income and capital gains and include the reinvestment of dividends and other income, as applicable. If management fees were deducted performance would be lower. For example, if the strategy were to achieve a 10% annual rate of return each year for ten years and an annual advisory fee of 0.75% were charged during that period, the resulting average annual net return (after the deduction of management fees) would be 9.25%. A GIPS compliant presentation of composite performance has preceded this presentation in the past 12 months or accompanies this presentation, and is also available at www.gmo.com. Actual fees are disclosed in Part 2 of GMO's Form ADV and are also available in each strategy's compliant presentation. The information above is supplemental to the GIPS compliant presentation that was made available on GMO's website in October of 2012.

GMO Benchmark-Free Allocation Strategy

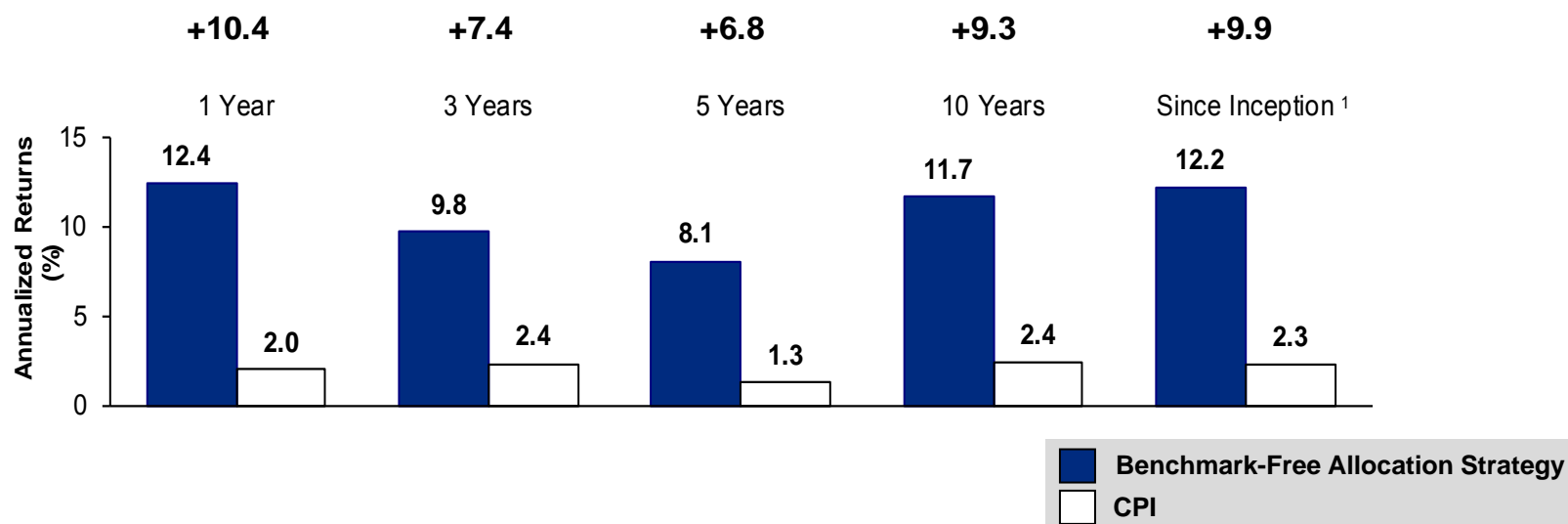
Investment objectives and performance record

- The Strategy seeks annualized excess returns of 5% (net of fees) above the Consumer Price Index, with annualized volatility of 5-10%, over a complete market cycle.

Annualized Performance of Benchmark-Free Allocation Strategy

Periods ending July 31, 2013 (gross of fees in USD)

GMO Value Added:



¹ Inception date: 7/31/2001

The performance of the Benchmark-Free Allocation Composite appearing in the chart above shows the past performance of the Benchmark-Free Allocation Composite (the "Composite"). Prior to January 1, 2012, the accounts in the Composite served predominately as the principal component (approximately 80%) of a broader real return strategy that also included a cash-benchmarked component. Since January 1, 2012, accounts in the composite have been managed as a standalone investment and has generally allocated a greater percentage of its assets to cash-benchmarked strategies.

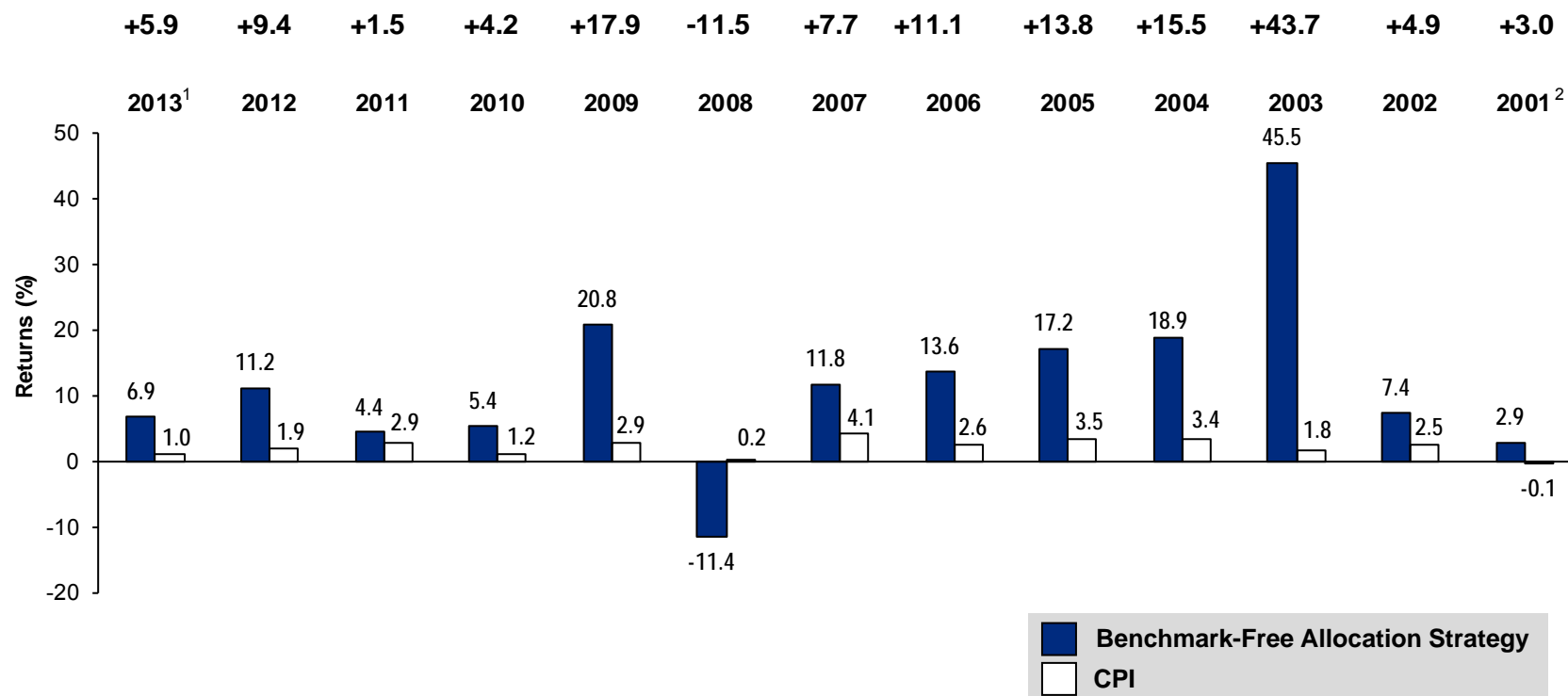
Performance data quoted represents past performance and is not predictive of future performance. Returns are presented gross of management fees and any incentive fees if applicable. Gross returns include transaction costs, commissions, withholding taxes on foreign income and capital gains and include the reinvestment of dividends and other income, as applicable. If management fees were deducted performance would be lower. For example, if the strategy were to achieve a 10% annual rate of return each year for ten years and an annual advisory fee of 0.75% were charged during that period, the resulting average annual net return (after the deduction of management fees) would be 9.25%. A GIPS compliant presentation of composite performance has preceded this presentation in the past 12 months or accompanies this presentation, and is also available at www.gmo.com. Actual fees are disclosed in Part 2 of GMO's Form ADV and are also available in each strategy's compliant presentation. The information above is supplemental to the GIPS compliant presentation that was made available on GMO's website in October of 2012.

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GMO Benchmark-Free Allocation Strategy

Annual performance, gross of fees

GMO Value Added:



¹ As of 7/31/13

² Inception date: 7/31/2001

The performance of the Benchmark-Free Allocation Composite appearing in the chart above shows the past performance of the Benchmark-Free Allocation Composite (the “Composite”). Prior to January 1, 2012, the accounts in the Composite served predominately as the principal component (approximately 80%) of a broader real return strategy that also included a cash-benchmarked component. Since January 1, 2012, accounts in the composite have been managed as a standalone investment and has generally allocated a greater percentage of its assets to cash-benchmarked strategies.

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Appendix

Representative Clients – Worldwide

Endowments

Appalachian Mountain Club	Lehigh University
University of Arizona Foundation	University of Michigan
Babson College	Northwestern University
Baylor College of Medicine	Norwich University
Baylor University	Pepperdine University
Boston College	Phillips Academy (Andover)
Boston University	Phillips Exeter Academy
California Institute of Technology	Pomona College
Carnegie Institute	Princeton University
Carnegie Institution of Washington	Santa Clara University
Christian Theological Seminary	Southern Methodist University
College of William and Mary	Spelman College
Dartmouth College	Stanford University
University of Delaware	Swarthmore College
Duke University	Vassar College
University of Hartford	University of Virginia
Kansas University	Yale University
Lawrenceville School	

Public Funds

Alaska Permanent Fund Corporation
 CalPERS
 Dallas Police & Fire Pension System
 City of Fairfax, VA
 Massachusetts PRIM
 Milwaukee County Empl. Ret. System
 Orange County Empl. Ret. System
 City of Richmond
 San Diego City ERS
 San Francisco City & County
 Teacher Retirement System of Texas
 Ventura County ERA
 Virginia Retirement System
 Washington State Investment Board

Sub-Advisory / Advisory

John Hancock
 Marks & Spencer
 Wells Fargo

Pension Funds

Andersen Corporation	Motion Picture Industry Pension & Health Plans
APL Limited	National Bank of Canada
BAE Systems	National Geographic Society
BASF Corporation USA	NCR - Scotland
The Boeing Company	NiSource
Cargill	NRECA
Church Pension Fund	Partners HealthCare
ContiGroup	JC Penney
Corning	Pfizer
Dominion Resources	PME (Bedrijfstakpensioenfondsv Metalektro)
Dow Chemical	Praxair, Inc.
FMC Corporation	Sidley & Austin
John Hancock	Siemens
Mayo Clinic	SunSuper
Ministers & Missionaries Benefit Board	Verizon

Defined Contribution

Ally Financial	Parker-Hannifin
AMD	Siemens
CenturyLink Investment Management	Sprint
Novartis	SunSuper

Foundations and Cultural Institutions

Abell Foundation	The Memorial Foundation
California Academy of Sciences	Metropolitan Museum of Art
The Cleveland Foundation	Metropolitan Opera
Commonwealth Fund	Nature Conservancy
Geraldine R. Dodge Foundation	Polk Bros Foundation
Doris Duke Charitable Foundation	Regenstrief Foundation
Father Flanagan's Foundation	The Rockefeller Family Fund
Fetzer Institute	Rotary International
Ford Foundation	Surdna Foundation
Hewlett Foundation	Toledo Museum of Art
Hilton Foundation	Trustees of Reservations
Joyce Foundation	Wenner-Gren Foundation
Kennedy Center for the Performing Arts	World Wildlife Fund
Kresge Foundation	Yawkey Foundation
Robert R. McCormick Foundation	

GMO Asset Allocation Investment Team

Responsible for \$55 billion of client accounts

Global Asset Allocation

Asset Allocation

Jeremy Grantham, *Chief Strategist*

Ben Inker, *Co-Head of Asset Allocation*

Sam Wilderman, *Co-Head of Asset Allocation*

Nick Nanda

Matt Kadnar

Edward Chancellor

Edmund Bellord

Erik Norton

Chris Hudson

James Montier

Peter Chiappinelli

Ara Lovitt

Kai Wu

Jamie Lee

Anna Chetoukhina

Tariq Ali

Catherine LeGraw

Implementation

Tom Hancock, *Global Equities*

David Cowan, *Global Equities*

Arjun Divecha, *Emerging Equities*

Tom Cooper, *Fixed Income*

Drew Spangler, *International Active*

Jason Halliwell, *Systematic Global Macro*

GMO Asset Allocation

What really matters



One true advantage: the long horizon



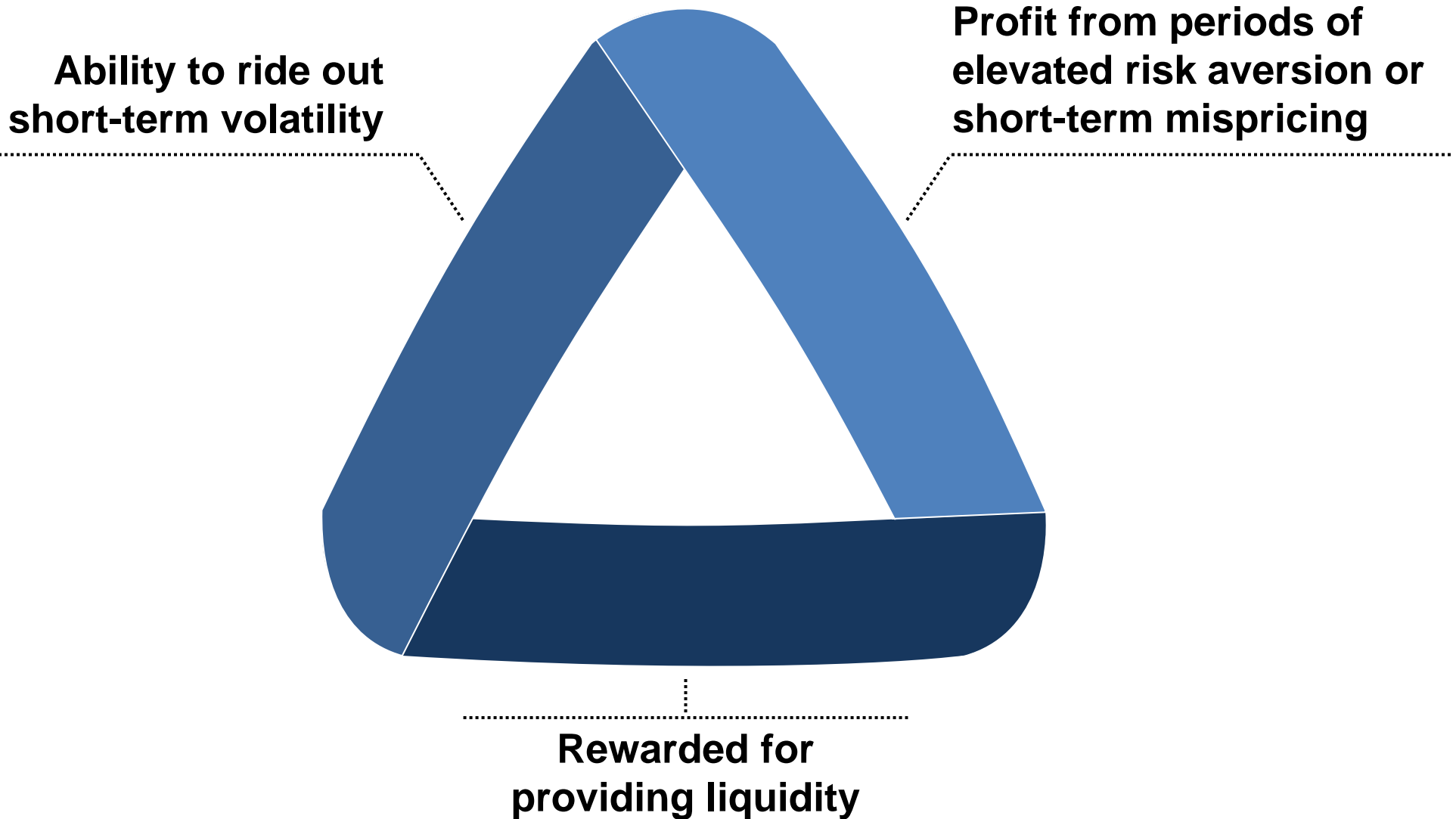
Overpaying is the greatest risk



Career risk governs the short run

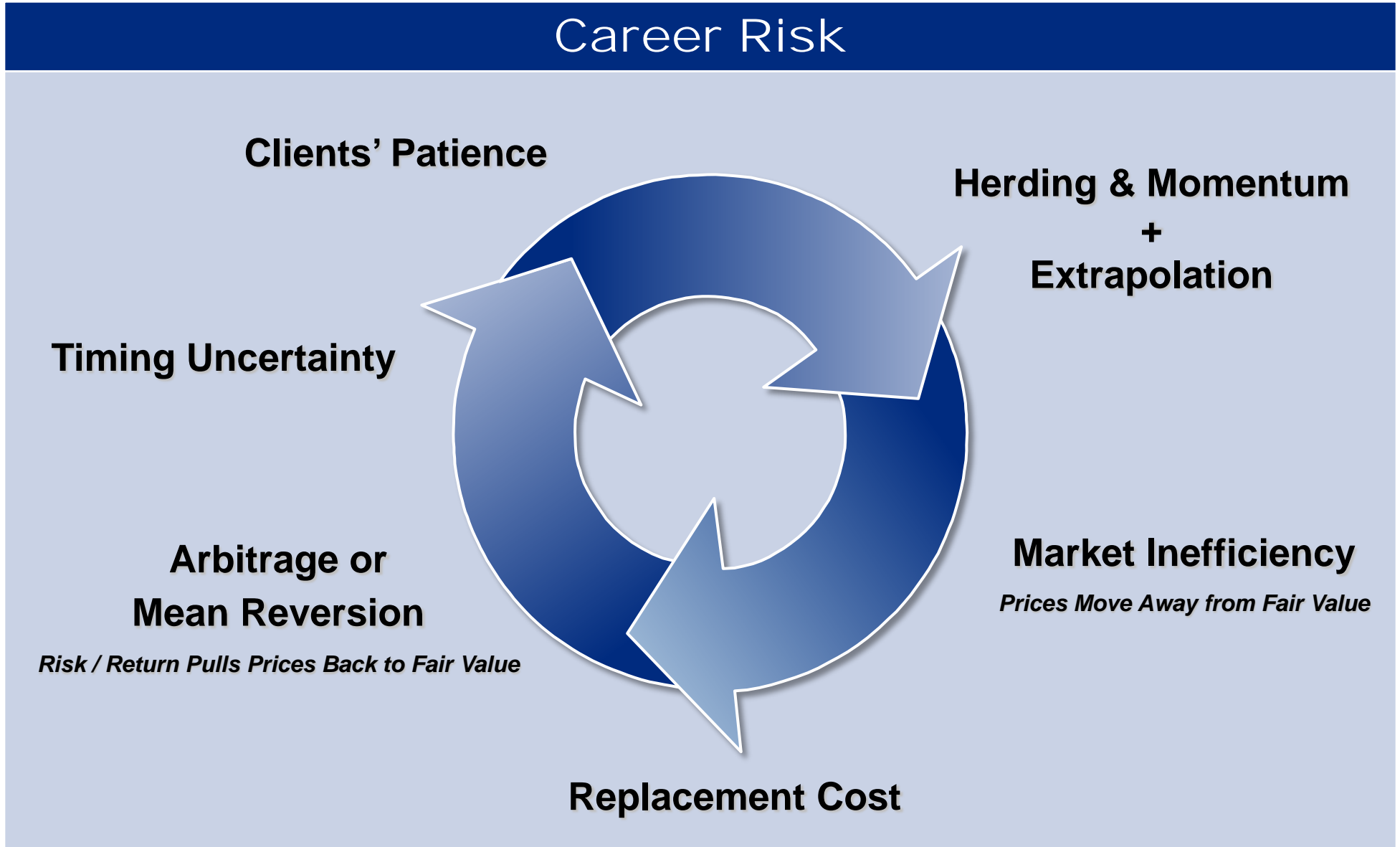
The Lonely Ballad of the Long-Term Investor

The built in advantages of the long-horizon



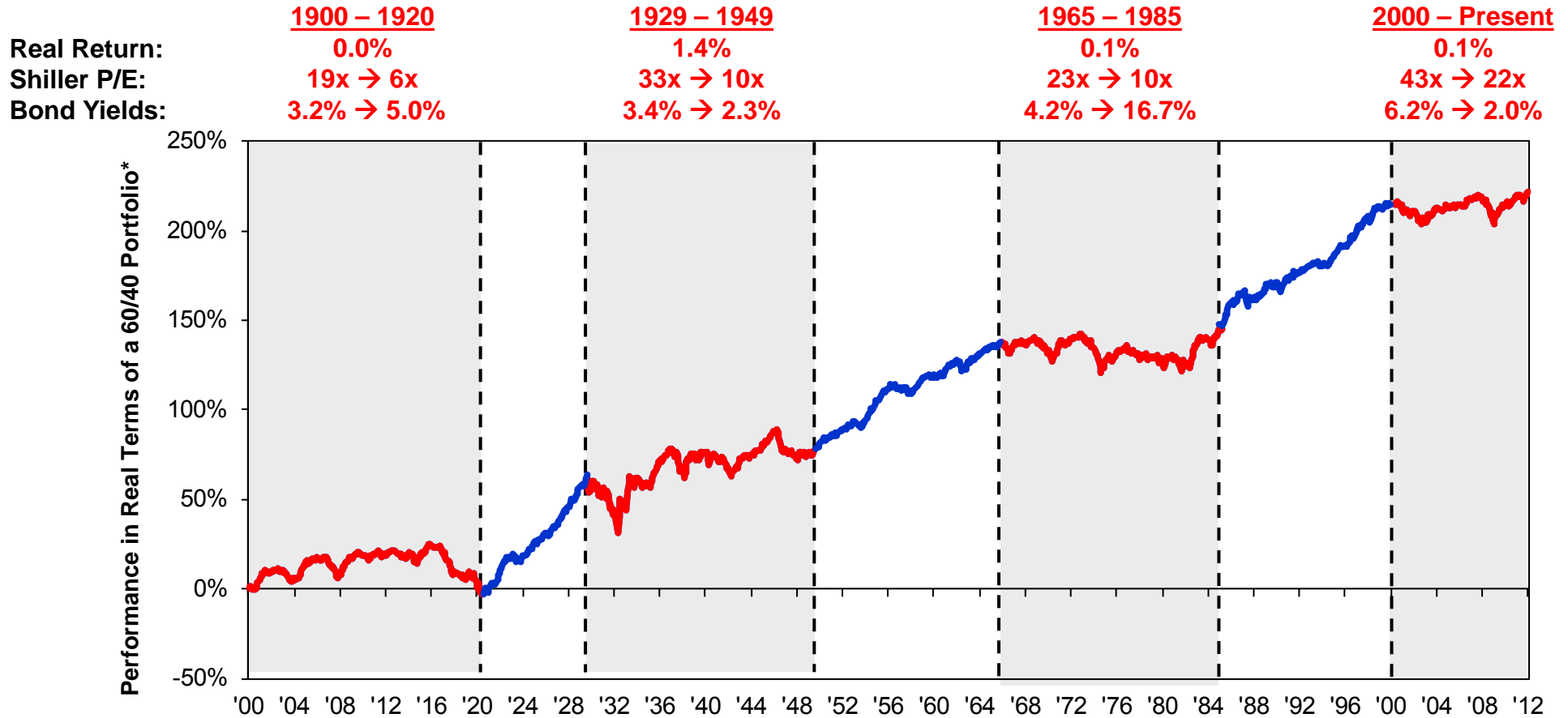
The Way the Market Goes Around

Career Risk



Spinning Your Wheels: A 60/40 Portfolio over Time

Overvalued markets can doom a static portfolio to poor returns for extended periods

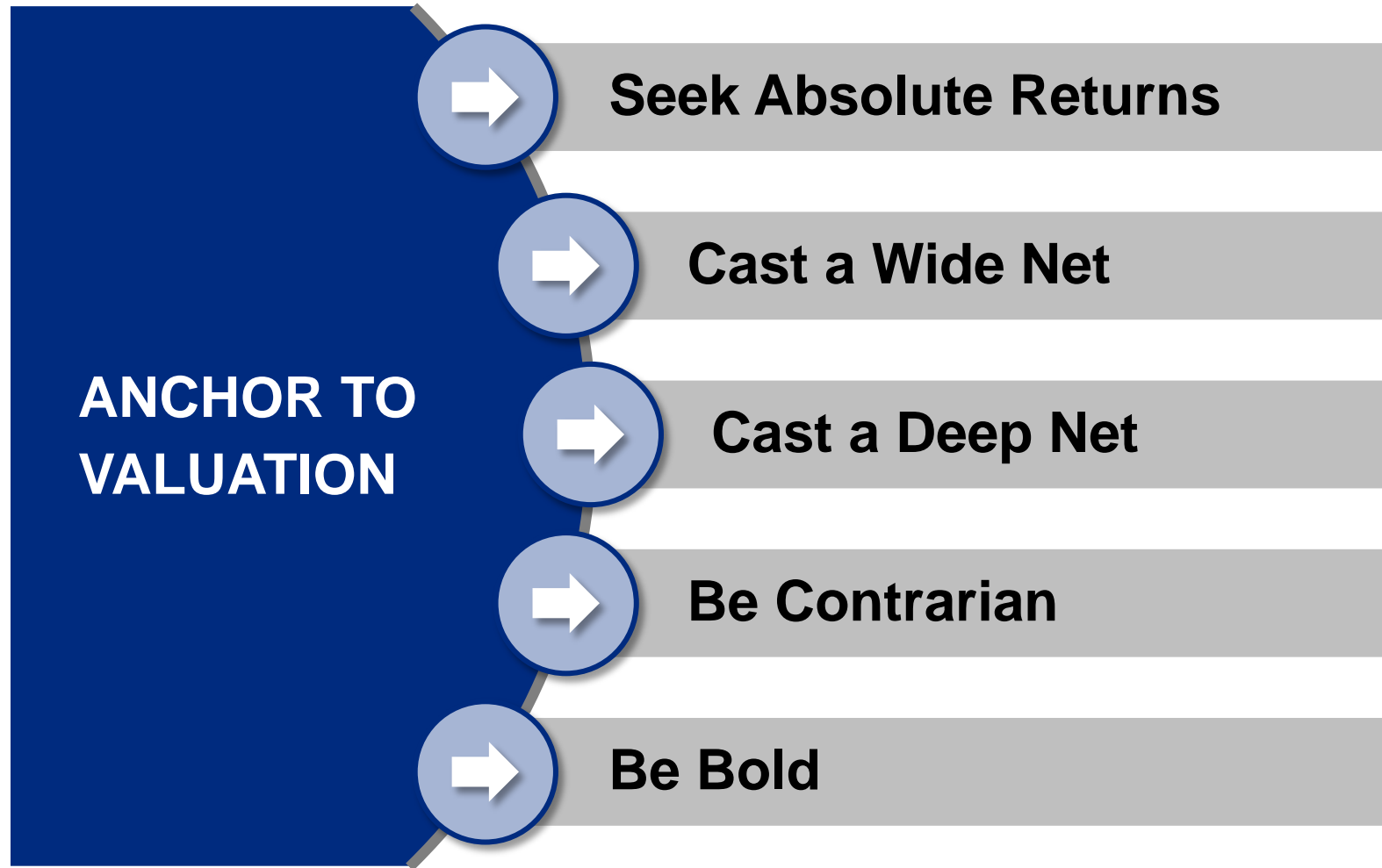


Note: 60% U.S. Equities (S&P 500), 40% U.S. Bonds (U.S. Treasuries) rebalanced monthly

Past Performance is not indicative of future results.

GMO Asset Allocation Credo

Harnessing the long horizon



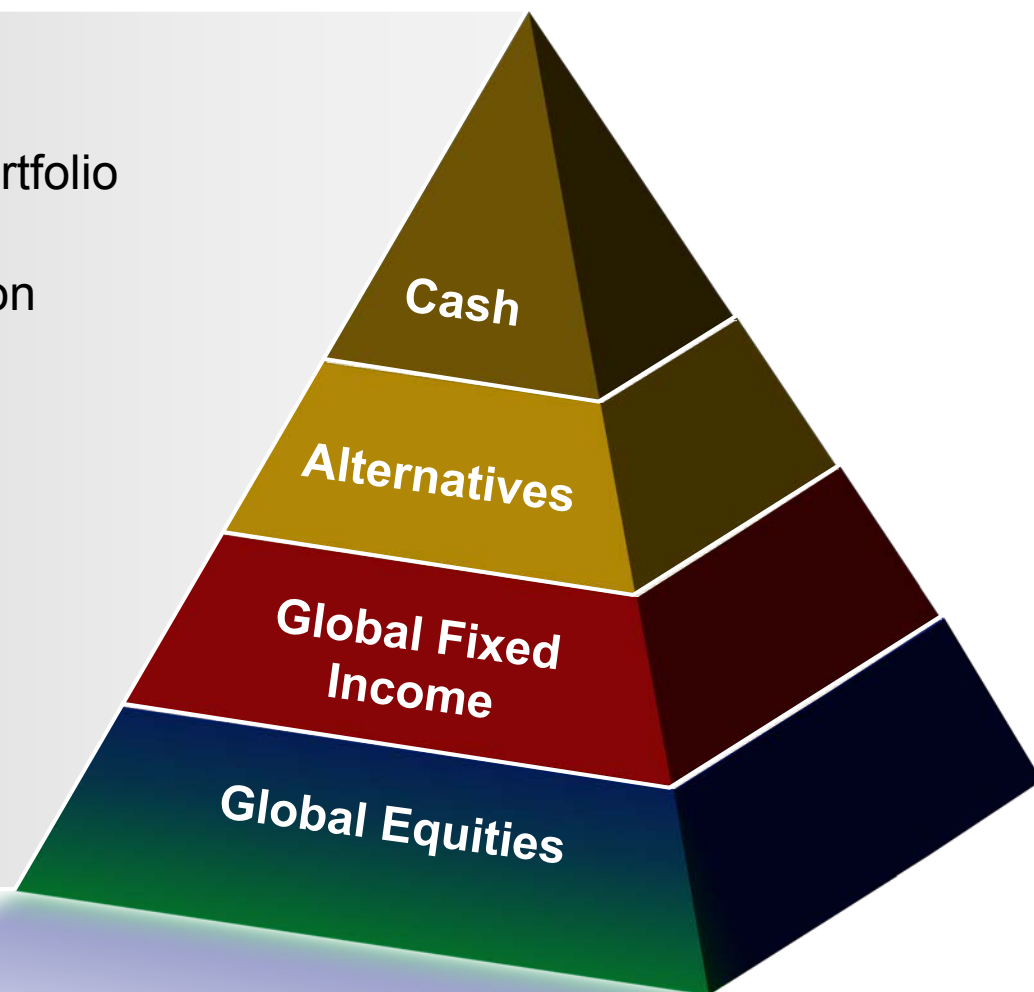
Benchmark-Free Investing with GMO



GMO Benchmark-Free: Casting a Wide Net

Representative universe

- Liquid, transparent multi-asset portfolio
- Global targeted style, capitalization and regional exposures
- Integrated duration, credit and currency decisions
- Fully collateralized alternative strategies



Note: GMO may use some or all of the investment opportunities listed above.

Risk Is the Permanent Impairment of Capital

Three routes to the permanent impairment of capital:

■ Valuation risk

- Buying overvalued assets dooms you to low long-run returns.

■ Fundamental risk

- “Real risk is measured not by the percent that a stock may decline in price in relation to the general market in a given period, but by the danger of a loss of quality and earnings power through economic change or deterioration in management.” – *Ben Graham*

■ Financing risk

- Leverage – “An investor who proposes to ignore near-term market fluctuations needs greater resources for safety and must not operate on so large a scale, if at all, with borrowed money.” – *Keynes*

Summary – Why GMO for Benchmark-Free Investing?

■ Experience and Record

- Experienced in managing global asset allocation mandates - over 100 institutions and 25 years. A team of investment professionals dedicated to asset allocation.
- Long, successful history of making a few important bold bets that drive superior performance.
- Strong record of adding value at the asset class level across a broad set of asset classes.

■ Philosophy and Process

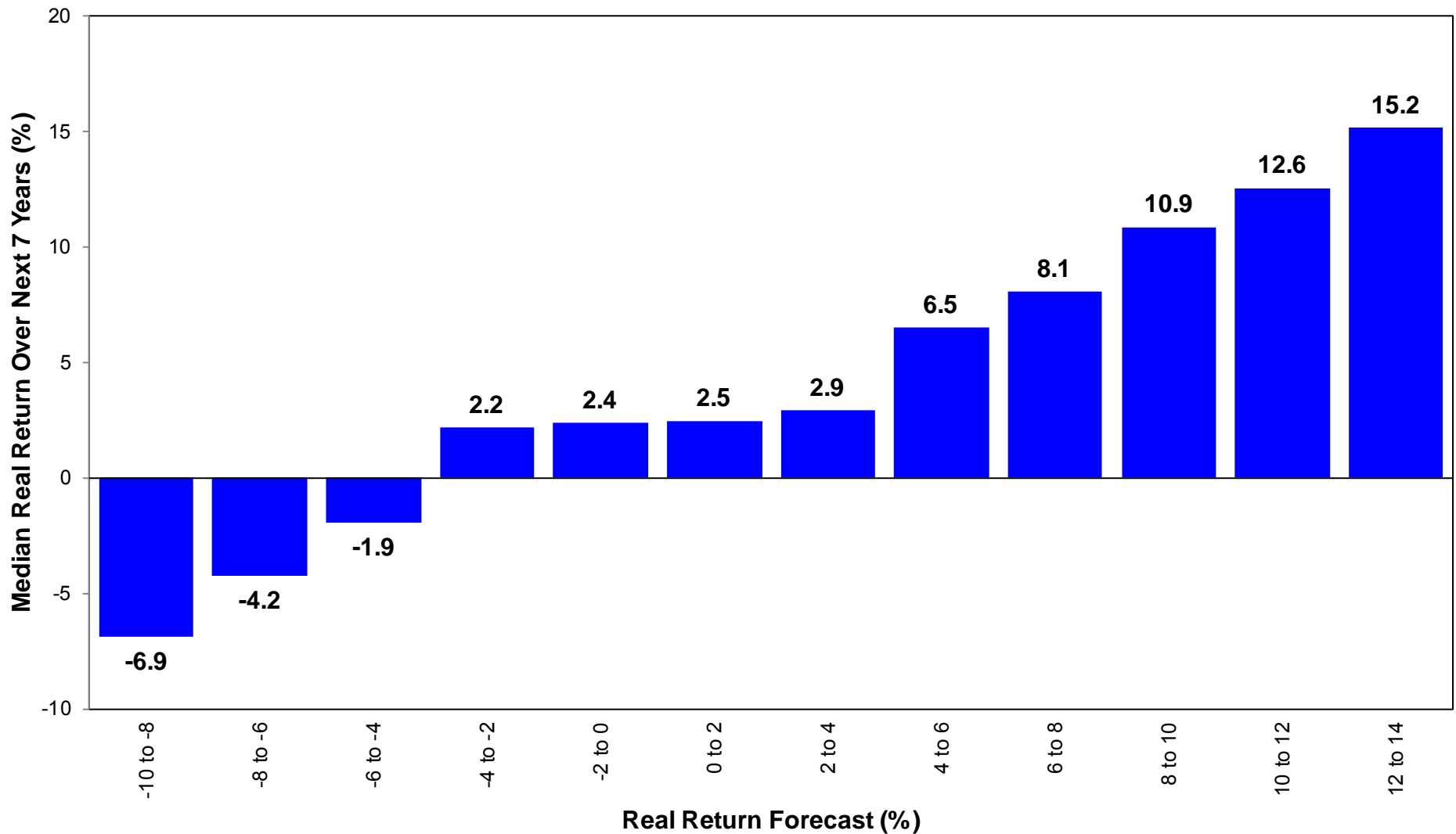
- Built-in conservative value bias which we believe helps to reduce the risk of capital loss.
- Obsessed with performance; understand the process of adding value at every stage of asset allocation.

■ A Firm Designed to Win

- 100% owned by individual partners, low turnover of investment professionals.
- Coordinated team working together on asset allocation and portfolio implementation.
- Small enough to be flexible to clients' needs and to move quickly.

Mean Reversion Drives Everything

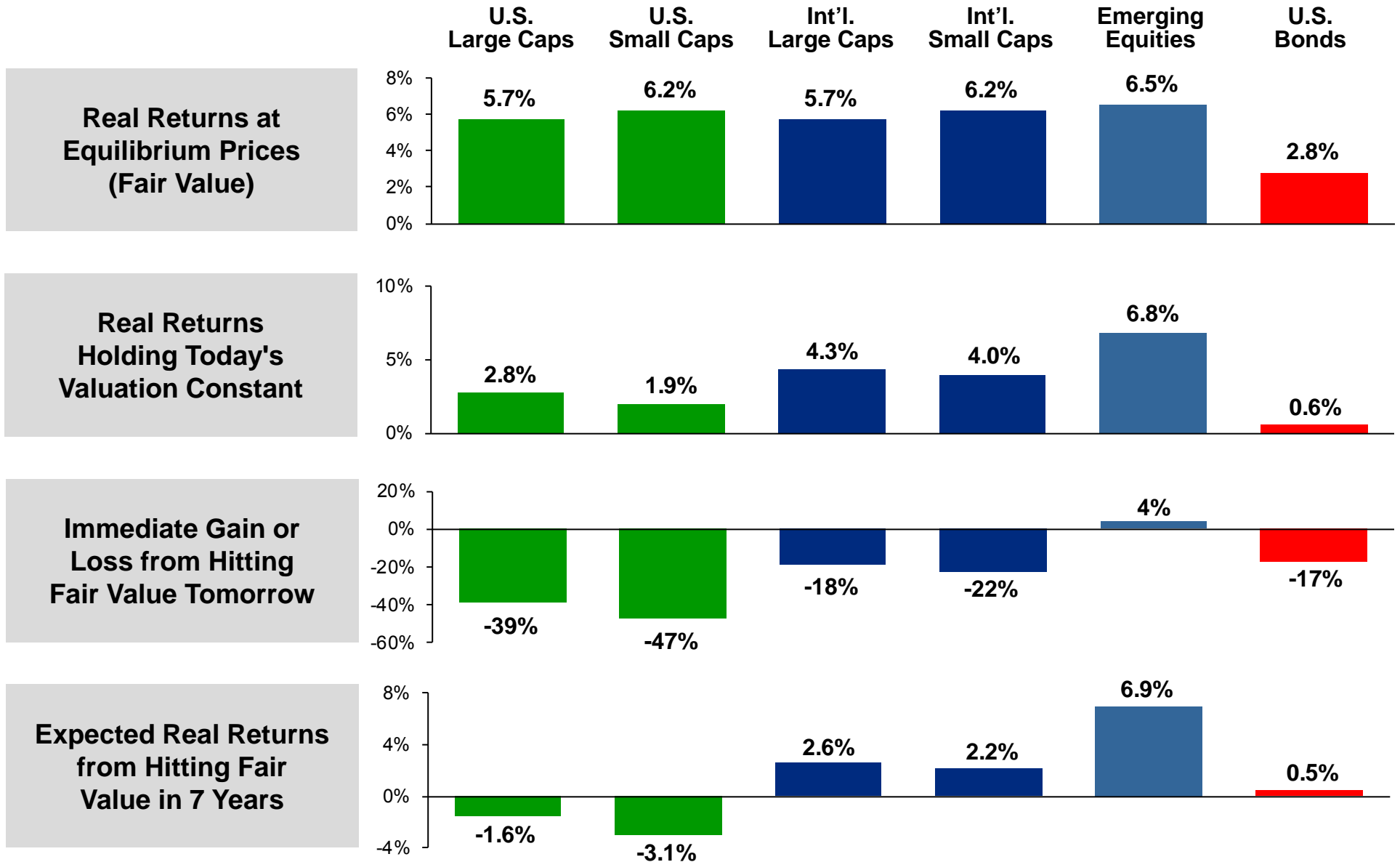
The realized performance of our forecasts since June 1994



Analysis uses 7-year GMO asset class forecasts for 18 asset classes from June-1994 until Dec-2005 (start date is October-1996 for REITS and July-1997 for TIPS). GMO began making 7-year asset class forecasts in 2002 and previously made 10-year asset class forecasts. 10-year asset class forecasts are converted into 7-year forecasts by assuming 3 years of equilibrium returns at the end of the 7-year period. Returns and forecasts are annualized.

Source: GMO As of 12/31/12 32
Master Page No. 127

Equilibrium Returns vs. GMO Forecasts

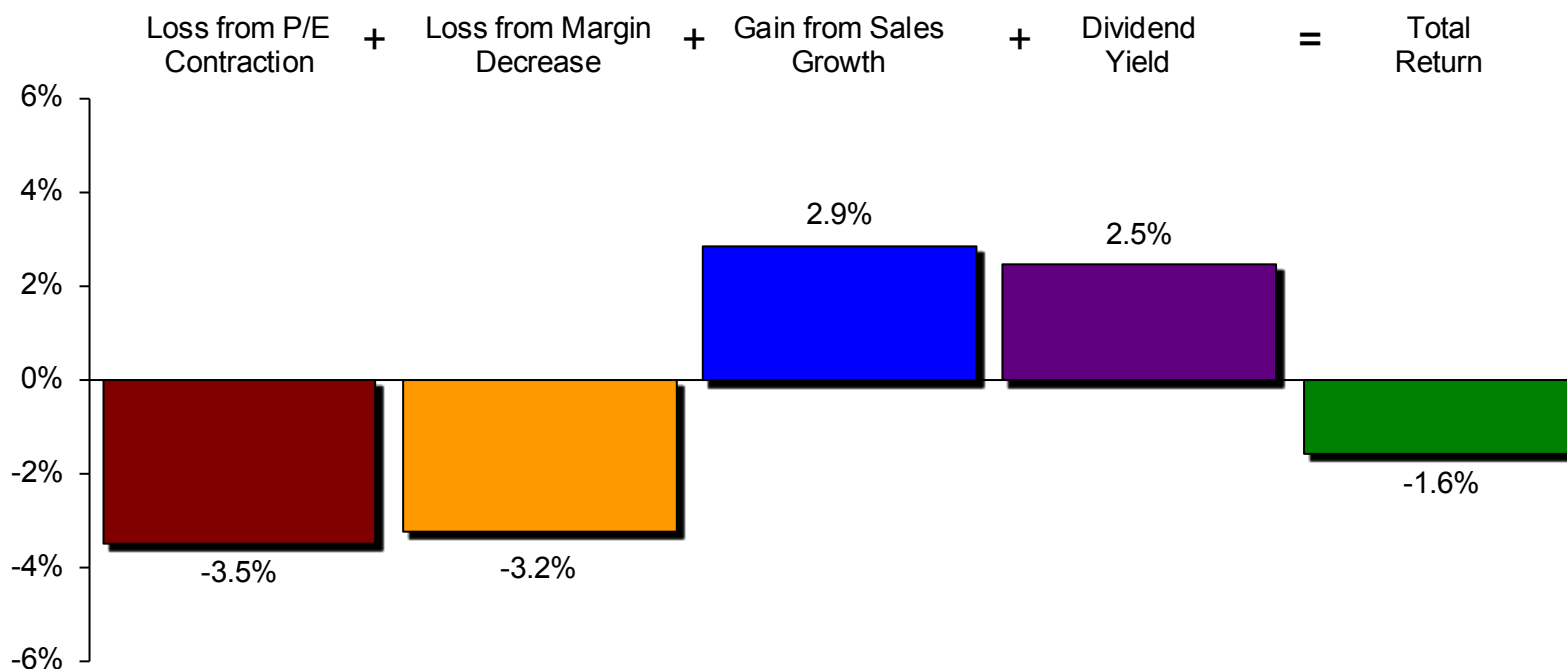


GMO Forecasts for asset classes are forward looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements. No forecast relates to a GMO fund or strategy.

S&P 500: Building a 7-Year Forecast

Components of annual return of S&P 500, with regression over 7 years

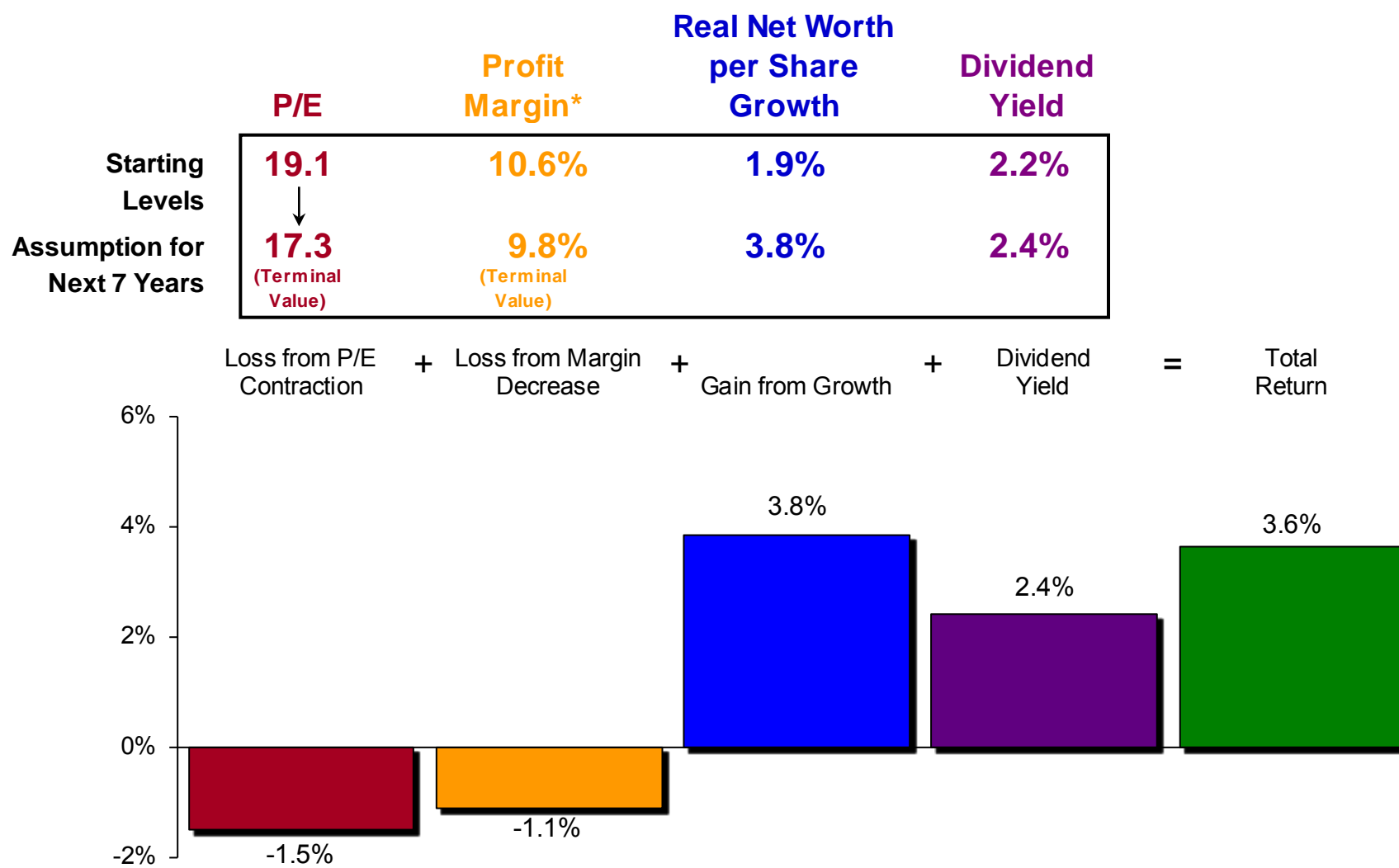
	P/E	Profit Margin	Real Sales per Share Growth	Dividend Yield
1926-1999 Averages	14.0	4.9%	1.8%	4.3%
Starting Levels	19.2	7.6%	1.9%	2.1%
Assumption for Next 7 Years	15.0 (Terminal Value)	6.1% (Terminal Value)	2.9%	2.5%



The chart represents a real return forecast for the above named asset class and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from the forecasts above.

High Quality: Building a 7-Year Forecast

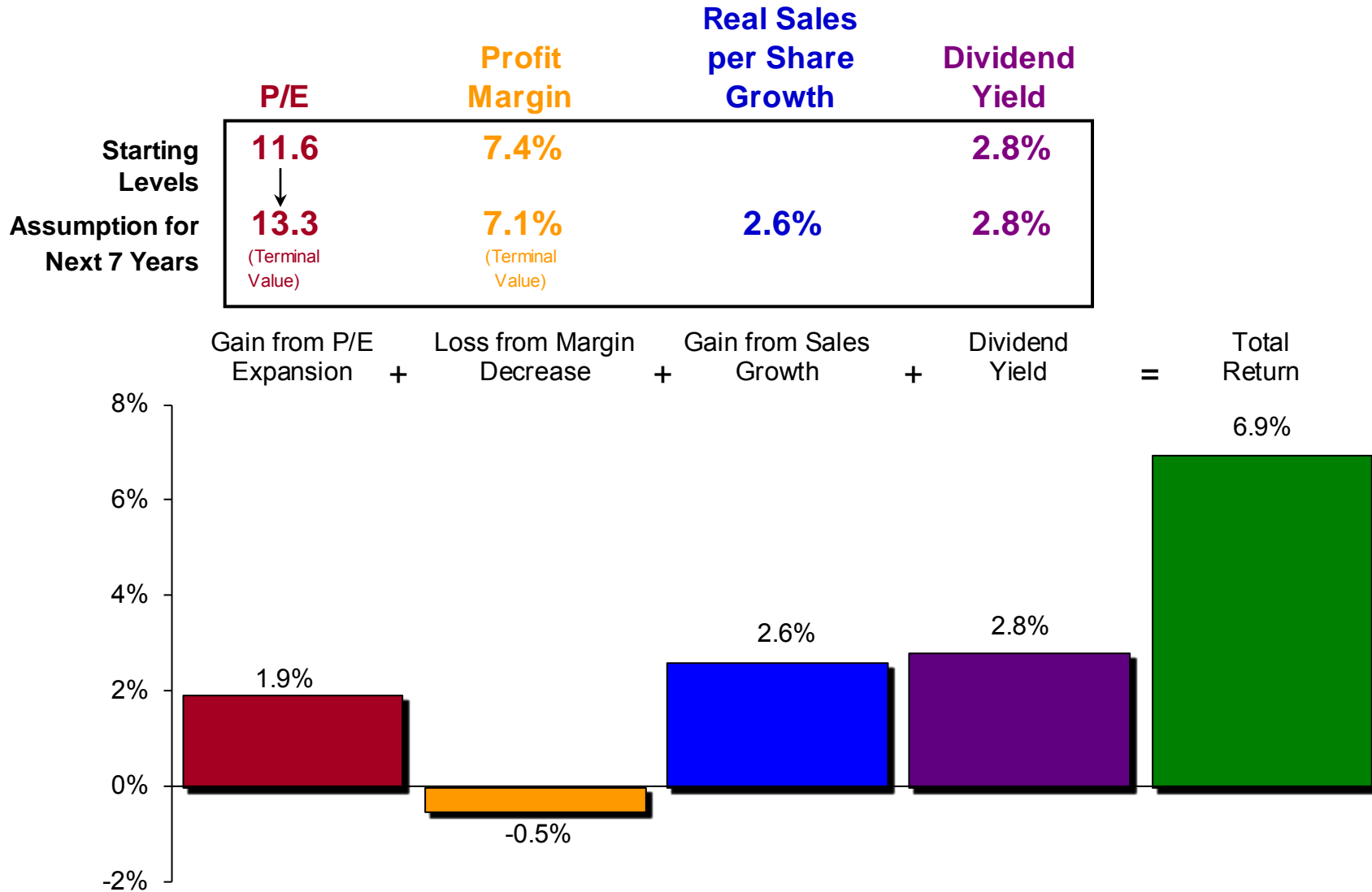
Components of annual return of high quality stocks, with regression over 7 years



The chart represents a real return forecast for the above named asset class and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from the forecasts above.

Emerging Equities: Building a 7-Year Forecast

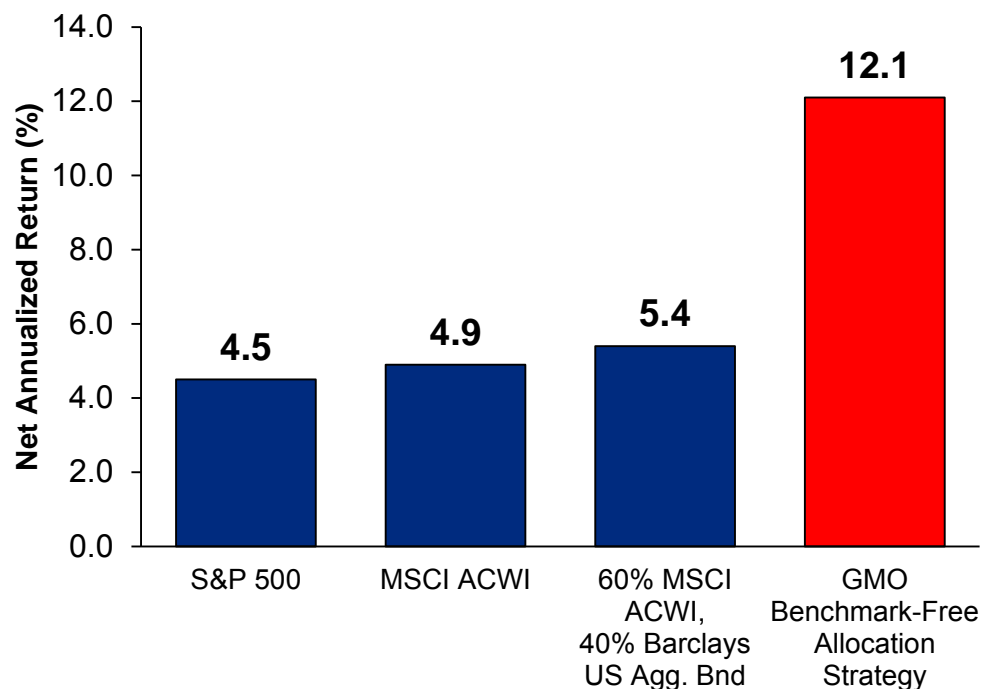
Components of annual return of emerging equities, with regression over 7 years



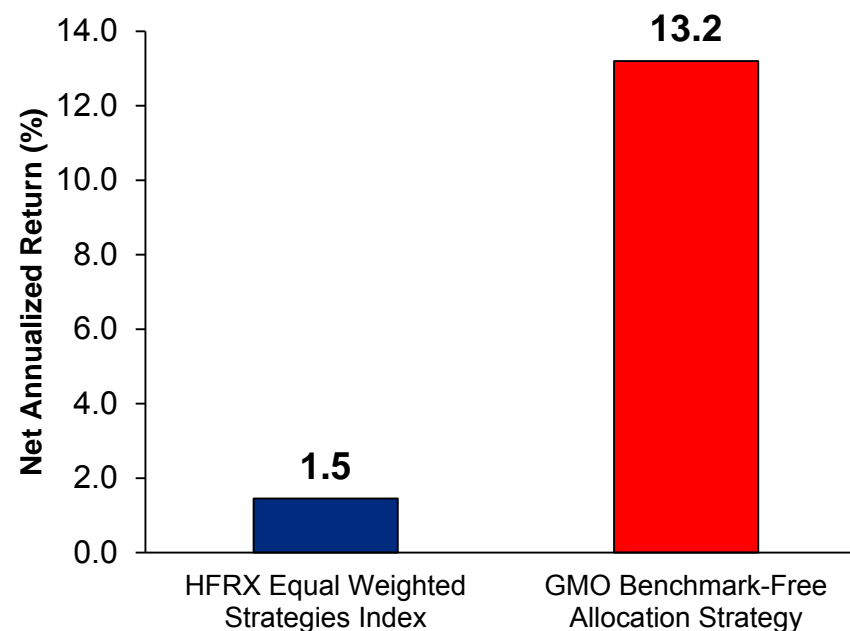
The chart represents a real return forecast for the above named asset class and not for any GMO fund or strategy. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from the forecasts above.

If You Seek Unconventional Returns...

Inception of Benchmark-Free Allocation Strategy to 6/30/13



Inception of HFRX (3/31/03) to 6/30/13



Inception date of GMO Benchmark-Free Allocation Strategy: 7/31/2001

The performance of the Benchmark-Free Allocation Composite appearing in the charts above shows the past performance of the Benchmark-Free Allocation Composite (the "Composite"). Prior to January 1, 2012, the accounts in the Composite served predominately as the principal component (approximately 80%) of a broader real return strategy that also included a cash-benchmarked component. Since January 1, 2012, accounts in the composite have been managed as a standalone investment and has generally allocated a greater percentage of its assets to cash-benchmarked strategies.

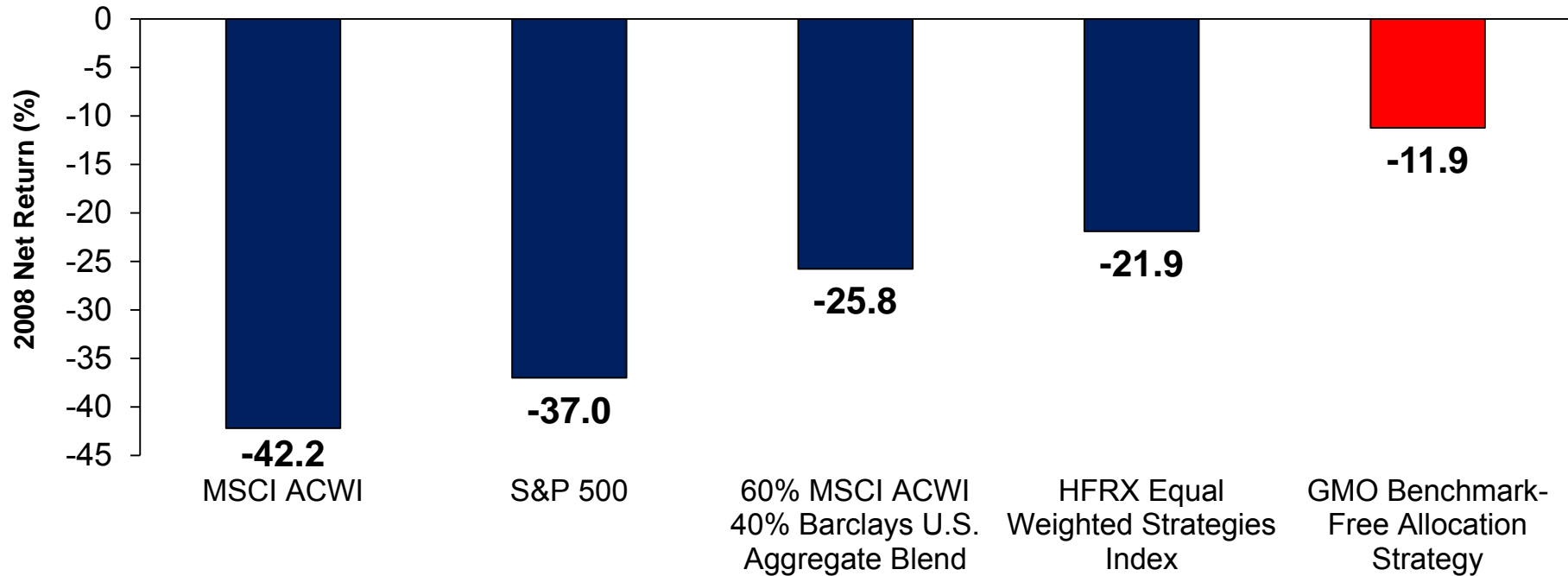
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Especially in a Down Year...

2008 Performance (Net of Fees in USD)



Inception date of GMO Benchmark-Free Allocation Strategy: 7/31/2001

The performance of the Benchmark-Free Allocation Composite appearing in the charts above shows the past performance of the Benchmark-Free Allocation Composite (the "Composite"). Prior to January 1, 2012, the accounts in the Composite served predominately as the principal component (approximately 80%) of a broader real return strategy that also included a cash-benchmarked component. Since January 1, 2012, accounts in the composite have been managed as a standalone investment and has generally allocated a greater percentage of its assets to cash-benchmarked strategies.

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The minimum investment for managed accounts implementing GMO's strategies generally ranges from \$50 to \$200 million.

Alpha Only

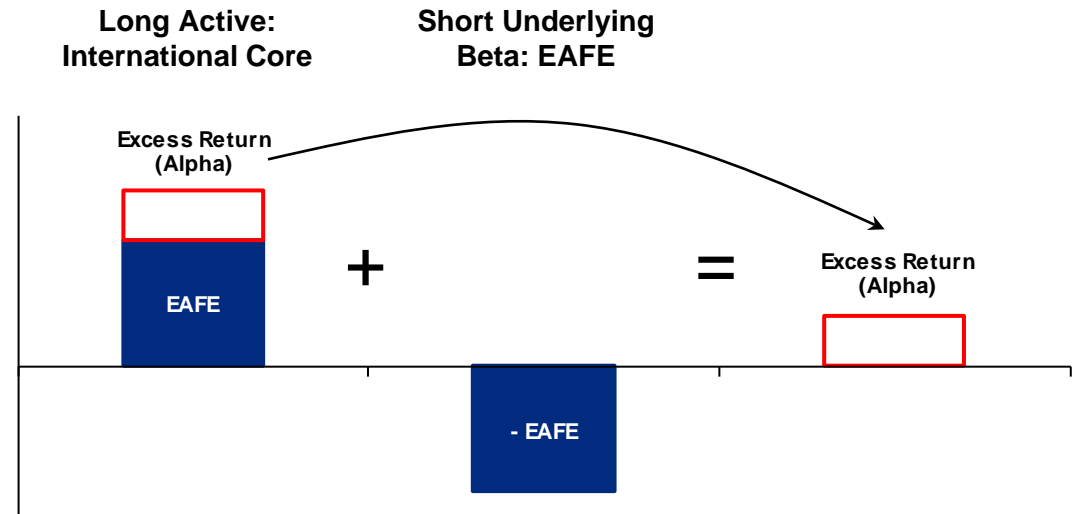
Framework

- Zero to negative equity beta
- Bond-like volatility
- Low correlation to stocks or bonds
- Portfolio constructed to maximize the opportunity to achieve annualized returns of T-Bills plus 1.5% - 2%
- Two primary alpha sources:
 - Security selection
 - Implementation of AA Forecasts

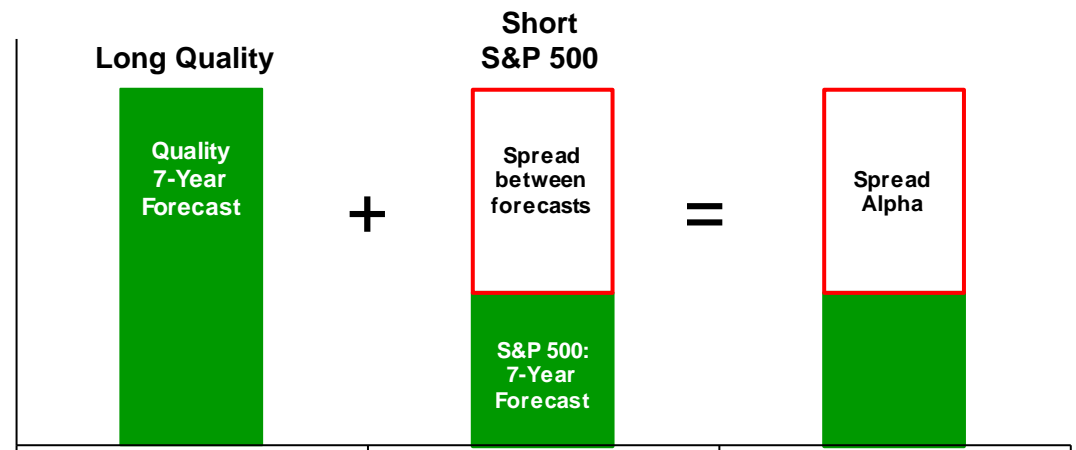
Role within a portfolio

- Alternative to cash or bonds
- “Dry powder”

Security Selection & Portable Alpha: A Stylized Example

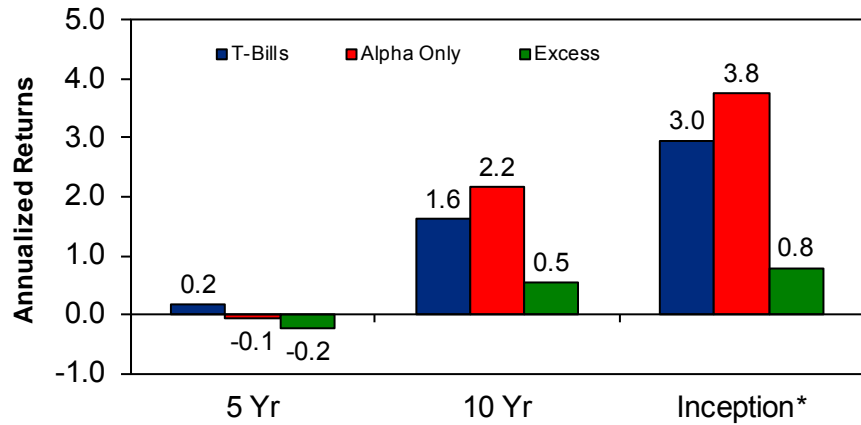


Asset Allocation Forecasts & Spread Trades: A Stylized Example



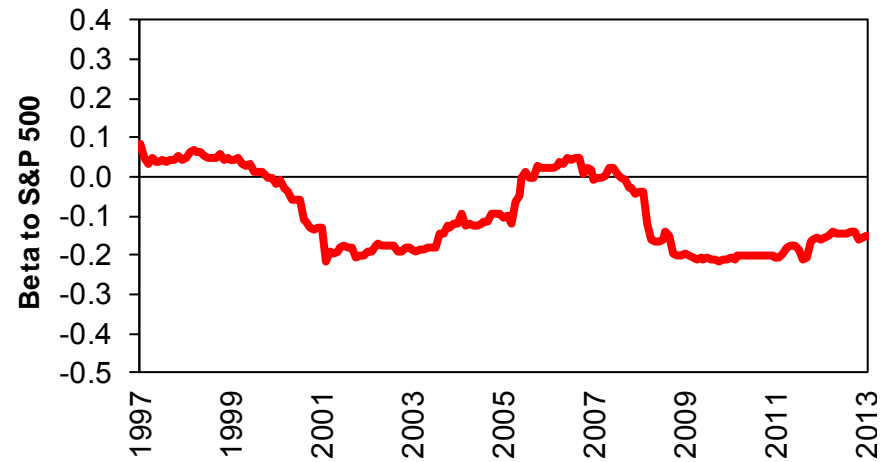
Alpha Only

Returns (Net of Fees)
Annualized, thru August 31, 2013

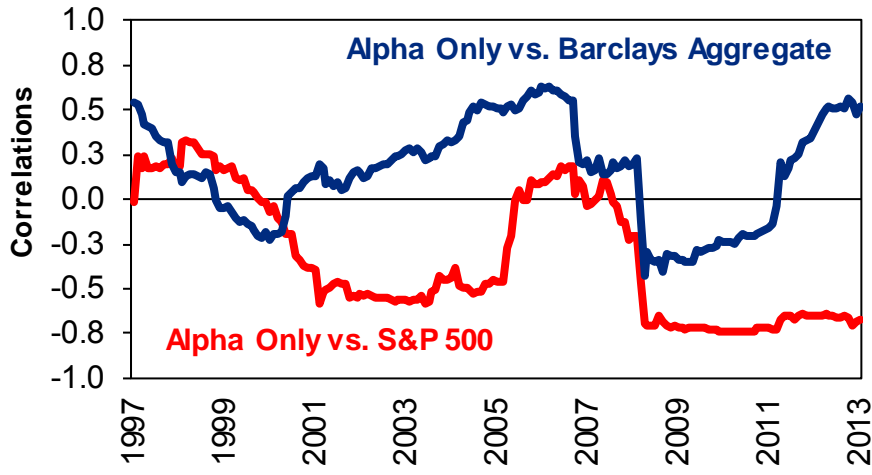


*Inception date: July 31, 1994

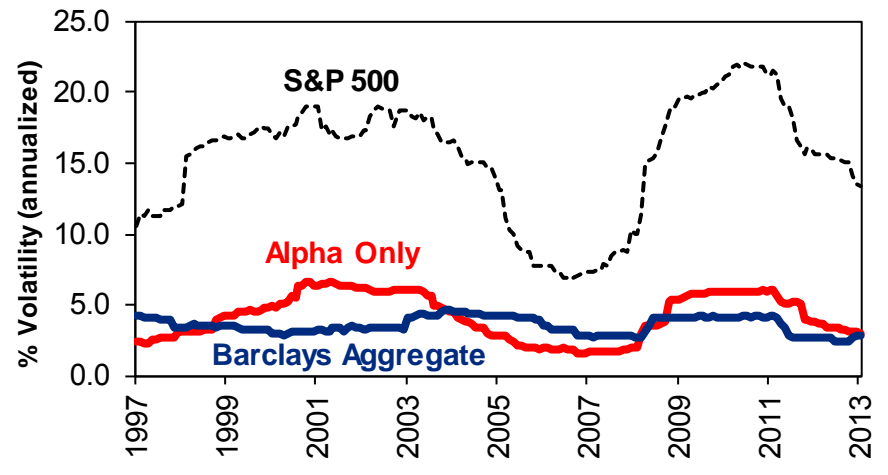
Beta
Rolling 3-Year to S&P 500



Correlations
Rolling 3-Year



Bond-Like Volatility
Rolling 3-Year



This information above is supplemental to the GIPS compliant presentation that was made available on GMO's website in October of 2012. **Performance data quoted represents past performance and is not predictive of future performance.** Returns are shown after the deduction of management fees, transaction costs, and other expenses. The returns assume the reinvestment of dividends and other income. A GIPS® compliant presentation of composite performance has preceded this presentation in the past 12 months or accompanies this presentation, and is also available at www.gmo.com. Actual fees are disclosed in Part II of GMO's Form ADV and are also available in each strategy's compliant presentation.

Alternative Asset Opportunity

Allocations as of June 30, 2013

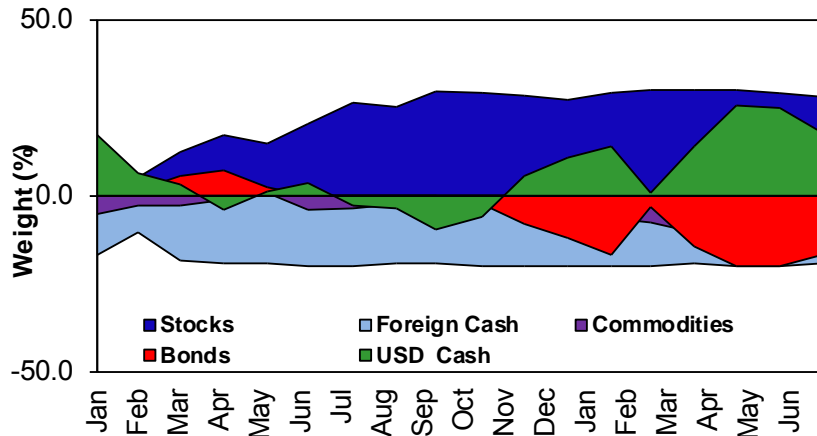
Portfolio constructed to maximize the opportunity to achieve:

- Return of T-Bills plus 2% - 3%
- Low volatility, liquid Global Tactical AA
- Low correlation to stocks or bonds

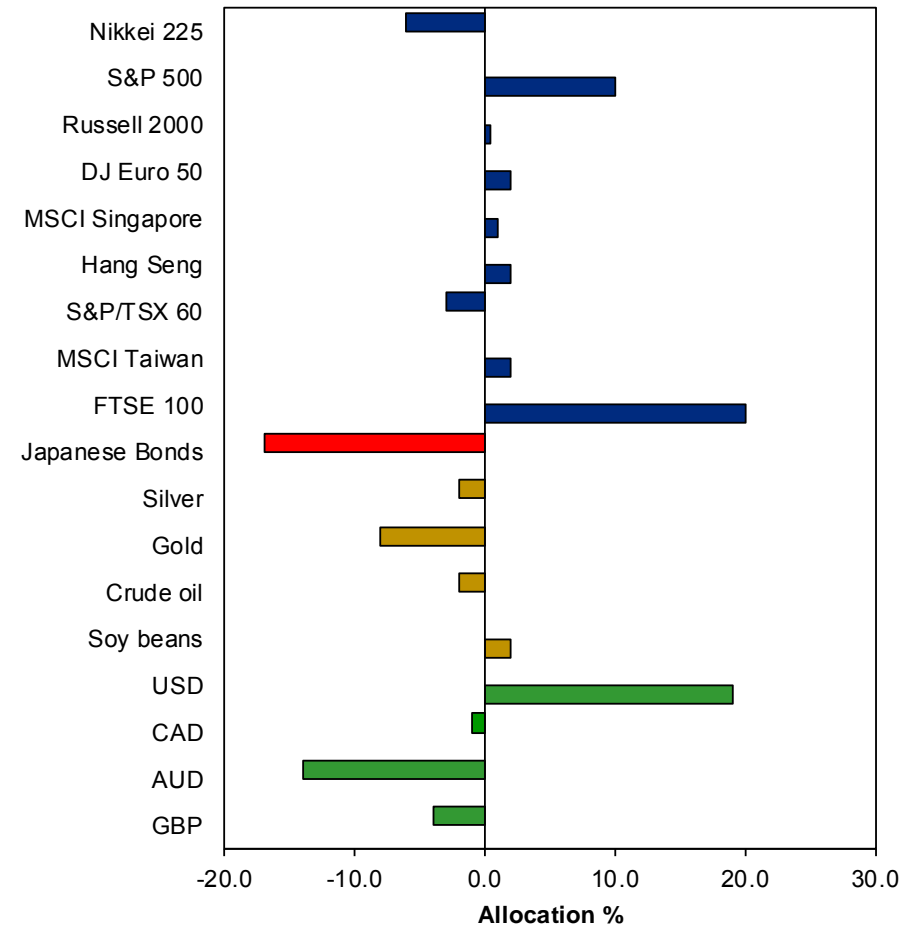
Role within a strategy:

- Alternative to cash or bonds
- Five sources of uncorrelated return

Net Allocations (Long-Short)



	Long	Short	Net
Stocks	38%	-9%	30%
Bonds	0%	-17%	-17%
Commodities	2%	-12%	-10%
Foreign Exchange	19%	-19%	0%
Cash	0%	-3%	-3%
Total	59%	-59%	0%



Capsule Biographies: Asset Allocation

Tariq Ali Mr. Ali is a member of GMO's Asset Allocation team. Prior to joining GMO full-time in 2011, he was an intern with the Asset Allocation team. Mr. Ali earned his B.A. in Government from the University of Texas, Austin.

Edmund Bellord Mr. Bellord is a member of GMO's Asset Allocation team. Prior to joining GMO in 2008, he was a senior portfolio manager at State Street Global Advisors Capital Management. Previously, he worked at Mellon Capital Management as a strategist. Mr. Bellord earned his M.A. in Economics from the University of Edinburgh in Scotland and his MBA at the University of California in Berkeley.

Robert Brannan Mr. Brannan is a member of GMO's asset allocation group. Previously, he was a member of GMO's investments control group. Prior to joining GMO in 2006, Mr. Brannan worked at Investors Bank & Trust as an account manager for fund accounting. Mr. Brannan earned his BA in Business Management from University of Massachusetts Amherst and MBA from Boston University. He is a CFA charterholder.

Edward Chancellor Mr. Chancellor is a member of GMO's Asset Allocation team focusing on capital market research. He has worked as a financial commentator and consultant and has written for the Wall Street Journal, New York Times, Financial Times, and Institutional Investor, among others. He is the recipient of the 2007 George Polk Award for financial journalism. Mr. Chancellor is the author of several books including *Crunch Time for Credit* (2005) and *Devil Take the Hindmost: A History of Financial Speculation* (1999), a New York Times Notable Book of the Year. Prior to joining GMO in 2008, he worked as deputy U.S. editor for Breakingviews.com in New York and for Lazard Brothers. Mr. Chancellor earned his B.A. in History from Cambridge University, and his Master of Philosophy in Modern History from Oxford University.

Anna Chetoukhina Ms. Chetoukhina is a member of GMO's Asset Allocation team. Prior to joining GMO in 2011, Ms. Chetoukhina was a fixed income quantitative analyst for Wellington Management. Previously, she was a research associate for State Street Associates, LLC. Ms. Chetoukhina earned her B.S. in Economics from Voronezh State University in Russia, her B.A. in Mathematics and Economics from Huntingdon College and her M.S. in Applied Mathematics from Northeastern University. She is a CFA charterholder.

Peter Chiappinelli Mr. Chiappinelli is a member of GMO's Asset Allocation team. Prior to joining GMO in 2010, he was an institutional portfolio manager in the asset allocation group at Pyramis Global Advisors. Previously, he was the director of institutional investment strategy and research at Putnam Investments. Mr. Chiappinelli earned his MBA from The Wharton School at the University of Pennsylvania and his B.A. from Carleton College. He is a CAIA charterholder, and is the founder of the CAIA Boston chapter. He is a CFA charterholder.

Thomas Cooper Mr. Cooper is the head of GMO's Fixed Income team. Before joining GMO in 1993, he was a managing director at Boston International Advisors. Prior to joining Boston International, he worked at Goldman Sachs Asset Management, Western Asset Management and State Street Bank & Trust Co. Mr. Cooper received his MBA in Finance from the University of California (Berkeley) and earned a B.A. in Mathematics from Oberlin College. He is a CFA charterholder.

Capsule Biographies: Asset Allocation

David Cowan Dr. Cowan is co-head of GMO's Global Equity team. Prior to joining GMO in 2006, he worked as a financial analyst and software developer for Nantahala Capital Management. Dr. Cowan earned his B.A. in Mathematics and Religion from Williams College, and his M.A. in Humanities from the University of Chicago. Additionally, he received his Ph.D. in Mathematics from Tufts University.

Arjun Divecha Mr. Divecha is the head of GMO's Emerging Markets Equity team and Chairman of the GMO Board of Directors. Prior to joining GMO in 1993, he spent 12 years at BARRA directing software development, marketing, client service and emerging markets research and development. Mr. Divecha holds a Bachelor of Technology in Aeronautical Engineering from the Indian Institute of Technology, Bombay and an MBA in Finance from Cornell University.

Jeremy Grantham Mr. Grantham co-founded GMO in 1977 and is a member of GMO's Asset Allocation team, serving as the firm's chief investment strategist. Prior to GMO's founding, Mr. Grantham was co-founder of Batterymarch Financial Management in 1969 where he recommended commercial indexing in 1971, one of several claims to being first. He began his investment career as an economist with Royal Dutch Shell. He is a member of the GMO Board of Directors and has also served on the investment boards of several non-profit organizations. Mr. Grantham has been featured in Forbes, Barron's and Business Week and is routinely quoted by the financial press. He earned his undergraduate degree from the University of Sheffield (U.K.) and an MBA from Harvard Business School.

Jason Halliwell Mr. Halliwell is the head of GMO's Systematic Global Macro team. He joined GMO Australia in September 1999 from Westpac Investment Management where he spent three years in research and development of quantitative tactical asset allocation methods. Mr. Halliwell has an honours degree in Commerce/Law from Queensland University and has completed postgraduate studies in Financial Mathematics at the University of Technology in Sydney. He is a CFA charterholder.

Thomas Hancock Dr. Hancock is co-head of GMO's Global Equity team and lead manager for U.S. and EAFE portfolios. Prior to joining GMO in 1995, he was a research scientist at Siemens and a software engineer at IBM. Dr. Hancock holds a Ph.D. in Computer Science from Harvard University and B.S. and M.S. degrees from Rensselaer Polytechnic Institute.

Christopher Hudson Mr. Hudson is a member of GMO's Asset Allocation team. Prior to joining GMO in 2009, he worked at Bain Capital/Sankaty Advisors and DDJ Capital focusing on distressed and special situations investing. Mr. Hudson earned his A.B. in economics from Harvard University.

Ben Inker Mr. Inker is co-head of GMO's Asset Allocation team and a member of the GMO Board of Directors. He joined GMO in 1992 following the completion of his B.A. in Economics from Yale University. In his years at GMO, Mr. Inker has served as an analyst for the Quantitative Equity and Asset Allocation teams, as a portfolio manager of several equity and asset allocation portfolios, as co-head of International Quantitative Equities, and as CIO of Quantitative Developed Equities. He is a CFA charterholder.

Matt Kadnar Mr. Kadnar is a member of GMO's Asset Allocation team focusing on research and portfolio management. Prior to joining GMO in 2004, he was an investment specialist and consultant relations manager at Putnam Investments. Previously, he served as in-house counsel for LPL Financial Services and as a senior associate at Melick & Porter, LLP. Mr. Kadnar has a B.S. from Boston College majoring in Finance and Philosophy and a J.D. from St. Louis University School of Law. He is a CFA charterholder.

Capsule Biographies: Asset Allocation

Tim Lang Mr. Lang is a member of GMO's asset allocation team. Previously, he was a member of GMO's global quantitative trading group as well as a member of the investments control group. Prior to joining GMO in 2006, Mr. Lang worked as an account manager at Investors Bank & Trust. Mr. Lang earned his B.S. in Finance from Stonehill College.

Jamie Lee Mr. Lee is a member of GMO's Asset Allocation team. Previously, Mr. Lee worked at pi Economics as an economist. He earned his B.A. in Mathematics and English from Dartmouth College.

Catherine LeGraw Ms. LeGraw is a member of GMO's Asset Allocation team. Prior to joining GMO in 2013, she worked as a director at BlackRock. Previously, Ms. LeGraw was an analyst at Bear, Stearns & Co. She received her B.S. and her B.A. in Economics from the University of Pennsylvania. She is a CFA charterholder.

Diane Lopez Ms. Lopez is the head of operations for GMO's asset allocation group. Previously at GMO, Ms. Lopez led GMO's quantitative equity trading group. Prior to joining GMO in 1995, she worked as a fund accountant at Investors Bank & Trust. Ms. Lopez earned her undergraduate degree in Economics from the University of Massachusetts at Amherst.

Ara Lovitt Mr. Lovitt is the head of GMO's Corporate Credit team and the Portfolio Manager of the GMO Credit Opportunities Fund. He is also a member of GMO's Asset Allocation team. Prior to joining GMO in 2010, Mr. Lovitt was a senior investment professional at Silver Point Capital. Previously, he was a vice president at Morgan Stanley. Mr. Lovitt earned his A.B. in Economics and Philosophy from Dartmouth College and his J.D. from Stanford Law School.

Mathew Marotta Mr. Marotta is a trading support analyst within GMO's asset allocation group. Previously at GMO, he was a member of the information technologies group. Prior to joining GMO in 2007, he was a financial analyst at Fidelity. Mr. Marotta received his B.S. in Business Administration and Management Information Systems from Babson College.

James Montier Mr. Montier is a member of GMO's Asset Allocation team. Prior to joining GMO in 2009, he was co-head of Global Strategy at Société Générale. Mr. Montier is the author of several books including *Behavioural Investing: A Practitioner's Guide to Applying Behavioural Finance*; *Value Investing: Tools and Techniques for Intelligent Investment*; and *The Little Book of Behavioural Investing*. Mr. Montier is a visiting fellow at the University of Durham and a fellow of the Royal Society of Arts. He holds a B.A. in Economics from Portsmouth University and an M.Sc. in Economics from Warwick University.

Nick Nanda Mr. Nanda is a member of GMO's Asset Allocation team focusing on research and portfolio management. He joined GMO in 2003 following the completion of his B.A. in Economics from Oberlin College. He is a CFA charterholder.

Erik Norton Mr. Norton is a trader for GMO's Asset Allocation team. Prior to joining GMO in 2008, he was head trader for Tisbury Capital Management's North American team and head trader for Sowood Capital Management's event and catalyst-driven equities team. Mr. Norton earned his B.S. in Mathematics from MIT.

Capsule Biographies: Asset Allocation

Brooke Radosevic Ms. Radosevic is a member of GMO's asset allocation group. Previously, she was a member of GMO's investments control group. Prior to joining GMO in 2006, she worked as a custody accountant for Investors Bank & Trust. Ms. Radosevic earned her B.S in Economics and Finance from Bentley College.

Drew Spangler Mr. Spangler is the head of GMO's International Active team. In addition, he is the portfolio manager responsible for Canada and shares responsibility for the management of the U.S. equity portion of the Global Active strategy. Mr. Spangler joined GMO in 1993 following the completion of a B.S. in Systems Science and Mathematics at Washington University in St. Louis. He is a CFA charterholder.

Sam Wilderman Mr. Wilderman is co-head of GMO's Asset Allocation team. Previously, he was co-head of the GMO Global Equity team and lead manager for U.S. quantitative portfolios. Prior to 2005, he was involved in research and portfolio management for the Emerging Markets Equity team. He joined GMO in 1996 following the completion of his B.A. in Economics from Yale University. Mr. Wilderman is a CFA charterholder.

Kai Wu Mr. Wu is a member of GMO's Asset Allocation team. Prior to joining GMO full-time in 2010, he was an intern with the Asset Allocation team. He earned his A.B. in Economics from Harvard College.

GMO

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Research on Traditional Stock and Bond Investing

Mike Sebastian
Partner

Hewitt ennisknupp

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Master Page No. 142

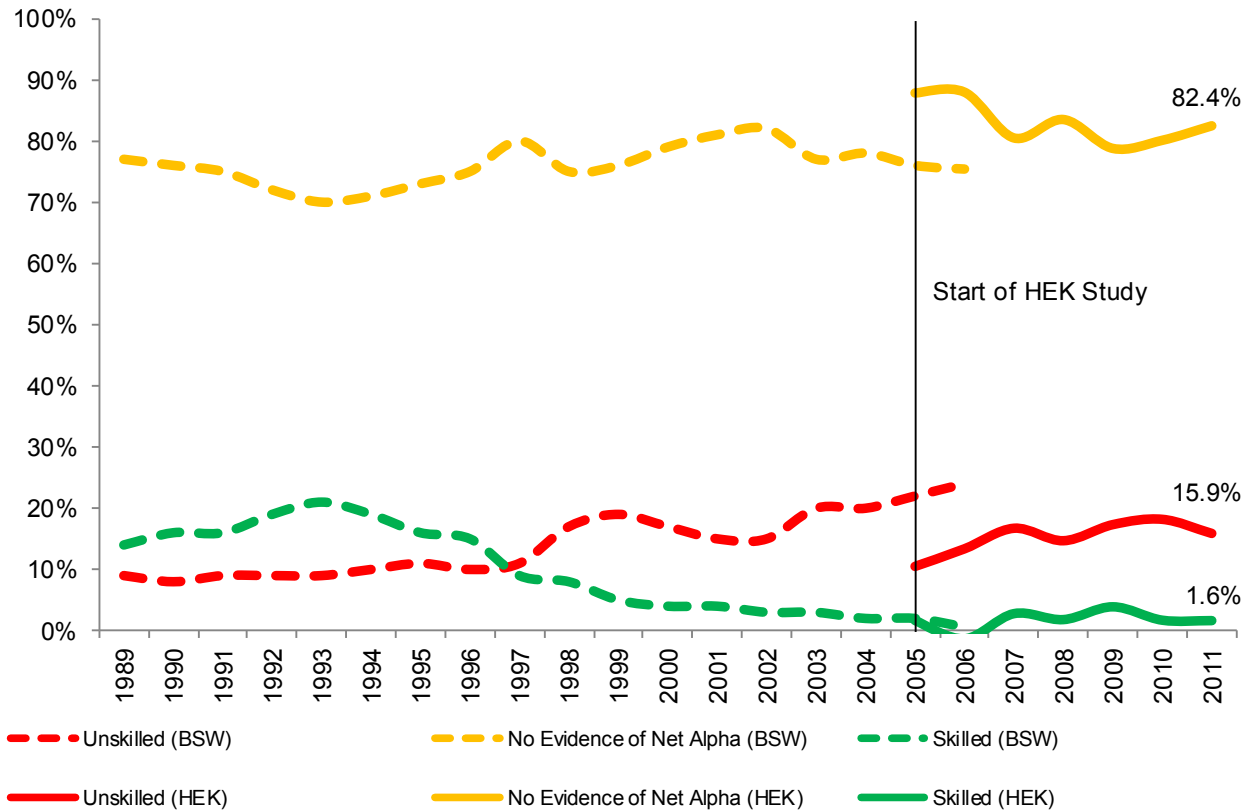
Stocks: Conviction in Equity Investing

Classifications of Manager Skill

Unskilled	Underperform on average after fees and trading costs	Net alpha < 0
No Evidence of Net Alpha	Earn enough excess return on average to cover fees and costs, but no more	Net alpha \approx 0
Skilled	Outperform on average net of fees and costs	Net alpha > 0

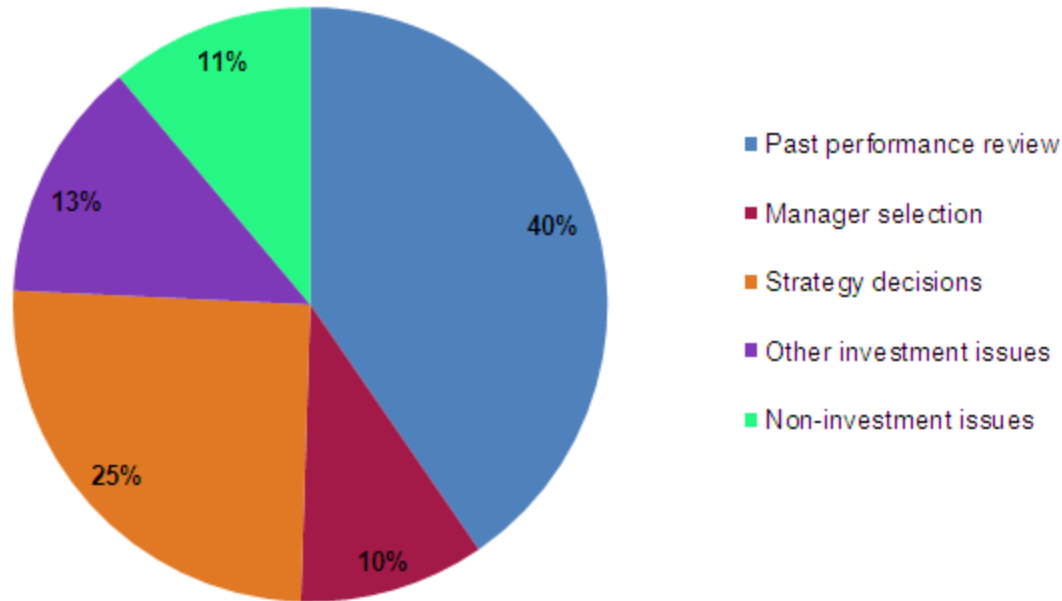
Our research separates investment manager products into three categories based on statistical analysis of returns

Manager Skill, 1975-2011



Manager skill has steadily declined since the 1990s, and we estimate that only about 2% of products demonstrate evidence of true skill today. Success with active management requires a high bar.

How Investment Committees Spend Time



Source: Vanguard Investment Counseling & Research

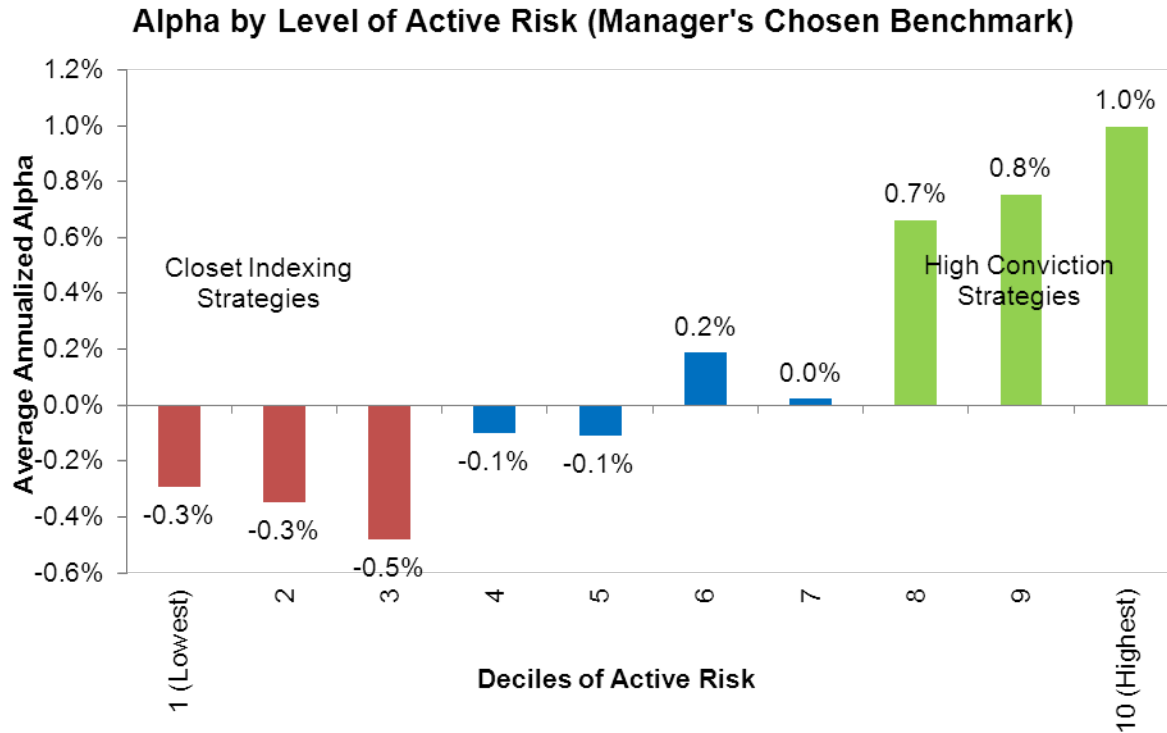
Clients spend significant resources overseeing active managers; there is a fixed element to these soft costs that suggests an efficiency argument for using more active management if any is used at all

Evidence on Outperformance of Higher Active Risk Managers

Study	Finding
Amihud and Goyenko [2012]	Funds with lower R ² (greater deviation from the market) outperform
Baks, Busse and Green [2006]	Managers willing to take big bets outperform
Brands, Brown and Gallagher [2005]	More concentrated funds outperform
Cremers, Ferreira, Matos and Starks [2011]	The most active funds outperform; closet indexers underperform
Da, Gao and Jagannathan [2010]	High active share and aggressive growth managers outperform
Duan, Hu and McLean [2009]	Managers exhibit stock picking ability only in high-volatility stocks
Huij and Derwall [2011]	Fund managers willing to take big bets, and with broader investment strategies, outperform
Ivkovic, Sialm and Weisbenner [2008]	Households with more concentrated stock holdings earn better returns
Jiang, Verbeek and Wang [2011]	Managers' highest-conviction stock holdings outperform
Kacperczyk, Sialm and Zheng [2004]	More concentrated funds outperform
Petajisto [2010]	The most active stock pickers outperform; closet indexers underperform
Wang and Zheng [2012]	Hedge funds with strategies more distinctive from peers outperform
Wermers [2000]	Funds that trade more actively outperform

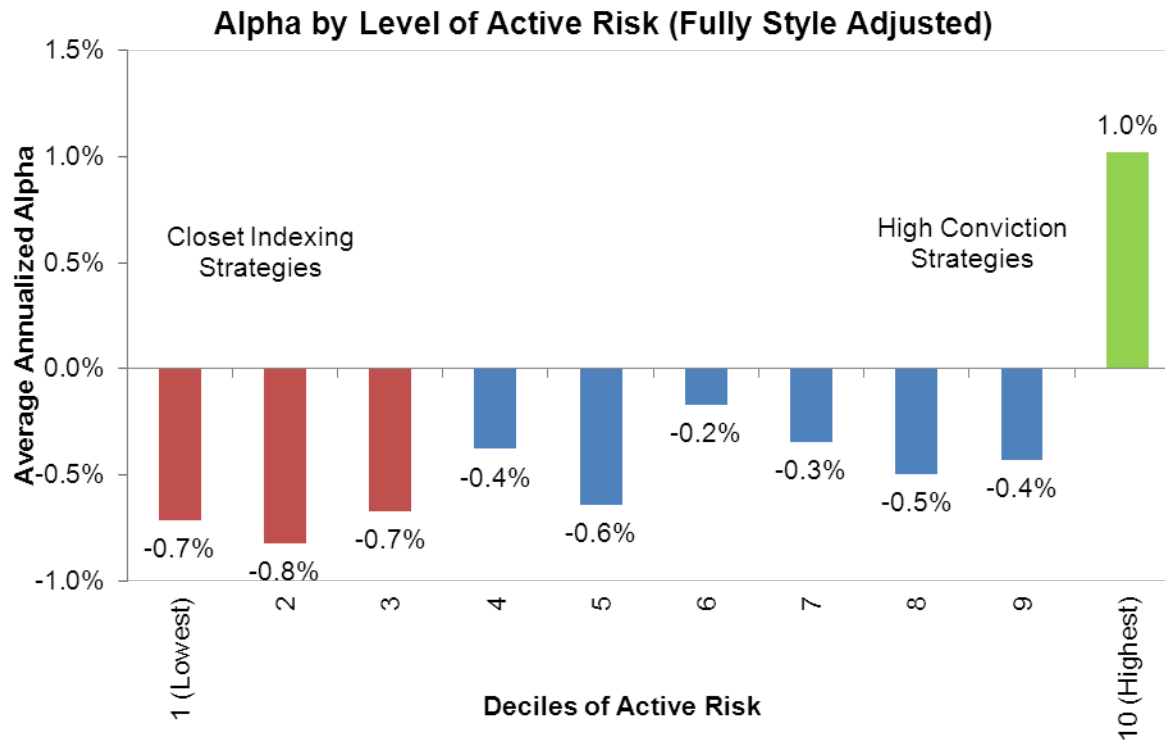
There is significant evidence of a link between investment manager products with higher active risk (higher conviction on the part of the manager) and value added

Active Manager Value Added and Active Risk



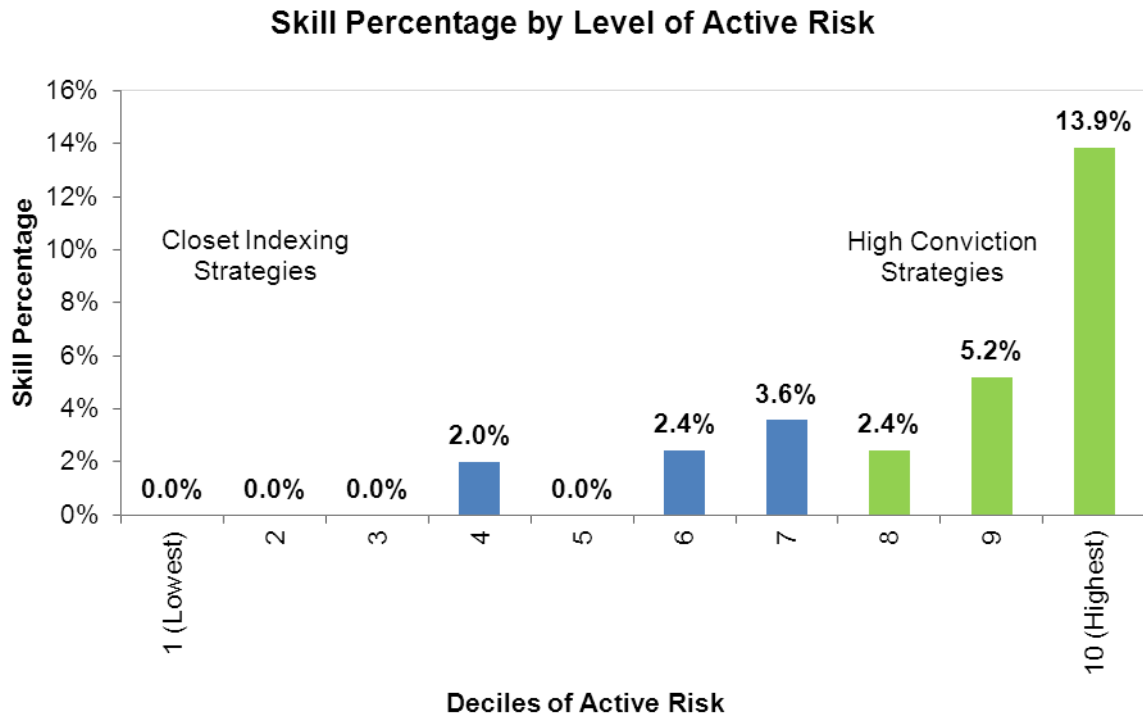
Our research finds a strong link between active risk and performance relative to the benchmark

Active Manager Value Added and Active Risk (cont.)



When fully adjusting for manager style and risk, we find value added *only* among the managers who take the most significant active bets

Active Manager Skill and Active Risk



Evidence of true skill is much stronger among the most active managers

A Risk Puzzle

- Institutional investors spend significant time and resources on active management
- But active management accounts for only a small amount (5% or less) of typical total fund risk
- Investors' portfolios are positioned to earn less alpha than they expect

A Solution

- We recommend that investors consider one of two directions with their public equity investments:
 - An *Efficiency* equity portfolio that is 100% indexed to a broad global equity benchmark
 - An *Opportunity* portfolio that maximizes the odds of success from active management in a high-conviction approach that is 80% or more actively managed
- *We believe that the Efficiency model is optimal for most investors.* Efficiency investors demonstrate conviction through a bold course of action of differing from peers who subscribe to the current model of active equity management.
- For investors unwilling to go to such extremes, at a minimum consider a strategy that combines indexing with high-conviction active strategies and avoids the expensive diversification of low active risk strategies and multitudes of actively managed portfolios.

A Call to Action

- We call on the major players in active equity management to step up their game:
 - Investment managers must focus on higher-conviction strategies that allow their skill to flow through to client returns, and reject low active risk strategies whose alpha is eaten up by fees and trading costs.
 - Consultants must also act with greater conviction, putting forward only their strongest recommendations, avoiding “safe” managers and being willing to recommend indexing instead in areas where credible products are lacking, or closed to new investors.
 - Asset owners must look within themselves to discover whether they are true believers. Those who are (the Opportunity investors) must demand conviction from managers and consultants, but also defeat their own value-destroying tendencies to chase returns and fire underperformers.

Bonds: Rethinking Fixed Income

Focus on Risk Reducing Portfolio

- We have discussed many ways to enhance the return seeking portfolio; for example, “Go Big or Go Home”, and “Conviction in Equity Investing.”
- In an era of low expected returns, we also must invest in the most efficient risk-reducing portfolio.
- Corporate Defined Benefit plans are encouraged to de-risk through the use of a hedge portfolio.
- Other investors-Public Defined Benefit, Endowment, Foundation and Sovereign Wealth-should move away from the broad based bond benchmarks to fine tune the risk-reducing properties of fixed income.

Risk Reducing Properties

- There are several desired characteristics for a risk reducing portfolio:
 - Low correlation
 - Low volatility
 - High volatility, IF correlation is negative
 - Downside protection: perform when the return-seeking, predominantly equity, portfolio experiences negative returns
- Achieving these properties at minimum cost is preferable.

Intermediate versus Long Treasury Market

- We disaggregated the Treasury Index into the intermediate sector (1-10 years) and long sector (10+ years) to compare the risk-reducing qualities of both maturity sectors of the fixed income market.
- The Treasury Index was utilized to focus exclusively on the duration positioning of the risk-reducing portfolio.

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Master Page No. 158

Correlation Sensitivity

- In order to compensate for the higher volatility, the long sector must have a lower correlation to equity than the intermediate sector.

	60/40 Portfolio		90/10 Portfolio	
Assumed Intermediate Correlation	Long Sector Breakeven Correlation	Likelihood	Long Sector Breakeven Correlation	Likelihood
0.3	-0.6	<0.001%	0.09	<0.001%
0	-0.18	<0.001%	-0.03	3.6%
-0.3	-0.31	6.7%	-0.16	84%

Assumes volatility of 18%, 12% and 5% for equity, long sector, and intermediate sector, respectively.

Downside Protection

- Conventional wisdom asserts the long sector of the market provides better downside protection, but history does not support this assertion. We are biased by the most recent experience.

	Since 1926		Since 1970		Since 1980	
Months of Negative Equity Returns	Number of Months Intermediate Outperforms Long	Percent	Number of Months Intermediate Outperforms Long	Percent	Number of Months Intermediate Outperforms Long	Percent
Worst 25	16/25	64%	15/25	60%	12/25	48%
Worst 50	30/50	60%	28/50	56%	26/50	52%
Worst 100	55/100	55%	60/100	60%	58/100	58%

Does the Long Sector Compensate for Additional Volatility

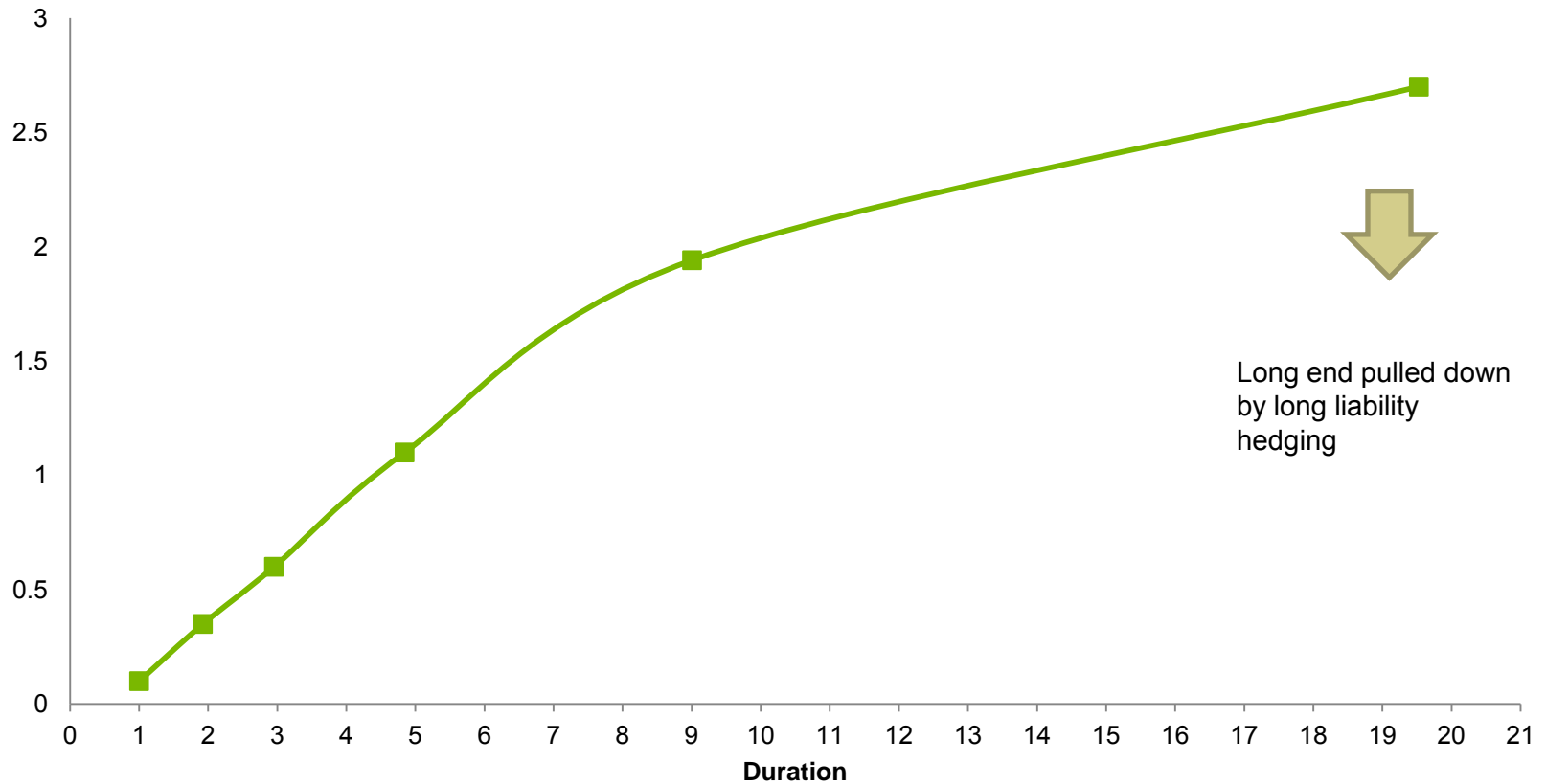
- In a word, NO!

Rolling 5 Year Return Difference



One Explanation for Lack of Risk Premium in Long Sector

Yield



Portfolio Implications

- Investors looking to manage the volatility of the return-seeking portfolio should invest the risk-reducing portfolio in *intermediate* fixed income.
- For those that are concerned about cash flow yield, recognize the yield reduction relative to the volatility reduction is minimal:
 - Reposition from Aggregate Index to Intermediate Aggregate Index,
 - Shorten duration by 1.35 years,
 - Yield reduction of 30 basis points,
 - One year breakeven yield change is only 22 basis points.



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Board of Retirement Investment Retreat

September 26, 2013

Don C. Stracke, CFA, CAIA, Senior Consultant
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- **Public Fund Analysis**
- **NEPC Asset Class Assumption Setting**
- **California Public Plan Information (from San Jose)**
- **Initial Thoughts on Onboarding Process**
- **Initial Thoughts on Plan**

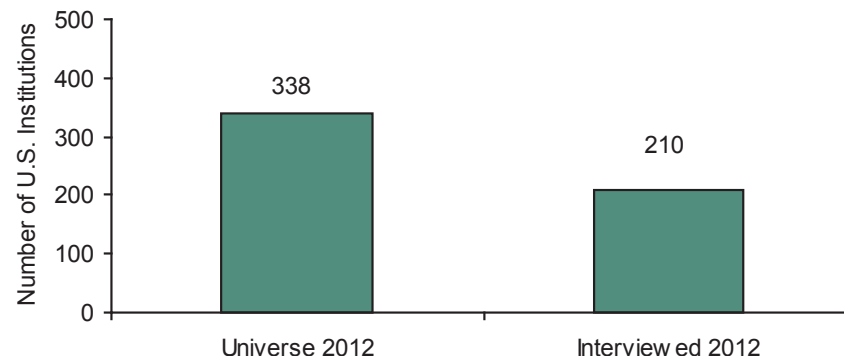
Greenwich Associates – Public Fund Analysis



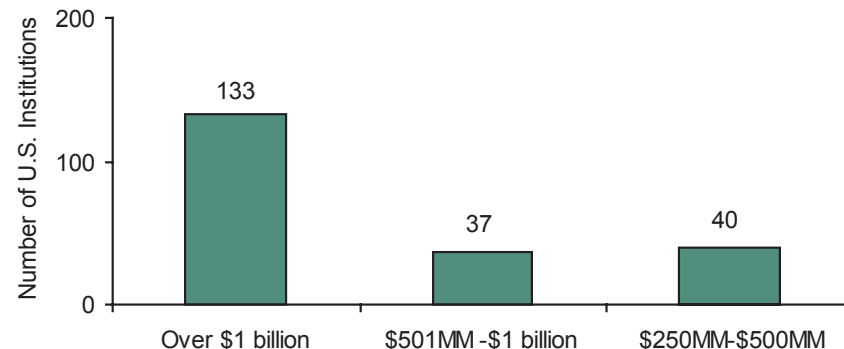
Greenwich Associates' 2012 research with U.S. institutional investors – this presentation is focused on Public Funds only.

- Each year Greenwich Associates interviews, in person, ~1,000 U.S. corporate and public pension plans, endowments and foundations and union funds with total assets over \$250 million.
- These in-person interviews were conducted from July through October of 2012.
- We interviewed 210 public funds, including 133 each with over \$1 billion in plan assets.

Greenwich Associates' U.S. Public Funds' Research Coverage 2012

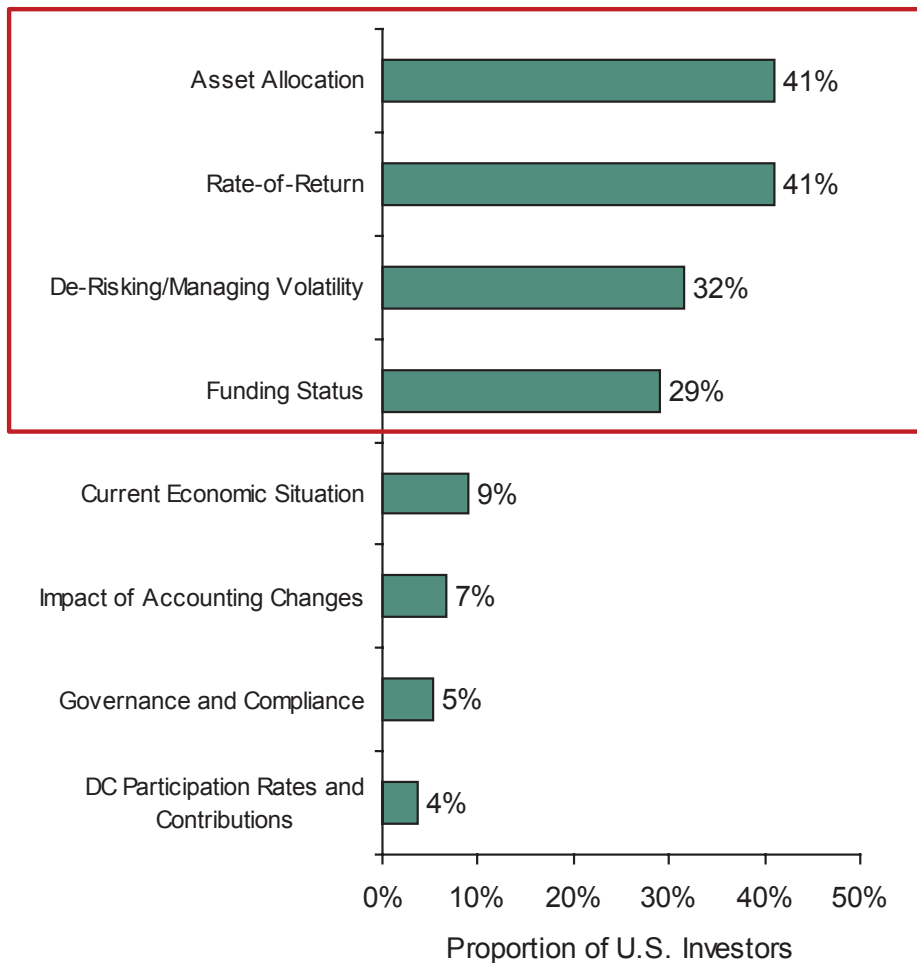


Greenwich Associates' U.S. Public Funds' Research Coverage 2012



Public Funds' primary challenge is meeting actuarial earnings rates – driving changes in asset allocation and within asset classes – while trying to de-risk.

Most Important Issues Facing Public Funds 2012



Source: Greenwich Associates 2012, USII-12.
Data is based on open-ended comments from 206 U.S. institutional investors.

Representative Quotes

- *“The issue we are facing is the funding status of the plan. **We are still trying to get back to where we were prior to the 2008 losses.** The way we are doing that is changing asset allocation by providing downside protection.” – Public Fund*
- *“Investment performance and meeting our goals is a huge issue right now”. – Public Fund*
- *“Funding is the biggest issue. We're addressing that in two ways: 1) we will probably reduce our assumed rate of return, and hope for interest rates to go up. 2) We are going to commit more money to alternative investments.” – Public Fund*
- *“The issue is funded status and our ability to meet the target return.” – Public Fund*

To achieve this Public plans are tweaking asset allocation and moving further into alternatives to enhance returns.

- Historically low interest rates and the current low yield environment continue to have pension fund executives reviewing their asset allocation and manager line-up, as well as benefits.
- As fund executives seek greater rates-of-return, a major area of focus is alternatives and how they can play a role in generating returns, reducing risk, and helping plans close their funding gaps.
- Future changes in public fund regulation is a concern among many plans executives, as is public perception.

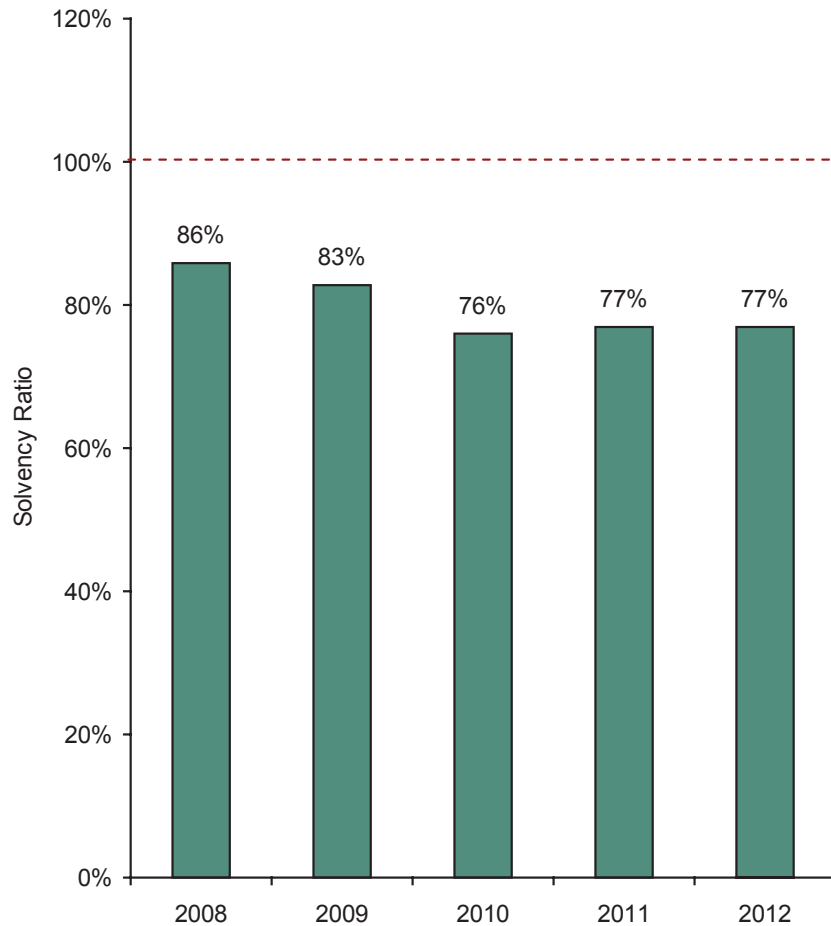
Source: Greenwich Associates 2012, USII-12.

Representative Quotes

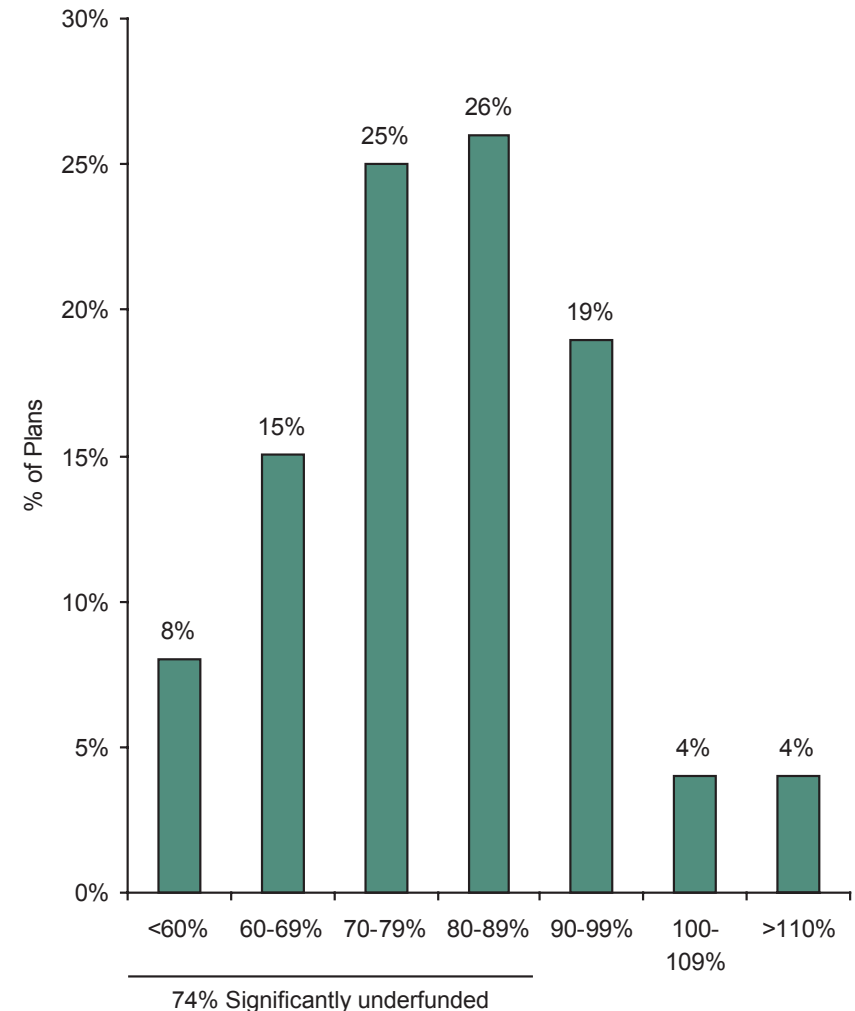
- *“So the question is do we start making changes or do we say this is a market cycle and we are going to work our way out of it?” - Public Fund*
- *“1) we will probably reduce our assumed rate of return, and hope for interest rates to go up. 2) We are going to commit more money to alternative investments.” - Public Fund*
- *“We are starting to look at changes in benefits, and enhancing our yields on our investments in ways that are not the traditional to us. I am talking about alternative investments.” – Public Fund*
- *“We have made some changes in our manager lineup to try to get more alpha with some different strategies.” - Public Fund*
- *“We are concerned about the "demonization" of public pension plans. Employees have traded off a higher salary for a pension.” - Public Fund*

Insufficient returns and declining interest rates have caused large funding gaps with less than 10% of pension plans fully funded.

U.S. Public Funds' Average Solvency Ratio of Defined Benefit Plans



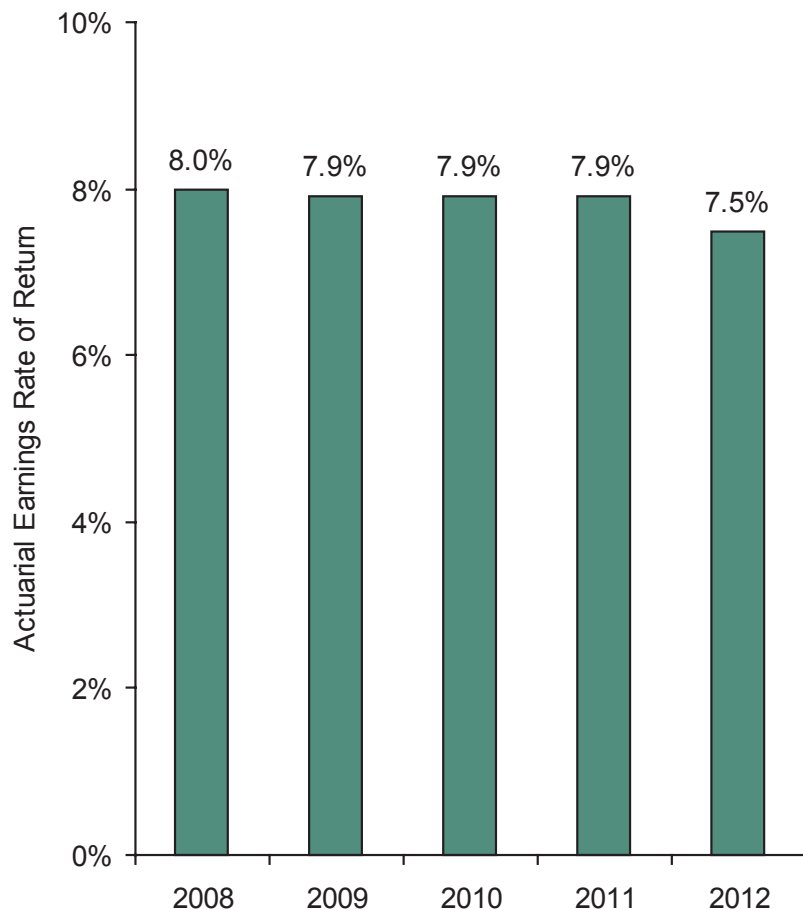
U.S. Public Funds' Distribution of Solvency Ratio of Defined Benefit Plans 2012



Source: Greenwich Associates 2012, USII-12.
 Mean calculation excludes reported answers of "0" and / or "None".
 Results are for public fund defined benefit plans assets.

Low economic growth has led plans to reduce anticipated returns, making funding challenges even more transparent.

U.S. Public Funds' Average Actuarial Earnings Return on Defined Benefit Plan Assets



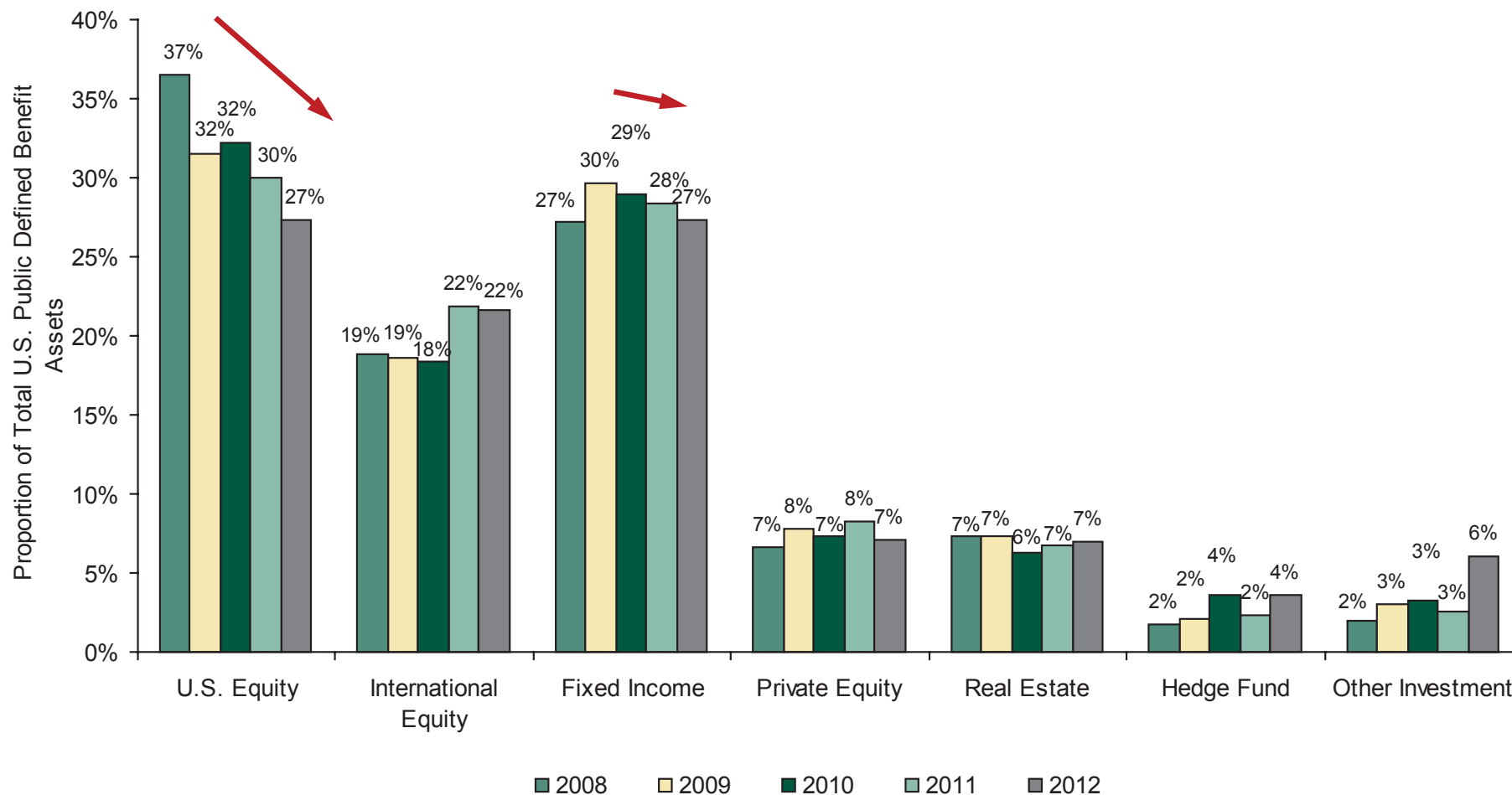
Representative Quotes

- *“We are looking at alternative investment strategies to access additional gains from equities, and a lot of soul searching while looking at different investment vehicles. We have not gotten anywhere near the actuarial investment rate in ten years.” – Public Fund*
- *“The most important thing is to be able to hit the assumed rate of return, which is becoming more challenging these days.” – Public Fund*
- *“We will probably reduce our assumed rate of return, and hope for interest rates to go up.” – Public Fund*

Source: Greenwich Associates 2012, USII-12.
Mean calculation excludes reported answers of "0" and / or "None".
Results are for public fund defined benefit plans assets.

Turning to Public Funds' asset allocation, this showed notable movements out of traditional asset classes and into alternatives.

U.S. Public Funds' Institutional Asset Allocation (DB, Excluding DC)

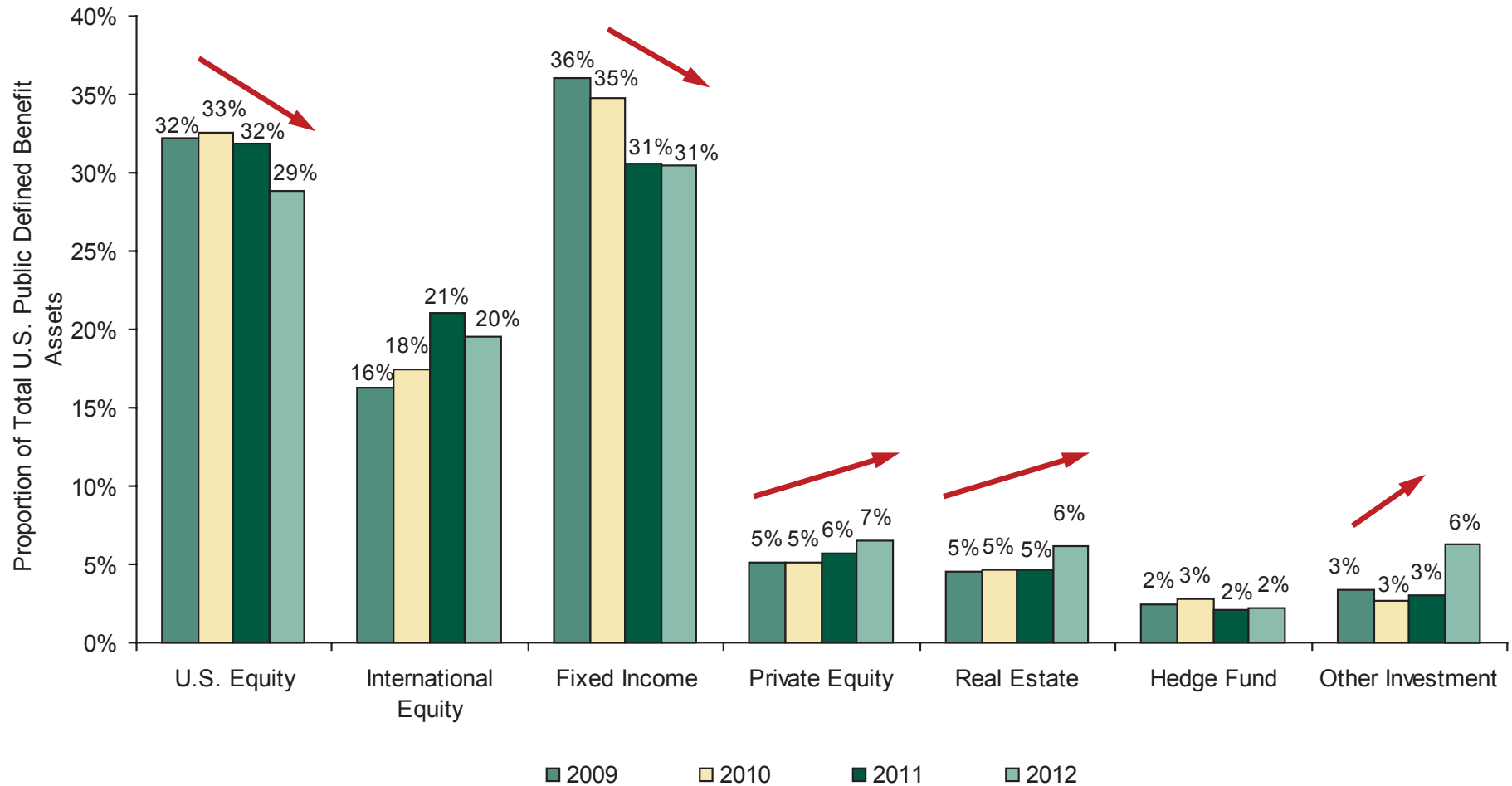


Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. "Other investment" represent allocations to commodities, money market, and other. Results are for public fund defined benefit plan assets.

A matched sample shows more clearly the move towards alternatives.

U.S. Public Funds' Institutional Asset Allocation, Matched Sample (DB, Excluding DC)

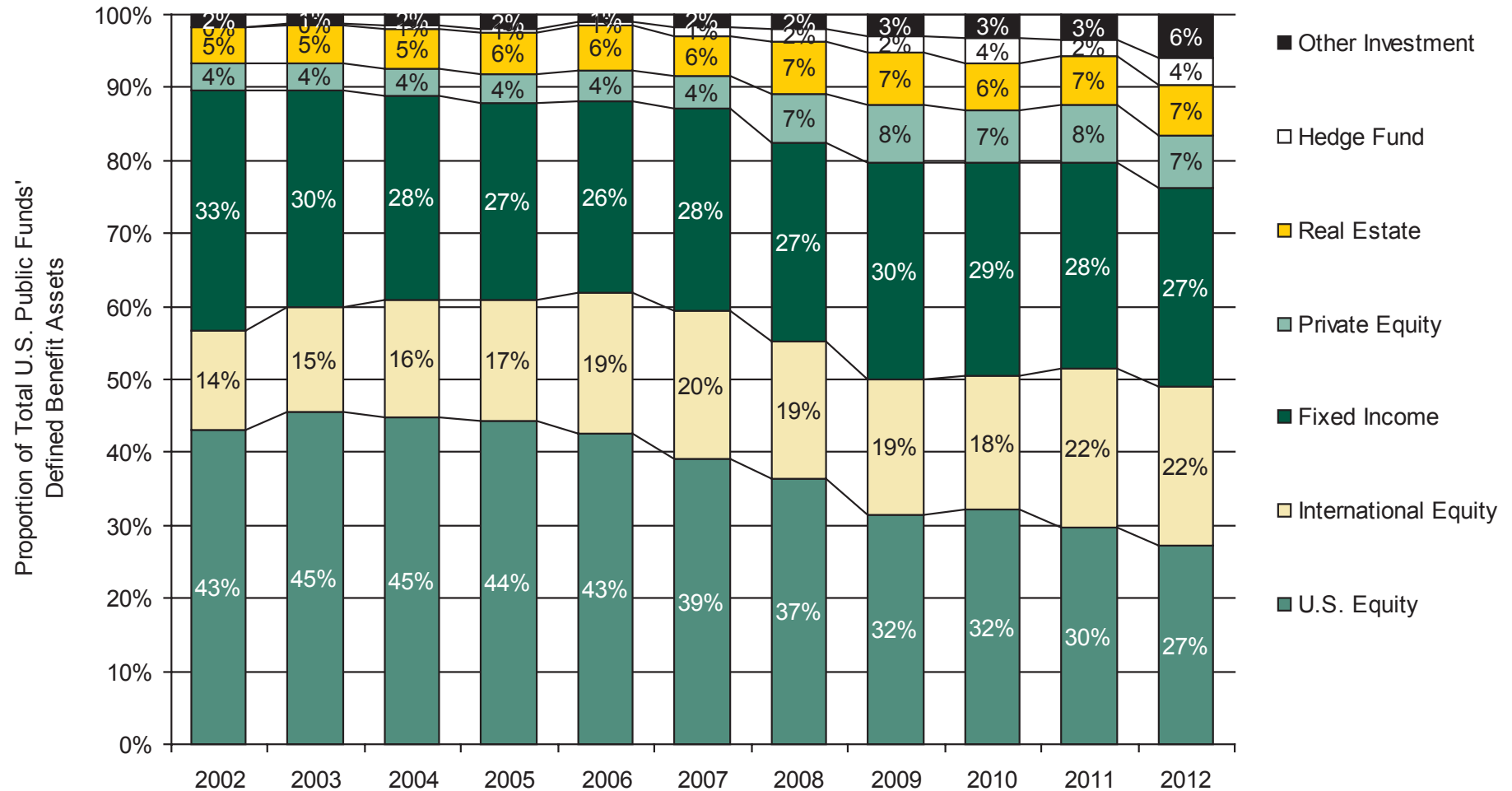


Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. "Other investment" represent allocations to commodities, money market, and other. Results are for public fund defined benefit plan assets.

On the DB side, the ten-year picture clearly shows the dramatic change Public Plans have gone through in asset allocation.

U.S. Public Funds' Institutional Asset Allocation (DB, Excluding DC)

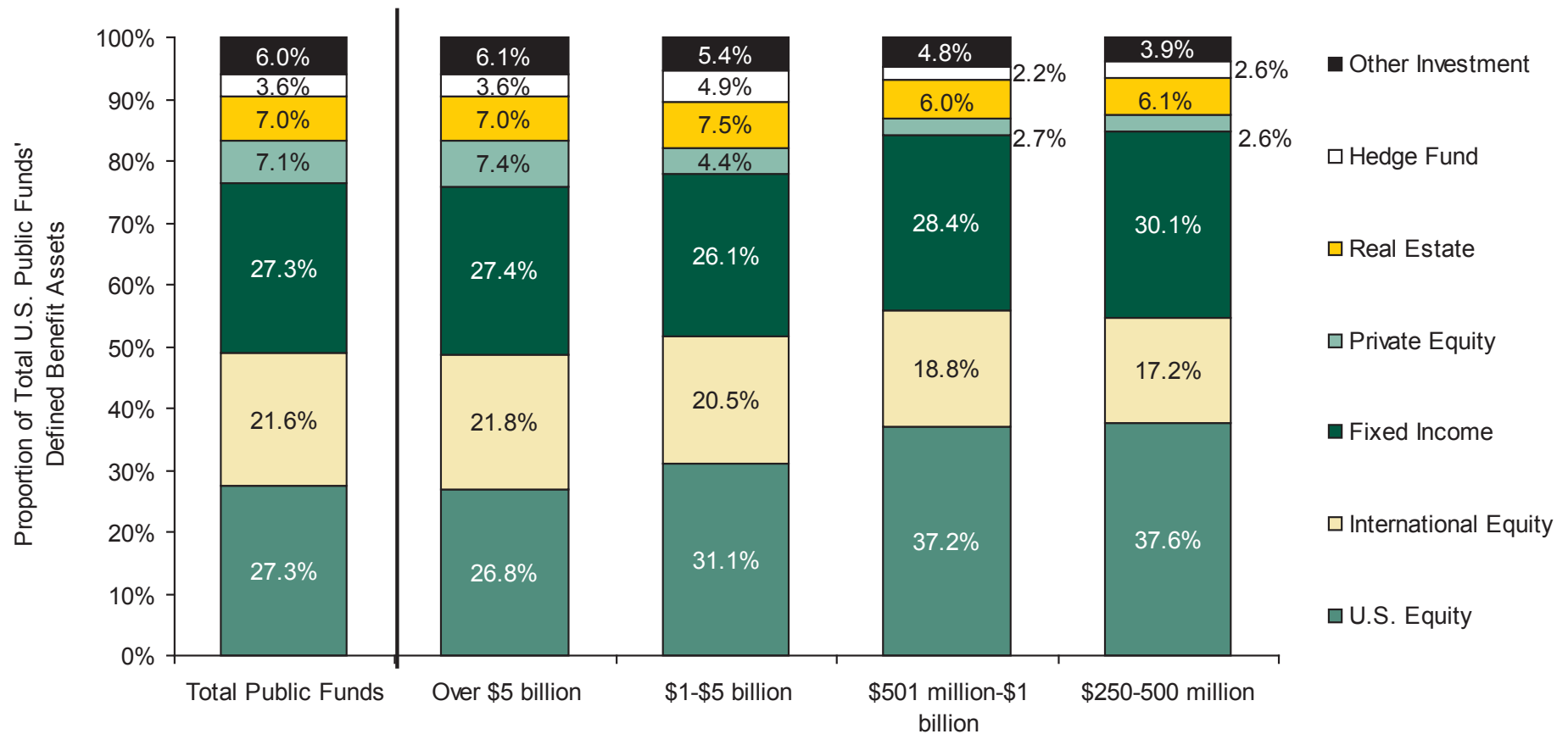


Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. "Other investment" represent allocations to commodities, money market, and other. Results are for public fund defined benefit plan assets.

The larger public plans rely less on domestic equities and more on alternatives than their smaller counterparts.

U.S. Public Funds' Institutional Asset Allocation 2012, by Size of Plan



2012 Average Blended Plan Return

4%

3%

5%

4%

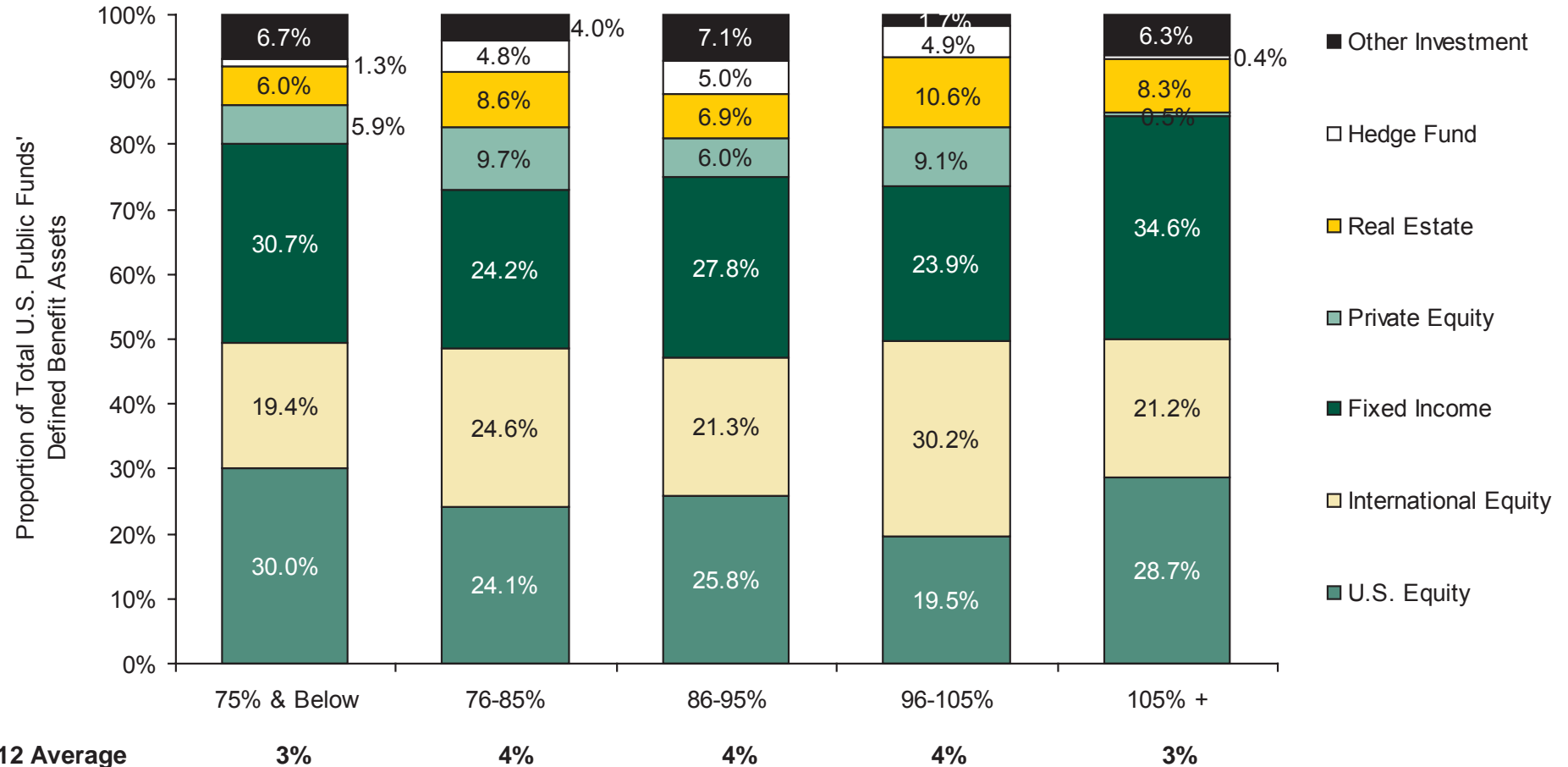
2%

Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. "Other investment" represent allocations to commodities, money market, and other. Results are for public fund defined benefit plan assets.

The over-funded public funds have more fixed income than others, but show fewer differences in asset allocation than their corporate counterparts.

U.S. Public Funds' Institutional Asset Allocation 2012, by Solvency Ratio



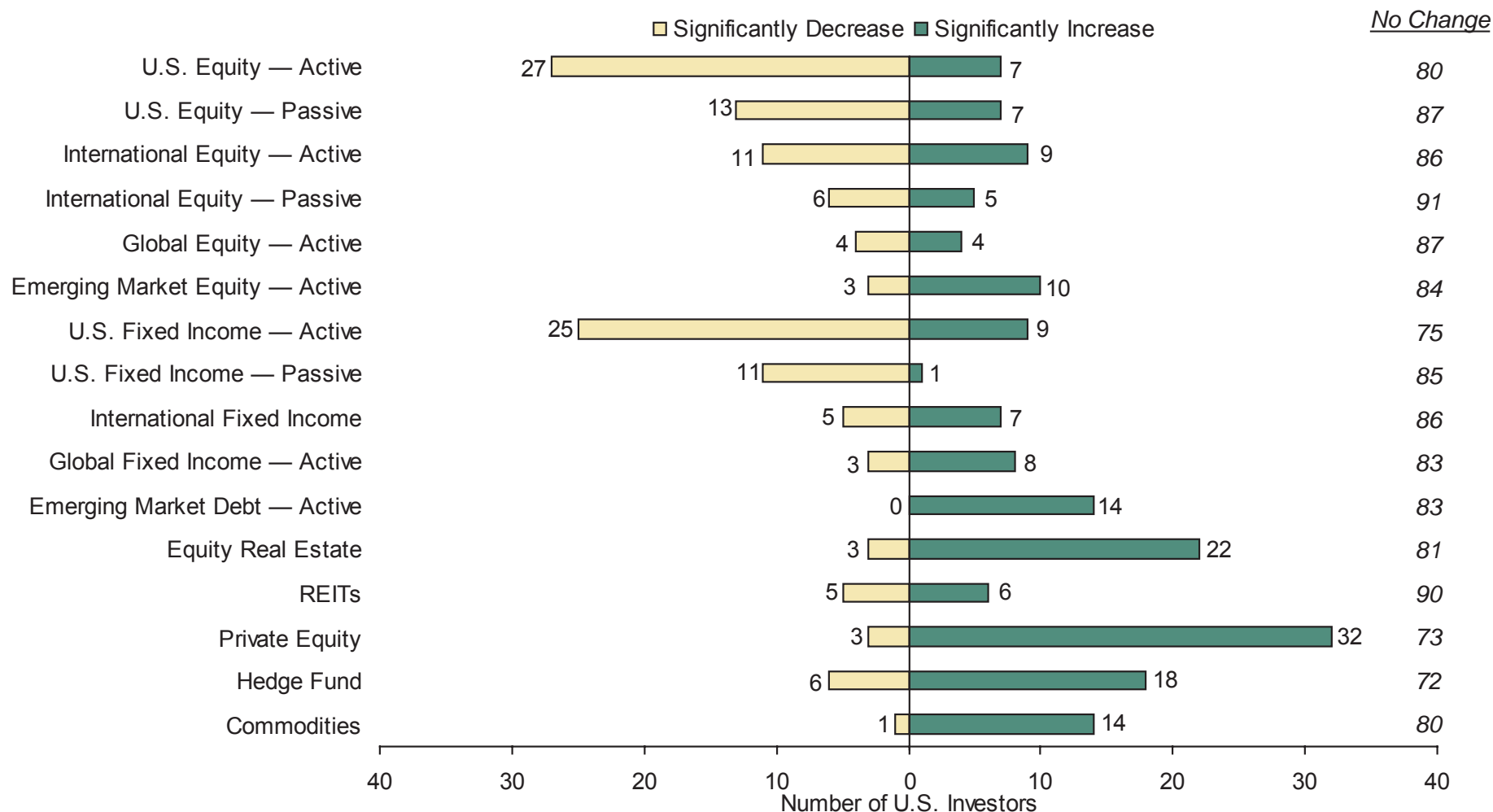
2012 Average Blended Plan Return

Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. "Other investment" represent allocations to commodities, money market, and other. Results are for public fund defined benefit plan assets.

Investors expect to continue movements into alternatives with shifts out of U.S. equities and fixed income.

U.S. Public Funds' 3-Year Institutional Asset Allocation Expectations



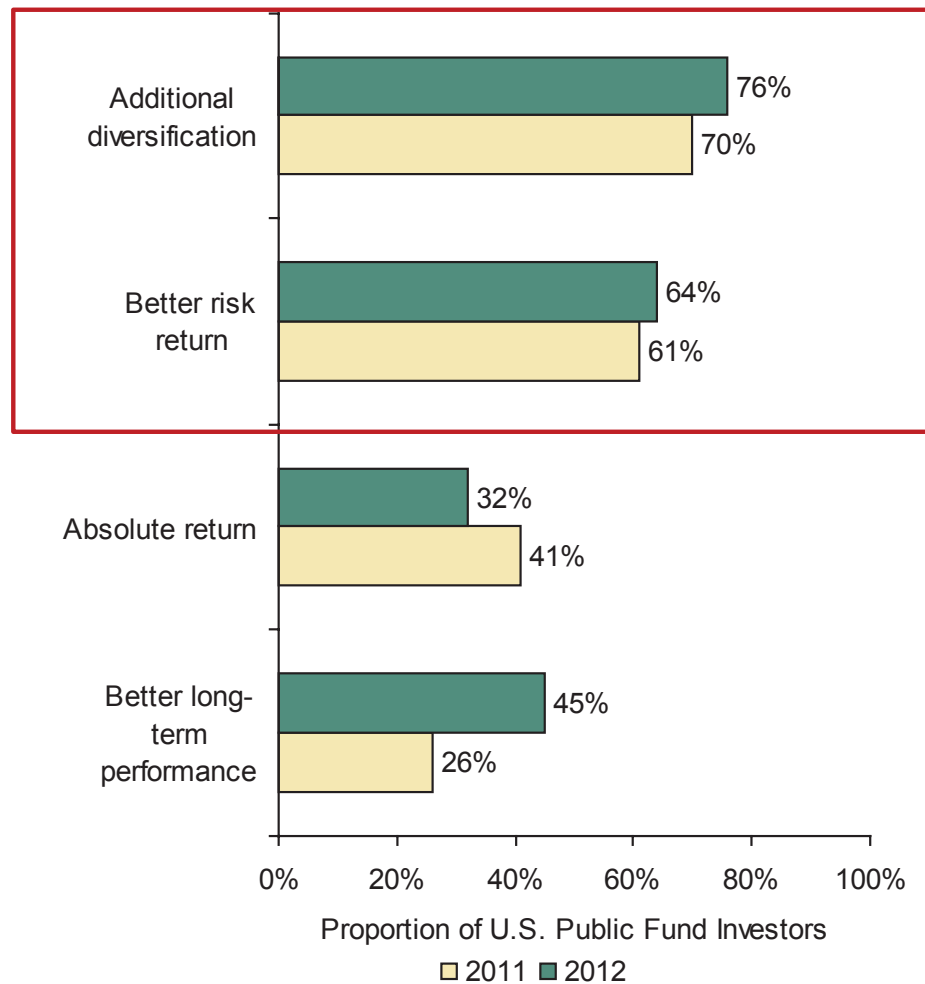
Source: Greenwich Associates 2012, US IIF-12.

Note: Three year outlook. "No Change" column indicates number of U.S. investors with no allocation changes planned for a given asset class.

Results are for public fund defined benefit plan assets. Money market and 'other' are not shown.

Hedge funds continue to be an important part of portfolios, primarily as a way of achieving increased diversification and risk/return and increasingly as a way of improving returns.

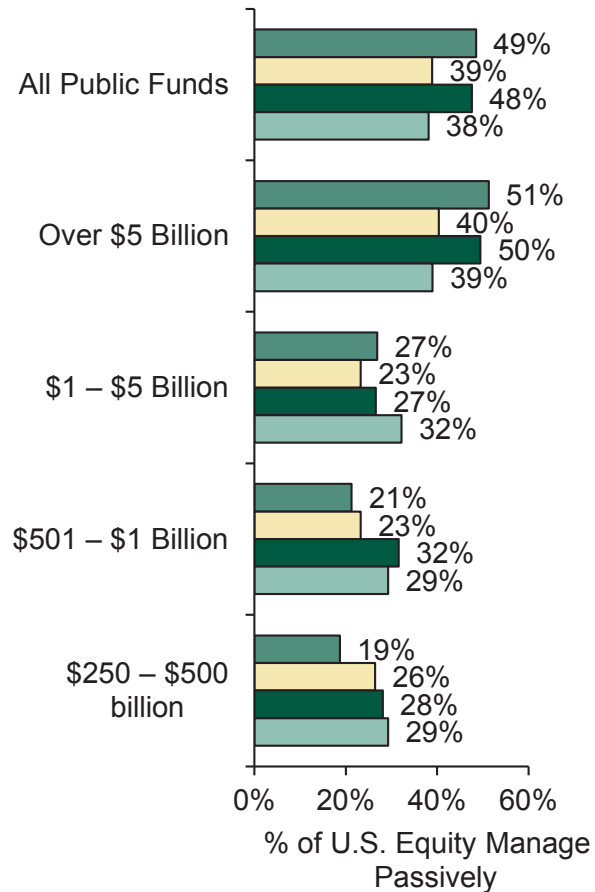
U.S. Public Funds' Investment Objectives for Hedge Fund Investments



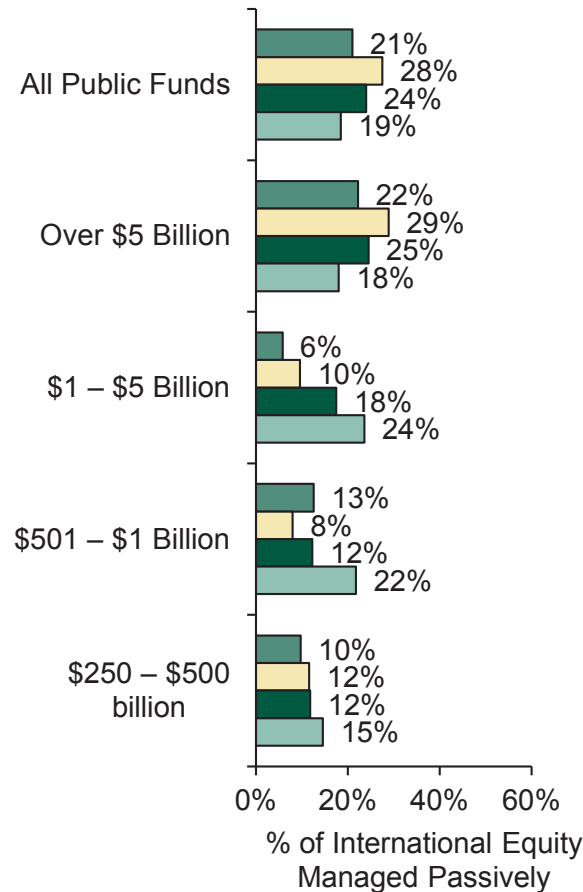
Source: Greenwich Associates 2012, U.S. IIF-12.

The commitment to active management remains firm, with the share of assets managed passively holding within long-term bands.

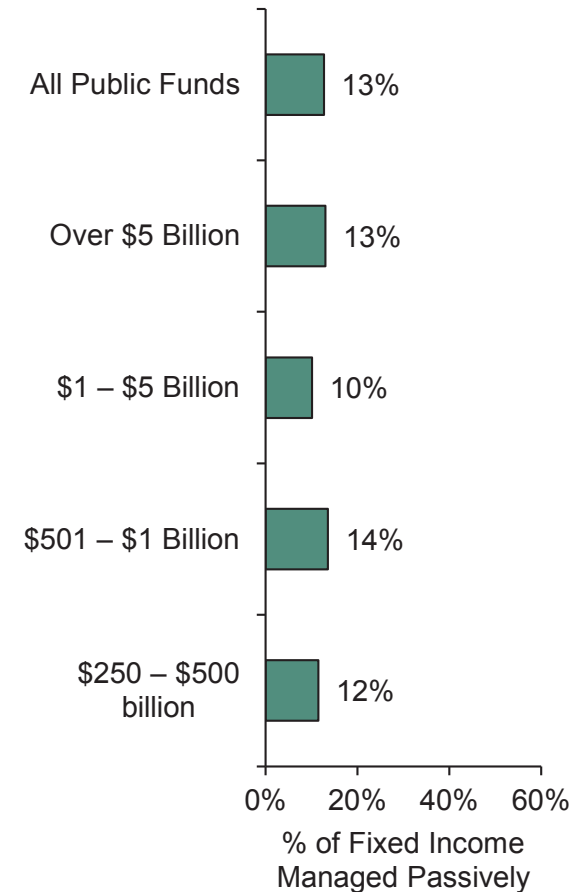
U.S. Public Funds' Institutional U.S. Equity Assets Managed Passively



U.S. Public Funds' Institutional Int'l Equity Assets Managed Passively



U.S. Public Funds' Institutional Fixed Income Assets Managed Passively



■ 2009 ■ 2010 ■ 2011 ■ 2012

■ 2009 ■ 2010 ■ 2011 ■ 2012

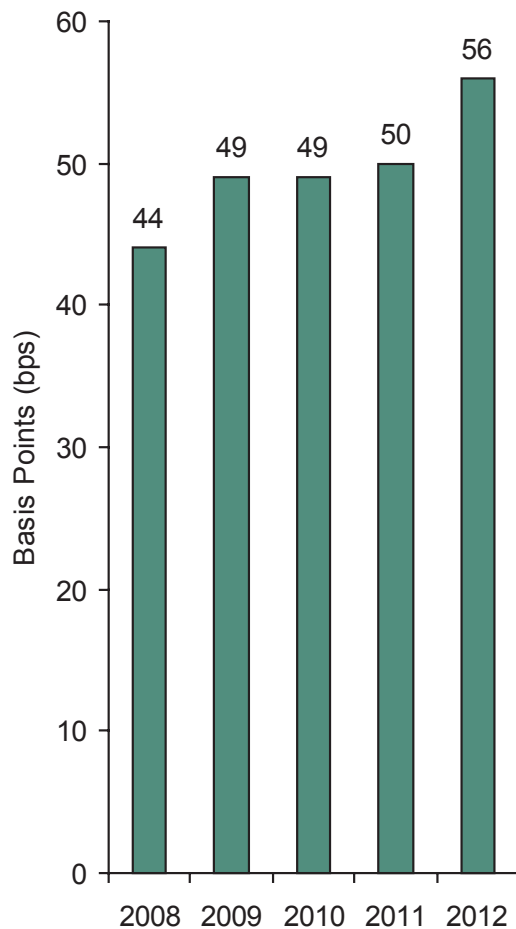
■ 2012

Source: Greenwich Associates 2012, U.S. IIF-12.

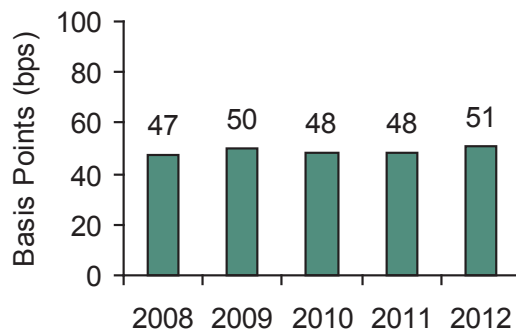
U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. Results are public fund defined benefit plan assets.

Despite continued pressures, fees paid by public funds have increased quite significantly.

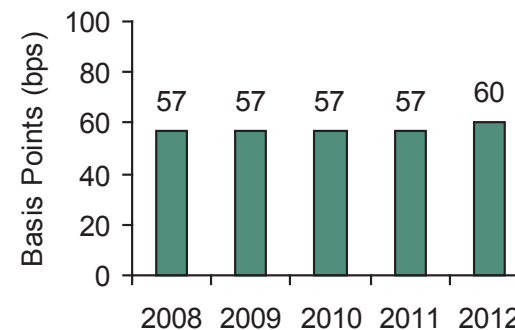
Average Fees Paid to External Managers



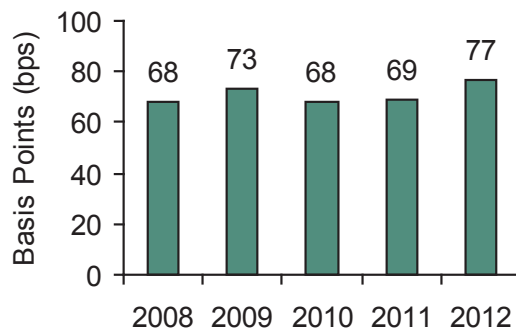
Average Fees Paid to Active U.S. Equity Managers



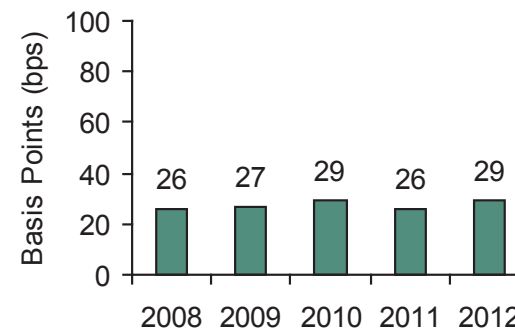
Average Fees Paid to Active International / Global Managers



Average Fees Paid to Active EME Managers



Average Fees Paid to Active Fixed Income Managers

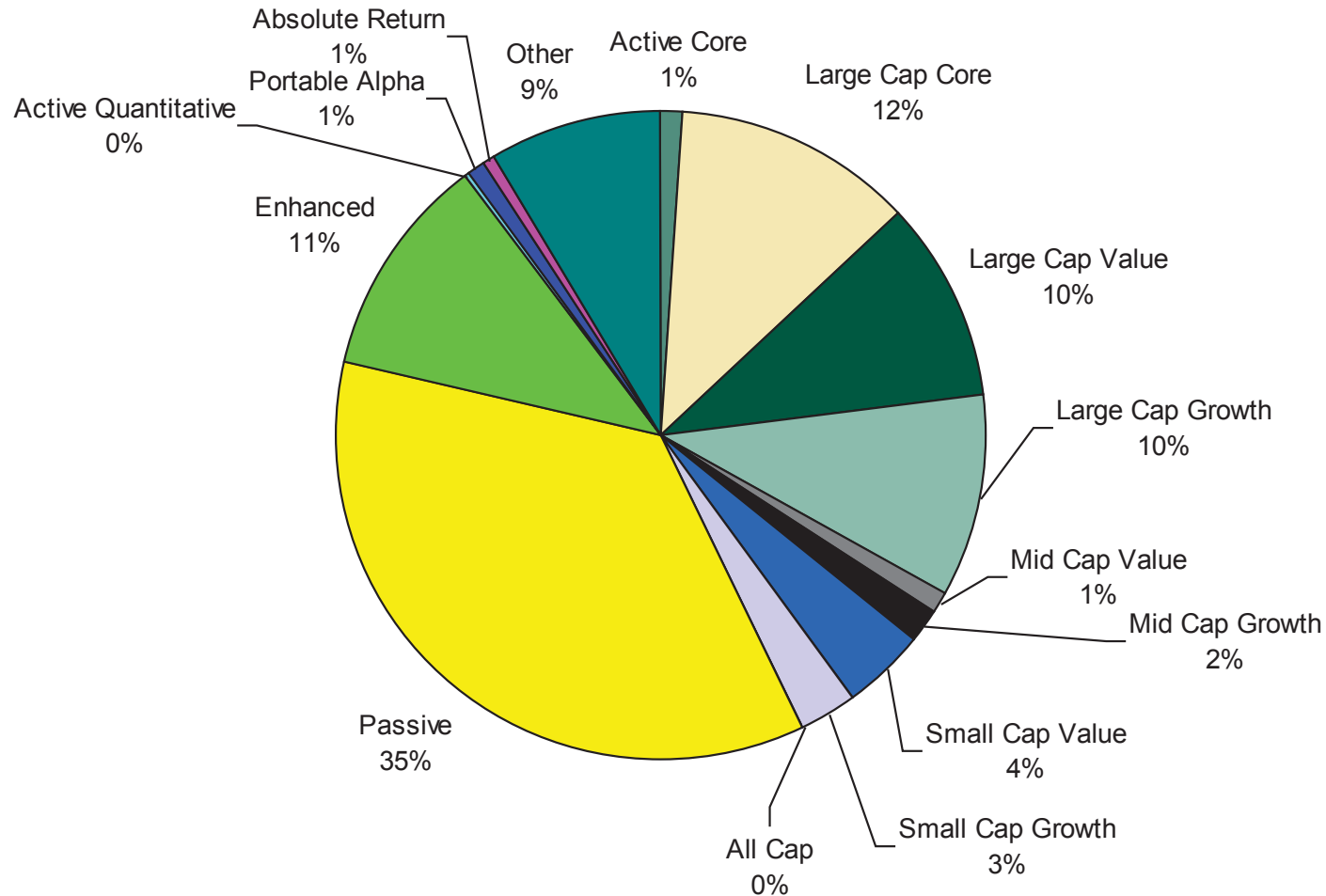


Source: Greenwich Associates 2012, U.S. IIF-12.

Note: Mean calculation shown excludes answers of "0" and/or "none". Shown in basis points.

Domestic equity specialists at large public funds have just over 30% of their U.S. equity assets in traditional large cap strategies.

U.S. Public Fund Specialist Investors' Style-Specific Allocation of Institutional U.S. Equity Assets 2012 (DB)



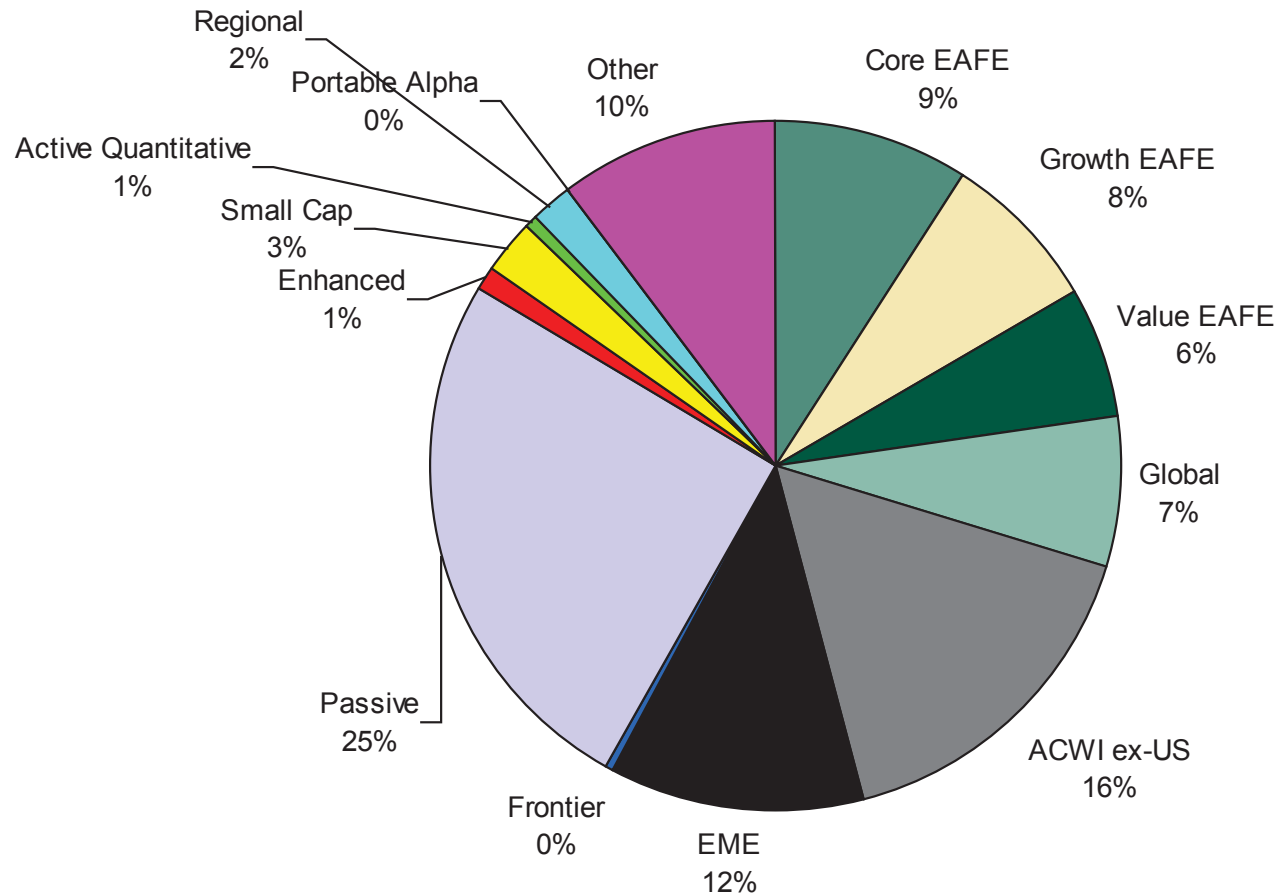
Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 101 U.S. equity specialist investors. Percentages are dollar-weighted.

Results are for public fund defined benefit plan assets.

International equity specialists among public funds report just under one quarter of the international / global assets in active EAFE mandates.

U.S. Public Fund Specialist Investors' Style-Specific Allocation of International Equity Assets 2012 (DB)



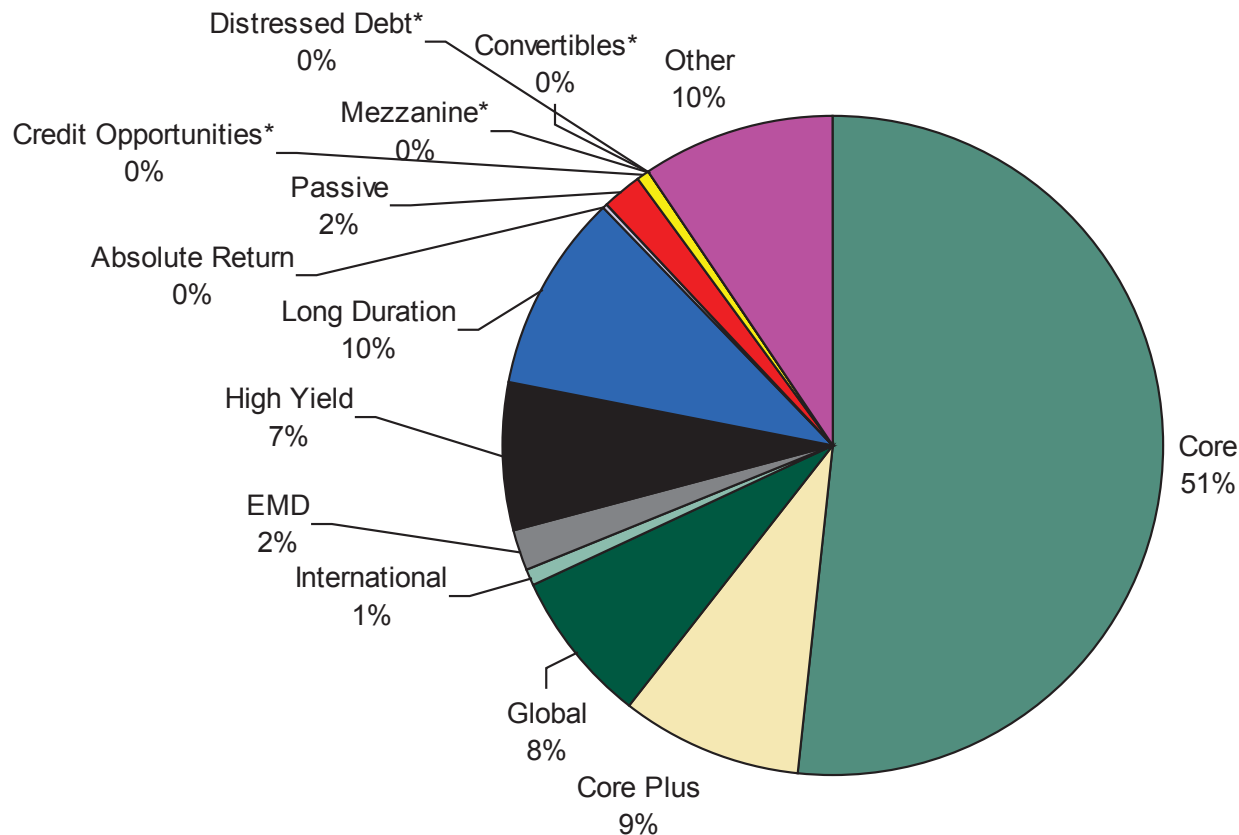
Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 103 international equity specialist investors. Percentages are dollar-weighted.

Results are for public fund defined benefit plan assets.

For funds with fixed income specialists, core and core plus are still the bulk of the assets, albeit lower than a few years ago.

U.S. Public Fund Specialist Investors' Style-Specific Allocation of Fixed Income Assets 2012 (DB)

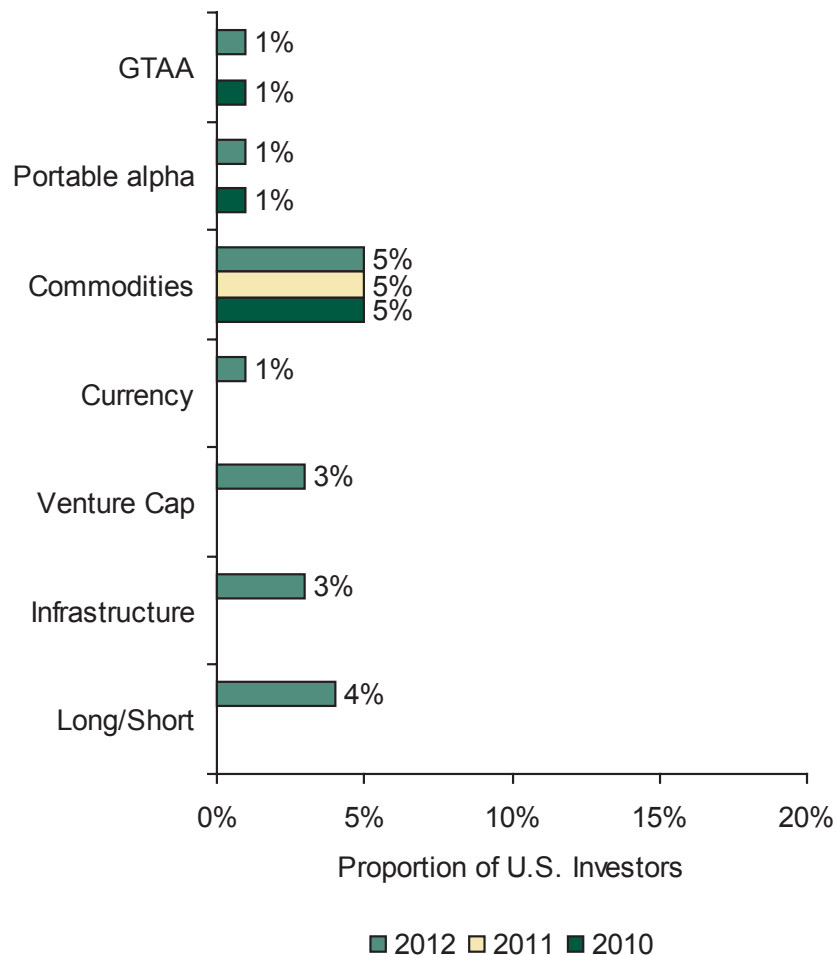
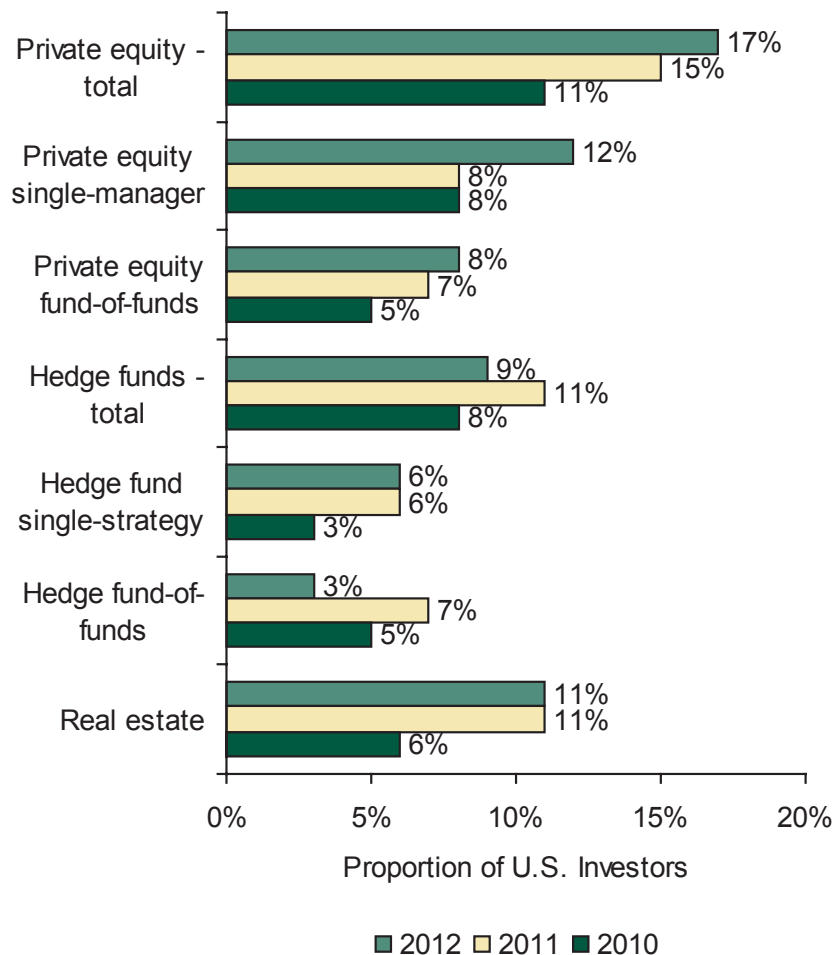


Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 95 fixed income specialist investors. Percentages are dollar-weighted. Results are for public fund defined benefit plan assets. *Indicated new factors in 2012.

Alternative hiring is expected to be very robust with the greatest demand in private equity, real estate and hedge funds.

U.S. Public Funds' Anticipated Hiring for Alternative Mandates in the Next 12-Months

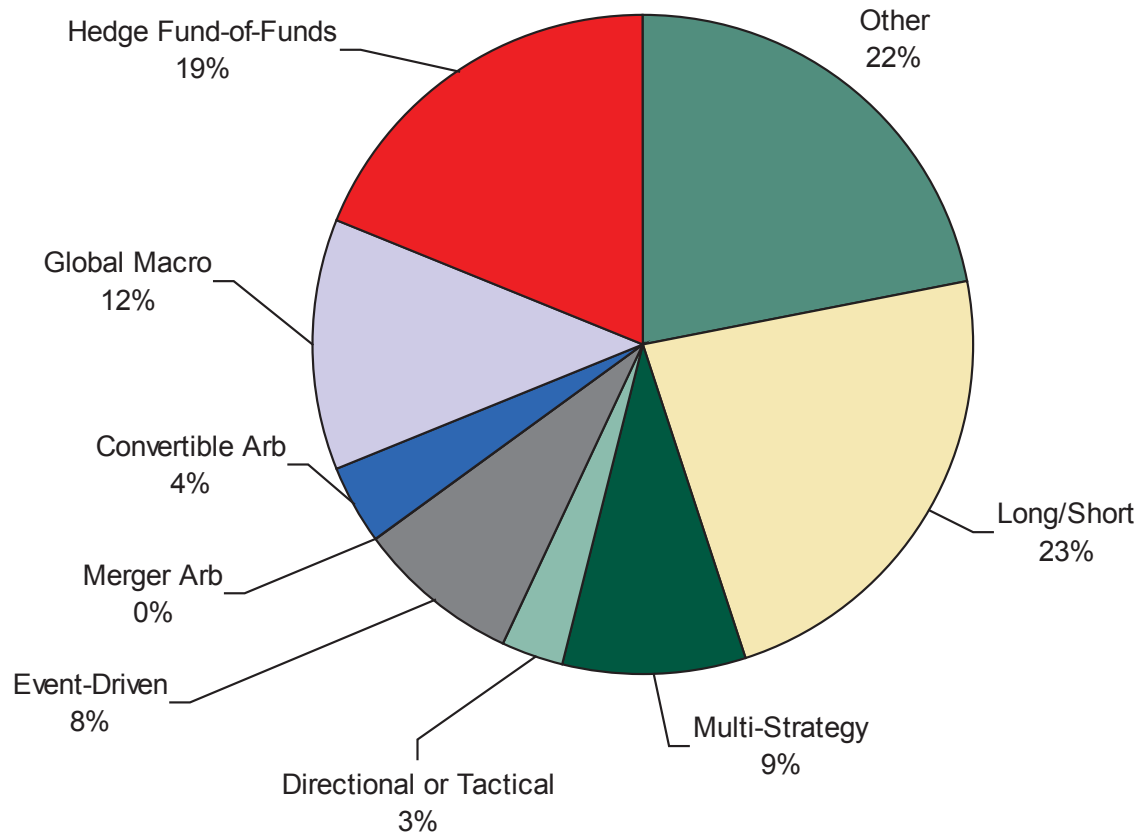


Source: Greenwich Associates 2012, USII-12.

Note: "Anticipated Hiring" refers to expected hiring of mandates or assignments in the next 12 months.

A very large portion of hedge funds are still fund-of-funds.

U.S. Public Funds' Style-Specific Institutional Asset Allocation of Hedge Fund Portfolios Assets 2012 (DB)

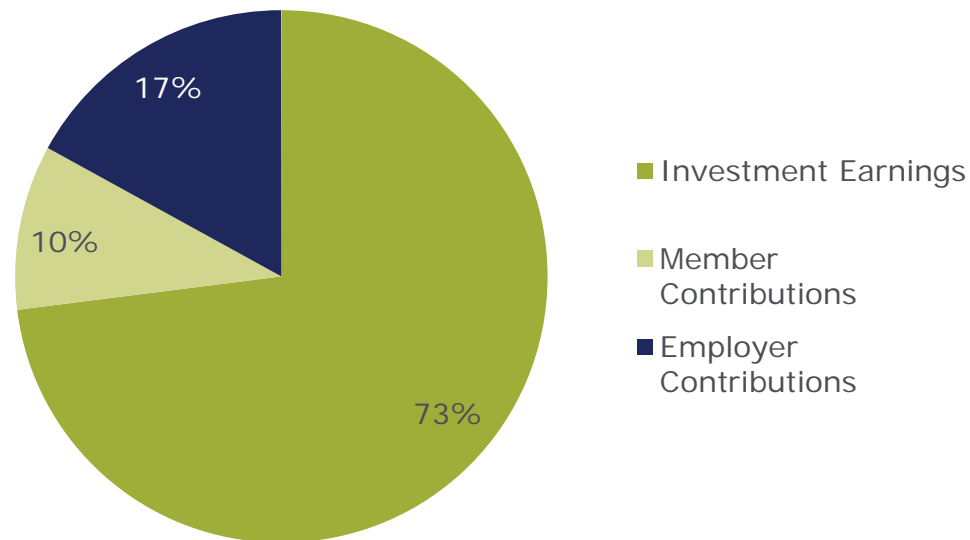


Source: Greenwich Associates 2012, USII-12.

U.S. assets are projected to the 2012 Greenwich Associates universe of 2,357 U.S. institutional investors with \$250 million or more in total assets. Percentages are dollar-weighted. Results are for institutional assets only: public fund defined benefit plan assets.

- **Income used to fund pension programs generally comes from 3 sources**
 - Investment Earnings
 - Member Contributions
 - Employer Contributions

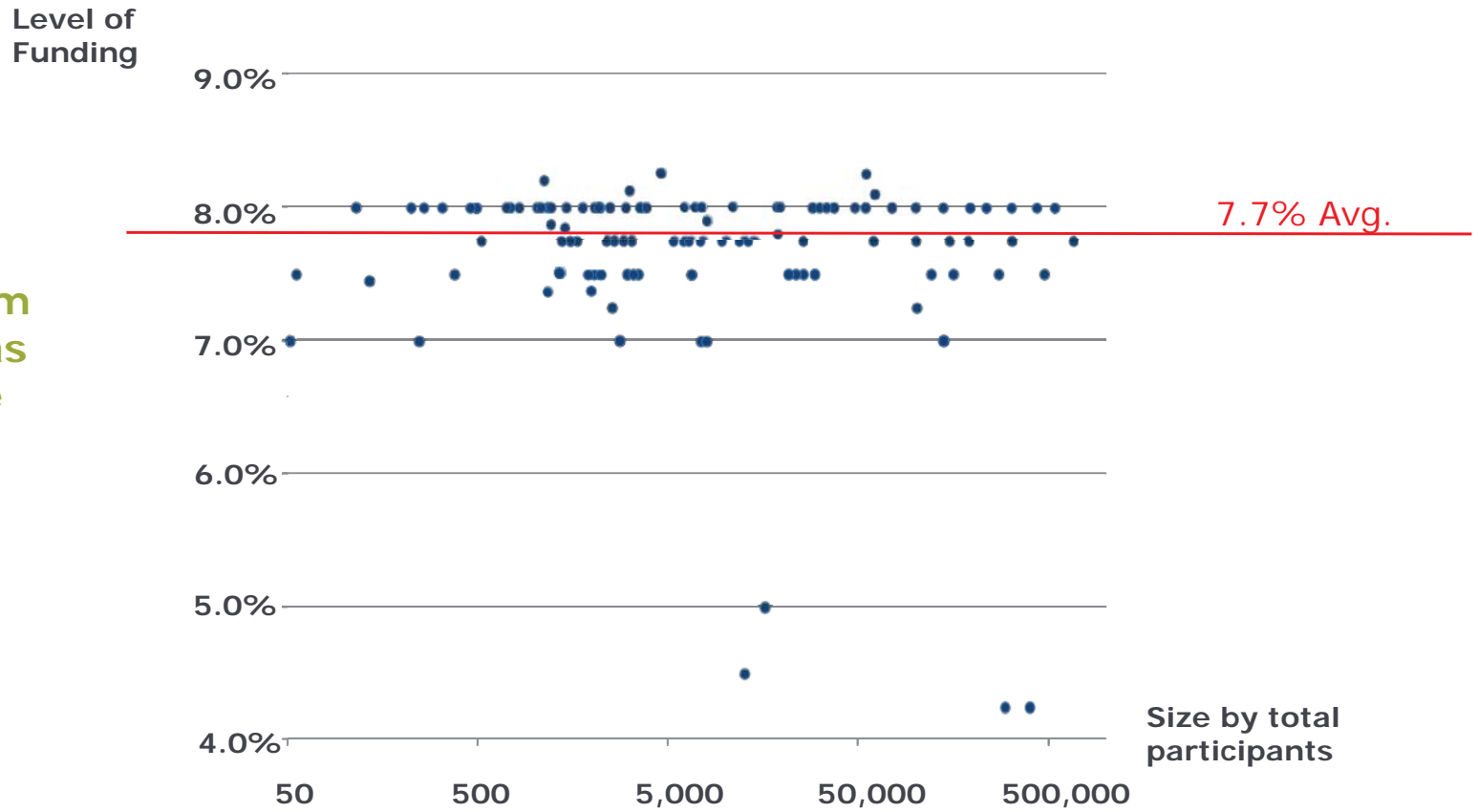
2012 Public Fund Sources of Funding



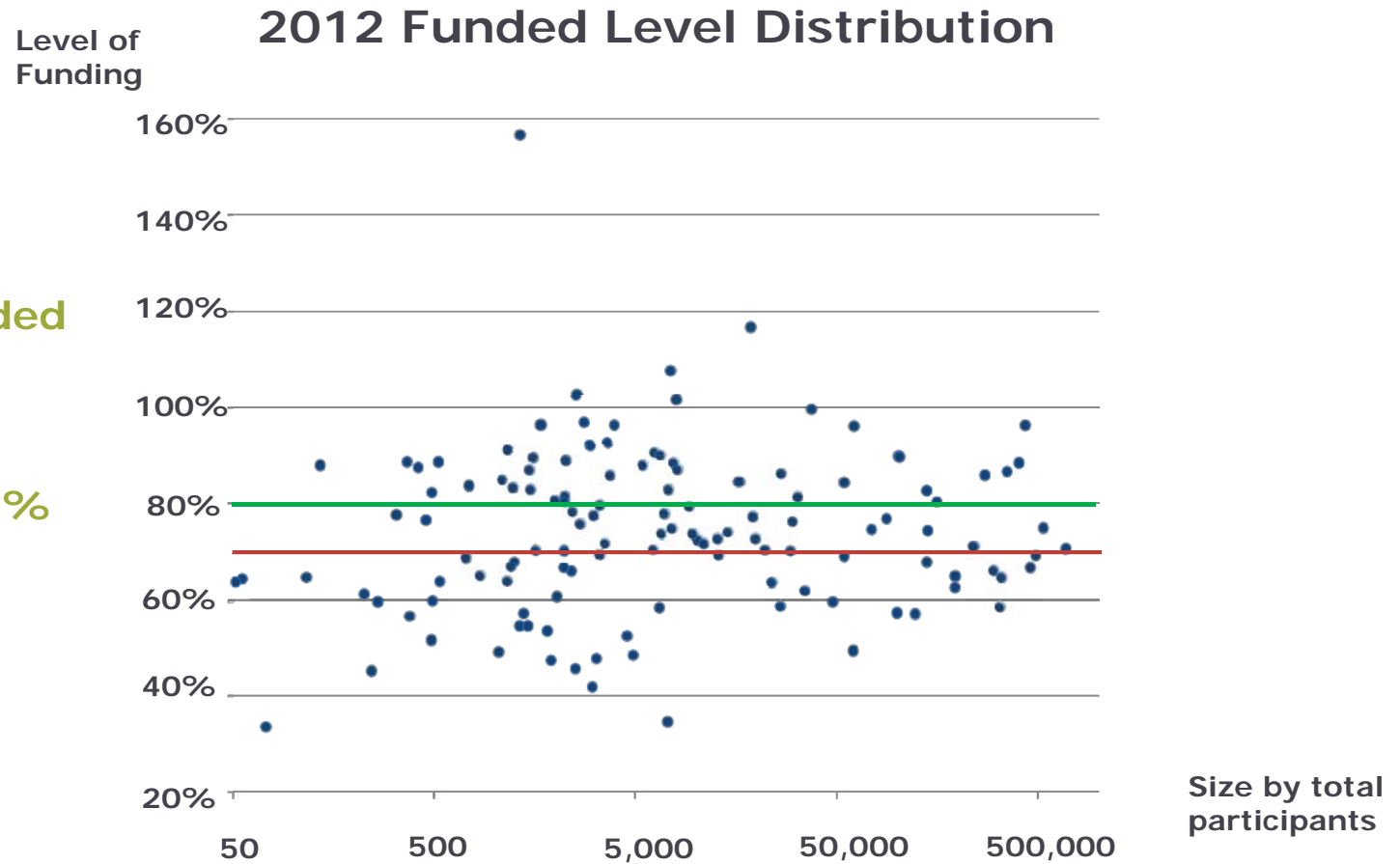
Source: NCPERS 2012 Fund Study

Investment Return Assumption

The Average Investment Assumption from respondents was 7.7%, the same as in 2011



Source: NCPERS 2012 Fund Study



The Average funded level from 2012 respondents was 74.9%, slightly down below 76.1% in 2011

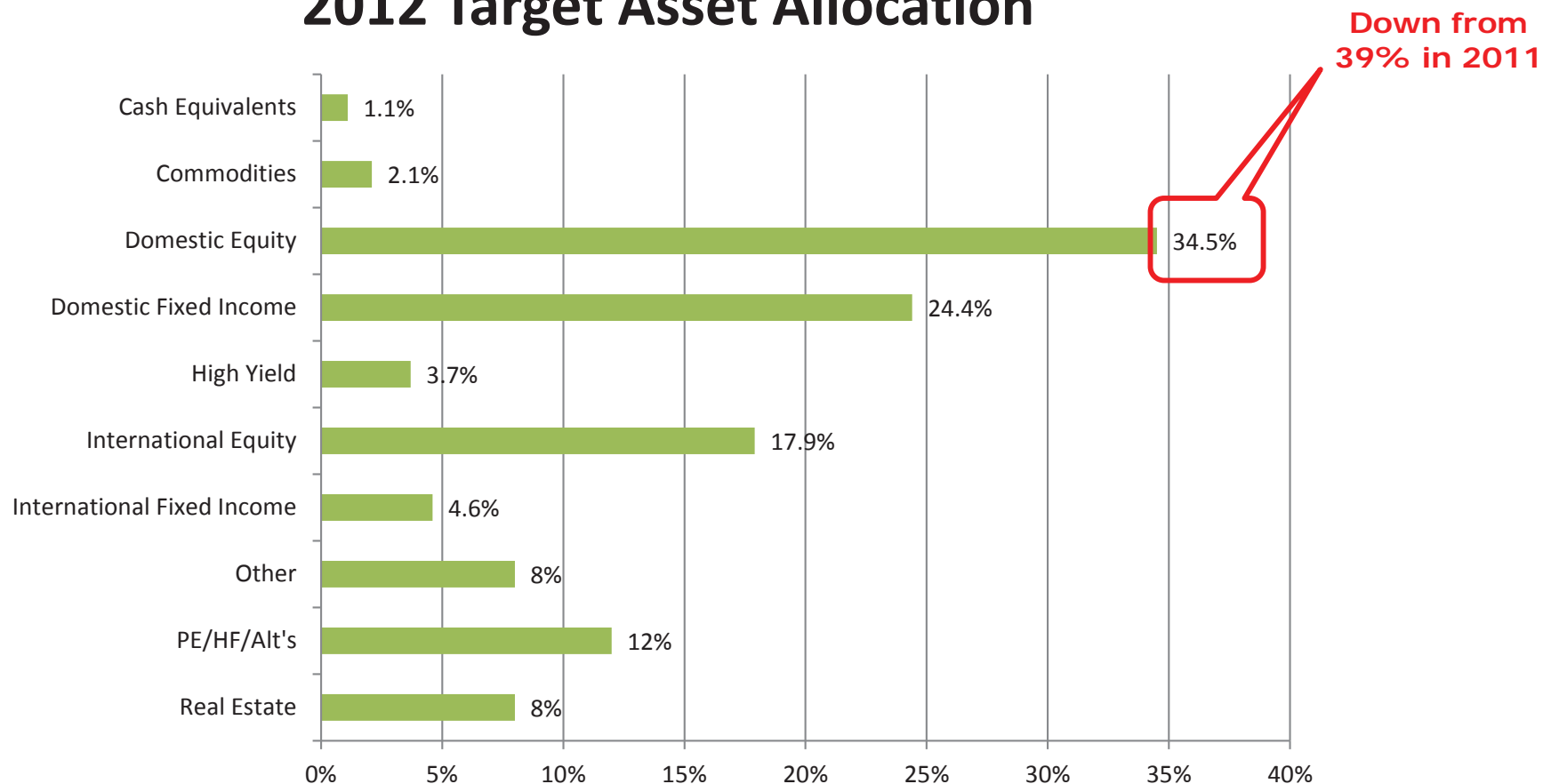
Green Line: denotes 80% funding target identified by the Government Accountability Office

Red Line: denotes 70% funding target that Fitch Ratings considers to be adequate

Source: NCPERS 2012 Fund Study

- Consistent theme of reducing equity and increasing alternatives such as private equity, real estate, hedge funds & commodities
 - 2011 Current Equity Allocation was 39%

2012 Target Asset Allocation



Other: Investments including but not limited to GAA, Timber, TIPS, Real Assets, Risk Parity, Infrastructure, MLP's, Natural Resources, and Opportunistic

Source: NCPERS 2012 Fund Study

Assumption Setting at NEPC

- **Relies on a combination of historical data and forward looking analysis**
 - Expected returns based on current market pricing and forward looking estimates
 - Volatility based on history, while recognizing current uncertainty
 - Correlations based on a mix of history and current trend
- **Historical data is used to frame current market environment as well as to compare to similar historical periods**
 - Historical index returns, volatility, correlations, valuations, and yields
- **Forward-looking analysis is based on current market pricing and a building blocks approach**
 - Return equals yield + changes in price (valuation, defaults, etc.)
 - Use of key economic observations (inflation, real growth, dividends, etc.)
 - Structural themes (supply and demand imbalances, capital flows, etc.)
- **Assumptions prepared by Asset Allocation Committee**
 - Asset Allocation team plus members of various consulting practice groups meet throughout Q4 to develop themes and assumptions
 - Specialists from public markets, hedge funds and private markets provide insight on market themes
- **Assumptions and Actions reviewed and approved by Partners Research Committee**

- **5-7 year return expectations are broadly lower relative to prior year**
 - Sustained low yields keep bond market expectations historically low
 - Rally in credit markets leads to meaningful reduction in expectations for credit asset classes
 - Risky asset fundamentals are similar, but strong 2012 performance limits further growth potential
 - US equity outperformance leads to lower expectations, non-US markets remain unchanged
 - Liquid inflation sensitive asset classes have modest improvements in return and Sharpe ratio but forecasts are still low
 - Hedge fund assumptions reduced based on lower expected cash returns and challenging alpha environment
- **Volatility expectations reduced modestly in bond markets and certain equity markets**
 - Aligning volatility forecasts with evolution of market conditions
 - EM volatility falling modestly as growth continues
 - MBS markets reflecting government support
- **30-year returns have similar themes to 5-7 year forecasts**
 - Reflecting pressure for higher long-term inflation through 25 basis point increase in long-term inflation forecast (3% for 5-7 years and 3.25% for 30 years)
 - Broad based credit spread compression and low sovereign yields reduce long-term expectations for credit
 - Limited changes to equity forecasts
 - Remain higher than 5-7 year expectations

Geometric Expected Return			
Asset Class	2012	2013	2013-2012
Cash	1.25%	0.75%	-0.50%
Treasuries	1.50%	1.00%	-0.50%
IG Corp Credit	4.50%	3.00%	-1.50%
MBS	3.25%	2.50%	-0.75%
<i>Core Bonds*</i>	<i>2.88%</i>	<i>2.04%</i>	<i>-0.84%</i>
TIPS	1.75%	1.50%	-0.25%
High-Yield Bonds	7.00%	5.00%	-2.00%
Bank Loans	5.00%	5.00%	
Global Bonds (Unhedged)	1.25%	0.75%	-0.50%
Global Bonds (Hedged)	1.49%	0.93%	-0.56%
EMD External	5.75%	4.00%	-1.75%
EMD Local Currency	6.75%	5.00%	-1.75%
Large Cap Equities	7.25%	6.75%	-0.50%
Small/Mid Cap Equities	7.50%	7.00%	-0.50%
Int'l Equities (Unhedged)	7.75%	7.75%	
Int'l Equities (Hedged)	8.00%	8.00%	
Emerging Int'l Equities	9.75%	9.75%	
Private Equity	9.75%	9.00%	-0.75%
Private Debt	9.50%	8.50%	-1.00%
Private Real Assets	N/A	8.00%	
Real Estate	6.00%	6.00%	
Commodities	4.75%	5.00%	0.25%
Non-US Credit	8.00%	10.00%	2.00%
US Credit	6.00%	7.45%	1.45%
Hedge Funds Low Vol	5.50%	4.75%	-0.75%
Hedge Funds Mod Vol	7.25%	6.50%	-0.75%

*Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

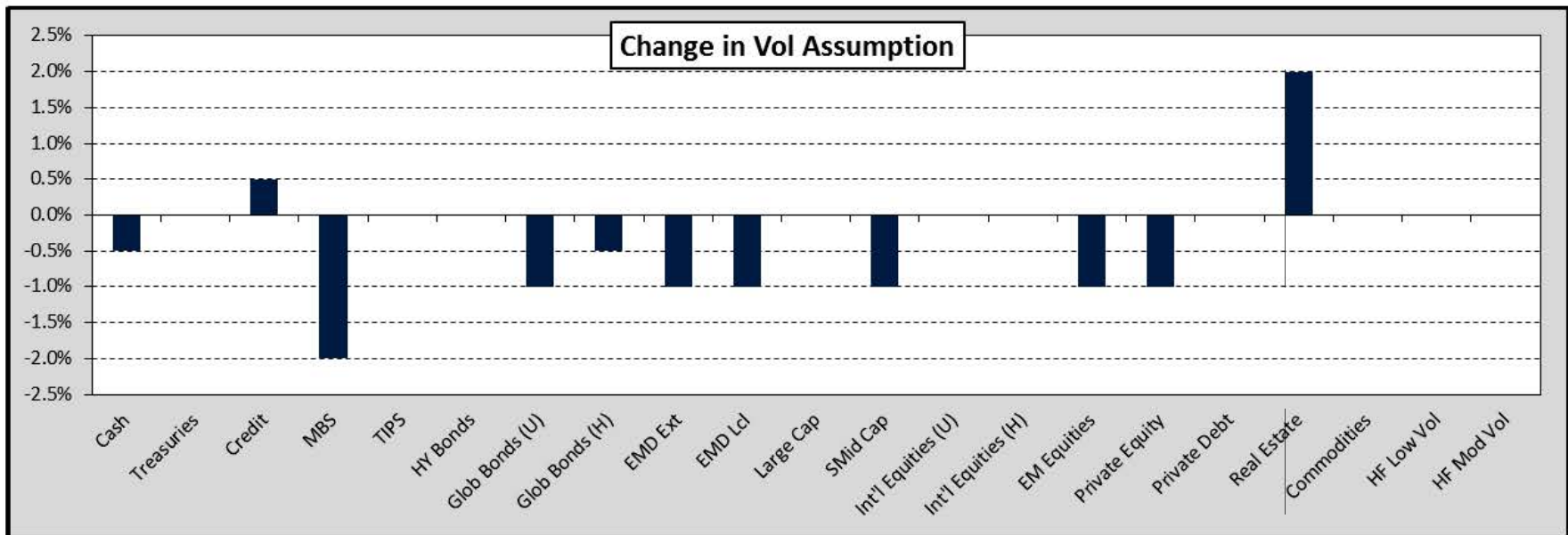
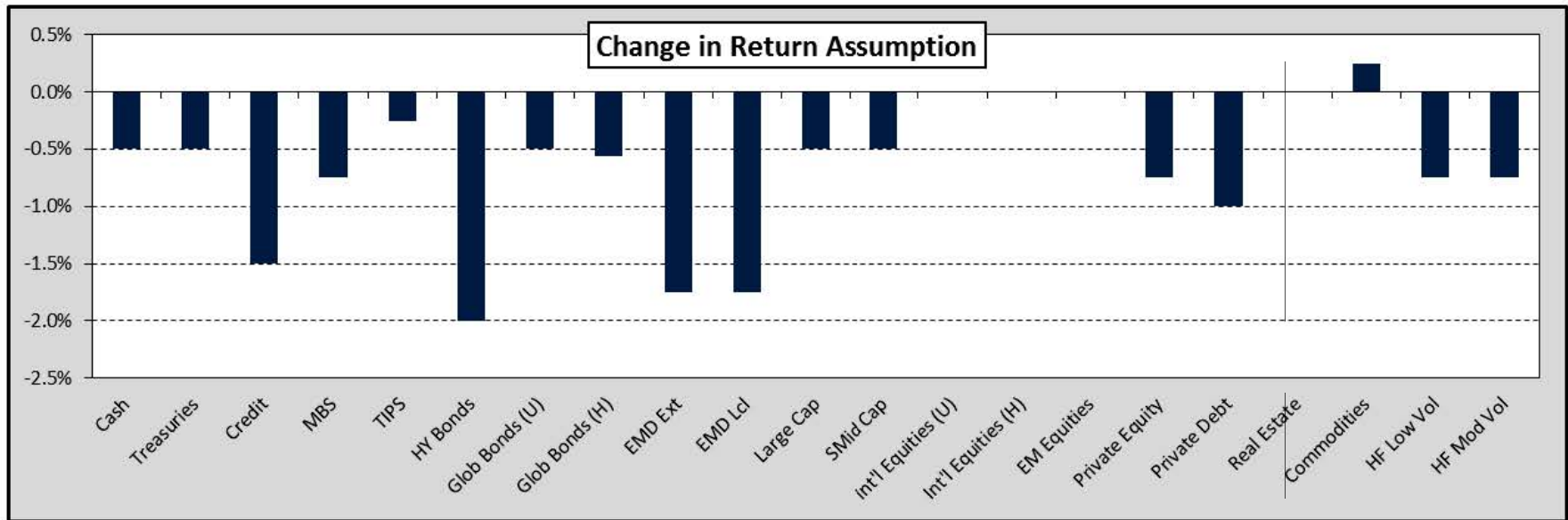
**US Credit assumption based on Client's actual weighting of Private Debt and Bank Loans.

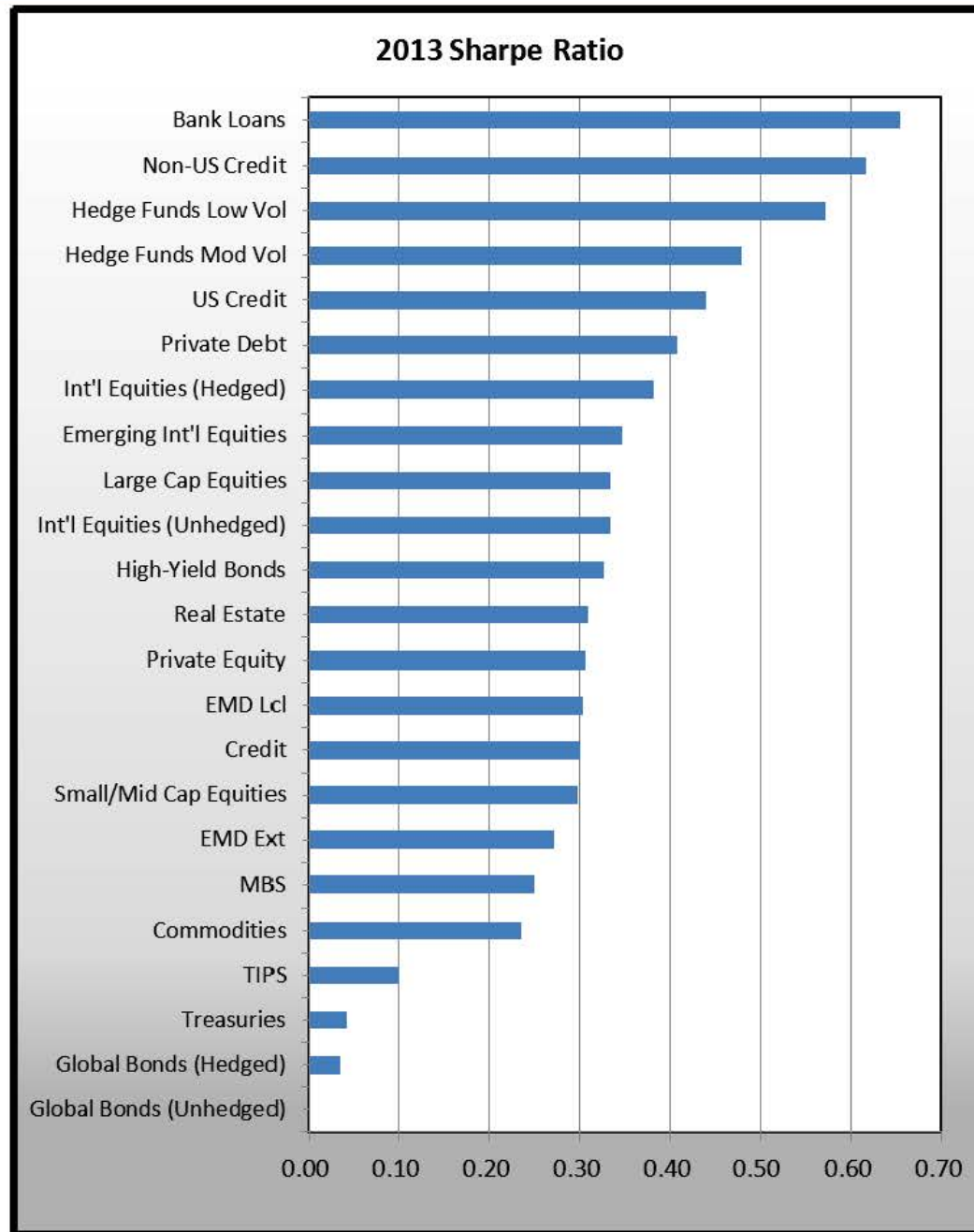
Volatility			
Asset Class	2012	2013	2013-2012
Cash	1.50%	1.00%	-0.50%
Treasuries	6.00%	6.00%	
IG Corp Credit	7.00%	7.50%	0.50%
MBS	9.00%	7.00%	-2.00%
<i>Core Bonds*</i>	<i>7.00%</i>	<i>6.31%</i>	<i>-0.69%</i>
TIPS	7.50%	7.50%	
High-Yield Bonds	13.00%	13.00%	
Bank Loans	6.50%	6.50%	
Global Bonds (Unhedged)	10.00%	9.00%	-1.00%
Global Bonds (Hedged)	5.50%	5.00%	-0.50%
EMD External	13.00%	12.00%	-1.00%
EMD Local Currency	15.00%	14.00%	-1.00%
Large Cap Equities	18.00%	18.00%	
Small/Mid Cap Equities	22.00%	21.00%	-1.00%
Int'l Equities (Unhedged)	21.00%	21.00%	
Int'l Equities (Hedged)	19.00%	19.00%	
Emerging Int'l Equities	27.00%	26.00%	-1.00%
Private Equity	28.00%	27.00%	-1.00%
Private Debt	19.00%	19.00%	
Private Real Assets	N/A	24.00%	
Real Estate	15.00%	17.00%	2.00%
Commodities	18.00%	18.00%	
Non-US Credit	9.00%	15.00%	6.00%
US Credit**	7.0%	15.25%	8.25%
Hedge Funds Low Vol	7.00%	7.00%	
Hedge Funds Mod Vol	12.00%	12.00%	

*Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

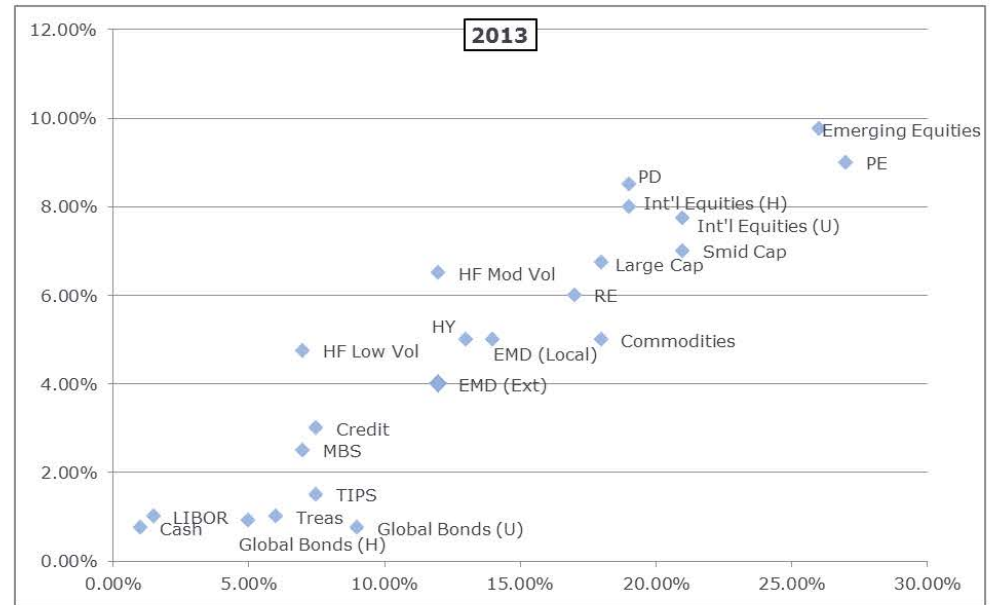
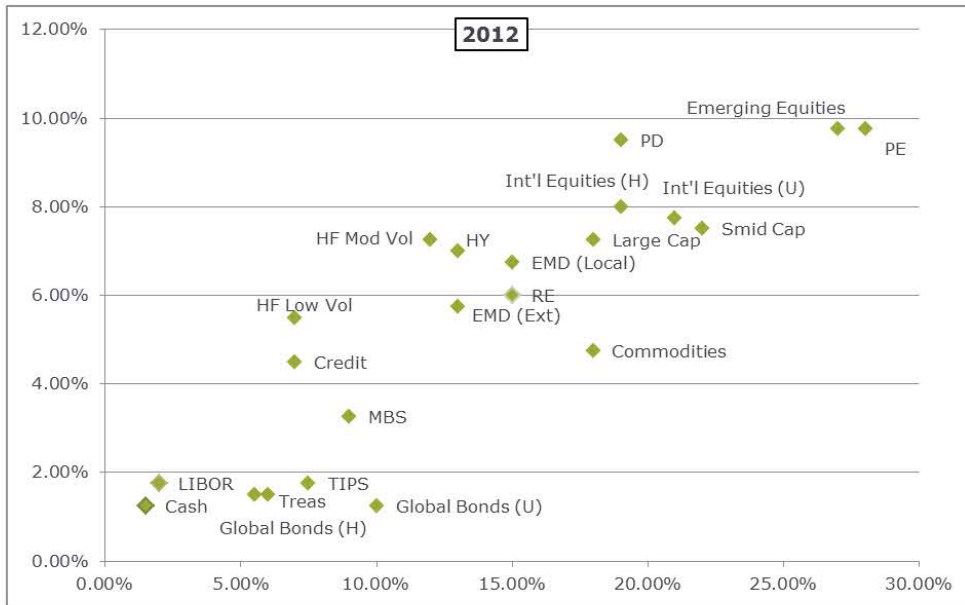
**US Credit assumption based on Client's actual weighting of Private Debt and Bank Loans. In 2012, only the Bank Loans' volatility was used.

Summary of Changes to 2013 Return and Volatility Expectations





Risk/Reward Comparison

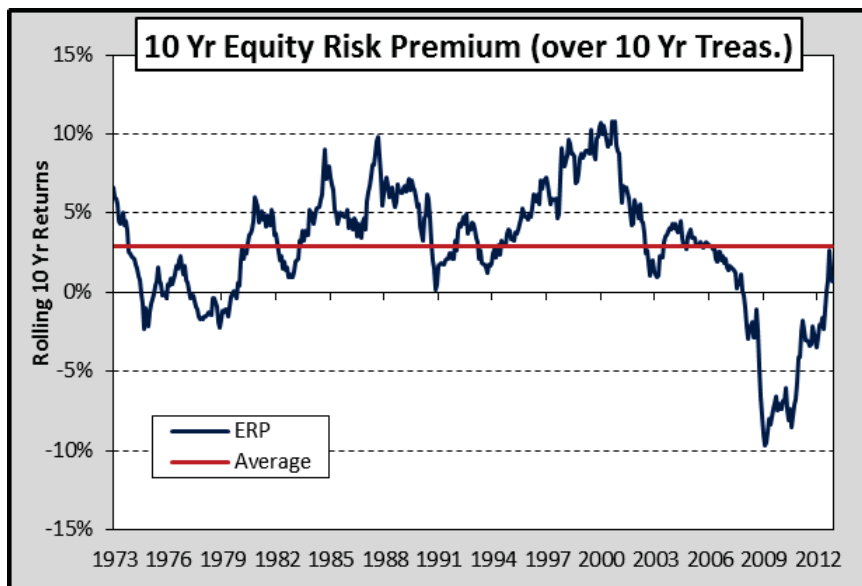


- **Sources of Return**

- Valuation
- Real earnings growth
- Dividend yield
- Inflation

Return Source	Current Values	Expected Forecast Values	Return Contribution
Valuation (1 yr forward)	13.6	15	-0.25%
Real Growth*	2.7%	2.0%	2.0%
Dividend Yield	2.1%	2.0%	2.0%
Inflation	2.2%	3.0%	3.0%
		Total Expected Return	6.75%

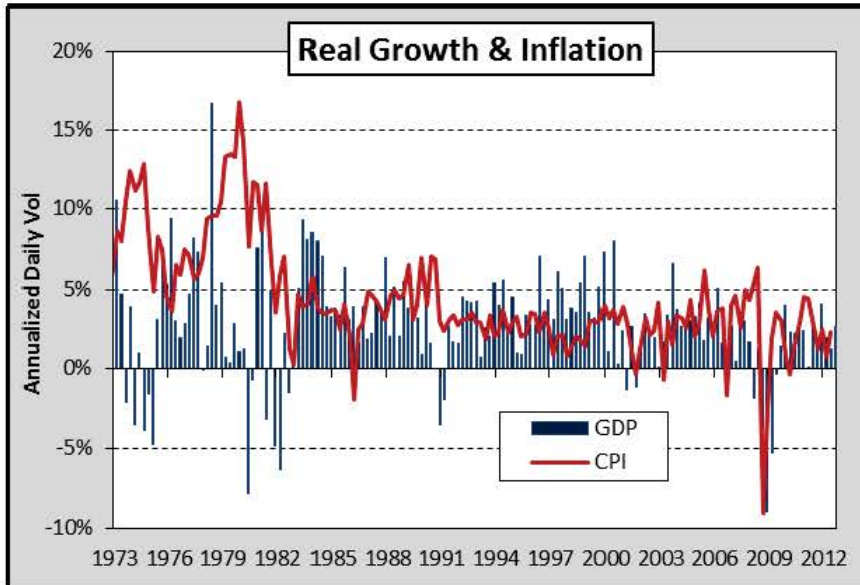
* Real GDP growth used as proxy for real earnings per share growth



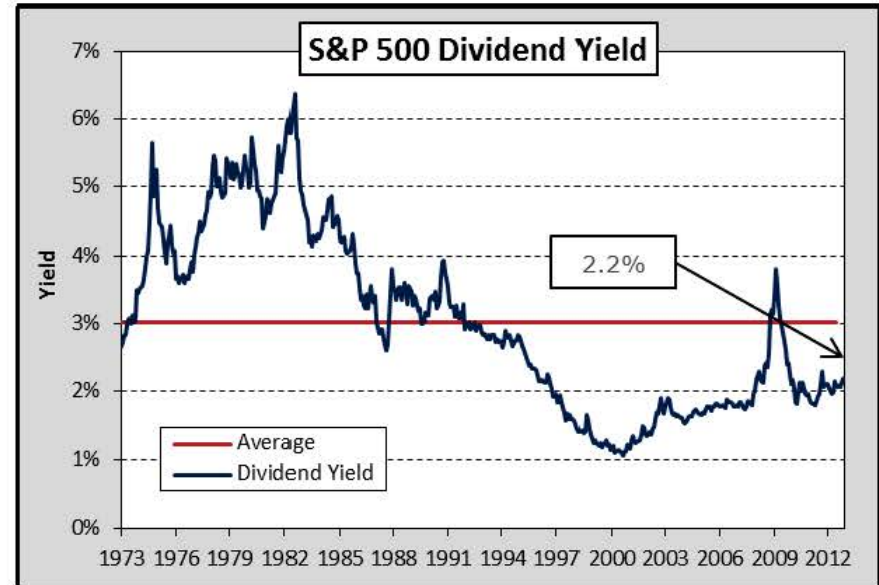
Source: Ibbotson as of 11/30

- **Equity Risk Premium over 10 year Treasury is volatile**
 - Long-term average of 2.9%
 - Our stock and bond forecasts imply an Equity Risk Premium of 5.75%
 - While high relative to the long-term average, approximately 20% of observations over the last 40 years exceed this level
- **Low interest rates and relatively attractive valuations are supportive of a high equity risk premium**
 - Attractive valuations offset by potential for margin compression

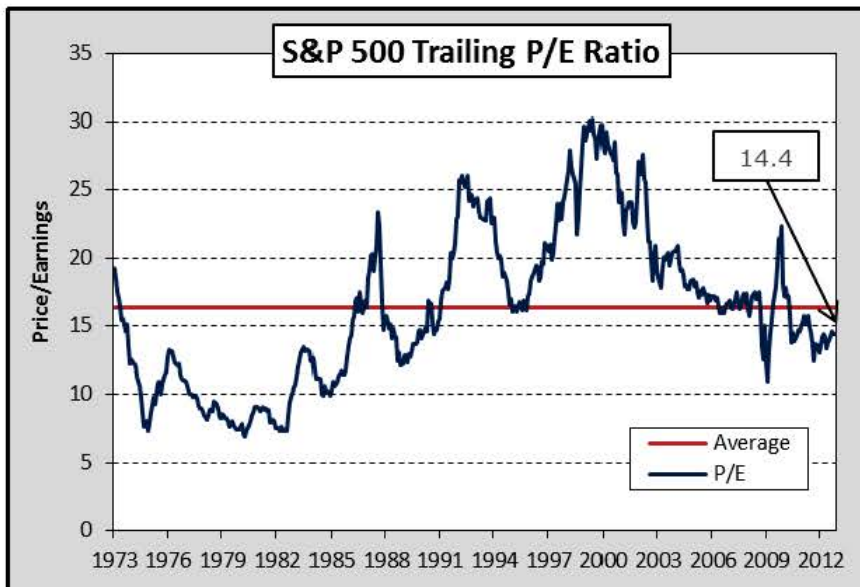
US Large Cap Equity Building Blocks



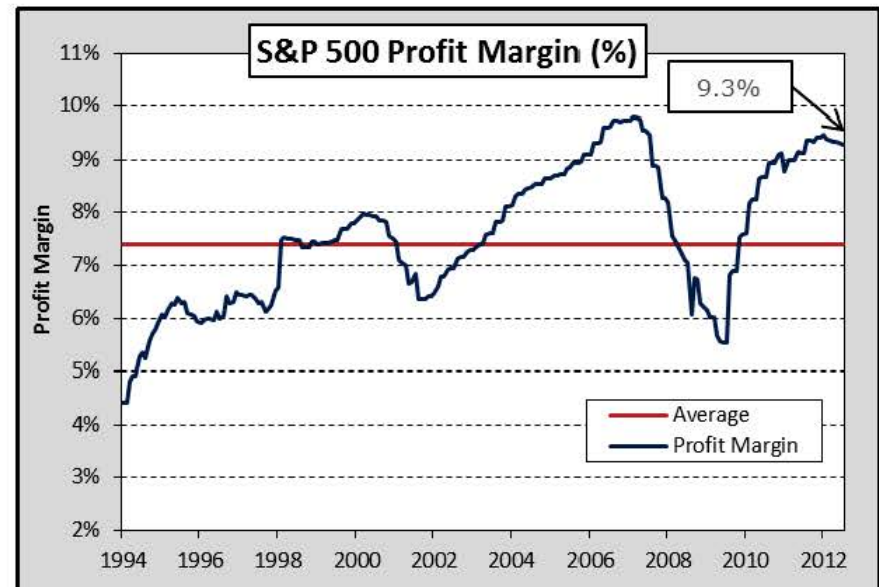
Source: Bloomberg as of 11/30



Source: Bloomberg as of 11/30



Source: Bloomberg as of 11/30



Source: Bloomberg as of 11/30

• Developed Markets

- Attractive valuation
 - Reflecting appropriate risk premium
 - Profit margins collapsed in 2012
- Higher dividend yields
- Continued uncertainty and elevated volatility
- Low growth and austerity but progress in Europe
- Recovery after several years of poor returns – but still lagging US markets
- *100 bps premium over US*

Return Source	Current Values	Expected Forecast Values	Return Contribution
Valuation (1 yr forward)	13.2	13	0%
Real Growth*	1.9%	1.5%	1.5%
Dividend Yield	3.6%	3.0%	3.25%
Inflation	2.2%	3.0%	3.0%
		Total Expected Return	7.75%

* Real GDP growth used as proxy for real earnings per share growth

• Emerging Markets

- Attractive valuation
 - Profit margins collapsed in 2012
- Continued conviction in high growth prospects
- Strong absolute returns but behind US markets
- *300 bps premium over US*
- *200 bps premium over Intl Developed*

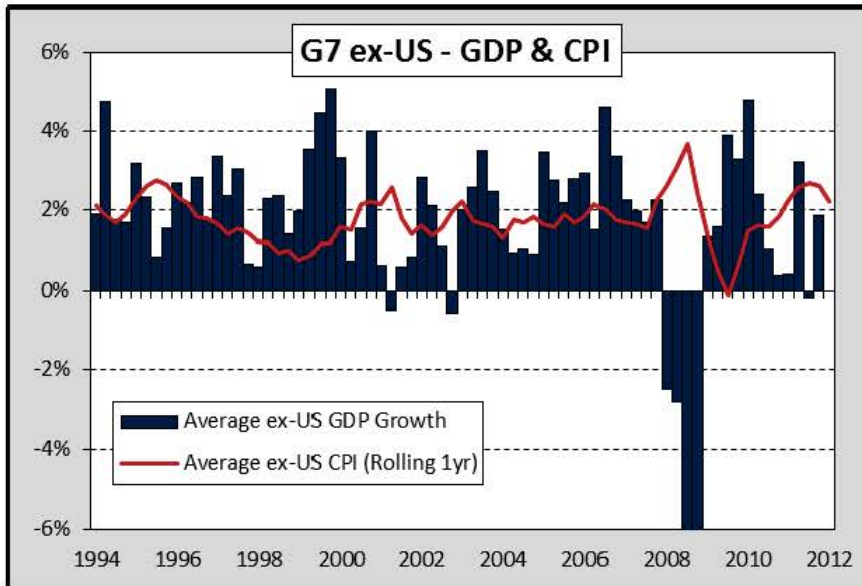
Return Source	Current Values	Expected Forecast Values	Return Contribution
Valuation (1 yr forward)	11.7	12	0%
Real Growth*	5.2%	3.5%	3.5%
Dividend Yield	4.1%	2.5%	3.25%
Inflation**	2.2%	3.0%	3.0%
		Total Expected Return	9.75%

* Real GDP growth used as proxy for real earnings per share growth

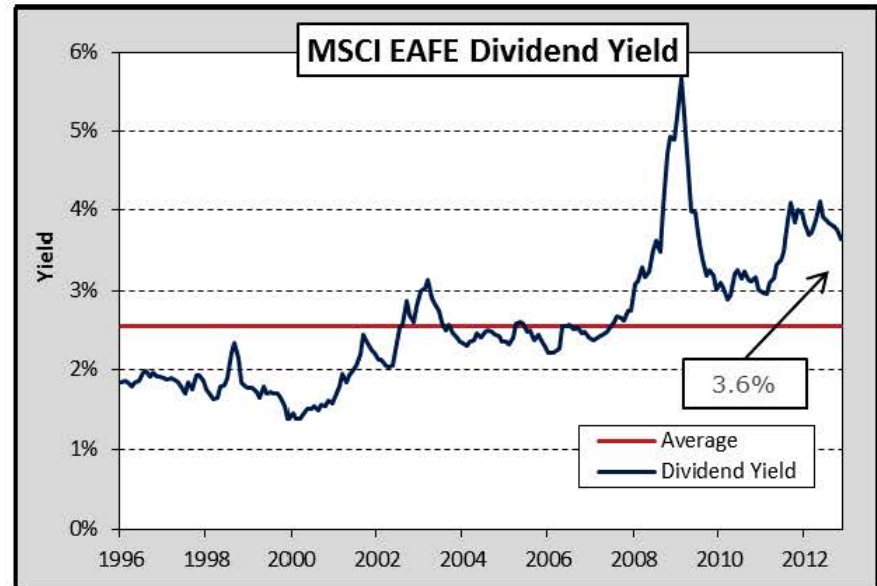
** - For assumption setting purposes, we thought of inflation as a global measure flowing through to investors and thus did not differentiate between expectations of low developed markets inflation and high emerging markets inflation

Source: Bloomberg, NEPC

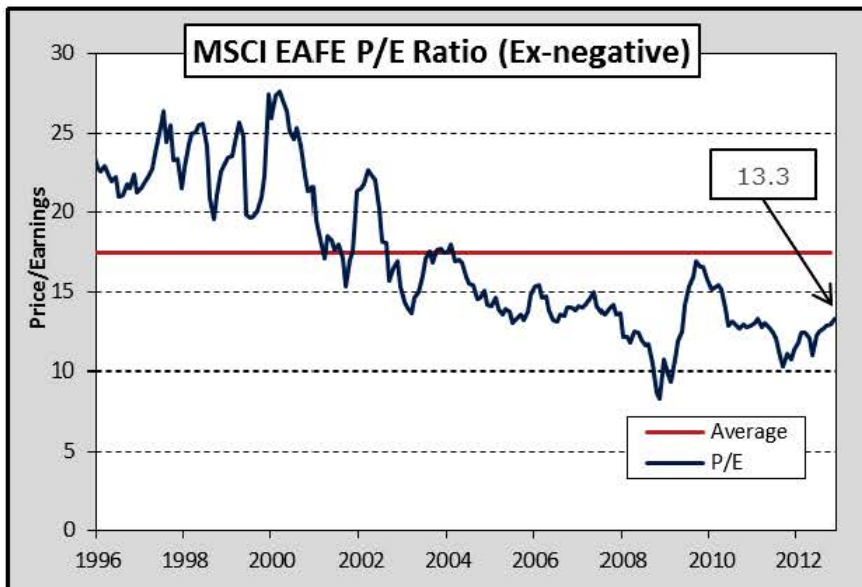
International Developed Equity Building Blocks



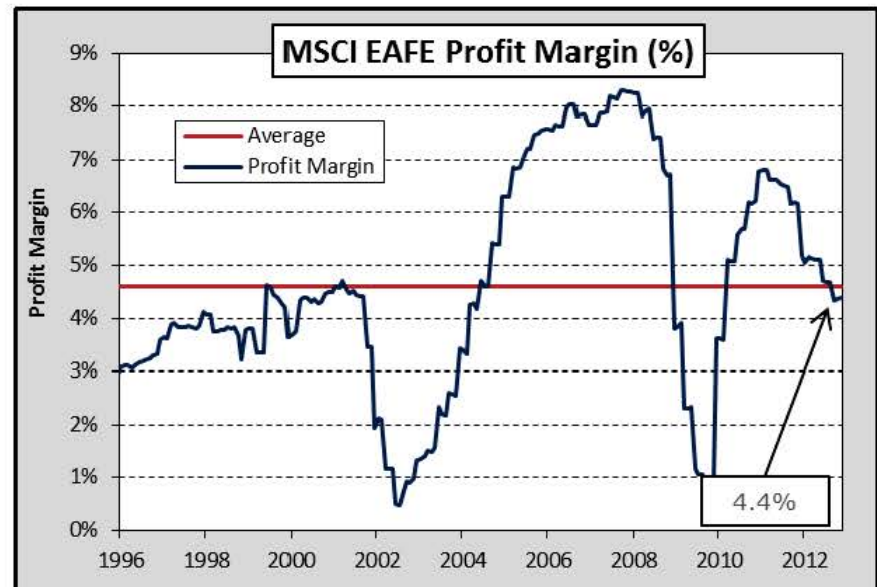
Source: Organisation for Economic Co-operation and Development as of 4/30



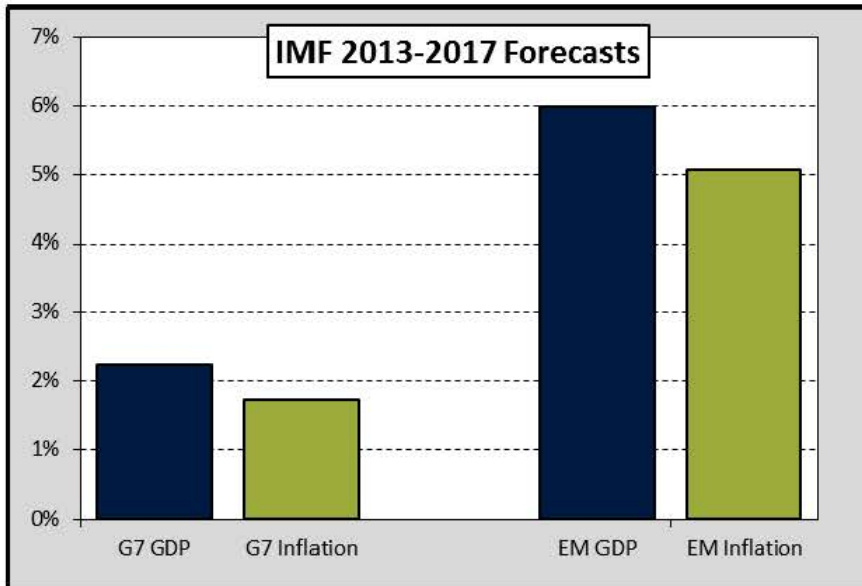
Source: Bloomberg as of 11/30



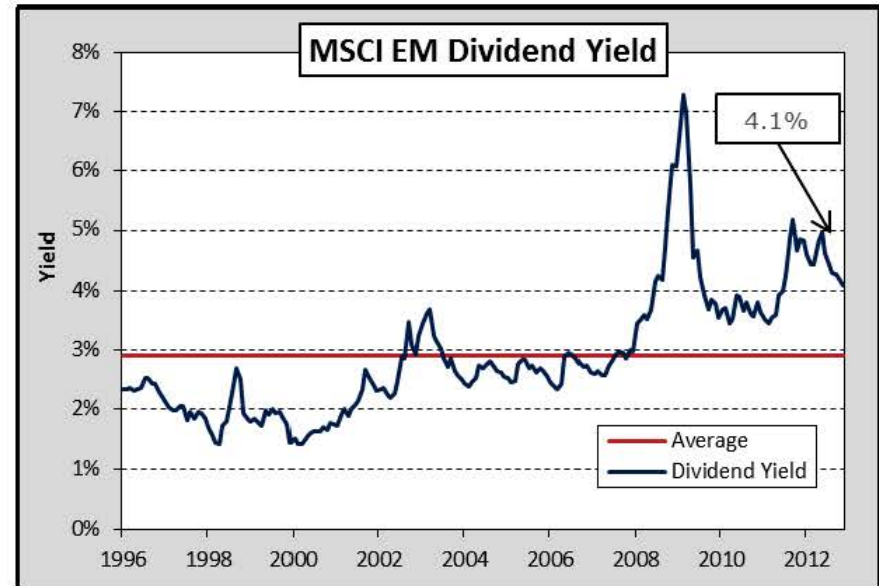
Source: Bloomberg as of 11/30



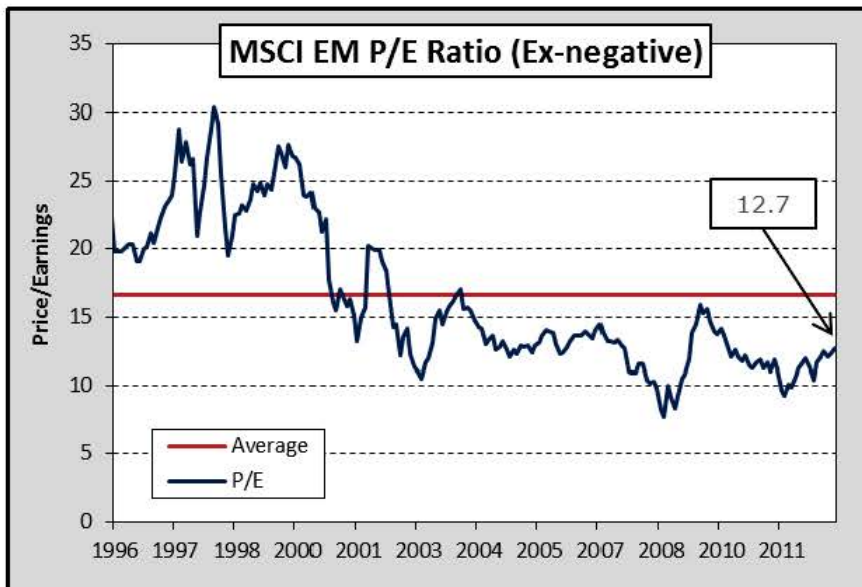
Source: Bloomberg as of 11/30



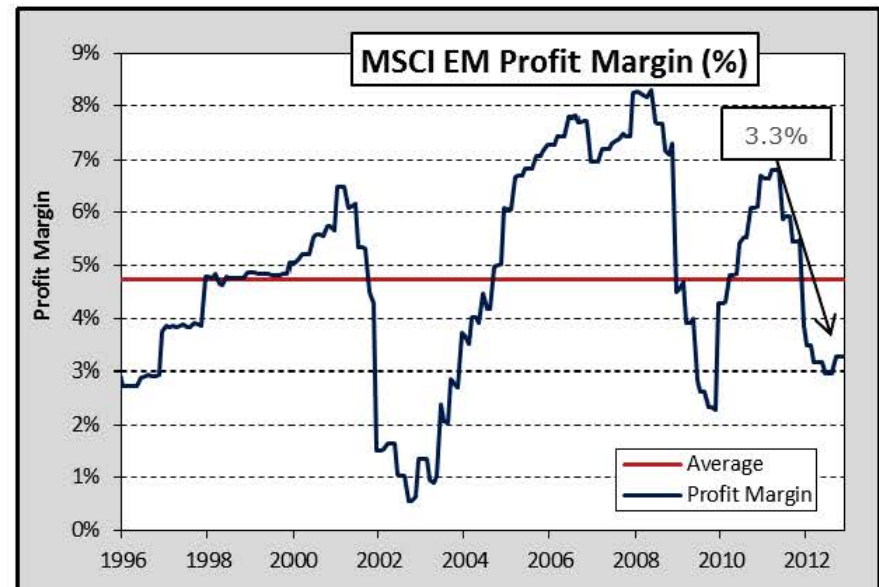
Source: IMF as of 10/30



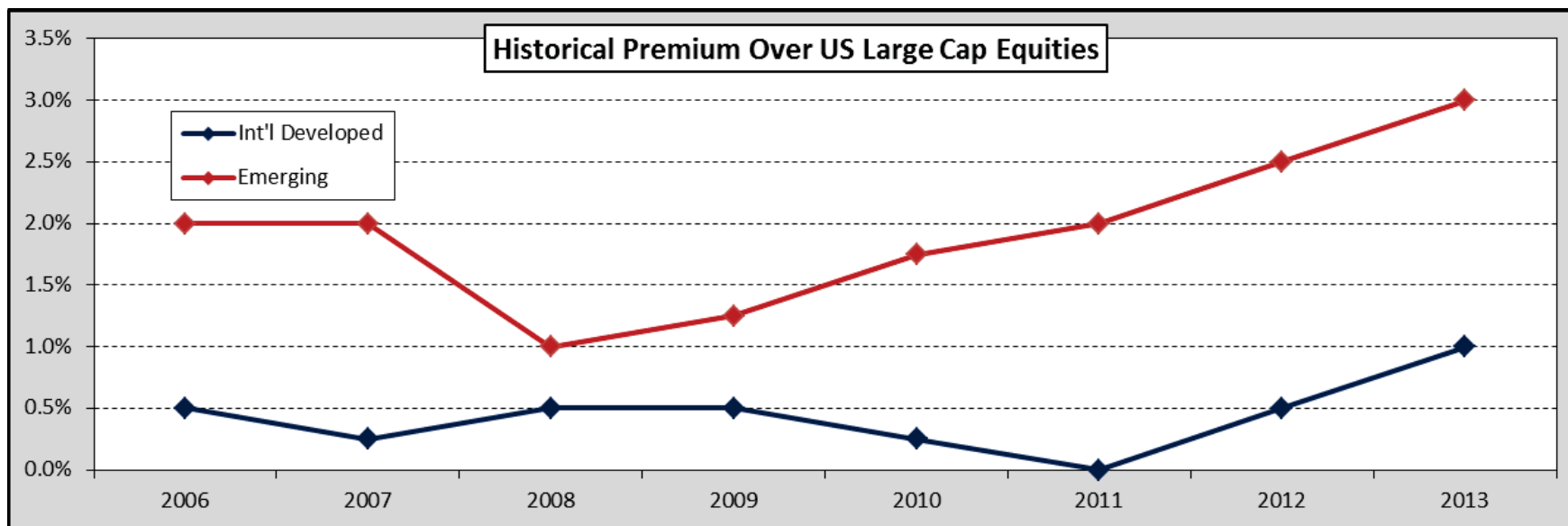
Source: Bloomberg as of 11/30



Source: Bloomberg as of 11/30

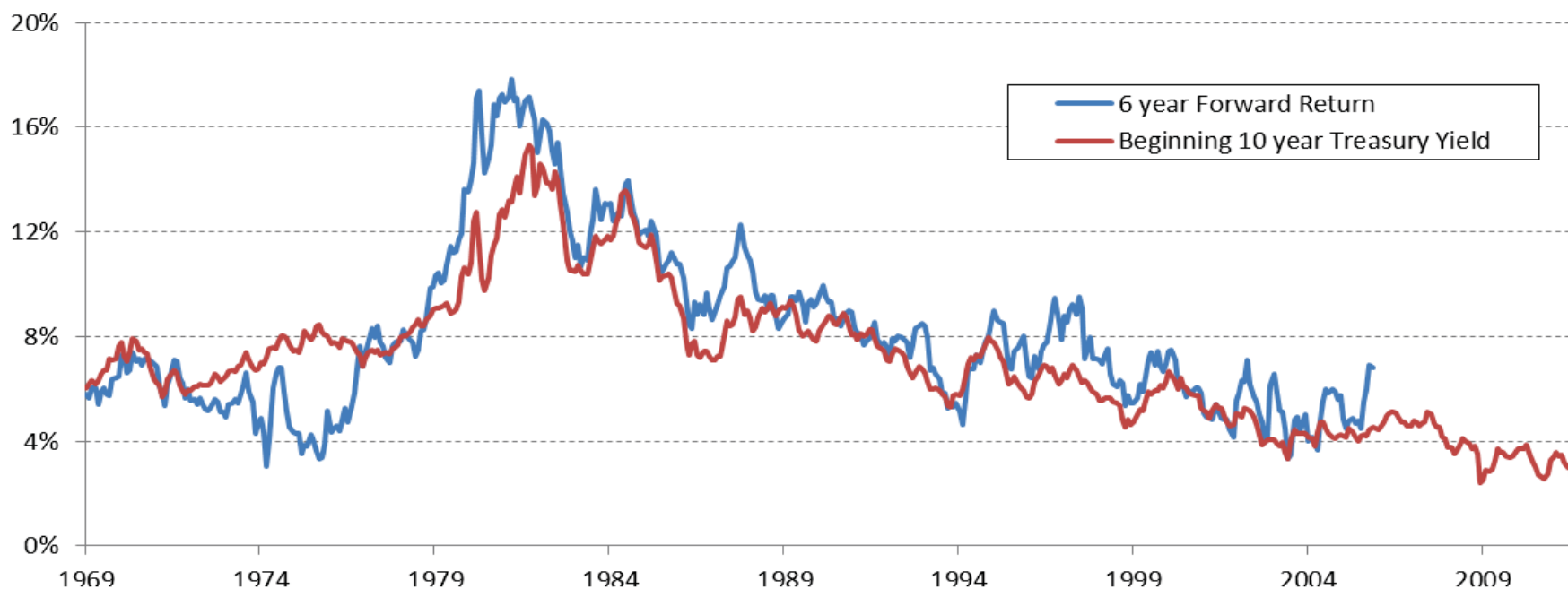


Source: Bloomberg as of 11/30



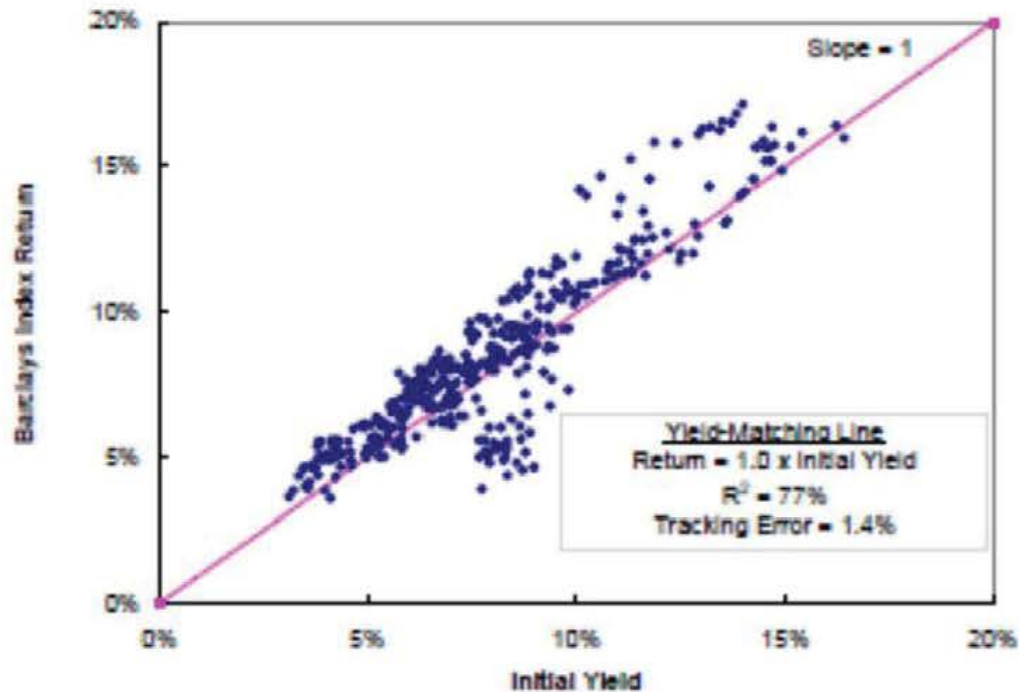
- **Expectations for Developed International Equities are relatively high compared to recent history**
- **Non-US markets have lagged the S&P 500 for several years and continued to lag in 2012**
 - 5 year trailing performance as of December 31, 2012
 - S&P 500: 1.7%
 - MSCI EAFE: -3.7%
 - MSCI EM: -0.9%
- **Valuations are fairly attractive and dividends are high**
- **Meaningful downside risks remain despite attractive valuations given exposure to any disappoint in Europe or long-term growth challenges in Japan**
- **While we expect investors to be compensated over 5-7 years with a higher relative return for holding non-US equities, it is appropriate to use active management to attempt to minimize exposure to downside risks**

- **Starting yield is the key building block for future performance**
 - Correlation to forward return of 0.88
- **Yields have had a 30-year secular decline**
 - This has been a tailwind to performance
- **Low current yields will challenge forward looking returns**
 - 10 year Treasury Yield as of January 22, 2013 was 1.86%



Source: St. Louis Fed, Ibbotson, Research Affiliates

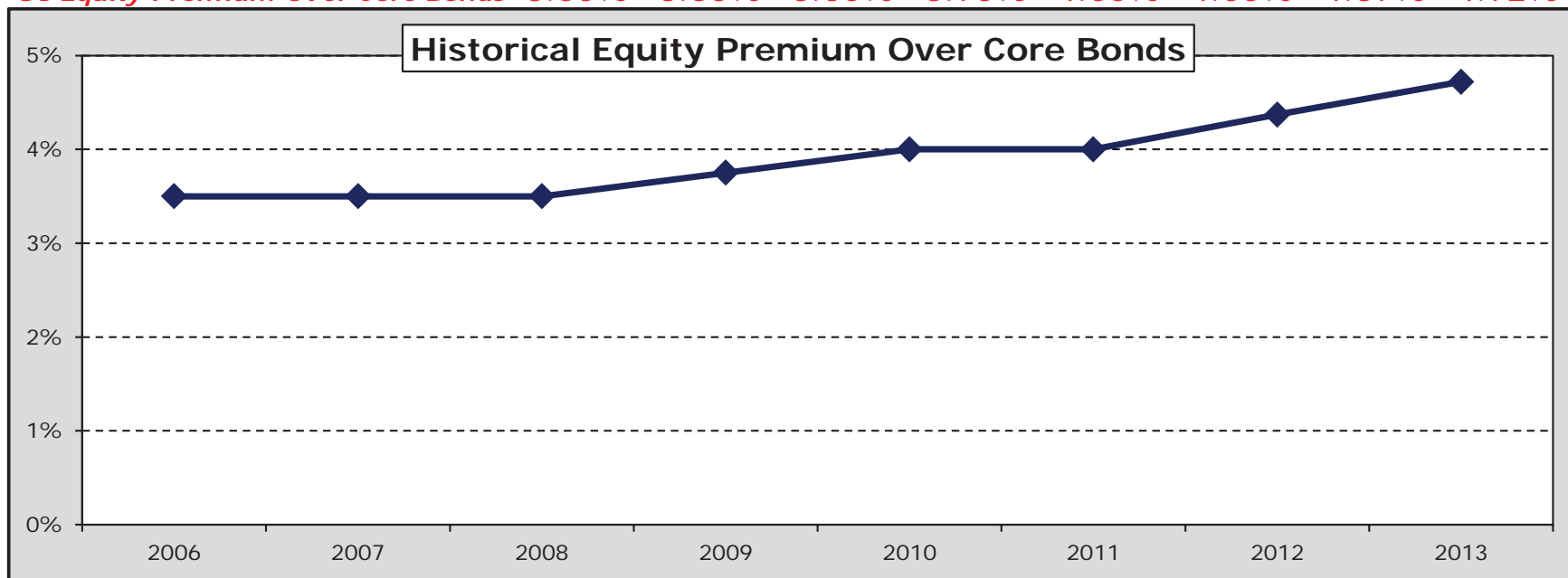
Exhibit 20
Government/Credit Returns Over 6-Year Holding
Periods (1972-2006) vs. Yield Matching Line



Source: Morgan Stanley Research, DataStream

Asset Class	Historical Long Term Geometric Average ¹	5-to-7 Year NEPC Assumptions							
		2006	2007	2008	2009	2010	2011	2012	2013
Cash	3.5%	3.75%	4.00%	4.00%	3.00%	2.00%	2.00%	1.25%	0.75%
Core Bonds ²	8.2%	5.00%	5.00%	5.00%	5.50%	3.75%	3.00%	2.88%	2.03%
Large Cap	9.8%	8.50%	8.50%	8.50%	9.25%	7.75%	7.00%	7.25%	6.75%
International ³	9.0%	9.00%	8.75%	9.00%	9.75%	8.00%	7.00%	7.75%	7.75%

US Equity Premium Over Core Bonds 3.50% 3.50% 3.50% 3.75% 4.00% 4.00% 4.37% 4.72%



1. Reflects average since inception (1926 except as noted below) of the respective index through 11/30/2012
2. LB/BC Aggregate reflects average compound annual return since 1976
3. International reflects average annual return since 1970

Geometric Expected Return			
Asset Class	2012	2013	2013-2012
Cash	3.25%	3.00%	-0.25%
Treasuries	3.50%	3.00%	-0.50%
Credit	5.00%	4.25%	-0.75%
MBS	5.25%	4.50%	-0.75%
<i>Core Bonds*</i>	<i>4.50%</i>	<i>3.84%</i>	<i>-0.66%</i>
TIPS	3.75%	3.25%	-0.50%
High-Yield Bonds	6.25%	5.25%	-1.00%
Bank Loans	6.00%	5.50%	-0.50%
Global Bonds (Unhedged)	3.25%	2.50%	-0.75%
Global Bonds (Hedged)	3.48%	2.67%	-0.81%
EMD External	6.25%	6.00%	-0.25%
EMD Local Currency	7.00%	6.25%	-0.75%
Large Cap Equities	8.00%	8.00%	
Small/Mid Cap Equities	8.50%	8.25%	-0.25%
Int'l Equities (Unhedged)	8.25%	8.25%	
Int'l Equities (Hedged)	8.50%	8.50%	
Emerging Int'l Equities	9.50%	9.50%	
Private Equity	10.00%	10.00%	
Private Debt	8.00%	8.00%	
Real Estate	6.00%	6.00%	
Commodities	5.25%	5.50%	0.25%
Hedge Funds Low Vol	6.25%	5.75%	-0.50%
Hedge Funds Mod Vol	8.00%	7.50%	-0.50%

* Core Bonds assumption based on market weighted blend of components of Aggregate Index (Treasuries, IG Corp Credit, and MBS).

California Public Plan Information

Development of Asset Class Assumptions

Plan name	Global Fixed					Absolute Return / Hedge Fund / GAA / Risk	Cash	Other
	Global Equity	Income	Real Assets	Real Estate	Private Equity	Parity		
AC Transit	48.0%	37.0%		5.0%		10.0%		
ACERA -- Alameda County	59.0%	15.0%		6.0%	7.5%	7.5%		5.0%
City of Fresno Retirement Systems -- Employee System	55.0%	24.0%		10.0%		11.0%		
City of Fresno Retirement Systems -- Fire & Police	55.0%	24.0%		10.0%		11.0%		
FPRS Administrator -- Pasadena	47.0%	35.0%			10.0%	5.0%	3.0%	
City of San Jose Federated	26.0%	15.0%	20.0%	5.0%	9.0%	25.0%	0.0%	0.0%
City of San Jose Police & Fire	29.0%	30.0%	10.0%	7.0%	8.0%	15.0%	1.0%	0.0%
Contra Costa County ERA	42.6%	29.4%	5.0%	12.5%	10.0%		0.5%	
EBMUD -- East Bay Municipal Utility District	70.0%	25.0%		5.0%				
FCERA -- Fresno County	53.0%	26.0%		6.0%		15.0%		
Imperial County Employees' Retirement System	55.0%	30.0%		5.0%		10.0%		
KCERA -- Kern County	45.0%	29.0%	6.0%	5.0%	5.0%	10.0%		
LACERA -- Los Angeles County	50.0%	24.0%	3.0%	10.0%	10.0%	1.0%	2.0%	
Los Angeles City Employees' Retirement System	53.0%	24.0%	5.0%	5.0%	12.0%		1.0%	
Los Angeles Fire & Police Pension	50.0%	22.0%	5.0%	9.0%	9.0%	4.0%	1.0%	
MCERA -- Marin County	54.0%	23.0%		15.0%	8.0%			
MCERA -- Mendocino County	63.0%	28.0%		9.0%				
SamCERA -- San Mateo County	53.0%	22.0%	3.0%	5.0%	8.0%	9.0%		
SBCERS -- Santa Barbara County	43.0%	30.0%	12.0%	8.0%	7.0%			
SCERA -- Sonoma County	57.0%	20.0%	5.0%	10.0%		8.0%		
SCERS -- Sacramento County	50.0%	20.0%	15.0%		5.0%	10.0%		
SDCERA -- San Diego City	58.5%	27.0%		11.0%	3.5%			
SJCERA -- San Joaquin County	34.0%	20.0%	7.0%	10.0%		14.0%		15.0%
SLOCPT -- San Luis Obispo County	50.0%	30.0%	5.0%	10.0%	5.0%			
StanCERA -- Stanislaus County	60.9%	37.6%		1.5%				
VCERA -- Ventura County	54.0%	24.0%		7.0%	5.0%	7.0%		3.0%
Average	50.6%	25.8%	3.9%	7.2%	4.7%	6.6%	0.3%	0.9%
Median	53.0%	24.5%	1.5%	7.0%	5.0%	7.3%	0.0%	0.0%

Source: San Jose Retirement Services.

Plan name	Total plan assets (\$bns)	Funded ratio (a)	Assumed rate of return, real (a)	Assumed rate of return, nominal (a)	Inflation estimate	Most recent Actuarial Valuation date	Preliminary fiscal 2013 performance (b)
AC Transit	0.5	63.9%	4.38%	7.38%	3.00%	01/01/13	13.8%
ACERA -- Alameda County	5.7	73.9%	4.30%	7.80%	3.50%	12/31/12	15.5%
City of Fresno Retirement Systems -- Employee System	1.1	102.2%	4.25%	7.50%	3.25%	06/30/12	13.6%
City of Fresno Retirement Systems -- Fire & Police	1.2	105.6%	4.25%	7.50%	3.25%	06/30/12	13.6%
City of Pasadena Fire & Police	0.1	78.1%	3.00%	6.00%	3.25%	06/30/12	12.5%
City of San Jose Federated	1.9	62.0%	4.25%	7.50%	3.25%	06/30/12	8.0%
City of San Jose Police & Fire	2.9	78.8%	3.75%	7.25%	3.50%	06/30/12	9.7%
Contra Costa County ERA	5.9	70.6%	4.00%	7.25%	3.25%	12/31/12	12.5%
EBMUD -- East Bay Municipal Utility District	1.1	65.0%	3.25%	7.75%	4.50%	03/30/12	not available
FCERA -- Fresno County	3.5	76.2%	3.25%	7.75%	4.50%	06/30/12	not available
Imperial County Employees' Retirement System	0.6	89.9%	4.25%	7.75%	3.50%	06/30/12	12.2%
KCERA -- Kern County	3.4	61.0%	4.50%	7.75%	3.25%	06/30/12	10.6%
LACERA -- Los Angeles County	41.0	76.8%	4.25%	7.50%	3.25%	06/30/12	12.1%(c)
LACERS -- Los Angeles City	11.9	69.4%	5.22%	7.75%	2.53%	06/30/12	14.1%
Los Angeles Fire & Police Pension	16.7	77.7%	4.25%	7.75%	3.50%	06/30/12	12.7%
MCERA -- Marin County	1.7	71.3%	4.25%	7.50%	3.25%	06/30/12	14.5%
MCERA -- Mendocino County	0.3	74.1%	4.25%	7.75%	3.50%	06/30/12	11.5%
SamCERA -- San Mateo County	2.7	72.0%	4.25%	7.50%	3.25%	06/30/12	13.5%
SBCERS -- Santa Barbara County	2.2	71.2%	4.50%	7.75%	3.25%	06/30/12	7.9%
SCERA -- Sonoma County	2.0	77.9%	4.25%	7.50%	3.25%	12/31/12	15.7%(c)
SCERS -- Sacramento County	6.9	83.3%	4.25%	7.50%	3.25%	06/30/12	13.2%
SDCERA -- San Diego City	6.0	68.6%	3.75%	7.50%	3.75%	06/30/12	13.6%
SJCERA -- San Joaquin County	2.2	70.0%	5.70%	7.75%	2.05%	01/01/12	8.9%
SLOCPT -- San Luis Obispo County	1.1	76.4%	4.50%	7.30%	2.80%	01/01/13	12.8%
StanCERA -- Stanislaus County	1.5	76.0%	4.50%	7.75%	3.25%	06/30/12	14.6%
VCERA -- Ventura County	3.6	77.7%	4.50%	7.75%	3.25%	06/30/12	12.8%
Average	4.9	75.8%	4.22%	7.53%	3.31%		12.4%
Median	2.2	75.1%	4.25%	7.50%	3.25%		12.8%

(a) For the most recent Actuarial Valuation.

(b) Net return unless otherwise noted. For the period July 1, 2012 to June 30, 2013.

(c) Gross of fees return; all others net of fees.

Source: San Jose Retirement Services.

Initial Thoughts on Onboarding Process

Board Meeting	Agenda Item
October 21, 2013	<ul style="list-style-type: none"> ✓ NEPC to attend as Observer ✓ NEPC/Staff to Discuss Plan Background ✓ Work plan discussion/review with Staff ✓ Manager Presentations ✓ Investment Consultant contract for Nov 1 ✓ Manager Guideline Review and Risk Modeling Profile ✓ Annual Proxy Voting Report (by HEK) ✓ SSgA Securities Lending Agreement Ammendment for the acceptance of Non-cash collateral. (presented by staff with input by HEK)
November 18, 2013	<ul style="list-style-type: none"> ✓ Third quarter investment performance ✓ October monthly performance ✓ Last HEK Board meeting and performance reports ✓ Review of board “risk profile” poll ✓ Set Board Meeting Dates and Investment Manager Presentations ✓ Review Due Diligence Calendar
December 16, 2013	<ul style="list-style-type: none"> ✓ 2014 work plan discussion ✓ VCERA Investment Program Review

Initial Thoughts on Plan

Asset Allocation Comparison

	Client 1 *	Client 2	Client 3	Client 4	Client 5	Client 6	Client 7	VCERA
U.S. Equity	30	13	33	15	18	28	25	30
Non-U.S. Equity	30	13	23	17	14	20	15	14
Global Equity	-	-	-	4	-	-	-	10
Total Equity	60	26	56	36	32	48	40	54
Domestic Fixed Income	25	3	18	13	8	22	18	19.2
Credit/Private Debt	-	22	3	7	12	10	15	-
High Yield	5	-	-	-	-	-	-	-
Global Bonds	-	2	-	3	1	-	-	4.8
Emerging Market Debt	-	6	4	3	3	5	2	-
TIPS	-	-	-	-	-	-	-	-
Total Fixed Income	30	33	25	26	24	37	35	24
Real Estate	6	9	8	10	10	5	2	7
REITs	4	-	-	-	-	-	3	-
Private Equity	-	16	7	5	9	-	5	5
Absolute Return	-	7	-	7	4	-	8	-
Total Alternatives	10	32	15	22	23	5	18	12
GTAA/Risk Parity	-	-	-	6	12	10	5	7
Real Assets/Commodities	-	7	4	10	7	-	1	3
Cash	-	2	-	-	2	-	1	-
Total Other	0	9	4	16	21	10	7	10
Total	100	100	100	100	100	100	100	100
As of March 31, 2013:								
Total Assets (\$ Millions)	2,235	6,946	30,185	10,524	7,200	500	10,212	3,500
5 Year - Total Fund Return	5.3%	3.1%	5.7%	4.7%	3.1%	5.5%	5.6%	
5 Year - Benchmark Return	5.4%	4.7%	5.2%	4.5%	3.0%	5.3%	4.2%	

*Became NEPC Client in 1Q 2013

Asset Class	Current Allocation	60/40 Mix	Proposed Mix
U.S. Equities	30%	35%	25%
Int'l Equities	14%	25%	10%
Global Equities	10%	-	10%
Total Equity	54%	60%	45%
Core Bonds	19.2%	28%	10%
Global Fixed Income	4.8%	2%	-
Credit/Private Debt	-	-	7%
Emerging Market Debt	-	2%	3%
Total Fixed Income	24%	32%	20%
Real Estate	7%	8%	8%
Private Equity	5%	-	8%
GTAA/Risk Parity	7%	-	9%
Real Assets/MLP's	3%	-	10%
Total Alternatives	22%	8%	35%

<i>Expected Return 5-7 Year</i>	<i>6.6%</i>	<i>6.2%</i>	<i>7.2%</i>
<i>Expected Return 30 Year</i>	<i>7.6%</i>	<i>7.2%</i>	<i>8.1%</i>
<i>Standard Dev of Asset Return</i>	<i>12.6%</i>	<i>12.1%</i>	<i>12.8%</i>
<i>Probability of 5-Year Return Over 7.75%</i>	<i>42.1%</i>	<i>38.4%</i>	<i>46.1%</i>
<i>Sortino Ratio MAR @ 0%</i>	<i>0.65</i>	<i>0.62</i>	<i>0.68</i>
<i>Sharpe Ratio</i>	<i>0.47</i>	<i>0.45</i>	<i>0.50</i>

- New allocation clearly step in the right direction
- Sample potential allocation seeks to diversify risk while seeking a higher return
- Reduce low yielding core bond and global bond allocations to introduce dedicated EMD, Opportunistic Credit and Private Debt exposures
- Reduce equity exposure and increase exposure to tactical strategies (GAA/Risk Parity)
- Private Equity will require significant time to build-out

- **Past performance is no guarantee of future results.**
- **Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **The goal of this report is to provide a basis for substantiating asset allocation recommendations.**
- **All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.**
- **This report is provided as a management aid for the client's internal use only. This report may contain confidential or proprietary information and may not be copied or redistributed.**