VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

DISABILITY MEETING

September 9, 2013

AGENDA

PLACE: Ventura County Employees' Retirement Association
Second Floor Boardroom
1190 South Victoria Avenue
Ventura, CA 93003

TIME: 9:00 a.m.

ACTION ON AGENDA: When Deemed to be Appropriate, the Board of Retirement May Take Action on Any and All Items Listed Under Any Category of This Agenda, Including "Correspondence" and "Informational".

ITEM:

V. APPLICATIONS FOR DISABILITY RETIREMENT (continued)

A. Application for Service Connected Disability Retirement; Mark Hara, Case No. 12-008. (continued)

2. Respondent's Response to the Summary of Evidence, Findings of Fact, Conclusions of Law and Recommendation, Submitted by Stephen D. Roberson, Attorney at Law, dated August 1, 2013.

3. Hearing Notice.

B. Application for Non-Service Connected Disability Retirement; Patricia Peters, Case No. 13-004. 87 - 145

1. Application for Non-Service Connected Disability Retirement and Supporting Documentation.

2. Hearing Notice.

VI. INVESTMENT INFORMATION

A. Receive and File Ad Hoc RFP Committee Investment Consultant Search Results. 146 - 159

B. Receive Investment Consultant Finalist Presentation, Strategic Investment Solutions (SIS) – Peter Keliuotis, Managing Director and Patrick Thomas, Senior Vice President. (45 Minutes) 160 – 200

C. Receive Investment Consultant Finalist Presentation, NEPC, Inc. – Donald Stracke, Sr. Consultant and Allan Martin, Partner. (45 Minutes) 201 - 255

D. Receive Investment Consultant Finalist Presentation, Wurts & Associates, Inc. (Wurts) – Scott Whalen, Executive Vice President, Senior Consultant and Ed Hoffman, Senior Consultant (45 Minutes) 256 - 473

E. Investment Consultant Search Discussion & Selection.

F. Receive and File Western Asset TRU Bond Fund Transition Update and Consider Authorizing the Chair to Execute Necessary Documents. 474

VII. OLD BUSINESS

A.	Receive and File Quarterly PAS (VCERIS) Report, PAS 2013-06 Monthly Status Report, and PAS 2013-07 Monthly Status Report and Consider Monthly Reporting Proposal.	475 - 498
	1. July 15, 2013 VCERIS Quarterly Report.	
	2. PAS 2013-06 Monthly Status Report.	
	3. PAS 2013-07 Monthly Status Report.	
B.	Receive and File Trustee Art Goulet Letter - Frequency of VCERIS Reports.	499
C.	Receive and File Staff's Cover Letter and Risk Management's Response on its Intended Use of the 'Referral for Independent Medical Examination' Template.	500 - 503
	1. County of Ventura CEO Risk Management Letter – "Risk Management's Intended Use of 'Referral for Independent Medical Examination' Document."	
D.	Receive and File Disability Retirement Process Review and Consultant Recommendations, and Consider the Consultant Recommendations and Proposed Consultant Contract Extension.	504 - 520
	1. Disability Retirement Procedures Consultant Final Report – Annette Paladino. (30 minutes)	

VIII. NEW BUSINESS

A.	Consider Exception to the Board's Travel Policy - Walter Scott Due Diligence Trip – October 2013.	521 - 522
B.	Receive and File SACRS Fall 2013 Conference Items and Designate Voting Delegates.	523 - 528
C.	Receive and File aiCIO Article: "UBS Calls Time on Risk Parity: Bridgewater's Bob Prince Responds"	529 - 531
	1. "UBS Calls Time on Risk Parity: Bridgewater's Bob Prince Responds"	

VIII. **<u>NEW BUSINESS</u> (continued)**

D. Receive and File August 2013 Due Diligence Trip Report – Trustees Hoag, C. Johnston, and McCormick. 532 - 539

IX. **<u>PUBLIC COMMENT</u>**

X. **<u>BOARD MEMBER COMMENT</u>**

XI. **<u>ADJOURNMENT</u>**

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

BUSINESS MEETING

July 15, 2013

MINUTES

DIRECTORS PRESENT:
William W. Wilson, Chair, Public Member
Tracy Towner, Vice Chair, Safety Employee Member
Steven Hintz, Treasurer-Tax Collector
Peter C. Foy, Public Member
Joseph Henderson, Public Member
Mike Sedell, Public Member
Deanna McCormick, General Employee Member
Arthur E. Goulet, Retiree Member
Will Hoag, Alternate Retiree Member
Chris Johnston, Alternate Employee Member

DIRECTORS ABSENT:
Tom Johnston, General Employee Member

STAFF PRESENT:
Donald C. Kendig, Retirement Administrator
Henry Solis, Chief Financial Officer
Julie Stallings, Operations Manager
Lori Nemiroff, Assistant County Counsel
Glenda Jackson, Program Assistant

PLACE:
Ventura County Employees' Retirement Association
Second Floor Boardroom
1190 South Victoria Avenue
Ventura, CA 93003

TIME: 9:00 a.m.

ITEM:

I. INTRODUCTION OF MEETING

Chairman Wilson called the Business Meeting of July 15, 2013, to order at 9:00 a.m.

II. APPROVAL OF AGENDA

After discussion, the following Motion was made:

MOTION: Judge Hintz moved, seconded by Ms. McCormick, to approve the Agenda as amended for noted corrections by Staff to the titles only for the dates of Agenda item IV.A. Regular and Deferred Retirements and Survivors Continuances, June 2013, Agenda item VI.E.2. Monthly Manager Report, June 2013, and Agenda item VI.E.3. Highlights and Research Report, July 2013.

Motion passed unanimously. Mr. T. Johnston absent. Mr. C. Johnston voting.

III. APPROVAL OF MINUTES

A. Disability Meeting of July 1, 2013.

After discussion, the following Motion was made:

MOTION: Mr. Goulet moved, seconded by Mr. Towner, to approve the Minutes as amended for the movement of the sentence beginning, “Trustee Goulet reminded Risk Management that a number of cases are still awaiting action,” under Agenda item II. Master Page No. 5 to the first sentence under Agenda item IV. and the failed motions and votes for Agenda item VII.B.1. on Master Page No. 8.

Motion passed unanimously. Mr. T. Johnston absent. Mr. C. Johnston voting.

IV. CONSENT AGENDA

THE FOLLOWING ITEMS ARE ANTICIPATED TO BE ROUTINE AND NON-CONTROVERSIAL. CONSENT ITEMS WILL BE APPROVED WITH ONE MOTION IF NO MEMBER OF THE BOARD WISHES TO COMMENT OR ASK QUESTIONS. IF COMMENT OR DISCUSSION IS DESIRED, THE ITEM WILL BE REMOVED FROM THE CONSENT AGENDA AND TRANSFERRED TO THAT SECTION OF THE AGENDA DEEMED APPROPRIATE BY THE CHAIR.

A. Regular and Deferred Retirements and Survivors Continuances for the Month of June 2013.

B. Report of Checks Disbursed in June 2013.

C. Asset Allocation as of June 30, 2013.

IV. CONSENT AGENDA (continued)

D. Statement of Plan Net Assets, Statement of Changes in Plan Net Assets, Investments & Cash Equivalents for the Month Ended May 31, 2013 and May 2013 Schedule of Investment Management Fees.

E. Budget Summary – Year to Date as of June 30, 2013 (Preliminary), Fiscal-Year 2012-13.

F. Quarterly Administrator Report for April 1, 2013 to June 30, 2013

MOTION: Mr. Henderson moved, seconded by Judge Hintz, to approve the Consent Agenda.

Motion passed unanimously. Mr. T. Johnston absent. Mr. C. Johnston voting.

END OF CONSENT AGENDA

V. CALPEPRA

A. Receive an Oral Update on CalPEPRA.

Received an oral update from Board Counsel on the Status of CalPERS' consideration of pensionable compensation and the status of AB197 and AB340 litigation.

VI. INVESTMENT INFORMATION

A. Annual Investment Presentation, Hexavest – Nadia Cesaratto, CFA, (30 Minutes).

Nadia Cesaratto was present on behalf of Hexavest to review the firm's organization, investment results for VCERA's accounts, investment process and outlook.

No action taken.

B. Annual Investment Presentation, Walter Scott – Margaret Foley. (30 Minutes).

Margaret Foley was present on behalf of Walter Scott to review the firm's organization, investment results for VCERA's accounts, investment process and outlook.

No Action Taken.

VI. INVESTMENT INFORMATION (continued)

C. Unconstrained Bond Fund Presentation, Western Asset Management – Steve Walsh and Karlen R. Powell. (30 Minutes).

Steve Walsh, Karlen R. Powell and Mark Lindbloom were present on behalf of Western Asset Management to review the firm's organization, investment results for VCERA's accounts, investment process and outlook.

No Action Taken.

D. Consideration of the Bridgewater All Weather Fund.

1. Hewitt EnnisKnupp Memo.

Mr. Henderson left the meeting at 11:00 a.m.

After discussion, the following Motion was made:

MOTION: Mr. Towner moved, seconded by Judge Hintz, based on Investment Counsel's recommendation, to approve the funding of Bridgewater.

Staff confirmed the Chair is to execute the documents required to effectuate the funding of $250,000,000 and that it expects funding by August 1, 2013.

Motion passed unanimously. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

E. Hewitt EnnisKnupp, John J. Lee and Kevin Chen.

1. Consideration of Western Asset Management's Unconstrained Bond Fund or Consolidation.

After discussion, the following Motion was made:

MOTION: Mr. Foy moved, seconded by Judge Hintz, to transition 100% of the Western Asset Core Bond Fund to the Western Asset Total Return Unconstrained (TRU) Bond Fund.

Motion passed unanimously. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

VI. INVESTMENT INFORMATION (continued)

E. Hewitt EnnisKnupp, John J. Lee and Kevin Chen. (continued)

2. Monthly Manager Performance Report June 2013.

   After discussion, the following Motion was made:

   MOTION: Mr. Goulet moved, seconded by Ms. McCormick, to receive and file the Monthly Manager Performance Report for June 2013.

   Motion passed unanimously. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

3. Highlights and Research, July 2013.

   a. Manager Investment Guidelines.
   b. Board Retreat Agenda.
   c. Peer Performance.
   d. Walter Scott Update.
   e. Emerging Market Equities.
   f. HEK Client Webcast and Blog.

   After discussion, the following Motion was made:

   MOTION: Judge Hintz moved, seconded by Mr. Sedell, to receive and file the Highlights and Research July 2013 report.

   Motion passed unanimously. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

   Mr. Goulet will provide comments to HEK regarding the proposed investment manager guidelines before they are brought back for adoption.

   HEK and staff will proceed with the Board Investment Retreat Agenda topics and refine the break times and length.

   No action taken on the consolidation of Walter Scott and the item is no longer under consideration.

VI. INVESTMENT INFORMATION (continued)

F. Receive and File Securities Lending Times Article: "Three Custodian Banks Face Ratings Review."

1. "Three Custodian Banks Face Ratings Review."

After discussion, the following Motion was made:

MOTION: Mr. Goulet moved, seconded by Mr. Towner, to receive and file the Securities Lending Times Article.

Motion passed unanimously. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

VII. NEW BUSINESS

A. Receive and File Quarterly PAS (VCERIS) Report, Approve Project Change Orders and Approve Budgetary Adjustments for Fiscal Year 2013-14.

Henry Solis, Chief Financial Officer, Julie Stallings, VCERA Operations Manager, and Brian Colker, Linea, entered the meeting.

1. Quarterly PAS (VCERIS) Report.

2. VCERIS Change Order #3489.

3. VCERA Contract Amendment #3.

After discussion, the following Motion was made:

MOTION: Judge Hintz moved, seconded by Ms. McCormick, to receive and file the Quarterly PAS (VCERIS) Report and approve the proposed project change orders and budgetary adjustments for Fiscal Year 2013-14.

Motion passed. Mr. Goulet voting no. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

B. Receive and File the Fiscal Year 2012-13 Annual Governance Report.

After discussion, the following Motion was made:

MOTION: Mr. Foy moved, seconded by Judge Hintz, to receive and file the Fiscal Year 2012-13 Annual Governance Report.

Motion passed unanimously. Mr. T. Johnston absent. Mr. Henderson absent for this item. Mr. C. Johnston voting.

VIII. CLOSED SESSION

It is the Intention of the Board of Retirement to Meet in Closed Session to Discuss the Following Item.

A. Evaluation of a Public Employee Pursuant to the Provisions of Government Code 54957 (b); Retirement Administrator.

No Reportable Action Taken.

IX. PUBLIC COMMENT

None.

X. BOARD MEMBER COMMENT

None.

XI. ADJOURNMENT

The meeting was adjourned at 2:45 p.m.

Respectfully submitted,

Donald C. Kendig

DONALD C. KENDIG, Retirement Administrator

Approved,

WILLIAM W. WILSON, Chairman

SPECIAL MEETING

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT

August 5, 2013

MINUTES

DIRECTORS PRESENT:	William W. Wilson, Chair, Public Member Tracy Towner, Vice Chair, Safety Employee Member Steven Hintz, Treasurer-Tax Collector Peter C. Foy, Public Member Joseph Henderson, Public Member Tom Johnston, General Employee Member Deanna McCormick, General Employee Member Arthur E. Goulet, Retiree Member Chris Johnston, Alternate Safety Employee Member Will Hoag, Alternate Retiree Member
DIRECTORS ABSENT:	Mike Sedell, Public Member
STAFF PRESENT:	Donald C. Kendig, Retirement Administrator Robert Orellano, Assistant County Counsel Glenda Jackson, Program Assistant
PLACE:	Ventura County Employees' Retirement Association Second Floor Boardroom 1190 South Victoria Avenue Ventura, CA 93003
TIME:	9:00 a.m.

ITEM:

I. INTRODUCTION OF MEETING

Chairman Wilson called the Special Meeting of August 5, 2013, to order at 9:00 a.m.

II. APPROVAL OF AGENDA

MOTION: Mr. Goulet moved, seconded by Ms. McCormick, to approve the Agenda.

Motion passed unanimously. Mr. Foy absent for this item. Mr. Sedell absent.

III. PUBLIC COMMENT

None.

IV. CLOSED SESSION

Mr. Foy arrived at 9:20 a.m.

It is the Intention of the Board of Retirement to Meet in Closed Session to Discuss the Following Item.

A. Evaluation of a Public Employee Pursuant to the Provisions of Government Code 54957 (b); Retirement Administrator.

No Reportable Action Taken.

V. BOARD MEMBER COMMENT

Mr. Goulet commented that the RFP Ad Hoc Committee completed its due diligence visits and a draft of the report to the Board is in the process of being finalized. The report will be on the September 9, 2013 Disability Meeting Agenda and recommended finalists will be in attendance for presentations and interviews by the Board.

VI. ADJOURNMENT

The meeting was adjourned at 10:49 a.m.

Respectfully submitted,

Donald C. Kendig

DONALD C. KENDIG, Retirement Administrator

Approved,

WILLIAM W. WILSON, Chairman

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: INVESTMENT CONSULTANT SEARCH RESULTS

Dear Board Members:

Executive Summary

The following is an Ad Hoc Committee (Committee) analysis of the strengths and concerns of the finalists it is recommending for consideration by the Board, based on its review of the proposals, site visits, and interviews. Immediately after, is the Process History outlining the steps taken in the RFP process. Also included later in this report is a summary of finalist firm background information; information relating to the five top selection criteria of the Board, in the order of importance 1) independence, 2) manager search and evaluation capabilities, 3) asset allocation and investment policy capabilities, 4) expertise and experience of the proposed consulting team, and 5) past investment performance of the firm's institutional clients; and, fee information, primarily derived from the Cortex analysis of the proposals.

At today's meeting, each finalist will have 45 minutes to discuss its assessment of the information contained in this report, and to elaborate on its asset allocation and investment policy approach/philosophy and its manager search and selection process. The Committee will also be able to further elaborate on its findings and opinion of the firms after the finalists' presentations.

The finalists will be presenting on their general (non-discretionary) investment consulting services. The Committee explored the possibility of an Outsourced Chief Investment Officer (OCIO) arrangement (discretionary investment consulting) and found the fees to be cost prohibitive, as you will see from the fee information included later in this report as proposed by Wurts & Associates, Inc. (Wurts). For information, both NEPC, Inc. (NEPC) and Wurts have the ability to offer discretionary consulting in the future, if selected, and if the Board later decides to explore this route further. Strategic Investment Solutions, Inc. (SIS) does not and is purely a non-discretionary consulting shop, possibly arguing that it makes it the most independent of the three finalists. To their credit, Wurts made it clear that they felt that a firm could not provide discretionary consulting without substantial oversight by either another investment consultant or capable in-house investment staff.

Ad Hoc Committee Analysis of the Strengths and Concerns

As part of its due diligence efforts, the Committee felt it appropriate to outline the strengths and concerns it discerned from the proposals and its site visits to the finalists for the Board's use in its decision-making process.

NEPC

Strengths	Concerns
• 100 % investment consulting. • Ability to transition to discretionary consulting, if desired by the Board. • Good lead, Don Stracke, and co-lead, Allan Martin. • Strong leadership in the alternative investment space. • Broad employee ownership with 33 partners, and no partner with greater than 26% ownership. • Has the most large clients VCERA's size. • Has the largest number of analysts (47). • Printing department in a separate state. (lower costs) • Solid management team. • Appeared to be only finalist to use S.W.O.T. (Strengths, Weaknesses, Opportunities, and Threats) analysis in its asset allocation process. • Thorough search process approached from many angles. • Had a preferred list, and welcomed ideas from all sources. • Appears to have superior manager search capabilities. • Proactive in the search for new opportunities. • Understood VCERA's staffing constraints. • Aggregates clients for fee breaks with money managers.	• Largest firm without corporate ownership. • Printing department in a separate state. (communications and fulfillment concerns) • Different time zones for analysts. • Main office distance.

SIS

Strengths	Concerns
• 100 % investment consulting. • Pure nondiscretionary and likely the freest from potential conflicts and independence issues. • One primary office location. • Analysts and consultants in the same office, and same time zone as VCERA, likely resulting in better communication. • Appeared to be strong fee negotiators. • Independent ownership structure. • 23% owned by an employee stock ownership plan (ESOP) for smooth ownership transitions. • Capped proportional profit sharing based on a maximum earnings of $250,000 so that younger employees would be incentivized more. • Boutique firm (personalized service). • Stressed the tenet of fiduciary responsibility and appeared to have the most conviction about it. • Strong corporate culture involving all staff in the firm's success. • Succession plan in place and tested on founder/ former managing director. • Integrates asset allocation with liabilities and believes that there is more than one way to define risk (lenses and what ifs). • Utilizes Barra for risk analytics. • Includes risk analysis in a lower fee. • Utilized Blue Chip Economic Indicators (BCEI) to expand upon investment assumptions every six months. • Hires senior staff. • Best utilizers of outside resources (BCEI, eVestement Alliance, Barra, etc.). • Negotiation of fees is a big part of manager search process.	• Unable to transition to discretionary consulting, if later desired by the Board. • No separate office in the event of a catastrophic event, which could slow business resumption relative to peers. • Boutique firm (staffing size a possible concern). • Current managing director retiring in 2016.

<u>Wurts</u>

Strengths	Concerns
• 100 % investment consulting. • Ability to transition to discretionary consulting, if desired by the Board. • Best integrations of asset allocation principles into manager search results (best understood the drivers of investment performance). • 100% employee owned with more potential for internal talent development. • Previous succession plan tested from Wurts to MacLean (in 2006). • Strong lead (Scott Whalen) and co-lead team (Ed Hoffman). • Proactive in the discussion of our investment policy and the portfolio monitoring requirements stated within it. • Strong manager due diligence and documentation process (proprietary database). • Sources ideas for all areas. • Utilizes Barra for risk analytics. • Willing to utilize outside consultant for direct alternatives investing (not trying to do it all). • Access to OCIO research. • Boutique culture. (high quality service, good staffing and potential for success).	• Support staff/analyst communication skills. • Believed that fewer asset allocation studies were appropriate (every 3 to 5 years) but would do it every three years, if asked. • Fees. • Most concentrated ownership structure of the three finalists, with only 7 shareholders.

Process History

Date	Action
7/2/12	• Trustee Towner requested Board to consider issuing RFP for non-discretionary or discretionary investment consulting services. Request continued to 2/4/13.
2/4/13	• Board authorized hiring Cortex to assist in search for non-discretionary or discretionary investment services. Contract not to exceed $29,500. • Ad Hoc RFP Committee (Committee) created and delegated responsibility for approving final RFP, evaluating proposals, and selection of finalists. • Trustees Foy, Goulet and C. Johnston appointed to Committee. • Quiet period established for duration of RFP process.
4/26/13	• After receipt of 10 proposals, the Committee decided to have Cortex analyze 9 proposals, rather than 7, as provided in the original contract, at an additional cost of $2,500. These were from Hewitt EnnisKnupp (HEK), Meketa Investment Group (Meketa), Milliman, Inc., NEPC, Inc. (NEPC), Pension Consulting Alliance, Inc., Russell Investments, Segal RogersCasey, Strategic Investment Solutions, Inc. (SIS), and Wurts & Associates, Inc. (Wurts). • Northern Trust was dropped from further consideration because the Committee felt it did not appear to meet the Board's criteria.
6/10/13	• After reviewing the Cortex analyses, the Committee selected Meketa, NEPC, SIS, and Wurts as the firms to be considered as preliminary finalists. • HEK was not selected for further consideration due to recent organizational and business model changes.
6/17/13	• Board authorized due diligence site visits by the Committee and selected staff to the home offices of the preliminary finalists, and to any California offices deemed necessary.
July	• During July, Trustees Goulet and C. Johnston, Board Counsel Nemiroff, and Retirement Administrator Kendig conducted the due diligence visits.
7/22/13	• The Committee met, selected NEPC, SIS, and Wurts to be presented to the Board as finalists, and outlined finalist strengths and concerns.

Finalist Backgrounds

The finalists are well established, with over 15 years of experience (SIS the youngest at approximately 19 years) and all are clearly of institutional quality by client base and able to accommodate VCERA's asset size.

NEPC is the largest of the three finalists in terms of assets under management, and Wurts is the smallest, claiming boutique consulting firm status. SIS also claims to be of a size comparable to other boutique consulting firms in the industry.

Background	NEPC	SIS	Wurts
Year Founded or Established	1986	1994	1986
Founders	Richard Carlton	Michael Beasly & Barry Dennis	William Wurts & Howard Johnson & Company
Number of Full Service Institutional Clients	296	33	121
Assets Under Advisement ($ Billion)	$468	$433	$42
Number of 1937 Act Clients	2	6	5
Clients by Size:			
Under $1 B	198	10	112
$1 - 10 B	95	14	9
$10 - 25 B	1	4	0
Over $25 B	2	5	0
Clients by Type:			
Public Pension Clients	56	16	8
# of Public Pension Clients with Assets > $1 B	*33*	*15*	*2*
Corporate	95	8	29
Unions/Taft-Hartley	49	0	45
Endowments, Foundations, Hospitals	83	5	23
Other (Non-Profits, Specialty, Financial, Etc.)	13	4	16
Clients by Length of Service:			
Less than 1 Year	7%	6%	0%
1-5 Years	36%	18%	38%
5-10 Years	27%	21%	25%
Over 10 Years	29%	55%	38%
Over 5 Years	*56%*	*76%*	*63%*
Client Terminations:			
Institutional Terminations in Last Three Years	22	6	10
Total Value of Terminations ($ Billion)	Not Disclosed	$210.8	$0.8
Number as a % of Total Institutional Clients	7%	18%	8%
Values as a % of Total Institutional Clients	N/A	49%	2%

Selection Criteria

As part of the investment consultant search activities, the Board retained the services of Cortex, who surveyed trustees, Board Counsel, and key staff in order to rank the level of importance each person placed on various attributes of an investment consulting relationship. The top five selection criteria of the Board, in the order of importance, are independence, manager search and evaluation capabilities, asset allocation and investment policy capabilities, expertise and experience of the proposed consulting team, and past investment performance of the firm's institutional clients.

Independence Criteria

None of the finalist firms reported having arrangements with broker-dealers or accepting brokerage commissions or soft dollars as payment and only one finalist firm indicated that it provides services to investment managers; NEPC provides consulting services to three corporate plans whose parent or subsidiary organizations are in the financial services industry.

The following statistics demonstrate subtle differences in independence.

1. Independence Criteria	NEPC	SIS	Wurts
Ownership Structure	100% owned by 33 partners with no single partner holding more than 30%.	100% owned by 17 employees, & 1 employee stock ownership plan at 22.6%, with no single employee holding more than 30%.	100% owned by 7 employees, with Jeffry MacLean at over 65%, and the 6 others less than 10%.
Subsidiaries or Affiliates	None	None	KEI Investments formed in 2012 to provide discretionary investment advice.
Investment Consulting as a Source of Revenue	100%	100%	100%
General Investment Consulting	96%	100%	90.9%
Discretionary Consulting Relationships	4%	0%	9.1%

In addition to the statistics provided on the previous page, two of the finalists made supplemental disclosures on their ADVs[1] concerning activities or affiliations that could pose actual or potential conflicts of interest.

[1] Form ADV is the uniform form used by investment advisers to register with both the Securities and Exchange Commission (SEC) and state securities authorities.

NEPC: In addition to fixed, hourly and asset-based fees, NEPC offers Liability Driven Investment (LDI) related performance fees. These fees tie compensation to success in closing the gap in a client's funded status. The fee schedule is agreed upon prior to NEPC's retention and is specified in each applicable client contract. Performance-based fee arrangements may create an incentive for NEPC to recommend investments which may be riskier or more speculative than those which would be recommended under a different fee arrangement. NEPC has procedures designed and implemented to ensure that all clients are treated fairly, and to prevent this potential conflict from influencing the allocation of investment opportunities among clients.

Wurts: a) KEI is an affiliated company that was formed to help differentiate the service product of the Strategic Partnership Program and create a retention strategy and ownership stake for key employees linked to the success of that entity. Wurts selects managers for its clients and KEI will manage client portfolios. This may create a conflict of interest. Wurts has responded to this potential conflict by creating policies and procedures to ensure that KEI services is not actively marketed to existing clients and all existing clients that select KEI as their investment advisor or money manager will be required to acknowledge in writing that the engagement was a result of a reverse inquiry on their part. b) While the majority of Wurts' clients select their brokers or custodians, Wurts will recommend a custodian or broker dealer based on the client's need for such services. Wurts recommends broker dealers and custodians for its discretionary clients. but does not accept commissions, soft dollars or any direct or indirect compensation in connection with client transactions.

Manager Search and Evaluation Capabilities Criteria

While all finalists provide dedicated full-time staff for manager research, the statistics that follow yield subtle differences.

2. Manager Search and Evaluation Criteria	NEPC	SIS	Wurts
Provides Dedicated Full-Time Group for Manager Research	Yes	Yes	Yes
Number of Research Staff Dedicated to Each of the Following Asset Classes:			
Public Markets	12	12	13
Private Equity (P/E)	9	7	5
Real Estate (R/E)	3	2	4
Infrastructure	9 (Same 9 for P/E)	1 (One of the two in R/E)	Shared by R/E and P/E resources
Hedge Funds	16	1	3
Other Alternative Asset Classes	Included above	1	4

2. Manager Search and Eval. Criteria (cont'd)	NEPC	SIS	Wurts
Number of Searches Conducted			
Number of Manager Searches last 3 Years	1,688	172	350
Domestic Equities	221	18	10
Domestic Fixed Income	174	14	104
International and Global Equities	327	25	63
Global Bonds	182	4	8
Alternative Assets	591	87 Individual 3 Fund-of-Funds	30 Individual 6 Fund-of-Funds
Real Assets	61	14 Individual 1 Fund-of-Funds	15 Individual
Synthetic Strategies	132	0	0
Other	0	6	17
Starts Searches from Scratch or Maintains a List of Preferred Managers	Recommend managers from Focused Placement List based on their fit with the client's goals and objectives, determined through interactions with client.	Starts from Scratch utilizing eVestment Alliance	They develop list of recommended mgrs.

In addition to the above statistics, the following are brief summaries of the finalists' manager search and evaluation approaches, which are best elaborated upon by the finalists during their presentations.

<u>NEPC Approach</u>: A continuous ongoing process to identify top-tier managers:
• Screening of internal & external databases based on client/NEPC search criteria, and identification of any issues of concern. • Review and analysis of performance, alpha & style. • Meeting with managers to assess investment team, business focus, investment philosophy, consistency of style, return attribution, and investment process. • Vetting by Due Diligence Committee of consultants & partners before manager is added to Focused Placement List.

<u>SIS Approach</u>: A search process from scratch using third party databases to identify the universe, screening the universe based on client-specific criteria. They then rank/screen managers based on a few common criteria and rank managers based on risk parameters through return-based analysis in early stages of search and holdings -based analysis in later stages. The remainder of the process used in hiring a mgr. is qualitative. RFP process includes following phases: Establish manager structure &

benchmarks, Establish RFP criteria & candidates, Review RFP submissions, Full Due-Diligence Review, Finalist presentations, Finalist Negotiations.

Wurts Approach: Three steps: 1) Initial database screening on basic criteria such as minimum assets & performance, and to rule out managers for recent organizational & staff changes, style drift, excessive asset growth or loss, unreliable performance. 2) Analysis & due diligence based on: people, philosophy, process, performance, and price. 3) Application of macroeconomic framework geared towards making educated estimations of future manager performance - rather than just past performance against a benchmark.

Asset Allocation and Investment Policy Capabilities Criteria

Asset allocation and investment policy capabilities are another aspect of the consultants that are best expressed during the finalist presentations. The following are brief summary statistics as a starting point for consideration and discussion.

3. Asset Allocation and Invstmnt Policy Criteria	NEPC	SIS	Wurts
Number of Years Conducting Asset Allocation Studies for Pension Plans	27 Since Inception	19 Since Inception	27 Since Inception
Number of Studies in Past Three Years	72	70	146
Studies Based on Both Assets and Liabilities or Assets Only	Yes. Both.	Yes. Both.	Yes. Both.
Modeling of Assets and Liabilities	Stochastic modeling of both assets and liabilities with deterministic scenario analysis.	Asset allocation process is stochastic with respect to both assets and liabilities.	For assets, both stochastic and deterministic forecasts. For liabilities, only deterministic forecasts provided by plan's actuary.

Brief narratives of the finalists' modeling approaches and the components and steps involved in the modeling process follow. This is another good area for further elaboration by the finalist firms during their presentations and the Committee members who met with them.

3. Asset Allocation & Invstmnt Policy (cont'd)	NEPC	SIS	Wurts
List the various steps or components of the asset allocation model (e.g. mean variance optimization, projection of liabilities, multiperiod simulation, etc.). Components of asset allocation model developed internally or licensed from third-party vendor(s)	Morningstar/ Ibbotson Encorr for mean-variance optimization (effic. frontier modeling). WinTech ProVal for asset-liab modeling. Internally developed proprietary models for scenario and liquidity analysis, risk budgeting, etc.	Have found third-party tools to be inadequate, so SIS developed/ maintains own asset allocation & liability models. SIS' asset modeling programs (OPTIMIZE, DBSim, and FPM) were developed by Lou Kingsland (Chairman of Investment Pol. Committee)	Internally developed capital market assumptions. Ibbotson for mean variance optimization model. Internally developed Macroeconomic Scenario Analysis.

Expertise and Experience of the Proposed Consulting Team

The following two tables summarize the firm and its offices, the breakdown of professional staff, and the lead consultant background.

4. Expertise and Experience Criteria	NEPC	SIS	Wurts
Number of Offices	7	2	2
Head Office - Employee Count	Cambridge - 162	San Francisco - 28	Seattle - 37
Office to Serve VCERA - Employee Count	Redwood Cty - 9 Cambridge - 162	San Francisco - 28	El Segundo - 13
Other Office Locations	Atlanta, Chicago Charlotte, Detroit, & Las Vegas	Chicago	N/A
Breakdown of Professional Staff:			
Total Number of Professional Staff	218	29	50
Senior Consultants	29	7	10
Consultants	20	6	9
Analysts (Research, Economics, Etc.)	110	14	17
Firm Management	33*	1	5
Marketing	4	0	2
Technical/Systems	9	Outsourced	2
Ratio of Clients to Professional Staff	1.4	1.8	2.7
Ratio of Support Professionals to Consultants	2.5	1.1	1.1

4. Expertise and Experience Criteria (cont'd)	NEPC	SIS	Wurts
Number of Staff with Professional Designations			
Certified Financial Analysts (CFA)	38	9	14
Chartered Alt. Investment Analyst (CAIA)	31	2	5
Fellow of the Society of Actuaries (FSA)	1	0	0
Other Professional Designations	75	2	15
Types of Other Professional Designations	Advanced Degrees	CIPM (1), FRM (1)	MBA (13), PhD (2)
Proposed VCERA Team			
Lead Consultant(s)	Don C. Stracke, CFA	Pete Keliuotis, CFA	Scott Whalen, CFA
Support Consultant(s)	Allan C. Martin	Patrick Thomas, CFA, John Nicolini	Ed Hoffman, CFA Herbert Nishii - Special Rpts.
Analyst(s) - Sans Designations	Anthony Ferrara		Justin Hatley - Perf. Rpts. Elena Solovyeva - Research
Other Team Member(s) - Sans Designations	Erik Knutzen - Chief Invstmnt Officer, Daniel Kelly - Chief Operating Officer, Mike Manning - Managing Partner, Sean Gill - Alternatives	Stephen Quirck - Asset Liability, Deborah Gallegos - Research, Anne Ward - Performance, Curt Smith - Private Equity, Steve Masarik - Alternatives	Supported by resources in portfolio analytics and manager and capital markets research.
Lead Consultant Background			
No. Yrs. Institutional Investment Experience	28	24	11
No. Yrs, Investment Consulting Experience	10	21	11
No. Yrs. With the Firm	3.7	12	11
Educational Qualifications	CFA, MBA Rutgers University	CFA, MBA Univ. of Chicago, BA Univ. of Illinois	CFA, MBA USC, BA Wake Forest Univ.
No. of Accts. Lead has Primary Responsibility	3	5	7

* Firm Partners

<u>Past Investment Performance of the Firm's Institutional Clients</u>

Please exercise caution when considering past investment performance because other than the age old disclosure that past performance is not an indication of future performance, it can be misleading. As noted by Cortex, "we believe the data are insufficient to draw meaningful conclusions, given the limited sample size and other issues. Several of the consultants also suggested that it is difficult to attribute all or even the major part of a client's investment performance to the investment consultant, given that the consultant has no discretion over key investment decisions, and that there are often a number of other parties or factors that influence the investment decision-making process (including trustees, staff, specialty consultants, state investment restrictions, active/ passive management policies, and clients' risk tolerance levels to name a few)."

The following two tables summarize the five year performance information requested as part of the RFP process and the June 30, 2013 one year performance of the 1937 Act clients for which the finalists consult.

5. Past Investment Performance Criteria	NEPC	SIS	Wurts
Clients meeting the specifications: 5-yr period	Not Provided	10	*
ending December 30,2012 of their general			
investment consulting, full service retainer			
clients (public & corporate) between $1-10 B			
Total Assets Represented ($ Billion)	Not Provided	$19.1	*
Average Total Fund Return (gross of fees)	3.65%	2.62%	*
Average Asset Mix Policy Return	3.30%	2.04%	*
Average Excess Return	0.35%	0.58%	*
Average Volatility (Standard Deviation)	11.98%	12.95%	*
1937 Act Client June 30, 2013 1 Year Performance			
San Bernardino	15.05% net		
Orange County	10.14% net		
Alameda		15.22% net	
Merced		11.91% net	
Sacramento		12.93% net	
San Joaquin		9.62% net	
San Mateo		13.66% net	
Stanislaus		14.6% gross	
Fresno			11.7% net
Imperial			11.8% net
Kern			10.6% net
San Diego			N/A**
Tulare			11.1% net

* Wurts responded that providing performance figures for non-discretionary mandates can be misleading and disingenuous for a variety of reasons; i.e., because of no discretionary authority, and implementation might not be timely. Also, different clients have different liability structures and investment objectives.

** Just acquired client. Performance not applicable.

Fee Information

While not listed as one of the top five criteria for consideration, fee information is pertinent in the determination of relative value, and the weighing of the quantitative costs of qualitative services offered. Also, as you will see, the one finalist with a discretionary consulting option, Wurts, provides a fee quote that the committee believes disqualifies discretionary consulting from further consideration at this time.

Fee Criteria	NEPC	SIS	Wurts
Bid on Nondiscretionary	Yes	Yes	Yes
Bid on Discretionary	No	No	Yes
Could Provide Discretionary Services	Yes	No	N/A
Year 1 Nondiscretionary Fee	275,000	250,000	395,000
Avg Ann Nondiscretionary Fee	291,600	270,000	403,000
All inclusive fee	Yes	Yes*	Yes
Est. Year 1 Discretionary Fee**	N/A	N/A	6,125,000
Est. Avg Ann Discretionary Fee**	N/A	N/A	6,564,649

* Fees for a direct investment model within the alternative investment area would be negotiated.

** 17.5 basis point (bps) weighted average fee based on $3.5B in Assets Under Management (AUM). Average would decrease as AUM increases and vice versa. Est. Avg. Ann. Discretionary Fee assumes a 7.75% growth in assets year over year, and an Avg. AUM of $4.086B and 16.06 bps fee. There is also the potential for an approximate 20% discount on the above calculated fees, resulting in a starting fee of approximately $5 Million. Wurts also provides a lower performance based discretionary consulting fee, which adds the risk of higher fees during good market performance periods, which may have little to do with the quality of the consulting.

Committee members, Ms. Nemiroff and I would be happy to answer any questions you may have and welcome any discussion of potential candidates.

Sincerely,

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

VCERA
Ventura County Employees' Retirement Association

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

Investment Consultant Presentation

STRATEGIC INVESTMENT SOLUTIONS, INC.

333 Bush Street, Suite 2000
San Francisco, CA 94104
(415) 362-3484

Table of Contents

Our Company

- San Francisco Based Firm; Founded in 1994
- 100% Independent
- Pure Consulting Model: No Conflicts of Interest
- 30 Employees; 28 Investment Professionals
- 33 Retainer Clients: Sophisticated Institutional Investors
- Financially Strong Organization
  - Revenues and Earnings at All-Time Highs
- Same Business and Consulting Philosophies Since Inception:
  - Serve Clients with Integrity
  - Foster Intellectual Freedom
  - Team Focus
  - Support Recommendations with Research

Key Points That Differentiate SIS

- Focus on working with sophisticated institutional investors (average client assets $16 billion, median assets $5 billion)
- Controlled growth
  - Focus on what we do best for our clients
  - All clients receive equivalent care and resource allocation
- Experienced professionals at all levels of the investment process: senior-level VCERA Relationship Team
- Stable organization and client base
- Widely distributed, meaningful ownership stakes
- No conflicts of interest

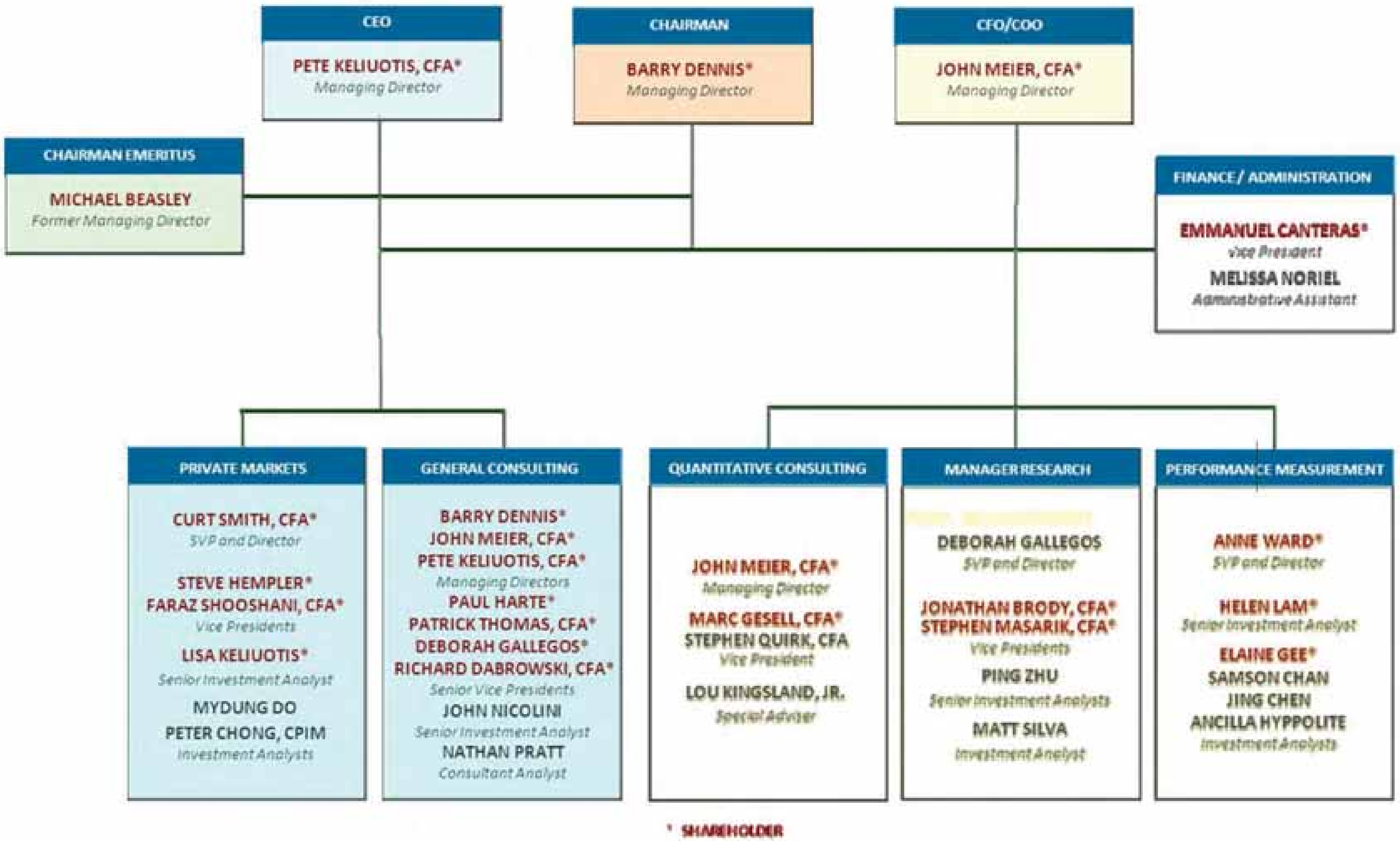
Our Areas of Focus

- Strategic Planning
  - Asset allocation, capital markets, asset/liability relationships
  - Manager structure
- Manager Research
  - Experienced team brings greater perspective
  - Focus on providing value added research
- Cost Control
  - Fee negotiations
  - Eliminating redundancies
  - Effective use of passive techniques
- Risk Management
  - At all portfolio levels
  - The human element

Customized Solutions for Clients

- No silver bullet in investments – many ways to succeed given discipline and creativity
- No “model portfolio” imposed on our clients – unique client preferences / objectives drive recommendations
- Apply creative thinking to unique client circumstances
- Leverage market knowledge, experience, and relationships for the benefit of all clients

Our Organization



VCERA Relationship Team

CO-LEAD CONSULTANTS

- **PETE KELIUOTIS, CFA** *Managing Director/CEO.* He is responsible for all aspects of client service and client development, investment strategy, and global manager research. Prior to joining SIS, Pete was a Senior Consultant and Principal in the Chicago office of Mercer Investment Consulting, Inc. He has 24 years of institutional investment experience, and has assisted public, corporate, foundation/endowment, and Taft-Hartley funds in the development of investment policy guidelines, asset allocation, investment manager selection, and performance measurement. Pete earned a B.A. in Economics from the University of Illinois at Urbana-Champaign and an M.B.A. in Analytic Finance and Accounting from the University of Chicago. Pete is a CFA Charterholder and a member of the CFA Society of San Francisco.

- **PATRICK THOMAS, CFA** *Senior Vice President.* He is primarily responsible for general consulting, investment strategy and global manager research at SIS. Started career as floor broker for Merrill Lynch on options exchange in San Francisco. From 1992 to 1996, he served as Senior Analyst for McKesson Corporation and was responsible for all aspects of portfolio analysis of the company's combined $1.2 billion Retirement Plans, ESOPs and Foundation. Patrick earned his Bachelor of Arts degree in English from the University of California at Berkeley and his M.B.A. from Georgetown University. He is a member of the CFA Society of San Francisco.

SUPPORT CONSULTANT

- **JOHN NICOLINI, CFA** *Vice President.* He is responsible for SIS' real assets research effort and works with a number of clients in general consulting. John is responsible for manager due diligence, manager monitoring, general consulting and client search activity. Prior to joining SIS in 2010, John worked in the manager research group at Highland Associates in Birmingham, Alabama. John was responsible for the firm's equity and fixed income manager research and monitoring. John has a Bachelor of Science degree in Finance from Auburn University.

ASSET/LIABILITY MODELING CONSULTANT

- **STEPHEN QUIRK, CFA** *Vice President.* He has been in the financial services industry since 1995. Previously, he managed emerging manager portfolios and led the Risk Management Group at Progress Investment Management Company. Prior to that, he was an investment data analyst at MSCI Barra, Inc. Within SIS's Quantitative Consulting Group, Stephen assists with strategic planning, asset allocation and liability modeling studies, manager structure studies, quantitative analysis of client portfolios, and manager research. He has a BS in Finance from Siena College, and is a CFA Charterholder and a member of the CFA Society of San Francisco.

MANAGER RESEARCH CONSULTANT

- **DEBORAH GALLEGOS** *SVP and Director of Investment Manager Research*. Most recently Chief Investment Officer of the New York City pension systems. Supervised City's five pension systems totaling $90 billion in assets. Former Deputy State Investment Officer for the New Mexico State Investment Council. Served as Vice President at JP Morgan Fleming Asset Management in New York City, where she worked for its Global Emerging Markets Fund, and associate at Morgan Stanley & Company's Latin America equity research group. MBA in Finance and BA in Political Economy from the University of California, Berkeley.

VCERA Relationship Team

PERFORMANCE MEASUREMENT CONSULTANT

- **ANNE WARD** *Director of Measurement Systems*. Twenty-four years of investment experience. Formerly Portfolio Manager for Wells Fargo Nikko, handling passive domestic non-S&P 500 equity index strategies for commingled funds. Served as Perform-ance Analyst for Harris Bretall Sullivan & Smith. Brought Harris Bretall's 22-year old measure-ment systems and historical data up to speed with AIMR reporting standards. B.S. Accountancy, University of Illinois—Urbana. MBA in Finance, University of San Francisco.

PRIVATE EQUITY CONSULTANT

- **CURT SMITH, CFA** *Senior Vice President.* Curt is responsible for SIS' private equity investments, including venture capital, buyout, distressed securities, and other funds. As a dedicated private markets consultant, he provides client-specific portfolio structuring and has been performing manager due diligence since 1989. Curt is a member of the CFA Institute and is Past President of the CFA Society of San Francisco (where he teaches the Level II Ethics course for CFA candidates). He earned degrees in Business and Economics and History from Beloit College and an M.B.A. from the University of San Francisco.

HEDGE FUNDS/ALTERNATIVES CONSULTANT

- **STEVE MASARIK, CFA** *Vice President.* Responsible for traditional and alternative investments manager research. He has 11 years of investment experience, most recently as a senior research analyst for the fiduciary consulting firm of Alan Biller & Associates. Steve served as a retail broker for TD Waterhouse and Quick & Reilly. He obtained his M.S. in Finance from DePaul University's Kellstadt Graduate School of Business and his B.B.A. degree from University of Kentucky. Steve is a CFA Charterholder and Chartered Alternative Investment Analyst.

Comments on Staff Report

- Accurate in all important respects
  - SIS most independent and conflict-free
  - Managed growth – limited number of sophisticated clients
  - Passion for fiduciary duty/service
  - “Top-heavy”: highly experienced/committed professional staff
  - Senior team assigned to serve VCERA; has worked closely together for over 12 years

Risk Budgeting

- Asset Allocation/Asset Liability Modeling
  - Identify sources of risk within a mix and asset classes
  - Investigate appropriate asset classes
  - Economic scenario impact on asset mix alternatives
  - Develop mixes that appropriately balances risks
- Manager Structure
  - Manager structure is an active risk budgeting process
  - Each manager's contribution to asset class risk is estimated and balanced

Asset Allocation/Asset-Liability Modeling

- Sophisticated proprietary modeling capabilities designed by John Meier and Lou Kingsland, Jr.
- Customized for each application
- Innovations:
  - Effects of illiquidity
  - Fat tails and skewness
  - Auto-correlated inflation/cash/bond return simulations
  - Thoughtful decision techniques

Asset Allocation/Asset-Liability Modeling

- A Dynamic Process Designed to Enhance the Long-Term Return and Risk Profile of a Multiple Asset Class Portfolio
- Portfolio Management at its Highest Level
- Risk Management at its Most Fundamental Level
- Greatly Impacts the Long-Term Level and Variability of Total Fund Returns
- Dependent Upon a Rational Interpretation of Existing Capital Market Risk and Return Characteristics
- **Goal of VCERA**: To Achieve the Systematic Construction of a Total Fund Portfolio Consistent with the Investment Objective of Maximizing the Expected Return for the Chosen Level of Risk

Asset /Liability Risk Reward Analysis

- Key Variable – Ultimate Net Cost
  - Definition – Net Present Value of Contributions made over the planning horizon plus the Net Present Value of any unfunded liability at the horizon
  - Planning Horizon: 5-7 Years
  - Reward Definition – When comparing two mixes, the reduction in Ultimate Net Cost at the Median (Expected Level)
  - Risk Definition – When comparing two mixes, the increase in Ultimate Net Cost at some poor outcome, 95^{th} (1 in 20) or 99^{th} (1 in 100) percentile
  - Favorable Risk/Reward tradeoff when Reward (reduction in expected costs) is greater than Risk (increase in costs in adverse markets)
  - Unfavorable Risk/Reward tradeoff when Reward (reduction in expected costs) is less than Risk (increase in costs in adverse markets)

Capital Markets Process

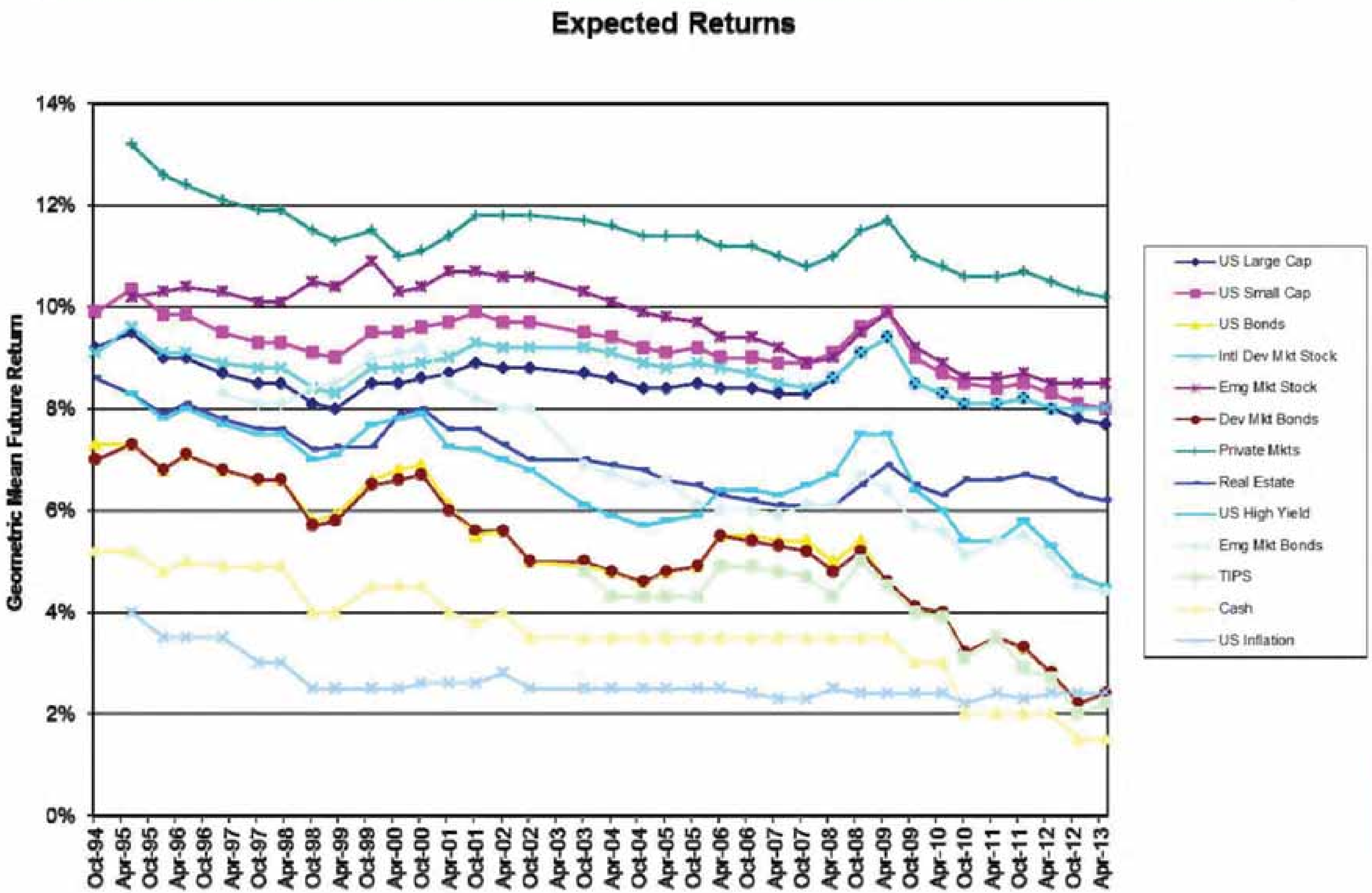
- Well-established process executed every six months.
- Returns:
  - Long-term real return corridors combined with mean reversion using dividend discount approach.
  - Building block approach starting with inflation expectation (TIPS breakeven and economic forecasts) and yield-to-worst for fixed income.
  - Capital Asset Pricing Model (CAPM) used to forecast “difficult” asset classes.
- Risk estimates use a two-factor model approach emphasizing recent past.
- Correlation estimates – Single factor model emphasizing recent past.

Result: Long-term value added of 35-75 bps annually depending on risk structure of the portfolio.

SIS Capital Market Expectations (5/15/13)

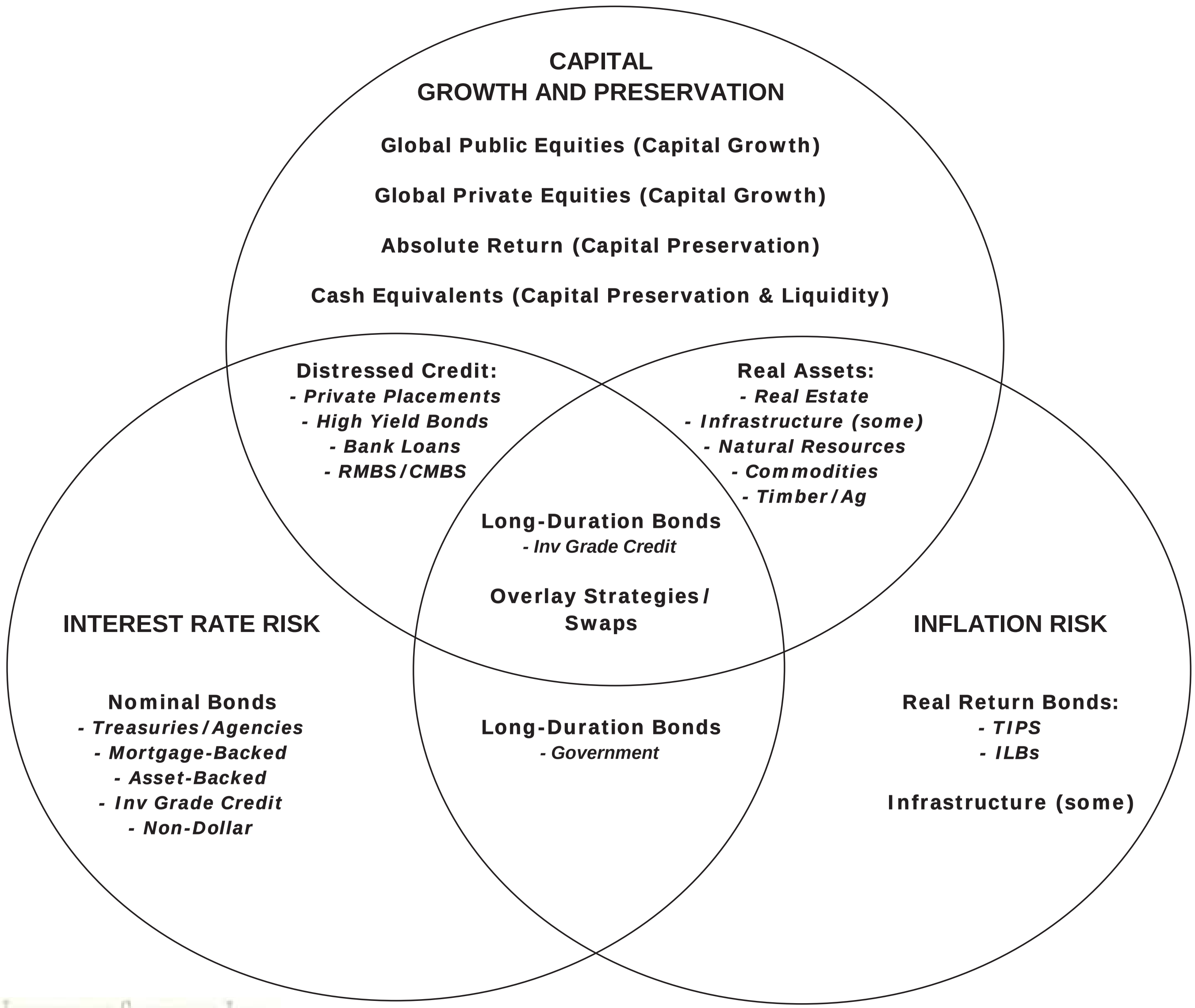
	Expected Return	Standard Deviation	Sharpe Ratio
U.S. Inflation	2.4%		
U.S. Large Cap Stock	7.7%	17.5%	0.354
U.S. Small Cap Stock	8.0%	20.0%	0.325
U.S. Fixed Income	2.4%	5.0%	0.180
Int'l Develop Mkt Stock	8.0%	20.0%	0.325
Emerging Mkt Stock	8.5%	29.0%	0.241
Int'l Fixed Income	2.4%	9.0%	0.100
Private Markets	10.2%	33.0%	0.264
Real Estate	6.2%	18.0%	0.261
U.S. High Yield	4.5%	11.0%	0.273
Emerging Mkt Debt	4.4%	10.0%	0.290
U.S. TIPS	2.2%	4.5%	0.156
Int’l ILB	2.2%	4.0%	0.175
Floating Rate Bank Loans	4.1%	7.5%	0.347
Infrastructure	6.5%	24.0%	0.208
Hard Asset Equity	7.3%	28.0%	0.207
Commodities	4.0%	30.0%	0.083
Hedge Funds	4.9%	10.0%	0.340
Cash	1.5%	1.0%	0.000

Historical SIS Expectations



STRATEGIC INVESTMENT SOLUTIONS, INC.

Asset Classes and Hedging Risk



STRATEGIC INVESTMENT SOLUTIONS, INC.

VCERA – Projected Results

VCERA Optimal Portfolios

		Expected		Current	Annual	Holding Period	Current	Limits		Asset Mix Alternatives	
Asset	Gm Mean	Ar Mean	Std Dev	Yield	Turnover	(Years)	Mix	Min	Max	1	2
US Lrg Cap	7.70%	9.10%	17.50%	2.10%	5.00%	1	35.00%	0.00%	100.00%	21.10%	21.48%
US Sml Cap	8.00%	9.80%	20.00%	1.30%	15.00%	1	4.00%	0.00%	100.00%	2.34%	2.39%
US Fixed	2.40%	2.52%	5.00%	2.40%	20.00%	1	25.00%	0.00%	100.00%	31.22%	29.15%
Intl Stock	8.00%	9.81%	20.00%	3.60%	10.00%	1	16.00%	0.00%	100.00%	17.82%	18.14%
EM Stock	8.50%	12.17%	29.00%	2.80%	15.00%	1	5.00%	0.00%	100.00%	5.63%	5.73%
Real Est	6.20%	7.73%	18.00%	2.40%	0.00%	4	10.00%	0.00%	100.00%	11.14%	12.37%
Priv Eqty	10.20%	14.68%	33.00%	0.00%	10.00%	10	5.00%	0.00%	100.00%	10.76%	10.74%
Totals							100.00%			100.00%	100.00%
Median							7.11%			7.09%	7.18%
Gm Mean							7.13%			7.13%	7.22%
Ar Mean							7.93%			7.89%	8.01%
Std Dev							13.28%			13.02%	13.28%
Skewness							0.08			0.19	0.18
Kurtosis							0.05			0.33	0.30
Lambda										1.31%	1.27%

Assumed optimization time period is 10 years.

Manager Structure Principles

- Implementation of Asset Allocation
- Objectives: Diversification and **Risk Control**
- Risk Management/Budgeting Approach
- Combination of Active and Passive Styles
- Index Funds Will Generally Be Median Performers in Appropriate Peer Groups
- Fewer Managers Is Better, But "Manager Specific Risk" Must Be Monitored
- Diversify Managers Across Investment Styles and Risk Profiles
- Maintain Style Neutrality Over Time
- Be Opportunistic

Manager Structure Example: US Equity

Benchmark selection is key; we believe the Russell 3000 is appropriate due to its breadth, representativeness, and is widely used.

These sub-categories represent the "Russell 6 Corners," which we believe is the best way to represent the various domestic equity sub-categories

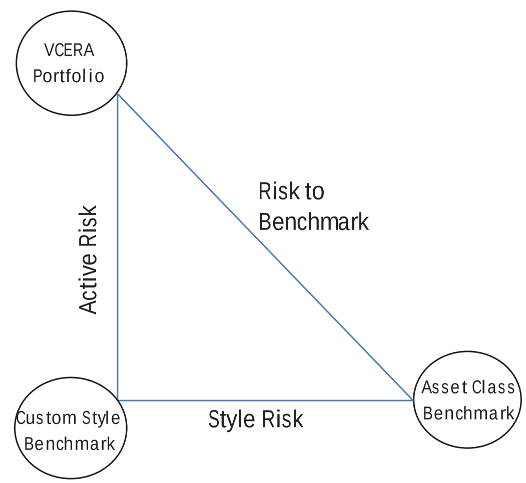
ASSET CLASS SUB-CATEGORY	Russell 3000 Index	US Equity Structure
US Large Cap Growth	31.5%	28.4%
US Large Cap Value	31.5%	24.7%
US Mid Cap Growth	13.5%	15.6%
US Mid Cap Value	13.5%	16.5%
US Small Cap Growth	5.0%	8.1%
US Small Cap Value	5.0%	6.7%
Total	100.0%	100.0%

In this example the US equity structure has an underweight to Large Cap, and overweights to Mid Cap and Small Cap, vs. the benchmark. It also has an overweight to Growth vs. Value.

These structural differences introduce Style Risk.

Style Risk	1.12%
Active Risk	0.94%
Risk to Bench	1.46%
Alpha	0.86%
Information Ratio	0.587

Our goal is to minimize Style Risk vs. Active Risk while maintaining an attractive level of Alpha . This will produce a higher Information Ratio (alpha per unit of risk).



Definitions
Style Risk: risk due to structural differences between the portfolio and benchmark (i.e. overweight to small cap or value.
Active Risk: risk due to portfolio holdings being different than benchmark after controlling for style risk (this is also referred to as "Tracking Error").
Risk to Benchmark: the geometric sum of these two sources of risk.
Alpha: risk-adjusted excess return over benchmark. This represents manager skill.
Information Ratio: the ratio of Alpha over Risk to Benchmark; the higher the IR, the more "efficient" the portfolio.

Manager Structure Example: US Equity

MANAGER EVENT RISK: US EQUITY PORTFOLIO

	US Eq Port Weights (%)	$ Weights	MER ($)	% of Total MER
Passive Large Cap	36.9%	579	0.0	0%
Enhanced Large Cap	5.2%	81	3.2	3%
Low TE* Large Value	6.8%	107	4.5	5%
High TE* Large Value	10.7%	167	20.0	22%
Low TE* Large Growth	7.6%	119	9.0	10%
High TE* Large Growth	10.3%	161	19.1	21%
Small Cap Value 1	5.4%	85	10.4	11%
Small Cap Value 2	2.7%	42	4.9	5%
Small Cap Value 3	3.1%	49	3.7	4%
Small Cap Growth 1	5.6%	88	12.0	13%
Small Cap Growth 2	5.7%	90	7.7	8%
Total	100.00%	$1,568	$92.7	100.00%

* TE denotes Tracking Error

This indicates the degree to which individual portfolios have a greater or lesser contribution to asset class volatility than would be indicated only by their $ allocations.

Our goal is to avoid having a single active portfolio "dominate" asset class risk by having a large % of total MER. By the same token, asset classes can be over-diversified across too many managers.

Note that this overstates the asset class MER because it assumes all portfolios would experience a 2-Standard Deviation event simultaneously.

Manager Event Risk Definition: MER is a measure of the contribution to the risk of a broad asset class by a single manager. MER = ($ in portfolio) X (2 x Tracking Error). The larger a manager's portfolio and higher its Tracking Error, the higher the MER.

The purpose of providing an MER estimate is to show whether any single portfolios may have a disproportionate effect on the variability of the broader asset class or, conversely, whether the asset class may be overly diversified.

Manager Research & Selection

- Most manager data has become commoditized. The ability to *interpret* what a manager is telling us is our value proposition
- Our long history with managers is an invaluable resource
  - Consultants are involved in all aspects of manager research
- SIS hires experienced professionals and expects critical thinking
- Research efforts are focused on relevant characteristics and differentiating factors
- Manager research opinions are for clients – not managers
- Flexible Manager Search process
  - Incorporates client specific objectives
  - Invites client input into the process

Manager Research & Selection

- Army of Analysts Can’t Match Experienced Professionals
- Multiple Outsourced Databases
  - eVestment Alliance
  - MPI
  - Morningstar Direct
  - State Street/ICC
- Focus on Managers With:
  - Demonstrated Competitive Advantages
  - Alignment of Interests with SIS Clients
- Research
  - Manager Research in Public & Private Markets
  - Excess Long-Term Returns
  - 485 Searches / $117 Billion Assets Placed Since Inception
  - Proprietary Internal Database

Manager Research & Selection

- Key Quantitative Criteria:
  - Attractive long-term risk/reward characteristics
  - Critical mass of assets to minimize business risk
  - Portfolio concentration and liquidity
  - Style and fit with desired characteristics
  - Competitiveness of Fees
- Key Qualitative Criteria:
  - Theoretically sound investment process
  - Proven and repeatable application of process
  - Proper financial incentives for team members
  - Team depth and stability
  - Experience serving institutional investors
  - Understanding of VCERA policies and guidelines

Private Markets Consulting

- Private Markets Consulting Since SIS Inception in 1994
  - Exclusive Focus on Non-Discretionary Consulting Services
  - Able to Look at Private Markets within a Total Fund Context
  - Can Assist with Private Markets Portfolio Management
- Experienced Team
  - 20 Years Average Industry Experience
  - Multiple Private Markets Cycles
- Private Markets Consulting Philosophies
  - Customized Solutions
  - Risk Management and Thorough Diligence: High-Conviction Portfolios
- Work with Large, Sophisticated Private Markets Investors
  - 15 Private Markets Clients in Various Stages of Program Maturity
  - Managing to Individual Client Needs and Risk Profiles
  - Currently Oversee $19 Billion in Commitments

Performance Measurement

- Interpretations by Highly Experienced Professionals
  - Founding Member of CIPM Advisory Council
  - John Meier Elected to GIPS Executive Committee (2013-2017)
- Data/Information from Multiple Sources
  - InvestorForce
  - Insignis
  - BARRA
  - MPI
  - Internal Attribution Analysis
- Database Credibility/Flexibility
- Hands-On Solutions to Problematic Situations

Summary

- Exclusive focus on large institutional investors like VCERA
  - Pure consulting model
  - Creative and unique solutions
  - Unmatched access to “best practices” in the large fund market
- Strong alignment of interests with VCERA
- In a lower return environment, cost control becomes more important: *small differences can have a big impact*.
- Senior-level consulting team
  - Direct access to all of SIS resources
  - SIS-VCERA relationship is a partnership
  - Local servicing – Strong California County Presence

Appendix

Code of Ethics

- SIS will consider plan participants and their beneficiaries to be our client, and our consulting services will be directed toward their sole benefit.
- Our consultants and professional staff will remain cognizant of the fact that we are advising fiduciaries and, therefore, have a fiduciary responsi-bility to act solely in our clients' best interests.
- SIS, and its employees, will not accept fees from investment managers for any service whatsoever.
- SIS will accept only cash payments from its clients.
- SIS, and its employees, will not accept "finder's fees" or financial rewards that are dependent on our clients' procurement decisions.
- Our employees will refrain from discussing confidential client inform-ation with anyone other than the client or SIS employees who have a need to know. Discussing facts about a client's fund, using a client's name in promotional materials or communications intended for public consumption without the client's permission shall be forbidden.
- Our employees are strictly prohibited from acting on any insider information they may be privy to. Each employee will quarterly submit a list of transactions executed in the prior quarter and a complete list of holdings as of year end to the Compliance Officer.
- **Enforcement.** Violation of any of the above could result in immediate termination of the offending employee.

Professional Biographies

- **<u>BARRY W. DENNIS</u>**. *Managing Director and Chairman.* Co-founder of SIS. His 35 years of investment experience has been focused on helping plan sponsors achieve their financial goals. Barry was a Senior Consultant and Western Region Manager for Callan Associates from 1983 to 1994, prior to founding SIS. Previously, he was an Investment Officer with Continental Illinois National Bank. Barry has a B.A. in English from the University of Wisconsin and an M.B.A. in Finance from The Keller Graduate School of Management.
- **<u>PETE A. KELIUOTIS, CFA</u>**. *Managing Director and CEO.* Responsible for general and private markets consulting at SIS. Over 20 years of investment experience. Former senior consultant and Principal at Mercer and member of its Global Research & Policy Committee. Prior to joining Mercer, Pete worked for Hotchkis and Wiley and The Northern Trust Company. B.A. in Economics from the University of Illinois – Urbana. MBA in Analytic Finance and Accounting from the University of Chicago. Pete is a CFA Charterholder and a member of the CFA Society of San Francisco.
- **<u>JOHN P. MEIER, CFA</u>**. *Managing Director and COO/CFO.* Highly experienced specialist in strategic planning, capital markets analysis, and quantitative investment strategies. A leading authority in the fields of perform-ance benchmarking and portfolio perform-ance attribution, whose ideas have been published in Pensions and Investments, Futures, Risk and Quantitative International Investing. Senior Product Manager at BARRA from 1988 to 1994, responsible for equity risk and valuation models and services. B.S. in Chem. Eng. From Michigan State, MBA in Finance from UC Berkeley.
- **<u>PATRICK F. THOMAS, CFA</u>**. *Senior Vice President.* Primarily responsible for general consulting at SIS. Served as Senior Analyst for McKesson Corporation from 1992 to 1996 responsible for all aspects of portfolio analysis of the company's combined $1.2 billion Retirement Plans, ESOPs and Foundation. Performed corporate financial analysis and acted as Corporate Cash Manager during tenure at McKesson. Served as analyst for Wells Fargo Inves-tment Advisors (now Barclays Global) and assisted the floor brokers for Merrill Lynch on the Pacific Stock Exchange Options Floor. B.A. in English UC Berkeley, M.B.A. Georgetown University. Member, AIMR and of the Securities Analysts of San Francisco.
- **<u>RICHARD P. DABROWSKI, CFA</u>.** *Senior Vice President and Senior Consultant.* Responsible for all aspects of client development and client service, investment policy, and global manager research. Twenty four years of consulting and investment experience. Held a number of roles at Mercer Investment Consulting from 1987-1999 including Midwest Practice Head, Director of Research and Chair of the Manager Search Committee. Most recently Managing Director at Harris Investments and previously Vice President, Sales and Client Service, for Nicholas Applegate Capital Management. MBA in Finance and Business Policy from the University of Chicago Graduate School of Business and a member of the CFA Institute and CFA Society of Chicago.
- **<u>PAUL S. HARTE</u>**. *Senior Vice President.* Responsible for investment manager research and general consulting. Twenty Five years of investment experience. Served as Senior Portfolio Manager at Leylegian Investment Management. Also served as financial analyst at Montgomery Financial Services Corp. and as a registered sales assistant at Merrill Lynch. B.A. in History and M.B.A. in Finance from New York University. CFA candidate.
- **<u>LOUIS KINGSLAND, JR.</u>** *Adviser and Chair, Investment Policy Committee.* Developed first commercially available asset allocation and liability simulation model and asset mix optimizer, both still widely used today. Most recently EVP of Mellon Capital Management. Graduate, Air Force Academy. MA in Engineering, CalTech. Served as Deputy Mission Director of The Viking Space Project, and received a Distinguished Service Medal from NASA.
- **<u>DEBORAH E. GALLEGOS</u>**. *Director of Investment Manager Research*. Most recently Chief Investment Officer of the New York City pension systems. Supervised City's five pension systems totaling $90 billion in assets. Former Deputy State Investment Officer for the New Mexico State Investment Council. Served as Vice President at JP Morgan Fleming Asset Management in New York City, where she worked for its Global Emerging Markets Fund, and associate at Morgan Stanley & Company's Latin America equity research group. MBA in Finance and BA in Political Economy from the University of California, Berkeley.
- **<u>MICHAEL R. BEASLEY</u>**. *Chairman Emeritus*. Co-founded Strategic Investment Solutions, Inc. (SIS) with Barry Dennis in 1994. Former EVP and Head of Consulting of Callan Associates, which he joined in 1986 and left in 1993. Founded Callan's Atlanta Office in 1986 and concurrently managed its New York Office in 1988. Served as Chairman of Callan's Manager Search Committee for two years. Brings 35 years of consulting and institutional investment experience to SIS. Prior experience includes 13 years with Merrill Lynch's Capital Markets Group in Jacksonville and Atlanta. Former Editorial Board member of the *Journal of Pension Plan Investing.* Frequent speaker on institutional investment issues. Graduate of the New Mexico Military Institute and an officer of the U.S. Army for five years that included a combat tour of duty in Vietnam.

Professional Biographies

- **ANNE K. WARD**. *Director of Measurement Systems*. Twenty years of investment experience. Formerly Portfolio Manager for Wells Fargo Nikko, handling passive domestic non-S&P 500 equity index strategies for commingled funds. Served as Perform-ance Analyst for Harris Bretall Sullivan & Smith. Brought Harris Bretall's 22-year old measure-ment systems and historical data up to speed with AIMR reporting standards. B.S. Accountancy, University of Illinois—Urbana. MBA in Finance, University of San Francisco.
- **CURT SMITH, CFA**. *Director of Private Markets.* Twenty years of experience as a private markets and alternative investments specialist. Formerly VP and Manager of Private Market Assets at Union Bank of California, where he was responsible for the review, valuation and management of distressed securities, LBO, futures and real estate funds. B.S. Economics and MBA in Finance from University of San Francisco. Past President, Society of Securities Analysts of San Francisco.
- **MARC GESELL, CFA**. *Vice President.* Quantitative analysis, statistical research, and systems development specialist responsible for strategic planning. Seven years experi-ence in software R&D, asset allocation modeling, and investment analysis. Most recently AVP and portfolio manager for First Interstate Bank (now Wells Fargo), responsible for managing $200 million in private client portfolios. Helped establish clients' strategic plans, investment objectives, asset allocation mixes, and portfolio structure. B.S. in Computational Mathematics, Arizona State University, MBA in Finance, San Francisco State University, Chartered Financial Analyst. Former Officer, United State Army.
- **JONATHAN BRODY, CFA**. *Vice President*. Responsible for investment manager research and has twelve years of experience in the investment industry. Formerly Senior Manager Research Analyst at Mpower Advisors. Previous to that was an Equity Research Analyst at Franklin Templeton. M.A. and Ph.D. in Philosophy from Johns Hopkins University. B.A. in Philosophy, Reed College.
- **STEVEN C. HEMPLER**. *Vice President*. Responsible for private equity consulting, partnership reviews and supervision of operations of SIS' private markets performance measurement services. Formerly Senior Cash Analyst at Providian Financial. B.A. in Business Administration and Accounting, California Polytechnic State University. Former Officer, United States Army.
- **FARAZ SHOOSHANI**. *Vice President.* Responsible for private equity consulting and partnership reviews. Formerly Associate Director of Invest-ments at Caltech. Founded Catapult Ventures, a consulting company that helped IT startup companies. Also served as senior revenue analyst at Intel Corpo-ration for its Profit and Loss Group, and consultant at Booz Allen Hamilton. MBA, Yale School of Management. B.A. Economics, UC Berkeley.
- **STEPHEN MASARIK, CFA, CAIA** *Vice President.* Responsible for traditional and alternative investments manager research. He has nine years of investment experience, most recently as a senior research analyst for the fiduciary consulting firm of Alan Biller & Associates. Steve served as a retail broker for TD Waterhouse and Quick & Reilly. He obtained his M.S. in Finance from DePaul University's Kellstadt Graduate School of Business and his B.B.A. degree from University of Kentucky. Steve is a Chartered Financial Analyst and Chartered Alternative Investment Analyst.
- **HELEN LAM.** *Senior Investment Analyst. R*esponsible for supervising performance measurement. She has 30 years of investment and financial service experience. At Fremont Investment Advisor, served as an Accounting Manager to set up the accounting and operational procedures for partnerships accounts. She was formerly Supervisor of the International Portfolio Fund Accounting group at Barclays Global Investors and participated a major role in the annual fund audit. Helen has a B.S. in Management and Marketing from California State University, Chico, and an MBA in Accounting from Golden Gate University.

Our Clients

RETAINER CLIENTS	$ MILLION	PROJECT CLIENTS	ASSIGNMENT
Alameda County Employees Retirement Association*	6,000	1199SEIU Benefit and Pension Funds	Benchmark Development
Boise Cascade Corp.	700	Alcon Laboratories	DC Manager Structure, Search
Boise Paper Holdings	600	Ameritech Corp.	Manager Search
Buck Trust/Marin Community Foundation	1,200	Arizona Public Service	AL Study/Manager Search
Cox Enterprises	2,400	Arizona Public Retirement System	Project Consulting Pool
Family Trusts 1, 2, 3, and 4	N/A	Automobile Club of So. California	A/L Study
Goldman Environmental Foundation	N/A	Central Bank of Chile	Manager Searches
Idaho Community Foundation	62	CalPERS	Alternatives Consulting Pool
Indiana Public Retirement System	25,000	Colorado Public Employees	Trustee Education
J.R. Simplot	N/A	Consolidated Freightways	A/L Study
Lurie Company and Foundation	15	County of Orange	Strategic Study
Maine Public Employees Retirement System	10,000	Genentech Inc.	Strategic Planning
Merced County Employees' Retirement Association	600	Hewlett Foundation	Intl Manager Search
New Jersey State Treasury	75,000	Houston Police Officers Pension	Manager Structure Study
New York City Police Pension Fund	29,000	Howard Hughes Medical	Manager Structure and Search
North Carolina Dept. of State Treasurer	75,000	Illinois State Board of Investment	Manager Structure
Oklahoma Public Employees Retirement System	7,000	Illinois State Universities Ret Sys	Private Markets Consulting
Oregon Investment Council	70,000	Kaiser Permanente	Asset Transition
Sacramento County Employees Retirement Association	6,000	Los Angeles County	Interim General Consulting
San Joaquin County Employees Retirement Association	2,500	Loyola University	Private Markets Consulting
San Mateo County Employees Retirement Association	2,000	New York State Common Fund	Project Consulting Pool
Southern Company	14,000	Nortel Networks	A/L Study, Manager Structure
Stanislaus County Employees Retirement Association	1,300	Ohio PERS	A/L Study, Strategic Planning
Sutter Health	8,700	Oregon Investment Council	Co-Investment Search
Tennessee Consolidated Retirement System	30,000	PG&E	MWDVBE Manager Search
University of Missouri System	7,000	Roche (Palo Alto)	Manager Structure Study
The Williams Companies	1,000	San Jose City Employees	Manager Search
West Virginia Investment Management Board	12,000	Swedish National Pension Fund 6	Private Markets Consulting
Wisconsin State Investment Board	95,000	Texas Utilities	AA Study/Mgr. Structure/Search
		University of British Columbia	Private Markets Consulting

Consulting & Research Staff

- Deep, Experienced & Stable Group
  - 20 Dedicated to Consulting and Manager Research
  - Average 19 years of Industry Experience and 9 years with SIS
  - Every Employee is an Owner

	Industry Experience	SIS Tenure	General Consulting	Quantitative Consulting	Alternatives Consulting	Manager Research	Investment Policy Cmte.
Barry Dennis	36	19	✔				✔
Pete Keliuotis, CFA	23	12	✔		✔		✔
John Meier, CFA	22	19	✔	✔	✔		✔
Patrick Thomas, CFA	22	16	✔			✔	✔
Paul Harte	28	15	✔		✔	✔	✔
Rich Dabrowski	26	2	✔			✔	✔
John Nicolini	9	3	✔		✔		
Nathan Pratt	8	2	✔				
Louis Kingsland, Jr. *	39	19		✔			✔
Marc Gesell, CFA	18	13		✔			
Deborah Gallegos	23	5			✔	✔	
Jonathan Brody, CFA	15	10			✔	✔	
Steve Masarik, CFA, FRM, CAIA	12	5			✔	✔	
Ping Zhu	6	1				✔	
Matt Silva	1	1				✔	
Curt Smith, CFA	28	15			✔		
Steve Hempler	17	14			✔		
Faraz Shooshani	14	6			✔		
Lisa Keliuotis	17	9			✔		
Elin Papkov	5	0			✔		
MyDung Do	13	8			✔		
Peter Chong, CAIA, CIPM	7	5			✔		

Topical Research

- Recent research topics:
  - Real Assets
  - Risk parity investing/smart use of leverage
  - Releasing long-only constraint
  - Portable alpha investing
  - Rebalancing
  - Passive/active update

- Periodical:
  - Capital Markets Outlook
  - Monthly Market Update
  - Private Markets Update

- Current agenda:
  - Real estate benchmarking
  - Core Plus fixed income vs. discrete allocations to extended sectors
  - Low volatility/minimum variance investing

SIS Manager Search Activity

Total Search Activity (1994-Present)

ASSET CLASS/STYLE	Number	Assets Placed ($M)
US Equity		
US Large Cap Active	107	18,133
US Large Cap Enhanced	17	7,673
US Large Cap Passive	10	9,930
All Cap	9	1,829
Mid Cap	5	423
SMID Cap	17	1,189
Small Cap	90	6,599
Micro Cap	5	360
Emerging Manager of Managers	9	1,043
Hedge FOF/Absolute Return	28	4,882
Balanced	3	205
Other (Commodities, Other Real Assets, Currency)	16	2,595
US Fixed Income	70	26,974
International Equity		
International Developed	95	23,116
International Emerging	15	3,276
International Small Cap	6	1,827
International Fixed Income	3	1,915
Global Equity	9	8,000
Global Fixed Income	15	9,818
Grand Total	**529**	**129,787**

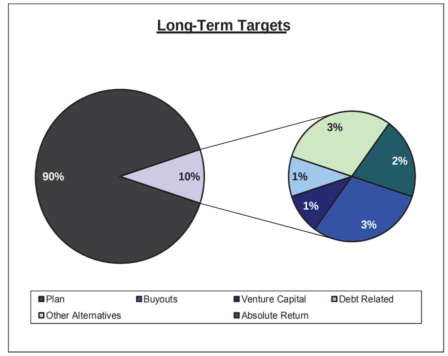
Example of PE Implementation Plan

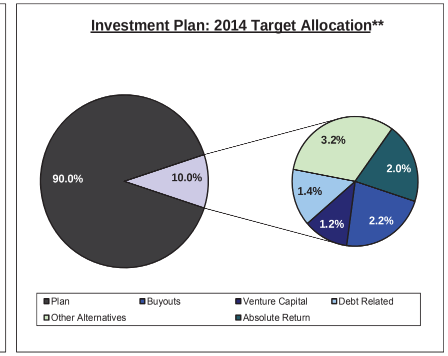
Investment Plan – Overview

- **Purpose – As per existing policy, review Plan:**
  - **Policy: Proposed Changes to**
    (1) Reflect Plans sub-asset classes without Commodities (and associated benchmarks);
    (2) Modify the authority delegated to Staff for small investments, allowing “re-ups” with existing managers in good standing, pending in-depth due diligence results.
  - **Investment Plan: Proposed updates to future annual commitments**
- **Key Updates:**
  - **Increase in Plan Value (December 31, 2011 projection: $5.9 billion)**
  - **SIS Long-Term Growth Rate Assumption: 7.7% (down from 8.12%)**
  - **No Updates to Plan Contributions and Distributions Assumptions** (source: Segal Co., 2010)

Current Outlook / Key Assumptions	Implications	Impact on Investment Plan
1. Continued stability in capital markets	▶ Future growth of the Plan likely in line with Long-Term expectations	▶ Commitment plan in line with long-term Policy target: Alt 10%, PE 5% (no change from 2010)
2. Improved liquidity for private assets – M&As and IPOs up 3. Continued, but moderating risk of capital “overhang” in U.S. and European Buyouts 4. General availability of Debt…	▶ Deal prices up in both Buyouts and VC ▶ GP capacities constrained	▶ Recommendations subject to compelling opportunities only ▶ Emphasize “back to basics:” - Alignment of interests - Disciplined, value-oriented - Proprietary sourcing/capabilities - Operating value-add
5. … less so for Smaller companies 6. Sovereign Debt risk in Europe	▶ Pockets of opportunity remain in Debt/Special Situations	▶ Continue 10% overweight to Debt/Special Situations (2014 target)
7. Downside risk on par with 2010 / higher than 2009 8. Volatility likely to continue	▶ Hedge funds can add value	▶ Begin deploying capital to hedge funds (via fund-of-funds)

Total Plan Allocation*





** Allocations are market value of funded commitments.*

*** Based on projected December 31, 2011 Plan Value of $5.9 billion and long-term growth of 7.7%.*

Roadmap – Allocations* as of July 1, 2011

TOTAL PROJECTED ALLOCATIONS	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	
	Actual Allocation	Actual Allocation	Actual Allocation	Projected Allocation	Projected Allocation	Projected Allocation	Projected Allocation	Proje
Buyouts	$ -	$ 2,315,728	$ 25,241,426	$ 42,531,689	$ 71,011,528	$ 109,587,979	$ 150,941,735	$
Venture Capital	$ 450,103	$ 4,971,777	$ 15,068,057	$ 22,478,104	$ 38,933,136	$ 57,944,425	$ 78,838,027	$
Debt-Related/Special Situations	$ 1,830,161	$ 25,269,358	$ 52,175,494	$ 73,154,412	$ 82,091,453	$ 88,971,016	$ 97,017,806	$
Total Private Equity	*$ 2,280,264*	*$ 32,556,863*	*$ 92,484,977*	*$ 138,164,205*	*$ 192,036,117*	*$ 256,503,420*	*$ 326,797,568*	*$*
Absolute Return	$ -		$ -	$ 56,925,000	$ 119,759,750	$ 127,873,433	$ 136,285,573	$
Other Alternatives	$ -	$ 9,910,181	$ 13,821,443	$ 45,883,095	$ 109,533,415	$ 177,316,826	$ 218,084,708	$
Total Alternatives	*$ -*	*$ 9,910,181*	*$ 13,821,443*	*$ 102,808,095*	*$ 229,293,165*	*$ 305,190,259*	*$ 354,370,281*	*$*
Total PEARLS Portfolio	***$ 2,280,264***	***$ 42,467,044***	***$ 106,306,420***	***$ 240,972,300***	***$ 421,329,282***	***$ 561,693,679***	***$ 681,167,849***	***$***
Approximate Plan Value - Beginning of Year		$ 3,794,336,861	$ 4,672,148,731	$ 5,215,227,671	$ 5,558,344,647	$ 5,929,831,914	$ 6,355,889,514	$
+ SIS Long-Term Growth Assumption (7.7% per year)				$ 401,572,531	$ 427,992,538	$ 456,597,057	$ 489,403,493	$
- Net Distributions/Contributions				$ (58,455,555)	$ (56,505,270)	$ (30,539,458)	$ (25,561,474)	$
= Plan Value - End of Year	$ 3,794,336,861	$ 4,672,148,731	$ 5,215,227,671	$ 5,558,344,647	$ 5,929,831,914	$ 6,355,889,514	$ 6,819,731,532	$
Private Equity as a % of Plan **(Target ~5%)**	**0.06%**	**0.70%**	**1.77%**	**2.49%**	**3.24%**	**4.04%**	**4.79%**	
Absolute Return as a % of Plan **(Target ~2%)**	**0.00%**	**0.00%**	**0.00%**	**1.02%**	**2.02%**	**2.01%**	**2.00%**	
Other Alternatives as % of Plan **(Target ~3%)**	**0.00%**	**0.21%**	**0.27%**	**0.83%**	**1.85%**	**2.79%**	**3.20%**	
Alternatives as a % of Plan **(Target ~5%)**		**0.21%**	**0.27%**	**1.85%**	**3.87%**	**4.80%**	**5.20%**	
VC % of Total Private Equity **(Target 20%: 0-30%)**	20%	15%	16%	16%	20%	23%	24%	
Buyouts % of Total Private Equity **(Target 60%: 40-80%)**	0%	7%	27%	31%	37%	43%	46%	
Debt/Special Situations % of Total PE **(Target 20%: 10-30%)**	80%	78%	56%	53%	43%	35%	30%	
Absolute Return % of Total Alternatives **(Target: 40%: 0-60%)**		0%	0%	55%	52%	42%	38%	
Other Alts. % of Total Alternatives **(Target: 20%: 0-30%)**		100%	100%	45%	48%	58%	62%	

** Allocations are market value of funded commitments.*

Implementation Roadmap – as of July 1, 2011
Annual Commitments*

	PEARLS category	2008	2009	2010	2011	2012	2013	2014	
		Actual Commit ($)	Actual Commit ($)	Actual Commit ($)	Projected Commit ($)	Projected Commit ($)	Projected Commit ($)	Projected Commit ($)	Projecte
	Buyouts	$ 45,000,000	$ 16,875,000	$ 30,000,000	$ 65,000,000	$ 65,000,000	$ 65,000,000	$ 60,000,000	$
	Venture Capital	$ 10,000,000	$ 26,000,000	$ 12,500,000	$ 25,000,000	$ 25,000,000	$ 25,000,000	$ 25,000,000	$
	Debt-related	$ 22,724,047	$ 40,625,000	$ 24,000,000	$ 55,000,000	$ 45,000,000	$ 35,000,000	$ 30,000,000	$
	Absolute Return	$ -	$ -	$ -	$ 55,000,000	$ 55,000,000	$ -	$ -	$
	Other alternatives	$ -	$ 20,000,000	$ -	$ 30,000,000	$ 60,000,000	$ 60,000,000	$ 30,000,000	
Annual Commitment ($)*	**Total**	**$ 77,724,047**	**$ 103,500,000**	**$ 66,500,000**	**$ 230,000,000**	**$ 250,000,000**	**$ 185,000,000**	**$ 145,000,000**	**$**
		Actual Commit (#)	Actual Commit (#)	Actual Commit (#)	Projected Commit (#)	Projected Commit (#)	Projected Commit (#)	Projected Commit (#)	Projecte
	Buyouts	1	1	1	2-3	2	2	2	
	Venture Capital	1	3	1	2	2	2	2	
	Debt-Related	1	2	1	2	1-2	1	1	
	Absolute Return				1-2				
	Other alternatives		1		1	1-2			
Number of Commitments*	**Total**	**3**	**7**	**3**	**8-10**	**6-8**	**5**	**5**	

** All commitments are estimates, subject to market conditions and SIS bottom-up due diligence.*

Strategic Investment Solutions, Inc.

Best Ideas – Asset Allocation

- Keep it simple
  - Limited number of broad asset classes and risk factors
  - Sub-sectors to be modeled in manager structure
- Consider risk factor based asset allocation approaches and the role of asset classes in hedging specific risks
- Real assets: inflation-hedging portfolio construction/optimization
- Maintain significant weight to global public equities: high equity risk premium
- Dedicated active US small cap; also add to active management opportunistically
- Movement towards ACWI IMI structure for non-US equity: higher/dedicated EM and Small Cap
- Consider hedge funds in targeted roles: multi-strategy, opportunistic credit, event-driven, etc.

Best Ideas – Manager Research

- Keep it simple
  - Limited number of managers
  - Avoid over-diversification
- Equities: high passive exposure currently
  - Consider increasing active management where prudent
  - High active share managers
- Sector-oriented portfolio construction
- Fixed income
  - Diversify away from core and reduce interest rate risk
  - Increase exposure to “plus” sectors
- Loomis: consider converting to global multi-sector strategy
- Consider diversifying real estate exposure
- Move towards a direct investment model in private markets
- Private markets offers better pricing and exposure in Infrastructure

SIS Capital Market Expectations (5/15/13)

Correlation Table

US LC	US SC	US FI	Intl Stk	EM Stk	Intl FI	PE	RE	HY	EM FI	TIPS	Intl ILB	BK Loan	Infrast	HA	Commod	HF	Cash
1.00																	
0.86	1.00																
0.17	0.09	1.00															
0.77	0.72	0.07	1.00														
0.58	0.66	-0.09	0.71	1.00													
0.11	0.02	0.47	0.36	0.13	1.00												
0.68	0.65	-0.07	0.55	0.54	0.01	1.00											
0.64	0.65	0.16	0.56	0.50	0.00	0.32	1.00										
0.70	0.73	0.35	0.60	0.59	0.29	0.53	0.69	1.00									
0.50	0.50	0.37	0.43	0.55	0.14	0.38	0.43	0.49	1.00								
0.12	0.08	0.63	0.07	0.08	0.42	-0.07	0.27	0.32	0.40	1.00							
0.45	0.28	0.59	0.43	0.15	0.47	0.26	0.26	0.41	0.31	0.52	1.00						
0.65	0.64	0.13	0.62	0.59	0.09	0.42	0.68	0.79	0.40	0.25	0.33	1.00					
0.51	0.53	0.43	0.49	0.44	0.22	0.23	0.63	0.61	0.52	0.37	0.18	0.57	1.00				
0.48	0.52	0.04	0.59	0.58	0.09	0.23	0.54	0.35	0.42	0.30	0.28	0.44	0.46	1.00			
0.27	0.29	-0.07	0.30	0.38	0.10	0.17	0.28	0.11	0.44	0.42	0.15	0.26	0.24	0.70	1.00		
0.59	0.52	0.27	0.67	0.51	0.24	0.42	0.39	0.34	0.60	0.25	0.39	0.46	0.59	0.47	0.46	1.00	
0.14	0.10	0.34	0.09	0.01	0.10	0.03	-0.16	-0.17	0.25	0.05	0.11	-0.08	0.34	0.08	0.19	0.61	1.00

SIS Private Equity Performance (12/31/12)

IRR as of December 31, 2012	Since Inception 1994
SIS NET IRR Vintage Years 1994-2012 [(1)]	9.37%
S&P 500 + 300 bps [(2)]	8.30%
Russell 3000 + 300 bps [(2)]	8.37%
VE Pooled IRR*	9.21%

[(1)] SIS Net IRR includes vintage years 1994-2012 and Active and Inactive Clients

[(2)] SIS Cash flows reinvested in the S&P 500 + 300bps and Russell 3000 + 300bps

* Thomson One Venture Economics Universe: US All PE, vintage years 1994-2012

IRR as of December 31, 2012	1 Year	3 Year	5 Year	10 Year	Inception
SIS Net IRR Vintage Years 1994-2012	10.1%	11.7%	6.3%	7.7%	9.4%
VE Pooled IRR*	13.1%	10.5%	5.0%	9.6%	9.2%
SIS Outperformance	-3.0%	1.2%	1.3%	-1.9%	0.2%

* Thomson One Venture Economic Universe: US All PE Pooled IRR Vintage Years 1994-2012

- SIS Performance includes SIS recommended funds for all active and inactive PE clients tracked by SIS for performance reporting; inactive clients include investments recommended while they were under SIS advisement. The data excludes years clients were under another advisor and funds selected without active SIS support and recommendation.

Ventura County Employees' Retirement Association

Investment Consulting Presentation

September 9, 2013

Don C. Stracke, CFA, CAIA, Senior Consultant
Allan C. Martin, Partner

One Main Street, Cambridge, MA 02142 | TEL: 617.374.1300 | FAX: 617.374.1313 | www.nepc.com
CAMBRIDGE | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

Agenda

- **Independence**
- **Manager Search and Evaluation Capabilities**
- **Asset Allocation and Investment Policy Capabilities**
- **Experience of the Proposed Consulting Team**
- **Past Investment Performance**
- **Review of Consultant Search Report**
- **Wrap-up**

Independence

Proposed Consulting Team

- **Don C. Stracke, CFA, CAIA**
  Senior Consultant
  - Twenty-eight years' investment experience
  - Member: Large Cap Equity Advisory Group
  - Previous affiliations: Shenkman Capital Management, Attalus Capital, Dresdner RCM Global Investors, Bankers Trust Company, Citibank
  - MBA, Rutgers University; BA, Farleigh Dickinson

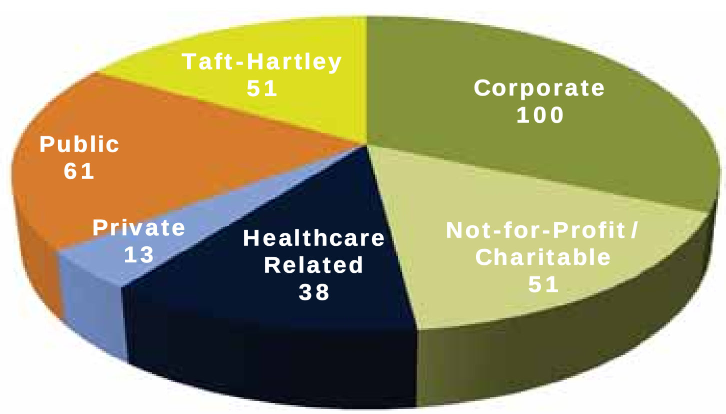
- **Allan C. Martin**
  Partner
  - Forty-four years' investment and consulting experience
  - Public/Taft-Hartley practice group leader
  - Ranked 2nd Most Influential Consultant in the World by aiCIO Magazine
  - MML Public Fund Consultant of the Year (2008)
  - Member: Executive Committee
  - Member: International Equity Advisory Group
  - Previous affiliations:
    - Bankers Trust – Managing Director Global Retirement Services
    - Dresdner/RCM – Partner, Head of Global Client Service & Marketing
  - MBA and BS, Stanford University (Phi Beta Kappa)

- **Tony Ferrara**
  Senior Analyst
  - Eight years' investment experience
  - Previous affiliations: Wurts & Associates; Waddell & Reed Inc
  - BS, San Jose State University; CAIA Level II Candidate

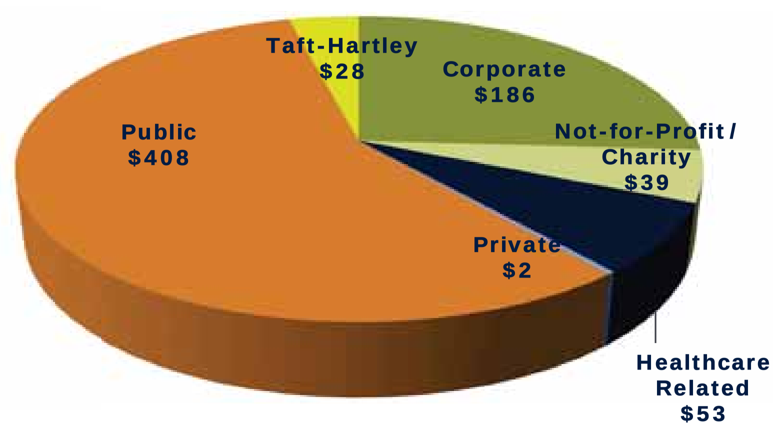
- **Established in 1986 in Boston, MA**
- **218 employees in 7 regional offices**
- **Employee-owned with 33 partners – 25% largest ownership share dropping to 10%**
- **100% of revenue from investment consulting**

- **314 institutional clients**
- **$716 billion assets under advisement**
  - Public funds account for over 55% of total assets
  - 31 greater than $1.5B
- **Public Fund Practice group**

 # Institutional Clients



AUA by Client Type



CAMBRIDGE | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

Independence – NEPC Hallmark

- **Trusted advisor**
  - Investment consulting is our sole line of business
  - No conflicts in our model
  - Firm stability and growth have allowed us to consistently reinvest in our business
  - More than 75% of the clients that have engaged NEPC as an investment advisor over the last 15 years are still clients today
- **Experienced professionals**
  - Multi-disciplined backgrounds
  - One of consulting's largest investment research teams
  - Small client load results in a boutique service model within a highly resourced firm
- **Proactive asset allocation advice and innovative investment solutions**
  - Clients have collectively outperformed national averages in 24 out of 27 years, with lower levels of risk*
- **History of client and NEPC recognition**

YOU DEMAND MORE, *So do we.* SM

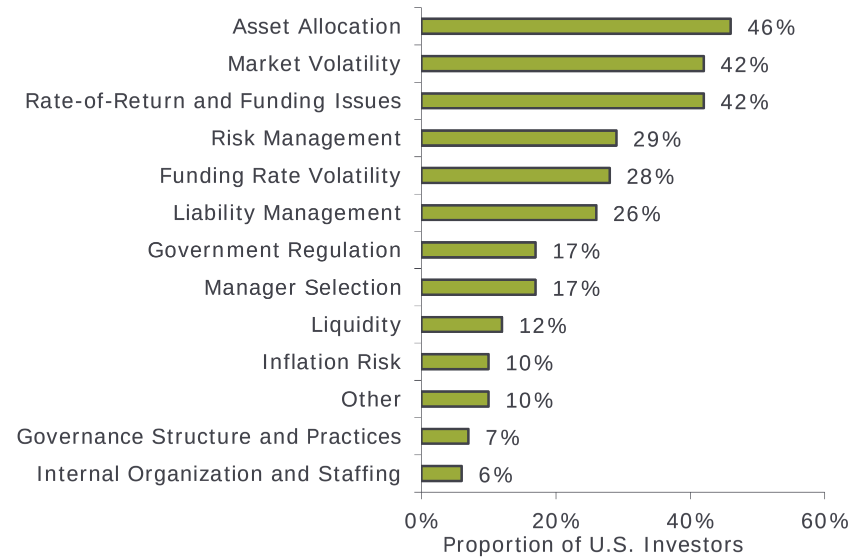
NEPC's Recent Awards

- **2012: Ranked #2 in overall client satisfaction among the ten largest institutional investment consultants by Greenwich Associates**
- **2012 CAIA Corporate Recognition Award**
- **2012 Investor Excellence Award by InvestHedge – Consultant category**
- **2012 aiCIO World's 25 Most Influential Investment Consultants**
  - **Allan Martin, Partner (#2)**
  - **Erik Knutzen, CFA, CAIA, CIO (#16)**
- **2012 MMI Public Fund Consultant of the Year Award**
  - **Kevin M. Leonard, Partner**
- **2012 Public Plan Recognitions**
  - **New Mexico Educational Retirement Board: MML's Mid-Sized Public Plan of the Year**
  - **San Antonio Fire & Police Pension Fund: MML's Small-Sized Public Plan of the Year**
- **2011 aiCIO Industry Innovation Consultant Award**
- **2009 PLANSPONSOR's "Alties" Award as the Alternative Asset Consultant of the Year**

Manager Search and Evaluation Capabilities

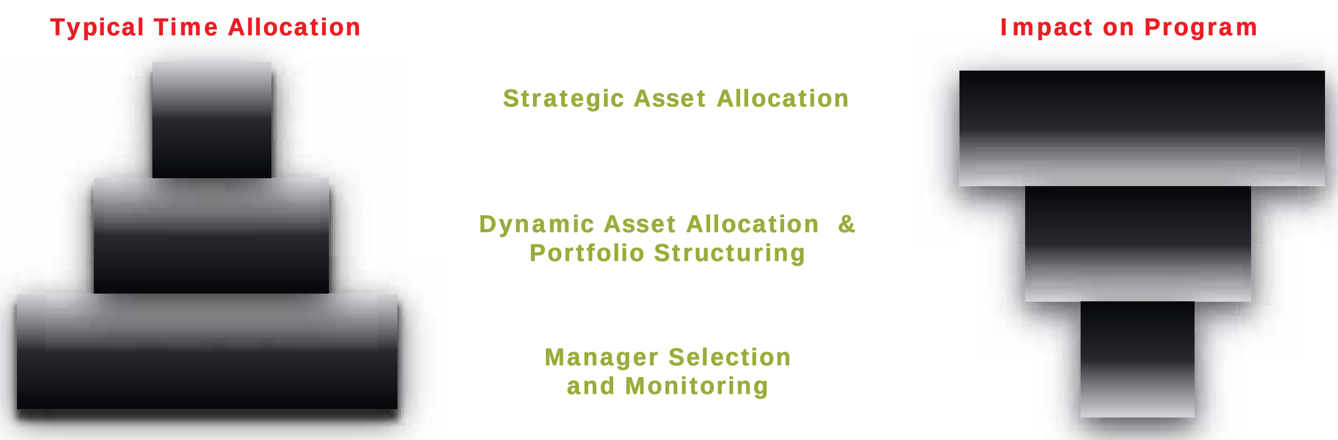
- **We pursue value-add at every step in the process**
  - Strategic asset allocation
  - Dynamic and opportunistic
  - Strategy selection and implementation
- **Our in-depth risk tools create framework for alpha seeking**
- **Team combines broad coverage with continuous innovation – 542 searches in 2012**

Most Important Issues Facing Investment Programs



Source: Greenwich Associates 2011 Survey

- **Our process re-aligns focus from the pyramid on the left toward the pyramid on the right**



Research Team

Erik Knutzen, CFA, CAIA
Chief Investment Officer (27)*

Eileen Keenan
Research Coordinator (9)

Tim McCusker, FSA, CFA, CAIA
Director of Traditional Research (10)*

Asset Allocation

John Minahan, PhD, CFA
Senior Investment Strategist++ (26)

Lynda Dennen, ASA, EA
Senior Research Consultant (21)

Mark Cintolo
Consultant (9)

Mario Tate
Senior Analyst (14)

Ian Spencer
Research Associate (1)

Traditional Research

Stephen Gargano
Senior Research Consultant (28)

Jeff Markarian
Senior Research Consultant (11)

Donna Szeto, CFA
Senior Research Consultant (17)

Phillip Nelson, CFA
Research Consultant (11)

Rosann Morello
Manager Search Supervisor (12)

Seth Bancroft
Research Analyst (3)

Research Associates

Angela Dawson *(2)*

Nick Edwards *(3)*

Hillary Goldy *(3)*

Bobby Jaramillo *(2)*

Ben Swift *(1)*

Sean Gill, CFA, CAIA
Partner, Alternative Assets (15)*

Private Markets

Eric Harnish
Director of Private Markets Research (19)

Jeffrey Roberts
Senior Consultant (11)

Sean Ruhmann
Senior Consultant (9)

Kevin Tatlow, CAIA
Senior Consultant (22)

Charles Tedeschi
Senior Consultant (15)

Claire Woolston
Senior Consultant (11)

Melissa Mendenhall
Consultant (10)

Andrew Brett, CAIA
Senior Analyst (7)

Siddique Haq, CAIA
Senior Analyst (6)

Analysts

Alexandra Adam *(4)*

Oliver Fadly *(3)*

Matthew Ritter *(3)*

Hedge Funds

Neil Sheth
Director of Hedge Funds Research (20)*

Timothy Bruce
Senior Consultant (7)

Alex Kamunya, CAIA
Senior Consultant (9)

Kamal Suppal, CFA
Senior Consultant (17)

Amanda Karlsson, CFA
Consultant (5)

Chris Matteini
Consultant (8)

Dulari Pancholi, CFA, CAIA
Consultant (13)

Analysts

Reino Ecklord *(3)*

Marco Jimenez *(6)*

Nate McNamee *(3)*

Timothy O'Connell *(4)*

Jarrett Yingling *(2)*

William Bogle
Chief Compliance Officer (28)*

Operational Due Diligence

Erin Faccone , CAIA
Op. DD Consultant (7)

Lauren Walsh
Op. DD. Analyst (3)

++ John Minahan, a long-time employee of NEPC and current faculty member at MIT's Sloan School of Management, is engaged as an independent consultant to NEPC.

*Ownership interest in NEPC
Note: The number in parentheses indicates years of investment experience

Thought Leadership and Market Insights

- **Thought Leadership**
  - White papers and original research
  - Asset allocation, traditional and alternative investments
- **Market Insights**
  - Annual Asset Allocation views
  - Quarterly Market Thoughts
  - Ad hoc market commentaries
  - Client webinars and conference
- **Regular communications**
  - Frequent client correspondence
  - Technical papers
  - Legislative updates
  - All available at www.nepc.com

NEPC Traditional Asset Research

We believe that through proprietary quantitative scoring and extensive qualitative research, we can identify the fundamental elements of an investment manager's ability to generate excess returns. Through this process, we isolate high conviction strategies expected to deliver superior long-term investment performance.

Differentiators:

- **Broad coverage**
  - More than 10,000 strategies covered through multiple industry recognized databases
- **Targeted approach**
  - Identify investment strategies with unique competitive advantages through deep understanding of manager's investment thesis
- **Risk-aware portfolio construction**
  - Combining conviction in strategies with quantitative framework for pairing and sizing in program
- **Continuous innovation**
  - Incorporating strategic and opportunistic views into pursuit of new strategies within traditional asset classes
- **Combination of publicly advertised search / client recommendations / proprietary research process**
- **Reputation of innovation attracts managers with unique products and reduced fees**

NEPC's Traditional Asset Research Process

Universe Screening

- Developed by asset class and style
- Minimum acceptable criteria for inclusion, minimum asset levels and track records

Quantitative Scoring

- Identification of candidates for further research through scoring all passing strategies
- Strategies scored using proprietary PASS tool to analyze alpha-only net of fees historical performance

Qualitative Research

- Articulation of NEPC Investment Thesis for each strategy – the fundamental drivers of a strategy's ability to delivery quality active performance
- Review of organization, key decision makers, investment process, risk controls, and investment thesis

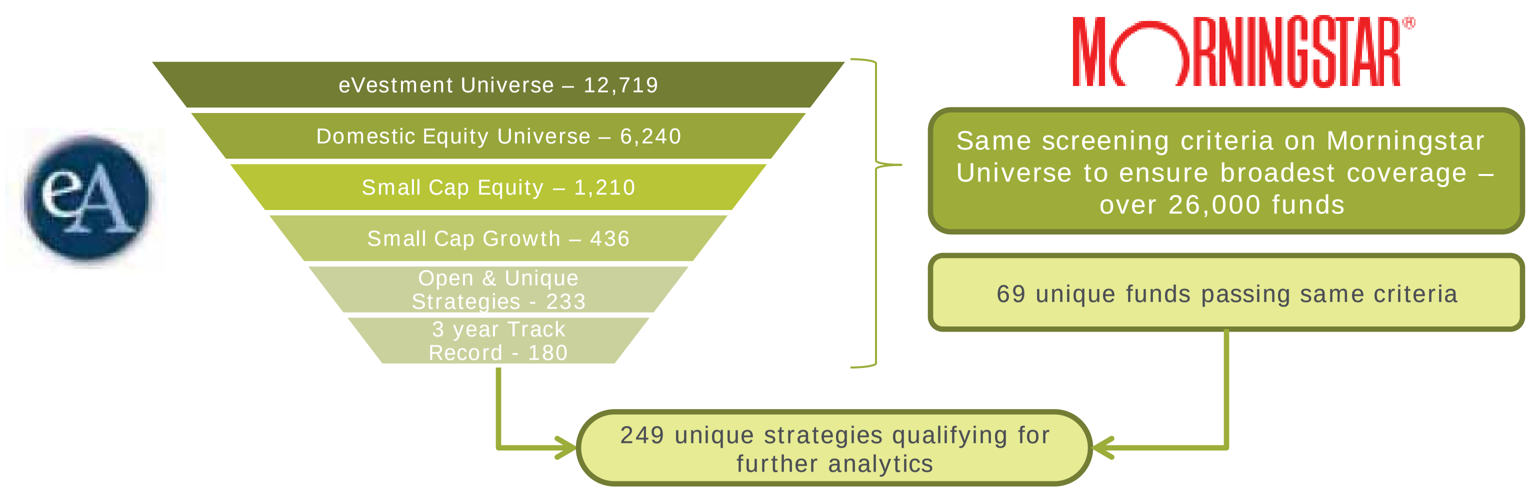
Peer Review

- Rigorous review from Asset Class Advisory Groups and Due Diligence Committee for each strategy considered for Focused Placement List
- Ongoing monitoring at firm and strategy level for all products

Universe Screening – Casting a Broad Net

- **eVestment Alliance and Morningstar screened to capture comprehensive universe of strategies in each asset class and investment style**
- **Minimum criteria used to focus research**
  - Track record
  - Assets under management
- **Criteria adjusted for each asset class based on competitive landscape**

Example: Small Cap Growth



- **Proprietary PASS tool (Performance Analytics Statistical Software) used to systematize quantitative analysis**

- **This software isolates net-of-fees alpha, removing market/index performance**
  - Attractive strategies will have consistent net-of-fees performance at reasonable levels of active risk (tracking error)

- **Each strategy scored on variety of excess return statistics**
  - Rolling metrics used to minimize end-point sensitivity
    - Statistical significance of alpha
    - Rolling alpha greater than certain hurdles
    - Upside/Downside Capture
    - Information Ratio
    - NEPC Score on quality of investment thesis and firm stability

- **Scoring channels Research focus to strategies demonstrating ability to deliver excess returns over long term**

NEPC Traditional Research - SMALL CAP CORE - NETTING 07/15/10

	Managers	CONTRARIAN INDICATOR	ROLLING 3 YR. RTR. - % >0	ROLLING 3 YR. RTR. - % >X%	AVG. 3 YR. INFORMATION RATIO	IR * SQRT LENGTH OF RECORD	UPSIDE MKT CAPTURE	DOWNSIDE MKT CAPTURE	FIRM/TEAM STRUCTURE/STABILITY	TOTAL SCORE
		EVALUATION CRITERIA - DATA								
	Assigned Weights	5%	5%	10%	15%	20%	5%	10%	30%	1-100
1	Manager 1	0.04	86%	58%	0.63	1.92	86%	72%	5	86
2	Manager 2	0.18	82%	67%	0.58	2.40	125%	100%	5	85
3	Manager 3	0.03	92%	79%	0.73	1.52	93%	79%	5	85
4	Manager 4	(0.02)	77%	65%	0.57	2.31	98%	81%	5	84
5	Manager 5	0.12	88%	68%	0.87	2.82	91%	72%	3	73
6	Manager 6	(0.03)	81%	24%	0.42	2.16	104%	96%	5	73
7	Manager 7	0.34	###	100%	1.14	1.89	100%	70%	2	70
8	Manager 8	0.05	89%	61%	0.87	2.27	104%	89%	3	70
9	Manager 9	0.20	97%	89%	0.71	2.51	100%	70%	2	70
10	Manager 10	0.33	82%	75%	0.95	3.16	106%	78%	2	70
	. . .		. . .						. . .	
172	Manager 172	(0.05)	20%	8%	(0.60)	(1.25)	93%	99%	3	21
173	Manager 173	(0.02)	0%	0%	(0.69)	(1.23)	87%	96%	3	20
174	Manager 174	(0.10)	31%	2%	(0.53)	(1.81)	87%	98%	3	19
175	Manager 175	(0.04)	18%	0%	(0.91)	(2.00)	95%	107%	3	18

Qualitative Research – Developing an Investment Thesis

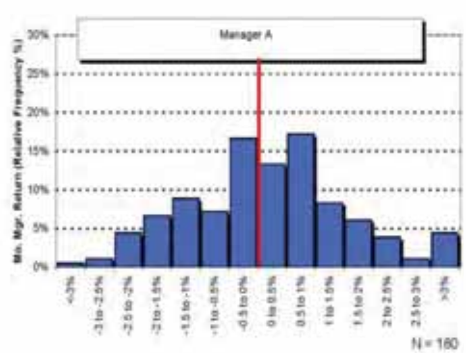
- **Deep, qualitative research to identifying strategy's investment thesis**
  - Strategies scoring well in PASS
  - Strategies identified previously by research team and reasons for poor scoring are well understood

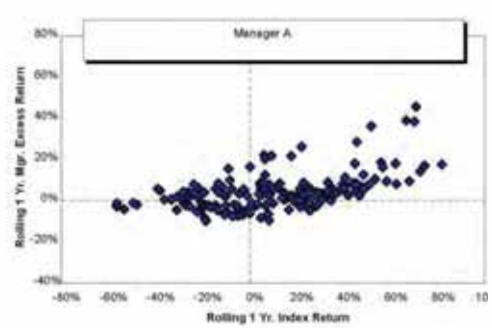
- **An investment thesis is the identification and articulation of a manager's "competitive edge"**
  - A set of beliefs regarding the security pricing mechanism and what it is about that mechanism which affords the opportunity to add value
  - A set of beliefs about the manager's competitive advantage in exploiting these opportunities
  - A thesis about how these beliefs can be exploited to generate alpha

- **A belief in a strategy's investment thesis is forward-looking and leads to a view on the ability to generate future outperformance**
  - Differentiating true investment skill from "noise"

- **Through meetings with lead portfolio manager, investment team and further quantitative analysis, we develop views on each strategy's key characteristics**
  - Organization/People
  - Investment Philosophy
  - Investment Process
  - Performance Expectations

- **Rigorous, intensive review by seasoned investment professionals**
- **Asset Class Advisory Groups serve as sounding board during research process**
  - Potential application of different strategies
  - Provide direction and ideas for new research or new product from managers
- **Final proposed list of preferred strategies presented to Due Diligence Committee (comprised of senior consulting and research professionals)**
- **Comprehensive materials presented along with qualitative review from Research Consultant**
  - Materials cover firm, process, NEPC investment thesis, detailed net-of-fees alpha analytics
  - Due Diligence Committee critiques and approves/eliminates each strategy individually





Ongoing Due Diligence

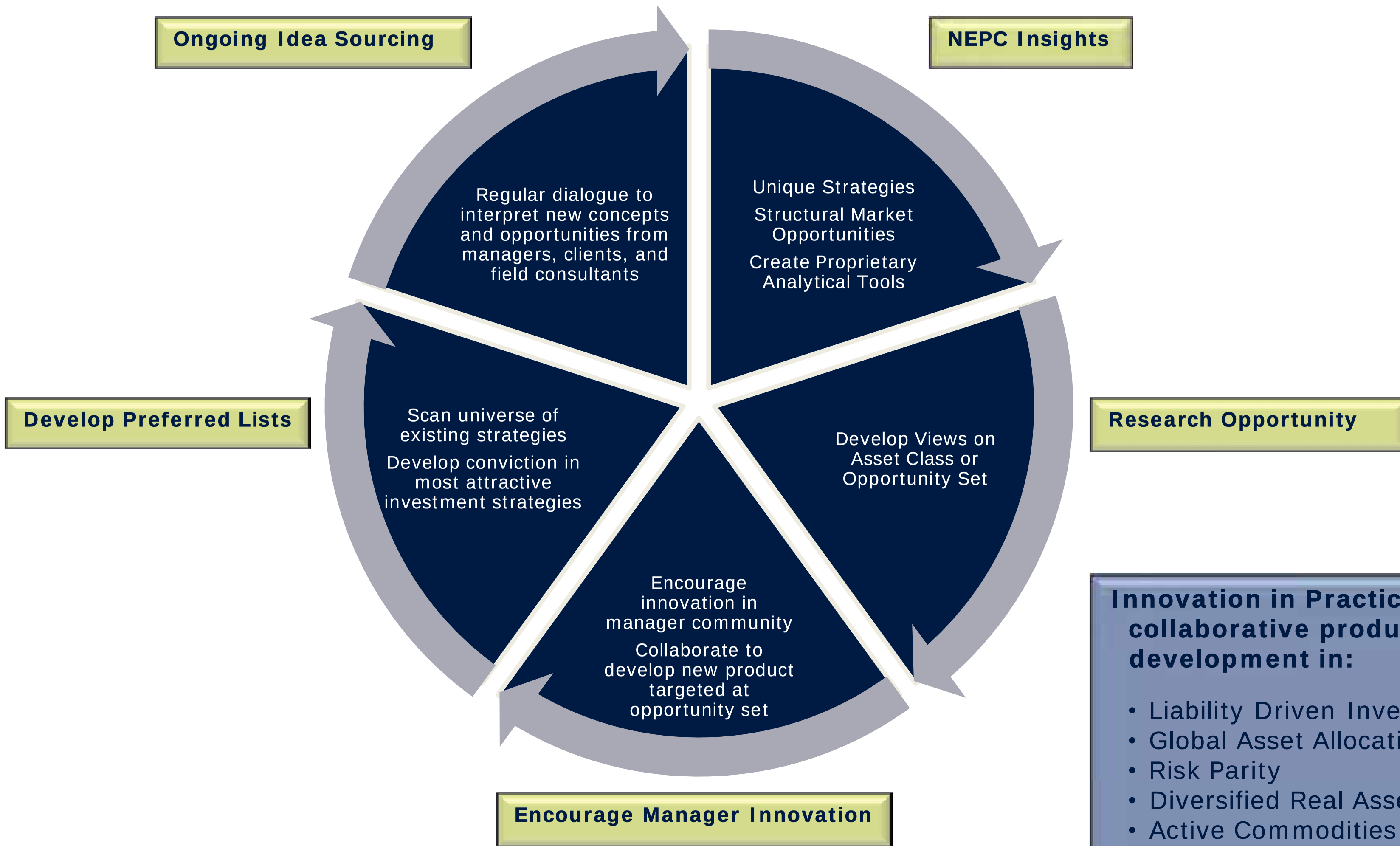
- **Centralized Due Diligence Committee meets bi-weekly throughout the year to evaluate recent events & potential issues**
  - Investment professional departure
  - Change in firm ownership structure
  - Litigation
  - Changes to original strategy mandate
  - Subtle long-term issues – questions of change in a firm's approach or commitment to particular business lines

- **Defined due diligence status at firm and strategy level to supplement strategy ratings**
  - Maintained and reviewed regularly by Due Diligence Committee
    - No Action, Watch or Hold
    - Client Review and/or Terminate

- **For all events requiring client action, a 48-hour letter from NEPC's Research outlining our opinion and suggested action delivered directly to clients**

- **Annual review of all strategies in client portfolios through NEPC Research or Consulting teams**

Continuous Innovation



Innovation in Practice – collaborative product development in:

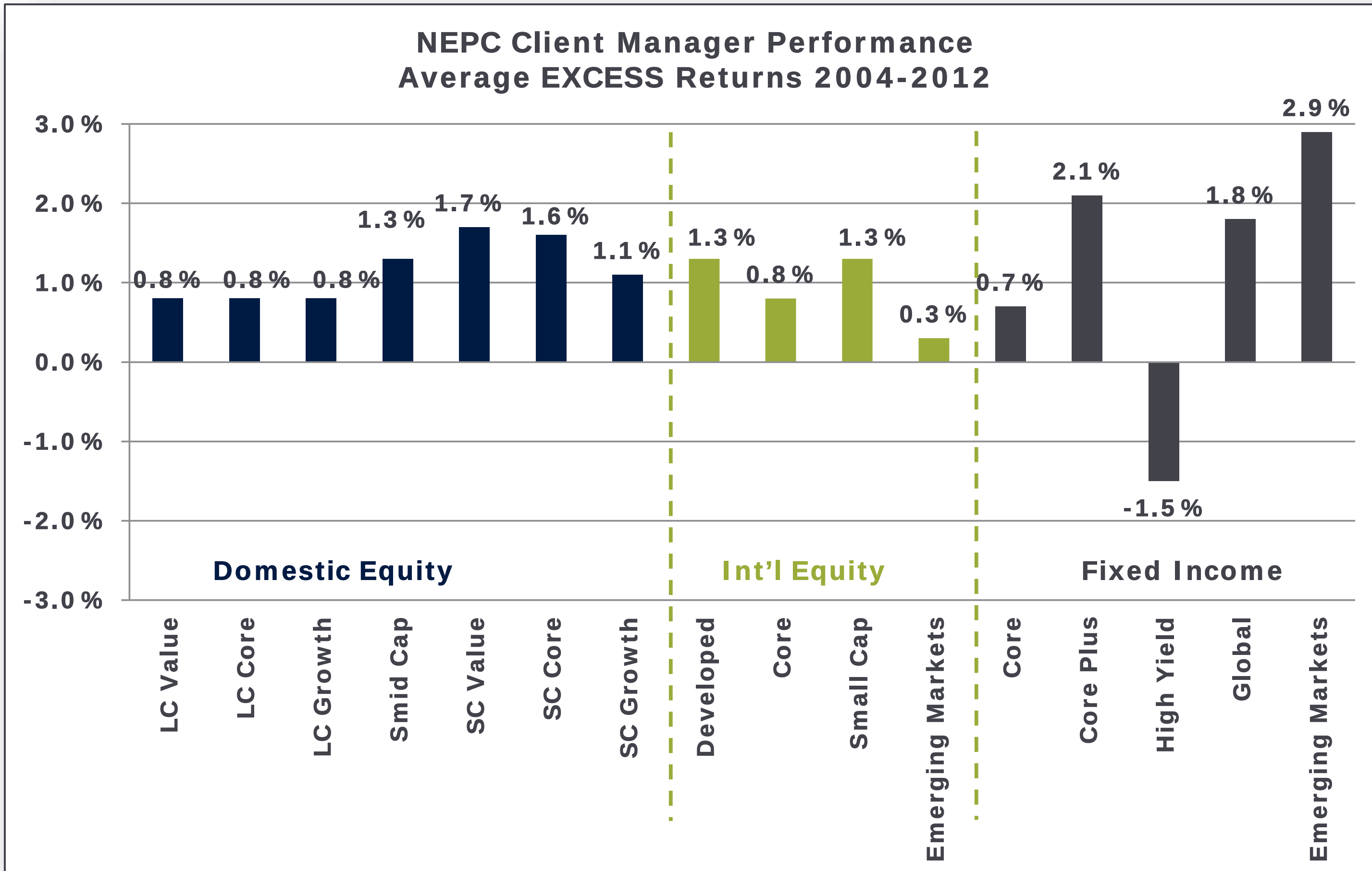
- Liability Driven Investing
- Global Asset Allocation
- Risk Parity
- Diversified Real Assets
- Active Commodities
- Opportunistic Credit
- Emerging Market Local Currency Debt

Searches Conducted in 2012

Total Searches & Reviews	**542**
Searches by Asset Class	
Large Cap Equity	31
Sm/Mid Cap & Mid Cap Equity	22
Small Cap Equity	21
All Cap Equity	6
Fixed Income	26
High Yield Bonds	11
International Equity/Global Equity/Emerging	120
Global Bonds/Emerging Market Debt	37
LDI	6
GAA/TAA (includes LifeCycle)	*52*
Hedge Funds	*55*
Private Equity	*110*
Real Estate	*32*
Commodities	*13*
Total Search Assets	**$15.6 billion**

48% of all searches were for non-traditional managers and strategies

- **Excess returns in 15 of 16 asset classes over the last nine years**
- **Consistent performance**



The data represents the average gross return of all current or former managers across all current NEPC clients. Not all managers were recommended by NEPC. Does not include 401(k) plans or index funds.

Asset Allocation / Investment Policy Capabilities

Asset Allocation – A Progressive Approach

- **Use forward-looking, fundamental based assumptions for all forecasting**
  - In-house proprietary tools with four actuaries on staff
  - Realistic outlook for plan changes over intermediate and long-term
  - Identify opportunities for enhancing portfolio structure
  - Liabilities fully integrated

- **Apply multiple models to build robust, objective driven asset allocation solutions**
  - Mean-variance optimization
  - Risk budgeting
  - Scenario analysis (integrated macro-economic SWAT analysis)
  - Factor analysis
  - Liquidity analysis

- **We believe that multiple perspectives on the portfolio provide a more comprehensive understanding of portfolio expectations and behavior in various environments**

- **Use forward-looking, fundamental based assumptions for all forecasting**
  - Realistic outlook for plan changes over intermediate and long-term
  - Identify opportunities for enhancing portfolio structure

- **Build a Mosaic**
  - No single asset allocation approach or model has all the answers
  - All analytical tools have the potential to provide useful insights but also including shortcomings
  - Minimize exposure to the shortcomings of any individual approach by using multiple perspectives and approaches to build a more robust solution

- **Be Dynamic**
  - Build a long-term strategic allocation that can meet long-term objectives, BUT
  - Look for opportunities to tilt away from the strategic allocation to add value
  - Take advantage of market discrepancies across time horizons and markets

Portfolio Construction Tools

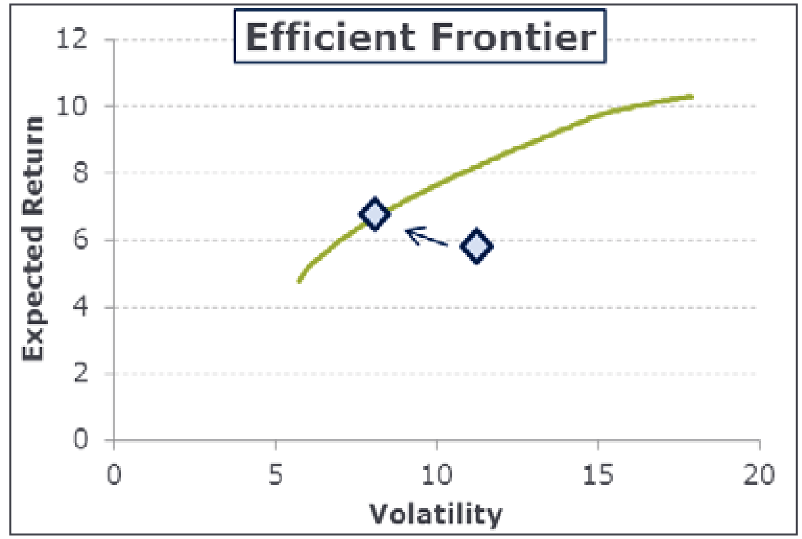
Approach	Advantages	Shortcomings
Mean-Variance	• Calculates most efficient portfolio for given volatility • Produces range of portfolios	• Relies on static assumptions • Assumes normal distribution • Limits risk definition to volatility
Risk Budgeting	• Provides risk allocations • Recognizes that less efficient portfolios may have risk balance	• Also relies on MVO assumptions • Defines risk as standard deviation • Ignores tail risks
Scenario Analysis	• Focuses on low-probability, high magnitude economic environments • Recognizes environmental biases of each asset class	• Offers opportunity to test risk tolerance to various outcomes but should not be used to construct best portfolio for each environment
Liquidity Analysis	• Recognizes a "risk" not captured in traditional tools: illiquidity	• Requires portfolio specific cash flow and partnership details • Long-term planning tool – cannot easily adjust portfolio or compare different portfolios
Factor Analysis	• Recognizes underlying economic drivers of asset class volatility • Can identify risk concentrations across asset classes	• Requires intuitive belief of asset class relationships to underlying factors – less quantitative and more qualitative
Active Risk Budgeting	• Incorporates manager/implementation risk	• Relies on historical manager returns to set expectations of risk and correlation

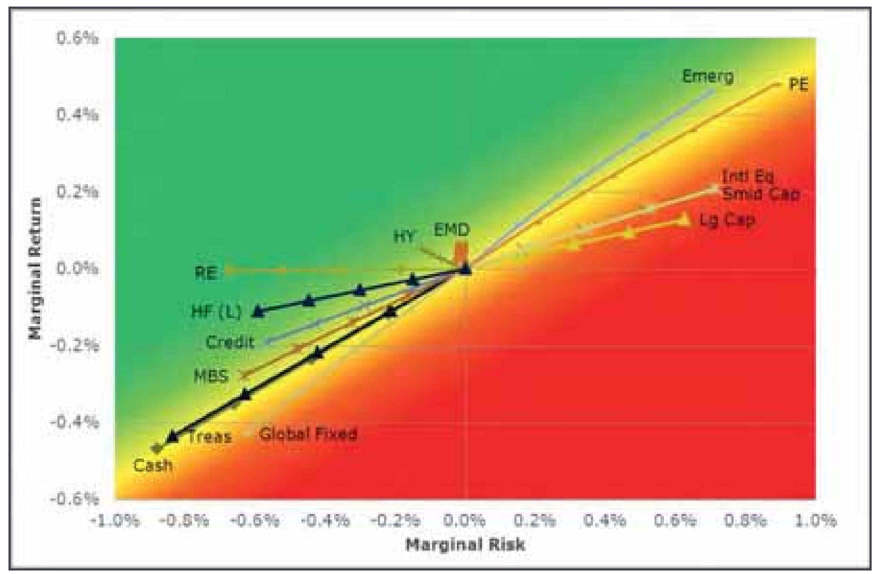
Mean-Variance Optimization and Efficient Frontier Analysis

- **Mean-variance optimization seeks the highest possible expected return for each given level of volatility**

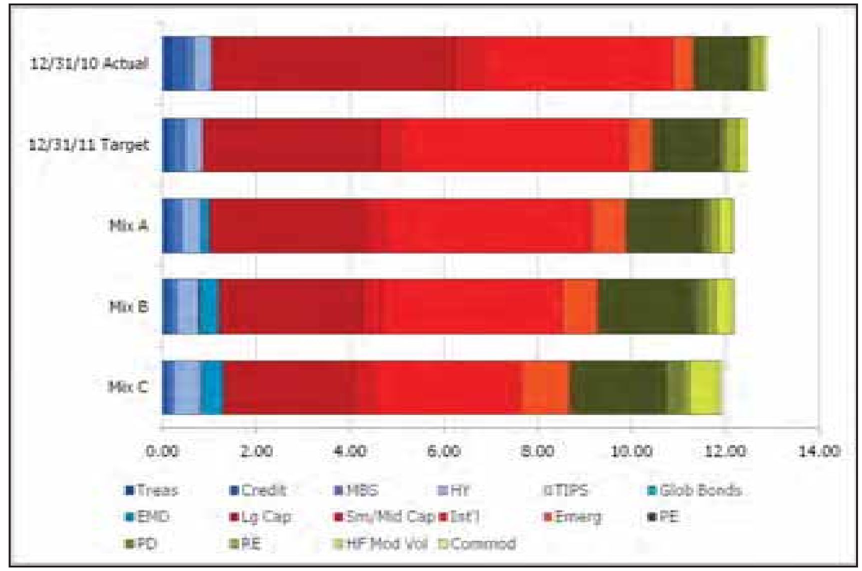
- **Advantages**
  - Thinking about risk and return at the margin can help identify attractive allocation decisions

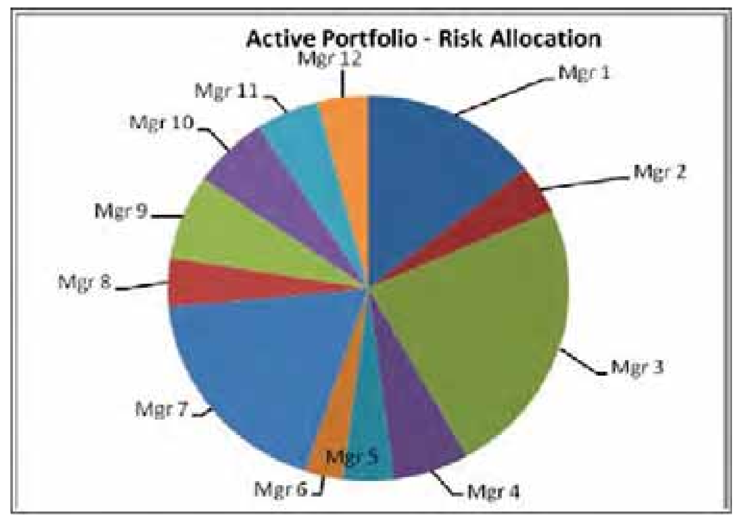
- **Disadvantages**
  - Model inputs are static: expected return, volatility, correlation, constraints
  - Mean-variance analysis has a tendency to underestimate left tails
  - Liquidity considerations may not be adequately reflected





- **Risk budgeting considers the portfolio from a total risk perspective rather than total return**
  - Determines the contribution to risk from each asset class based on standard deviation (volatility) and correlations
- **Advantages**
  - Highlights benefits of diversification and risk balance
  - Both total risk and distribution of risk across asset classes can be compared across mixes
  - Active management risk can be evaluated under a similar framework that incorporates manager tracking error
- **Disadvantages**
  - Still relies on mean-variance framework

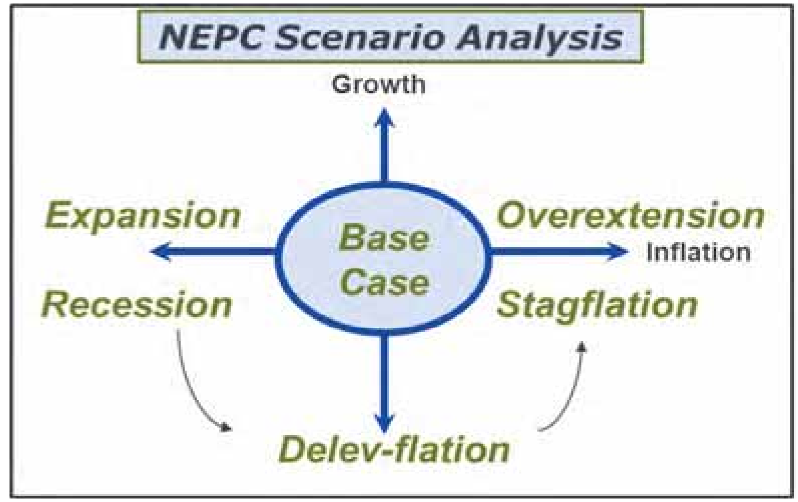


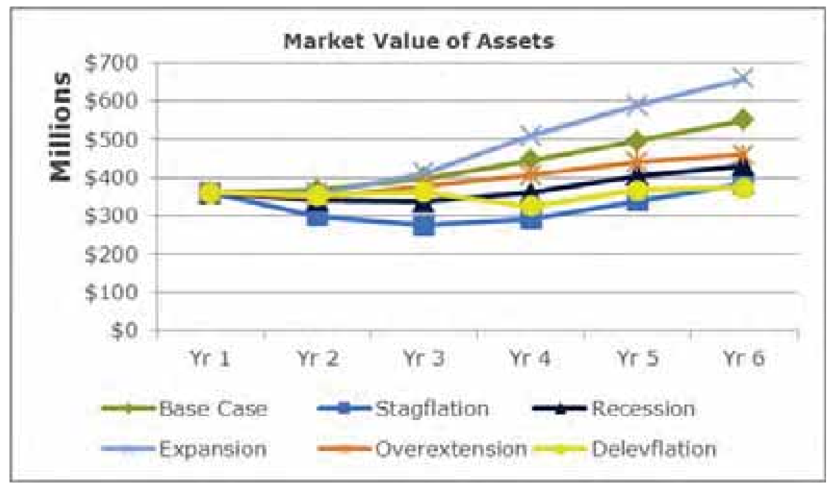


- **Scenario analysis tests the viability of asset mixes under multiple economic scenarios**

- **Advantages**
  - Allows better understanding of risk exposures under contrasting inflation and economic growth regimes
  - Can reveals risk tolerance under various economic environments
  - Scenarios can be customized to examine fund outcomes as markets adjust and specific risks become a concern

- **Disadvantages**
  - Doesn't reflect views on the likelihood of various economic environments

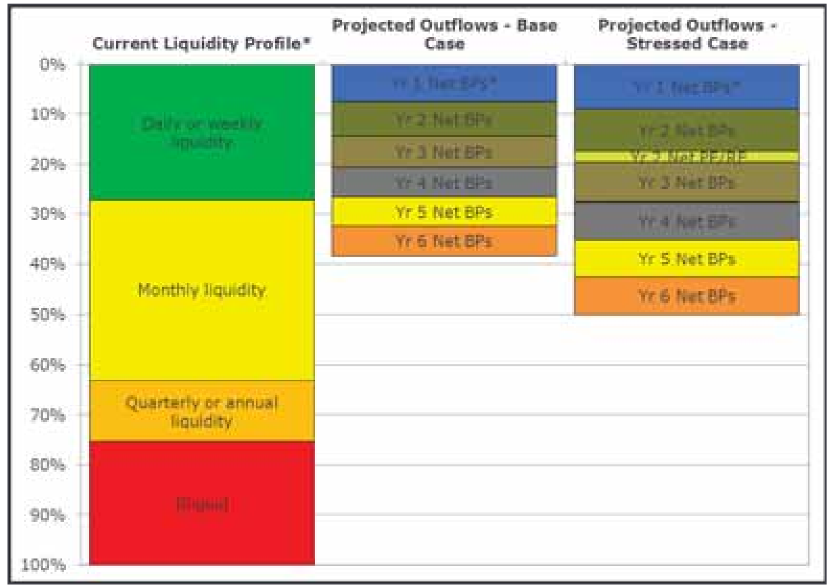


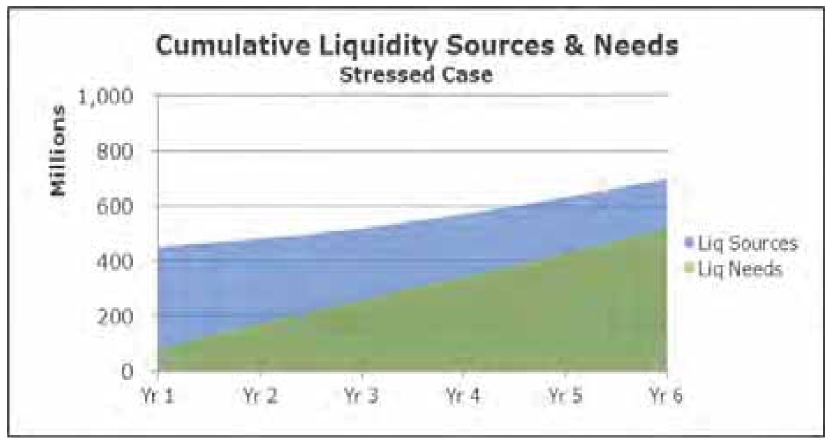


- **Liquidity analysis recognizes that certain adverse conditions can disrupt investment objectives**
  - Inability to meet cash flow needs
  - Forced sale of distressed assets

- **Advantages**
  - Considers the interplay between asset allocation, forward-looking commitments, and cash flows
  - Can help inform the appropriate size of a leveraged position or an illiquid program
  - A stressed case can help frame the nature and magnitude of any potential liquidity issues

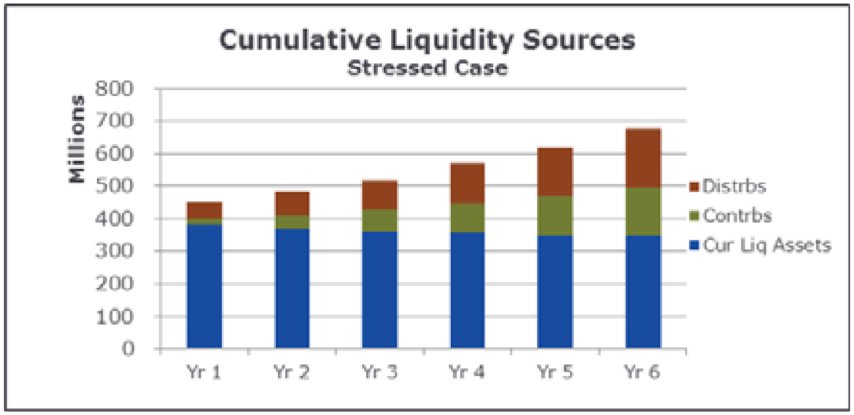
- **Disadvantages**
  - Helps set appropriate investment constraints but doesn't identify a single optimal allocation
  - Difficult to create plan for all liquidity contingencies when conditions leading to contagion are unique

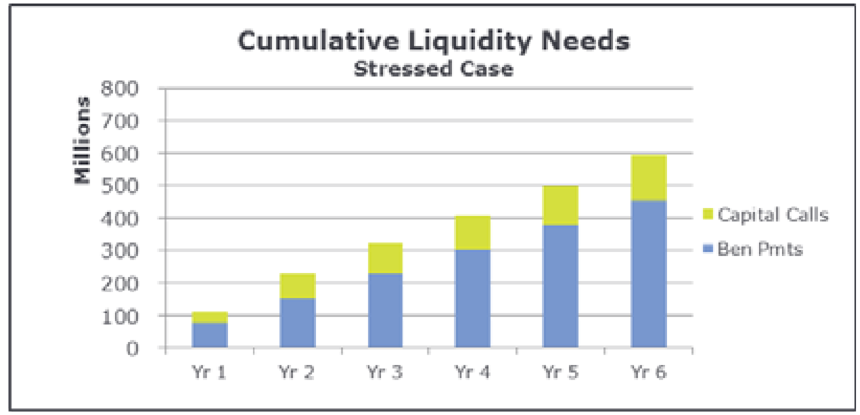


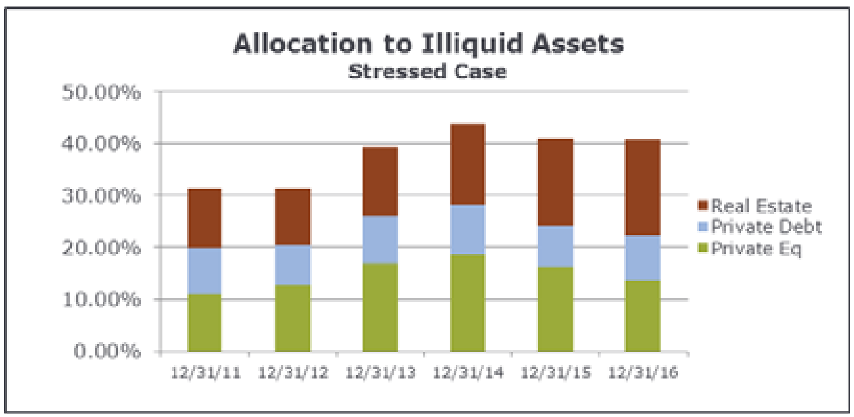


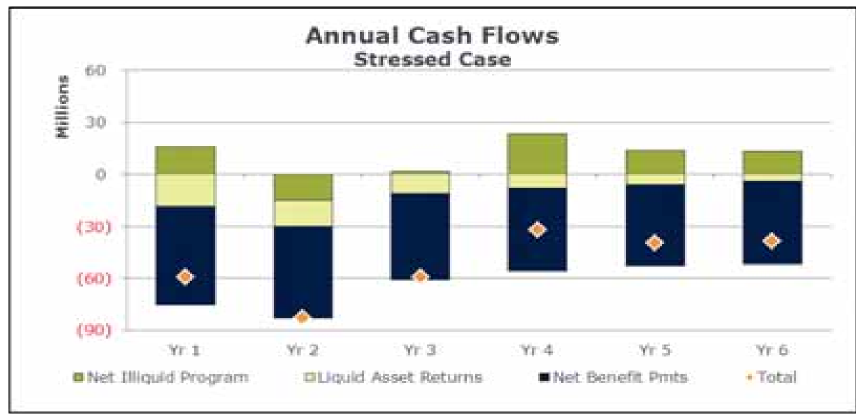
Managing Liquidity Risk: Long-Term

- **Using our scenario assumptions, we can project how the liquidity sources, needs, and asset allocation will evolve over the next several years**





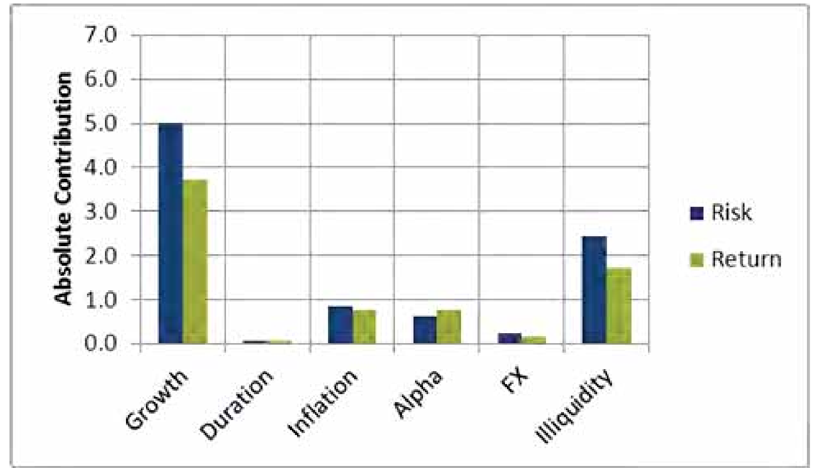


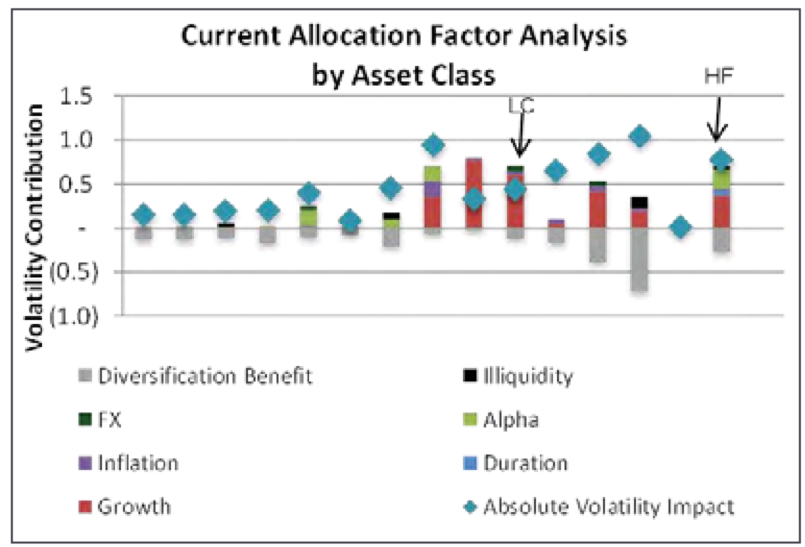


- **Factor analysis reflects the interaction of common economic factors across different asset classes**

- **Advantages**
  – Reveal portfolio concentrations that may appear diversified on an asset class basis
  – Help frame performance expectations across economic regimes
  – Improve perspective on how individual strategies fit in a program
  – Aligns portfolio construction approach with evolution of using unconstrained multi-asset classes to achieve best risk-adjusted returns

- **Disadvantages**
  – Still requires static measures of risk and relationships
  – Can lead to a desire to bucket each strategy by a factor
  – Quantifying risk views may be more difficult for factors than asset classes



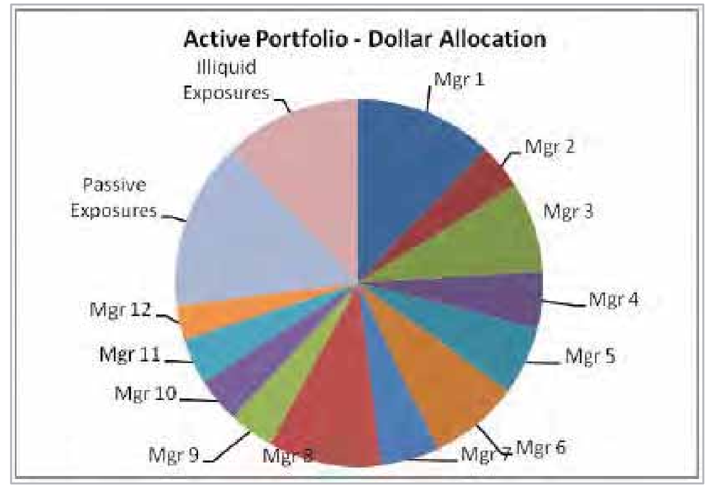


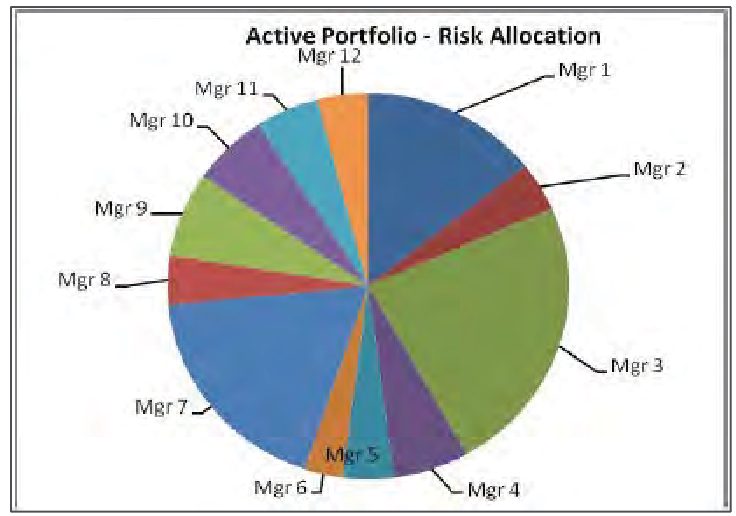
- **Proprietary Active Risk Budgeting tool used to develop an optimal active portfolio structure**

- **Uses estimates of each strategy's tracking error and correlations between alphas to construct Alpha Risk Budget**

- **Used to size strategies appropriately and understand each strategy's contribution to tracking error, or active risk**

- **This framework can be useful in**
  – Developing active vs. passive decisions
  – Building active portfolios within an asset class
  – Complementing qualitative due diligence process in selecting high conviction active managers
  – Separating alpha from market exposure





Diversification and Risk Budgeting with Alternatives

- **Diversification Concepts**
  - The range of eligible investments has expanded nicely over time
  - These new options can be used to improve and stabilize returns

- **Risk Management**
  - Traditional (60/40) portfolios are dominated by equity risk
  - NEPC has been derisking client portfolios since the late 1990's
  - Over 70 clients currently using risk parity concepts/products in varying degrees

- **Hedge Fund Overview**
  - Hedge funds remain an important risk mitigator, return enhancer

- **Credit Ops**
  - Credit markets offer exceptional opportunistic potential

Opportunities To Add Value to Strategic Allocation

- **The strategic portfolio target allocation will likely have the largest impact on long-term risk and return**
- **But there are opportunities to add incremental value to the portfolio through a dynamic approach**
- **Portfolio adjustments should take on different approaches based on the time horizon**

Time Horizon	Approach
Long-Term (5-7 years)	Dynamic Forecasting and Allocation Adjustments
Medium-Term (2-5 years)	Flexibility to implement Opportunistic Allocation
Short-Term (0-2 years)	Global Asset Allocation strategies

Opportunistic Strategies – Credit Example

- **In 2008, credit markets experienced a major dislocation**
- **Investors needed to implement outside traditional asset class buckets, creating an opportunistic bucket**
  - Separate allocation with 0% target and 0-10%
  - Required different kind of decision-making process
- **Opportunity set ranged from bank loans and investment grade credit to private equity like structures**
  - Likely be realized over an extended time period (2-3 year horizon)
  - Volatility was to be expected – important to fund from risky asset class like equities
- **Outcomes – Live three year opportunistic returns through 6/30/13**
  - SBCERA – 9.8%
  - NMERB – 10.2%

Index	2nd Half 2008	2009	1st Half 2010	Total Period
Barclays US Credit	-3%	16%	6%	**19%**
Barclays High Yield	-25%	58%	5%	**24%**
S&P LSTA Lev Loan	-28%	45%	3%	**12%**
S&P 500	-29%	19%	-7%	**-16%**
MSCI EAFE	-36%	29%	-13%	**-27%**

Experience of the Proposed Consulting Team

Proposed Consulting Team

- **Don C. Stracke, CFA, CAIA**
  Senior Consultant
  – Twenty-eight years' investment experience
  – Member: Large Cap Equity Advisory Group
  – Previous affiliations: Shenkman Capital Management, Attalus Capital, Dresdner RCM Global Investors, Bankers Trust Company, Citibank
  – MBA, Rutgers University; BA, Farleigh Dickinson

- **Allan C. Martin**
  Partner
  – Forty-four years' investment and consulting experience
  – Public/Taft-Hartley practice group leader
  – Ranked 2nd Most Influential Consultant in the World by aiCIO Magazine
  – MML Public Fund Consultant of the Year (2008)
  – Member: Executive Committee
  – Member: International Equity Advisory Group
  – Previous affiliations:
    - Bankers Trust – Managing Director Global Retirement Services
    - Dresdner/RCM – Partner, Head of Global Client Service & Marketing
  – MBA and BS, Stanford University (Phi Beta Kappa)

- **Tony Ferrara**
  Senior Analyst
  – Eight years' investment experience
  – Previous affiliations: Wurts & Associates; Waddell & Reed Inc
  – BS, San Jose State University; CAIA Level II Candidate

Value-added background of the consulting team

- **Thirty-six years average experience**
- **Team has worked together for fifteen years at three different jobs**
- **Consultant experience plus:**
  - Fiduciary/Governance
  - Trust, custody, securities lending, cash management
  - Asset management
  - Product management
  - Client service
  - Experience with almost every asset class
  - International custody and asset management
  - Performance measurement

Our Investment Philosophy – How We Help Clients

- **Focus of NEPC's consulting approach**
  - Building diversified portfolios
  - Demonstrate a clear understanding of the relevant risks within client portfolios
  - Asset allocation increasingly based on liabilities and spending needs
  - Prudent use of active, passive, and alternative strategies
  - Pursuit of higher risk-adjusted returns

- **Blend of strategic and tactical**
  - Long term strategic policy is the cornerstone
  - Opportunistically adjust the portfolio as conditions warrant

- **Client attributes require different solutions**
  - Required return and risk tolerance
  - Staffing and resource levels
  - Investment acumen of staff and committee members
  - Tolerance for legal complexities
  - Desired level of investment complexity

- **Research indicates Non-Traditional Asset Classes are necessary in today's environment to meet or exceed an assumed rate of 7.75%**

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	36
Non-U.S. Equity	30	13	23	17	14	20	15	19
Global Equity	-	-	-	4	-	-	-	10.0
Total Equity	**60**	**26**	**56**	**36**	**32**	**48**	**40**	**65**
Domestic Fixed Income	25	3	18	13	8	22	18	25
Credit/Private Debt	-	22	3	7	12	10	15	-
High Yield	5	-	-	-	-	-	-	-
Global Bonds	-	2	-	3	1	-	-	2
Emerging Market Debt	-	6	4	3	3	5	2	-
TIPS	-	-	-	-	-	-	-	-
Total Fixed Income	**30**	**33**	**25**	**26**	**24**	**37**	**35**	**27**
Real Estate	6	9	8	10	10	5	2	8
REITs	4	-	-	-	-	-	3	-
Private Equity	-	16	7	5	9	-	5	-
Absolute Return	-	7	-	7	4	-	8	-
Total Alternatives	**10**	**32**	**15**	**22**	**23**	**5**	**18**	**8**
GTAA/Risk Parity	-	-	-	6	12	10	5	-
Real Assets/Commodities	-	7	4	10	7	-	1	-
Cash	-	2	-	-	2	-	1	-
Total Other	**0**	**9**	**4**	**16**	**21**	**10**	**7**	**0**
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***

**Became NEPC Client in 1Q 2013*

Allocations Analyzed – Ventura County

Asset Class	Current Allocation	60/40 Mix	Proposed Mix
U.S. Equities	36%	35%	25%
Int'l Equities	19%	25%	10%
Global Equities	10%	-	10%
Total Equity	**65%**	**60%**	**45%**
Core Bonds	25%	28%	10%
Global Fixed Income	2%	2%	-
Credit/Private Debt	-	-	7%
Emerging Market Debt	-	2%	3%
Total Fixed Income	**27%**	**32%**	**20%**
Real Estate	8%	8%	8%
Private Equity	-	-	8%
GTAA/Risk Parity	-	-	9%
Real Assets/MLP's	-	-	10%
Total Alternatives	**8%**	**8%**	**35%**

Expected Return 5-7 Year	*6.4%*	*6.2%*	*7.2%*
Expected Return 30 Year	*7.5%*	*7.2%*	*8.1%*
Standard Dev of Asset Return	*12.7%*	*12.1%*	*12.8%*
Probability of 5-Year Return Over 7.75%	*40.9%*	*38.4%*	*46.1%*
Sortino Ratio MAR @ 0%	*0.64*	*0.62*	*0.68*
Sharpe Ratio	*0.45*	*0.45*	*0.50*

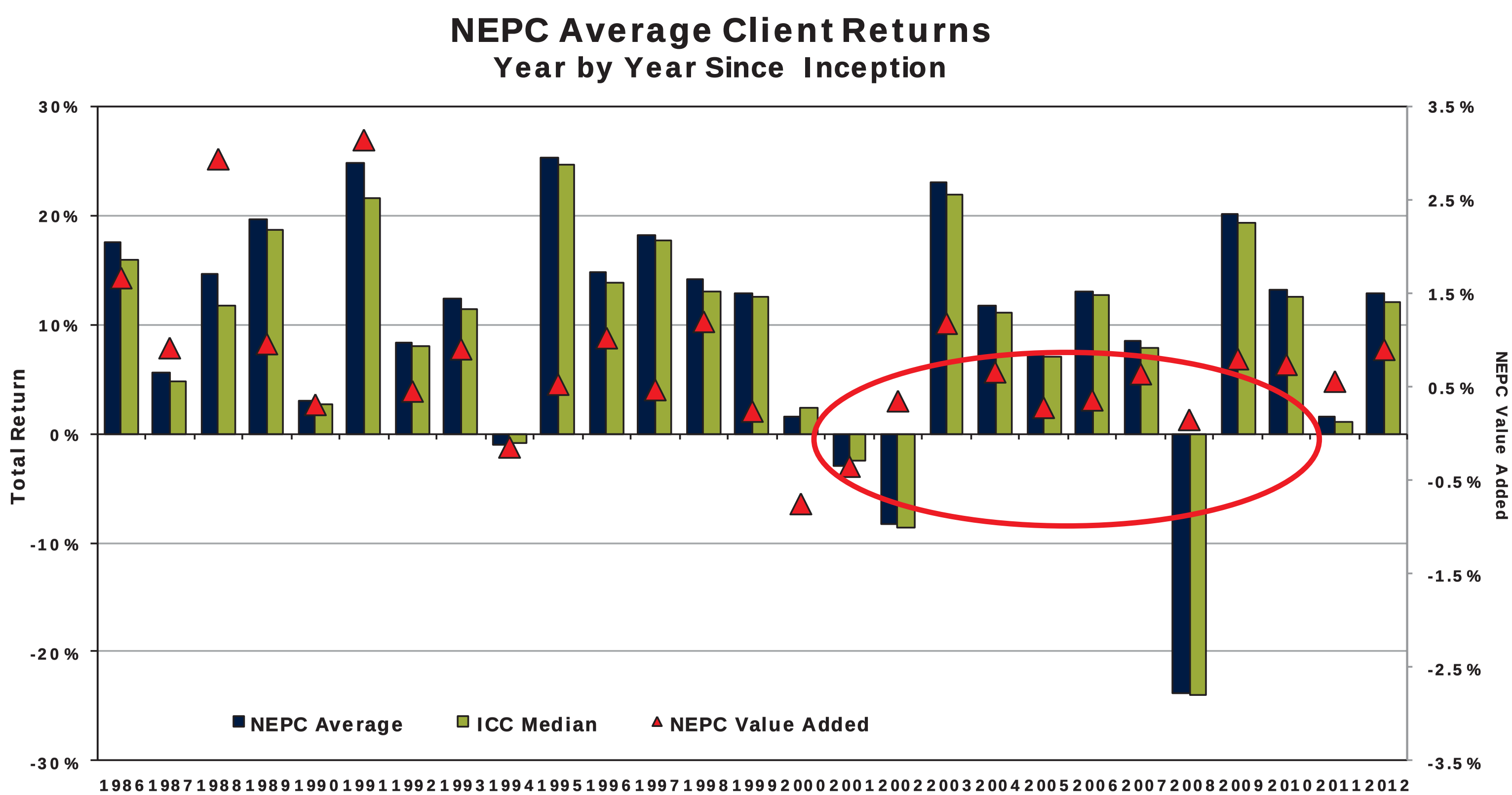
- **Current allocation heavily reliant on equity markets**
- **Sample potential allocation seeks to diversify risk while seeking a higher return**
- **Reduce low yielding core bond and global bond allocations to introduce dedicated EMD, Opportunistic Credit and Private Debt exposures**
- **Reduce equity exposure and increase exposure to tactical strategies (GAA/Risk Parity), and inflation protection (PRA)**

City of Fresno 2013 Meeting Schedule

Board Meeting	Agenda Item
February 26, 2013	✓ Quarterly investment performance report ✓ 2013 NEPC Outlook ✓ Dodge & Cox Overview ✓ Work plan discussion/review
March 26, 2013	✓ Loomis, Sayles Overview ✓ Fixed income asset class review – Core/High Yield ✓ Fixed income education ✓ Manager search/guideline fixed income
April 23, 2013	✓ Asset class review – non-US equity managers ✓ Non-US equity education ✓ Kennedy Capital Overview ✓ Custodian rfp reviews/discussion
May 28, 2013	✓ Quarterly investment performance report ✓ Baillie Gifford Overview ✓ GTAA Education
June 25, 2013	✓ Asset Allocation Discussion ✓ "Big Picture" Review ✓ GTAA Education - Manager ✓ Absolute Return Fixed Income Discussion
July 23, 2013	• Principal EAFE Overview • Asset Allocation Review/Decision • Asset class overview – US equity
August 27, 2013	• Quarterly investment performance report • Asset class review – Real Estate • Real estate – education • Real estate value-added search discussion
September 24, 2013	• Principal REIT • Heitman REIT • Real assets education
October 22, 2013	• Eagle Overview
November 26, 2013	• JP Morgan Overview • Quarterly Investment Report
December 24, 2013	• Prudential Overview • Initial Asset/Liability discussion

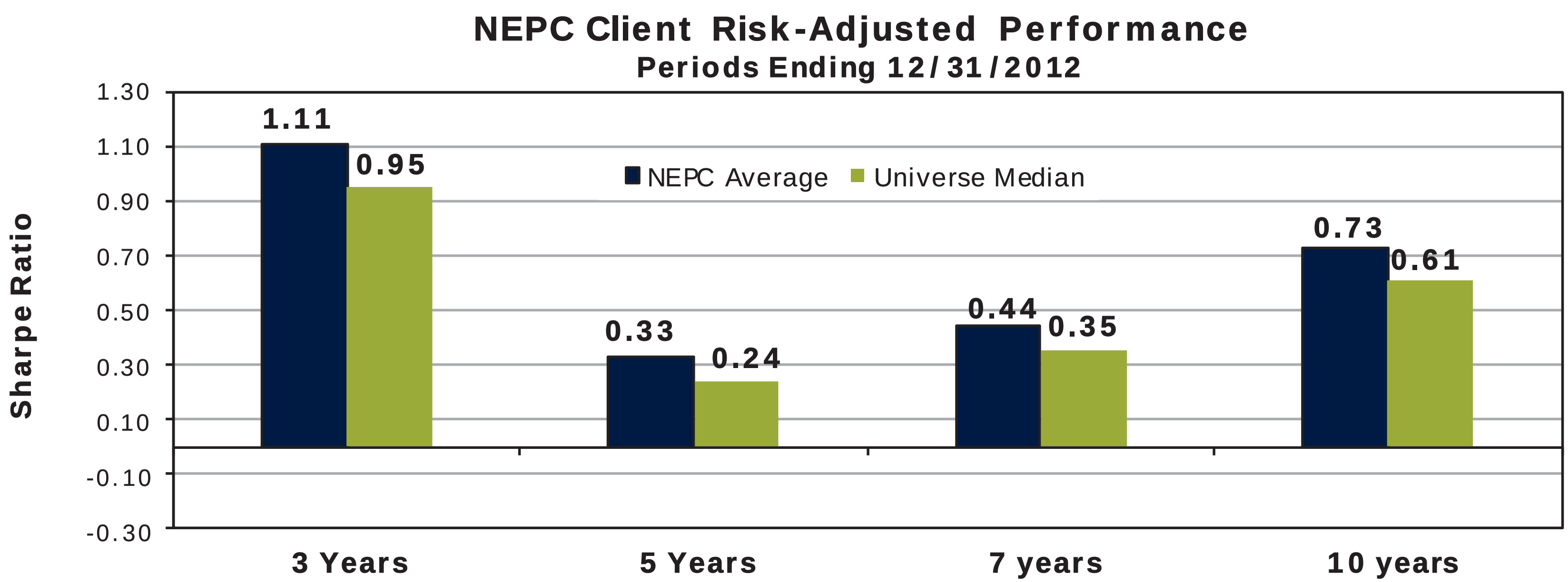
Past Investment Performance

- Outperformed national averages in 24 of 27 years
- Product of manager and asset allocation excellence
- Outperformed in 2002 – 2012



The national average is represented by the median fund in the $1.9 trillion InvestorForce Universe (or the ICC Universe through 2011). NEPC and universe results are both gross of manager fees. Past performance is no guarantee of future results. Please see additional information on the Disclosure page.

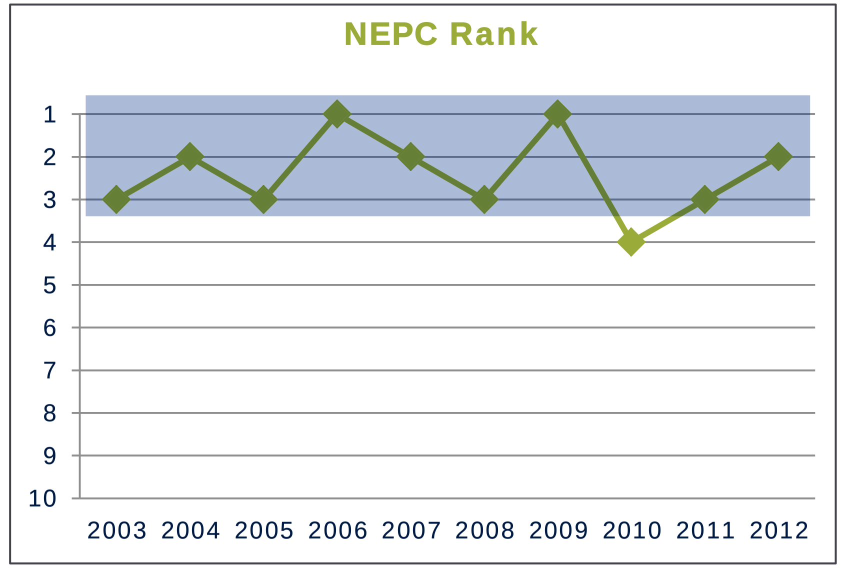
- **Significant outperformance on a risk-adjusted basis**

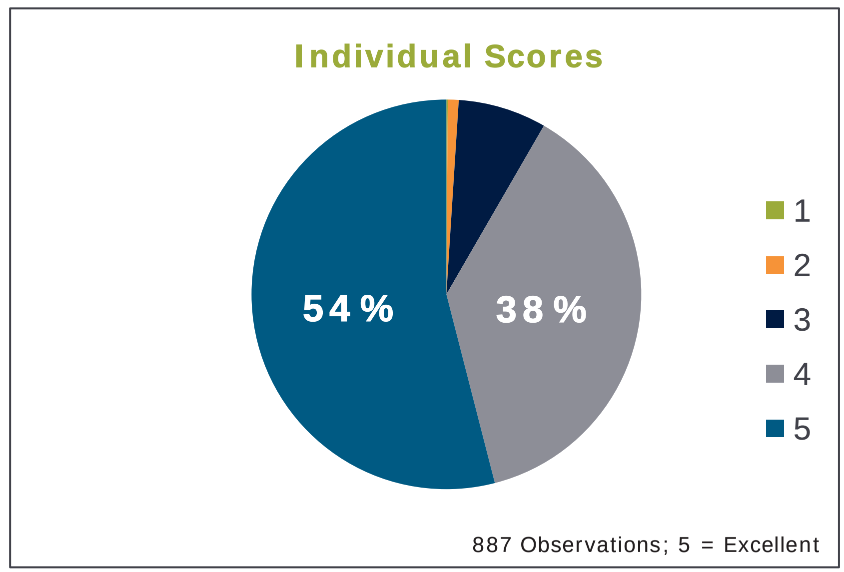


The national average is represented by the median fund in the $1.9 trillion InvestorForce Universe (or the ICC Universe through 2011). NEPC and universe results are both gross of manager fees. Past performance is no guarantee of future results. Please see additional information on the Disclosure page.

Client Focus/ Client Satisfaction

- **Greenwich surveys ~1,000 large plan sponsors every year**
- **3 broad areas of focus**
  - Investment Counseling
  - Manager Selection
  - Client Servicing
- **In 2012, NEPC ranked #2 among our top 10 competitors**
  - We ranked in the top 3 in every major component category in 2012
- **NEPC is only firm ranked #3 or higher in nine of past 10 years**
- **Ranked #2 among the top 10 in alternative asset capability in each of the last eight years**
- **Employee compensation is linked to this survey through our Quality Bonus**





Performance submitted on clients between $1-10 billion

- **Significant, risk-adjusted out-performance**

Number of Clients	Total Assets	5 Year STD	5 Year Return	Benchmark Return	Excess
28	84.9 billion	11.98	3.65	3.30	0.35

Review of Consultant Search Report

Thoughts and Clarifications

- **Concerns**
  - Corporate Ownership
  - Printing
  - Remote Office

- **Strengths**
  - Proactive
  - Research Breadth
  - Corporate Ownership
  - Alternatives
  - Performance
  - Experience

Wrap-up

Why NEPC

- **Independence**
- **Manager Search and Evaluation Capabilities**
- **Asset Allocation and Investment Policy Capabilities**
- **Experience of the Proposed Consulting Team**
- **Past Investment Performance**

Appendix

Representative Client List

Public

Anne Arundel County
Arizona Public Safety Personnel Ret. System*
Arizona State Retirement System*
Baltimore County ERS
Boston Water and Sewer Commission
Braintree Retirement Board
Chicago Policemen's Annuity & Benefit Fund
City of Boston - Trust Funds
City of Detroit, Michigan
City of Fairfax, Virginia
City of Fresno, California*
City of San Jose Police & Fire Dept. Ret. Plan*
Dallas Police & Fire Pension System
Fairfax County Uniformed Retirement System
Louisiana State Employees Retirement System
Massachusetts Water Resource Authority
New Mexico Educational Retirement Board*
New York City Fire Department Pension Fund
NY City Metropolitan Transportation Authority
Ohio Public Employees Retirement System
Oklahoma State Pension Commission*
Oklahoma Tobacco Settlement Trust*
Omaha Schools Employees' Retirement System
Orange County Employees Retirement System*
Philadelphia Housing Authority
Regional Transportation Authority
San Antonio Fire & Police Pension Fund
San Bernardino County ERA*
St. Louis Public School Retirement System
State Boston Retirement System
State of Vermont
The Metropolitan St. Louis Sewer District
Town of Belmont, Massachusetts
Town of Greenwich, Connecticut
State of Wisconsin Investment Board
State of Wyoming Retirement System*
West Virginia Board of Treasury Investments

Taft-Hartley

ABC-NABET
Bert Bell/Pete Rozelle NFL Player Retirement Plan
Boston Newspaper
Boston Plasterers' & Cement Masons' Local 534
Boston Shipping Association
Chicago Laborers' & Retirement Board
Employees' Annuity & Benefit Fund
Desert States UFCW Pension Fund
FELRA & UFCW Pension Fund
Fulton Fish Market
IBT Locals 111 & 854
IUOE Locals 12, 15 & 324
Rocky Mountain UFCW
Sheet Metal Workers Local 40
Southern California IBEW-NECA
Teamsters Local 856
UFCW - Northern California
Western Pennsylvania Teamsters & Employers

Healthcare Related

Blue Cross/Blue Shield of Kansas
Blue Cross/Blue Shield of Massachusetts
Boston Medical Center
Cardinal Health
Care New England
Christus Health
Fallon Community Health Plan
Hebrew SeniorLife
Henry Ford Health System
Johns Hopkins Hospital
Lahey Clinic
Rochester General Health Systems
Rush University Medical Center
Shriners Hospitals for Children, Inc.
St. Barnabas Hospital
Unity Health System
University of Maryland Medical System

Corporate

Alliant Energy Corporation
Bose Corporation
Continental Airlines
Iberdrola USA Management Corp.
Invensys
JM Family Enterprises, Inc.
Maine General Hospital
National Grid
Nstar
Ocean Spray Cranberries
Procter & Gamble
Revlon
SBC Holdings
United Technologies Corporation

Endowments & Foundations

Boston Biomedical Research Institute
Community Foundation for SE Michigan
Dartmouth Hitchcock Hospital & Clinic
Hebrew Immigrant Aid Society (HIAS)
Hebrew SeniorLife
Kaleida Health
MaineGeneral Healthcare
Massachusetts SPCA
Several High-Net Worth Foundations
Unitarian Universalist Association

NEPC services 314 clients with total assets of $716 billion.

The above client list is a sample only and does not necessarily reflect approval of the services provided.

Client Type	Retainer Clients	Funds less than $1.5B	Funds greater than $1.5B	Total Assets	Average Client Size	Median Client Size
Public Fund	61	30	31	$408 billion	$6.7 billion	$1.5 billion

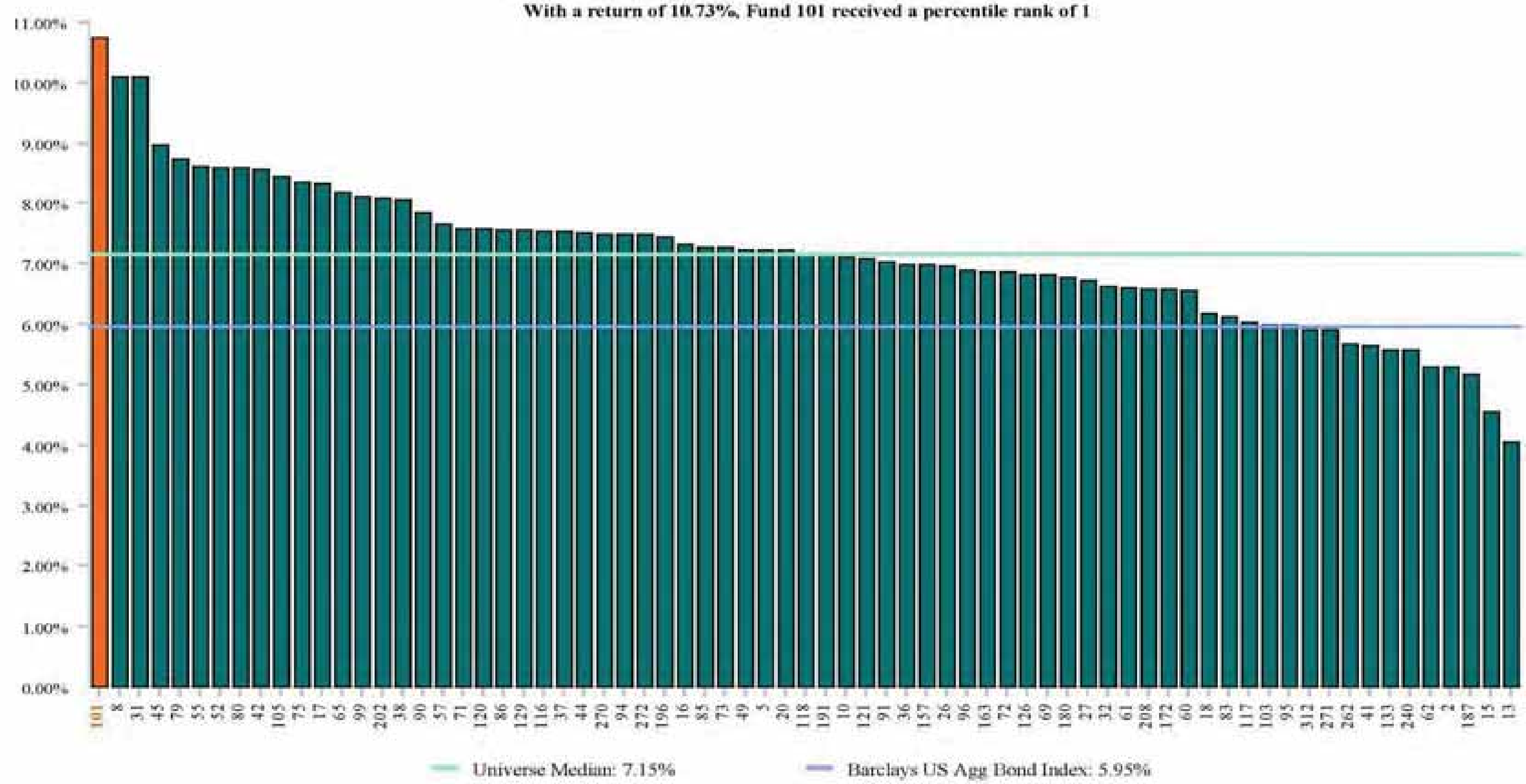
*Serviced out of NEPC's San Francisco Regional Office

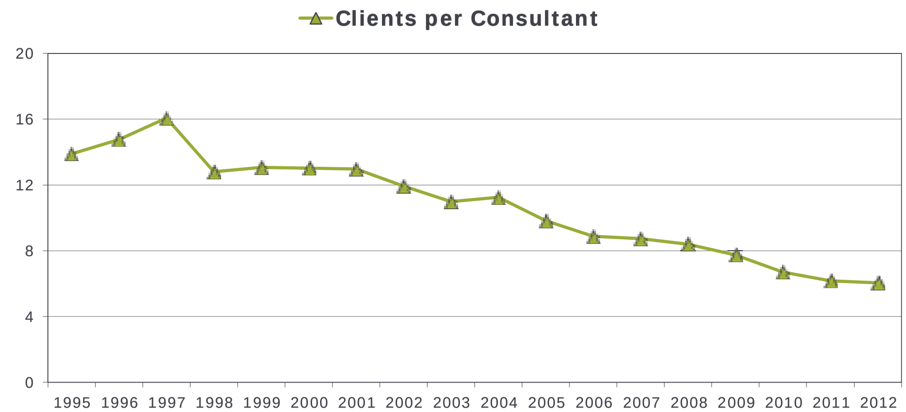
5 Year Annualized US Fixed Income Returns

As of December 31, 2012

Fund Number: 101

71 of 75 funds provided US Fixed Income returns for this time period
With a return of 10.73%, Fund 101 received a percentile rank of 1





Selective growth

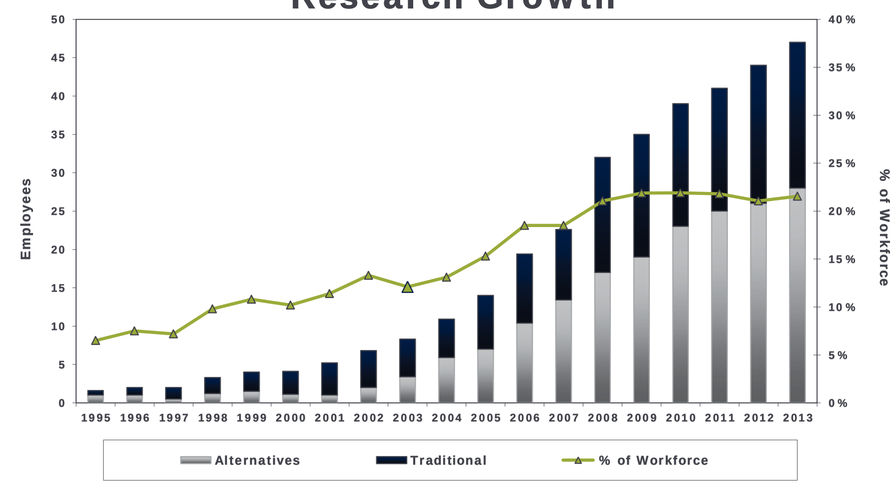
- Balance resources, product and services
- Recognize increased servicing requirements
- Add experts
- Declined 117 RFPs in 2012

Client Commitment

NEPC employs 47 dedicated research professionals

- Asset allocation and manager research is a hallmark of NEPC
- Second largest alternative asset group in the industry
- Five consulting actuaries and one PhD specializing in risk budgeting and asset allocation

Research Growth



Senior Secured Direct Lending Characteristics

- **Corporate Loans and Bonds vs Senior Secured Direct Lending**
  - Corporate loans and bonds are typically arranged by banks and syndicated to a broad group of investors
  - Private direct lending involves a limited number of investors that structure terms of a transaction directly with a middle-market or small corporate borrower

- **Less Liquid: There is generally a limited public market for these loans; they are usually refinanced prior to maturity or held to maturity by one or a relatively small number of investors.**

- **Lenders in the space have historically been principal finance groups or proprietary desks within commercial/investment banks, specialty finance companies, financing arms of industrial corporations, traditional asset management firms and hedge funds.**

FINALS PRESENTATION

Ventura County Employees' Retirement Association

September 9, 2013

WURTS ASSOCIATES

SEATTLE | 206.622.3700
LOS ANGELES | 310.297.1777
www.wurts.com

OUR MISSION

WURTS & ASSOCIATES provides research-driven investment solutions that enable institutional investors to prudently discharge their fiduciary responsibility.

Through independent, conflict-free advice and investment expertise, our professionals strive to be the driving force that empowers clients to achieve their investment objectives.

TABLE OF CONTENTS

INTRODUCTION

WHY WE ARE HERE

CLIENT FOCUS

THOUGHT LEADERSHIP

PROACTIVE ADVICE

Established

Founded in 1986. Advise on over $62 billion in assets.

Independent

Employee-owned, conflict-free

Boutique Culture

Personalized and well-resourced

Innovative

Global thought leadership on risk management & governance

Credentialed

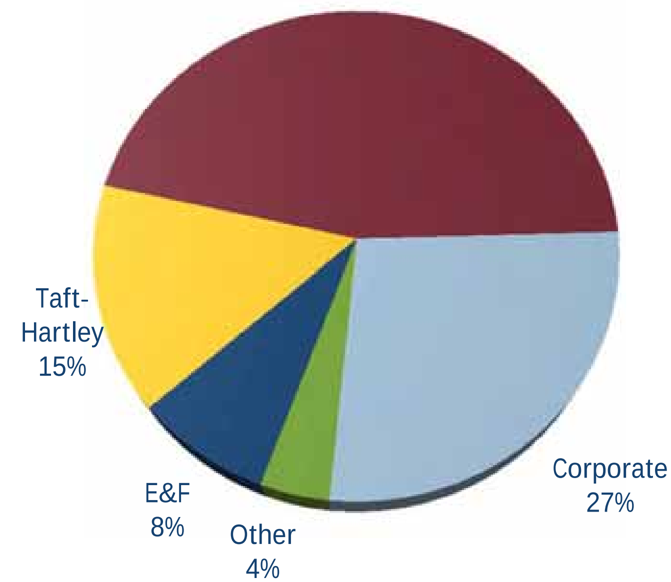
16 CFAs, 14 MBAs, 5 CAIAs, 4 MSs, 2 PhDs

Experienced

Well-established reputation for success

Assets Under Advisement

(as of July 1, 2013)

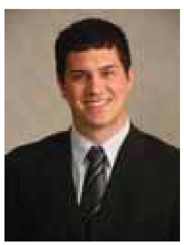


* Other includes medical institutions, religious organizations, and personal trusts.

CONSULTING TEAM

Scott Whalen, CFA
Executive VP, Senior Consultant
MBA, Marshall School of Business
BA, Wake Forest University
11 Years experience

Ed Hoffman, CFA
Senior Consultant
MBA, Harvard Business School
BS, Carnegie Mellon University
18 Years experience



Justin Hatley
Director of Portfolio Analytics
BA, University of Idaho
MBA, Seattle University
9 Years experience

Herbert Nishii
Senior Consulting Associate
BA, University of Hawaii
MBA, Marshall School of Business
12 Years experience

Elena Solovyeva, CFA
Research Analyst
MS, Moscow State University
MBA, North Dakota State University
10 Years experience

PREPARED COMMENTS

Clarifications

- Asset Allocation systems include Markov Processes International (MPI) for mean variance optimization (MVO); proprietary scenario analysis system to test MVO results; and WinTech ProVal for liability modeling—both deterministic and stochastic
- Pooling clients for purposes of fee & account minimum negotiations is routine, standard practice
- Asset/liability studies are augmented with tactical tilts and investment ideas
- Recommended fewer asset allocation (liability) studies
- Mr. Whalen's client count is 5

Noted Concerns

- Support staff/analyst communication skills
- Concentration of ownership structure
- Fees

INVESTMENT PHILOSOPHY KEY TENETS

Enterprise Objectives Should Guide All Decision-making

- Policies and portfolios must be designed to meet liabilities, not exceed peers.

Economic Factors Drive Long-term Asset Class Returns

- Understanding sources and dynamics of global GDP growth and inflation are critical to portfolio design.

Asset Allocation and Risk Exposures Drive Portfolio Results

- Avoiding large drawdowns supersedes the importance of alpha.

Valuations Matter

- Markets periodically misjudge and misprice risks, creating investment opportunities for the prepared.

Risk and Diversification Must be Viewed Through Multiple Lenses

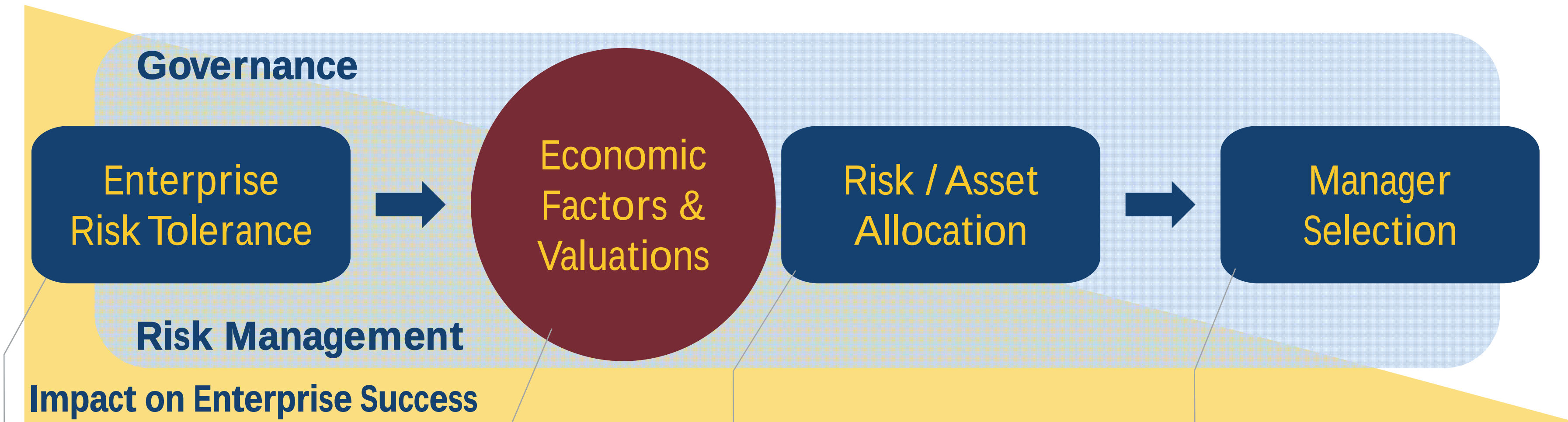
- Complementing MVO with additional concepts & tools is critical to managing portfolio risks.

Behavioral Biases Must be Managed

- Chasing returns and fads (e.g. embracing complexity, leverage, and illiquidity) often leads to problems.

Fees and Costs Must be Minimized

- Investment management fees, trading costs should be expertly managed.

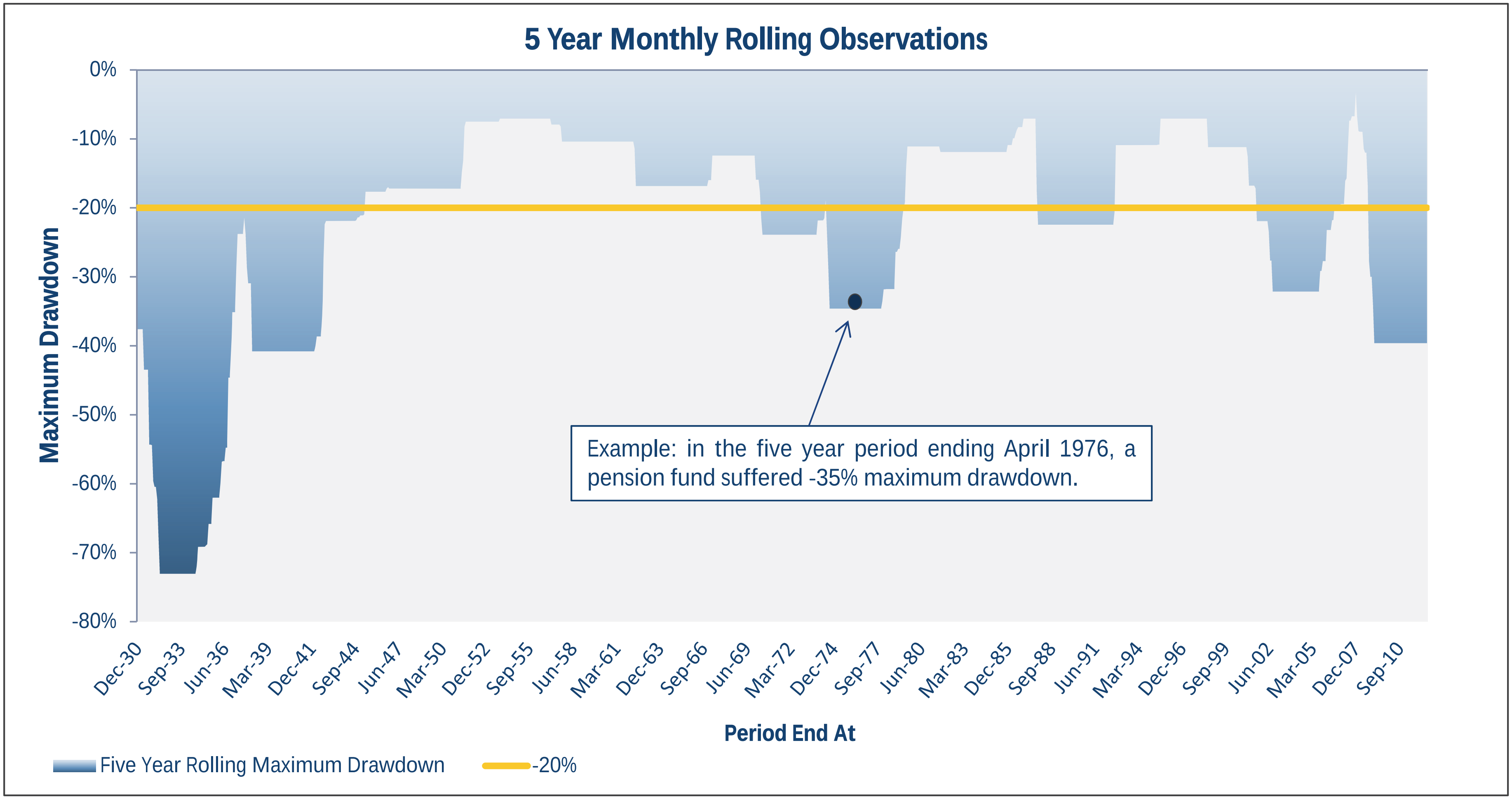


Guide All Decision Making
- Strategic Objectives
- Board Risk Assessment
- Financial Strength
- Liquidity Profile

Drive Asset Class Returns
- Understanding Global Economy
- Finding Investment Opportunities
- Assessing Asset Class Valuations
- Proper perspective on "alpha" and "beta"

Drive Portfolio Results
- Multiple Lenses of Risk
- Strategic and Tactical Allocation
- Role of Asset Classes
- Stress Tests

Achieve Mandated Exposures
- Robust team led by CIO
- Support from 11 Consultants
- Comprehensive Reviews
- On-Site Due Diligence



*Typical pension fund risk equivalent asset allocation portfolio

Average drawdown in a 5-year period	**-28%**
Percent of 5-year periods with a drawdown of -20% or greater	**40%**

A focused, nimble, and collaborative team and emphasis on top-down integration creates a multi-faceted approach to investment manager research.

Bottom-Up

- Client team identifies investment manager need
- Client team clarifies scope/ mandate and define desired manager characteristics
- Manager Research Group sources candidates

Top-Down

- Capital Markets team identifies top down Beta opportunity
- Chief Investment Officer & RAC clarify scope / mandate and define desired manager characteristics
- Manager Research Group sources candidates

RESEARCH PERSONNEL

Capital Markets

- ☆ **Jeffrey Scott, CFA** – *Chief Investment Officer*
- **Max Giolitti** – *Director, Risk Allocation*
- **Omer Tareen, CFA** – *Director, Risk Management*
- **Scott Day, CFA** – *Director, Risk Management*
- **Peter Wilamoski, Ph.D.** – *Director, Capital Markets Research*
- **Ling Zhang, Ph.D.** – *Senior Research Analyst*
- **Matt Brady** – *Senior Research Analyst*
- **Stefan Myers** – *Risk Analyst*
- **Danny Sullivan** – *Risk Analyst*

Equity

- **Peter Wilamoski, Ph.D.** – *Director, Capital Markets Research*
- **John Wasnock** – *Senior Research Associate*
- **Elena Solovyeva, CFA** – *Research Analyst*
- **Eric Crowder** – *Analyst*
- **Matt Lowe, CFA** – *Analyst*
- **Trevor Parmelee** – *Analyst*
- **Ryan Ross** – *Analyst*
- **Craig Shubin** – *Analyst*
- **Victor Lee** – *Senior Consultant*
- **Jason Taylor** – *Senior Consultant*
- **Annie Taylor, CFA** – *Senior Consultant*
- ☆ **Anne Westreich, CFA** – *Senior Consultant*
- **Ed Hoffman, CFA** – *Senior Consultant*

Fixed Income

- **Scott Day, CFA** – *Director, Risk Management*
- **Brian Rowe, CFA, CAIA** – *Director, Manager Research*
- **Rob Meussner** – *Analyst*
- **Austin Vierra** – *Analyst*
- **Griffin Phillips** – *Analyst*
- **P. Bradley Ness** – *Senior Consultant*
- **Lorelei Chao, CFA** – *Consultant*

Real Assets

- **Omer Tareen, CFA** – *Director, Risk Management*
- **John Wasnock** – *Senior Research Associate*
- **Eyal Bilgrai, CFA, CAIA** – *Senior Research Associate*
- **Rob Meussner** – *Analyst*
- ☆ **Brent Nelson** – *Senior Consultant*
- **Victor Lee** – *Senior Consultant*

Private Investments

- ☆ **Jeffrey Scott, CFA** – *Chief Investment Officer*
- **Peter Wilamoski, Ph.D.** – *Director, Capital Markets Research*
- **Brian Rowe, CFA, CAIA** – *Director, Manager Research*
- **Elena Solovyeva, CFA** – *Research Analyst*
- **Danny Sullivan** – *Risk Analyst*
- ☆ **Shelly Heier, CFA, CAIA** – *President and COO*
- **Scott Whalen, CFA** – *Executive Vice President*

Hedge Funds

- **Max Giolitti** – *Director, Risk Allocation*
- **Eyal Bilgrai, CFA, CAIA** – *Senior Research Associate*
- **Craig Shubin** – *Analyst*
- ☆ **Shelly Heier, CFA, CAIA** – *President and COO*
- ☆ **Brent Nelson** – *Senior Consultant*

☆ Research Advisory Committee Member | Risk & Capital Markets Team | Consulting Team | Research & Analytics Team

WHY WE ARE HERE

CLIENT FOCUS

THOUGHT LEADERSHIP

PROACTIVE ADVICE

APPENDICES

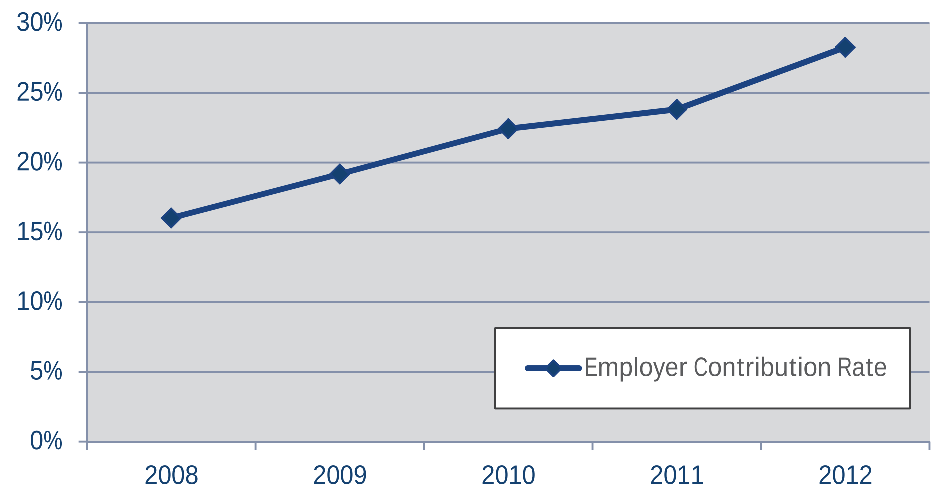
THE VCERA PLAN CHARACTERISTICS

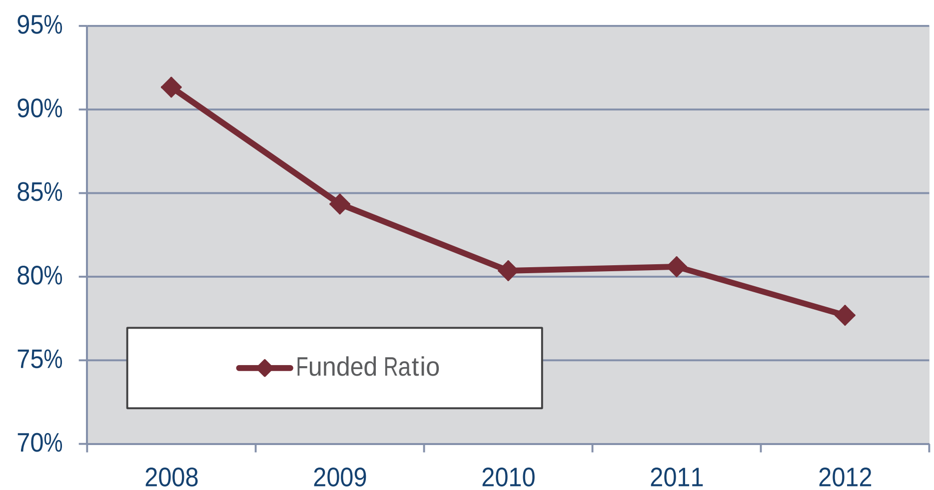
Actuarial Characteristics

- $3.65 Billion in assets
- 7.75% assumed rate of return
- 28.3% Employer Contribution Rate
- 77.7% AVA Funded Ratio

Portfolio Characteristics

- Broadly diversified across major asset classes
- Utilization of passive equity management
- Limited allocation to illiquid assets
- Modest alternatives exposure

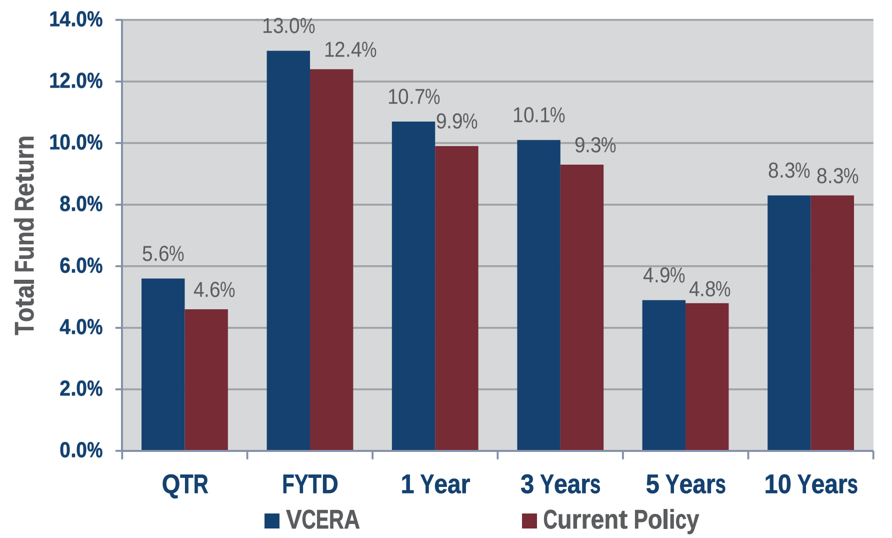




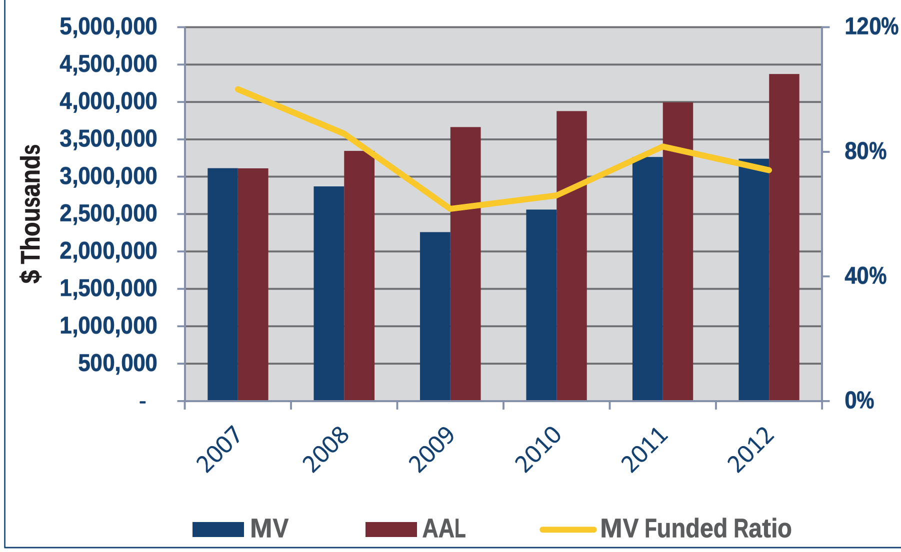
Source: VCERA 2012 Actuarial Valuation and Review

THE VCERA PLAN SUMMARY [1]

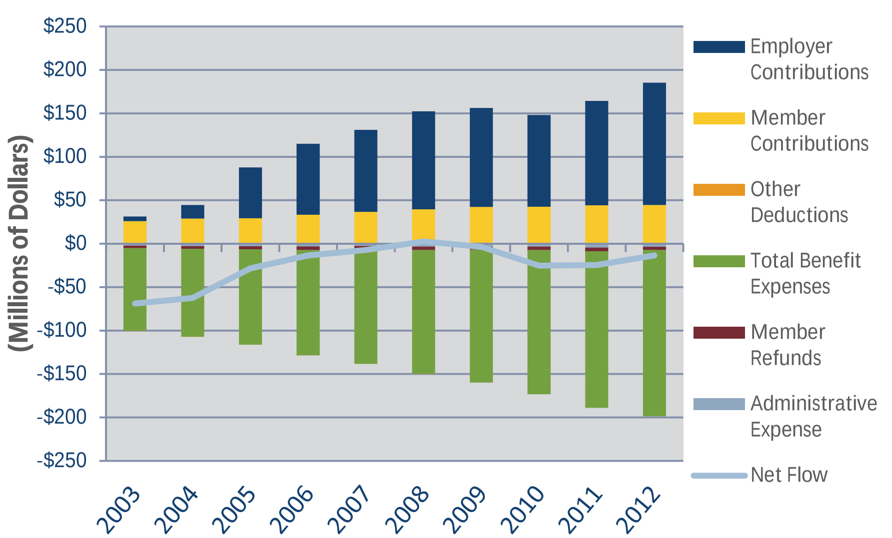
Plan Performance, trailing periods as of March 31, 2013



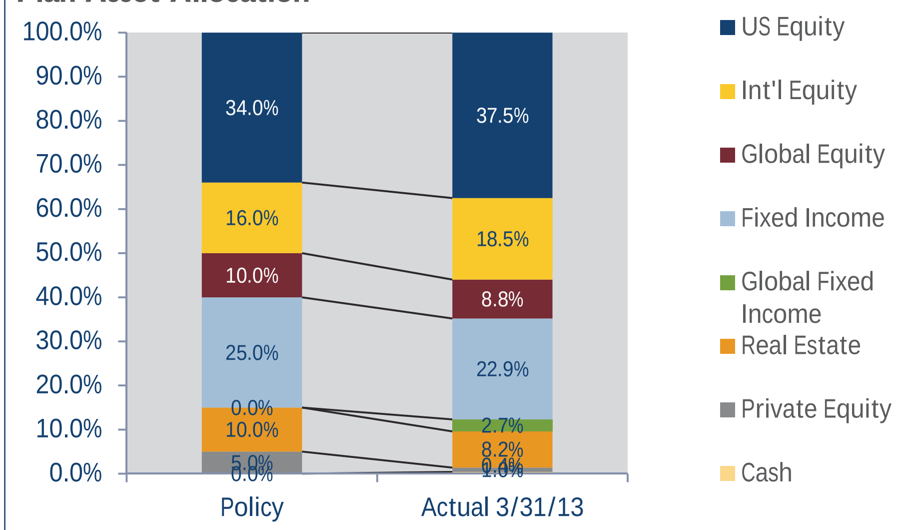
Plan Assets vs. Liabilities



Plan Cash Flows



Plan Asset Allocation

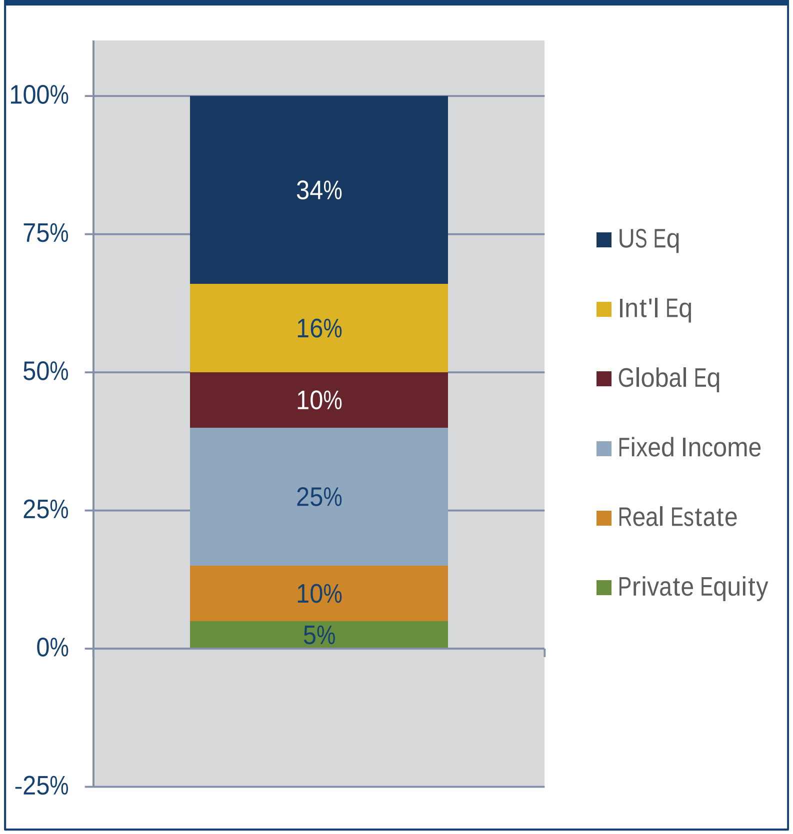


[1] Sources: *VCERA Comprehensive Annual Financial Reports*

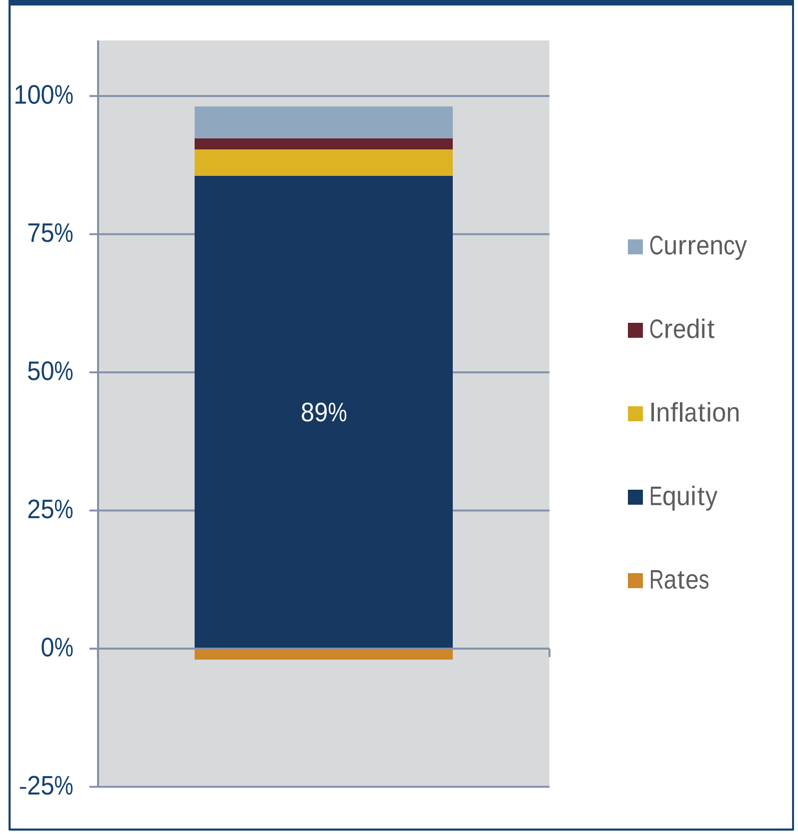
THE VCERA PLAN
RISK DECOMPOSITION

The traditional approach to portfolio diversification implicitly (and often surprisingly) accepts a disproportionate amount of equity risk

Current Policy Exposure to Asset Classes



Current Policy Exposure to Economic Risks



Sources: VCERA Investment Policy Statement; BARRA.

THE VCERA PLAN
PRELIMINARY PORTFOLIO REVIEW

U.S. Equity	$1,308,858	35.4%
BlackRock Extended Equity Index	36,586	1.0%
Western Index Plus	105,904	2.9%
BlackRock Equity Market Fund	1,166,368	31.5%
Non-U.S. Equity	682,820	18.5%
BlackRock ACWI ex-US Index	357,145	9.7%
Sprucegrove	166,699	4.5%
Hexavest	72,153	2.0%
Walter Scott	86,823	2.3%
Global Equity	329,474	8.9%
GMO Global Equity	187,813	5.1%
BlackRock ACWI Equity Index	141,661	3.8%
Fixed Income	702,764	19.0%
Western	255,754	6.9%
BlackRock	132,606	3.6%
Reams	247,976	6.7%
Loomis Sayles Multi Sector	66,428	1.8%
Global Fixed Income	206,179	5.6%
Loomis Sayles Global	109,400	3.0%
PIMCO	96,779	2.6%
Real Return	407,641	11.0%
Prudential PRISA	85,723	2.3%
UBS TPF	179,894	4.9%
Guggenheim	23,797	0.6%
RREEF America III	10,226	0.3%
Tortoise Energy Infrastructure	108,001	2.9%

Private Equity	37,991	1.0%
Adams Street	29,687	0.8%
Pantheon	8,304	0.2%
Overlay		
Clifton	24,267	0.7%
To Be Funded		
Adams Street	75,000	
Bridgewater All Weather Fund	259,000	
HarbourVest Dover VIII Fund	60,000	
Loomis Sayles Strategic Alpha	40,000	
Total	**$3,699,994**	**100%**

Observations

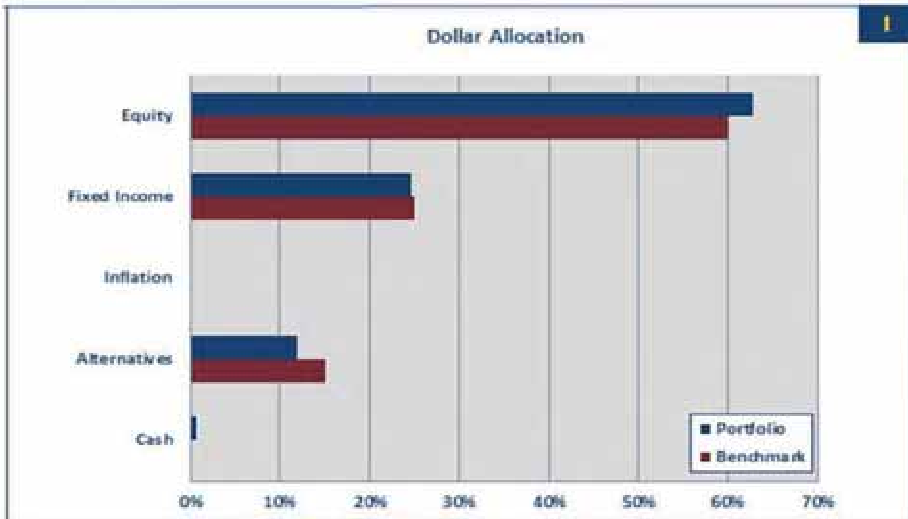
- Effective implementation of indexing has reduced fees
- Overweight domestic equity has enhanced recent results

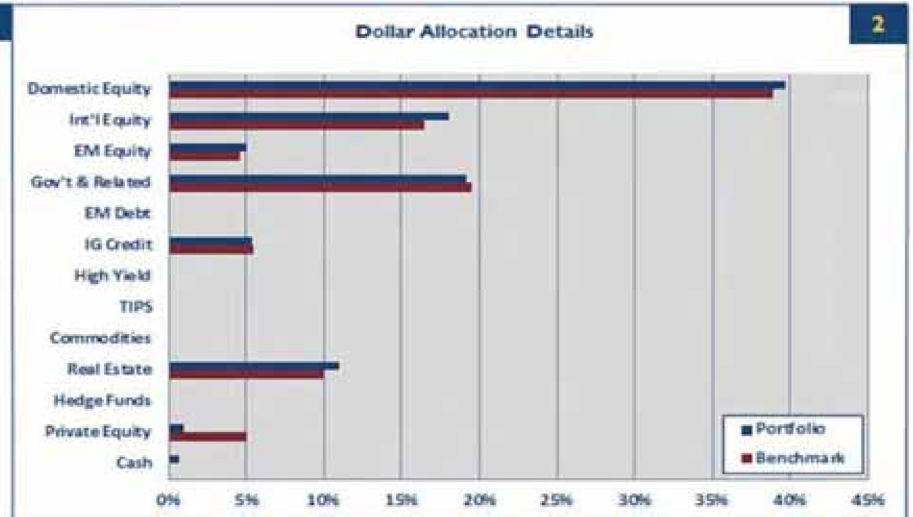
Recommendations

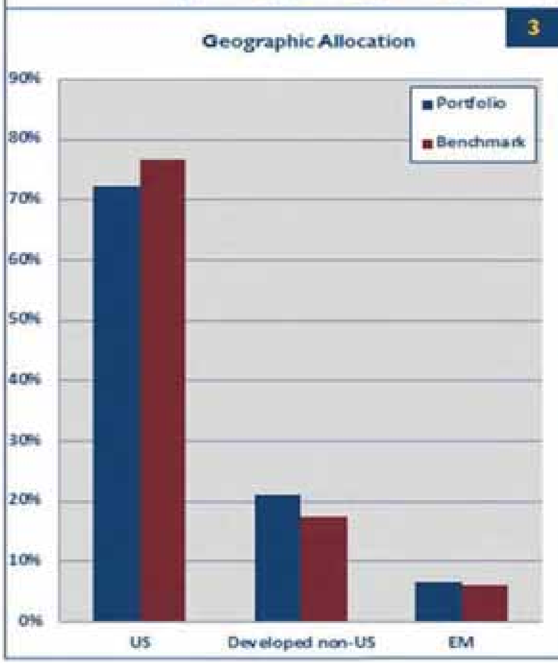
- Review weight to domestic equity and coordination with global mandates
- Explore dedicated mandates to EM, HY
- Review Real Return exposures including real estate and commodities

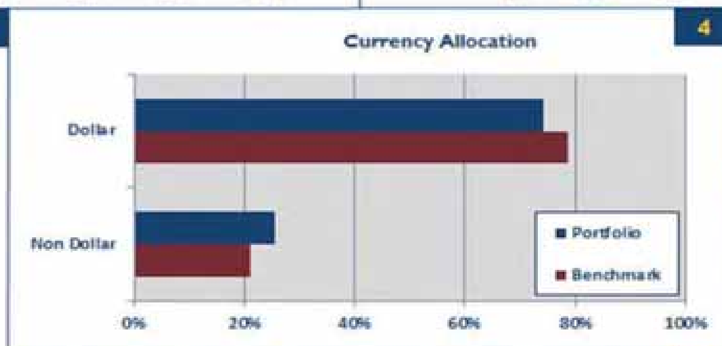
Source: May 31, 2013 Performance Report, Board minutes, Investment Policy Statement, Mandate Pipeline "Ventura County Cancels GTAA Plans", May 2, 2013.

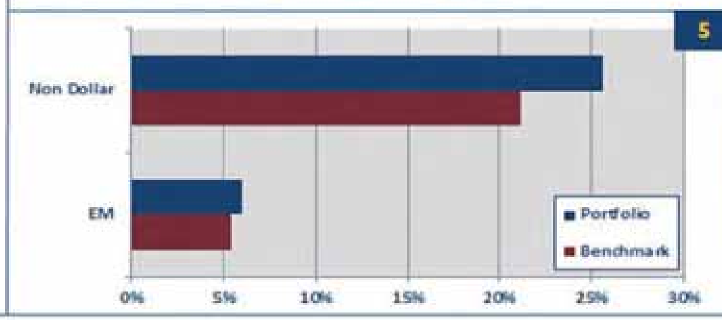
THE VCERA RISK DASHBOARD ALLOCATIONS











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Portfolio Benchmark

	Portfolio	Benchmark
Rate Duration	1.3	1.3
Spread Sensitivity	0.3	0.4
Portfolio Beta	1.0	N/A
Equity Beta	0.6	0.7
Annual Tracking Error	46bps	N/A
Monthly Tracking Error	13bps	N/A

Data as of May 31, 2013

THE VCERA RISK DASHBOARD
RISK FACTORS

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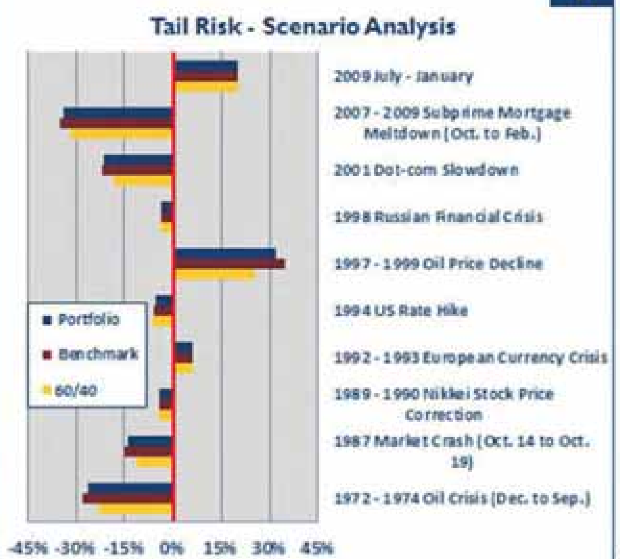

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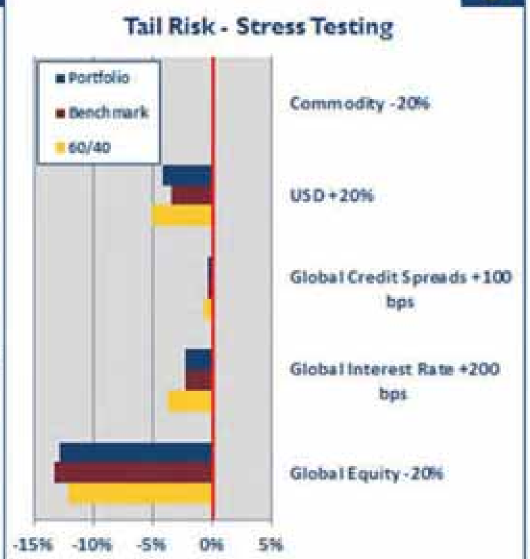

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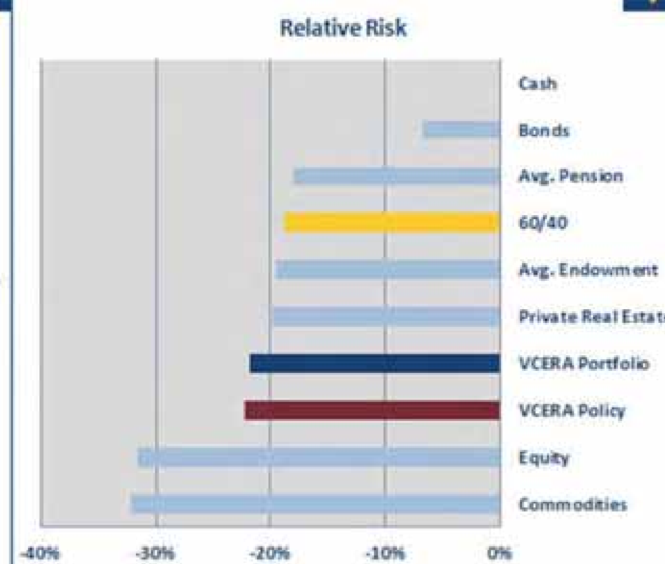

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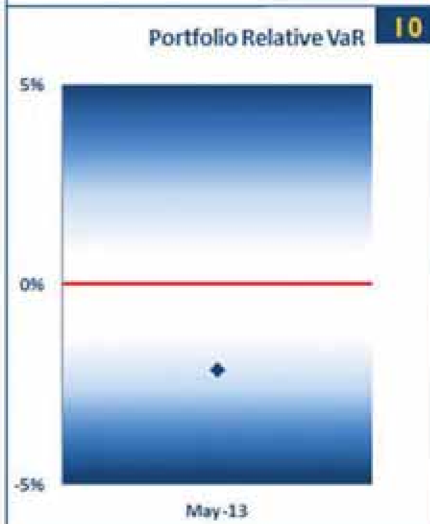

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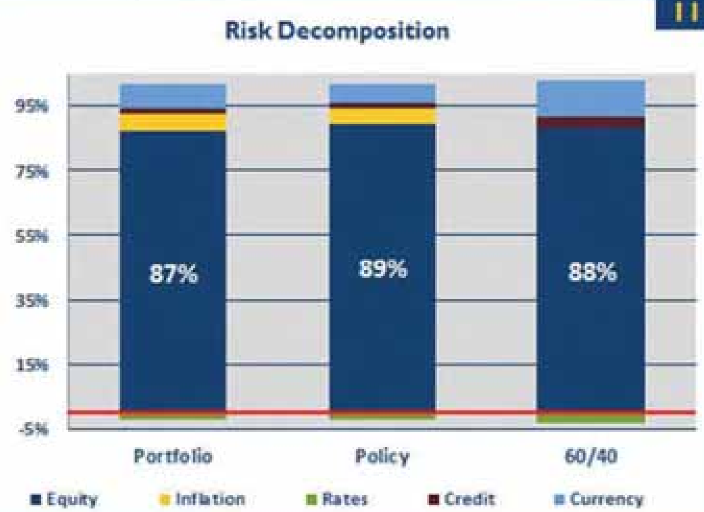

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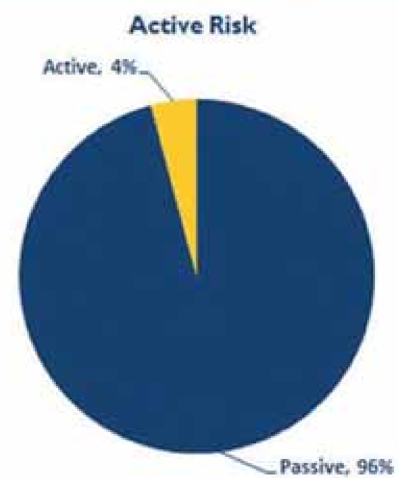

THE VCERA RISK DASHBOARD PERFORMANCE

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Asset Allocation & Market Return Summary

		Asset Allocation 5/31/2013			Market Returns 5/31/2013				
		Portfolio	Benchmark	Difference	Current MTD	Prior 1 Month	Quarter to Date	Year to Date	1 Year
Equity	Domestic Equity	39.7%	38.9%	0.8%	2.4%	1.6%	4.0%	15.6%	27.9%
	Int'l Equity	18.0%	16.5%	1.5%	-2.3%	5.3%	2.9%	8.3%	32.2%
	EM Equity	5.0%	4.6%	0.4%	-2.5%	0.8%	-1.7%	-3.3%	14.5%
Rates	Gov't & Related	19.2%	19.5%	-0.3%	-1.8%	1.0%	-0.8%	-0.9%	0.9%
	EM Debt	0.0%	0.0%	0.0%	-3.8%	2.8%	-1.1%	-3.4%	10.4%
Credit	IG Credit	5.4%	5.5%	-0.1%	-2.4%	1.8%	-0.6%	-0.8%	4.2%
	High Yield	0.0%	0.0%	0.0%	-0.6%	1.8%	1.2%	4.1%	14.8%
Inflation	TIPS	0.0%	0.0%	0.0%	-4.4%	0.8%	-3.6%	-3.9%	-1.8%
Alternatives	Commodities	0.0%	0.0%	0.0%	-2.2%	-2.8%	-5.0%	-6.0%	1.8%
	Real Estate and Infrastructure	11.0%	10.0%	1.0%	0.0%	0.0%	0.0%	2.7%	10.8%
	Hedge Funds	0.0%	0.0%	0.0%	0.6%	0.8%	1.4%	4.7%	4.6%
	Private Equity	1.0%	5.0%	-4.0%	2.6%	1.8%	4.5%	16.6%	31.0%
	Cash	0.7%	0.0%	0.7%	0.0%	0.0%	0.0%	0.1%	0.1%

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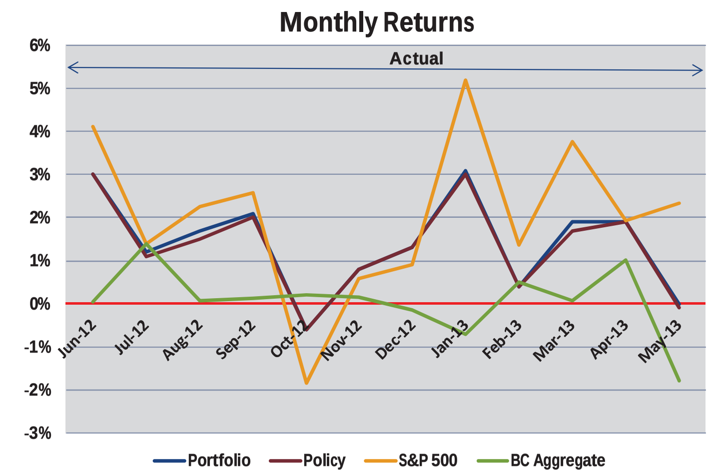

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Attribution Summary 5/31/2013

		Current MTD	Prior 1 Month	Quarter to Date	Year to Date	1 Year
Equity	Domestic Equity	0.02%	0.01%	0.03%	0.12%	0.22%
	Int'l Equity	-0.03%	0.08%	0.04%	0.12%	0.48%
	EM Equity	-0.01%	0.00%	-0.01%	-0.01%	0.06%
Rates	Gov't & Related	0.01%	0.00%	0.00%	0.00%	0.00%
	EM Debt	0.00%	0.00%	0.00%	0.00%	0.00%
Credit	IG Credit	0.00%	0.00%	0.00%	0.00%	0.00%
	High Yield	0.00%	0.00%	0.00%	0.00%	0.00%
Inflation	TIPS	0.00%	0.00%	0.00%	0.00%	0.00%
Alternatives	Commodities	0.00%	0.00%	0.00%	0.00%	0.00%
	Real Estate	0.00%	0.00%	0.00%	0.03%	0.11%
	Hedge Funds	0.00%	0.00%	0.00%	0.00%	0.00%
	Private Equity	-0.10%	-0.07%	-0.18%	-0.66%	-1.24%
Returns	Portfolio	-0.05%	1.96%	1.90%	7.75%	19.49%
	Policy	0.07%	1.94%	2.00%	8.14%	19.87%
	Fund Alpha	-0.12%	0.02%	-0.11%	-0.40%	-0.37%

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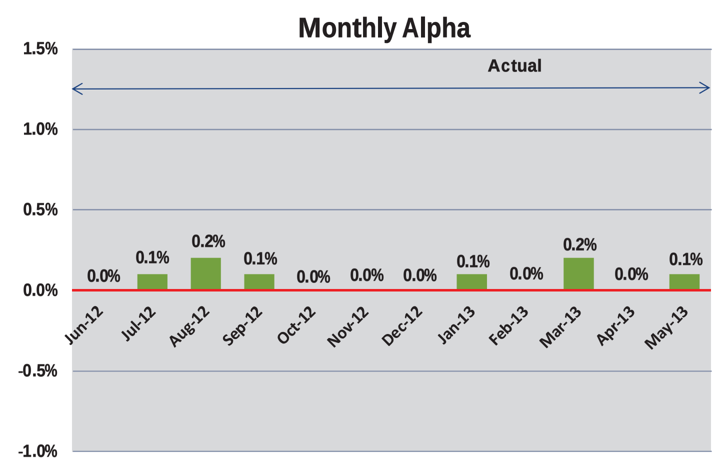
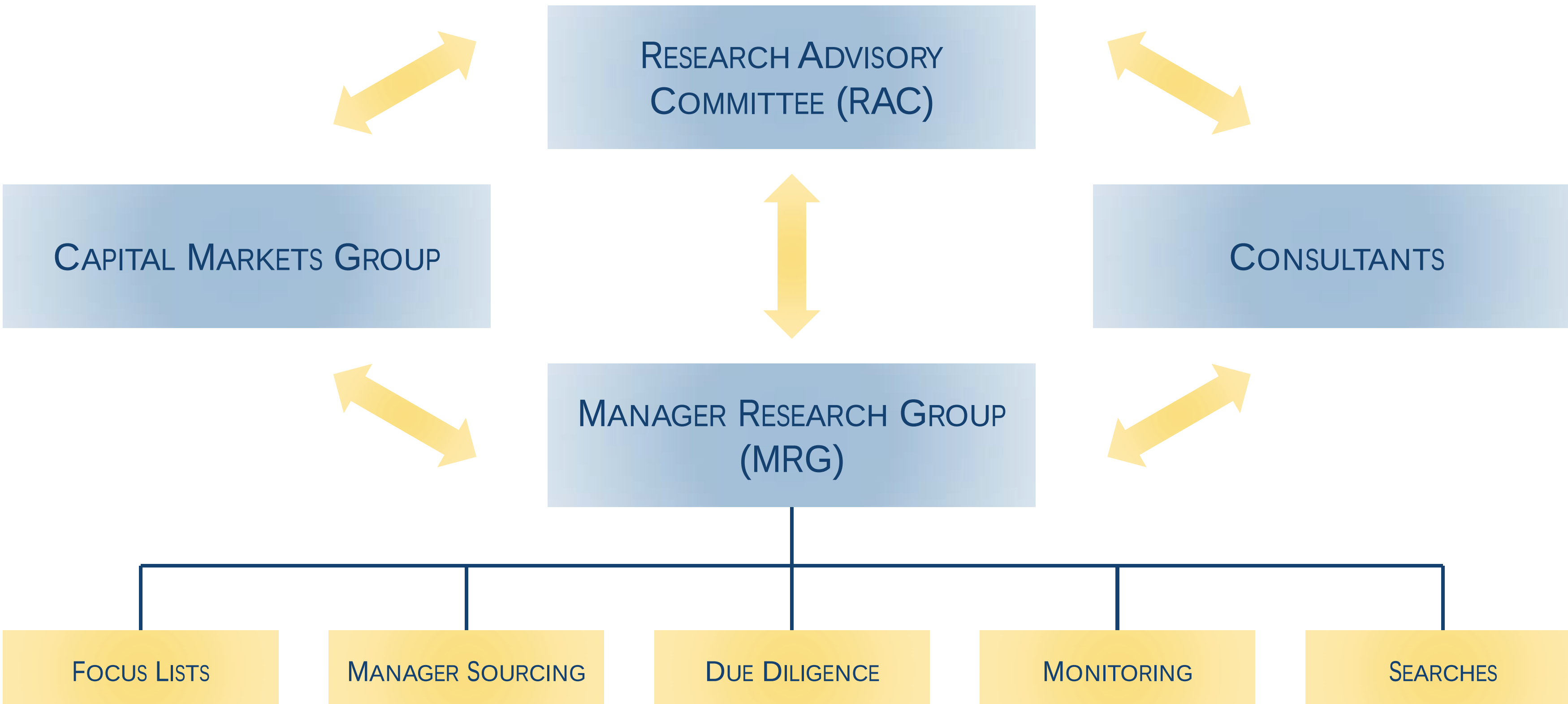
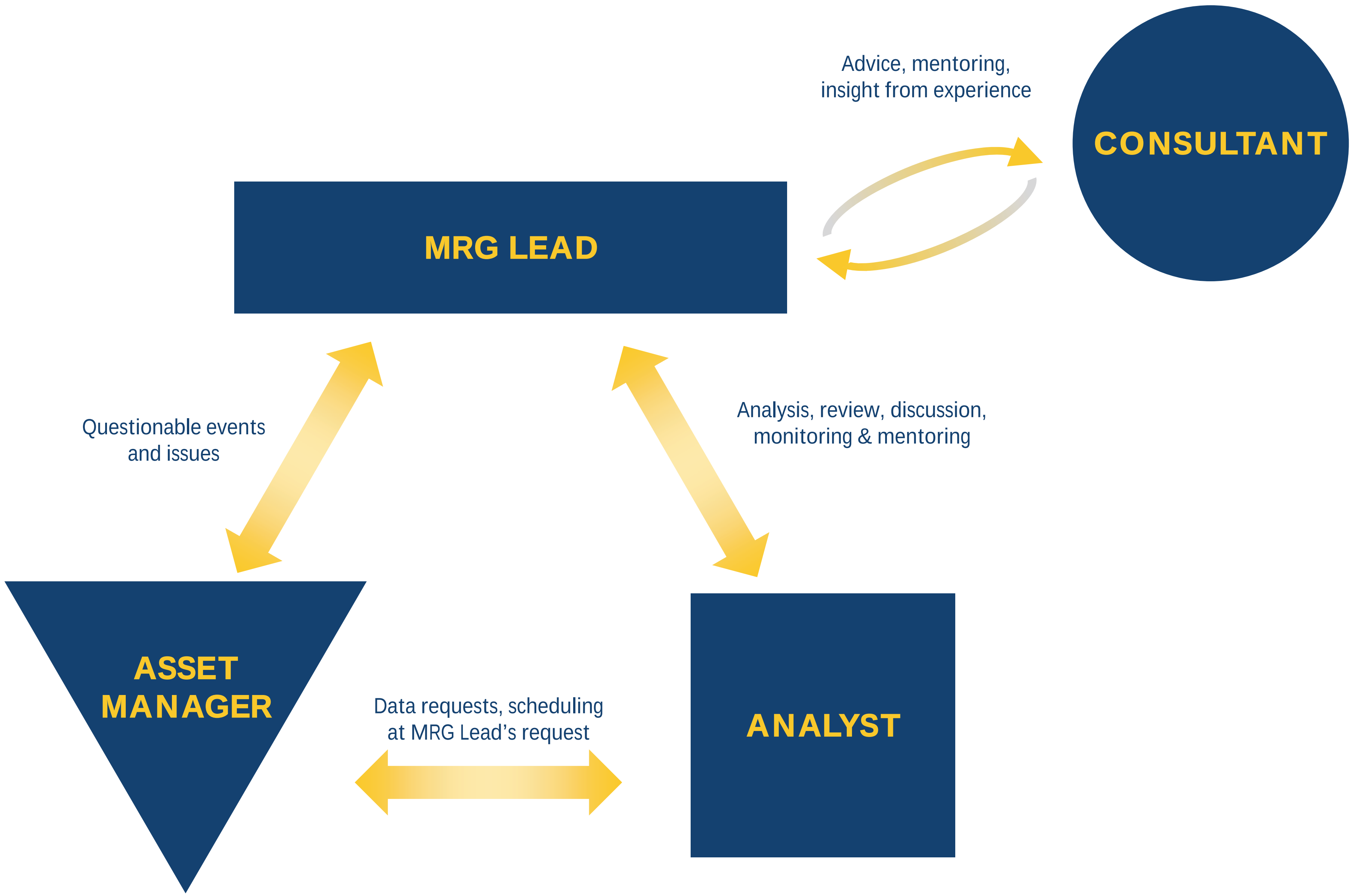


MANAGER RESEARCH

MANAGER RESEARCH GROUP FUNCTIONS



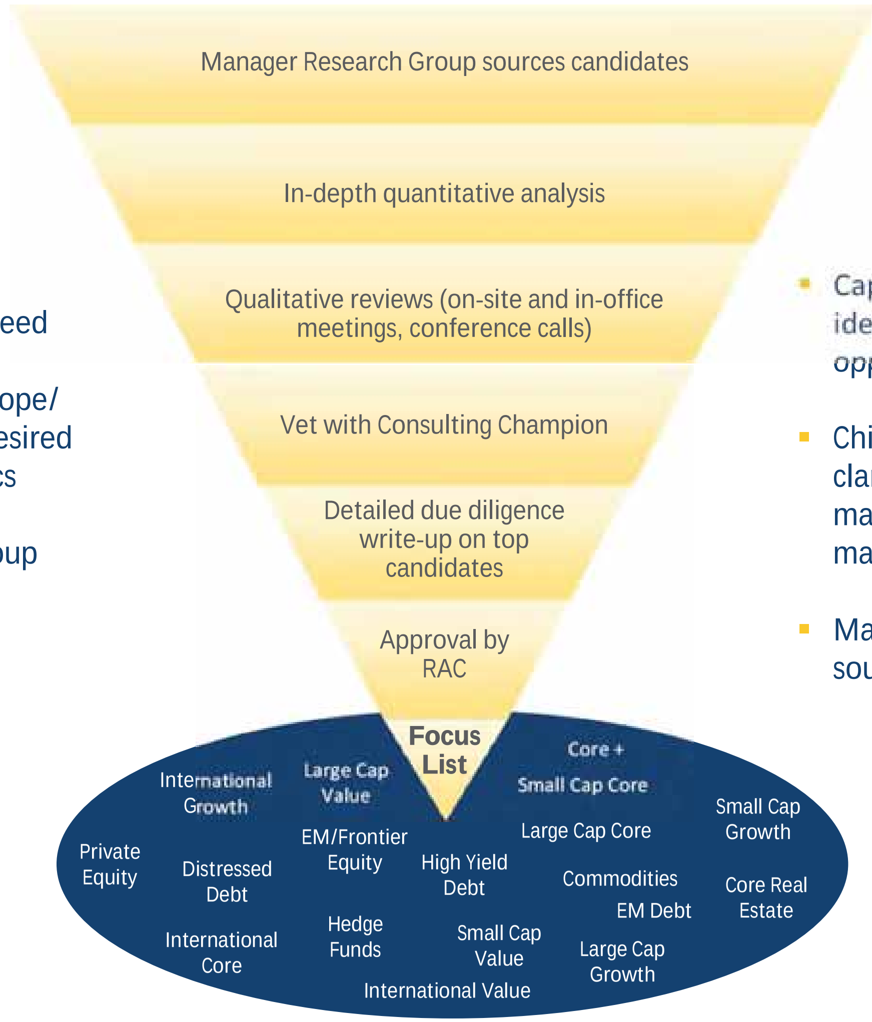
ROLES & RESPONSIBILITIES



A focused, nimble, and collaborative team and emphasis on top-down integration creates a multi-faceted approach to investment manager research.

Bottom-Up

- Client team identifies investment manager need
- Client team clarifies scope/ mandate and define desired manager characteristics
- Manager Research Group sources candidates



Top-Down

- Capital Markets team identifies top down Beta opportunity
- Chief Investment Officer & RAC clarify scope / mandate and define desired manager characteristics
- Manager Research Group sources candidates

ONGOING MONITORING

To ensure a high-quality list of managers is maintained for recommendation, all managers are reviewed each quarter.

- Qualitative Factors
- Quantitative Factors

Analysts

Compile:

- Performance update
- Quarterly commentary
- Portfolio Characteristics
- Explanation of significant +/-performance
- Verify no changes to philosophy or process
- Organizational/ownership changes
- Capacity updates, vehicle changes

Discuss findings with MRG

MRG

Primary Responsibility
Focus List managers

- Review Analysts' findings
- Direct additional research
- Follow-up on issues
- Present Summary to Consultant

Consultant

Active and Constructive Input

- Verify understanding of issues
- Question deeper issues
- Suggest strongest possible selection based on experiences and background

Issue Resolution and Escalation Criteria

NON-CRITICAL ISSUES

Director of Manager Research advises in questionable instances, may solicit input from Consultants directly impacted.

- Individual analyst turnover
- Moderate, discrete loss of accounts or AUM
- Significant portfolio repositioning but within guidelines
- Slight, one-time index underperformance
- Capacity-constrained strategy closes to additional investors

SUBSTANTIALLY CONCERNING ISSUES

MRG-lead prepares for discussion with affected Consultants; formal memo requests evaluated by the Director of Manager Research and RAC case-by-case.

- Nominal change in investment guidelines
- Reorganization of senior management (non-investment team)
- Significant abrupt departure of staff or investment team members
- Sustained or dramatic gain/loss of AUM
- Proposed changes to investment prospectus
- Merger/sale/acquisition of firm or strategy

BURNING PLATFORM ISSUES

MRG distributes firm-wide flash email while Lead, Director of Manager Research, and affected Consultants collaborate on appropriate line of manager inquiry. Recommendations memo distributed to RAC for review, discussion, and approval.

- Headline fraud
- Criminal activity
- Adverse SEC actions
- Key personnel event risk incurrence
- Dramatic/significant/sustained loss of AUM
- Overwhelming evidence of poor risk control
- Gross negligence and significant violation of investment guidelines

LEVEL OF URGENCY

PRESENTER BIOGRAPHIES

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swhalen@wurts.com

MR. SCOTT WHALEN, CFA

Mr. Whalen, *Executive Vice President and Senior Consultant*, joined Wurts & Associates in 2002. Mr. Whalen serves primarily to provide high quality strategic investment advice to enable his clients to meet their long-term investment objectives. Mr. Whalen is a Wurts & Associates shareholder and a key member of the Wurts & Associates leadership team; he sits on the Management Committee and oversees the Los Angeles consulting staff. Prior to joining Wurts & Associates, Mr. Whalen built a distinguished career in management consulting with McKinsey & Company and Ernst & Young, where he led corporate and public sector institutions to increase efficiency and improve operational performance. Through his vast experience working with multiple stakeholders across industries, Mr. Whalen has honed his ability to drive effective decision-making, often in challenging environments.

Mr. Whalen is a recognized speaker at industry conferences, where he has presented on a broad range of investment topics including asset allocation, alternative investing, investment manager oversight, attaining operational efficiencies in investment programs, the challenges and potential benefits of dynamic asset allocation, and the importance of maintaining a long-term perspective.

Mr. Whalen received a Bachelor of Arts degree in Economics from Wake Forest University and a Masters Degree in Business Administration (MBA) from the University of Southern California. He is a recipient of the Chartered Financial Analyst (CFA) designation and a member of the CFA Institute and the CFA Society of Los Angeles.

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MR. EDWARD HOFFMAN, CFA

Mr. Hoffman, *Senior Consultant*, joined Wurts & Associates in 2011. Mr. Hoffman has more than 18 years of experience providing a broad range of high quality services to institutional investors. Prior to joining Wurts & Associates, Mr. Hoffman served institutional clients at Causeway Capital Management, Legg Mason, Inc., and Prudential. In addition to his client service responsibilities at Legg Mason, Ed also served on the operating and valuation committees, led a variety of corporate development initiatives, and managed several mutual fund closures and launches. His background in retirement plan recordkeeping and administration provides an additional and valuable perspective on the needs of our Defined Contribution clients.

Mr. Hoffman earned a Bachelor of Science degree in Industrial Management with honors from Carnegie Mellon University and holds a Masters Degree in Business Administration (MBA) from the Harvard Business School. He holds the Chartered Financial Analyst (CFA) designation and is a member of the CFA Society of Los Angeles.

QUARTERLY RESEARCH REPORT

QUARTERLY RESEARCH REPORT

June 2013

WURTS ASSOCIATES

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www.wurts.com

TABLE OF CONTENTS

Crossing the Line
There are some lines we cross without even realizing, time zones for example. Other crossed lines become apparent when we look back in time. The market crossed one in August 2011—a line of demarcation that separated the performance of developed and emerging markets (EM).

From the market bottom in March 2009 until the end of August 2011, performance was generally as expected—the higher beta EM outperformed the lower beta developed markets (while both still posted impressive gains). Interest rates were lower on QE purchases, but EM yields were significantly lower relative to developed.

Then something interesting happened, from September 2011 until June 2013, developed markets, led by the U.S., continued to move higher while EM significantly underperformed. Additionally, interest rates in the U.S. began to move higher and the stock/bond correlation began to change. What happened?

When Extraordinary Became Permanent
To gain an insight into what changed, we need to explore the Federal Reserve (Fed) balance sheet relative to the equity market. From March 2009 through June 2013, the S&P 500 and Fed balance sheet were 90% correlated. Furthermore, during all periods of QE, the combined performance for the S&P 500 is a remarkable 104%. During periods of no QE, the S&P 500 is down 16%. The greatest volatility of performance came during QE 1 (including QE 1 Expanded) and QE 2 as the Fed provided guidance that QE policies were extraordinary and temporary. However, once the Fed introduced Operation Twist in August 2011, and the market realized that QE policies were no longer extraordinary but rather a permanent policy tool, market declines became less frequent and much shallower.

Who's In Charge Here?
It's not just the Fed that has engaged in QE, the European Central Bank (ECB) has also been active. Surprisingly, the EAFE has only been 38% correlated with ECB balance sheet. However, the EAFE exhibited a much higher correlation of 62% with the Fed's balance sheet. Why? The markets have become binary (risk-on/risk-off). As the Fed QE programs started and finished, market sentiment shifted globally across asset classes and countries.

The overall gains in Europe have been less significant when compared to the U.S., but the dependence upon QE is much greater. During periods of Fed QE, the EAFE was 95% higher. During periods of no QE, the EAFE declined 62%.

The Most Interesting Economy in the World
As stated in the prior QRR, Japan is the global testing grounds to see if QE actually works or not. Much like the U.S. and Europe, the capital markets in Japan have been directly related to the size and expansion of the Bank of Japan (BoJ) balance sheet.

Following the announcement of Abenomics, the Nikkei and 10-year yields moved significantly higher. Recently, however, the Nikkei has experienced some turbulence and is raising concerns on whether or not QE will work long-term, or if the recent gains were temporary.

QE will only "work" if the equity gains translate into economic growth. So far, Abenomics has generated great excitement and few results. GDP remains very low and inflation remains negative (far below the 2.5% target).

Will QE work? Too early to tell, but so far, little economic progress has been seen.

Global Economics – When Average Looks Good
How are the other global economies performing? Is QE having any effect in the U.S. or Europe? So far, the effects of QE have been felt more in the

financial markets than the economies. U.S. economic growth continues to be low and slow (good for BBQ, not so good for growth). To be clear, the U.S. is NOT in a recession, but neither is it experiencing anything near potential growth.

Europe is at its lowest point of growth in over two years with no potential sign of improvement in the future. EM growth has been higher than developed at nearly 5.5%, but below its potential growth level of 6.25%.

Why then, if EM growth has been better than Europe, have EM equities been underperforming?

Can't Spell Equities Without a Q and an E

Comparing equity returns relative to economic growth provides a good insight, but does not really explain the difference in performance. Introducing an additional variable, size of QE as a percent of GDP, we see a clear driver emerge.

The more a central bank engages in QE as a percent of GDP, the better the equity returns have been. The best performing equity markets have been the countries engaged in QE with the best performing (Japan) engaged in the largest commitment of QE as a percent of GDP of 60%. The EM countries where the central bank is not engaged in QE, have experienced the worst performing equity markets. The size of GDP does not appear to be a driver of returns.

Are we saying the market is valuing the equity market based upon QE and not economic growth or valuations? For now, yes.

QE – Lost in Translation

Why is QE not translating into economic growth? A CNBC survey captures the problem perfectly; 83% believe QE distorts the financial market and 65% believe QE does not lower the unemployment rate (i.e., does not boost the "real economy.")

According to Milton Friedman's Permanent Income Hypothesis, temporary gains are not considered income and will not be spent. Thereby, if QE is going to be successful, the central banks need to change consumers/investors' perception in order for them to consider the income gains permanent.

The Federal Reserve 3 Legged Policy Stool

As QE became a permanent policy tool, the Fed introduced three economic targets to guide policy:

1. Unemployment rate of 6.5%
2. Forward inflation expectations of 2.5%

As long as these targets were not met, the market believed that the Fed would continue to engage in QE and push the equity markets higher. However, recently the Fed introduced the idea of tapering QE and introduced a third leg policy:

3. Size of QE would depend upon economic activity

The 3rd leg is a challenge to the market as the "heads I win, tails you lose" scenario no longer applies. If the economy strengthens, the Fed will reduce the size of QE purchases. In other words, the size of QE will act like the new Fed Funds rate. The Fed will increase/decrease the size of purchases based upon economic weakness/strength.

Interest Rates: Has the Tide Finally Shifted?

One of the most talked about stories this year has been the movement higher in interest rates. Are the "bond bears" finally right (after being wrong since 2000) and are we in store for a normalization of rates?

It may or may not surprise you to realize U.S. rates have been highly correlated with Japanese rates. Yes, the same country mired in deflation for over 20 years. Both U.S. and Japanese rates have moved sharply higher over the past year or so in response to central bank policy.

Since August 2011, when QE became a permanent policy tool, the stock/bond correlation moved steadily higher. While still within the bounds of average, the rising correlation warrants monitoring.

Credit – Leading the Way for Better or Worse

Credit spreads have become increasingly wider and EM debt (much like equities) has been the leading driver of this.

Credit spreads bottomed in May 2013 and have trended wider since. Similar to equities, where higher beta usually leads lower beta, the higher beta EM debt has been underperforming and has lost most of the gains generated since January 2011.

A Changing Trend – 7 Things to Watch

Major changes in trend for the equity market usually exhibit 7 hallmarks:

1. Stock prices usually diverge from GDP. As the market is topping, GDP will decline as equity prices reach new peaks. As the market bottoms, GDP will rise, and equity prices will continue to fall. Currently, GDP peaked in 2010 and has been trending lower. GDP typically leads equities by an average of 10 months.
2. High and low beta stocks indices diverge. High beta is supposed to lead, and as the market enters a change of trend, high and low beta usually diverge. High beta usually leads low beta by an average of 4 months.
3. Interest Rates Change Trend. The existing trend (either higher or lower) will turn and begin a new direction.
4. Credit Spreads Change Trend. Credit spreads have tended to lead equities by an average of 4 months. In a market top, credit spreads will begin to move wider before equities turn lower.
5. Equity Price Momentum Changes. Monthly price trends will change direction. In a top, momentum will turn from positive to negative.
6. Equity Sentiment Becomes too One Sided. Investors tend to love the markets at tops and hate it at bottoms. Sentiment indicators are usually at extremes when a trend is changing. Current sentiment of 92% bulls is the highest on record (include a tech equity and credit bubble)!
7. Volatility Will be Near Extremes. Volatility reflects market/investor concern. A low volatility index (VIX) shows compliancy, while a high VIX reflects great fear. Currently the VIX is in the range of extreme compliancy where tops are usually formed.

Six of the seven hallmarks of a changing trend are in place – and all are indicating a market top. While we do not know when the top will occur, we are reminded to be diligent on risk and portfolio exposures.

Overall Summary

Coming out of the March 2009 lows, the financial markets behaved as one would expect with the higher beta assets leading. Equities continued to move higher despite the lack of economic growth as central bank policy continued the extraordinary QE program. During periods when QE was halted, the equity market would correct until then next QE measure was announced. The markets believed, through Fed guidance, QE was an extraordinary and temporary policy tool. When the Fed announced Operation Twist in August 2011, the market finally determined that QE had become a permanent policy tool and the markets began behaving irregularly.

Since August 2011, equity market has been dependent upon the size of central bank QE and not GDP or valuations. The greater the QE, the greater the equity returns. Since developed market central banks have engaged in QE and EM countries have not, developed market equities have outperformed EM.

Strong equity market returns have not been met with strong economic growth. QE policies will only be successful if they result in economic growth. Any new equity market high should be fleeting; expect to see a correction of 10% or greater in the coming months.

GLOBAL ECONOMIC AND MARKET OUTLOOKS

	March 2009 – September 2011			September 2011 – June 2013		
	U.S.	Europe	EM	U.S.	Europe	EM
Equity Total Return (USD)	**49%**	**49%**	**66%**	**48%**	**28%**	**12%**
Sovereign Yield Change	75 bps **lower**	110 bps **lower**	344 bps **lower**	57 bps **higher**	16 bps **lower**	137 bps **lower**
Spreads	390 bps **lower**		252 bps **lower**	Unchanged		150 bps **lower**
Average Real GDP Growth	1%	0%	8%	2%	0%	9%
Central Bank Bal. Sheet % GDP	19%	25%	5%	22%	26%	4%
Stock/Bond Price Correlation	-55%			-18%		

Sources: S&P, MSCI, Federal Reserve, Bloomberg, Wurts

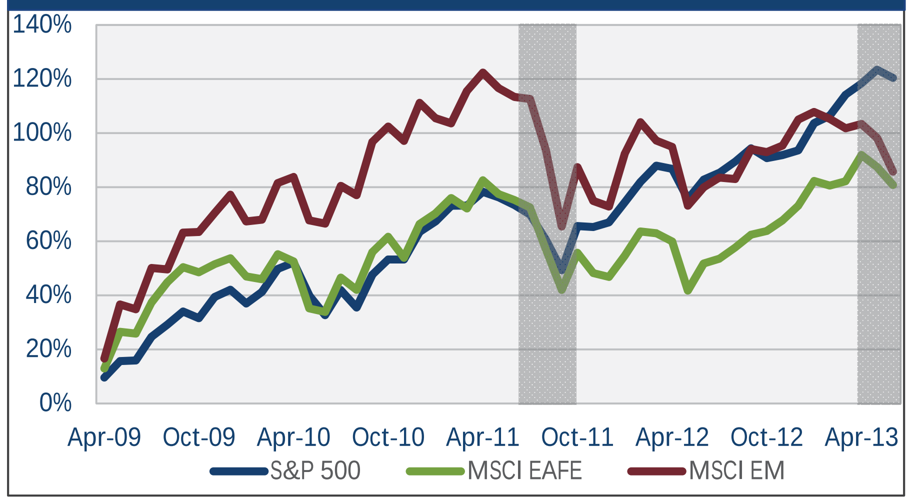
March 2009 – September 2011

- Coming out of the Great Recession, equities and spreads produced extraordinary returns despite slow GDP growth
- The higher beta EM outperformed developed markets, despite developed market central bank QE

September 2011 – June 2013

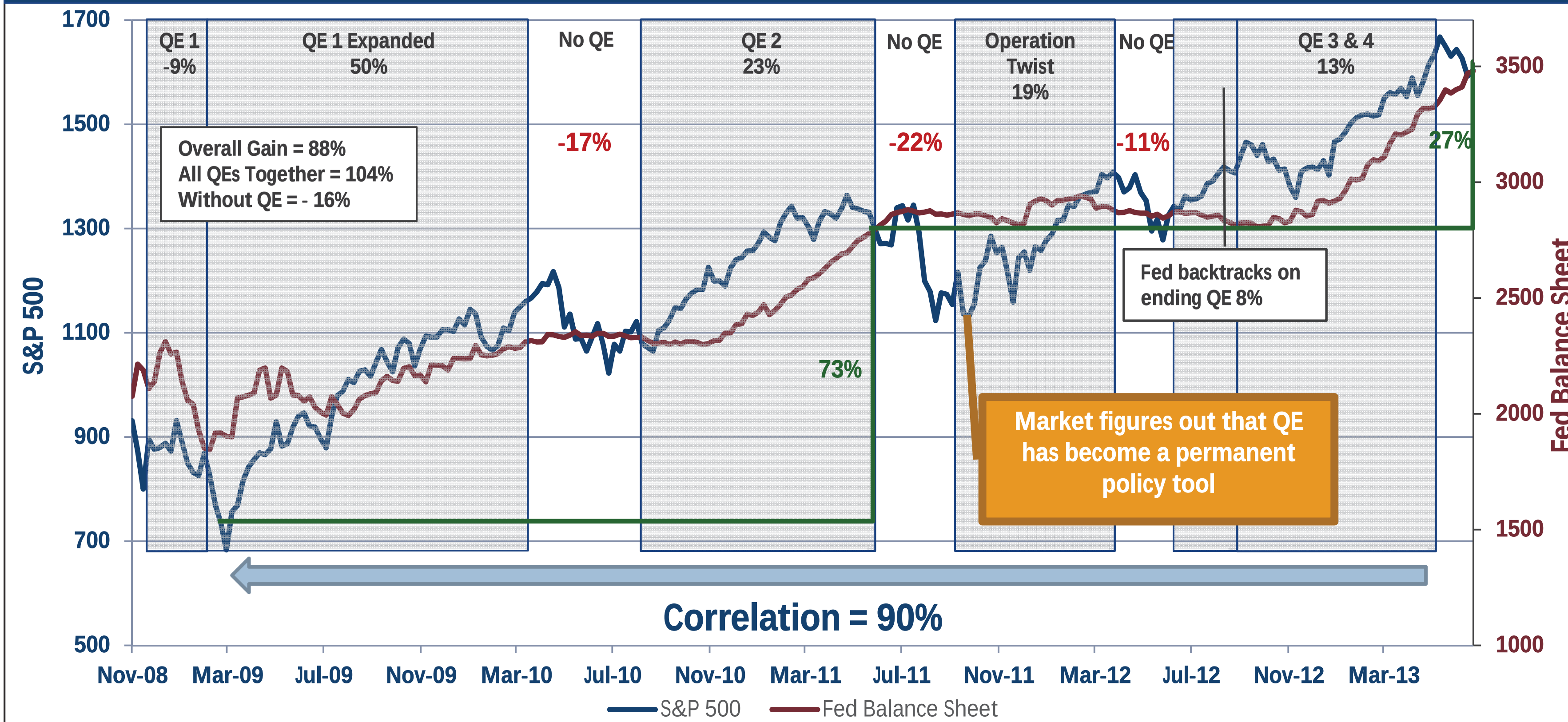
- Developed market equity markets continued to move higher, but EM began underperforming
- U.S. interest rates moved higher, while EM rates continued lower
- The stock/bond correlation began moving higher

Equity Returns March 2009 – June 2013



Sources: S&P, MSCI, Bloomberg, Wurts

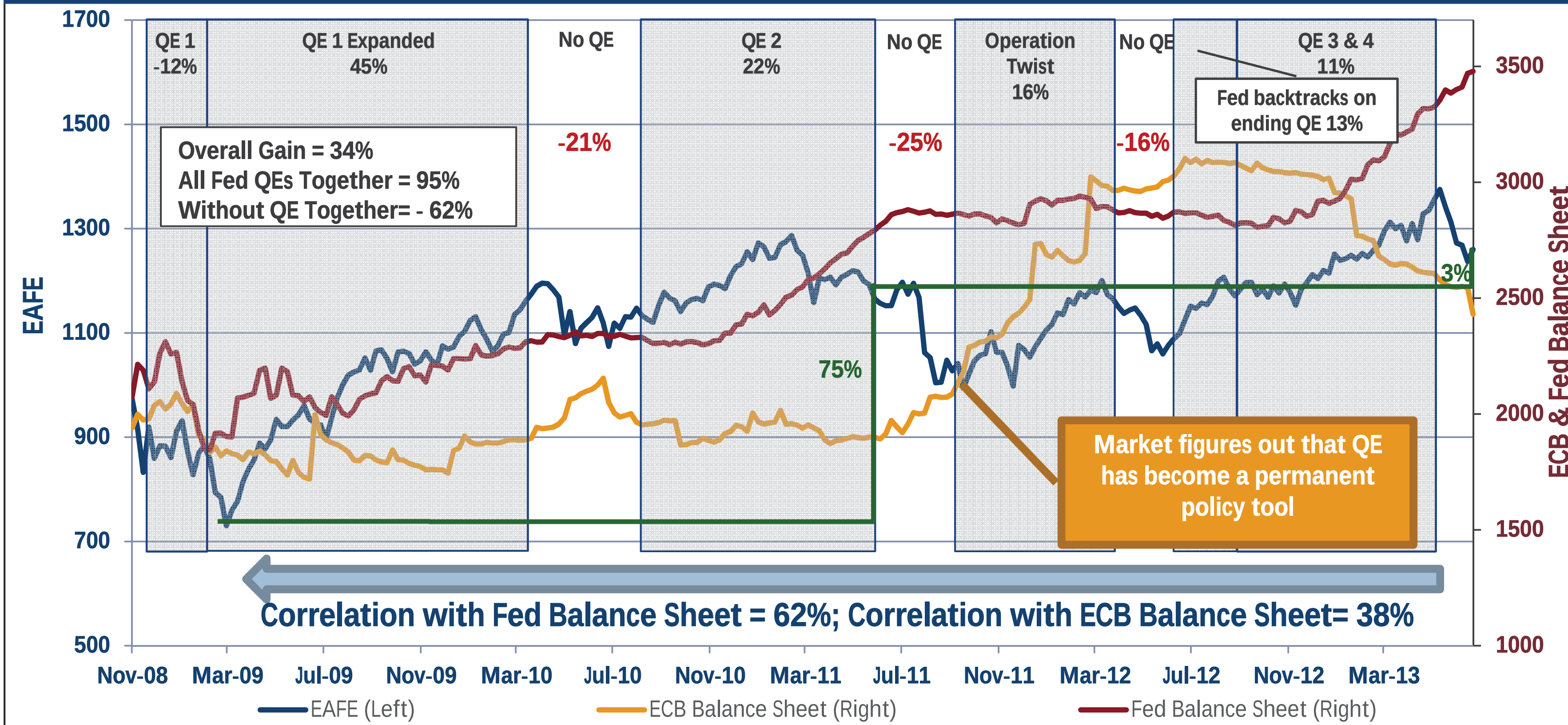
S&P 500 and Federal Reserve Balance Sheet



Sources: S&P, Federal Reserve, Bloomberg, Wurts

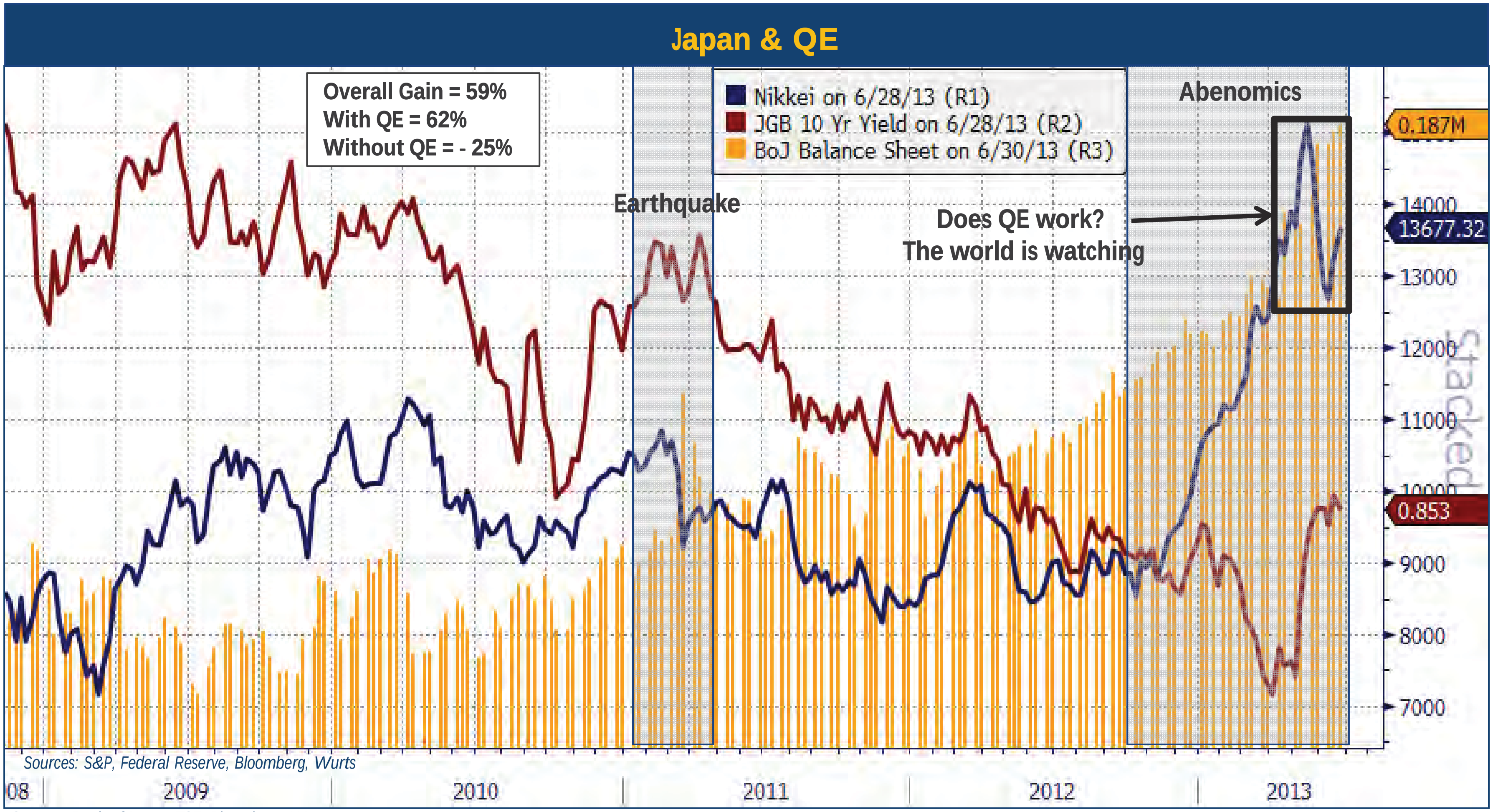
- Since the March 2009 low, the S&P 500 has been 90% correlated with the Federal Reserve balance sheet
- With both QE 1 (including expanded) and QE 2, the market believed (through Fed guidance) QE was extraordinary policy with a limited life span
- With the introduction of Operation Twist (August 2011), the market figured out that QE had become a permanent policy tool
- Since becoming a permanent policy tool, market declines were less frequent and much more shallow

EAFE & Central Bank Influence



Sources: MSCI, ECB, Federal Reserve, Bloomberg, Wurts

- Since the March 2009 low, the EAFE has been 62% correlated with the Federal Reserve balance sheet, but only 38% correlated with ECB balance sheet
- When the FED was engaged in QE, the EAFE gained 95%; but with no Fed QE, the EAFE declined a total of 62%
- Since July 2012, the ECB balance sheet has contracted while the Fed balance sheet continues to expand
- The EAFE has underperformed the S&P 500 over the past few quarters, bringing about the question of whether QE is working

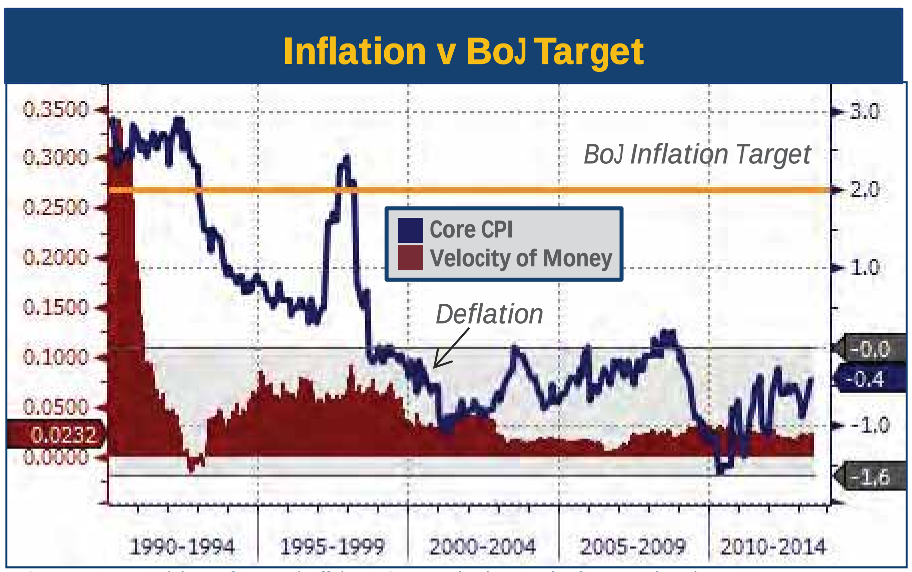


Sources: Bank of Japan, TSE, Bloomberg, Wurts

- Japan, the inventors of QE, reintroduced it to the markets with “Abenomics” – since then the Nikkei is 62% higher
- Without QE, the Nikkei declined 25%
- Recent Nikkei decline is causing concern on whether QE will actually work

- How is the most interesting economy in the world doing with the massive QE program?
- The good news, GDP has not become any worse; the bad news, it really has not improved either
- For QE to be successful, it must result in real self-sustaining economic growth without government intervention
- How about their goal of pushing inflation higher toward their 2% target?
- Not much progress here either as core CPI remains fairly low
- In fairness, more time is needed to judge the effectiveness of QE, but the economic results so far have been muted

Sources: Economic & Social Research Institute Japan, Bloomberg, Wurts



Sources: Japan Ministry of Internal Affairs & Communication, Bank of Japan, Bloomberg, Wurts

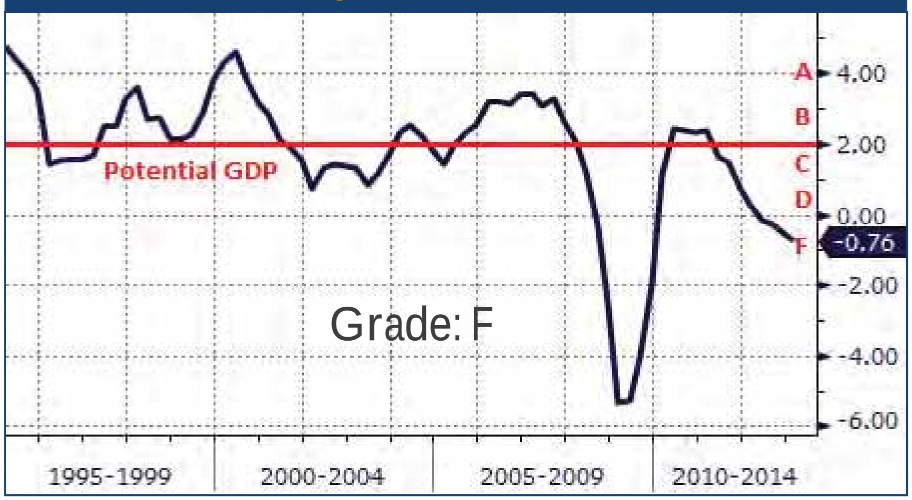
Sources: Cagle.com

- So far, the effects of QE have been felt more in the financial markets than the economy – and the true success test (real self-sustaining GDP growth without government intervention) has not been met
- U.S. GDP growth has been slow and low (good for BBQ, but not GDP). The U.S. is not in a recession, but growth is average at best
- European growth has been far worse and is currently at its lowest point in over 2 years
- EM growth has been below its higher standard, but still producing a solid GDP at nearly 5.5%
- Why with a GDP of 5.5% versus a recession in Europe would EM equities be underperforming the developed markets?

U.S. GDP 1975 - 2013

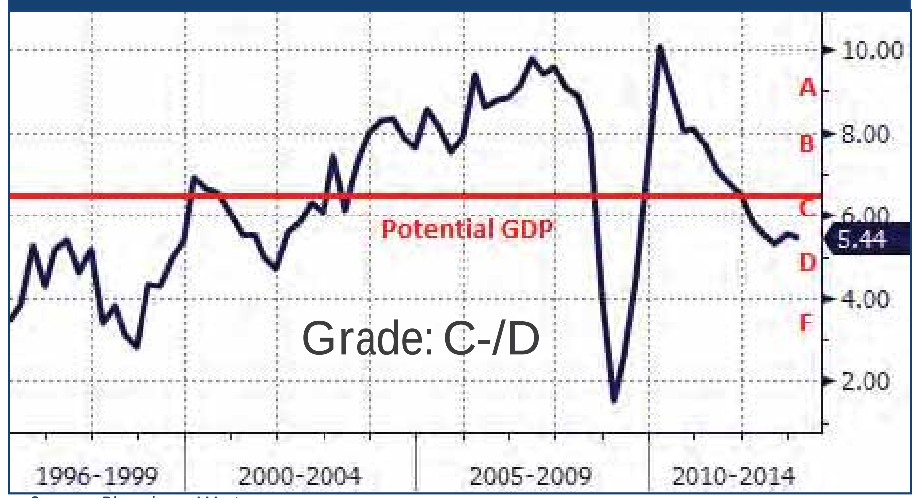
Sources: Bureau of Economic Analysis, Bloomberg, Wurts

Europe GDP 1995 - 2013



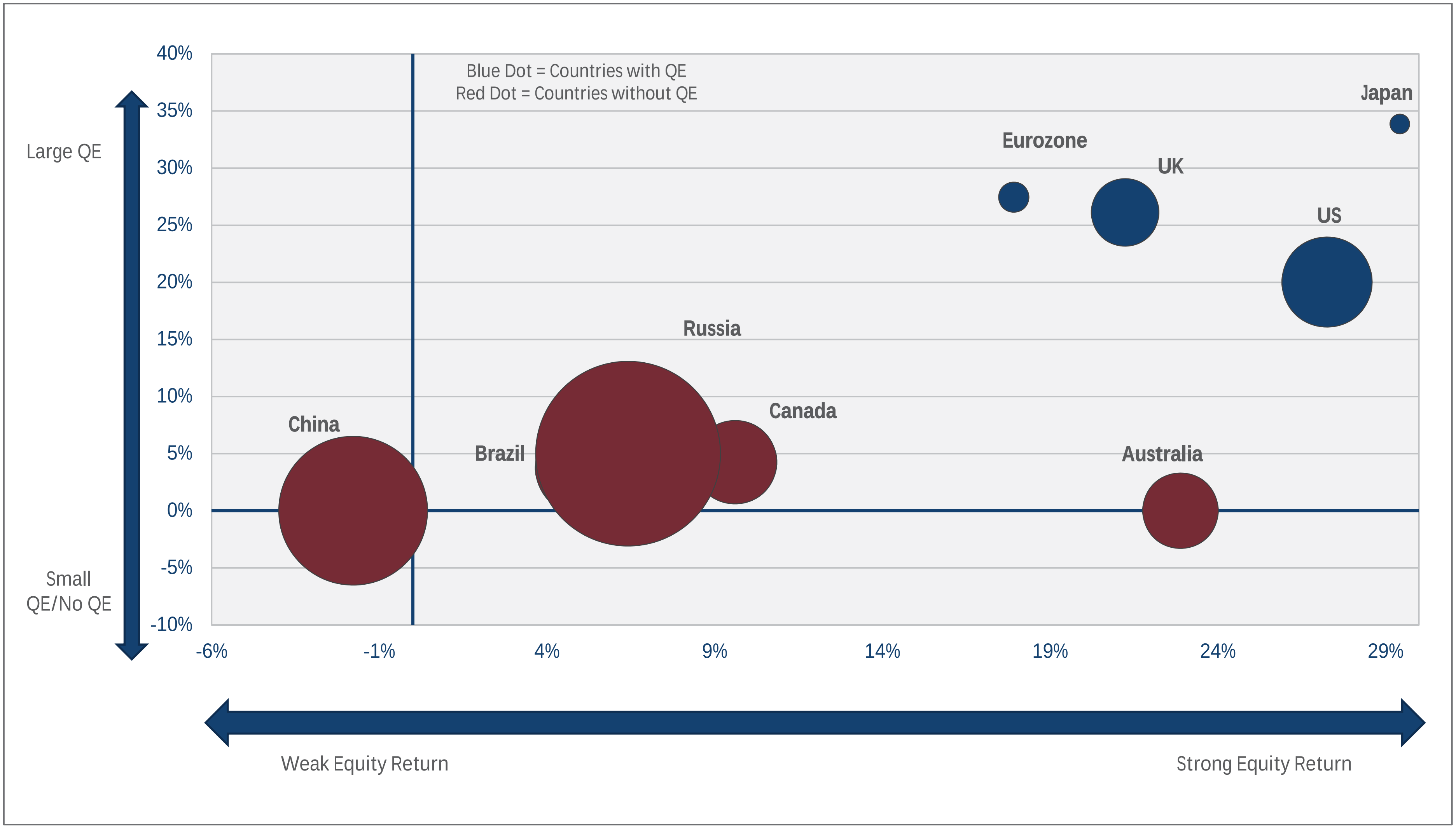
Sources: Eurostat, Bloomberg, Wurts

EM GDP 1996 - 2013



Sources: Bloomberg, Wurts

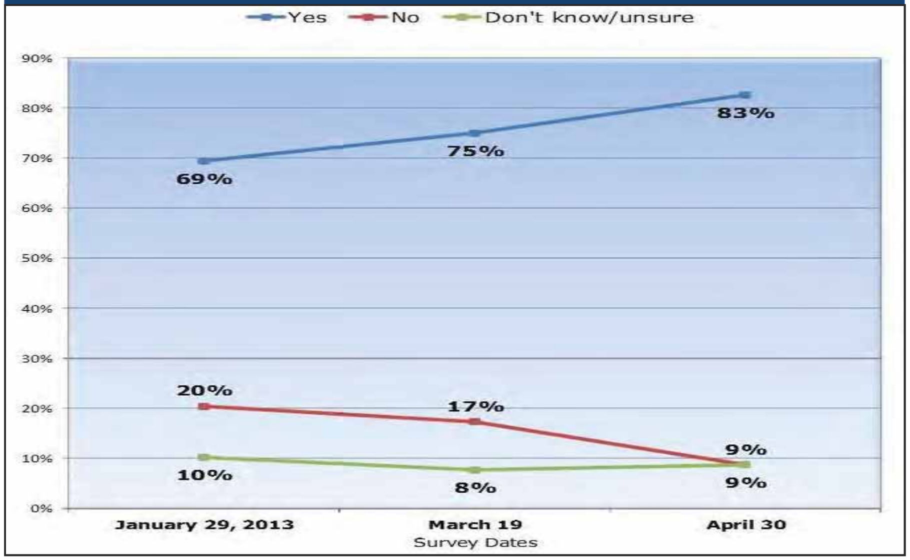
CAN'T SPELL EQUITIES WITHOUT A Q AND AN E



Size of bubble = Relative size of GDP growth since September 2011

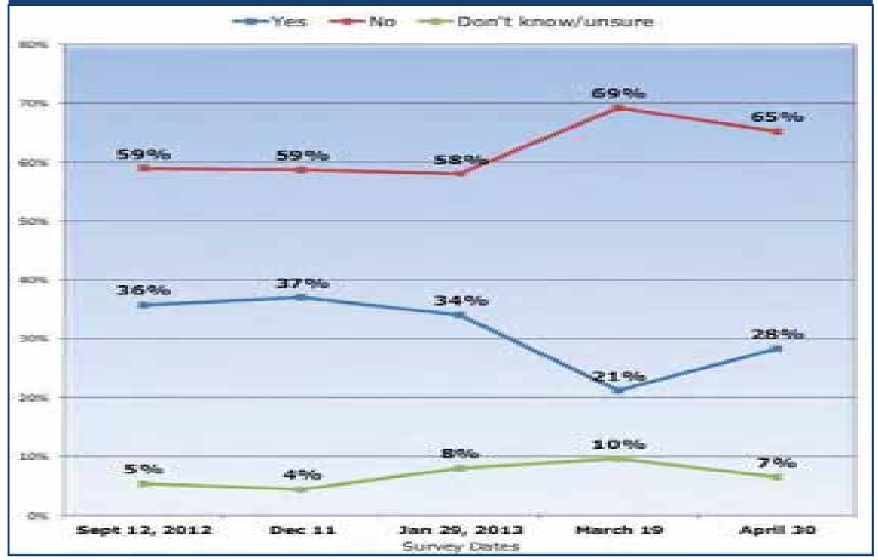
Sources: Federal Reserve, ECB, Bank of Japan, RBA, Bank of Canada, IBGE, National Bureau of Statistics of China, Federal Service of State Statistics, UK Office for National Statistics, Bank of England, Bloomberg, Wurts

Will Further QE Help Increase Stock Prices?



Sources: CNBC

Will Further QE Help Lower Unemployment?



Sources: CNBC

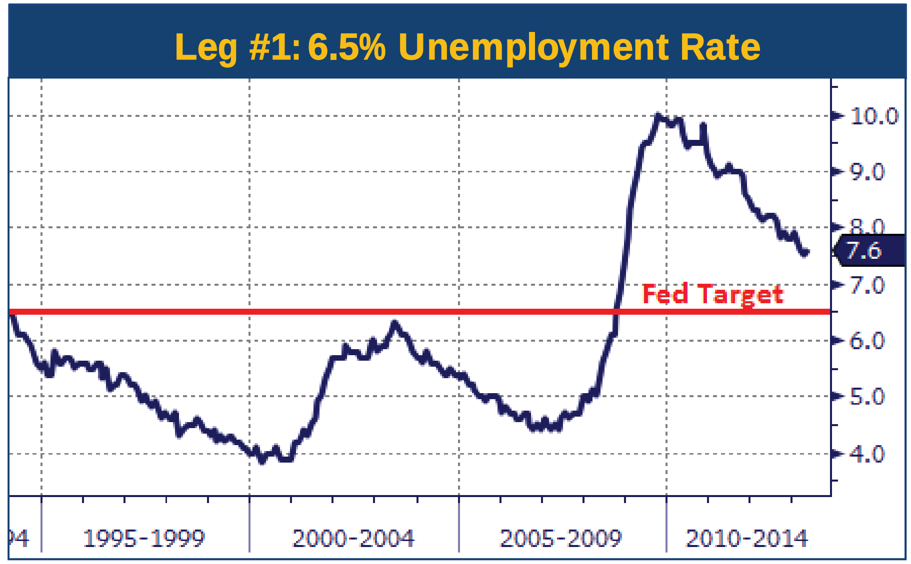
- Milton Friedman's Permanent Income Hypothesis states that temporary gains are not considered income and are therefore not spent. Thereby, if QE is going to be successful, the wealth created from the stock market/housing gains must be considered permanent if they are to be spent and result in economic growth.
- Based upon the CNBC survey, most believe QE distorts financial markets (83% think QE helps stocks) but does not boost the real economy (65% believe QE does not lower the unemployment rate). The market believes the stock market gains are manipulated and not real, which helps to explain why the "wealth effect" expected from QE has not materialized. No one believes these asset gains are permanent and no one is viewing these gains as additional income.

QE Debate in a Nutshell

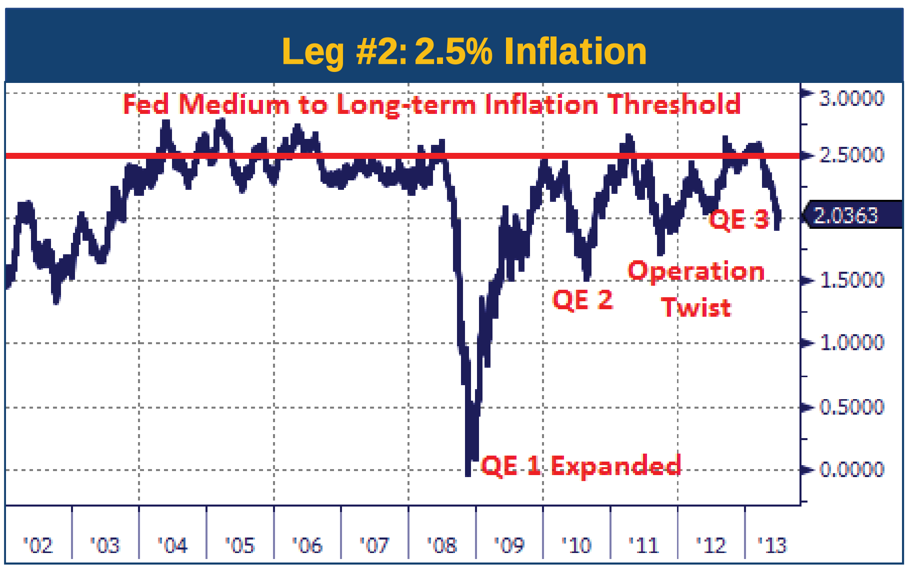
Sources: New York Times

THE FEDERAL RESERVE'S 3 LEGGED POLICY STOOL

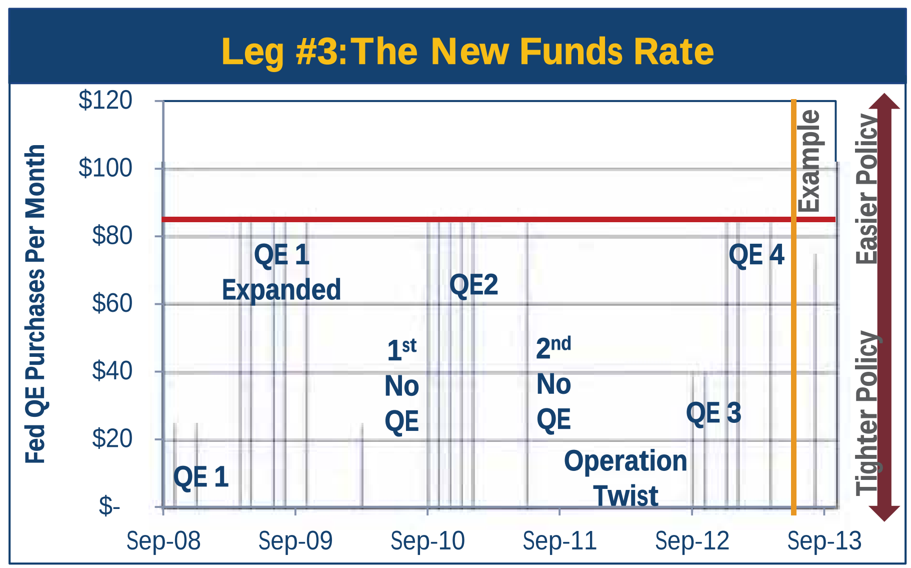
- As QE became a permanent part of the Fed monetary policy toolkit, the Fed introduced 2 economic targets that would guide policy:
    1. Unemployment rate of 6.5%
    2. Forward Inflation expectations upper bound of 2.5%
- As long as these targets were not met, the market believed the QE program would continue (i.e., equity prices would continue higher)
- However, recently the Fed introduced a third leg to the monetary policy stool:
    3. The size of QE would depend upon economic activity
- The 3rd leg is a challenge to the market as the "heads I win, tails you lose" scenario no longer applies. If the economy strengthens, the Fed will reduce the size of QE purchases



Sources: Bureau of Labor Statistics, Bloomberg, Wurts



Sources: US Treasury, Bloomberg, Wurts

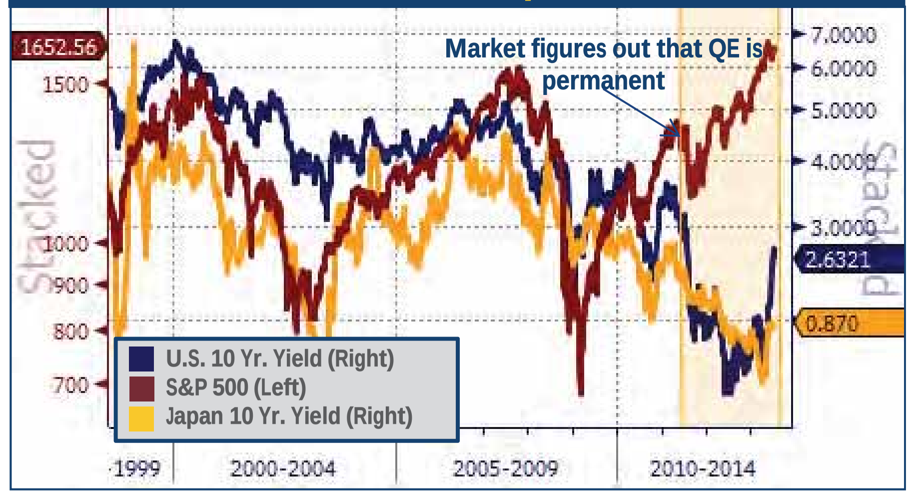


Sources: Federal Reserve, Bloomberg,, Wurts

INTEREST RATES: HAS THE TIDE FINALLY SHIFTED?

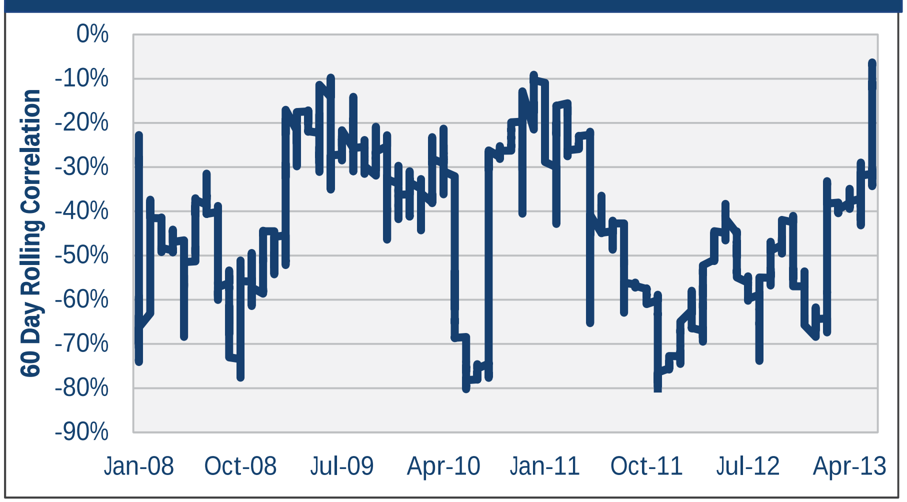
- One of the most talked about stories of the year has been the rapid rise in interest rates
- But it's not just a U.S. story, global sovereign rates have been rising
- After reaching an all-time low for a 10-year sovereign bond of 0.32%, Japan's JGBs shot higher reaching a recent peak of 1% in May
- U.S. and Japan's interest rates have been highly correlated as U.S. yields bottomed in July 2012 and have since moved 120 bps higher
- Over the short-term, the stock/bond correlation has been rising from a low of -80% to -10% (meaning bonds offer less diversification benefits)
- While over the long-term, the correlations remain fairly low – but warrant monitoring

Rates and Equities



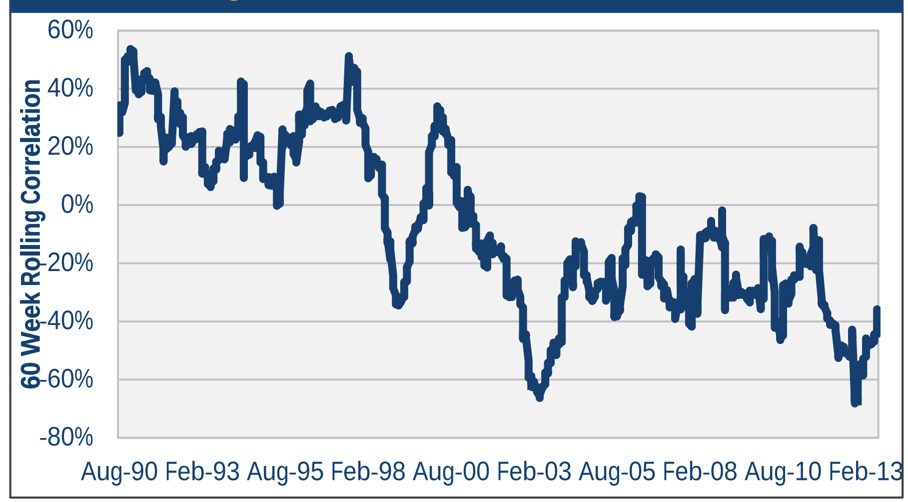
Sources: US Treasury, Bank of Japan, TSE, Bloomberg, Wurts

Short-Term Stock/Bond Correlation



Sources: S&P, US Treasury, Bloomberg, Wurts

Long-Term Stock/Bond Correlation



Sources: S&P, US Treasury, Bloomberg, Wurts

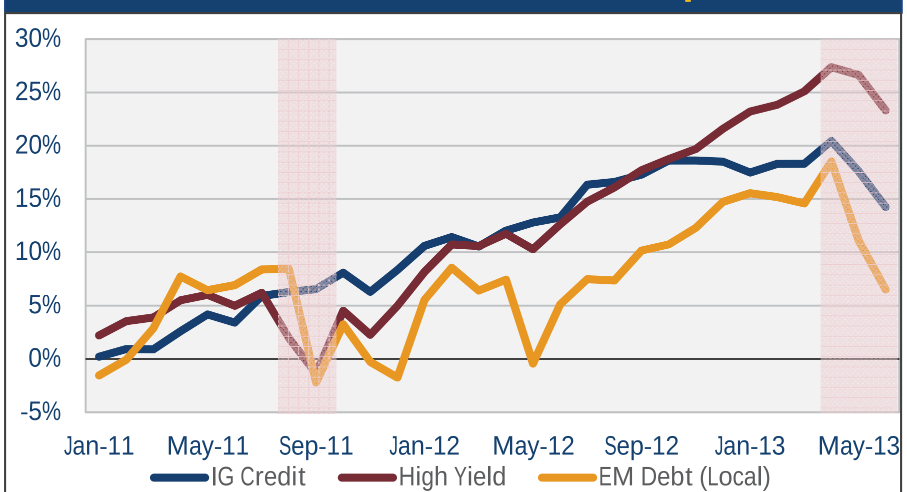
CREDIT: LEADING THE WAY FOR BETTER OR WORSE

- The yield grab that pushed high yield and EM debt spreads to the cycle lows may be experiencing a trend change
- Credit spreads bottomed in May 2013 and have pushed wider led by the higher beta high yield and EM debt
- Similar to equities, a change in trend is hallmarked by the higher beta high yield and EM debt is underperforming the lower beta IG credit markets
- Since spreads bottomed, the higher beta EM debt has been the worst performer, losing most of the gains generated since January 2011
- In prior cycles, spreads have lead the equity markets in a change of trend by an average of 4 months

Credit Spreads

Sources: Barclays, Bloomberg, Wurts

Credit Market Total Return Comparison



Sources: Barclays, Bloomberg, Wurts

Spreads v Equities

Sources: Barclays, S&P, Bloomberg, Wurts

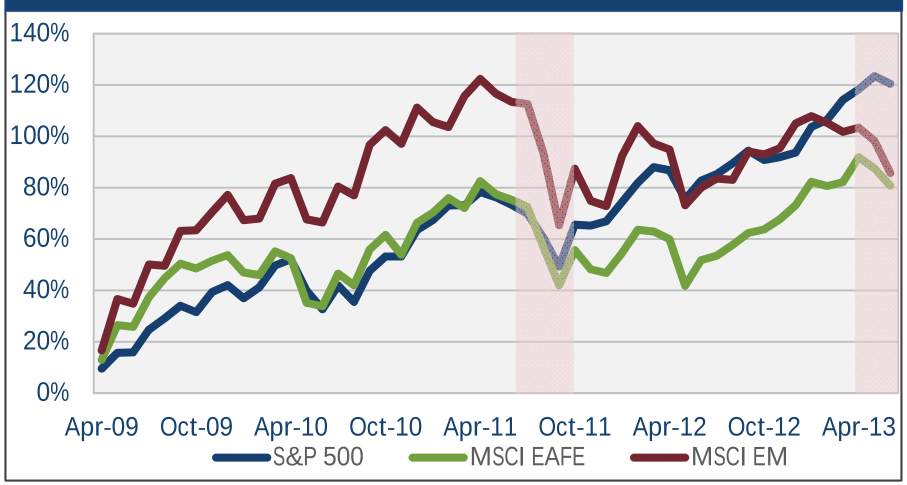
A CHANGING TREND: 7 THINGS TO WATCH

- Major trend changes have typically shown up as 7 hallmarks:
  1. Economic growth and stock prices diverge
     - GDP leads equities by an average of 10 months
  2. High beta and low beta stock indices diverge
     - High beta leads low beta by an average of 4 months
  3. The Interest rate trend changes
     - Leads equities by an average of 8 months
  4. Credit spreads change trend
     - Leads equities by an average of 4 months
  5. Equity price momentum changes
     - Coincidental indicator
  6. Equity sentiment becomes too bearish/too bullish
     - Coincidental indicator
  7. Volatility at or near an extreme

1. Equity Prices and GDP Growth Diverge

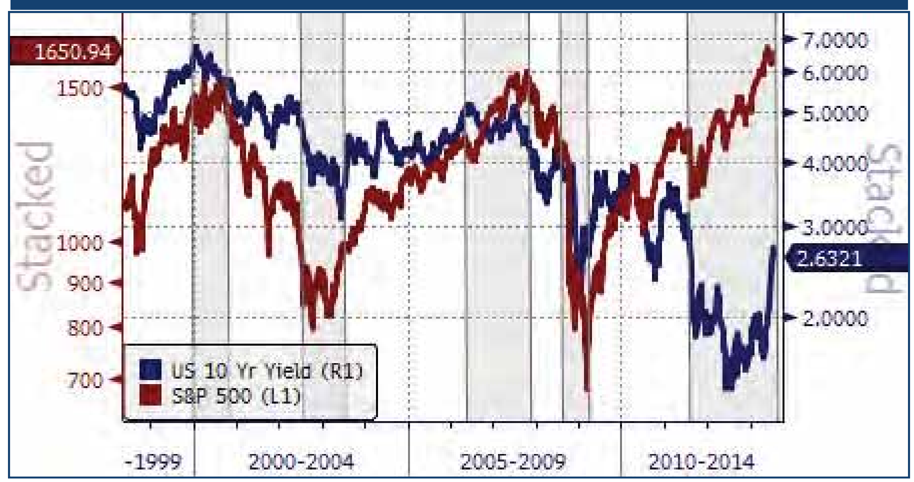
Sources: BEA, S&P, Bloomberg, Wurts

2. Low Beta Outperforming High Beta



Sources: S&P, MSCI, Bloomberg, Wurts

3. A Change in Trend in Interest Rates?

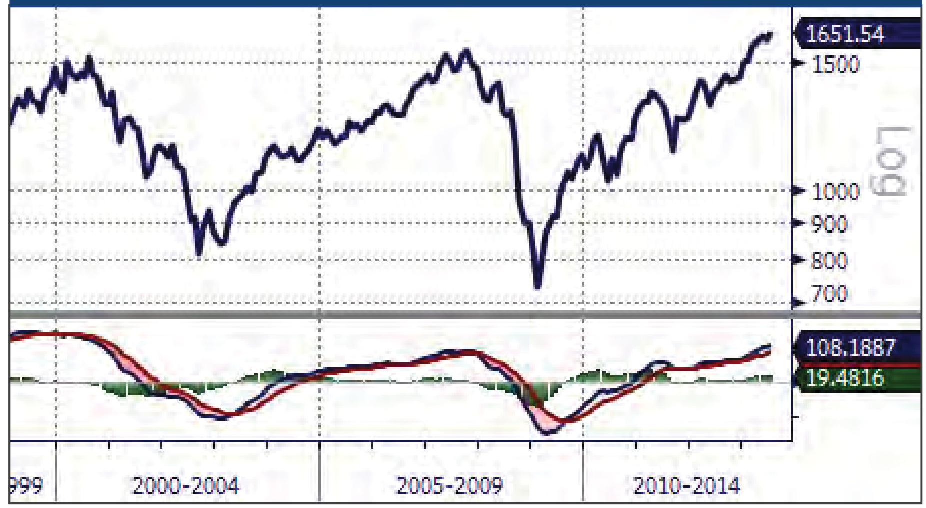


Sources: US Treasury, S&P, Bloomberg, Wurts

4. Credit Spreads Leading the Way Again?

Sources: Barclays, S&P, Bloomberg, Wurts

5. Equity Price Momentum Still Bullish

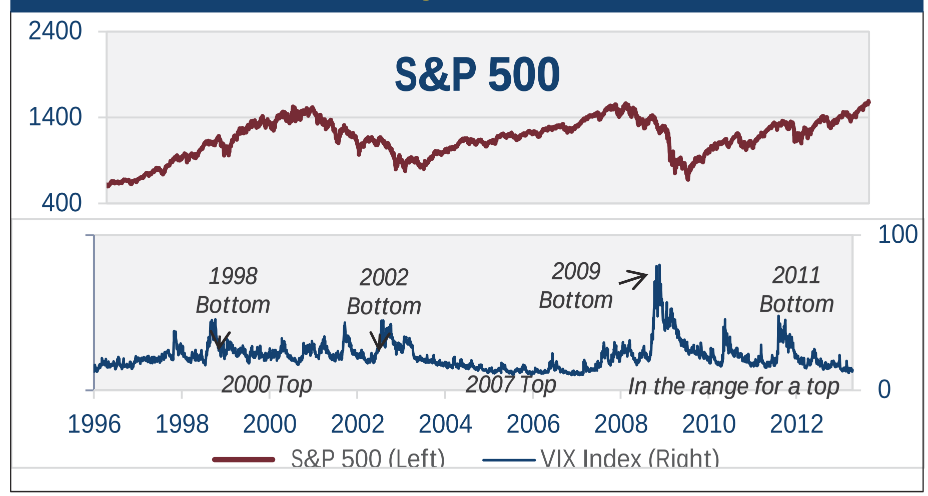


Sources: S&P, Bloomberg, Wurts

6. Equity Sentiment Very One Sided

Sources: S&P, Market Vane, Bloomberg, Wurts

7. Volatility at an Extreme

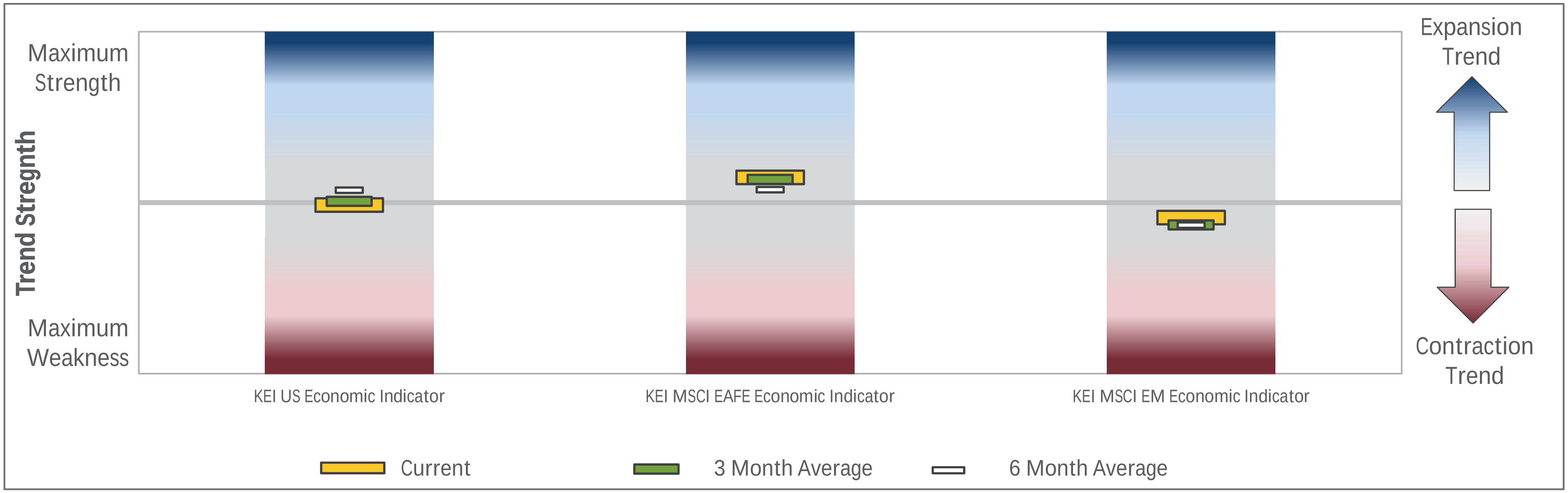


Sources: S&P, CBOE, Bloomberg, Wurts

TREND CHANGE CHECKLIST

		Average Lead	Current Lead	Trend Change	Stocks Topping or Bottoming
1	Stock Prices & GDP Diverge	10 Months	19 Months	✓	Topping
2	High and Low Beta Stock Indicies Diverge	4 Months	6 Months	✓	Topping
3	Interest Rates Change Trend Direction	8 Months	12 Months	✓	Topping
4	Spread and Stock Prices Diverge	4 Months	2 Months	✓	Topping
5	Stock Price Momentum Changes Direction	Coincidential	No Change	✗	No Change
6	Stock Sentiment Becomes Extreme	Coincidential	Record Extreme	✓	Topping
7	Volatility Reaches Extremes	Coincidential	Near Record Lows	✓	Topping

ECONOMIC AND CAPITAL MARKET SUMMARY

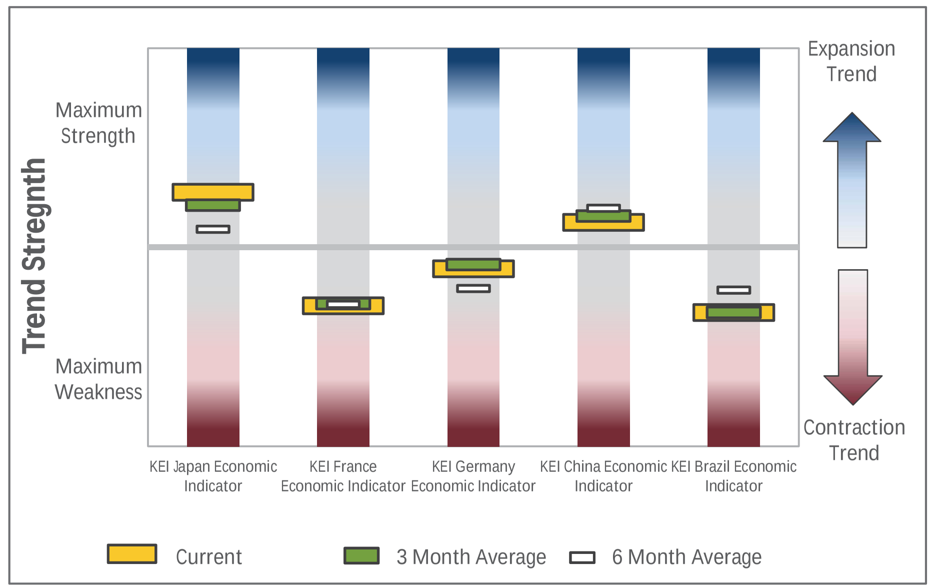


Summary: Global economic growth remains slow and low. EAFE is showing the strongest trend strength, and EM growth remains below trend, but the overall trend remains weak.

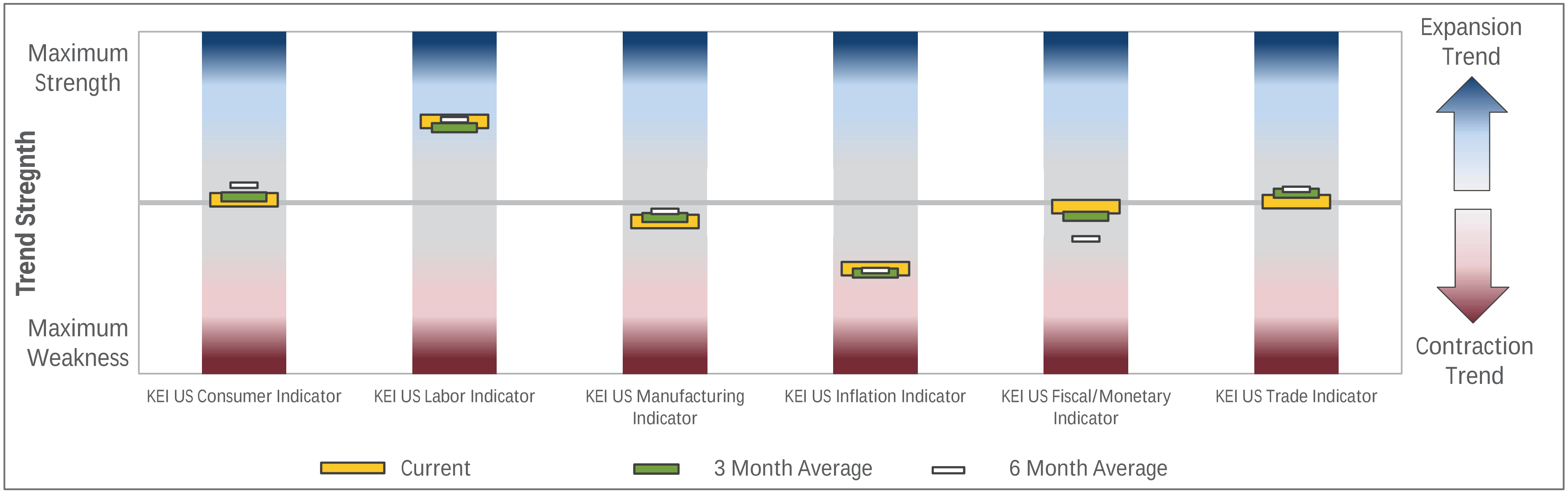
Keys to Watch:

1. U.S. Growth: Will the trend of low and slow growth continue and how will it impact other developed countries?
2. EM: Will EM growth return to above trend, or are the EM economies leading the developed markets?

Outlook (Next 3 – 6 Months): Look for growth to continue to slow in the U.S. and a slowing trend to emerge in EAFE. EM is unlikely to be able to generate a new trend toward greater economic strength and maintaining current growth of 5.5% looks to be the best potential outcome.



U.S. ECONOMIC SUMMARY

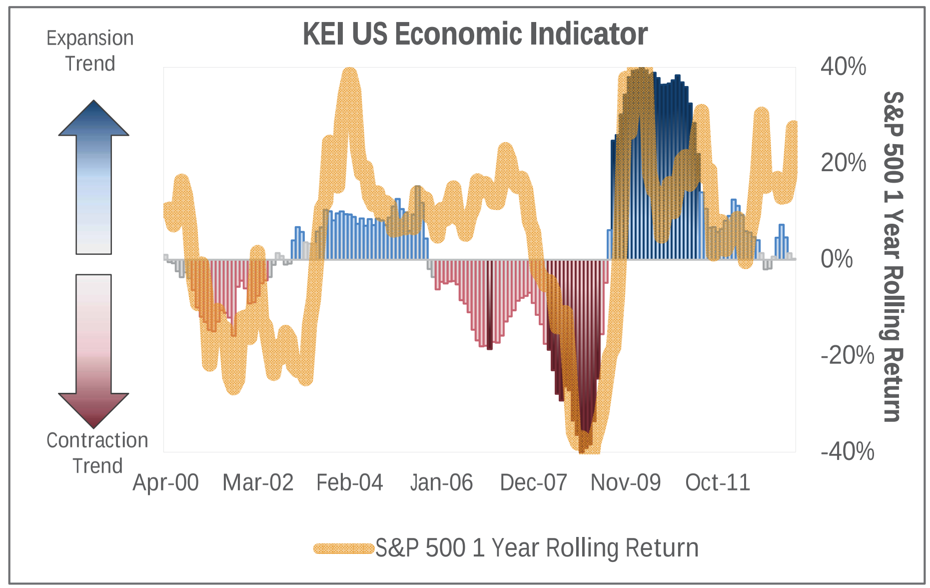


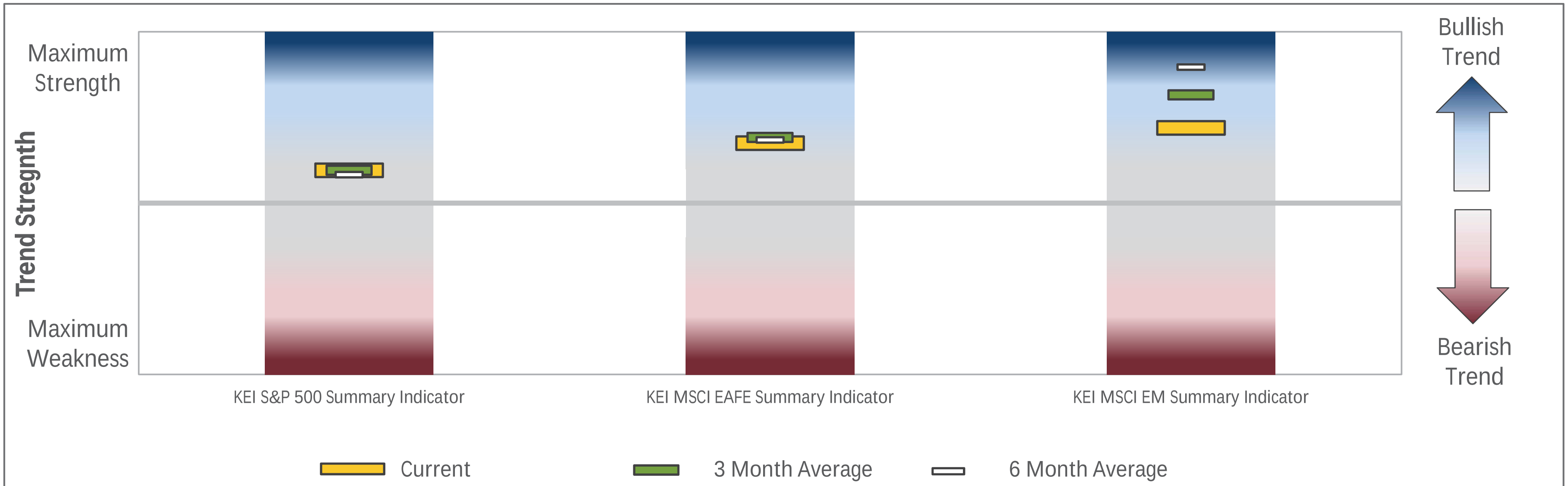
Summary: The U.S. economy continues to provide growth at or slightly below trend, with no sustained driver of growth. Hopes of improvement in the labor and housing markets mask the underlying weakness.

Keys to Watch:

1. Wage growth: Headline payroll growth is of little importance without wage growth. Increased wages can increase consumption and GDP.
2. Credit growth: Expanding money supply via Fed QE will not improve the economy without increased credit growth. A dollar printed will stay a dollar without increased velocity of money (credit growth).

Outlook (Next 3 – 6 Months): Look for a continued trend toward economic weakness as we move into the second half of the year. Expect to see GDP growth trend toward 1% with the potential for lower in Q4.



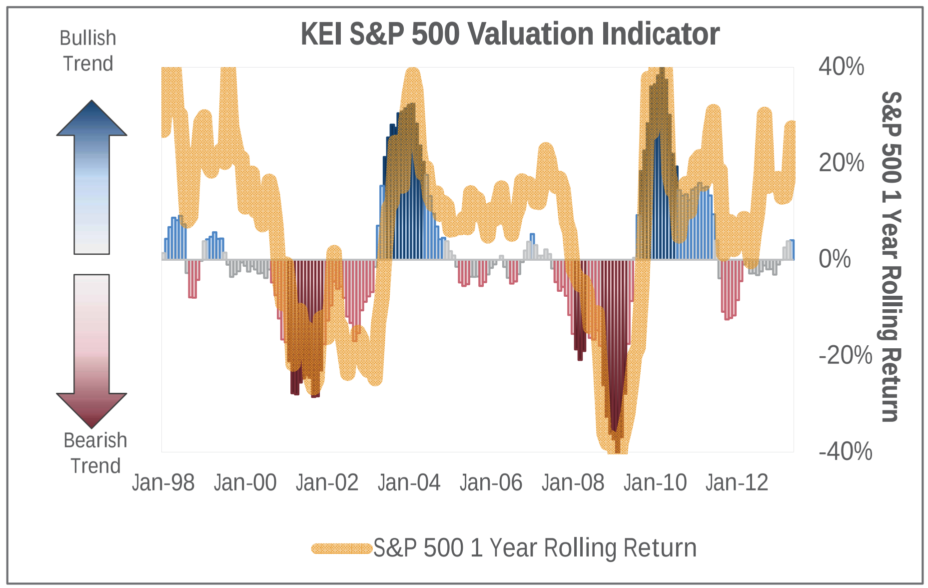


Summary: The developed market equities trend remains slightly bullish, while the bearish trend in EM equities appears poised to continue.

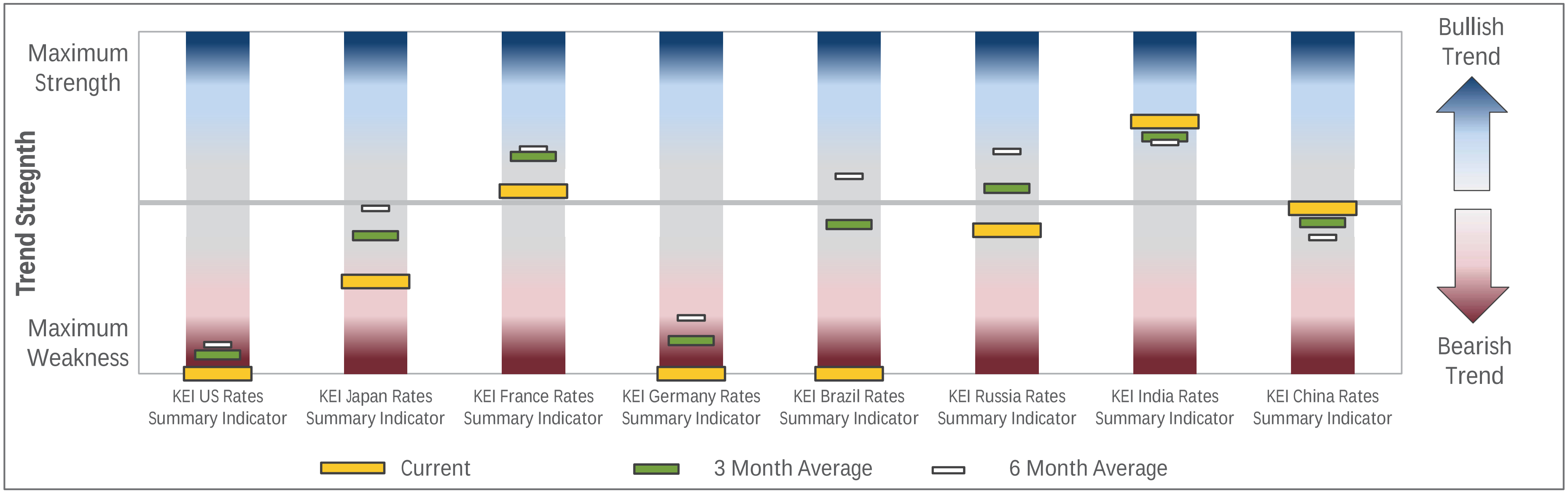
Keys to Watch:

1. EM Leading: Are EM equities leading developed markets or will EM equities stage a rally to meet the returns of the developed markets?
2. Following Fed Policy: Will EAFE returns continue to be primarily influenced by Fed policy or will continued economic problems outweigh central bank stimulus?

Outlook (Next 3 – 6 Months): So far, the summer swoon has been shallow. Will the Fed back away from "taper talk" and push equities to a new high? If another high is seen, it should not last long. Expect to see a 10% or greater correction over the next few quarters – the only question is, from what starting point?



GLOBAL RATES SUMMARY

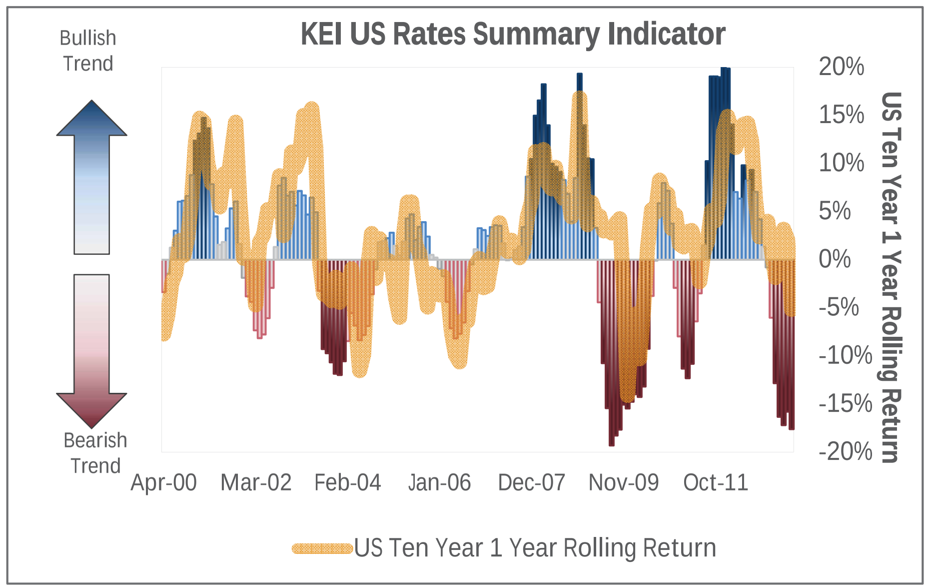


Summary: Global interest rates are mixed. U.S. and Germany remain historically rich. Japan has seen tremendous volatility with the current valuation slightly rich. France, Russia and India are trending toward lower rates, but risks of instability are higher.

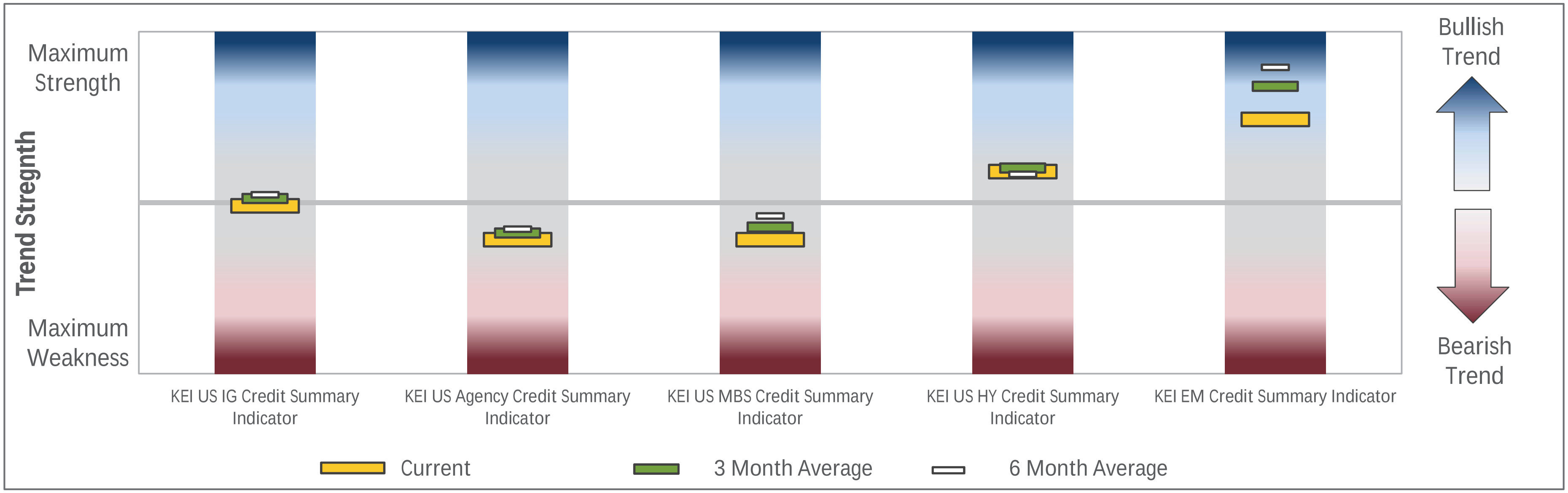
Keys to Watch:

1. U.S. Stock/Bond Correlation: Are U.S. rates trending in a new direction? Is the historical relationship changing? Watch rates for direction when equities correct for an indication.
2. Japan/U.S. Rate Direction: Is QE working? Rates have been pressured higher by expanding supply and fears of reduced Fed buying. Watch for direction on rates if QE is working in Japan and Fed taper talk.

Outlook (Next 3 – 6 Months): Rates have moved a significant amount over the past few months. Look for a move back to lower in rates in the coming months. The force and trend strength of the rally will tell us about the longer-term outlook.



CREDIT SUMMARY

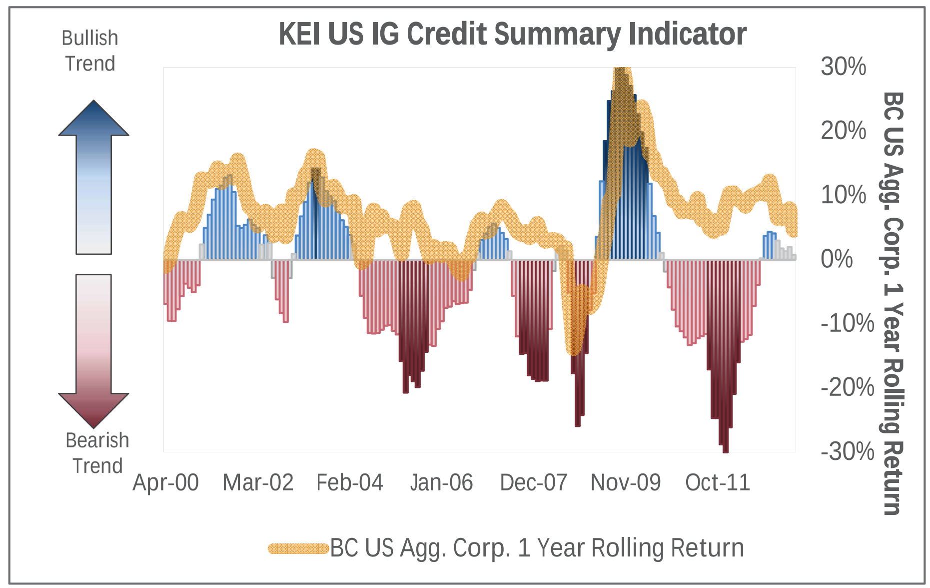


Summary: The move toward wider credit spreads has changed the trend in IG and MBS from bullish to bearish. High yield spread trend has moved toward neutral and while EM spread trends remains bullish, the trend has been weakening over the past 6 months.

Keys to Watch:

1. High beta lead: Will the higher beta HY and EM spread sectors lead the overall credit spread market wider, or will the yield grab continue to keep HY spreads tight?
2. Spreads Lead Equities: Is the widening spread trend a leading indicator for equities or will Fed policy outweigh?

Outlook (Next 3 – 6 Months): Look for spreads to continue to press wider and potentially change the trend in both HY and EM debt from bullish to bearish. The trend reversal is likely to occur with the equity correction.



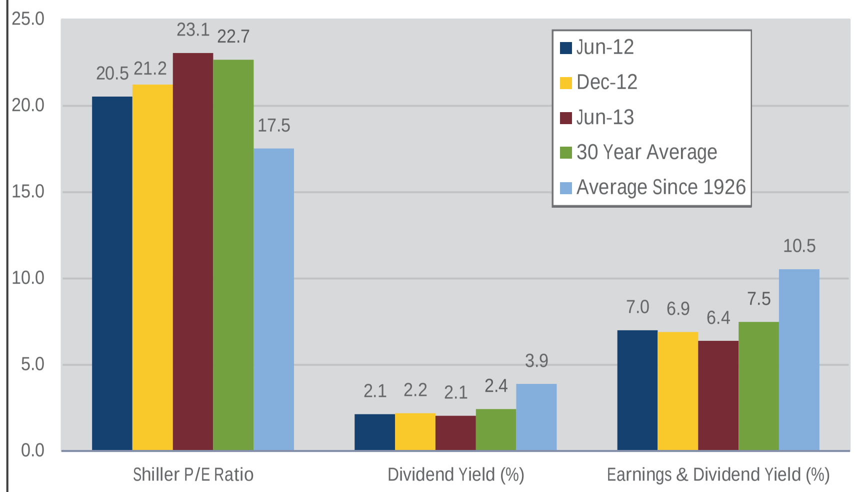
ECONOMIC & CAPITAL MARKET SUMMARY

			US		Europe		EM	
			Prior	Current	Prior	Current	Prior	Current
Economy		Trend	Below Potential	Below Potential	Contracting	Contracting	Below Potential	Below Potential
Economy		3 - 6 Month Outlook	Below Potential	Below Potential	Contracting	Contracting	Below Potential	Below Potential
Economy		Comment	Growth should continue to slow with the risk of growth at/below 1% in Q4.		Growth is currently at its weakest point in 5 quarters. Look for continued weakness.		Below potential growth likely to continue; is EM leading developed?	
Equity		Trend	Neutral	Neutral	Slightly Higher	Slightly Higher	Higher	Slightly Higher
Equity		3 - 6 Month Outlook	Bearish	Bearish	Bearish	Bearish	Bearish	Bearish
Equity		Comment	The summer swoon has been shallow. Continue to look for a 10+% correction in the coming months. Only question is from what starting point?		Equities have performed well relative to the economy. Look for a correction along with the U.S., Euro likely to underperform with the correction.		Who is leading? Will EM equities lead developed markets lower? Or will EM equities "catch-up" to developed and stage a significant rally?	
Fixed Income	Rates	Trend	Higher	Higher	Higher	Higher	Higher	Higher
Fixed Income	Rates	3 - 6 Month Outlook	Slightly lower rates	Slightly lower rates	Core rates lower; PIIGS rates higher	Core rates lower; PIIGS rates higher	Slightly Higher Rates	Slightly Higher Rates
Fixed Income	Rates	Comment	10-year yields are 120 bps higher since July 2012, but remain historically rich. Look for a move toward lower rates with the equity correction.		Core rates should benefit from the risk-off trade and see lower yields. However, PIIGS rates should see higher yields.		On a relative basis, EM rates remain cheap to developed countries. Rates may be pushed higher on a "risk off" trade.	
Fixed Income	Spreads	Trend	Wider	Wider			Tighter	Neutral
Fixed Income	Spreads	3 - 6 Month Outlook	Wider	Wider			Wider	Wider
Fixed Income	Spreads	Comment	The trend toward widening spreads looks set to continue. Are the spread markets leading equities?				The spread trend has moved toward neutral, with spreads leaking wider, the trend could turn bearish (wider).	
Overall Outlook			Slow growth has not stopped the equity march higher. Do fundamentals still matter? Prices must be supported by growth or valuations become misaligned. For QE to be successful, growth must result. Look for a 10+% correction in the coming months.		European GDP growth is at its weakest point in 5 quarters. Equity returns are being driven by central bank policy (most the Fed and less ECB). As with the U.S., look for a 10+% equity correction.		EM has been the big disappointment of the year. While growth is still positive, it has been below potential. Will EM equities lead developed markets lower? Or will EM equities "catch-up" to developed markets and stage a significant rally.	

APPENDIX

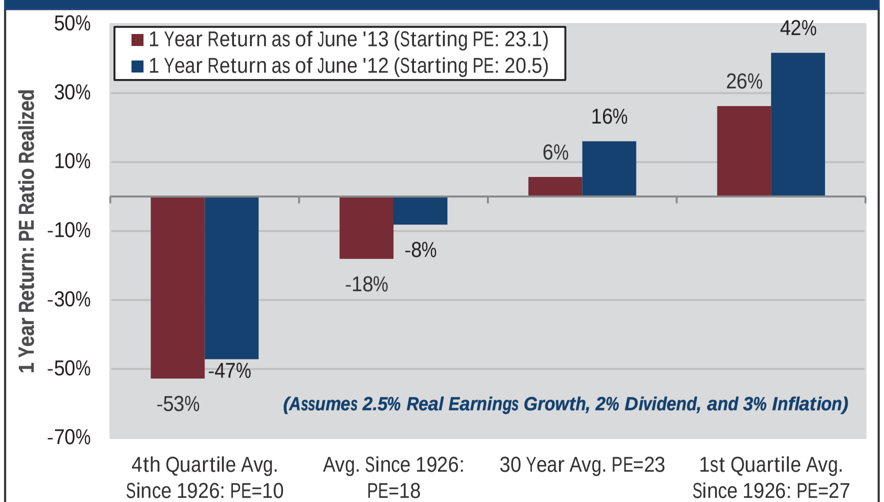
- Although the S&P 500 lost 1.3% in June it is still up 13.8% year-to-date. The 2Q return for the index is 2.9%. The Shiller P/E decreased from 23.5 to 23.1 over the month, but is still up 2.2% for the quarter.
- The S&P 500 one-year return is an impressive 20.6% while the Shiller P/E is up from 20.5 to 23.1 over the same time period; a 12.7% increase.
- A higher P/E ratio implies the market is pricing in either stronger earnings growth or higher stability in earnings growth going forward. If neither of these scenarios come true, the current P/E ratio suggests the market is overvalued.
- The current P/E ratio compared to its long-term average implies the market is overvalued.

U.S. Large Cap (S&P 500) Valuation Snapshot



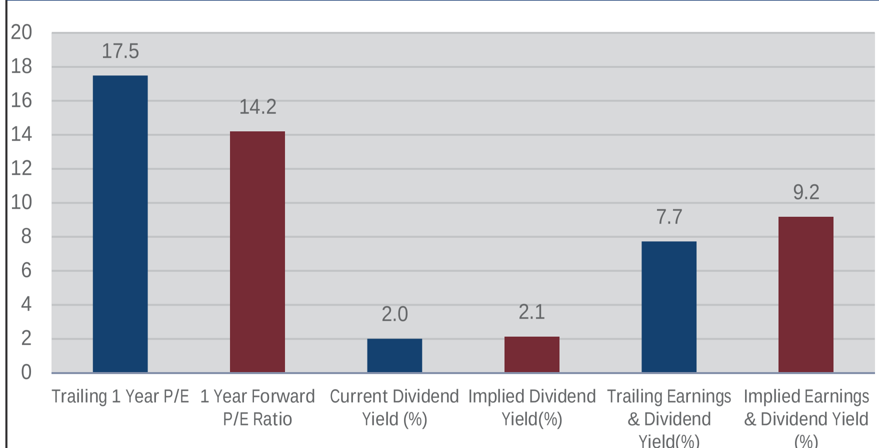
Source: Yale/Shiller, Wurts

Effects of Changes in Shiller PE Ratio



Source: Yale/Shiller, Wurts

S&P 500 Valuation Snapshot (June '13)

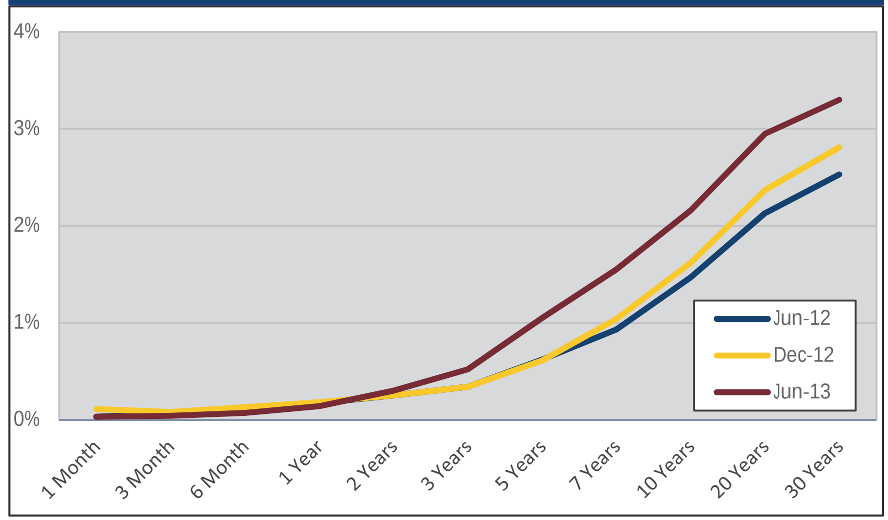


Source: S&P, Wurts

FIXED INCOME

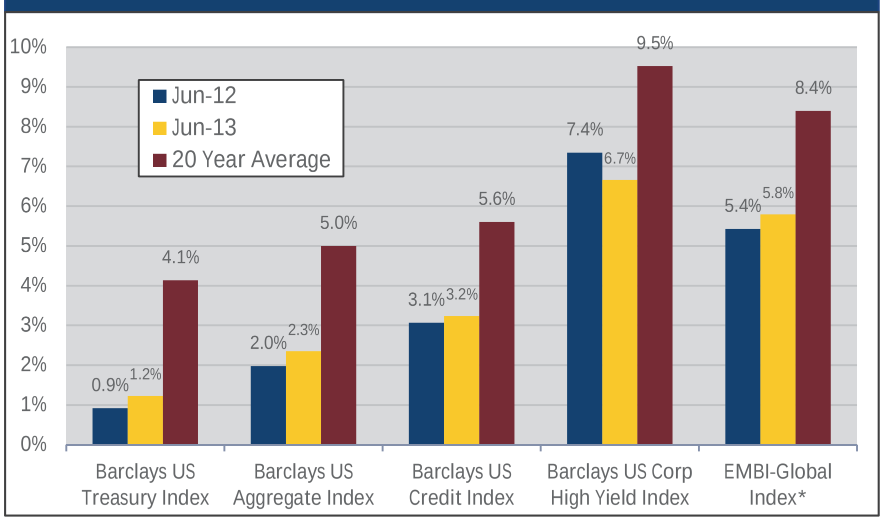
- Treasury yields rose sharply on the long end of the curve over the quarter while short-term rates remained relatively unchanged. The Treasury curve is steeper compared to one year ago.
- Over the quarter, market inflation expectations decreased 20% from a ten-year expectation of 2.5% to 2%. This is the lowest market expectation for ten-year inflation observed over this last year, and is near the same level one year ago.
- Credit yields followed Treasury yields higher due to higher rates and spread widening; the yield on the Barclays U.S. Corporate High Yield index was up 93 bps over the quarter, over a third attributed to spread widening.

U.S. Treasury Yield Curve



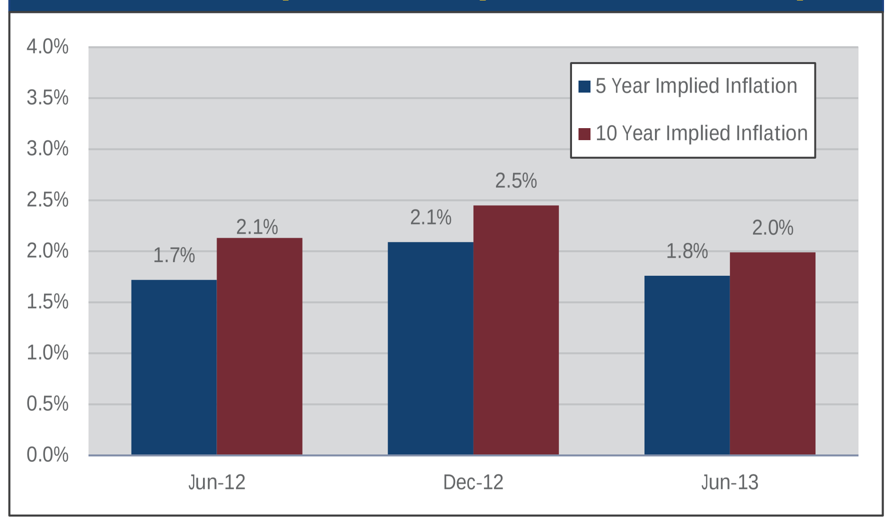
Source: Federal Reserve

Nominal Fixed Income Yields



Source: Ibbotson, JP Morgan

Inflation Expectations (Nominal less Real)

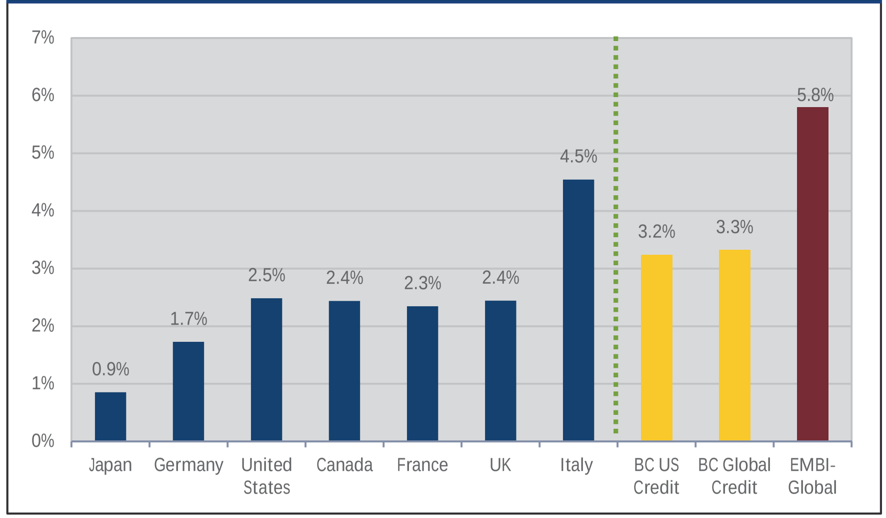


Source: Federal Reserve

GLOBAL MARKETS

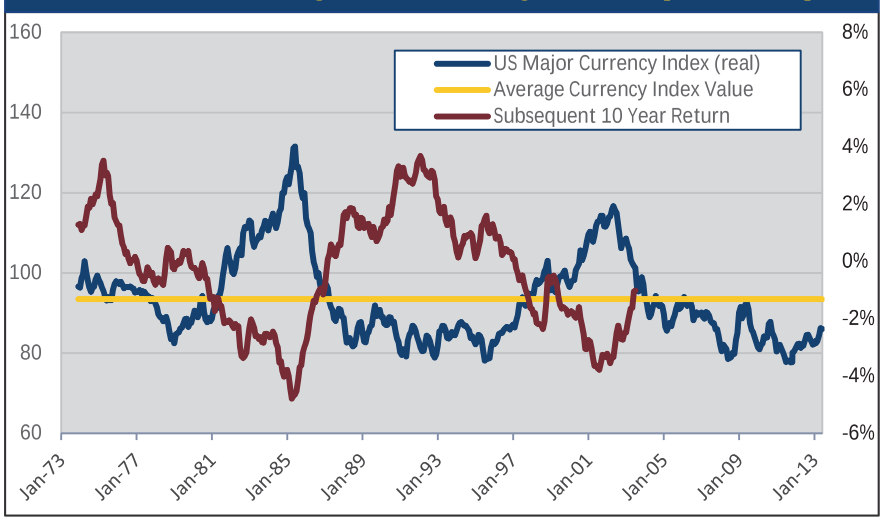
- International equities trailed domestic markets over the quarter. Emerging market equities were down 8% for the quarter with most of the selling pressure in June. Developed markets remain up 4.5% for the year while emerging markets are down 9.4%.
- With the exception of Italy, sovereign rates rose across the globe. U.S. rates are up 70 bps over the quarter and EM debt up 100 bps.
- P/E ratios for U.S. and EAFE equities are up over the quarter and down for EM equities. Despite a negative quarter for the MSCI EAFE, it's P/E that is up nearly 4%, suggesting this region is experiencing negative earnings pressure.
- The sell-off in international equities over the quarter resulted in investors demanding U.S. assets and dollar appreciation.

Global Sovereign 10-Year Index Yields (June '13)



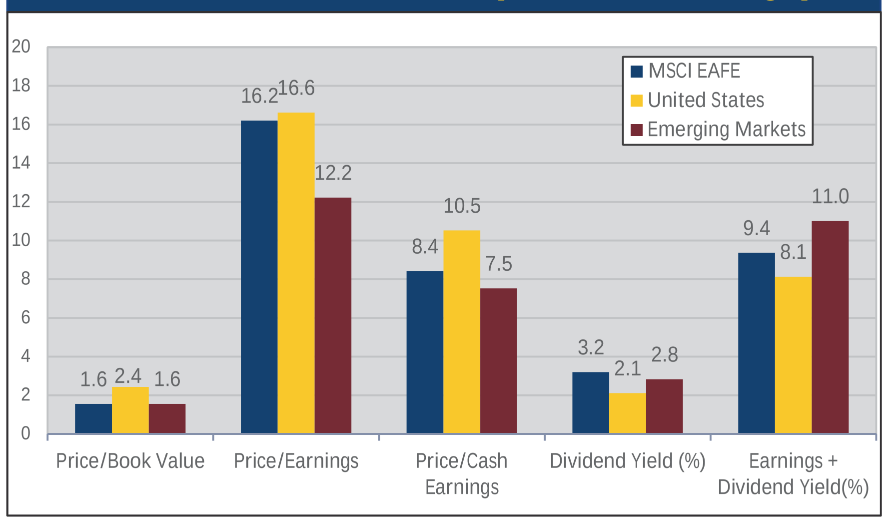
Source: Bloomberg , JP Morgan

U.S. Dollar Major Currency Index (June '13)



Source: Free Lunch, Wurts

MSCI Valuation Metrics (3-Month Average)

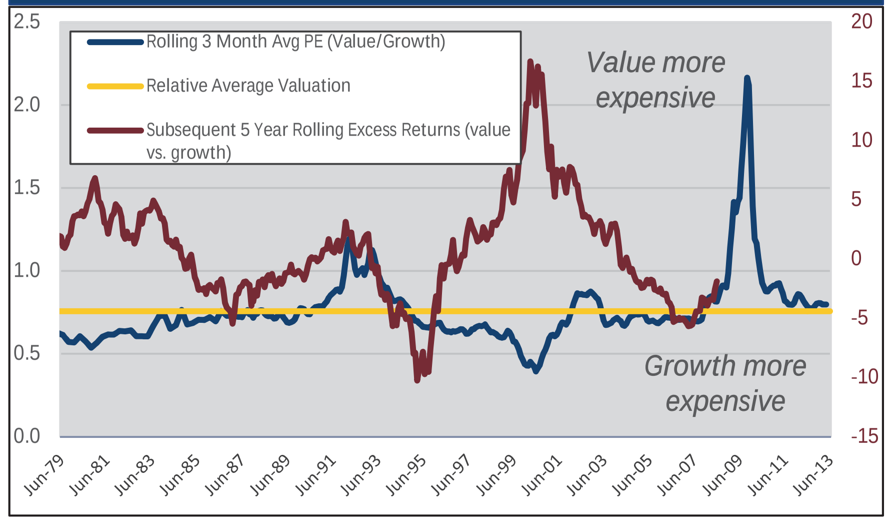


Source: MSCI

STYLE TILTS: U.S. LARGE VALUE VS GROWTH

- Both U.S. large cap growth and value stocks are up in the quarter and year. Value is outperforming growth significantly over one-year, but is slightly underperforming over the latest three- and five-year period.
- The relative P/E between value and growth stocks suggest both are fairly valued relative to one another. Historically, it is only during and after heightened market volatility that this relationships shows an opportunity to overweight one over the other.

Relative PE Ratio of U.S. Value vs Growth



Source: Russell

U.S. Value vs Growth Absolute Performance

	Russell 1000 Growth Annualized Return to date, %	Russell 1000 Value Annualized Return to date, %
QTD	2.06	3.20
YTD	11.80	15.90
1 Year	17.07	25.32
3 Years	18.68	18.51
5 Years	7.47	6.67
7 Years	6.99	4.57
10 Years	7.40	7.79
20 Years	7.84	9.22
	Sharpe Ratio	Sharpe Ratio
3 Years	1.28	1.28
5 Years	0.47	0.41
7 Years	0.40	0.26
10 Years	0.44	0.45
20 Years	0.35	0.46

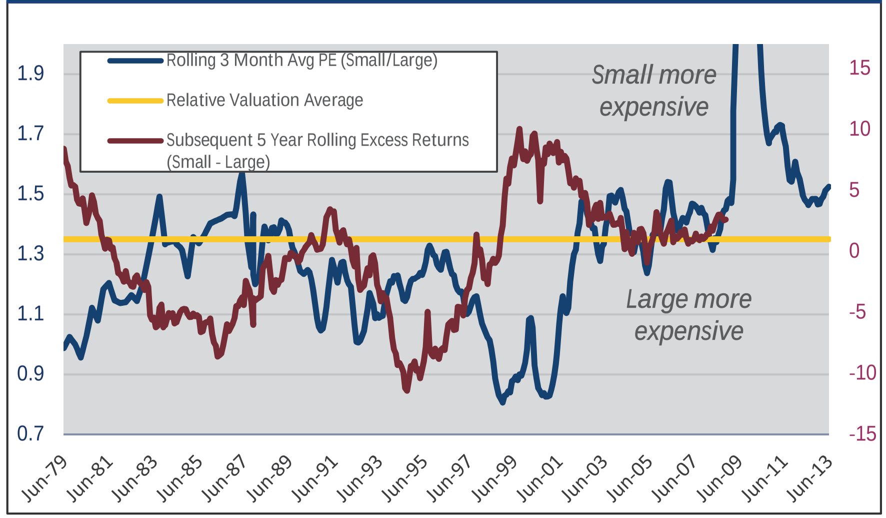
Source: MPI

U.S. Value vs Growth Relative Performance

Source: MPI

- Small-cap equities are outperforming large by 3% over the most recent trailing one-year time period. Most of small cap's outperformance has been since the start of this year.
- Although small-cap equities have outperformed large cap, it has done so with higher volatility and similar Sharpe ratio.
- Similar to using the relative P/E relationship between value and growth stocks, the validity of using the relative P/E relationship between large and small to determine future relative performance should be considered at extreme valuations.

Relative PE Ratio of U.S. Small vs Large



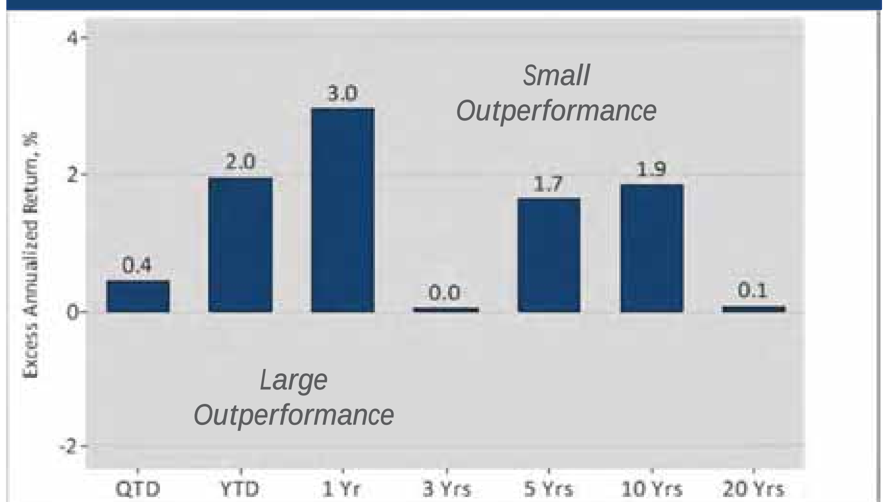
Source: Russell, Wurts & Associates

U.S. Small vs Large Absolute Performance

	Russell 1000 Annualized Return to date, %	Russell 2000 Annualized Return to date, %
QTD	2.65	3.08
YTD	13.91	15.86
1 Year	21.24	24.21
3 Years	18.63	18.67
5 Years	7.12	8.77
7 Years	5.85	5.82
10 Years	7.67	9.53
20 Years	8.80	8.88
	Sharpe Ratio	Sharpe Ratio
3 Years	1.30	1.01
5 Years	0.44	0.46
7 Years	0.33	0.30
10 Years	0.46	0.47
20 Years	0.43	0.38

Source: MPI

U.S. Small vs Large Relative Performance



Source: MPI

PERIODIC TABLE OF RETURNS – JUNE 2013

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	YTD
Best	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	17.4
	32.9	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	15.9
	26.3	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	15.9
	23.8	4.4	31.0	21.6	30.5	16.2	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	14.4
	18.9	2.6	28.5	21.4	22.4	15.6	26.5	7.0	2.8	1.0	39.2	16.5	8.0	18.4	11.6	-25.5	28.4	16.8	1.2	16.4	13.9
	18.1	0.4	25.7	16.5	19.1	13.8	24.3	6.0	2.5	-6.0	30.0	14.5	7.5	16.6	10.3	-28.9	27.2	16.7	0.4	16.3	11.8
	13.4	-0.2	24.4	15.5	16.2	8.7	21.3	4.1	-2.4	-8.9	29.9	14.3	7.1	15.5	8.7	-33.8	20.6	16.1	0.1	15.3	4.5
	13.2	-1.5	18.5	14.4	13.9	4.9	20.9	0.4	-4.3	-11.4	29.7	11.9	6.3	14.0	7.0	-35.6	19.7	15.5	-2.9	14.6	3.3
	10.2	-1.8	15.2	11.3	12.9	1.2	16.8	-3.0	-5.6	-15.5	23.9	11.4	5.3	13.3	7.0	-36.8	18.9	13.1	-4.2	12.6	0.0
	9.7	-2.0	11.6	10.3	9.7	-2.5	11.4	-7.8	-9.2	-15.7	22.9	9.1	4.7	10.4	5.8	-37.6	18.4	13.0	-5.5	10.5	-2.4
	3.1	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	-9.4
	2.9	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-10.5
	1.4	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	NA
Worst	-1.1	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	NA

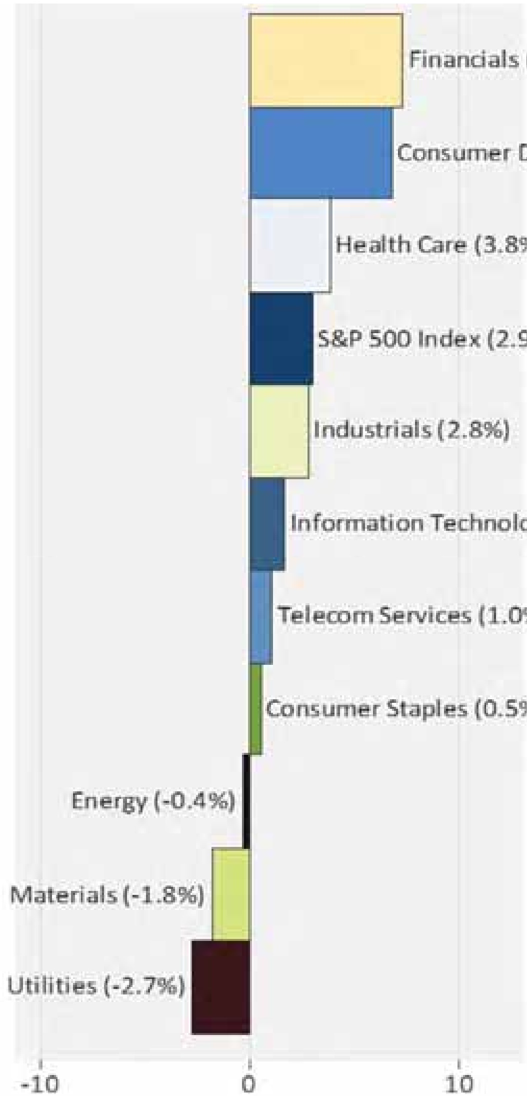
- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- Universe Median Total Funds

Source: Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF) and BNY Mellon

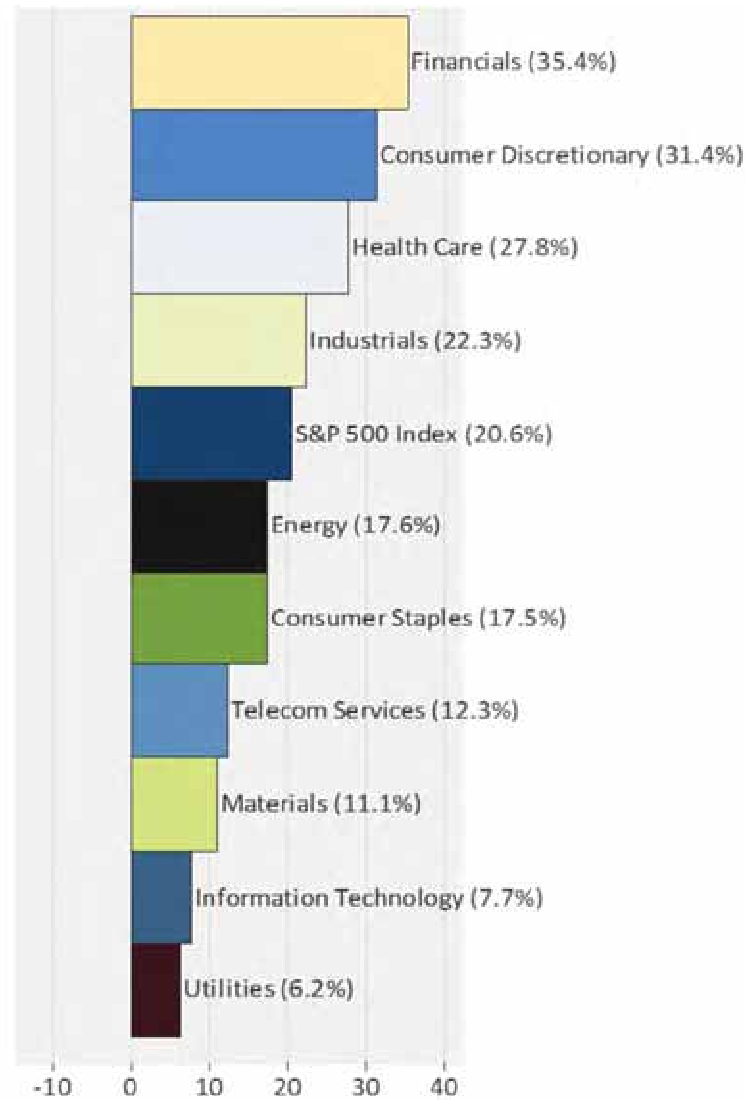
Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BC Agg, T-Bill 90 Day, DJ UBS Comm, NCREIF Property, HFRI FOF, BNY Universe Median Total Funds.

S&P 500 AND S&P 500 SECTOR RETURNS

QTD Ending June 2013



One Year Ending June 2013



Source: MPI

DETAILED INDEX RETURNS

Domestic Equity 6/2013	Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Core Index							
S&P 500 Index	(1.3)	2.9	13.8	20.6	18.5	7.0	7.3
S&P 500 Equal Weighted	(1.1)	3.2	16.2	26.5	19.9	10.5	10.2
DJ Industrial Average	(1.3)	2.9	15.2	18.9	18.2	8.6	7.9
Russell Top 200	(1.4)	2.9	13.3	19.5	18.2	6.7	6.6
Russell 1000	(1.4)	2.7	13.9	21.2	18.6	7.1	7.7
Russell 2000	(0.5)	3.1	15.9	24.2	18.7	8.8	9.5
Russell 3000	(1.3)	2.7	14.1	21.5	18.6	7.3	7.8
Russell Mid Cap	(1.2)	2.2	15.5	25.4	19.5	8.3	10.7
Style Index							
Russell 1000 Growth	(1.9)	2.1	11.8	17.1	18.7	7.5	7.4
Russell 1000 Value	(0.9)	3.2	15.9	25.3	18.5	6.7	7.8
Russell 2000 Growth	(0.6)	3.7	17.4	23.7	20.0	8.9	9.6
Russell 2000 Value	(0.4)	2.5	14.4	24.8	17.3	8.6	9.3

Fixed Income 6/2013	Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Broad Index							
BC US Treasury US TIPS	(3.6)	(7.1)	(7.4)	(4.8)	4.6	4.4	5.2
BC US Treasury Bills	0.0	0.0	0.1	0.1	0.1	0.4	1.8
BC US Agg Bond	(1.6)	(2.3)	(2.4)	(0.7)	3.5	5.2	4.5
Duration							
BC US Treasury 1-3 Yr	(0.1)	(0.1)	0.0	0.3	0.8	1.9	2.6
BC US Treasury Long	(3.2)	(5.6)	(7.8)	(8.4)	6.2	7.6	6.1
BC US Treasury	(1.1)	(1.9)	(2.1)	(1.6)	3.1	4.5	4.1
Issuer							
BC US MBS	(1.0)	(2.0)	(2.0)	(1.1)	2.5	4.8	4.7
BC US Corp. High Yield	(2.6)	(1.4)	1.4	9.5	10.7	10.9	8.9
BC US Agency Interm	(0.7)	(1.0)	(0.9)	(0.1)	1.8	3.5	3.6
BC US Credit	(2.9)	(3.4)	(3.6)	0.8	5.5	7.0	5.1

International Equity 6/2013	Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Broad Index							
MSCI EAFE	(3.5)	(0.7)	4.5	19.1	10.6	(0.2)	8.2
MSCI AC World ex US	(4.3)	(2.9)	0.3	14.1	8.5	(0.3)	9.1
MSCI EM	(6.3)	(8.0)	(9.4)	3.2	3.7	(0.1)	14.0
MSCI EAFE Small Cap	(3.6)	(2.4)	5.9	21.3	12.3	2.8	10.8
Style Index							
MSCI EAFE Growth	(3.1)	(1.0)	5.8	19.1	11.2	0.0	8.0
MSCI EAFE Value	(3.9)	(0.5)	3.2	19.2	9.8	(0.3)	8.2
Regional Index							
MSCI UK	(5.2)	(2.2)	0.3	11.9	12.7	0.5	7.3
MSCI Japan	1.8	4.4	16.6	22.4	8.8	0.0	6.4
MSCI Euro	(5.4)	2.4	1.4	23.1	8.6	(3.6)	6.9
MSCI EM Asia	(5.8)	(5.2)	(6.4)	7.9	5.3	3.4	13.2
MSCI EM Latin America	(9.0)	(15.5)	(14.7)	(6.8)	(1.2)	(4.7)	18.5

Other 6/2013	Month	QTD	YTD	1 Year	3 Years	5 Years	10 Years
Index							
DJ UBS Comm.	(4.7)	(9.5)	(10.5)	(8.0)	(0.3)	(11.6)	2.4
Wilshire US REIT	(1.7)	(1.4)	5.9	8.4	18.5	7.2	10.8

Source: Morningstar, Inc.

HEDGE FUND OUTLOOK

2013 HEDGE FUND OUTLOOK

September 2013

WURTS ASSOCIATES

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The Role of Hedge Funds in a Portfolio

In the last dozen years, assets invested in hedge fund strategies have quadrupled to over $2 trillion, based in part on the promises made by the hedge fund industry. As experience in using hedge funds grows it is only natural for investors to ask (1) whether they have delivered on those promises; and (2) whether the way they are used in portfolios should evolve. And that is true for Wurts & Associates. Among the ways in which our thinking has evolved, two stand out: (1) the role head funds play in a portfolio; and (2) the ways in which hedge funds generate returns.

Typically, hedge funds are held in a portfolio on the expectation that they will provide attractive risk adjusted returns that are stable and consistent, while providing low correlation to other asset classes and a hedge against market downturns. Have they delivered on those promises? The results are mixed. The excess returns of hedge funds over an equity/fixed income benchmark have fallen steadily over the last decade. Looking at returns on a risk adjusted basis, as measured by the Sharpe ratio also reveal a steady decline over the last decade. Hedge fund performance has become increasingly correlated to equity markets and as a result, promised diversification benefits have waned. And with their increasing correlation to equity markets, they are less able to protect capital in falling markets.

Given that hedge funds as a whole are not delivering on their promised benefits as they once did, what role should they play in a portfolio? Wurts & Associates believes that a portfolio of hedge funds can be constructed that delivers on the promises made by recognizing that different strategies have different characteristics, and that each can deliver on some of the promises made. Specifically, we believe that an overall hedge fund portfolio should consist of three buckets: one that is return enhancing, one that is risk reducing, and one that is portfolio diversifying. The first bucket will include strategies that will benefit from evolving market dislocations or that harvest illiquidity premia; the strategies included will vary over time with market conditions. The second bucket will include strategies that reduce risk by protecting capital. The third bucket will include strategies that provide true portfolio diversification, i.e., they introduce new risk factors to the portfolio that have little correlation to the rest of the portfolio; this would include Global Macro and Managed Future funds.

The third bucket, diversifying strategies, recognizes the second way in which our thinking has involved. Historically, investors have been led to believe hedge returns represented “alpha”, the return to a manager’s skill in capturing mis-pricings that could not be earned through traditional long-only investments. Over time, however, investors have come to recognize that the returns to many hedge fund strategies do not represent some manager specific insight and skill, but a hedge fund “beta” that captures exposures to common risk factors shared by all managers pursing similar strategies. Merger arbitrage provides one example of a hedge fund beta. Merger arbitrage strategies go long companies being acquired and short the companies doing the acquiring. The merger arbitrage “beta” comes from capturing the risk premium that exists in the aggregate of all investible deals.

One take-away from the idea of hedge fund beta is that the common risk factors, the beta, can be isolated for most hedge fund strategies. And if it can be isolated, can it be reproduced passively, and if so, why pay hedge fund managers a 2% management fee and a 20% incentive fee? A second take-away is that hedge fund beta, can come and go. In the case of merger arbitrage, the number of mergers and borrowing costs at any time will influence the size of the risk premia for investing in merger arbitrage strategies.

The ways in which Wurts & Associates thinking about hedge funds has evolved has influenced the structure of this outlook. The outlook will review hedge fund strategies where common risk factors and thus a hedge fund beta can be identified, and examine what the market environment suggests about the potential size of the risk premia, the beta, for taking on those common factor risk exposures.

Outlook and Opportunities

As the five year anniversary of the 2008 financial market crisis draws near, investors find themselves at a transition point as to the economic and market environment that will shape future performance. For the last five years markets have been driven as much by quantitative easing that encourages investment in risk assets, and expectations about changes in monetary and government policy, as they have by economic fundamentals.

This environment proved challenging for many hedge fund strategies. Global liquidity and rapidly changing policy stances led asset prices higher, often in the face of weak fundamentals. It also resulted in a period of increasing correlations and decreasing dispersion across assets. Neither of which is conducive to managers adding value.

Over the last year, macroeconomic uncertainties (e.g., Europe crisis) and the belief that central bank provided liquidity was keeping the economy afloat have begun to be replaced by the view that economic growth, albeit slow, can stand on its own and that assets should be evaluated on their own merits. This has been observed in falling equity price correlation and increasing dispersion.

The environment markets are slowly transitioning too is one where interest rates are normalizing and overall economic growth is slow. The success of investors' decisions depends on their understanding of the winners and losers in such a world. The challenge in this transition is determining whether markets are being driven by fundamentals or yet by expectations about policy. The market's broad sell-off in late May and June on the belief that the Fed would begin shrinking its bond buying program sooner than expected provides an example. Portfolio positions taken on the basis of fundamental attractiveness of assets found themselves whipsawed by positions driven by expected changes in central bank provided liquidity.

As hedge funds forecast the environment that will frame their decisions in the next year ahead, (1) what factors will weigh heavily; and (2) what will the environment mean for each strategy's ability to generate returns from its market beta and what will it mean for managers' ability to add value via alpha?

On the economic front, hedge funds must evaluate the strength of the global economic recovery; will growth accelerate or slow in the U.S, Europe, Japan and the emerging markets? With absolute growth low relative to historical averages, regardless of whether it accelerates or slows, growth will not provide a strong tail wind for asset values. Credit strategies will benefit from low default rates, but more importantly they must make a call on the direction of QE across the globe and the timing of any changes, and face the likely rotation of assets out of fixed income as real rates remain negative. Company fundamentals continue to strengthen and matter more to equity markets, but managers face higher valuations. Commodity prices are likely to suffer from the transition within China to a consumption driven economy. What does this environment mean for the attractiveness of hedge fund strategies in the months ahead?

Equity Strategies Long-Short equity managers should benefit from the decline in stock price correlation, but in the face of low revenue growth, valuations mostly fair and the cost of shorting expensive, the return to beta will be modest. Skilled managers will have opportunities to add value by identifying companies benefiting from growth and shorting those exposed to slowing growth. Short-biased strategies that underperformed as equities market rallied face an improved environment as fundamentals matter more, but the environment will remain tough given the headwind of low rebates on short positions that are expensive to obtain. Equity market neutral strategies face the same headwind, but their environment is more positive, particularly for statistical arbitrage, given increased volatility and the decline of capital competing in the space. Emerging market equity long/short strategies over the long-term will benefit from inexpensive beta (stocks are cheap), but over the near term, opportunities will be driven by changing expectations of growth across countries and industries.

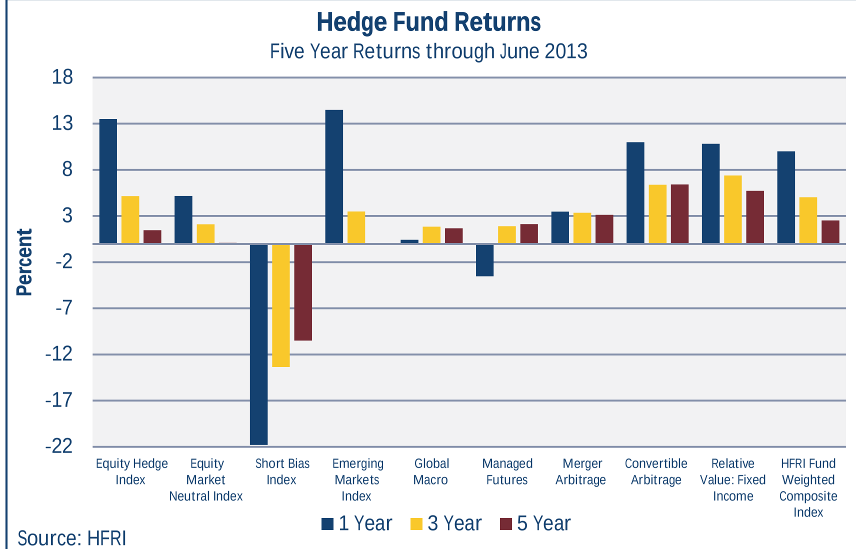
Macro Strategies Global macro strategies should benefit from the declining importance of policy in decision making and the resulting decrease in correlations and increase in dispersion and volatility. As U.S. rates normalize against a back drop of weak European and emerging markets growth, many global directional trades look attractive, creating an attractive beta driven return environment. The environment for emerging market macro strategies is less favorable; inexpensive directional beta opportunities exist, but they must be weighed against possible capital flows on changing investor sentiment. Managed futures trend-following strategies will benefit over the longer term from economic normalization and the decreased importance of policy decisions.

Arbitrage Strategies Convertible arbitrage strategies should benefit from rising issuance, volatility, rising equity prices and low rates, all positive contributors to returns. The environment for Event Driven strategies (Merger Arbitrage) is positive across a host of critical factors (inexpensive borrowing costs, corporate cash, low organic growth) but M&A activity remains low on uncertainty about global growth. Fixed income arbitrage strategies benefit from rising bond volatility but many investors have stepped away from the strategy on the basis that uncertainty in the pace at which rates will rise makes relative value trades difficult.

HAVE HEDGE FUNDS DELIVERED ON THEIR PROMISES?

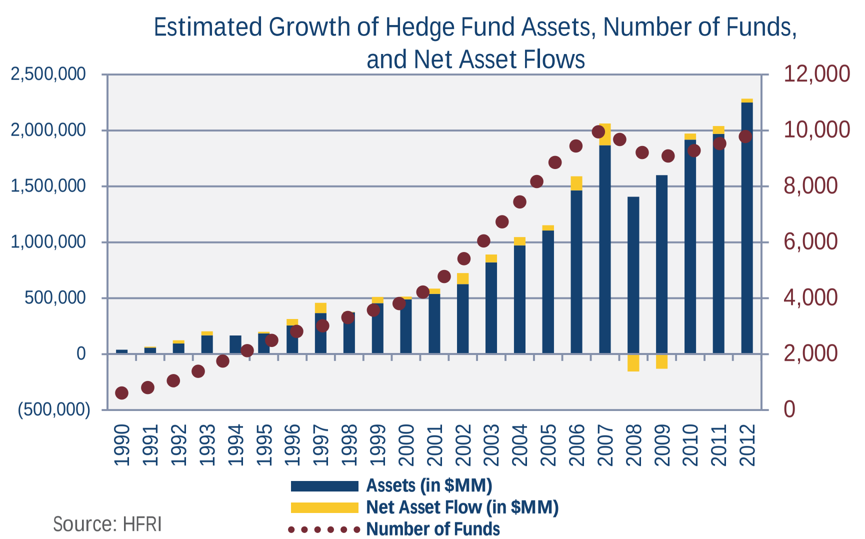
- Hedge funds are typically held in a portfolio on the expectation that they will provide attractive risk adjusted returns that are stable and consistent, while providing low correlation to other asset classes and a hedge against market downturns. Have they delivered on those promises?

- Hedge fund returns have varied by strategy. Long-short equity strategies have benefited from rising equity markets. Macro funds have struggled in a policy driven, trendless environment. Interest-rate sensitive strategies have been hurt by zero interest rate policy.



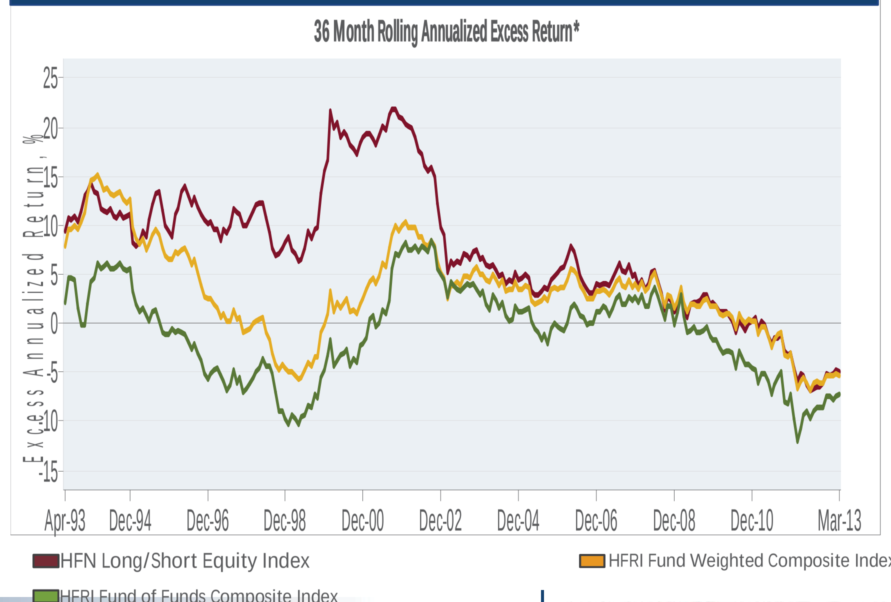
Source: HFRI

Hedge fund assets have quadrupled in the last dozen years to over $2 trillion. A case can be made that the growth in assets has been detrimental to returns and managers' ability to generate excess returns (alpha).



Source: HFRI

In the last decade, hedge funds have had a harder time outperforming a 60/40 benchmark. Recently, hedge funds ability to outperform has been hurt by the low interest rate environment .

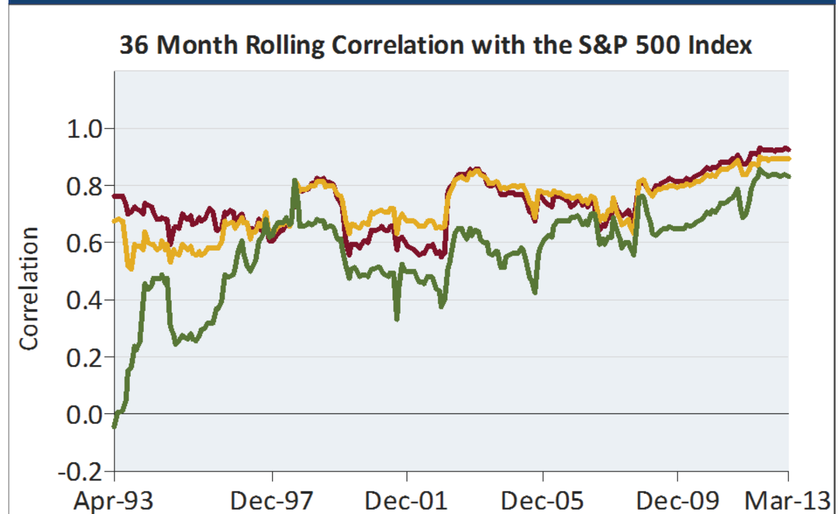


Source: HFRI

HAVE HEDGE FUNDS DELIVERED ON THEIR PROMISES?

The volatility of hedge fund returns, as measured by standard deviation of returns, varies significantly over time, suggesting returns are not stable.

Hedge fund returns have become increasingly correlated with equity market returns, thus providing less diversification.



Adjusted for risk, hedge fund returns as measured by the Sharpe Ratio have declined substantially.

Hedge funds appear to be increasingly participating in market downturns, while capturing less upside during rallies.

Source: HFRI

HFN Long/Short Equity Index
HFRI Fund of Funds Composite Index
HFRI Fund Weighted Composite Index
50-50 S&P 500 & BC Aggregate

WURTS ASSOCIATES

WHAT ROLE DO HEDGE FUNDS PLAY IN A PORTFOLIO?

- Investors have come to realize that much of a hedge fund's returns do not reflect the manager's skill-alpha, but can be attributed to common risk factors- "hedge fund betas". Hedge fund betas reflect the fact that managers with similar strategies (e.g., convertible arbitrage) are exposed to common systematic risks.

- Merger arbitrage provides one example of a hedge fund beta; managers go long companies being acquired and short the companies doing the acquiring. The "beta" comes from capturing the risk premium that exists in the aggregate of all investible deals.

- A number of strategies can be characterized as having hedge fund betas, i.e., risk exposures common to all managers employing that strategy.

- They include equity based strategies (long-short equity, market neutral, short-bias, emerging markets), macro strategies (Global Macro, Managed Futures) and arbitrage strategies (convertible arbitrage, event driven, fixed income relative value).

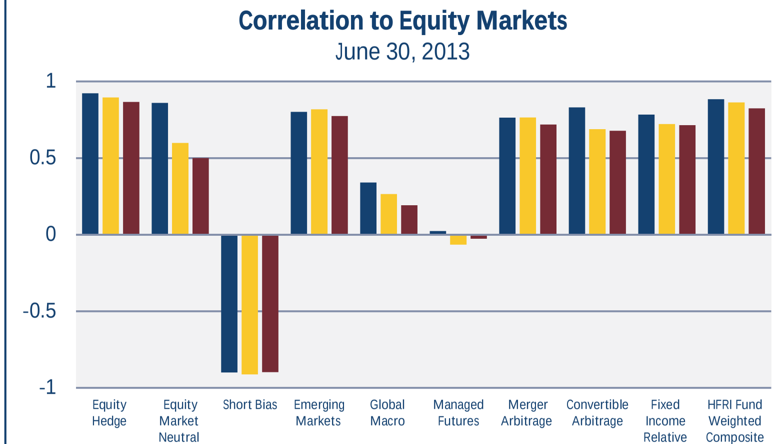
- Hedge funds promise return enhancement, risk reduction and diversification.

- How well do each of these hedge fund betas accomplish these roles?

- One way to answer this question is to examine each hedge fund strategy's returns, ability to preserve capital and correlation to equity markets.

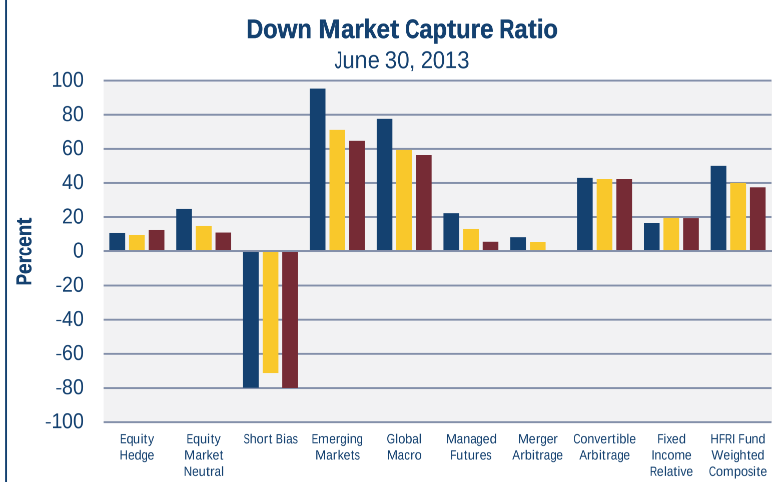
- The table on the next page provides a view of how each strategy is expected to accomplish each goal over the long term.

Short Bias and Macro strategies are the least correlated to equity markets, and as would be expected, equity strategies the most.



Source: HFRI

Most strategies' ability to protect capital has fallen. Emerging Market strategies provide the worst protection; Short-Bias the best.



Source: HFRI

THE ROLE OF HEDGE FUND BETAS IN A PORTFOLIO

	Strategy	Beta (Source)	Return-Enhancing	Risk Reduction (capital preserving)	Diversification (exposure to new risk factors)
Equity Strategies	**Long-Short Equity**	Long-short stock portfolio seeking to take advantage of a range of relative value and timing opportunities in global markets.	Medium	Medium	Low
	Market Neutral	Global developed stock portfolio balancing longs & shorts seeking to capture short – & medium term relative value opportunities based on differences in fundamentals (valuation, earnings quality, etc.)	Low	Medium High	Medium High
	Short-Biased	Short-biased, global developed stock portfolio seeking to capture inefficiencies due in part to a general long-bias orientation balanced by a long portfolio that hedges characteristics of short-portfolio.	Medium	Medium High	Medium High
	Emerging Markets	Long-short stock portfolio seeking to take advantage of a range of relative value and timing opportunities in emerging markets.	Medium High	Low	Medium High
Macro Strategies	**Global Macro**	Long-short and tactical allocation strategies in developed and emerging market equities, bonds and currencies based on attractive fundamentals, performance trends and carry.	Low	Medium	High
	Managed Futures	Short, medium and long-term trend-following strategies in equities, interest rates, currencies and commodities.	Low	Medium	High
Arbitrage Strategies	**Event Driven**	Seeks to capture spread between current value of merger targets and value when deal is completed, as well as spin-offs and other capital structure transactions.	Medium	Medium	Medium High
	Convertible Arbitrage	Seeks to capture discount between current price of convertible bonds and their fundamental value as a bond plus an equity call option.	Medium	Medium	Medium
	Fixed Income Arbitrage	Long-short relative value and tactical credit market portfolio of global fixed income securities and currencies based on valuation, trends and carry	Low	Medium High	Medium High

Magnitude	None	Low	Medium	Medium High	High

THE COSTS OF SHORTING: A HEADWIND TO PERFORMANCE

- There are numerous explanations for the mediocre performance of hedge funds, but one that has drawn attention involves the rising cost of shorting stocks.

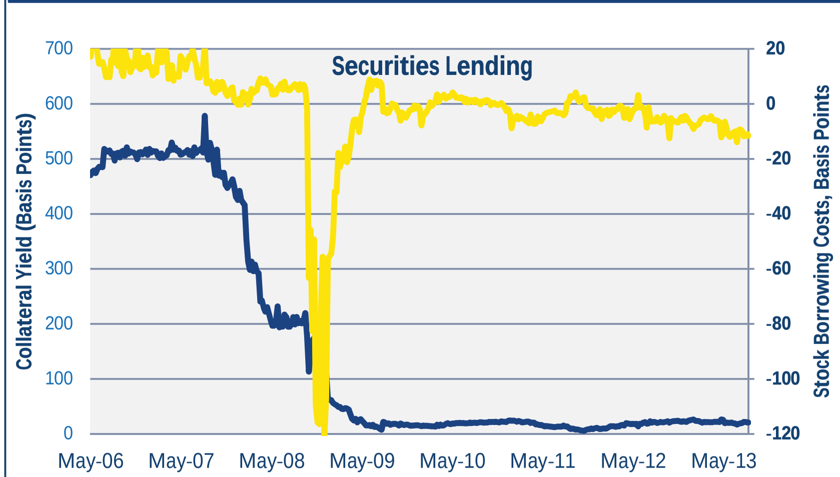
- Why has shorting stock become more expensive? Two reasons stand out. First, the rebate short sellers earn on the collateral they must post when borrowing stocks has fallen in a zero interest rate environment.

- Second, the cost of borrowing stock has increased. While the average cost today is only 20 basis points, heavily demanded stocks can be many more times expensive and volatile. In 2012, the cost of borrowing Facebook shares fell from 40% to 6% (annualized) in a single day when the supply of available shares increased.

In 2013, the most heavily shorted stocks surprisingly outperformed the broad market. On explanation is that as equity markets rallied, short sellers were forced to buy back their shorts to limit their losses, driving prices even higher. Short interest in heavily shorted stocks can be many days trading volume, so it is not unusual for short covering to drive prices higher.

Source: WSJ, S&P Capital, Russell Investments

Since 2007, the short rebate (the yield earned on collateral) has shrunk from 5% to nearly zero, and the cost of borrowing stocks has turned negative, i.e, short sellers are paying lenders to borrow stock.



Source: Bloomberg, S&P

For stocks where short interest is low, borrowing costs can be expressed in basis points. But when demand is high and shares available to be borrowed low, the cost can change quickly and approach 100% as in the case of Tesla Motors.

Tesla Motors	Borrowing cost (Annualized)	Short Interest (shares)	Days to Cover
March 15, 2013	43.9%	30.6m	19.8
March 21 2013	54.77		
March 24, 2013	60.7%		
March 26, 2013	85.3%	32m	22.9

Source: Bloomberg

LONG/ SHORT EQUITY

Market Environment

- Has Long/Short Equity provided a source of diversified, enhanced returns while protecting capital? Marginally. With its high correlation to equity markets, hedged equity failed to fully protect capital during the 2008 crisis, and failed to keep up during the last year's rising equity markets.

- Developed market equities benefited much of the last year from quantitative easing (QE), corporate share buybacks and the attractiveness of equities to bonds in a zero interest rate environment.

- Equity markets should continue to benefit from improving global economic indicators, and dispersion in growth across geographies and industries, leading to falling stock price correlations.

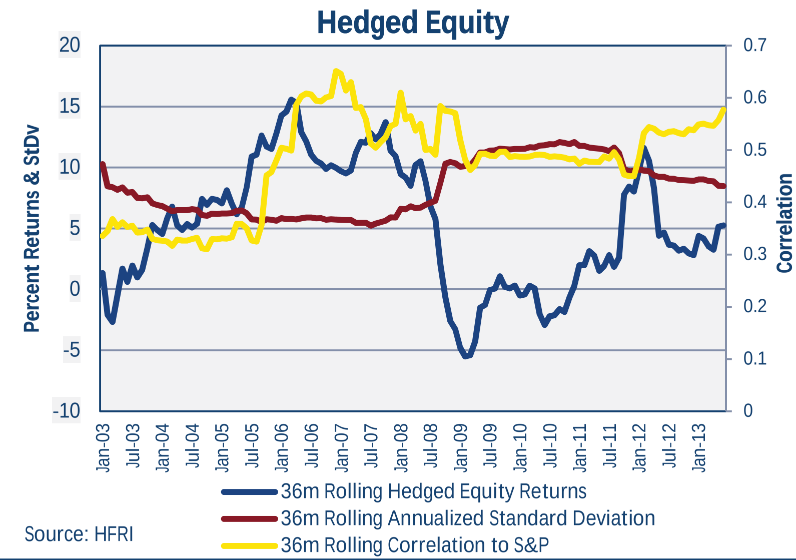
- The markets' response to a potential reduction in QE led contributed to a sell-off in equities, bonds and currencies, revealing that equity markets are still driven in part by policy measures designed to generate interest in risk assets, a headwind to fundamental based decisions.

Market Outlook: Neutral

- **Beta:** Long/Short Equity beta should benefit from declining stock correlation, increased dispersion and rising price volatility, but valuations are less attractive than earlier, and so managers can no longer count on multiple expansion to drive equity prices. Inexpensive equity beta can be found in Japanese and European equities, though not without accepting the associated macroeconomic risks.

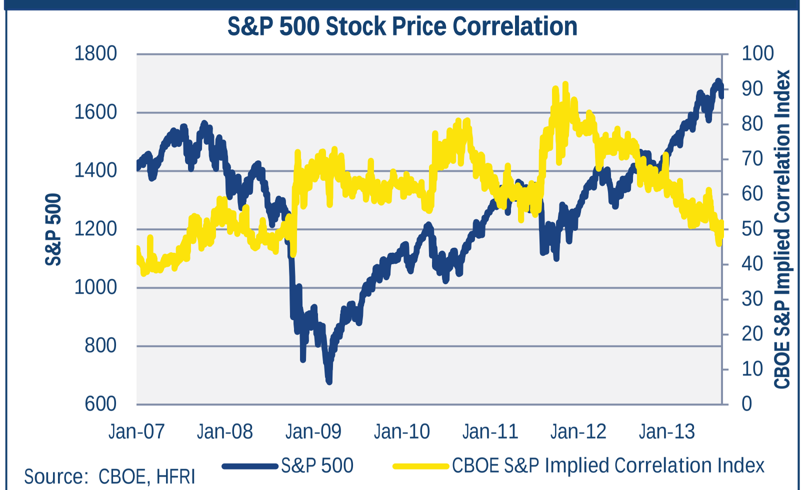
- **Alpha:** Diverging growth rates will create opportunities to go long stocks that benefit from growth (e.g., U.S. housing recovery) and short those hurt by slowing growth (exposure to China or commodity prices).

The correlation of hedged equity returns to equity markets remains above its historical average, limiting its contribution to a portfolio.



Source: HFRI

Over the last year, the market has become less focused on macro risks; stock price correlations are falling as a result, creating more opportunities for long-short equity managers to add value.



Source: CBOE, HFRI

EQUITY STRATEGIES: EQUITY MARKET NEUTRAL & DEDICATED SHORT BIAS

Market Environment

- Historically, Equity Market Neutral strategies have displayed low correlation to equity markets, providing a diversified source of returns and preserving capital in down markets. More recently, returns have been highly correlated to equity markets returns.

- One explanation is that broad market returns have been driven by central bank provided liquidity that contributed to rapidly changing sector leadership, a lack of trend persistence and less attention to fundamentals.

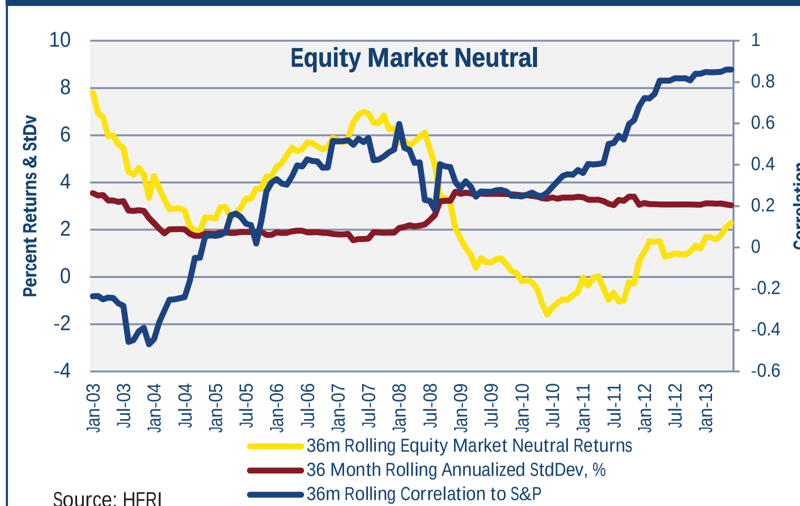
- To be successful, market neutral strategies need to take advantage of short- and medium-term relative value opportunities driven by differences in fundamentals including valuation, earnings quality and performance trends across companies.

- Short-Bias strategies provide a diversified sources of returns that protects capital. As should be expected in a positive, macro-driven equity market, dedicated short-bias funds have been the worst performing strategies, losing 22% in the last year. This tough environment has been made tougher due to the rising cost of shorting.

Market Outlook: Neutral

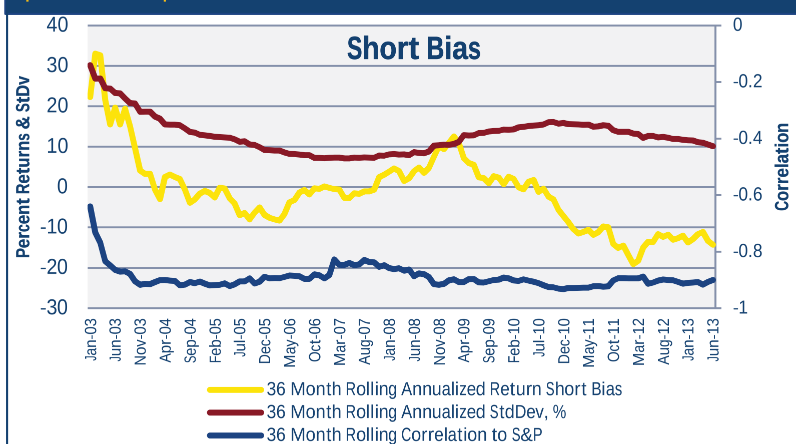
- **Beta:** Increasing volatility and dispersion, reflecting a greater attention to fundamentals and valuation as growth and interest rates normalize will improve the ability of Equity Market Neutral and Short Bias strategies to add value. A decrease in prop desk traders could lead to higher beta. Rising rates will help returns on the short side.
- **Alpha:** Until liquidity conditions return to normal, strategies trading on medium term trends will face headwinds.

As assets in equity market neutral strategies grew, trades became crowded and returns fell. With the departure of prop desk traders it is possible the strategy's beta could rise.



Source: HFRI

With their negative correlation to equity markets returns, short bias strategies have historically provided a diversified source of returns protected capital.



EMERGING MARKETS

Market Environment

- Investors are attracted to emerging markets because of their high expected growth and returns. In making an allocation investors must recognize that they are not getting a diversified source of returns that protects capital.

- Emerging market equities, bonds and currencies have sold off on a combination of slowing emerging markets economic growth, falling commodity demand, improving developed market growth and the expectation of interest rate normalization leaving assets attractively valued.

- Emerging market equities as a whole are inexpensive relative to their own history, sovereign spreads relative to U.S Treasuries are attractive, and currencies appear cheap relative to long-term expected values, based on productivity growth.

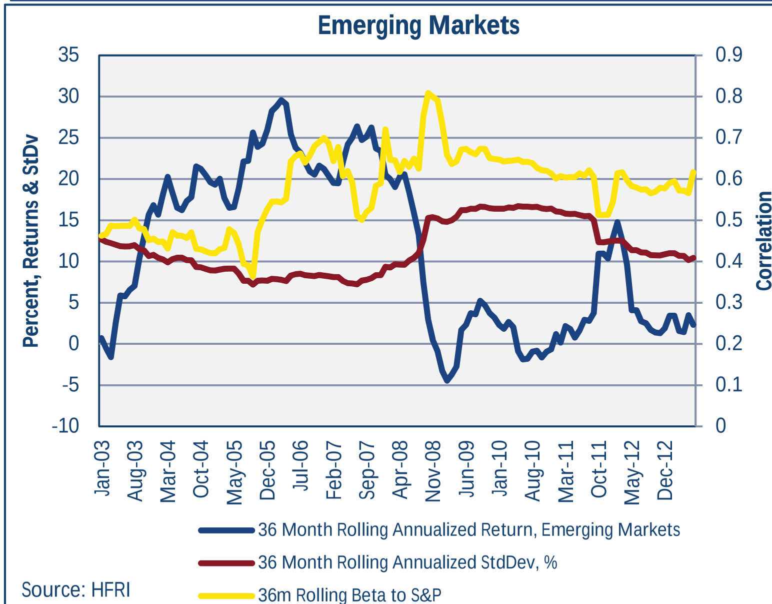
- A number of risk factors weigh on the cheap equity beta that the asset class offers. First, growth prospects vary by country; commodity- and export-dependent nations with budget and current account deficits and that depend on foreign capital are susceptible to capital outflows that would trigger falling equity prices and currency values.

Market Opportunity: Neutral (Short-term), Positive (Long-term)

- **Beta:** Inexpensive directional beta opportunities must be weighed against possible capital flows on changing investor sentiment. In the near-term, I opportunities will be driven by changing expectations of relative growth across countries. In the long-term, growing economic divergence and attractive valuations offers numerous relative value opportunities.

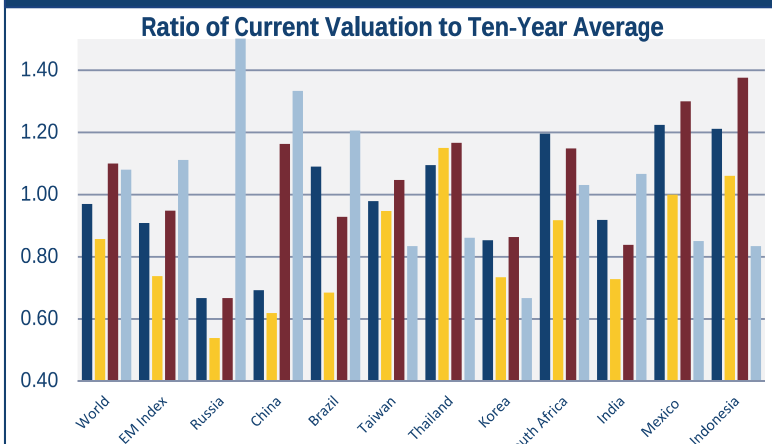
- **Alpha:** Divergences in macro and policy conditions across emerging markets create relative value opportunities (short commodity-sensitive equities, currencies and rates, and go long countries with consumption driven growth for investors with market specific knowledge.

Given the tendency of Emerging Market strategies to be long-biased and the sell-off in emerging market equities, the poor performance of the strategy is not surprising.



Source: HFRI

Country valuations relative to their own history and relative to one-another suggests a beta tail-wind for managers once near term risks are resolved.



Source:J.P Morgan

MACRO: GLOBAL MACRO

Market Environment

- Global Macro strategies are often included in portfolios as a source of diversified, non-correlated returns to equity markets. In the last year, they have performed that role in an unexpected way, delivering flat returns against strong equity returns.

- Their performance might be viewed as surprising given the apparent macro-driven drivers of asset market performance, but the dynamic of how many of the macro drivers played out over time provides an understanding.

- The positions that managers take should reflect value or momentum driven trends or fundamental mist-pricings across assets. But recently, global liquidity, diverging growth rates and rapidly changing policy stances have interfered with longer term fundamental drivers of value, leading asset prices higher in the face of weak fundamentals.

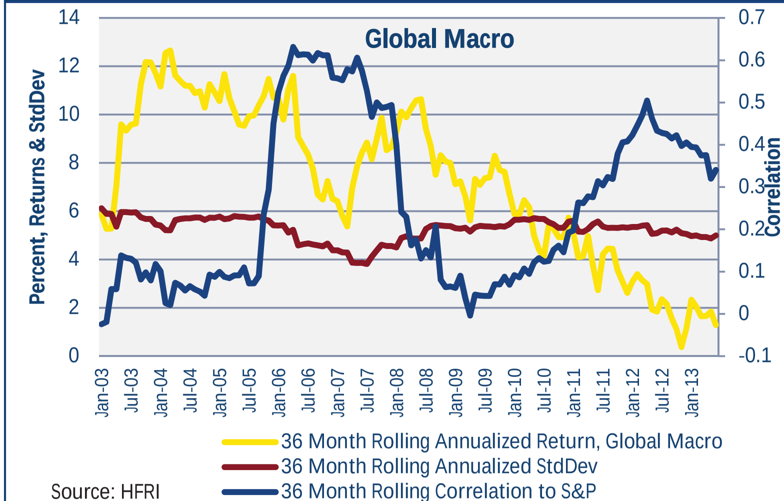
- Quantitative easing and changes in expectations about future policy measures (e.g., Fed tapering) have led to distortions in relative values that are not sustainable. The result has left many macro managers whip-sawed by reversals in rates, currencies and commodity prices.

Market Opportunity: Positive

- **Beta** As U.S rates normalize against a back drop of weak European and emerging markets growth, a variety of directional trades such as long dollar and short long-duration U.S. rates or short the yen look attractive.

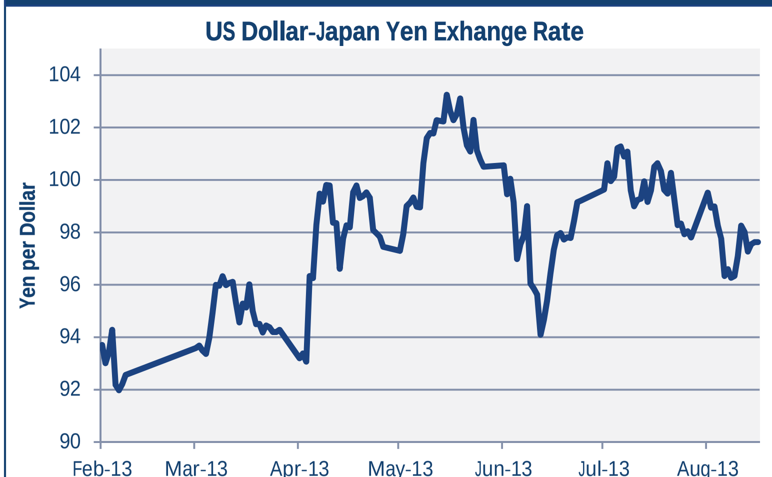
- **Alpha:** Rising volatility and dispersion in growth rates will create relative value trades for managers with a deep understanding of how central bank and government policy will differ across countries.

As QE winds down, opportunities to capture fundamentally driven differences in equities, interest rates and currencies should improve.



Source: HFRI

Volatility in the Yen-Dollar exchange based on differences in US and Japanese central bank policy will create opportunities for macro traders.



Source: Bloomberg

Market Environment

- Managed Future funds by pursuing short, medium and longer term trends in equities, interest rates, currencies and commodities are expected to provide a source of diversified returns to equity markets.

- They continue to deliver on that promise over the longer term, but have delivered poor performance more recently, loosing 4.5% during the last year. Strategies based on longer-term models have delivered the worst performance while short-term strategies (one-week) have performed better.

- Returns have been hurt by (1) the zero interest rate environment which limits interest earned from not trading, and (2) a decrease in the level of volatility employed.

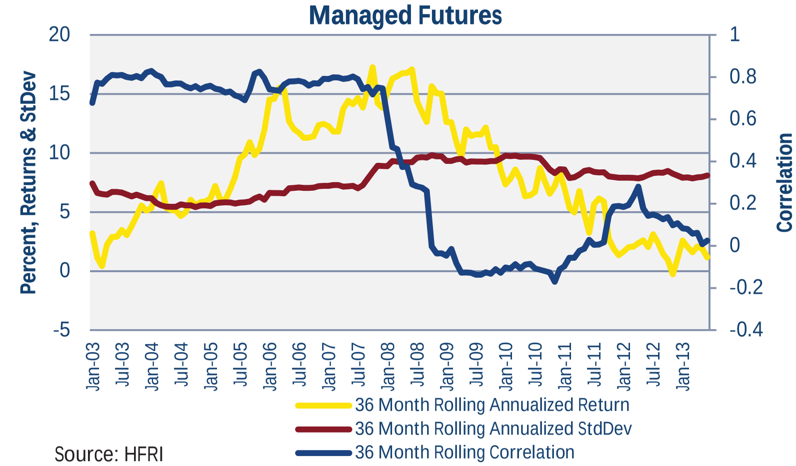
- Managed Futures strategies like market volatility, stable correlations across assets and sustained trends. Instead, traders have experienced a market environment that flips between being driven by fundamentals and one that is driven policy-changes (e.g., QE). Correlations that hold in market driven environments do not necessarily hold in policy-driven markets, making it hard for traders to find a strategy to rely on and more importantly, control risk.

Market Opportunity: Neutral in Short-term/Positive Long-term

- **Beta:** As markets continue to normalize and policy becomes less important in decision making, trend following strategies will benefit from a focus on fundamentals and stabilizing correlations.

- **Alpha:** Managers with short-term trading approaches can better capture short lived movements between risk-off, risk on environments.

Managed future strategies performed well during the 2008 financial market crisis. In markets without observable trends, performance can lag and be subject to reversals.



Source: HFRI

The deterioration of commodity exporting nations' current account balances while the US balance improves suggests the dollar's long term decline has ended, creating opportunity.

Market Environment

- Convertible arbitrage strategies hedge away equity risk, and as a result their returns should show little relationship to what is happening in equity markets. Instead, convertible arbitrage returns have shown an increasing correlation to equity markets.

- One explanation is based in the fact that convertible arbitrage beta depends in part on the level of convertible bond issuance, volatility in stock prices and changing credit spreads.

- With strong equity markets, convertible bond issuance has been high as many companies have been able to issue bonds at rates lower than investment grade.

- During the first half of 2013, US convertible bond issuance of $22 billion exceeded all of that for 2012, while global issuance of $46 billion was already twice 2012 issuance.

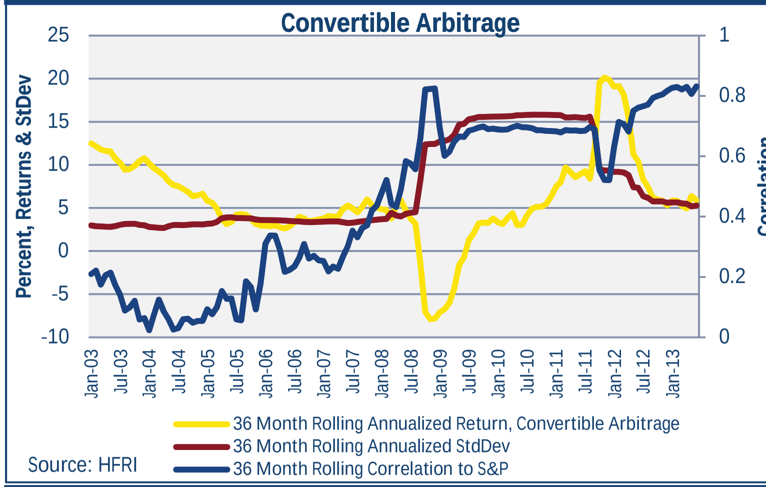
- The strategy has generated strong absolute returns over the last year, the HFRI Convertible Arbitrage Index gained over 8%.

Market Opportunity (Positive)

- **Beta:** Rising issuance, volatility, and the direction of equity prices and rates are all positive drivers of returns.

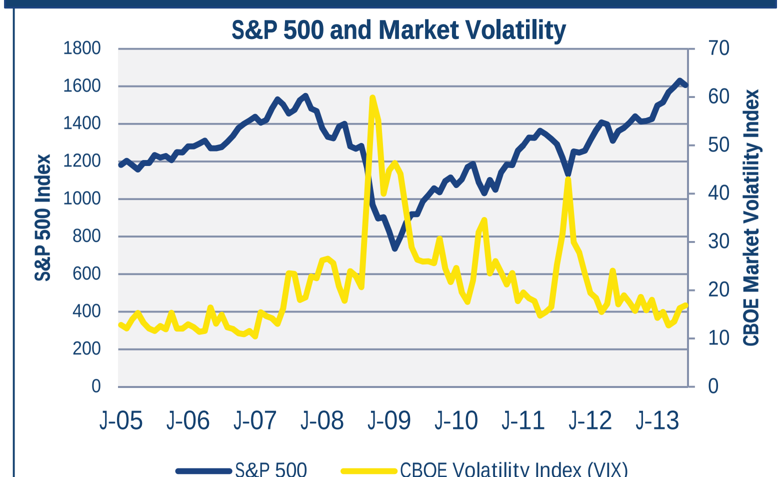
- **Alpha:** Research suggests that at the strategy level there is no alpha for managers to generate, and that allocations should be based on the beta opportunity, but in practice, managers have added value in event driven deals.

Convertible arbitrage beta varies significantly over time, a function of strength in equity markets issuance and credit spreads.



Source: HFRI

Convertible arbitrage benefits from equity market rallies and volatility in underlying stock prices. Stock prices have rallied, but volatility has been limited.



Source: CBOE

Market Environment

- Merger arbitrage is generally thought of as "deal driven" rather market driven, and thus returns should not be driven by the systematic risk of the market. As a result, Merger Arbitrage strategies should provide a diversified source of returns and provide risk reduction in the form of capital preservation.

- In reality, returns have become increasingly correlated with equity markets. One explanation is based in the fact that return opportunities depend on among other things, the volume of deals and the "spreads" (difference in price of the acquiring and target company) available after deals are announced.

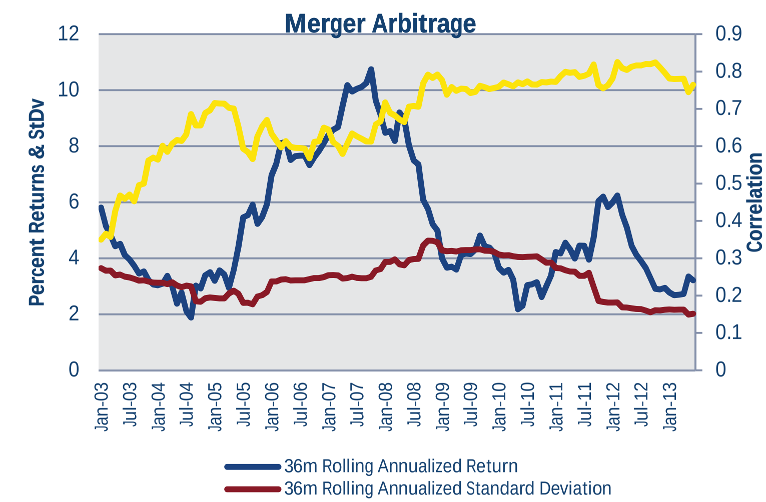
- In spite of low organic growth, record amounts of cash on company balance sheets, and low borrowing costs overall global merger volume is low today (U.S. based deals are up 34%, but European deals are down 36% YTD). Coupled with more capital investing in announced deals, merger arbitrage spreads are low as trades have become more crowded and managers are able to better evaluate all of the transactions.

Market Opportunity (Neutral to Positive)

- **Beta** Inexpensive borrowing costs and cash on the balance sheet and low organic growth suggest a favorable environment for rising M&A activity. Any reduction in political and regulatory uncertainty or a belief that global growth is improving should improve the landscape for merger arbitrage as a whole.

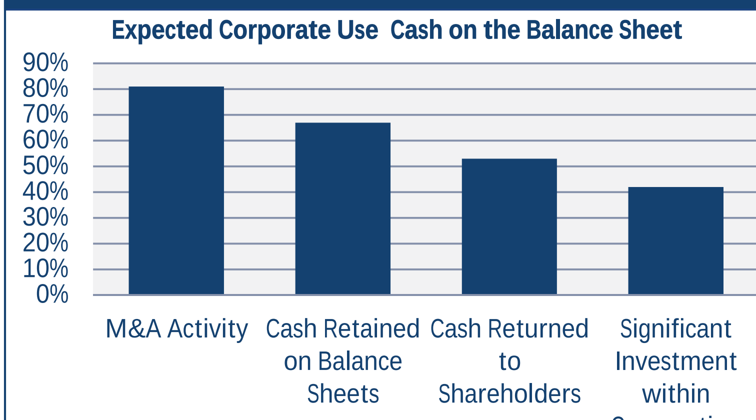
- **Alpha** With spreads and thus risk-adjusted returns low, opportunities to add value in specific deals is low. Managers may be able to add value by identifying deals the market perceives as having a higher chance of breaking than the actual risk.

In spite of rising equity markets and record cash on corporate balance sheets, merger arbitrage returns have been hurt by declining acticity.



Source: HFRI

Surveys of corporate leaders suggest merger and acquisition activity will be a major focus for the large volume of cash on corporate balance sheets in the next two years.



Source: Coller Capital

Market Environment

- Fixed income arbitrage seeks to capture mis-pricings driven by valuations, economic conditions, trends and carry, across the range of global fixed income securities. Popular strategies include yield curve arbitrage. These strategies involve a long position offset by a corresponding short; they use leverage; and they rely on mean reversion as the basis for bringing price discrepancies to an end.

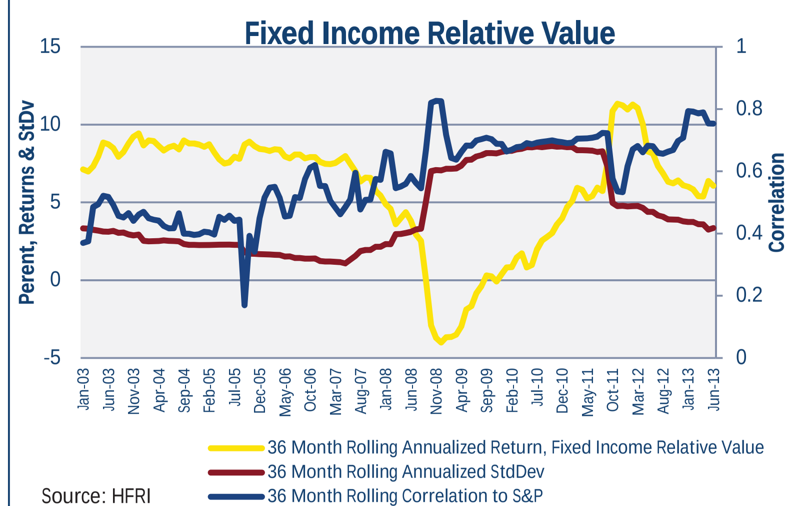
- Because of their relative value approach, they are often viewed as defensive strategies, but with the expected scaling back of quantitative easing along with the uncertainty of its pace, the resulting rise in rates and associated interest rate volatility creates both potential opportunities and headwinds to performance.

- Uncertainty continues to hang over a variety of European trades; should the ECB's OMT program be halted over constitutional issues, the consequences to the European debt market would become unpredictable and lead spreads to resume widening.

Market Opportunity: Neutral

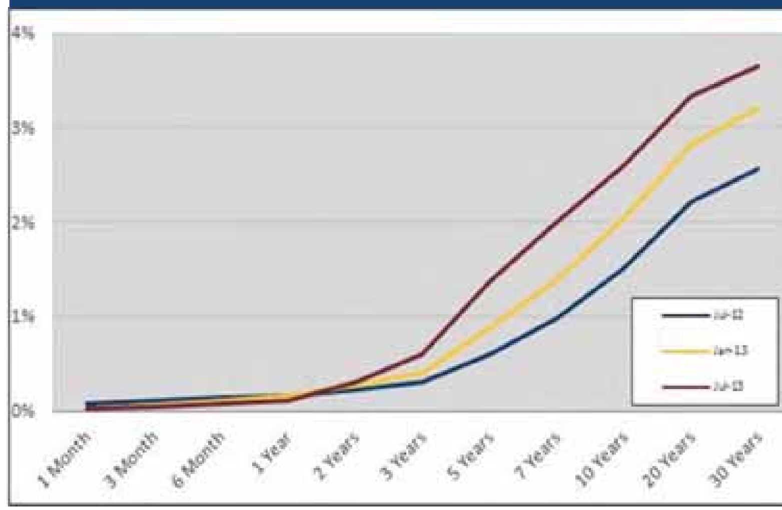
- **Beta**: Fixed income arbitrage benefits from higher bond volatility, but rapid increases can be difficult to trade. Some see opportunity in the space, pointing to a variety of spread tightening or widening trades., but others are stepping away, and limiting duration risk, arguing that these strategies are risky if Treasury yields move substantially higher and abruptly.
- **Alpha:** Rising volatility and dispersion increases the opportunity set for skilled managers with strong views about rate directionality taking idiosyncratic positions.

Low yields and reduced use of leverage as a response to risk, continue to limit expected returns.



Source: HFRI

The steepening of the US Yield Curve creates opportunities for a number of fixed income relative value strategies.



SUMMARY

Strategy	Market Environment	Market Outlook	2013
Equity Long Short	Equity markets should benefit from improving global economic indicators, and dispersion in growth across geographies and industries, but in the near term, equit markets still appear to be driven by changing expectations regarding policy.	Strategies should benefit from the decline in stock correlation, but valuations are less attractive than earlier, and so managers can no longer count on multiple expansion to drive equity prices. Some inexpensive equity beta can be found in Japanese and European equities, though not without accepting the associated macroeconomic risks.	Neutral
Equity Market Neutral/Short Bias	Performance depends on the market's attention to fundamental factors relative to macro and momentum. Performance has faced headwinds from central bank provided liquidity that contributed to rapidly changing sector leadership and a lack of trend persistence. Recent performance has benefited from market volatility, lower correlations, wider dispersion, and the market's greater attention to valuation in the U.S., Europe and the U.K.	Increasing volatility and dispersion, reflecting a greater attention to fundamentals as growth and interest rates normalize will improve the ability to add value on the for both equity market neutral and short bias strategies. The decrease in prop desk traders will also likely raise equity market beta. Rising rates will help returns on the short side. Until liquidity conditions return to normal, strategies trading on medium term trends will face headwinds.	Neutral
Emerging Markets Equity Long Short	Emerging market equities as a whole are inexpensive relative to their own history, but several risk factors weigh on the cheap equity beta that the asset class superficially offers. Growth prospects vary by country; nations with budget and current account deficits and dependent on foreign capital are susceptible to capital outflows that would trigger falling equity prices and currency values. Second, some market sentiment exists that growth will continue to slow, leading to lower expected returns than over the last decade.	In the near-term, long-short opportunities will be driven by changing expectations of relative growth opportunities. In the long term, growing economic divergence and inexpensive equity beta offers numerous relative value long/short opportunities. Investors with local, company and market specific knowledge have opportunities to short companies with exposure to Chinese industrial growth and go long consumer-based companies.	Neutral
Global Macro	Global liquidity, diverging growth rates and rapidly changing policy stances have interfered with longer term fundamental drivers of value, leading asset prices higher in the face of weak fundamentals. Multiple rounds of quantitative easing and changes in expectations about future policy measures (e.g., Fed tapering) have led to distortions in prices and relative values that are not sustainable in the absence of easing. The result has left many macro managers whip-sawed by reversals in rates, currencies and commodity prices.	As U.S rates normalize against a back drop of weak European and emerging markets growth, directional trades such as long dollar and short long-duration U.S. rates and short the yen look attractive. Rising volatility and dispersion Rising Relative value trades positioned for rising US relative to Europe and EM rates.	Positive
Emerging Markets Macro	The slow-down in emerging market economic growth and the expectation of interest rate normalization in the U.S. has contributed to a sell-off in equities, rates and currencies, leaving assets attractively valued, but investors must consider relative attractiveness across nations due to differences in growth and current account strength	Inexpensive directional beta opportunities must be weighed against possible capital flows on changing investor sentiment. Divergences in macro and policy conditions across emerging markets create relative value opportunities (short commodity-sensitive equities, currencies and rates, and go long countries with consumption driven growth.	Neutral

SUMMARY

Strategy	Market Environment	Market Outlook	2013
Managed Futures	Managed future strategies require market volatility, stable correlations across assets and sustained trends, the opposite of what has been observed. Rather than seeing the usual market forces that drive market outcomes and have predictable co-moments across different variables, traders have experienced an environment that flips between being driven by fundamentals and one that is driven policy-changes (e.g., QE). Correlations that hold in market driven environments do not necessarily hold in policy-driven markets, making it hard for traders to find a strategy to rely on and more importantly, control risk.	As markets continue to normalize and policy becomes less important in decision making, trend following strategies will benefit from a focus on fundamentals and stabilizing correlations. Managers with short-term trading approaches can better capture short lived movements between risk-off, risk on environments.	**Neutral (Short-term) / Positive (Long-term)**
Convertible Arbitrage	The strategy's performance benefited from a number of tail winds that contributed to rising issuance, including rising rates and widening credit spreads, and rising equity prices. The attractiveness of the equity portion allowed a number of companies to borrow at rates lower than investment grade. During the first half of 2013, US convertible bond issuance of $22 billion exceeded all of that for 2012, while global issuance of $46 billion was already twice 2012 issuance	Rising issuance, volatility, equity prices and rates are all positive drivers of returns and the convertible arbitrage beta. Research suggests that at the strategy level there is no alpha for managers to generate, and that allocations should be based on the beta opportunity, but in practice, managers have added value in event driven deals	**Positive**
Merger Arbitrage	In spite of low organic growth, record amounts of cash on company balance sheets, and low borrowing costs overall global merger volume is low today. Coupled with more capital investing in announced deals, merger arbitrage spreads are low as trades have become more crowded and managers are able to better evaluate all of the transactions. Given this environment, the most attractive trades are concentrated in broken deals misunderstood by the market, warranting a lower allocation given the higher risks inherent in investing in these deals.	Inexpensive borrowing costs, cash on the balance sheet and low organic growth suggest a favorable environment for rising M&A activity. Any reduction in uncertainty or a belief that global growth is improving should improve the landscape. With spreads and thus risk-adjusted returns low, opportunities to add value in specific deals is low. Managers may be able to add value by identifying deals the market perceives as having a higher chance of breaking than the actual risk	**Netural/ Positive**
Fixed Income Arbitrage	Because of their relative value approach, they are often viewed as defensive strategies, but with the expected scaling back of quantitative easing along with the uncertainty of its pace, the resulting rise in rates and associated interest rate volatility creates both potential opportunities and headwinds to performance. In the near term, opportunities are constrained by low rates and managers reduced use of leverage.	The strategy's beta benefits from higher bond volatility, but rapid increases can be difficult to trade. Some hedge funds see opportunity in the space, pointing to a variety of spread tightening or widening trades. Others are stepping away though, and limiting duration risk, arguing that these strategies are risky if Treasury yields move substantially higher and abruptly. Rising volatility and dispersion increases the opportunity set for skilled managers with strong views about rate directionality taking idiosyncratic positions	**Neutral**

APPENDIX:
HEDGE FUND STRATEGY DEFINITIONS

HEDGE FUND CLASSIFICATION & DEFINITIONS*

Directional Strategies

Equity Long/Short strategies maintain both long and short positions in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities - both long and short.

Macro strategies trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ Relative value (RV) techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. For Macro strategies the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices.

*Hedge fund strategy definitions are adapted from Hedge Fund Research (HFI).

Event Driven Strategies

Event Driven strategies maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. There are many types of Event Driven Strategies including Merger Arbitrage and Distressed.

Merger Arbitrage strategies focus on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction. Merger Arbitrage involves primarily announced transactions, typically with limited or no exposure to situations which pre-, post-date or situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross border, collared and international transactions which incorporate multiple geographic regulatory institutions, with typically involve minimal exposure to corporate credits.

Distressed strategies focus on corporate fixed income instruments trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically involved in the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists.

Relative Value Strategies

Relative Value (RV) strategies maintain positions in which the investment thesis is predicated on the realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV positions may be involved in corporate transactions where the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction. Among the most popular RV strategies are Fixed Income Arbitrage, Convertible Arbitrage and Equity Market Neutral.

Fixed Income Arbitrage strategies are predicated on the realization of a spread between related instruments in which one or multiple components of the spread is a fixed income instrument backed physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery or other tangible financial commitments. The investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed income instruments. In many cases, investment managers hedge, limit or offset interest rate exposure in the interest of isolating the risk of the position to strictly the yield disparity of the instrument relative to the lower risk instruments.

Convertible Arbitrage strategies are predicated on the realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between the price of a convertible security and the price of a non-convertible security, typically of the same issuer. Convertible arbitrage positions maintain characteristic sensitivities to credit quality the issuer, implied and realized volatility of the underlying instruments, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities

Equity Market Neutral strategies employ quantitative techniques to analyze price data and ascertain information about future price movement and relationships between securities for purchase and sale. These can include both Factor-based and Statistical Arbitrage/Trading strategies. Factor-based investment strategies include strategies in which the investment thesis is predicated on the systematic analysis of common relationships between securities. In many but not all cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies in which the investment thesis is predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high frequency techniques may be employed and trading strategies may also be employed on the basis on technical analysis or opportunistically to exploit new information the investment manager believes has not been fully, completely or accurately discounted into current security prices.

PRIVATE EQUITY OUTLOOK

PRIVATE EQUITY OUTLOOK

June 2013

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EXECUTIVE SUMMARY

U.S. Buyout Outlook: Negative (Large Buyout) and Neutral (Middle-market)

- Funds with dry powder are under pressure to put capital to work. With inexpensive capital, price multiples have been bid up, effectively reducing expected returns. Longer holding periods are also reducing expected returns. Price multiples (EV/EBITDA) for middle market buyouts are less expensive than for larger deals and their growth prospects appear better.

Global Buyout Outlook: Negative (Europe) and Neutral (Emerging Markets)

- **Europe:** Higher price multiples, increased equity contributions and limited exit options when combined with economic weakness make European buyout unattractive relative to its own history and against other options (U.S. and Emerging Market buyout). Pockets of opportunity do exist (Nordic countries) making manager selection critical.

- **Emerging Markets:** In the near-term, emerging markets face many of the same headwinds that developed markets have struggled with: an overhang of capital that needs to be put to work in an environment of slowing growth, leading to rising prices and falling expected returns. Longer-term growth prospects make emerging markets buyout more attractive.

Secondary Market Outlook: Neutral

- In the near-term, the market has tilted in favor of sellers. Deal flow has slowed in response to rising equity prices and increased distributions to LPs, and funds nearing the end of their investment period have been aggressive buyers of deal flow, pushing prices up. Over the intermediate- and long-term, market dynamics continue to favor buyers over sellers.

Venture/Growth Equity Outlook: Negative

- Weak exit markets, a need for companies to remain private longer, and fewer successful companies representing a larger share of total returns to venture, creates an environment that is a headwind to expected returns.

Private Credit Outlook: Neutral (US)/Positive (Europe)

- In the US, a sustained economic recovery and record amounts of new credit has limited opportunities. In Europe, banks are curtailing their lending and find themselves with growing portfolios of non-performing loans, creating greater opportunities for non-traditional debt providers and buyers of distressed assets. Given the uncertain and challenging macro environment, the premium for investing in private credit over public credit is wide relative to historical averages, but as the credit cycle matures, the risk return profile is less attractive than a couple of years ago.

The Question

Time stands still for no one, but to look at private equity markets over the last year it would appear they have done so. The same issues that plagued private equity a year ago remain today: weak economic growth, an overhang of capital waiting to be invested, high purchase price multiples, and longer holding periods for portfolio companies – leading to slower distributions. As limited partners (LPs) consider commitments to 2013 vintage funds that will call and invest capital over the next five years, the question they need answered is whether returns to funds maturing over the next decade will be impacted by current market conditions or whether conditions will improve enough to raise prospective returns?

Our analysis of the macro and market environment faced by general partners (GPs) finds that 2013 vintage funds will face headwinds to returns that vary by geography and type of investment. Whether 2013 vintage funds outperform earlier vintage funds will depend on the extent of global economic growth and exit markets improvement, and the ability of managers to not only identify attractive markets, but to generate company value through their management decisions. In assessing the overall environment for 2013 vintage funds across investment focus, we conclude that private credit strategies tend to be more attractive relative to other private equity strategies.

Across specific strategies, we believe that new allocations to large buyout will produce unattractive returns because of high purchase price multiples, weak economic growth, and expected challenging exit markets. The outlook is brighter for middle market buyout (relative to large buyout), where the expected exit market is more promising and the ability of GPs to create value at the company level is greater, but the overall market environment (the market's "beta") looks to be average relative to earlier periods. The overall outlook for buyout could brighten further if GDP growth picks up and leads to an acceleration of M&A and IPO activity.

The issues faced in buyout are not unique to the U.S.; uncertainty about when growth will recover combined with current high price multiples, increased equity contributions and limited exit options make European buyout in general unattractive when compared to its own history and U.S. middle market buyout. When European opportunities are evaluated by industry or region, the answer is not as clear cut. Northern European exporters are more attractive candidates than Southern European companies selling domestically.

Emerging markets face many of the same headwinds that developed markets have struggled with: an overhang of capital that needs to be put to work in an environment of slowing growth; but longer-term growth prospects make emerging markets buyout more attractive.

In the case of venture capital, new commitments might seem attractive on the surface. Delving deeper we find that capital dedicated to the asset class continues to decrease, but the nature of returns is centered on an ever smaller group of winners requiring less private capital. This makes access to successful managers even more critical as the differences in returns between top quartile and average managers remains wide.

In the near-term, the secondary market has tilted in favor of sellers. Deal flow has slowed in response to rising equity prices and increased distributions to limited partners (LPs), and funds nearing the end of their investment period have been aggressive buyers of deal flow, pushing prices up. But over the intermediate-term, during which new commitments to secondary funds would be made, market dynamics continue to favor buyers over sellers.

Market dislocation has created greater opportunities for non-traditional debt providers leading to attractive pricing for lenders. Given the uncertain and challenging macro environment, the premium for investing in private credit over public credit is wide relative to historical averages; but with so many "new" managers raising funds, the challenge for investors is to identify managers with the skill set and experience to implement the strategy in a manner that reflects the desired risk-return profile.

Market Environment

Weak global economic growth creates two sets of problems for GPs that squeeze returns at the time of investment and at exit. First, GPs are finding fewer attractive opportunities to put committed capital to work. Though the overhang of dry powder has fallen from record levels, it is still several years deep, much of it from funds with vintages whose investment periods are winding down, putting pressure on GPs to put committed capital to work. The result is too much dry powder chasing too few opportunities, keeping deal multiples high, and lowering expected returns.

The second problem is while exit markets and distributions showed some year-end strength (fueled by rising equity markets and record dividend recapitalizations), they were weak for 2012 as a whole. The overall weakness of the exit market in 2012 reinforced three challenges GPs have faced since the 2008 downturn: (1) the increasing overhang of assets waiting to be sold; (2) the decreasing chances to profitably exit boom-year vintage holdings remaining in their portfolios; and (3) the continued pressures GPs feel to return capital to LPs.

There are several reasons GPs are left holding record amounts of assets for longer periods. First, many of the assets in their portfolios were purchased at peak prices. They are now held at valuations that do not allow GPs to earn their "carry," forcing them to hold onto the assets longer. Second, three straight years of weak exit markets have left GPs with a record amount of companies still sitting in their portfolios. Globally, private equity sponsors own over 6,600 companies worth more than $3 trillion today, nearly 2.5 times as much as just a decade earlier and 14% higher than a year earlier. GPs globally completed 10,260 buyout deals between 2003 and 2007, yet they have been able to exit just over 4,000 of these between 2008 and 2012.

As a result, GPs find the amount of time they own companies increasing significantly, which effectively reduces the expected returns to their fund. Most funds aim to sell assets within 3 to 5 years, but for investments exited in 2012, the median PE asset holding period had risen to 5.1 years—a year and a half longer than it had been at the PE cycle peak in 2007.

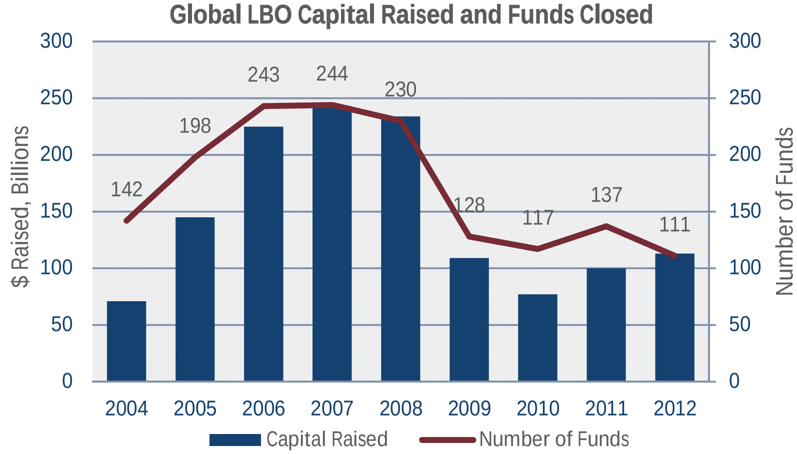
As holding periods have increased, distributions to LPs have fallen dramatically compared to historical distributions. Five years into their lives, 2006-07 vintage funds have returned just 26% of LPs paid-in-capital; this compares to two-thirds of paid-in-capital being returned by 2001-2002 vintage funds, five years into their lives. Unrealized returns might look attractive, but the decline in actual distributions makes it difficult for LPs to commit to new funds, making new fund raising challenging for GPs. The difficulty is leading to a rationalization of the asset class, with many existing managers unable to raise new funds and effectively turning existing funds into "zombie" funds – they won't die. LPs have every reason to be concerned that some GPs, sitting on underperforming portfolios of unsold assets that are unlikely to generate carry and that face poor prospects for raising a new fund, might not be motivated to wind down their current fund in order to maximize fees.

Finally, in their search for liquidity, GPs have found a new source: other GPs with dry powder looking for assets to purchase before their investment period expires. A positive case for sponsor-to-sponsor transactions can be made, but it will always have to overcome LP concerns about fees (if they are in the selling and buying funds) and whether the new PE owners of a company will be able to create value where the original PE owner could not.

In summary, weak economic growth has created headwinds to expected returns, altering the behavior of both LPs and GPs and raising questions about the alignment of interests between GPs and LPs.

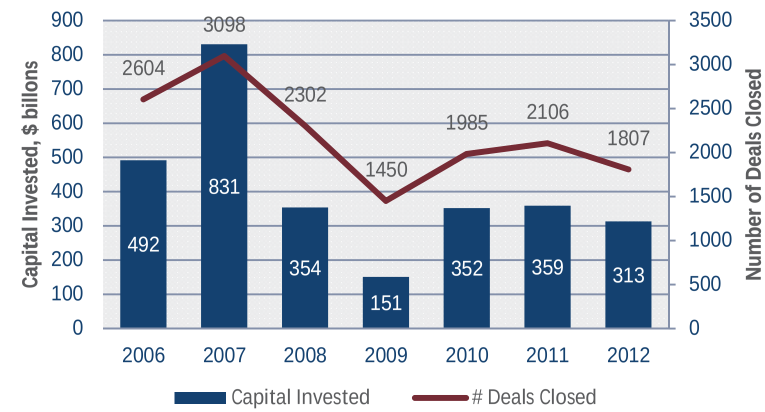
- Since the 2008 economic downturn, global LBO fund raising and deal volume have reset to a lower level; fund raising and capital invested are at half of their peak levels.
- Fewer funds are being raised and they are in the market longer (11.5 months on average in 2006 and 17 months in 2012). Interestingly, funds raising over $1 billion are on the rise; 32 closed in 2012, making up 80% of assets raised in 2012.
- For GPs who are unable to raise new funds, there is some incentive to stretch out the lives of their existing funds in order to collect fees and to grow asset value with the hope of earning their carry; these have become known as "zombie funds."
- The decline in fund raising has helped erode the overhang of dry powder, but it has not gone away. One implication is a continuation of upward pressure on purchase price multiples with negative consequences for fund performance.

Fund raising has slowed for a variety of reasons including LPs being over allocated to private equity, and partly because of the slow return of capital by GPs from earlier funds.



Source: Pitchbook, Preqin

In spite of easy access to leverage, GPs have been slow to put capital to work; there are many possible explanations including global economic weakness and uncertainty.



Source: Thompson Reuters

The capital overhang is slowly falling, but vintage year funds near the end of their investment period are under pressure to put significant amounts of capital to work in the next couple of years

Source: Pitchbook

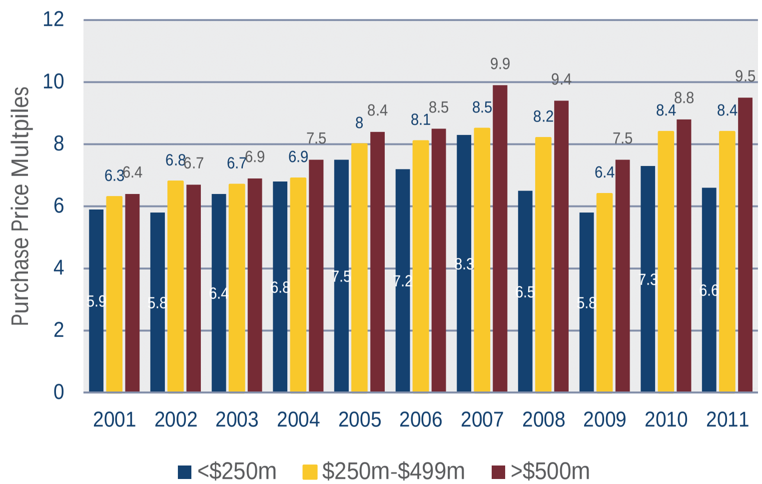
MARKET ENVIRONMENT: DEAL PRICES

- The overhang of dry powder that needs to be put to work before its investment period expires, along with easier access to cheaper debt financing has helped push purchase price multiples up since 2009.

- As has historically been the case, middle market buyout deals continue to close at lower purchase price multiples than large buyout. This is partly because markets limit their use of leverage by demanding more equity participation from GPs for middle market buyout deals versus larger deals.

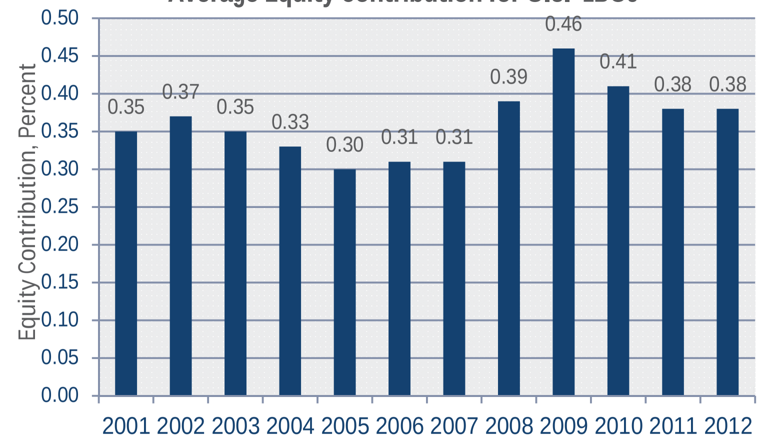
- One implication of rising purchase price multiples is that it is more difficult for private equity firms to count on multiple expansion to drive returns.

Purchase price multiples, which have been rising since 2009, have stabilized, but still remain close to historical highs, particularly for the largest deals.



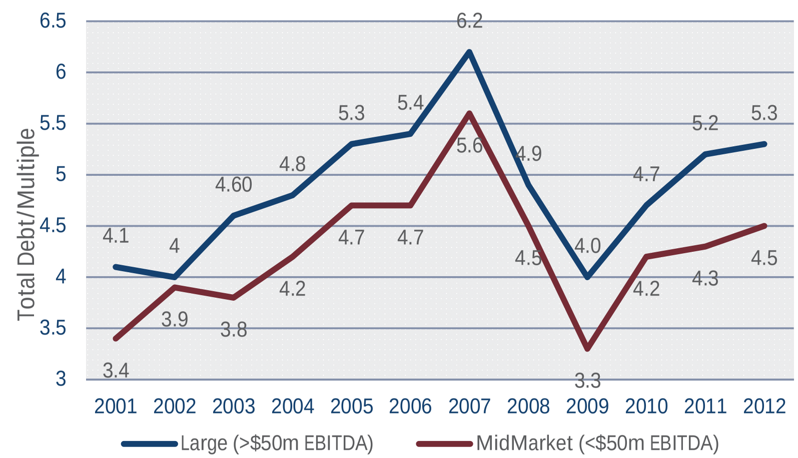
Source: S&P Capital IQ, LCD Leveraged Buyout Review Q3 2012

Average equity contributions have fallen, due in part to easy access to debt financing.



Source: Pitchbook

With easy access to debt financing, the use of leverage to finance LBOs is on the rise again.

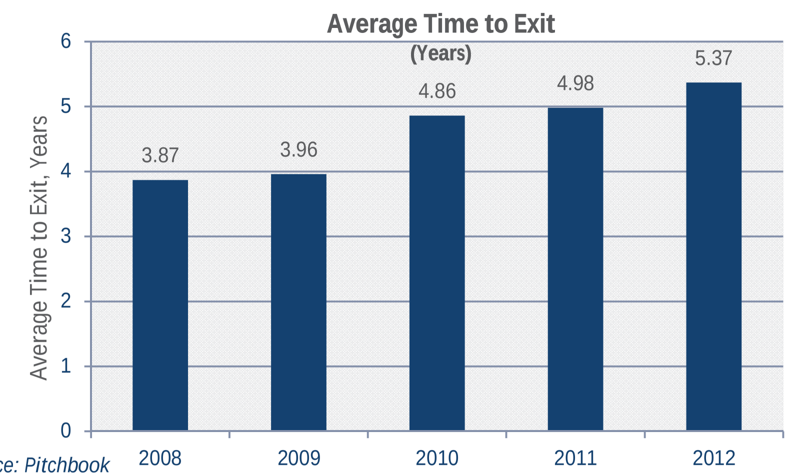


Source: Pitchbook

CHANGING MARKET DYNAMICS

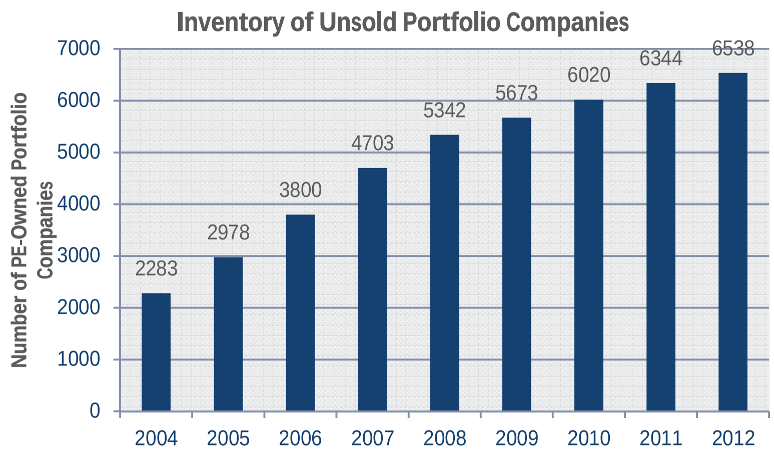
- The record amounts of capital raised prior to the economic downturn, followed by a weak economic recovery has altered the dynamics of private equity markets, including the rapid expansion of the secondary market as a source of exits for GPs and liquidity of LPs.
- Holding periods for portfolio companies has increased to beyond 5-years. With the last several years characterized by weak M&A and IPO markets, GPs have been slow to return capital to LPs and have been forced to seek out other exit strategies. The impact of this has contributed to growth of the secondary market.
- At least 30% of 2012 exits were "sponsor-to-sponsor" exits in the private equity secondary markets. These have become known as a "direct secondary" – the sale of a captive portfolio of direct investments to a secondary buyer (another private equity sponsor).

With GPs holding record amounts of portfolio companies and recent weakness in the trade sale and IPO markets, holding periods (historically under 4 years) have expanded to beyond 5 years, hurting prospective returns.



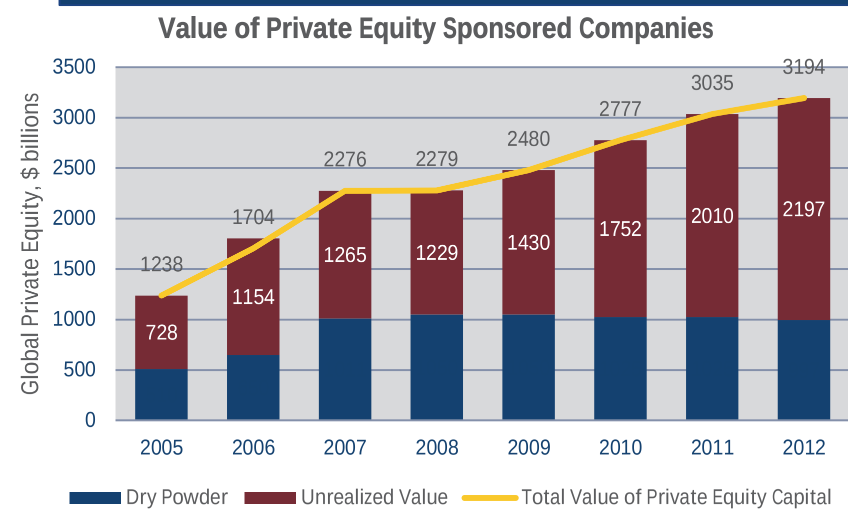
Source: Pitchbook

Private equity ownership of portfolio companies has nearly tripled in 8 years, creating a headwind for prospective returns.



Source: Pitchbook

The market value of unsold portfolio companies along with dry powder now exceeds that of the Russell 2000.



Source: Pitchbook

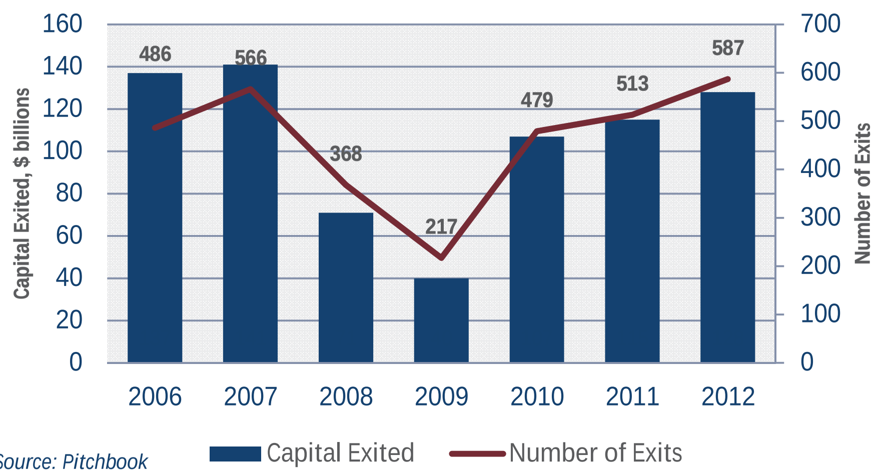
MARKET ENVIRONMENT: EXITS

- Exit markets began to recover at the end of 2012, driven in part by a resumption of M&A activity and resulting in increased distributions to LPs, but that positive news must be viewed in context.

- The year 2012 turned out to be a good year for exits thanks in part to Q4, which made up over 40% of the year's exits. This has been attributed to uncertainty surrounding the tax treatment of capital gains. This raises the question, did Q4 exits "borrow" from exits that would have taken place in 2013?

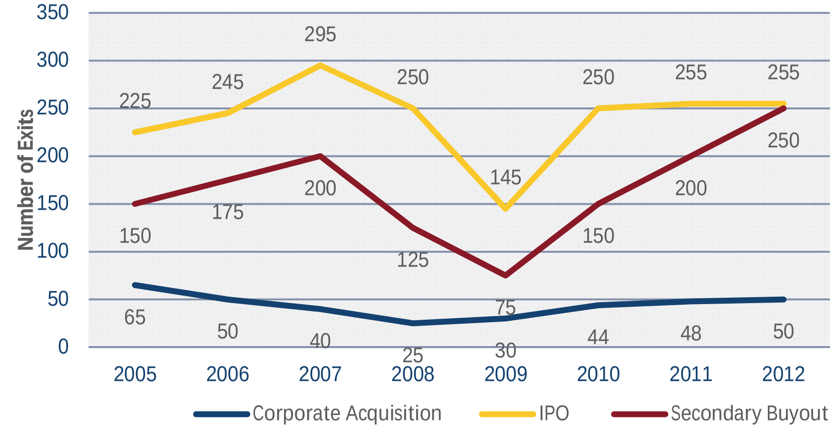
- GPs with near record amounts of dry powder to invest would appear to be a perfect match for GPs looking to exit portfolio companies and their LPs waiting for distributions. But LPs in funds looking to put capital to work have to ask whether the companies their GPs are bidding on have future growth prospects that warrant the multiples being paid for them?

In the last several quarters, private equity exits have recovered to 2007 levels, but off an NAV base that is 75% higher than pre-crisis.



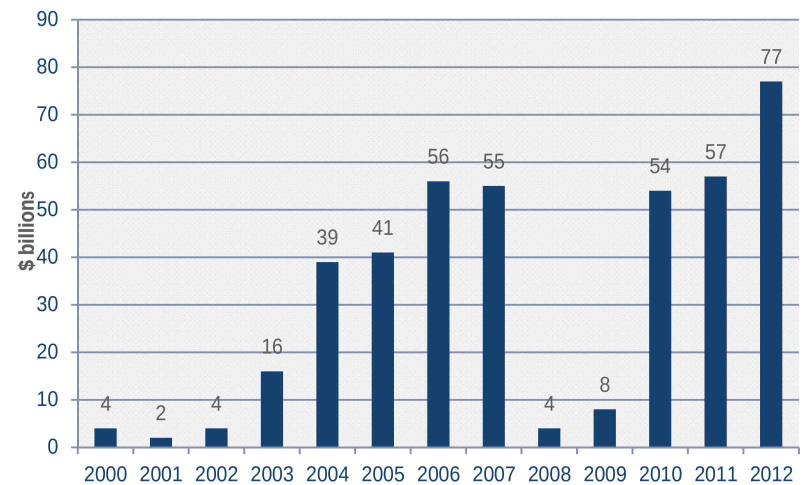
Source: Pitchbook

Traditional exit strategies for GPs (M&A and IP0s) have been flat, leading GPs to sell to other GPs in secondary buyouts.



Source: Pitchbook

GPs have made use of easier access to cheap debt to finance dividend recapitalizations as a means to return capital to LPs.



Source: Pitchbook

- Using IRRs as a measure of private equity performance before a fund has fully returned capital is fraught with the potential for misleading returns.

- A more straightforward means by which to evaluate fund performance is to look at the current value of an investment as a ratio of the amount that has been paid-in. DPI (Distribution to Paid-In capital) measures the capital that has been distributed as a proportion of the total paid-in. RVPI (Remaining Value to Paid-In) is a measure of the unrealized return as a proportion of the total contributed (paid-in) capital. TVPI (Total Value to Paid-In) measures both the realized and unrealized return of a fund as proportion of paid-in capital.

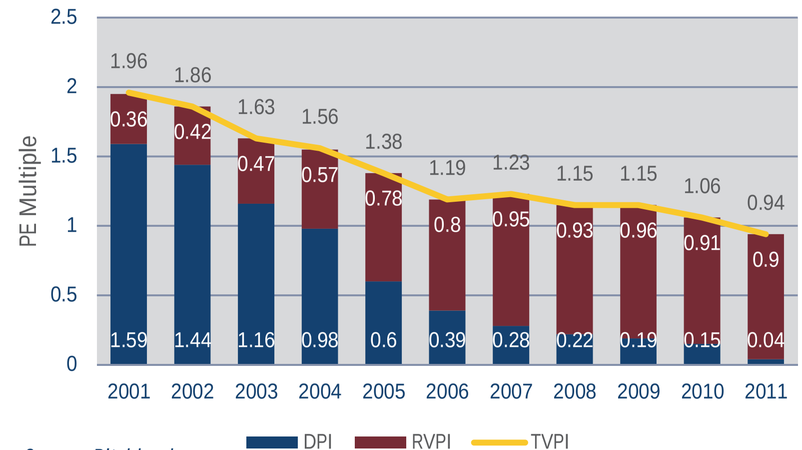
- 2001-2003 vintage global private equity funds have a DPI greater than one, meaning that investors have been made whole and are beginning to realize a profit from investments. Later vintage funds, particularly those from 2006 on, have returned small amounts of capital to investors and their total prospective returns (TVPI) are barely above one, reflecting the economic and market challenges managers have faced in creating value.

- Venture capital funds have generated "disappointing" performance for more than a decade. Not a single vintage year since 2001 has an average DPI of 1.0X, i.e., the average VC investor has not received a return of their committed capital.

- Potential returns, as measured by TVPI is only slightly above 1.0X regardless of vintage. Top quartile funds have delivered better performance as measured by TVPI, while bottom quartile funds have TVPIs ranging from .7X to .9X over the last 10 vintage years, i.e., they have destroyed capital. Clearly, manager selection matters.

2006 vintage funds are six years into their life cycle but have returned only 39% of committed capital and have a TVPI of 1.19 – indicating little value creation.

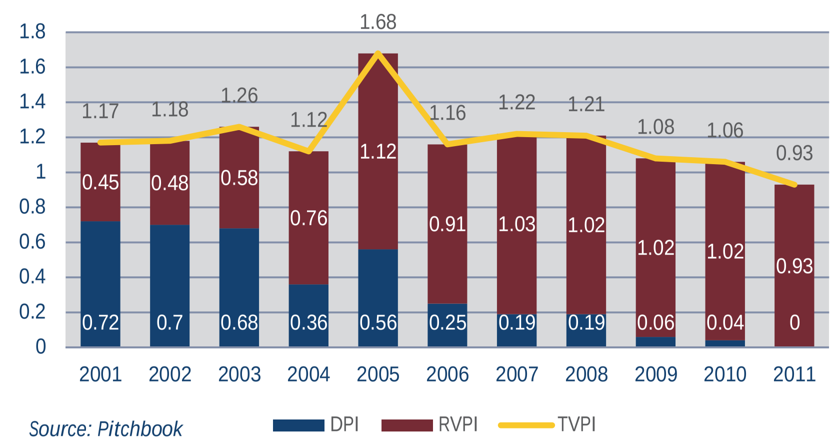
Global Average PE Fund Return Multiples by Vintage Year



Source: Pitchbook

Since 2006, the average venture capital fund has returned little capital and produced little prospective returns.

Global Average Venture Capital Return Multiples by Vintage Year



Source: Pitchbook

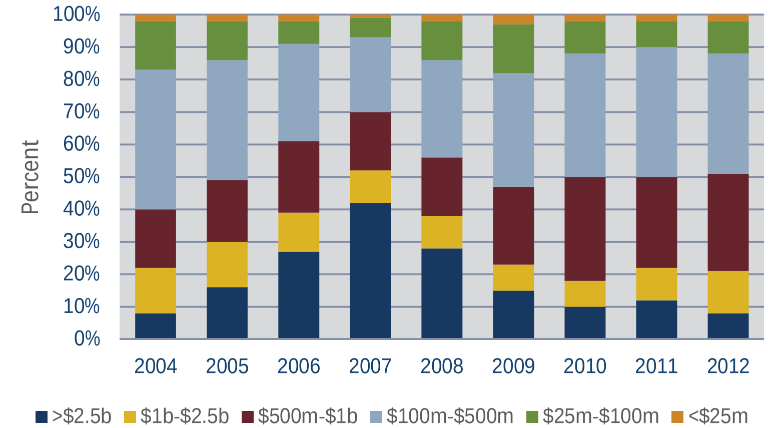
Market Environment

- The combination of record amounts of capital raised prior to the economic downturn and a weak economic recovery has altered the dynamics of large buyout transactions.
- Large buyout funds are confronted with large amounts of dry powder, much of it committed to funds nearing the end of their investment period. This puts pressure on GPs to put capital to work. With easy access to inexpensive capital, price multiples have been bid up, effectively reducing expected returns.
- Slow growth, high purchase price multiples, and a record number of companies in their portfolios seeking liquidity will likely lead GPs to own companies for longer periods before returning capital to LPs – effectively reducing expected returns.

Market Outlook: Large: Negative; Middle-Market: Neutral

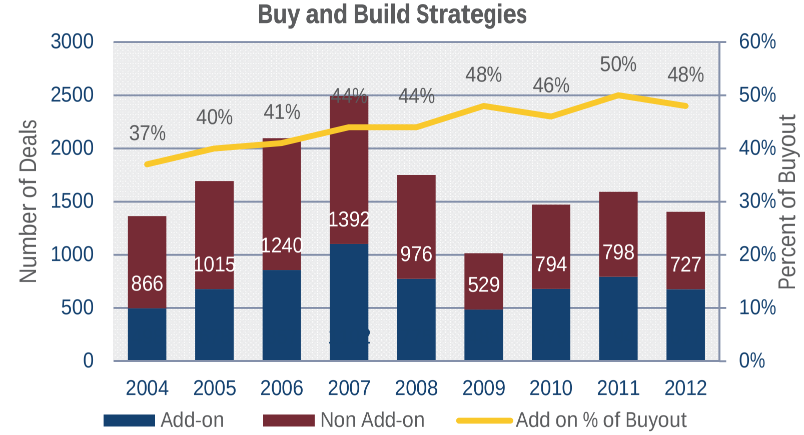
- Because of their smaller size, mid-market buyout funds are less able to use leverage in their deals, holding purchase price multiples down, and private equity sponsors are better able to generate internal growth and create value. Both effectively increase expected returns.
- Mid-market deals will also face a crowded exit market, but unlike large cap deals, their smaller size makes them more attractive acquisition candidates for strategic buyers. This effectively increases the expected returns of mid-market portfolio companies relative to large buyout.
- The current market and macro economic environment leads us to be negative on large buyout and neutral on mid-market buyout. Mid-market buyout deals face the same headwinds as large buyout deals, to a lesser extent. While the outlook is brighter for funds focusing on middle market buyout the overall market environment (the market's "beta") looks to be average relative to earlier periods. The overall outlook for buyout could brighten further if GDP growth picks up and leads to an acceleration of M&A and IPO activity.

Large buyout deals (greater than \$500m) made up 70% of deal volume at the market's peak, but since 2009, middle-market and smaller buyout deals have made up 80% of transactions.



Source: Pitchbook

In a low growth environment, smaller companies with faster organic growth have been attractive buyout targets by larger private equity sponsored and strategic buyers



Source: Pitchbook

GLOBAL BUYOUT: EUROPE

Market Environment

- Private equity backed buyouts in Europe shrank considerably in 2012, down 21% over a number of potential causes including pricing, uncertainty over exit markets, and macroeconomic concerns.

- European LBO purchase price multiples are below their 2007 peak value, but are still high by historical standards and are driven by a large capital overhang and a shortage of quality growth assets leading to aggressive bids. With debt financing harder to come by in Europe, average equity contributions exceed 50%, well above their historical average of 40%. Both conditions lower expected returns.

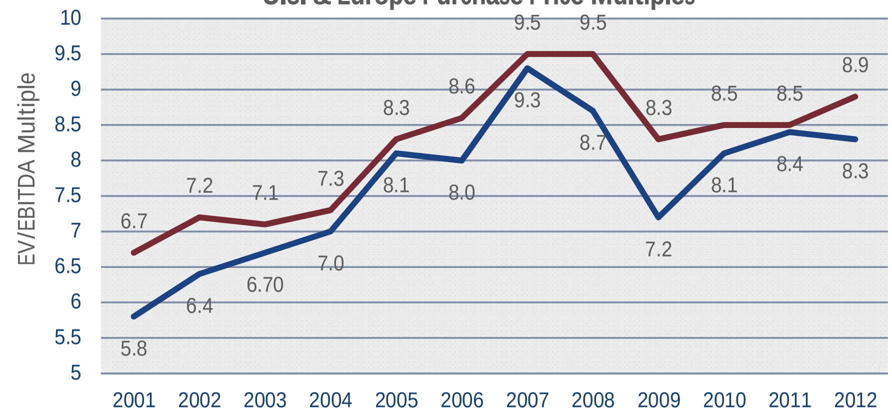
- Earlier vintage European funds face the challenge of finding profitable exits for their holdings. All three normal exit strategies face strong headwinds. The European IPO market is effectively closed, strategic buyers are reluctant given Europe's weak and uncertain economic climate, and direct sales to other private equity sponsors in the secondary market are constrained by limited access to finance. Together they imply longer holding periods, which along with expected weak future growth, puts downward pressure on expected returns.

Market Outlook: Negative

- Without improved visibility for economic growth, 2013 vintage European buyout funds are likely to face the same headwinds as recent vintage funds: high purchase price multiples, increased equity contributions, and limited exit options are making European buyout deals unattractive relative its own history and against other options (U.S. and Emerging Market Buyout).

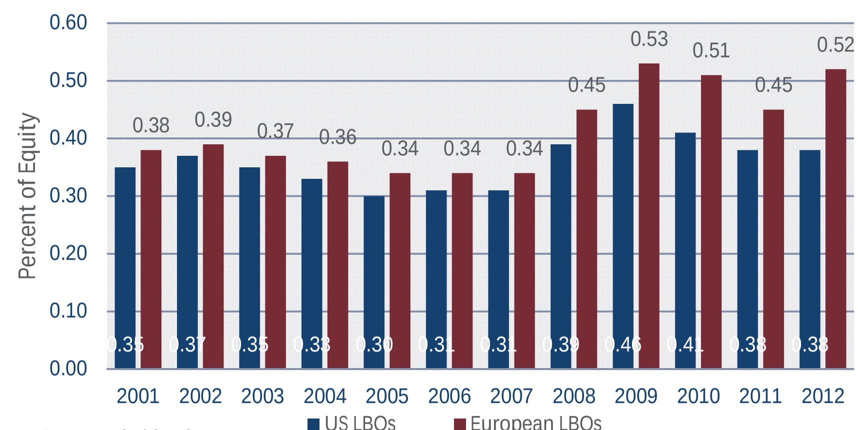
- When European opportunities are evaluated by industry or region, the outlook is less clear. Northern European exporters are more attractive candidates than Southern European companies selling domestically, meaning the outlook is more positive for GPs with the skill set to identify companies not burdened by Europe's economic ills.

Recession and economic uncertainty have reduced the supply of high quality and growing companies making European buyout expensive relative to its own history.



Source: Pitchbook

With financing more difficult to come by for small deals where public debt financing is less available, buyout sponsors have to put up more equity, hurting expected returns.



Source: Pitchbook

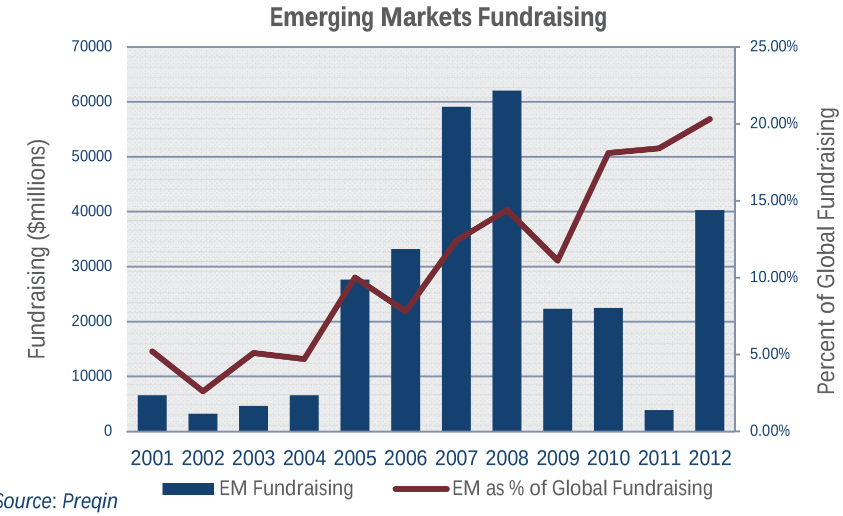
Market Environment

- After years of robust growth in fund raising and transaction volume for emerging markets' private equity deals, total deal value fell by nearly 20% in 2012, reflecting in part declining market sentiment.
- The case for emerging market private equity has always been driven by the simple thesis that economic growth pushes asset values higher. Once questions arise about the pace of growth, so do questions about the value GPs should pay for portfolio companies.
- With $56 billion of dry powder committed to a slowing Chinese economy alone, GPs face challenges identifying enough attractively valued opportunities. Deal volume in 2012 fell 41% in China, an outcome that was repeated across much of the emerging markets.
- Emerging markets also experienced weak exit markets in 2012. M&A activity for 2012 was $2.3 trillion, which is about the same as 2011. Private equity sponsored IPO exits in Asia's emerging economies fell from $76 billion in 2010 to just $25 billion in 2012.

Market Outlook: Neutral

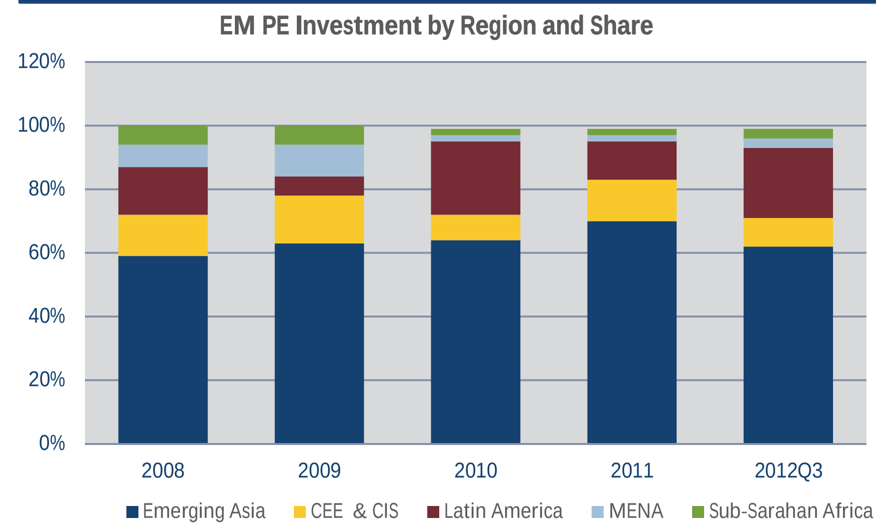
- In the near-term, private equity faces many of the same headwinds that developed markets have struggled with: an overhang of capital that needs to be put to work in an environment of slowing growth and diminishing opportunities – leading to rising prices and falling expected returns.
- For those with capital to put to work, manager selection and access to attractive deal flow matters.
- Over the long-term, favorable demographic trends favor a growing allocation to emerging markets.

Allocations to emerging markets have been volatile, but reflect an increasing share over time.



Source: Preqin

China still makes up over 40% of emerging market allocations, but Latin America, in particular Brazil, is a growing source of opportunities.



Source: EMPEA

Market Environment

- Secondary funds are raising record amounts of capital on the belief that the supply of new portfolios to be sold in the secondary market will continue to increase.

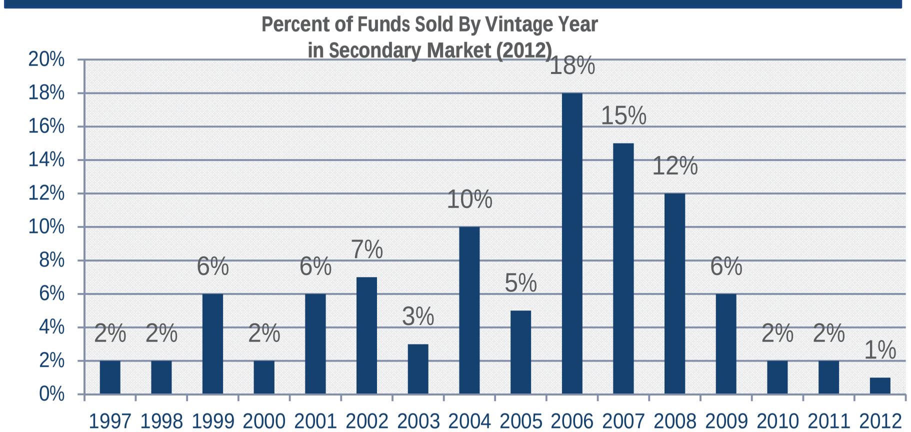
- In the near-term, the market has tilted in favor of sellers. Deal flow has slowed in response to rising equity prices and increased distributions to LPs – funds nearing the end of their investment period have been aggressive buyers of deal flow, pushing prices up.

Market Outlook: Positive

- There are reasons to believe that in the medium-term, the supply/demand dynamic will favor buyers: Regulatory changes forcing financial institutions to exit portfolios have not fully taken effect, and GPs will increasingly use the secondary market as a source of liquidity.

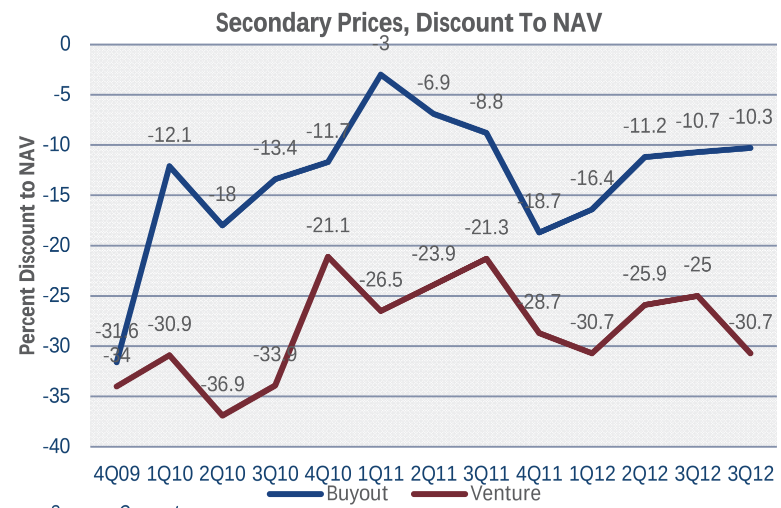
- In the near-term, current secondary prices do not reflect the risks of the underlying assets and resulting volatility in NAV. This leads us to conclude that buyers of secondary interests should focus on "complex" proprietary transactions (e.g., direct secondary) with high quality partners that have less risk and sell for larger discounts.

LPs are primarily selling 2006-2008 vintage portfolios to manage future capital calls as well as older "tail-end funds" that are still returning capital.



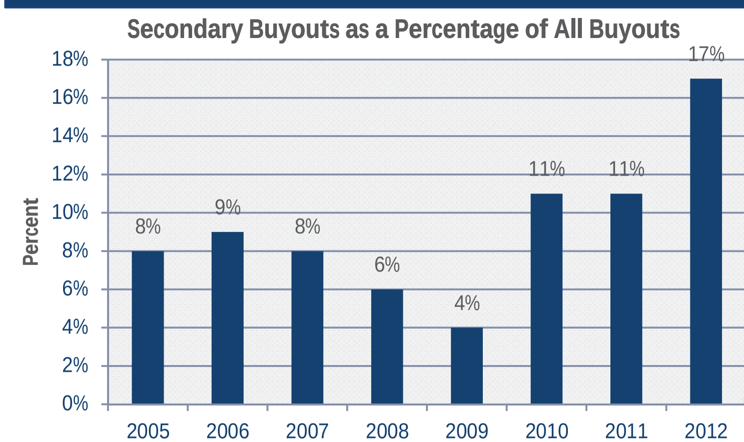
Source: Cogent

Discounts to NAV for buyout funds continue to narrow as strong equity markets and increasing distributions by GPs have led deal flow to slow. Venture funds trade at much larger discounts, reflecting the greater uncertainty associated with their expected returns.



Source: Cogent

The secondary market continues to evolve, with sponsor-to-sponsor deals playing an increasingly large role as GPs with mature portfolios seek liquidity to facilitate new fundraising through direct sales in the secondary market.



Source: Cogent

Market Environment

- Over the last decade, the average venture capital fund failed to deliver the types of return multiples that earlier investors came to expect. The result is a net outflow of assets from the asset class as distributions have exceeded new commitments over much of the last decade.

- The industry is consolidating around the limited number of fund managers that have consistently delivered superior return multiples. In 2012, just ten funds were responsible for over 50% of all fundraising.

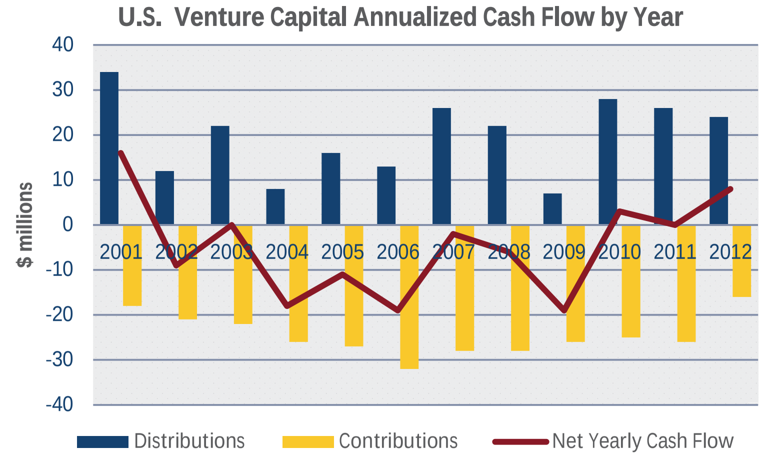
- Changing market dynamics are leading to increased funding for seed and late stage investments at the expense of early stage investments. This is based on the belief that cloud computing has reduced the cost of starting a company by 90%, thereby reducing the need for early stage investments. Larger commitments to late stage is predicated on: (1) GPs fearing not having exposure to successful companies; and (2) with companies staying private longer, more value is being created later.

Market Outlook: Negative

- Improving market dynamics in the form of declining transaction volumes (leading to lower acquisition prices) and companies with a lot of cash to make strategic acquisitions both suggest a more favorable environment for venture capital, but this has yet to translate into higher returns.

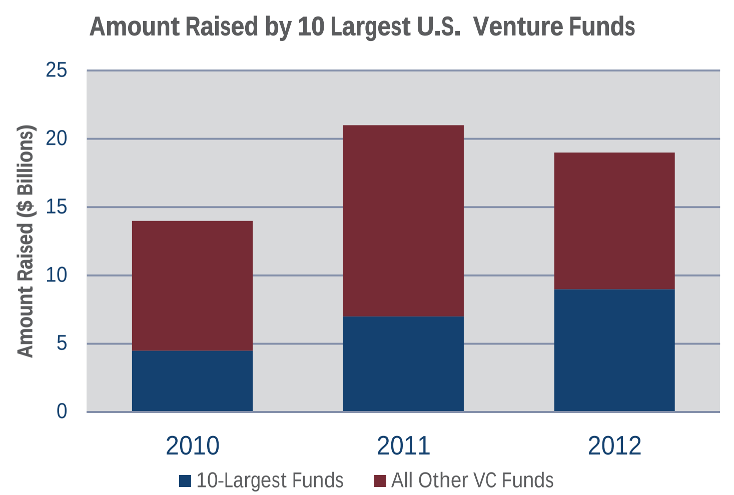
- Weakness of IPO markets, modest M&A activity, a need to own companies for longer to reach commercial success, and fewer successful companies representing a larger share of total returns to venture creates an environment that is a headwind to expected returns. It also reveals the importance of manager selection and a need to be in larger funds with investments in more portfolio companies.

Over the last decade, distributions have tended to exceed new commitments, leading to a net outflow of assets and letting the asset class downsize to a sustainable level given the available opportunities.



Source: Pitchbook

As the gap between the top and bottom quartile performing funds has risen, more of total fundraising has been concentrated in the ten largest funds.



Source: Preqin

Market Environment

- The premium for investing in private credit strategies above public credit is high relative to its history, but as the credit cycle matures, the risk return profile is less attractive than a couple of years ago. The premium above public credit is wide due in part to market dislocations brought on by regulatory pressures on banks to decrease their private equity holding and leveraged lending. These dislocations create opportunities for non-traditional debt providers, and opportunities to purchase distressed assets and loan portfolios.

Market Outlook: Neutral (US)/Positive (Europe)

- While returns to private credit strategies are attractive, investors should also consider whether they are being compensated for the additional risks they are taking.

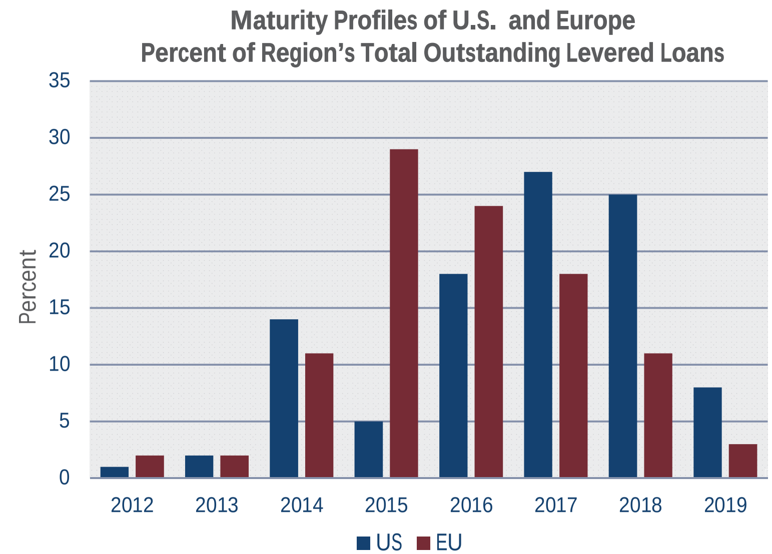
- Today, at the top of the credit cycle, when lots of funds have been raised but the need for capital is less, there is more competition for deals. The resulting risks include: (1) more competitively priced deals; (2) rapid growth of covenant light deals in the U.S. ; (3) acceptance of greater debt multiples from borrowers; and (4) default rates at cyclical lows.

- In an environment where many "new" managers are raising funds, the challenge for investors is to identify managers with the skill set and experience to implement the strategy in a manner that reflects the desired risk-return profile they seek.

- In the U.S., steady slow growth and robust credit markets for refinancing have limited the opportunity set.

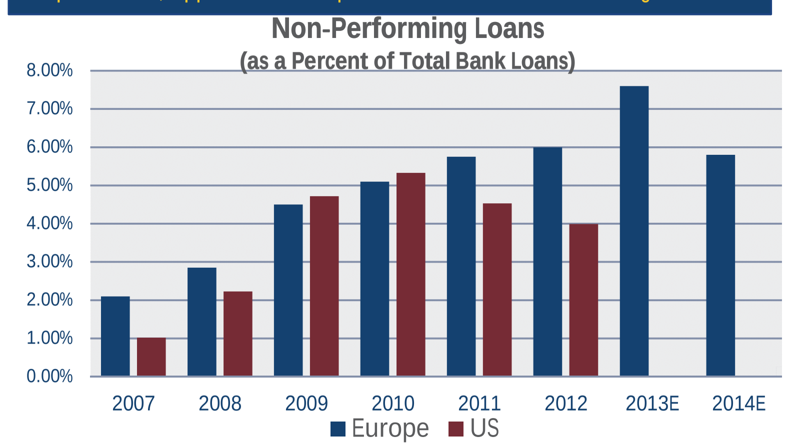
- In Europe, bank deleveraging and loan maturities are creating lots of opportunities. With declining access to bank credit for smaller borrowers, pricing appears most favorable for non-traditional lenders to the small and lower mid-market. In Europe, where senior lending is harder to come by, demand for mezzanine is high and pricing is still attractive. The supply of distressed assets should grow as bank balance sheets improve.

The percentage of outstanding European loans coming due over the next several years creates opportunity for non-traditional lenders.



Source: S&P LCD

European banks have been slow to sell non-performing assets because of the poor shape of their balance sheets and access to cheap ECB loans. As balance sheets improve and banks are forced to meet higher capital requirements, opportunities to purchase distressed assets will grow.



Source: European Banking Federation, IMF, Federal Reserve Bank, Earnst & Young

RECOMMENDATIONS

	Buyouts	Europe	Emerging Markets	Secondary Market	Venture	Private Credit
Pricing Conditions	Prices for large and middle-market LBOs are high relative to their history. Middle market price multiples (EV/EBITDA) are more attractive than for large deals.	Purchase price multiples are high relative to their history and compared to U.S. buyout.	Strong fundraising relative to opportunity set is leading to large capital overhang and rich pricing.	Strong equity markets and increased distributions to LPs have reduced near-term supply, but over the medium-term, regulatory changes will increase supply and favor buyers of portfolios in the secondary market.	Fundraising appears to have permanently settled at a more sustainable level. Decreasing commitments and improved industry dynamics are producing more favorable pricing.	Market dislocation has created opportunities and attractive pricing for non-traditional debt providers. Given the uncertain and challenging macro environment, the premium for investing in private credit over public credit is very wide relative to historical averages.
Macro Environment (Beta)	Funds with dry powder are under pressure to put capital to work. With easy access to inexpensive capital, price multiples have been bid up, effectively reducing expected returns. Longer holding periods are effectively reducing expected returns.	Expected returns are hurt by aggressive price bids, greater equity contributions, and longer holding periods.	In the near-term, emerging markets face many of the same headwinds that developed markets have struggled with, leading to rising prices and falling expected returns. Over the intermediate-term, faster economic growth is a tailwind to value creation.	Record fundraising has in the short-run made the market less attractive, but changing market dynamics (regulatory driven selling) will, in the medium-term, favor buyers of secondary portfolios. Managers with access to proprietary deal flow and strong underwriting efforts will outperform.	Weak exit markets, a need to own companies for longer to reach commercial success, and fewer successful companies representing a larger share of total returns to venture creates an environment that is a headwind to expected returns.	The relative attractiveness of private credit varies with the type of deal. With cheap financing and declining access to credit for smaller U.S. borrowers and those in Europe (due to declining bank lending and the collapse of the CLO market), pricing appears most favorable for senior lenders to the small and lower mid-market.
Manager Environment	High purchase prices and low economic growth means manager driven value creation will be key to strong returns; favoring small and middle-market deals.	A bifurcated economic recovery suggests that managers able to navigate country differences to source and evaluate deal flow have greater opportunities to outperform.	Capital has tended to rotate to the "hot country." In recent years that has been China, India, and Brazil, hurting expected returns. Managers that develop expertise in less invested countries will have an opportunity to outperform.	As the market matures, LP interests will be more efficiently priced. Outperformance will depend on manager's ability to transact in complex deals, such as direct secondarys.	With more of total returns driven by fewer successful portfolio companies, access to managers with larger funds that have ownership in a wide range of portfolio companies will influence outperformance.	The absolute returns to private credit appear attractive, but today, as the credit cycle reaches its top, the risk return profile of is less attractive. With many "new" managers raising funds, the challenge for investors is to identify managers with the skill set and experience to implement the strategy in a manner that reflects the desired risk-return profile they seek.
Outlook	**Negative (Large) Neutral (Mid-market)**	**Negative**	**Neutral**	**Neutral**	**Negative**	**Positive**

REAL ESTATE OUTLOOK

REAL ESTATE OUTLOOK

March 2013

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EXECUTIVE SUMMARY

Commercial Real Estate Fundamentals Slowly Improving:

- Weak US economic growth has led to the slow recovery of commercial real estate fundamentals. Aided by below normal construction, vacancy rates are approaching prerecession levels, leading to modest rent and Net Operating Income (NOI) growth.

- The uneven nature of the economy's recovery has led investors to assets with more stable income, resulting in a preference for the safety of primary markets and a divergence in cap rates across property types and regions.

Core Real Estate:

- **Multi-family:** Fundamentals remain positive for rent growth over the next several years with occupancy rates continuing to rise and new inventory not expected to exceed demand for two more years.

- **Office, Industrial and Retail:** The depth of the recession created significant excess capacity so as the economy has slowly recovered, those property types have had to work through large inventories leading to weak rent growth.

- **Cap rates:** Absolute cap rates are low, but their yields relative to Treasuries and corporate credit suggest real estate is still attractive relative to other assets, and given the Fed's commitment to low interest rates, cap rates should remain low.

- **Expected Returns:** The multi-family sector should continue to see rent growth, but retail, office and industrial probably offer greater upside given how much more room their fundamentals have for improvement.

Value-Added/Opportunistic

- The queue to invest in "Core" has led prices in primary markets to rise, creating opportunities for managers to create value by repositioning and developing non-core properties to become stable income producing core properties.

REITs:

- REITs have been strong performers during the recovery of commercial real estate, aided by easy access to equity and debt capital, and high acquisition activity. However, when measured against NAV and equity price multiples, REITs appear expensive; against corporate bonds they appear fairly valued to slightly cheap.

Real Estate Debt:

- Lending markets are slowly opening up, but mostly for stable, income producing core properties in top tier markets while properties exhibiting any kind of stress have far less access. The current environment creates opportunities for both lenders as well as value added/opportunistic investors to acquire properties at attractive prices.

"It's all about the Economy"

Many of the asset classes investors are asked to consider today are complex, making it hard to decide if they are attractive investments. How many factors must one consider before investing in CLOs or a hedge fund trying to capture an "exotic" beta? Evaluating the attractiveness of real estate on the other hand is pretty straight forward: "It's all about the Economy".

The returns to core real estate depend on the strength of economic growth. It is as simple as supply and demand. The level of economic growth affects property fundamentals: what is happening to vacancy rates and rents (demand), what is the level of development activity (supply)? The level of economic growth also affects capital markets: is capital available and at what price, whether to refinance existing properties or purchase new ones? The impact of economic growth on property and capital market fundamentals impacts property prices.

As an example, in a fast growing economy with robust job creation, the demand for office space increases, driving vacancy rates down and rents up, raising net operating income and the returns to investing in core office space. In the longer-run, rising rents and income leads investors to seek new capital in order to bid for existing higher income producing assets. If their prices are bid up too high, investors may seek assets that can be repositioned to generate higher income (value-added), or land that can be developed into income producing office space (opportunistic).

But in bidding up property prices, investors drive down the yield to investing in real estate, the "cap rate" (current net operating income/property price). Understanding where the economy and real estate are in their cycles is critical to understanding what an investor can expect over the intermediate term from allocating to real estate.

The Current Environment for Core Real Estate

The US economy has been slow to recover from the 2007-2009 recession and as a result commercial real estate fundamentals are demonstrating varying signs of recovery. The recovery has been uneven; slowest in property types, regions and cities hurt most by the housing bubble, and where job growth has been the weakest. Aided by below normal construction, vacancy rates are coming down, leading to rent and NOI growth that varies by property type, quality and metropolitan area.

This bifurcated nature of the recovery in fundamentals has led to a bifurcated recovery in returns as investors seek to avoid riskier assets in favor of more certain income. The result has been a preference for the safety of primary metropolitan areas (gateway cities) and best-of-core assets where fundamentals and income growth has recovered the most. This has led to a divergence in price appreciation and thus cap rates across property types and regions.

The recession and slow recovery affected property types and metropolitan areas differently. Captured by the decline in home ownership, the end of the housing bubble forced a movement from single family to multi-family housing, resulting in rapidly improving fundamentals as witnessed in decreasing vacancies and rising rents. Office, industrial and retail spaces were not so lucky. The rise in unemployment signaled a much smaller need for office and industrial space, and as personal income growth slowed to a standstill, a decline in consumption and need for retail space. As the economy has slowly recovered, these property types have had to work through large inventories resulting in weak rent growth.

Secondary metropolitan areas including suburban have been slower to recover, leading to weaker income growth and as a result investors have steered away from these areas in favor of primary markets, leading price appreciation to vary significantly by market as well as property type.

Outlook

Core real estate has produced several years of double digit returns following two years of negative performance. When compared to historical cap rates, much of core real estate appears expensive. Investors' aversion to risk and preference for stable income led prices of some property types in primary markets to outpace income growth the last several years. This trend should reverse itself as prices in primary markets stabilize, and vacancy rates continue to decline and rents rise, leading to continued NOI growth.

With new inventory not expected to exceed demand until 2014, the multi-family sector should continue to see low vacancy rates and good rent growth, but in primary markets, price appreciation is expected to slow as current prices are approaching pre-recession levels.

As yields of best-in-core properties in primary markets are driven down, investor demand is expected to broaden beyond best-of-core to next best quality segments. The implication is that in the years to come, core returns will be driven by property types whose fundamentals are still improving (office, retail and industrial) and in areas where job growth has further to recover.

It should also be noted that while absolute cap rates are low, yields relative to Treasuries and corporate credit suggests real estate is still attractive relative to other assets. If interest rates remain low, so should cap rates.

REITs have also enjoyed several years of strong performance. When measured against NAV, spreads to corporate bonds and equity price multiples, REITs appear expensive.

The strongest opportunities in private real estate may be in the value-added and opportunistic space. Demand for prime properties in major cities with stable income growth has led to aggressive pricing for the available supply while investor demand for second-tier properties (quality of income or location) is weak, leading to wide spreads between the prices of core and non-core property.

Lending markets are slowly opening up, but mostly for stable, income producing core properties in top tier markets while properties exhibiting any kind of stress have far less access.

With many properties still underwater and with limited access to capital, many owners have been unable to reinvest in their properties. This environment appears to be creating opportunities for lenders and managers to create value by acquiring properties from distressed sellers at attractive prices and repositioning and developing them into more stable income producing core properties.

The risks to improving fundamentals for core properties outside of multi-family, areas outside of primary markets and opportunities for value-added and opportunistic investors? Any downturn in economic growth will lead to a weaker recovery in price and income growth.

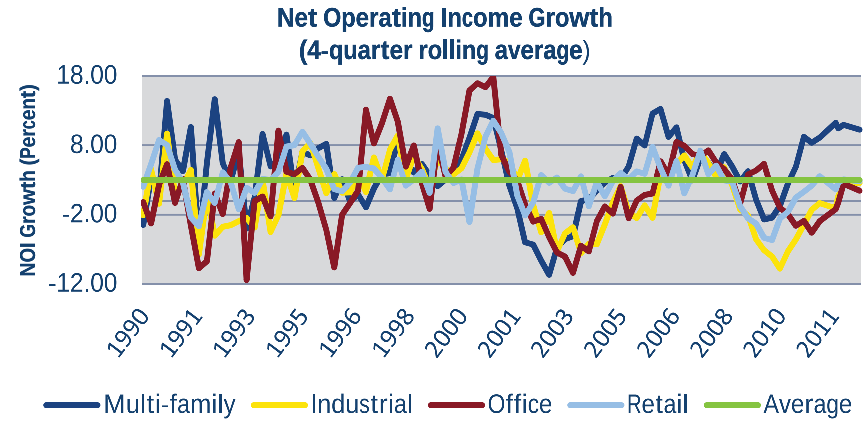
THE STATE OF COMMERCIAL REAL ESTATE: A TOP DOWN VIEW

- Real estate fundamentals are showing signs of recovery. Aided in part by below normal construction across most property types (office, retail, industrial), absorption is improving, leading to a gradual reduction in vacancy rates and an upward turn in NOI growth.

- Recovery has been uneven; slowest in regions/cities hurt most by the housing bubble and where job growth has been the weakest. This dynamic has led to a bifurcated recovery, with investors preferring the safety of gateway cities and best-of-core assets.

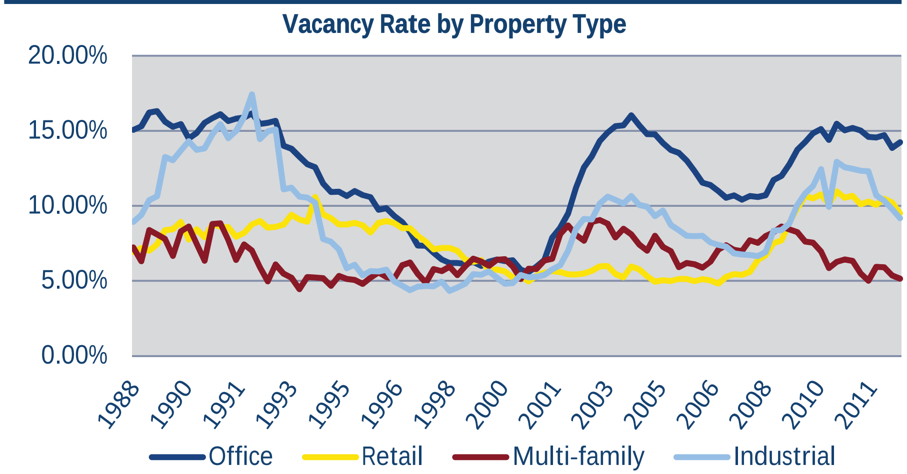
- In property types (multi-family) and regions (gate-way) where occupancy is on the rise and rents are following, investors have bid up high quality core properties prices and pushed cap rates down.

On an aggregate basis, NOI has recovered to pre-crisis levels. NOI growth now exceeds its long-term average, but when examined by property type or region, it is clear some property types and regions are much further along in the recovery.



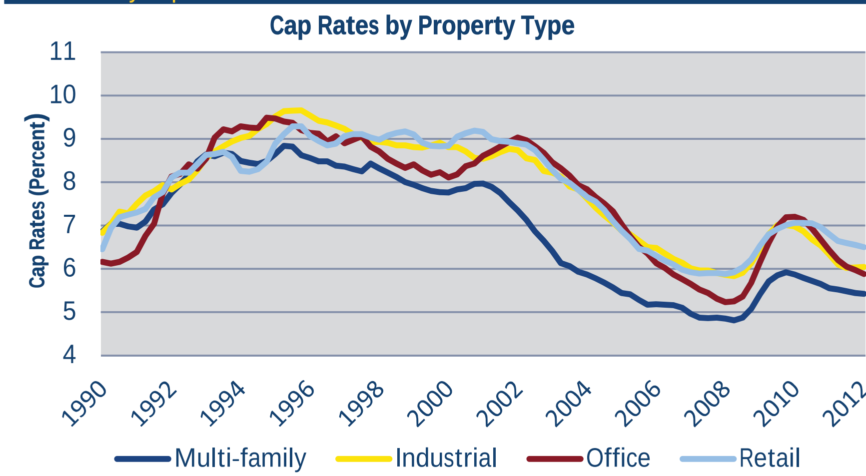
Source: NCREIF

Except for multi-family housing, the weakness of the recovery has left vacancy rates for most core property well above their historical averages.



Source: NCREIF

Multi-family fundamentals have recovered more quickly than the other core property types; their property prices have led NOI growth, pushing down multifamily cap rates to near all time lows.



Source: NCREIF

THE STATE OF COMMERCIAL REAL ESTATE: A TOP DOWN VIEW

- On signs of recovering fundamentals, investors are stepping back in and as a result transaction volume in 2012 approached pre-bubble levels. Transaction prices are rising, which along with income growth allowed real estate to enjoy a second straight year of double digit returns.
- Given strong returns and low cap rates, is real estate still an attractive asset class? In spite of their low absolute levels, spreads between cap rates and Treasuries remain above their historical norms and attractive relative to corporate credit spreads.
- Given the Fed's commitment to low interest rates, absolute cap rates should remain low for the foreseeable future. Even if risk free rates rise, the spread between cap rates and Treasuries may narrow as investors continue to enter real estate, limiting the rise in cap rates.

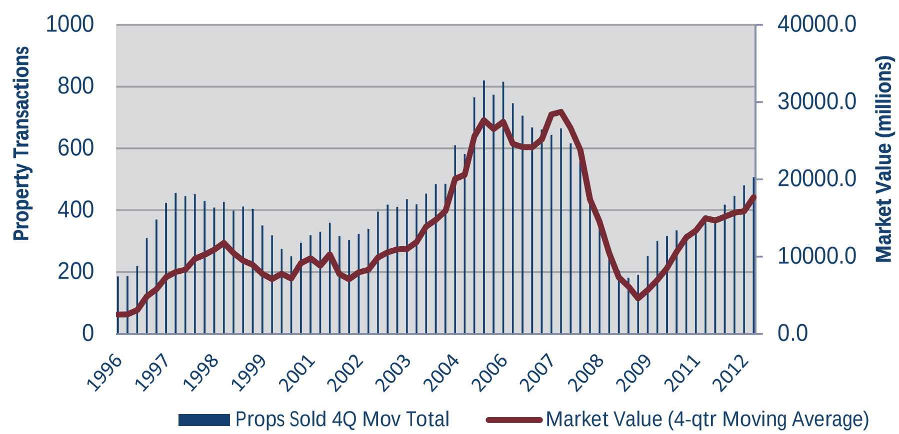
Seeking to avoid risk, investors have focused on property types where fundamentals have improved the most, leading to higher returns for multi-family housing and in the west and south where job creation is strongest .

Annual Returns (12/31/12)

	1-Year			3-Year	5-Year
Property Type	**Total**	**Income**	**Apprec**		
Apartment	11.2%	5.4%	5.6%	14.9%	3.0%
Industrial	10.7%	6.3%	4.3%	11.5%	1.4%
Office	9.5%	5.7%	3.7%	11.6%	0.9%
Retail	11.6%	6.2%	5.2%	12.7%	4.1%
Region					
East	9.0%	5.6%	3.3%	12.7%	1.8%
Midwest	9.7%	6.4%	3.1%	10.5%	2.2%
South	11.1%	6.2%	4.6%	12.0%	3.0%
West	12.0%	5.7%	6.0%	13.6%	2.0%
Total	10.5%	5.8%	4.5%	12.6%	2.10%

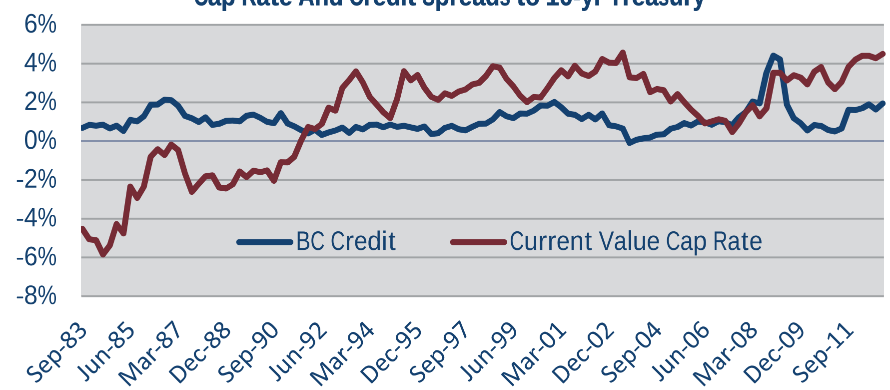
Source: NCREIF Property Index

Transaction volume is recovering, helping push up transaction prices and putting downward pressure on cap rates.



Source: NCREIF

Cap rates are near their lows, but with credit spreads at such low levels, real estate still looks attractive, relative to credit.



Source: NCREIF

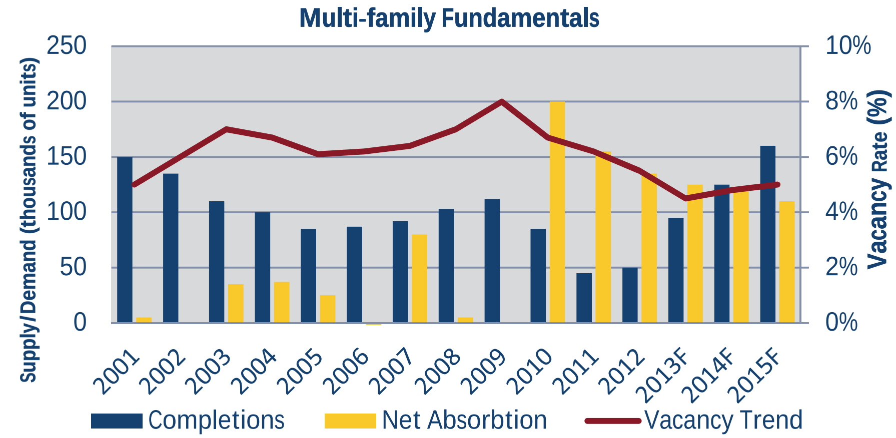
Market Environment

- Multi-family housing has been the best returning sector in real estate the last two years, aided by strong fundamentals.
- Income growth has been robust as vacancy rates fell to below 5% in 2012, aided by declining homeownership levels and weak new multi-family construction, which along with short lease terms led to strong rent growth.
- The average national rent exceeds peak rents achieved in 2007, though rents vary by city. Effective rents in cities with strong job growth are nearly 110% of their previous peak while rents in slow recovering cities remain below peak levels.

Outlook

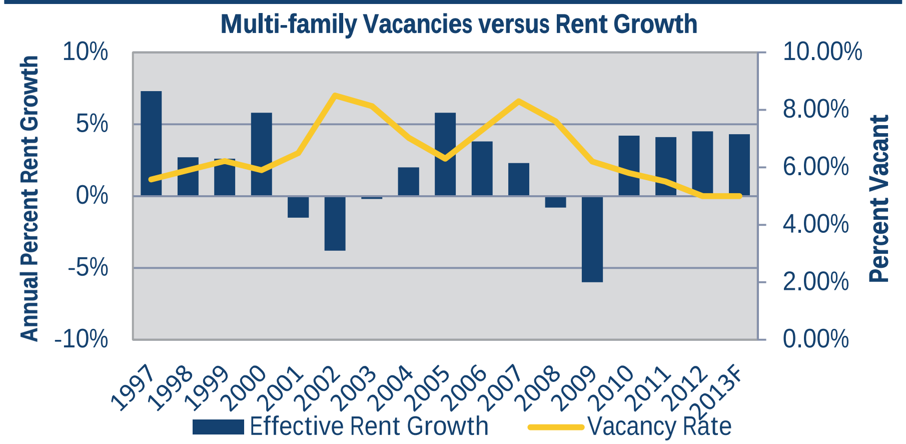
- For the next two years, new demand is expected to exceed new inventory, supporting rent growth. Positives for rent growth include an expected rise in household formation as labor markets improve and homeownership rates continue to decline.
- Constraints to rent growth over the longer term include (1) new construction leading vacancy rates to stabilize or possibly rise; and (2) a narrowing spread between the cost of renting and owning as rents rise and homeownership costs falls.
- Performance of multi-family investments will vary by metropolitan area and submarket, as differences in economic recovery and initial inventory lead to differential rent growth.
- Developers' focus on first tier metro areas where vacancies are low should rotate to second tier cities where prices have not been bid up, offering more attractive cap rates, but returns are likely to be constrained by fewer barriers to entry.
- In spite of rent growth, rising prices for multi-family properties make multi-family housing expensive on a cap-rate basis.

Multi-family fundamentals benefitted from a lack of new inventory and declining vacancy rates, but new inventory and low housing costs will put a floor under vacancies, likely slowing rent growth.



Source: REEF, REIS

Declining vacancy rates supported several years of strong rent growth, but "most" think the market has peaked and that rent growth will slow.



Source: REEF, REIS, Axiometrics

Market Environment

- All property types are in recovery but each sector is at a different stage of its recovery cycle. Regardless of property type, new inventory has been next to nonexistent, but excess capacity has led to weak inventory absorption and as a result weak income growth and price appreciation.

Market Outlook

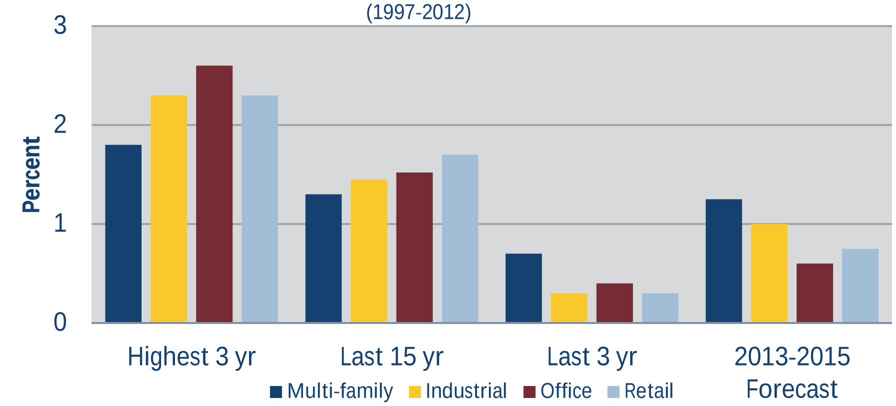
- **Industrial:** Leading indicators of demand (job growth, industrial production) are showing signs of improvement. New supply is nearly nonexistent (0.6% per year), but vacancy rates remain elevated; historically rents have increased as vacancies (11.5% today) dip below 10%. Property values have exhibited little growth since bottoming in 2010, and so along with weak NOI growth, cap rates have remained at more attractive levels.

- **Office:** Vacancy rates remain elevated (15%) and as a result NOI growth has trailed other sectors, but improvement is expected by 2014 as leases signed during the recession expire and are renewed at market rates. Risks to recovery include declining government and defense sector spending, and more efficient use of space per worker. In 2011, about 120 square feet of space was absorbed per office job added, below the long-term average of 163 feet per office worker.

- **Retail:** Occupancy remains close to historical lows, hurt by cyclical and secular trends and at the same time hiding stronger performance and opportunity in some property types. Retail has been held back by weak job and income growth as well as movement to e-commerce though high end retail (best in-class malls) have done well.

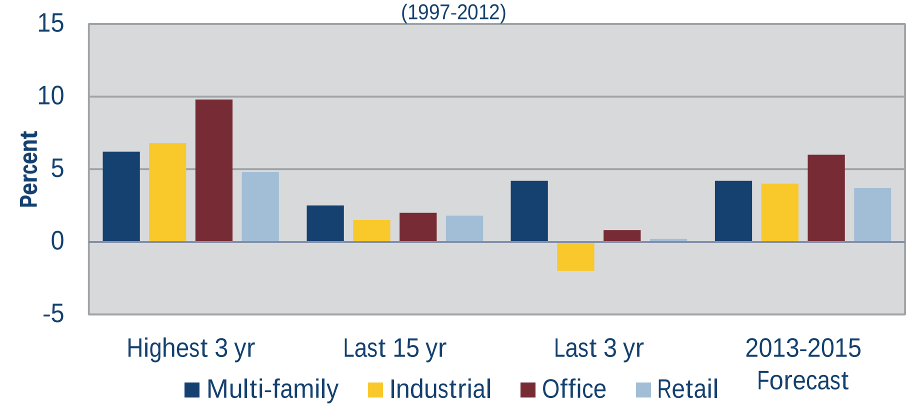
- **Take-away:** As yields of best-in-core assets are driven down, investor demand is expected to broaden to next-best quality segments. The implication is that in the years to come, core returns will be driven by property types (office, retail, industrial) and markets (second-tier, suburban) whose fundamentals are still improving, though slowly.

Inventory growth over the last three-years is a fraction of normal levels and is expected to remain low for the next several years given the slow pace of growth and available inventory.



Source: Invesco, CBRE-Econometric Advisors

In spite of limited inventory growth, rent growth has hovered near zero outside of multi-family housing. With inventory flat, rents should return to historical levels as occupancy rates increase.



Source: Invesco, CBRE-Econometric Advisors

VALUE-ADD AND OPPORTUNISTIC

Market Environment

- Investors are returning to real estate, but with the memories of the last cycle still fresh, they are focusing on high quality core properties to avoid the risks of value-added and opportunistic real estate through the more stable income that core offers.

- This dynamic has led to differences in pricing between core and non-core properties, differences in cap rates and in the availability of credit.

- On the supply side, high vacancy rates led many owners to under invest in their properties, creating an over supply of poor quality properties in need of refinancing and repositioning, estimated at over $1 trillion in the next five years.

Market Outlook

- The current environment creates several types of opportunities for valued added and opportunistic strategies. First, the markets' focus on tier-one income producing properties has led second-tier properties to be priced cheaply relative to NOI growth prospects given repositioning and the steady improvement in property fundamentals.

- Second, the lack of new inventory in the face of rising demand for tier-one core properties creates opportunities for managers to "create" core properties by purchasing lower quality properties and repositioning them in ways that leads to rising occupancy and rents.

- Third, traditional lenders have smaller appetites for illiquid, distressed assets today, creating opportunities for non-traditional lenders to step in and provide capital for refinancing or restructuring at attractive prices.

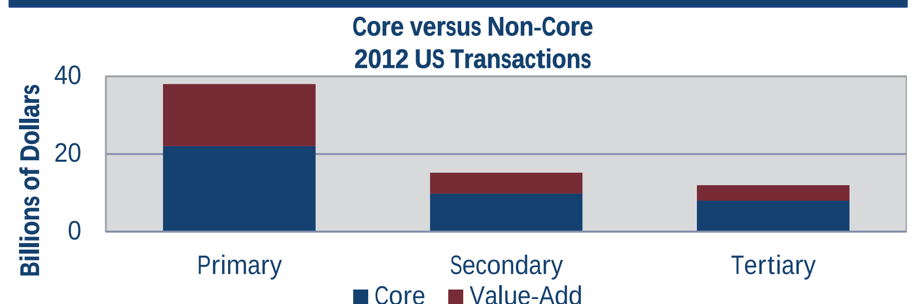
- The risks to this outcome are a downturn in the economy or rising interest rates.

Property prices have diverged, creating opportunities to acquire some properties at attractive prices as well as to create core properties in areas in need of new inventory

Index	Peak-to-Trough	Peak-to-Current	Percentage Peak-to-Trough Loss Recovered	Peak	Trough
Apartment-Major	-23.3%	-0.3%	98.7%	Jan 08	Nov-09
CBD Office-Major	-47%	-3.6%	92.3%	Dec-07	Sep -09
Office CBD	-48.1%	9.9%	79.4%	Jan -08	Sep -09
Apartment	-38.8%	-9.6%	75.3%	Jan-08	Nov-09
Major Market Aggregate	-37.5%	-11.9%	68.5%	Dec-07	Dec-09
Apartment-Non-major	-47.1%	-16.1%	65.9%	Sep-07	Jan-10
Retail-Major	-38.7%	-19.8%	48.8%	Aug-07	Jul-10
Office	-45.1%	-24.0%	46.8%	Jan-08	Dec-09
National All-Property	-39.5%	-21.7%	45.1%	Nov-07	Dec-13
CBD Office-Non-Major	-53.2%	-31.6%	40.7%	Feb -08	Oct-09
Industrial-Major	-33.6%	-20.9%	38.0%	Nov-07	Dec-09
Core Commercial	-39.9%	-25.9%	34.9%	Nov-07	Dec-09
Suburban Office-Major	-47.5%	-32.3%	32.1%	Nov-07	Apr-10
Non-Major Market Aggregate	-41.0%	-29.6%	27.9%	Oct-07	Dec-09
Industrial	-32.8%	-24.6%	24.9%	Nov-07	Sep-10
Retail	-41.9%	-34.1%	18.8%	Aug-07	Feb-11
Industrial-Non-Major	-34.7%	-28.5%	18.0%	Mar-08	Apr-13
Office Suburban	-44.4%	-38.5%	1.4%	Nov-07	Apr-10
Reail-Non-Major	-43.9%	-40.1%	8.7%	Aug-07	Oct-10
Suburban Office-Non Major	-44.1%	-43.8%	0.7%	Nov-07	Feb-11

Source: Moody's Real Capital Analytics,

Seeking lower risk, core and value-added investors have focused on primary markets



Source: Real Capital Analytics, Morgan Stanley

SLOW HEALING OF COMMERCIAL DEBT MARKETS CREATING OPPORTUNITY FOR LENDERS AND OPPORTUNISTIC INVESTORS

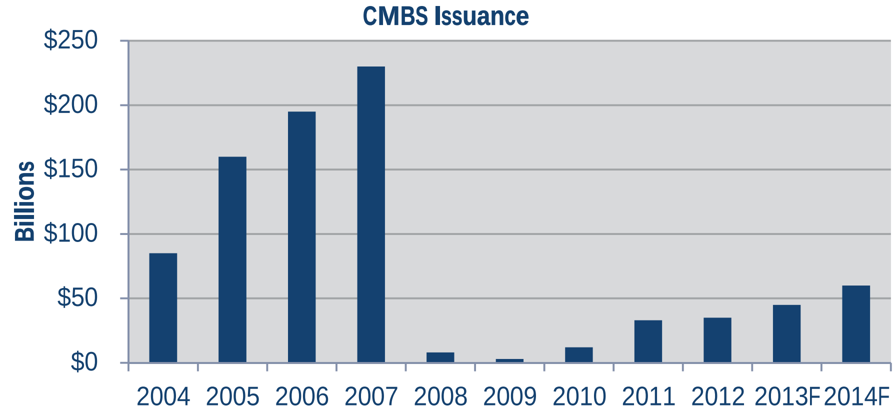
Market Environment

- During the downturn, deteriorating fundamentals led to impaired cash flow and falling property values, resulting in high loan-to-value ratios. Traditional sources of commercial real estate lending, primarily from banks and CMBS, dried up, reflecting investor unease about prospects for the asset class.
- Lending markets are slowly opening up, but mostly for stable, income producing core properties in top-tier markets while properties exhibiting any kind of stress have far less access.
- The lack of credit has led many properties to fall in quality, hurting rents and property values.
- Over the next four years nearly $1 trillion of commercial real estate debt will need refinancing; with the slow recovery of CMBS, the decline of CDOs and higher collateral demands by lenders, it is estimated that a $200 billion shortfall of lending could exist.

Market Outlook

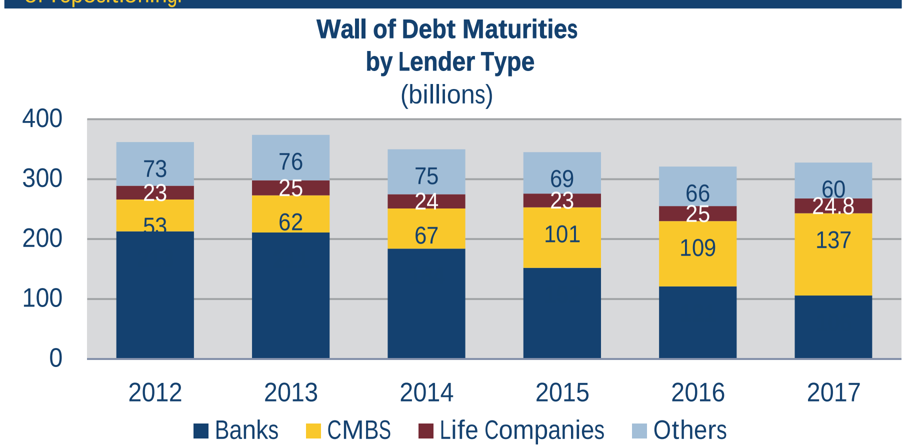
- The current environment creates opportunities for both lenders and value added-opportunistic investors. The impending financing gap will create opportunities for mezzanine lenders who are also demanding higher equity participation by borrowers.
- In providing refinancing, lenders appear focused on permanent loan resolution through property sales rather than modifications and extensions. This would likely provide opportunities for investors to acquire overleveraged properties in need of capital and repositioning at attractive prices.

Not only has CMBS issuance been slow to recover, the availability of finance is bifurcated. Credit is readily available to stable, income producing core properties in top markets while properties with any issues struggle for access to capital.



Source: Deloitte

With credit still hard to come by for many, and a large amount of loans needing refinancing, investors with dry powder will be in a position to acquire properties in need of repositioning.



Source: RREEF, Morgan Stanley

PUBLIC REAL ESTATE (REIT): STRONG RETURNS IN 2012 RAISE VALUATIONS

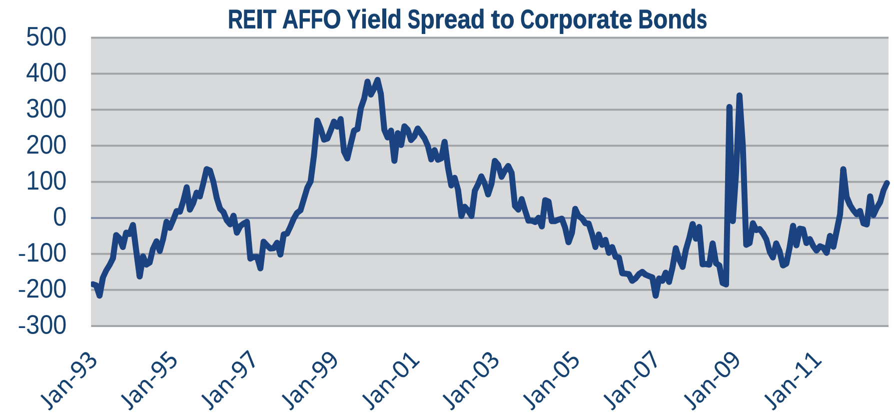
Market Environment

- After returning 28% in each of 2009 and 2010, REITs delivered 8.3% in 2011 and nearly 20% in 2012. REIT performance has been aided by easy access to equity and debt capital and high acquisition activity. REITs have also benefited from strong equity markets, to which their performance is highly correlated; historically, REITs have exhibited a correlation of .6 to equities.

Market Outlook

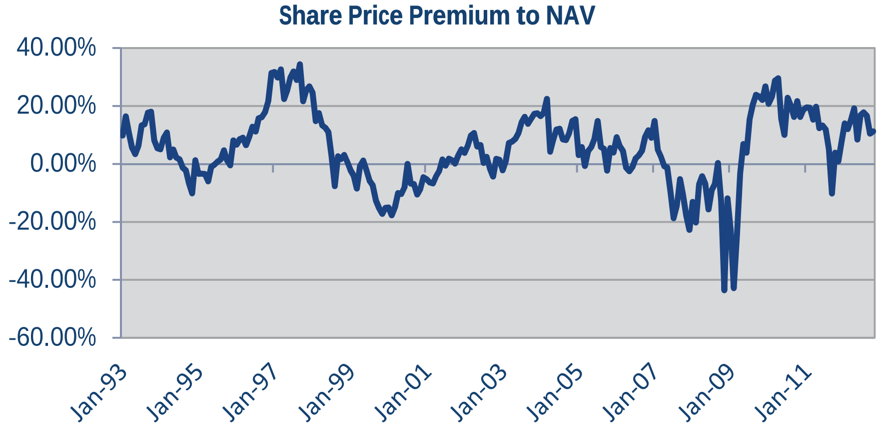
- When measured against NAV and equity price multiples, REITs appear expensive, while against corporate bonds they appear fairly valued to slightly cheap.
- REIT growth prospects depend on higher rental income. “New” capital, attracted to the sector by higher returns will push property prices up, supporting capital appreciation of existing property prices, but lowering returns to new acquisitions.
- Risks to REIT performance include declining equity markets or investors choosing to reduce their REIT exposures over valuation concerns.

The current spread of REITs over Baa-rated corporate bonds is nearly 100 bp and rising; above its historically average . The take-away? Today, REITs are fairly valued to slightly cheap relative to corporate bonds, in part because corporate bonds are expensive.



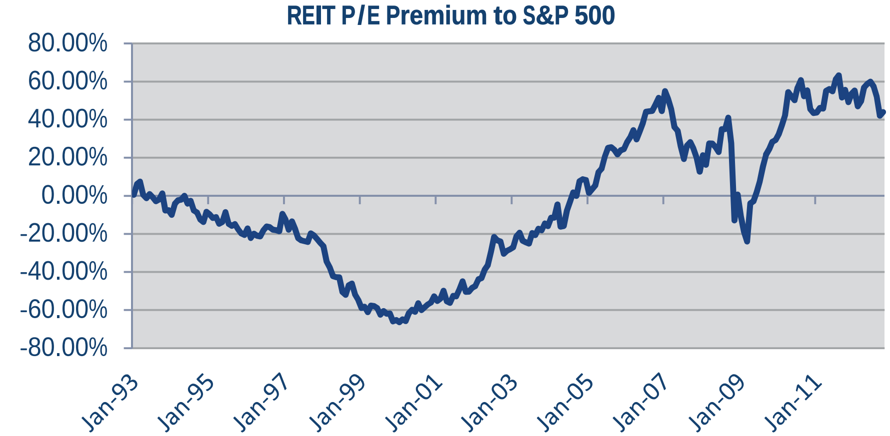
Source: Greenstreet

Historically, the average premium of REITs to their NAV has been 5.4%. Today's REIT price premium to NAV is 11.2%. The take-away? Relative to their NAV, REITs been more expensive only about one-third of the time.



Source: Greenstreet

The REIT P/E premium to S&P 500 stocks is currently 44%, not far from its historical high. The take-away? Today, REITs are expensive relative to equities.



Source: Greenstreet

Market Environment

- The global search for yield in a low interest rate environment led global transaction levels to recover from their 2009 lows, though volumes fell in 2012 due to weakness in Europe. The gradual recovery in transaction volumes has led global cap rates to fall to under 7%.

- Europe is following a pattern very similar to the that of the US, but is earlier in its recovery cycle. Prices remain well below peak value and distressed properties abound. New construction is below historical averages, vacancies remain elevated relative to norms, and rents in most of Europe have failed to recover.

- Asia-Pacific activity is driven primarily by deals in China, but momentum slowed in 2012 over concerns about economic strength. In Japan, activity is in response to last year's natural disasters but office and retail income growth, though showing signs of life, remain challenged by excess capacity.

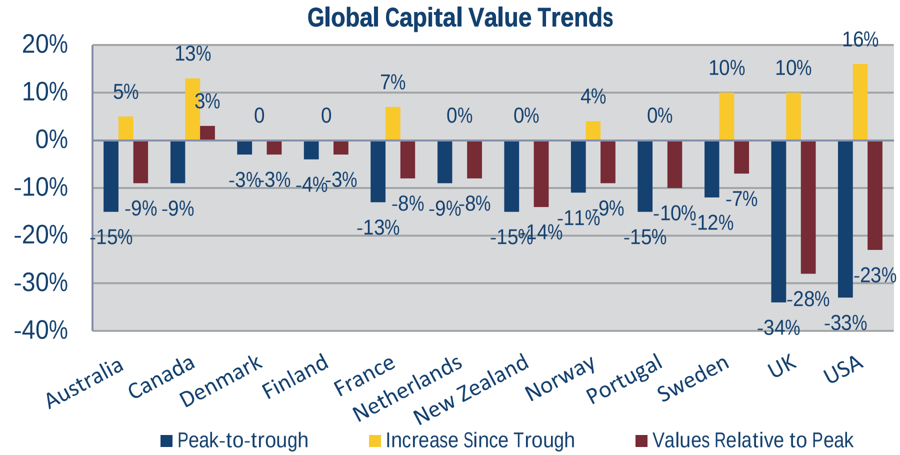
Market Outlook

- Despite cap rates being below historic average, the premium offered by property relative to government bonds tends to be high compared to history across markets.

- Transaction cap rates tend to reflect perceived growth and risk; prime properties in cities like London, Hong Kong and Paris are trading at cap rates under 4.5 while non-core properties in slower growing cities trade at cap rates of 6 and above.

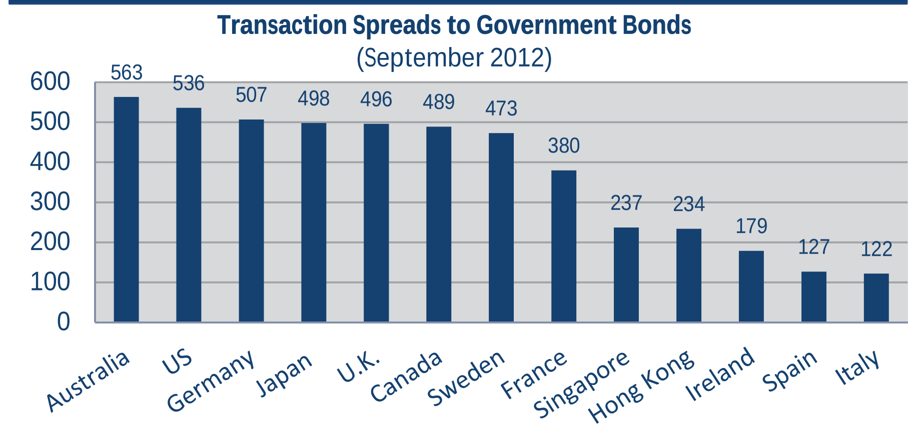
- **Take-away:** Global valuations are attractive, but in a low growth environment risks still exist. Country and asset selection matters. The risks of being early are greater than the risks from being late.

Prices are recovering, but at different rates, creating opportunities for managers able to assess the prospects for price recovery across markets.



Source: REEF

Absolute cap rates remain low, but with sovereign rates low, real estate looks attractive outside of Southern Europe.



Source: Real Capital Analytics, Morgan Stanley

SUMMARY OF CONCLUSIONS

	Core Real Estate - Aggregate	REITs	Value Added	Opportunistic	Credit Opportunities
Valuations/ Pricing	▪ Valuation: Expensive ▪ Cap rates below historical averages as property prices have recovered more quickly than NOI ▪ Still attractive relative to major asset classes	▪ Valuation: Expensive relative to equities and their own NAV; fairly valued against bonds	▪ Valuation: Favorable ▪ Wide price spread between high and low quality properties ▪ Opportunity to create value in low return environment by property repositioning	▪ Valuation: Favorable ▪ Focus on income growth has led to avoidance of low quality properties and wide spreads between core and "opportunistic" property prices	▪ Valuation: Favorable ▪ Pricing has improved as spreads have widened on declining liquidity to commercial real estate
Macro Considerations	▪ Multi-family rent growth still strong but property prices have been bid up ▪ Significant fundraising puts pressure on prices ▪ Prospective returns can fall in rising interest rate, slowing economic growth environment	▪ High 2012 returns leave REITs fairly valued relative to other equities ▪ Returns have benefitted from easy access to equity and cheaper debt capital ▪ Highly volatile asset class with respect to discounting economic expectations	▪ Focus on property fundamentals (vacancy &income growth) leads to avoidance of "hairy" properties and bifurcated pricing	▪ Weak economic growth contributes to over-supply of poor quality properties in need of refinancing and repositioning	▪ Traditional sources of financing (CMBS, banks) have decreased, particularly to non-core properties ▪ CMBS delinquency rates declining across most property sectors though still high
Manager Alpha Conditions	▪ Bifurcated economic recovery means allocation by property type and location will be key to generating alpha ▪ The high demand for core real estate is leading to entry queues of as long as nine months with managers demonstrating previous success.	▪ In moderate NOI growth environment, the ability to generate alpha will depend on asset selection and managers' ability to improve cash flow through balance sheet restructuring	▪ Lack of new inventory in the face of rising demand creates opportunities for managers to "create" core properties by purchasing lower quality properties and renovating them in ways that leads to rising occupancy and rents	▪ Many properties are still underwater, limiting owners' access to finance, creating distressed sellers and opportunities to acquire properties at attractive prices	▪ Decline in financing sources leads to more favorable risk adjusted spreads ▪ Opportunities for non-traditional lenders to step in and lend to borrowers in need of capital to reposition good assets into stable, income producing properties

Outlook	**Neutral**	**Negative**	**Positive**	**Positive**	**Positive**

APPENDIX: GLOSSARY OF TERMS

Capitalization Rate (Cap Rate): a rate of return on a real estate investment property based on the expected income that the property will generate. It is calculated by dividing the income the property will generate (after fixed costs and variable costs) by the total value of the property.

Commercial Mortgage-Backed Security (CMBS): a type of mortgage-backed security that is secured by the loan on a commercial property.

Core: real estate properties that include the major property types - offices, apartments, retail, and industrial that are most liquid, most developed, and least leveraged. The assets are held for a long period of time to take full advantage of the lease and rental cash flows they provide. The majority of the returns come from the cash flows vs. value appreciation.

Current Value Cap Rate: a rate of return on a real estate investment property based on the appraised value of the property. The property valuation could be done relatively infrequently, resulting in the appraised price that could be different from the actual transaction price.

NCREIF Property Index (NPI): an index compiled by the National Council of Real Estate Investment Fiduciaries based on voluntary reporting of its members that includes pension funds, real estate investment professionals, appraisers, academics, and consultants to track performance of direct real estate investments. The NPI provides the returns for an institutional-grade real estate portfolio held by large U.S. investors. The index includes quarterly reported appraised prices of offices, apartments, retail, industrial, and hotels.

Net Asset Value (NAV): a mutual fund per share value calculated by dividing the total value of all the securities in its portfolio, less any liabilities, by the number of funds shares outstanding.

Net Operating Income (NOI): NOI is equal to a property's yearly gross income less operating expenses. NOI is equal to net rental income + depreciation + amortization + interest expense – non-reoccurring income. NOI is used in the calculation of the Cap Rate (Cap Rate = NOI/Transaction Value).

Opportunistic: real estate properties that have high risk and return profile and often require extensive development or are turnaround opportunities, including development of new properties, redevelopment of property that is in disrepair, the purchase of property in the area that is undergoing significant urban renewal. The majority of the return from these properties comes from value appreciation over a three- to five-year period.

Real Estate Investment Trust (REIT): a security listed on major stock exchanges that represent an interest in an underlying pool of real estate properties. REITs invest in the equity and / or mortgages of different real estate assets and operate similar to mutual funds.

REIT AFFO Yield: a financial performance measure that is usually equal to the real estate trust's funds from operations (FFO) after adjustments made for recurring capital expenditures used to maintain the quality of the REIT's underlying assets.

Transaction Cap Rate: a rate of return on a real estate investment property based on the prices from actual real estate transaction.

Value Added: real estate properties that usually include hotels, resorts, assisted care living, low-income housing, outlet malls and similar assets. These properties may require repositioning, renovation, redevelopment, a new marketing campaign, etc. They produce less current income and rely more on capital appreciation to produce total return.

SAMPLE ASSET/LIABILITY STUDY

ASSET LIABILITY STUDY

Fresno County Employees' Retirement Association

April 2013

WURTS ASSOCIATES

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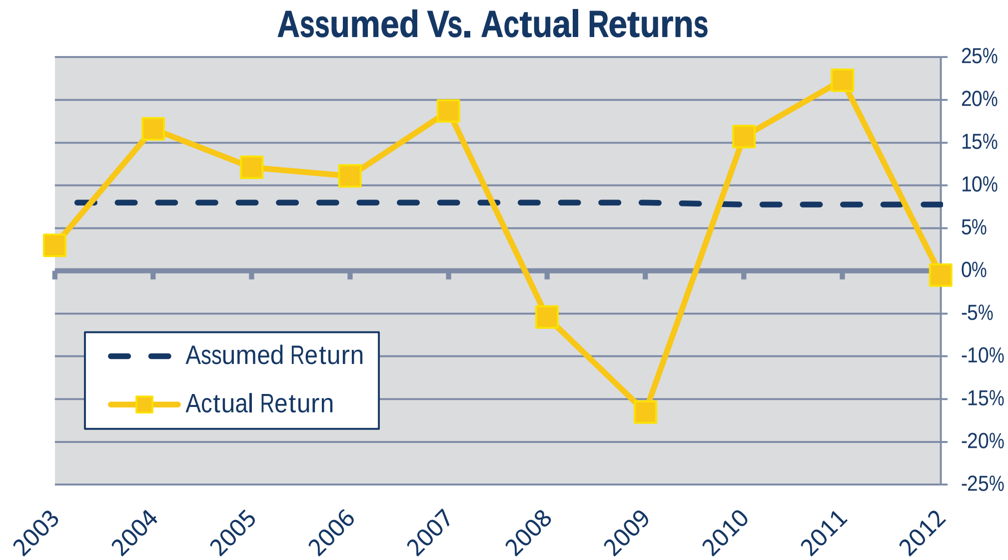
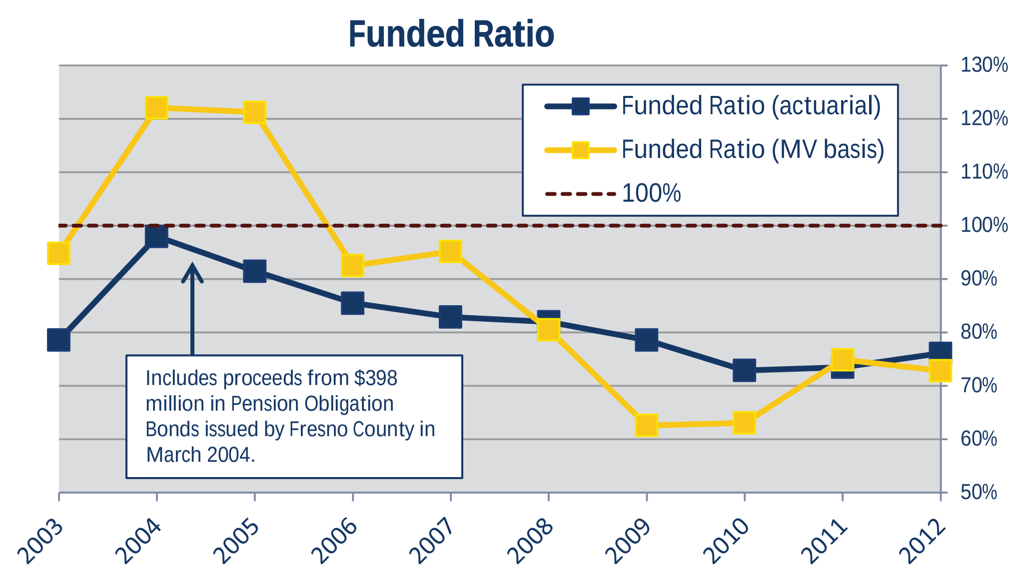
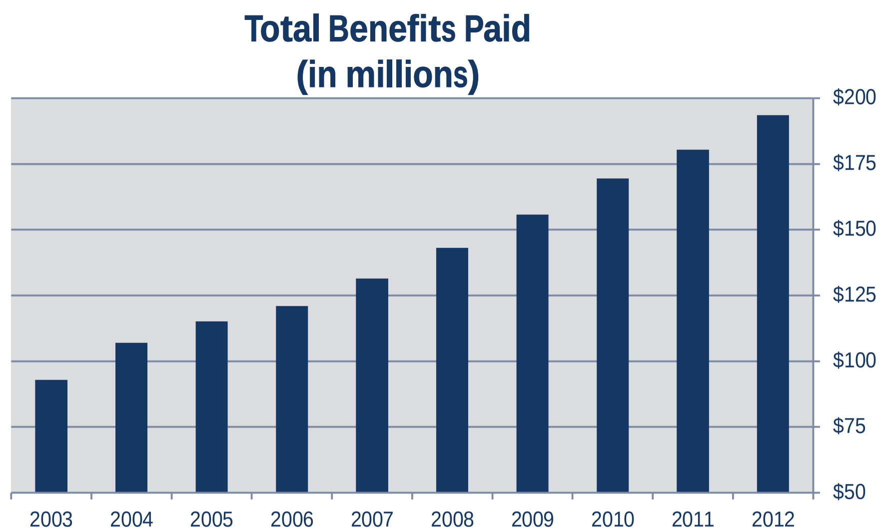


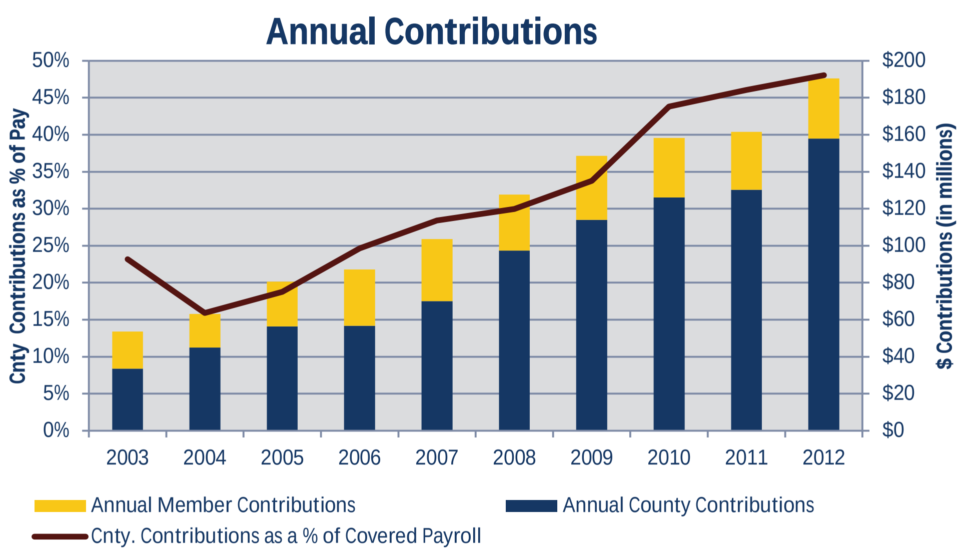


- Fiscal year returns have been volatile. The Plan has outperformed the assumed rate in 6 of the last 10 years.
- Annualized return for the 10 years ended June 30, 2012 was 7.0% net of investment expenses, 75 bps below the current assumption.
- Actuarial funded status uses a smoothed market value, mitigating volatility of returns.
- Despite this, the amortization of large losses in 2002 and 2009 have caused the funded status to trend downward.

Note: Data is for the periods ending 6.30.12, the date of the last actuarial valuation.

HISTORICAL CASH FLOWS





- Total benefits paid continue to increase each year, averaging an 8.5% annual growth rate over the last 10 years.
- This has been funded through increased County contributions (on an absolute basis as well as relative to payroll.)
- As of 6/30/2012, the County contributions as a percentage of payroll was 48%.

Member Contributions:

The contribution rate is dependent on the membership tier, and calculated so that the accumulation of basic contributions will be sufficient to fund an annuity at retirement that is equal to a portion of average final compensation.

County Contributions:

Normal Cost:

The annual contribution rate that, if paid annually from first year of membership to the year of retirement, would accumulate the amount necessary to fully fund the member's retirement benefits.

+

Contribution to the Unfunded Actuarial Accrued Liability:

The annual contribution rate that if paid annually over the UAAL amortization period, would accumulate the amount necessary to fully fund the UAAL.

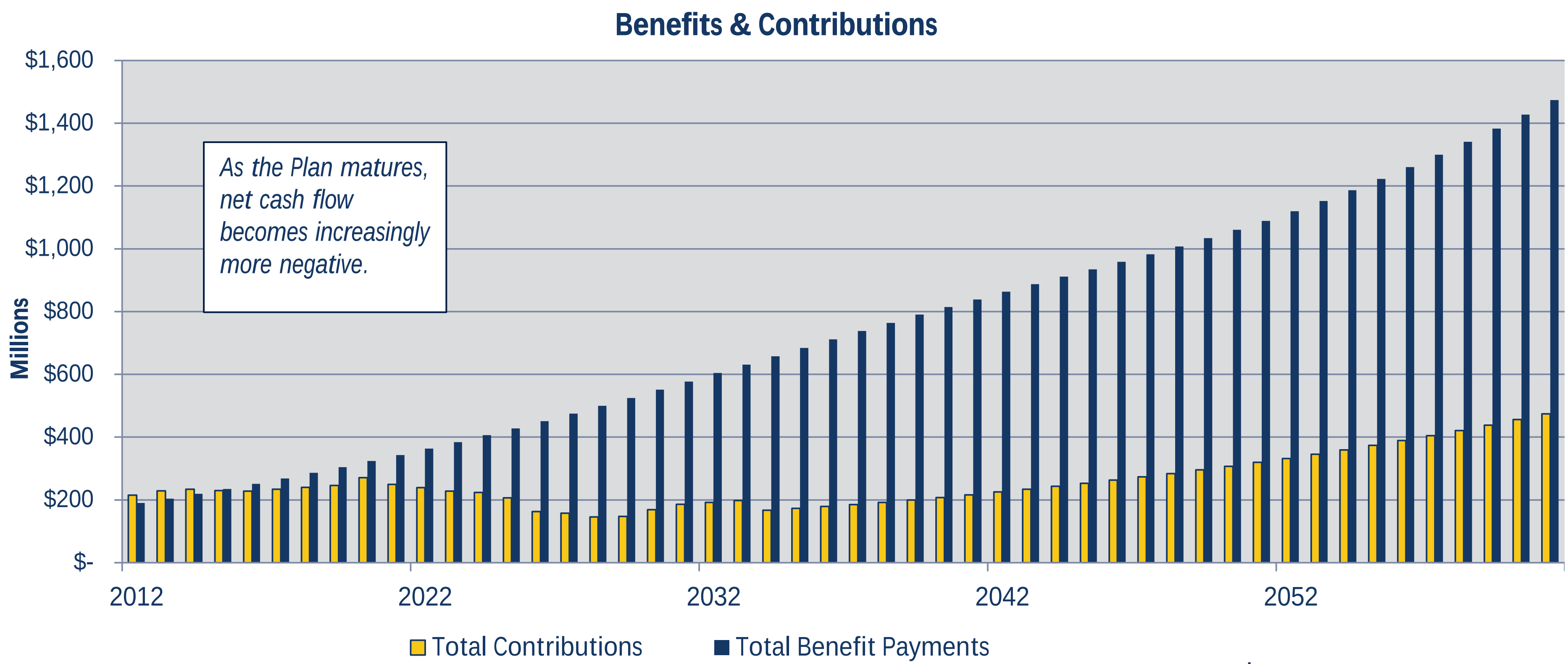
Before examining different portfolios we want to set expectations for what the future holds.

Assume:

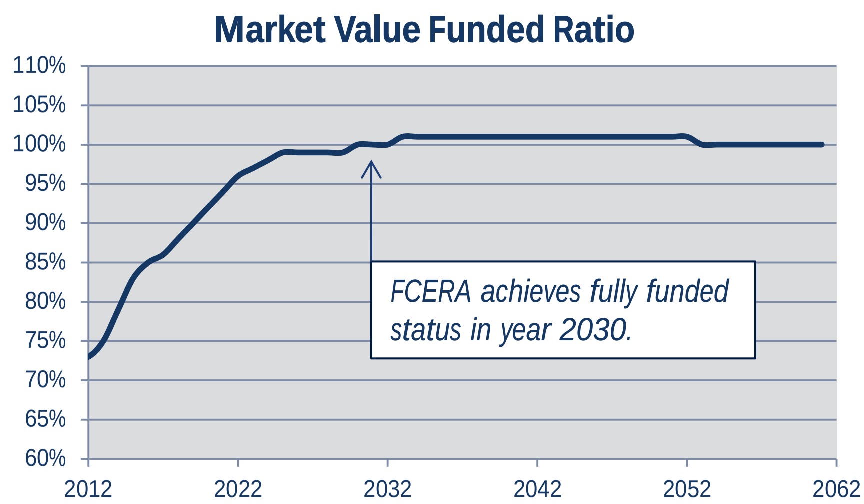
- The investments return meets the current assumed rate of 7.75%, net of fees and administrative costs, each year. (we will alter this assumption in later trials).
- Inflation is 3.5% per year.
- Actual contributions are in line with recommended contributions
- This projection includes the new tier 4 rates, effective for contributions for the 2012/2013 fiscal year and forward, using formulas as prescribed in Section 31676.1.

What is the impact on:

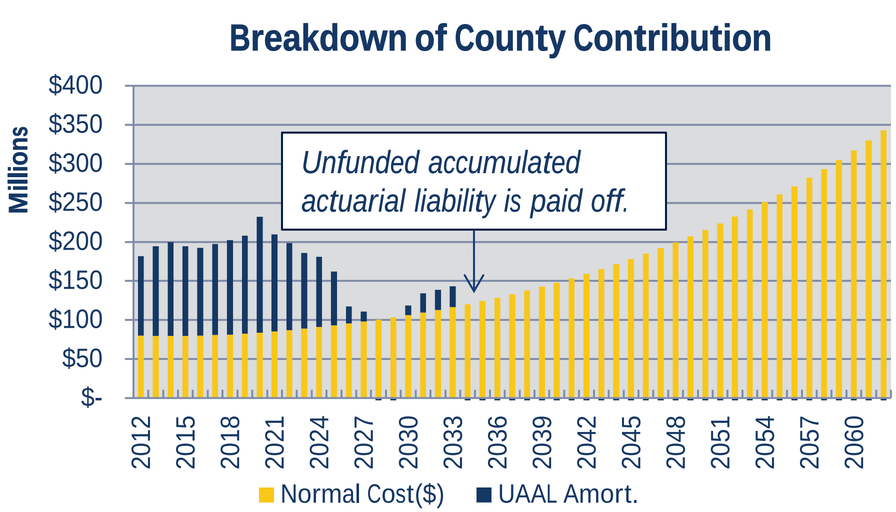
1. Future Funded Status?
2. Employer Contributions?
3. Contributions as a % of Pay?



BASELINE PROJECTIONS: IF EVERYTHING GOES TO PLAN …



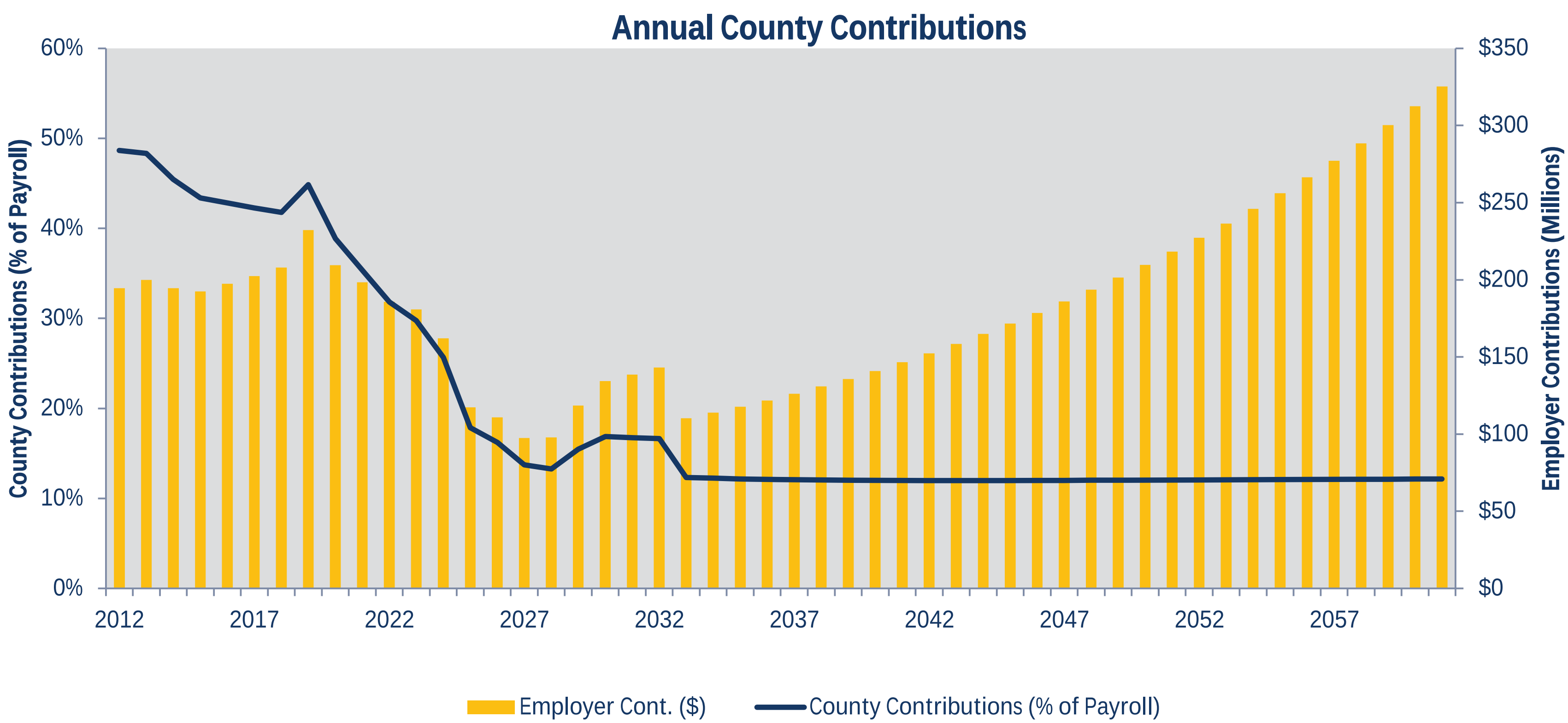
- Funded status is projected to increase from 71.8% to 100% in 18 years. [1]



- Since we assume that in all future years, actual returns will equal assumed returns, there are no further accruals to the UAAL.
- The existing UAAL is fully amortized by 2033. After this, the County contributions only consist of the normal cost component.
- Normal cost increases with inflation and wage growth.

[1] As of 6.30.12. The funded status using the actuarial value of assets is 76.1%.

BASELINE PROJECTIONS: IF EVERYTHING GOES TO PLAN …

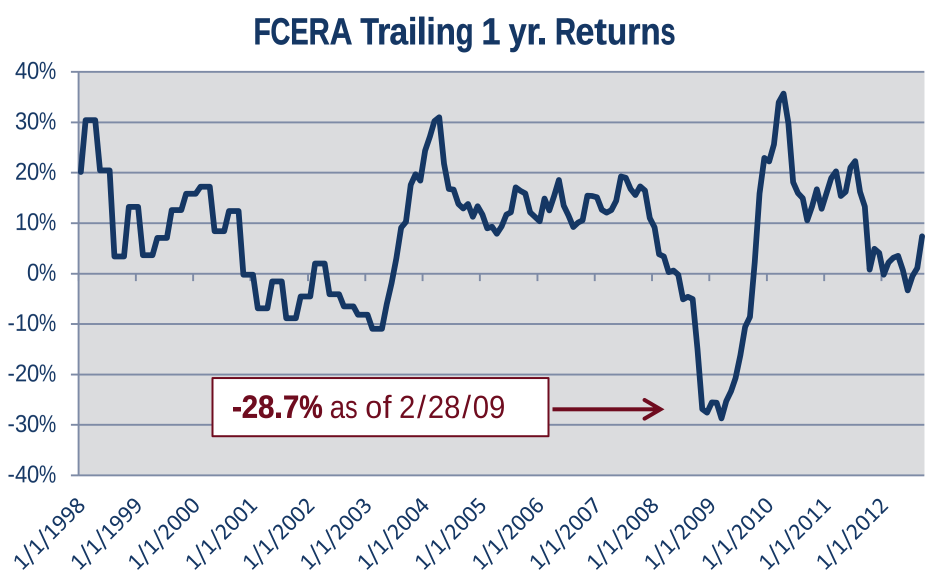


- While the dollar amount of contributions do go up, contributions relative to payroll trends down.
- This is due to projected payroll increasing approximately 4%/year.

RISK & DRAWDOWNS

HISTORICAL DRAWDOWNS

- While the baseline projection suggests that the health of the Plan will trend upwards, this is dependent on the Plan earning the assumed rate of return every year.
- In reality, we know that returns are very volatile, and driven by large swings in global equity markets:

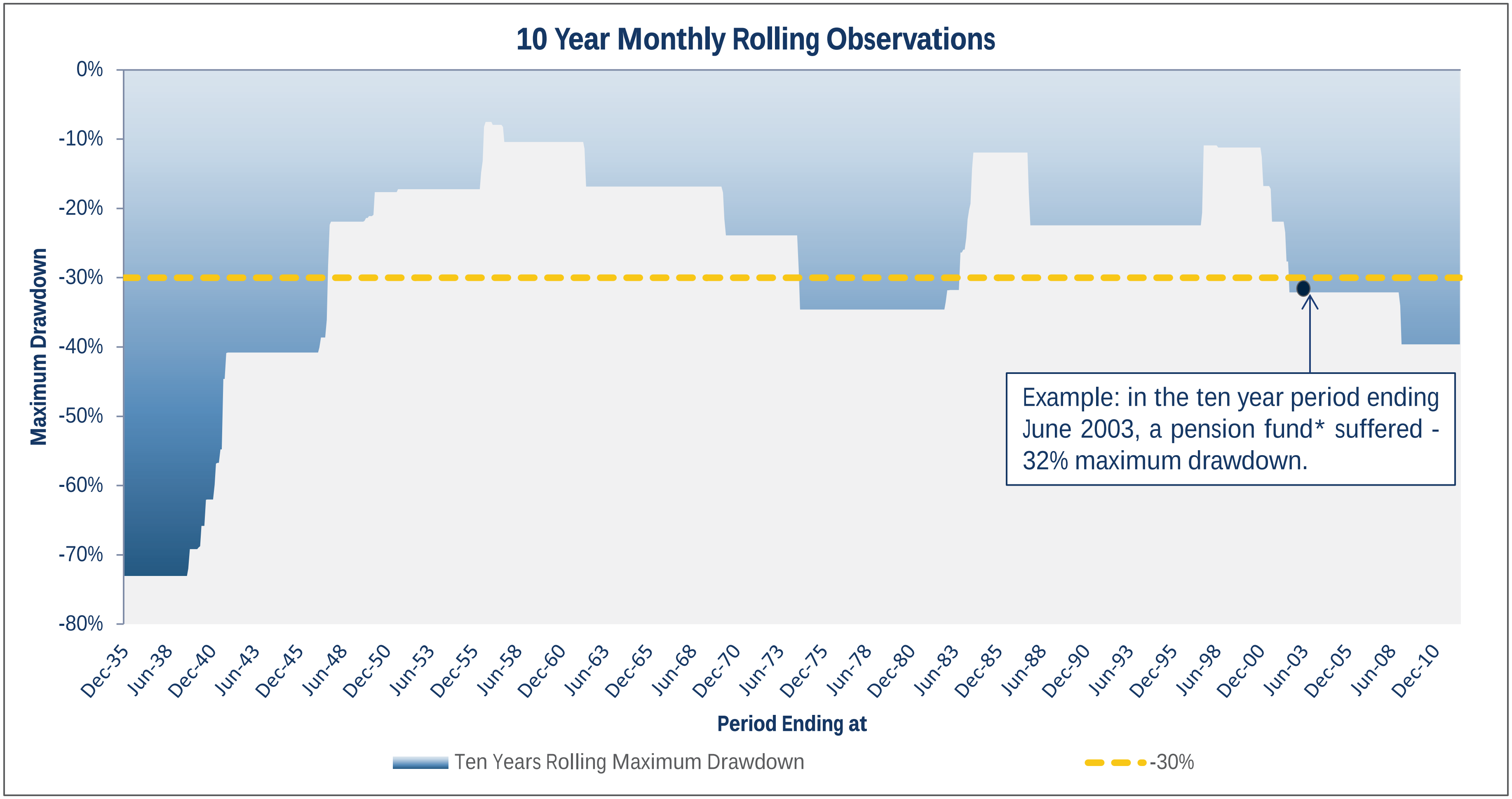


- FCERA experienced a 28.7% drawdown for the 12 months ended February 2009.
- This drawdown was the primary factor contributing to the Plan not achieving the assumed return for the trailing ten years ending 6.30.12.
- To illustrate, if the plan earned 0% in the 2009 plan year, the 10 year trailing return would have been 9.1%, meaningfully higher than both the 7.75% assumption and the actual return of 7.0%.

Was the 2008 drawdown really a "100 year storm" or can we expect it to happen again?

Graph is rolling monthly trailing. Rolling quarterly trailing prior to 2003.

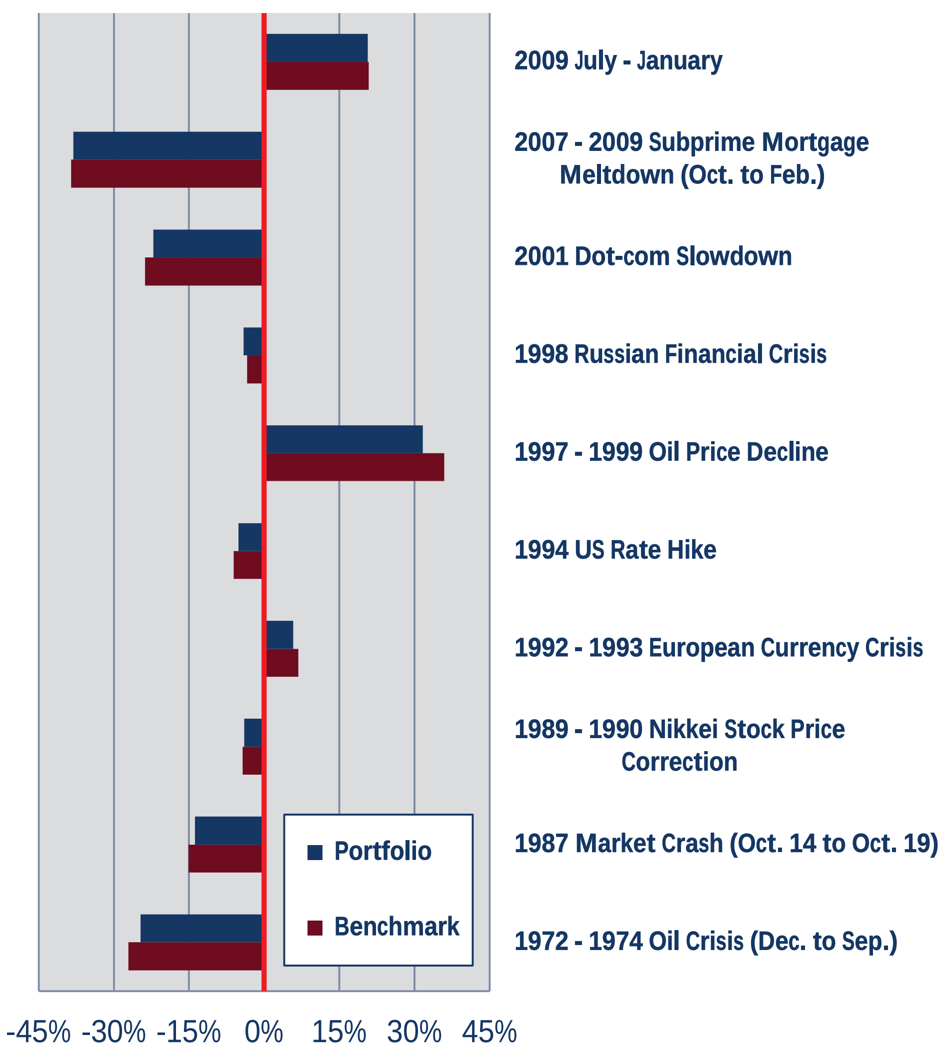
DRAWDOWNS HAPPEN MORE OFTEN THAN YOU THINK



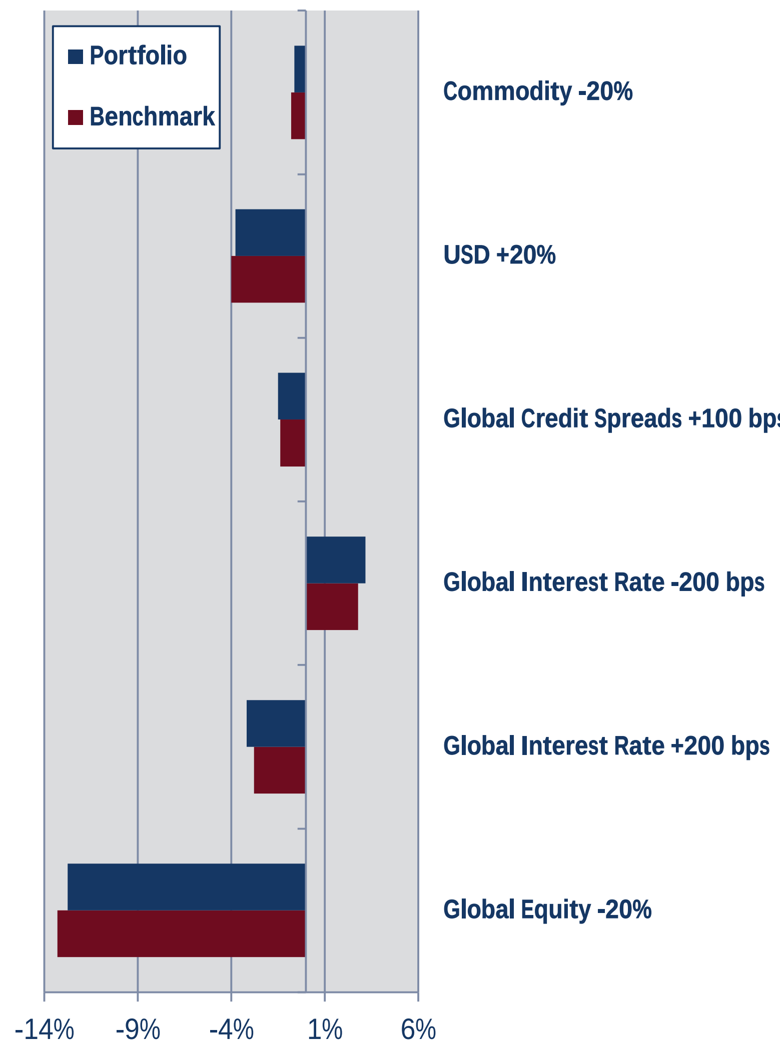
Average Max Drawdown in a Ten Year Period	**-23%**
Probability of Suffering a Drawdown of -30% in Any Ten Year Period	**45%**

*Typical pension fund risk equivalent asset allocation portfolio with ~14% ex-ante volatility.

Tail Risk - Scenario Analysis



Tail Risk - Stress Testing

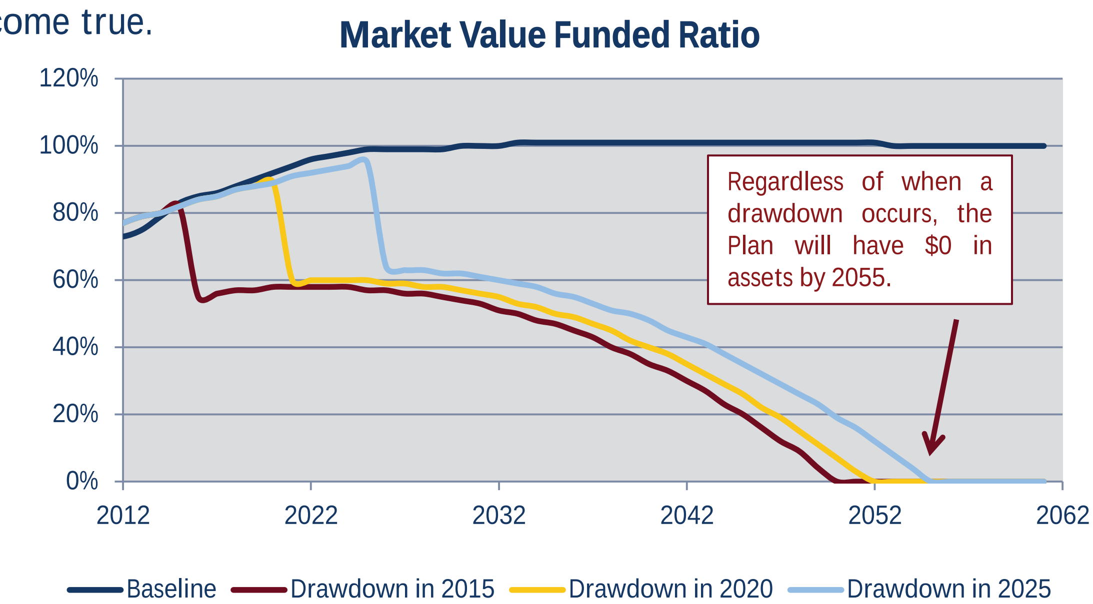


As of 6/30/2012. Analysis performed using BarraOne Risk Analytics.

- We can say with a reasonable degree of confidence that FCERA is likely to experience another large drawdown with the current allocation. But when?
  - 2015...Possibly?
  - 2020...Seems Reasonable?
  - 2025...Not that far-fetched?

- Assumptions:
  - County Contributions are capped at the current recommended amount ($184 million/year[1]).
  - Investments earn the assumed rate of return of 7.75% every year except for one year with a 28% drawdown.
  - All other actuarial assumptions come true.

- Impact:
  - Future drawdowns severely impact funded status given the maturity of the Plan (negative cash flows – see page 7).

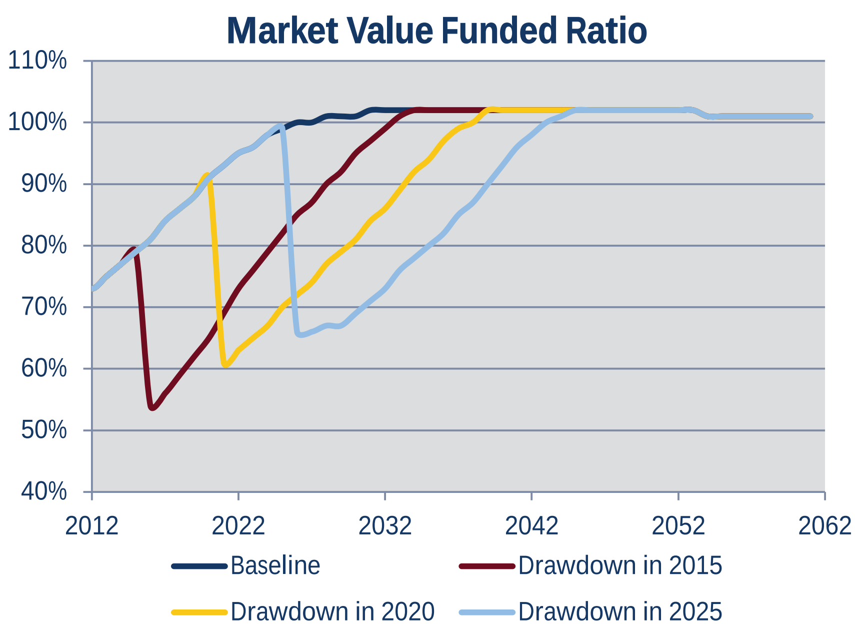


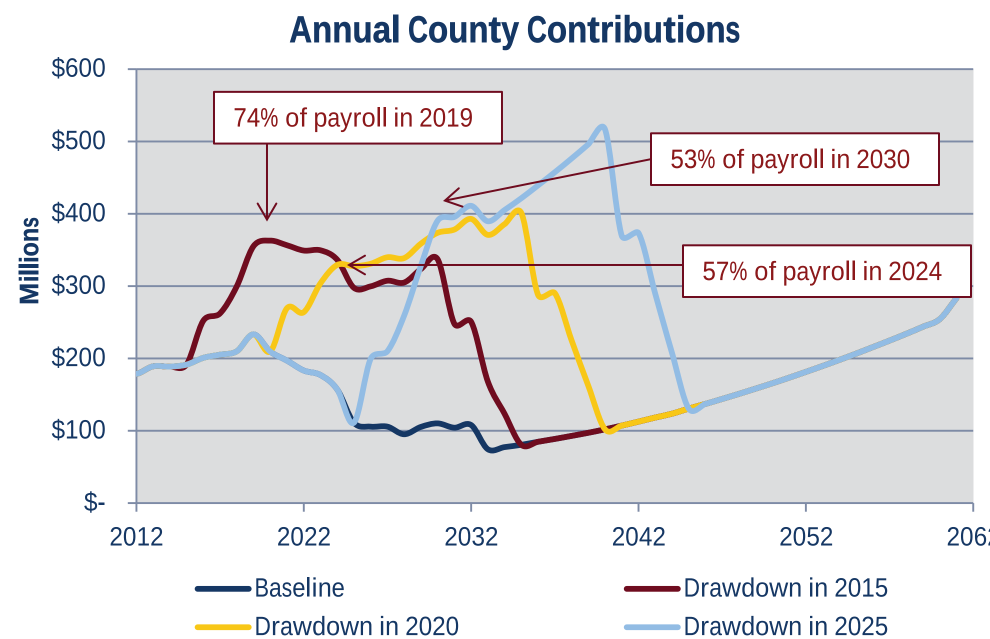
Note: Wurts & Associates is uncertain if the $184 million contribution is in fact the maximum the County can contribute. We can update our analysis to reflect a higher maximum contribution rate if the Board prefers to alter this assumption.

[1] The recommended amount for the Plan year ending 6/30/2013, as determined in the 6/30/2011 actuarial valuation.

SOLVENCY & DRAWDOWNS

- Assuming the County can meet all future recommended contributions, the Plan can still achieve fully funded status, albeit 10-20 years later.
- After all, any funded ratio can be repaired through higher capital contributions.
- Contributions are projected to reach as high as 70% of payroll in 2019 if the Plan experiences another 28% drawdown near or before 2015.
- The subsequent drawdowns all result in contributions as a percentage of payroll that are greater than the current level.





Graph assumes 7.75% return for all years except for one 28% drawdown event.

Compound Return

- 10 Years at 10% return produces an annualized return of **10%**

What would be the annualized return if on the 10th year the portfolio experiences a -30% return?

The Importance of Limiting Drawdowns

- 9 years at 10% return plus a one year return of -30% produces an annualized return of **5.14%**

ADDITIONAL QUALITATIVE CONSIDERATIONS

Its easy to focus on endpoints in terms of funded status/contributions, etc.

But there are other qualitative considerations to think about that can happen along the way:

1. To what extent does a near term event impact the County's ability to borrow in municipal markets?
2. To what extent do funding concerns impact the tax base or future growth prospects for the County?
3. To what extent does the health of the Pension impact employee recruitment, morale, and retention?

SUMMARY: DRAWDOWNS

- We know that large drawdowns occur roughly once every ten years.
- When we encounter another drawdown event, FCERA can either:

1. Increase County contributions *(may not be feasible)*
2. Allow the Plan to eventually experience much higher contributions and much lower funded status *(may not be acceptable)*

How can we structure the portfolio differently to mitigate large drawdowns?

PORTFOLIO CONSTRUCTION PROCESS

- FCERA returns have been relatively similar to other SACRS Plans:

U.S. Equity: 10 Years	
Median of SACRS Counties:	5.8%
Standard Deviation:	0.46%
FCERA:	**5.9%**

Domestic Fixed Income: 10 Years	
Median of SACRS Counties:	6.9%
Standard Deviation:	0.86%
FCERA:	**6.8%**

International Equity: 10 Years	
Median of SACRS Counties:	6.5%
Standard Deviation:	0.69%
FCERA:	**6.5%**

Total Fund: 10 Years	
Median of SACRS Counties:	6.5%
Standard Deviation:	0.76%
FCERA:	**7.3%**

~68% of SACRS Counties had plan-level investment returns between 5.7% and 7.2%

- All Counties have employed the same method of portfolio construction, the same definition of diversification, and the same constrained minimum variance portfolio using an efficient frontier.
- The 0.76% standard deviation comprises differences in both asset allocation and manager selection.
- All of the time and energy spent managing managers, style tilts, administrative issues, etc., has resulted in remarkably little differentiation.

All data is gross of fees. As of 6.30.12. Obtained from RV Kuhns SACRS Public Fund Universe Analysis.

- Portfolios were constructed by optimizing asset classes to identify those mixes that maximized returns for a given level of risk, as defined by standard deviation.

  Major inputs:
  - Expected Return
  - Expected Standard Deviation
  - Expected Correlations

- The underlying principles of Mean Variance Optimization ("MVO") are sound… "Diversification is a free lunch." However:

  - MVO requires an accurate prediction of expected returns, volatility (standard deviations), and correlations.

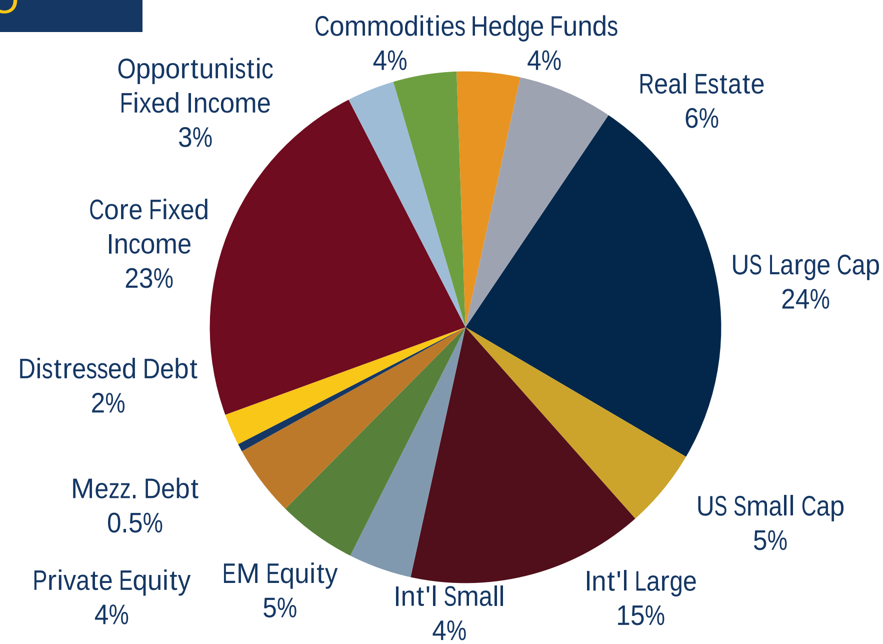
  - MVO assumes markets are normally distributed. (hint: they are not, more on this later)

  - MVO assumes correlations remain constant over time.

The result is that MVO is not an effective tool for modeling the devastating effects of drawdowns.

FCERA CURRENT PORTFOLIO

	Current Policy[1]	CMA's (10 Yr)*
Large Cap US Equity	24	6.3
Small/Mid Cap US Equity	5	6.9
Total Domestic Equity	***29***	
International Large	15	8.0
International Small	4	8.3
Emerging Markets	5	9.6
Total Int'l Equity	***24***	
Total Equity	***53***	
US Core Fixed Income	19	2.0
Emerging Markets Debt - Local	3	5.7
TIPS	4	2.2
Total Fixed Income	***26***	
Commodities	4	4.3
Real Estate	6	5.6
Total Real Assets	***10***	
Liquid Alts/HFoF	4	5.4
Private Equity/VC	7	9.9
Total Non-Public Investments	***11***	
Total Allocation	**100**	



Fresno County ERA	
Expected 10 Year Return	
Mean Variance Optimizer Analysis	
Forecast 10 Year Return	***5.9***
Volatility (Standard Deviation)	10.8
Sharpe Ratio	0.30

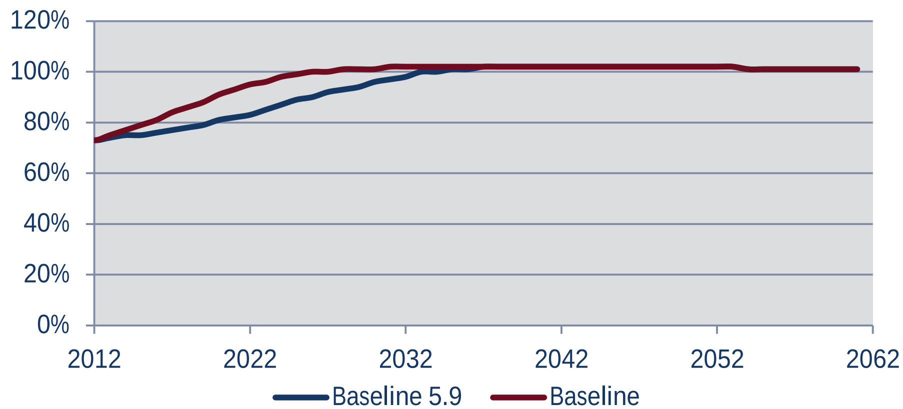
* See appendix for details regarding Wurts' Capital Market Assumptions.

RECONCILING TO THE ACTUARIAL EXPECTED RETURN

- Wurts & Associates uses a 10 year time horizon, whereas the actuarial assumed rate covers the entire life of the Plan.
- Forecasting is difficult to begin with. However, we prefer a 10 year time frame because it is long enough for markets to correct themselves but short enough to use tangible data points.
- In Wurts' judgment it is reasonable to assume a lower rate of return for the next decade and a higher rate of return thereafter.
  - It is problematic to try and construct a portfolio that is projected to achieve 7.75% in the current low return environment. Doing so would require the Plan to assume an unacceptable level of risk.
  - It is Wurts' philosophy that FCERA should take less risk given the low return environment when risk-premia are less compensated (see Appendix for analysis of current valuation levels)

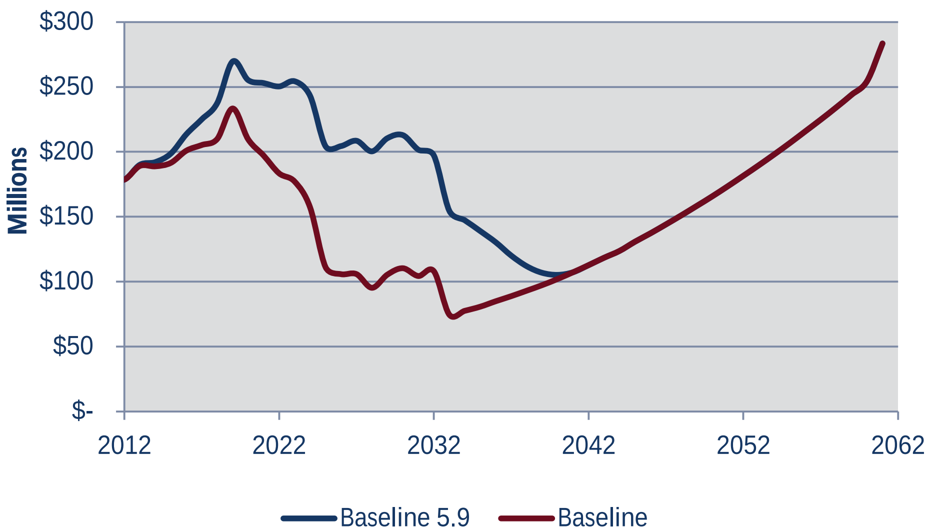
IMPACT ON UNDERPERFORMING ASSUMED RATE

Market Value Funded Ratio

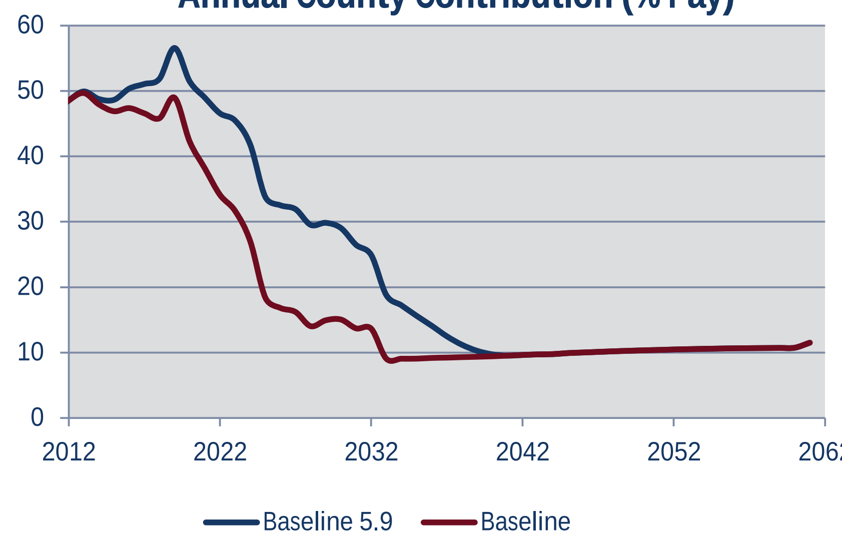


Assumes the Plan's investments earn 5.9% for the next 10 years, and the actuarial assumed rate thereafter.

Annual County Contribution



Annual County Contribution (% Pay)



SUMMARY

I. The UAAL is the primary reason why County contributions are greater than 40% of payroll. The current UAAL is the result of the Plan's investments experiencing large drawdowns.

II. The current portfolio was constructed using MVO, just like most other SACRS Plans.

III. While MVO is a necessary tool in that it is a simple way of comparing different portfolios, it does not adequately address the risk of large drawdowns. Large drawdowns can threaten the financial viability of mature plans.

IV. Inevitably, another tail event will occur in the future. When it does, the UAAL will be negatively affected, and the Plan will need to increase contributions to ensure sustainability. This risk needs to be factored into the asset liability review.

IMPROVING THE PORTFOLIO CONSTRUCTION PROCESS

1. Understand the sources of risk.

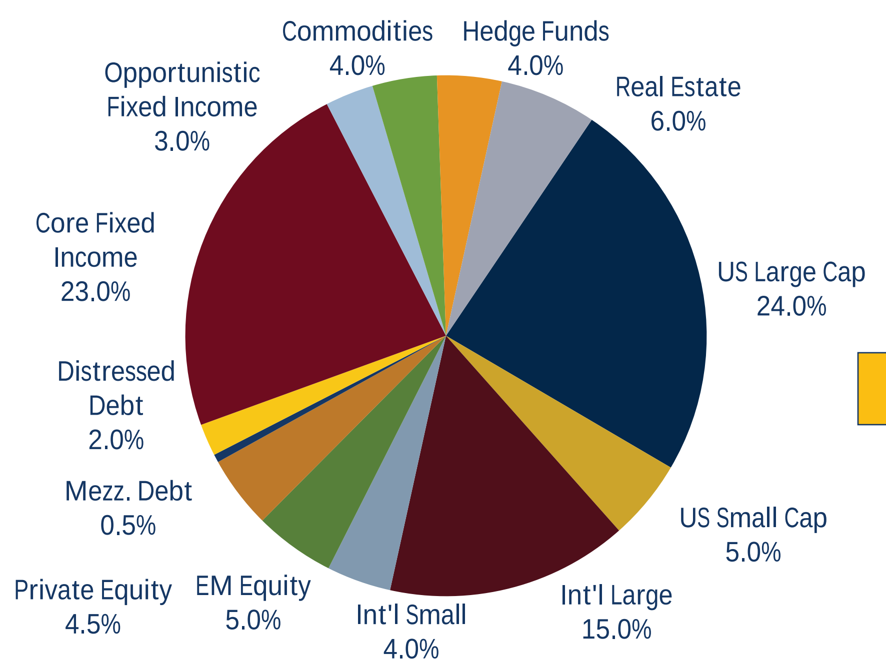
2. "**Win by not losing**" – Mitigate large drawdowns.

3. <u>Supplement</u> MVO with other methods of forecasting portfolios:

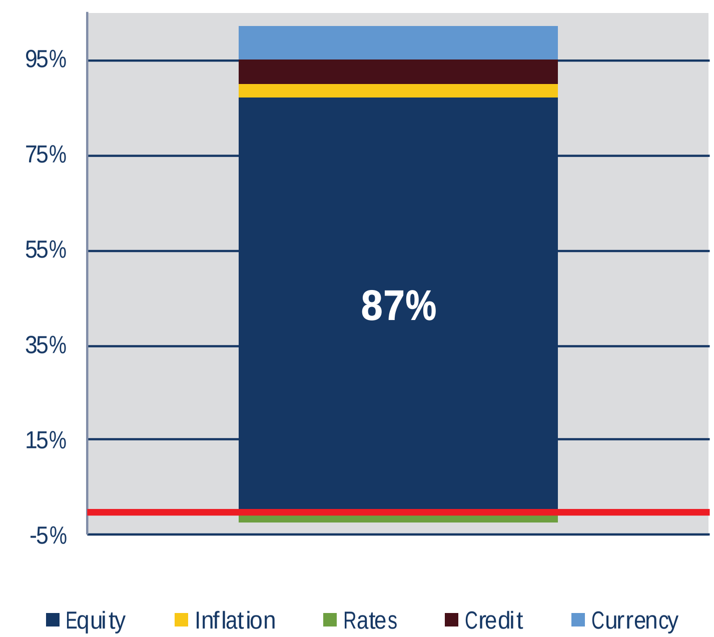
   - Risk Decomposition
   - Economic Diversification
   - Stress-testing & Scenario Analysis

4. The alternative: **A Risk-Diversified Portfolio**

FCERA Existing Allocation



FCERA Risk Decomposition



Asset-diversified, but…

Risk diversified?

Because many assets are inextricably tied to the risks embedded in global equity markets and that risk is greater than other type of risk, an MVO-constructed portfolio derives the majority of its risk from equities.

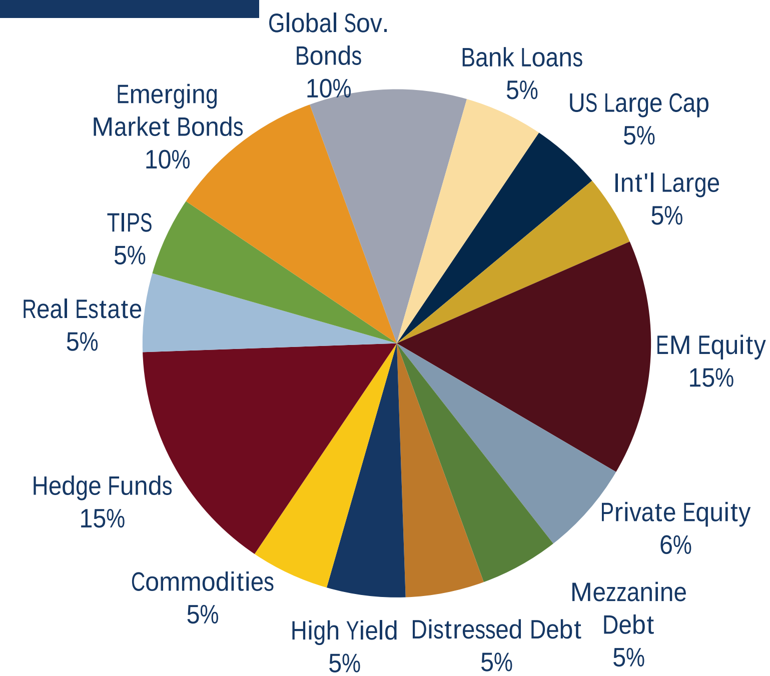
Source: BarraOne Risk Analytics

THE RISK-DIVERSIFIED PORTFOLIO

- The MVO Portfolio was diversified by assets, but not risk factors.
- We propose a risk-diversified portfolio that is projected to achieve the same rate of return as the current portfolio.
- The key tenets of the risk-diversified approach:
  - Reduces the absolute level of expected volatility.
  - Diversified the sources of return (beta) to be more dependent on contractual cash flows, and less dependent on capital appreciation.
  - Effectively reduces equity risk.
  - This beta diversification makes the portfolio less susceptible to large drawdowns.

THE RISK-DIVERSIFIED PORTFOLIO

	Risk-Diversified Portfolio	CMA's (10 Yr)*
Large Cap US Equity	4.5	*6.3*
Total Domestic Equity	***4.5***	
International Large	4.5	*8.0*
Emerging Markets	15	*9.6*
Total Int'l Equity	***19.5***	
Total Equity	***24***	
High Yield Fixed Income	5	*4.9*
Bank Loans	5	*4.1*
Global Bonds - Sovereign	10	*2.2*
Mezzanine Debt	5	*5.9*
Distressed Debt	5	*5.9*
Emerging Markets Debt - Local	10	*5.7*
TIPS	5	*2.2*
Total Fixed Income	***45***	
Commodities	5	*4.3*
Real Estate	5	*5.6*
Total Real Assets	***10***	
Hedge Funds	15	*5.4*
Private Equity/VC	6	*9.9*
Total Non-Public Investments	***21***	
Total Allocation	**100**	



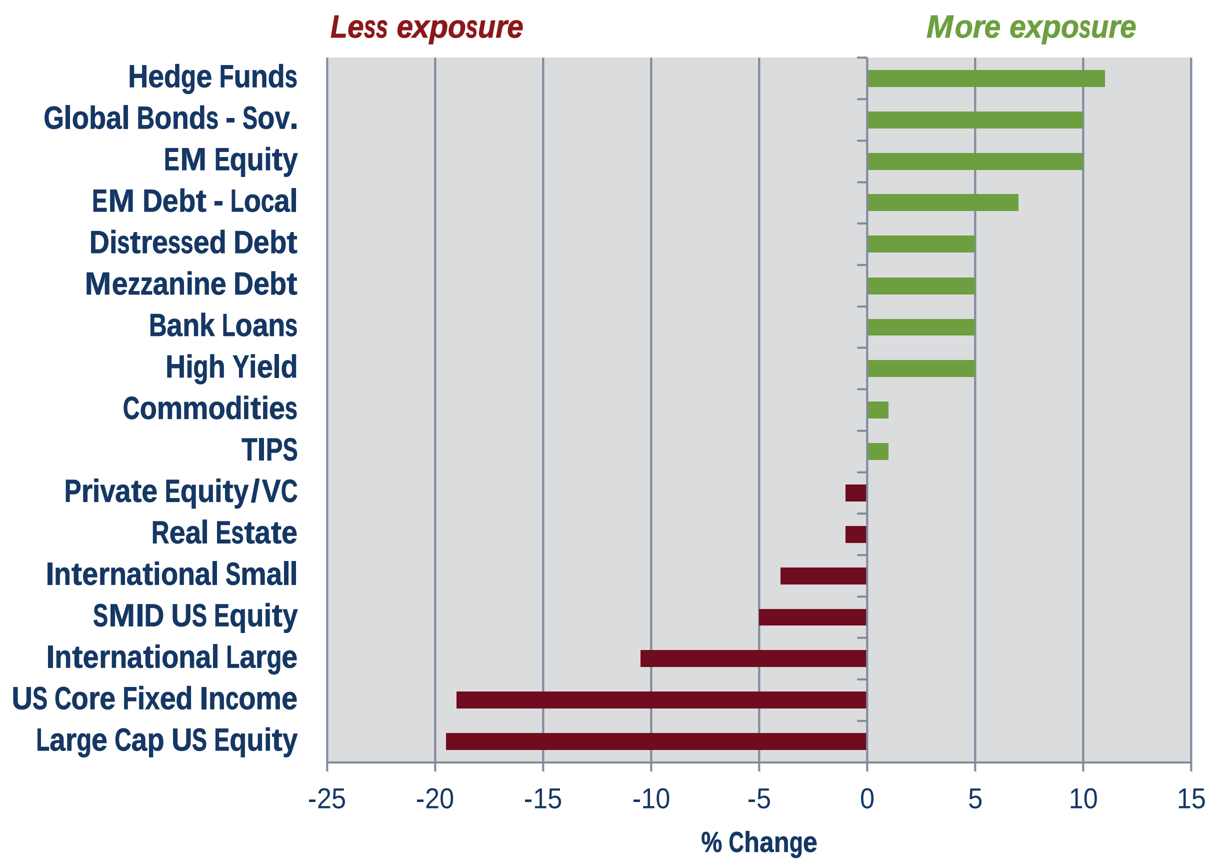
Risk-Diversifed Portfolio	
Expected 10 Year Return	
Mean Variance Optimizer Analysis	
Forecast 10 Year Return	***5.9***
Standard Deviation	8.8
Sharpe Ratio	*0.36*

* See appendix for details regarding Wurts' Capital Market Assumptions.

A RELATIVE COMPARISON

- The new portfolio has the same expected return, but achieves a **19% reduction** in the expected volatility of returns.
- Some asset class exposures are eliminated completely. Likewise, the risk-diversified mix includes new asset classes.

Relative to the current mix, the risk-diversified mix has:

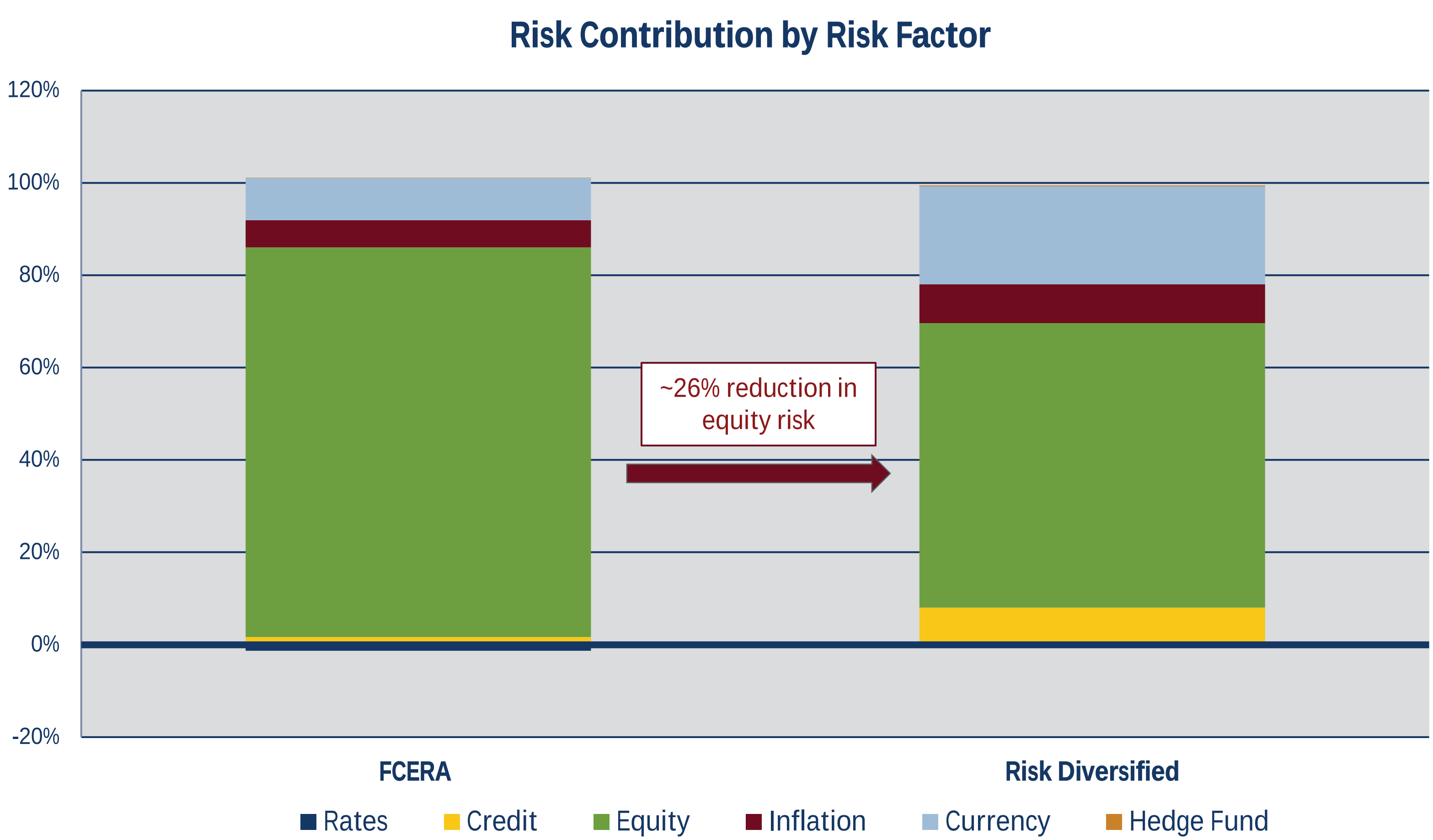


New Asset Classes*
+ Global Sovereign Bonds
+ High Yield
+ Bank Loans
+ Mezzanine Debt
+ Distressed Debt

Eliminated Asset Classes
- U.S. Core Fixed Income
- SMID Equity
- International Small Cap

* Note that this distinction applies to the policy allocation. FCERA has exposure to these asset classes, either as a subset of the private equity allocation, or as a result of the underlying tactical allocations made by investment managers.

DIVERSIFICATION OF RISK FACTORS



Because of the need to earn a reasonable return we still need a significant exposure to the equity risk factor. Still, the direct exposure to equities is meaningfully reduced.

As of 6/30/2012. Analysis performed using Barra.

CAN WE FURTHER MITIGATE EQUITY RISK?

Current Mix

- Asset-diversified but not risk-diversified.
- A good portfolio if economic prosperity continues indefinitely, but susceptible to large drawdowns because of high equity exposure.

Risk-Diversified Mix

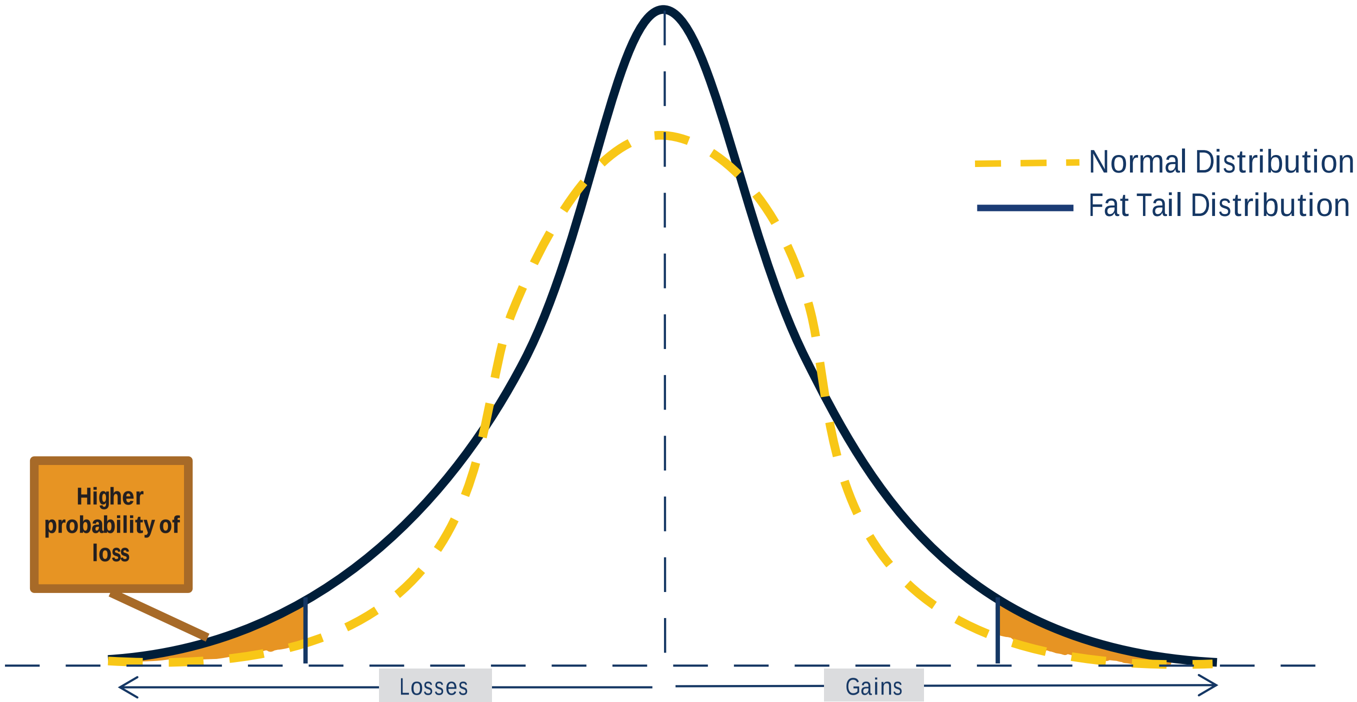
- Achieves greater diversification of risk factors.
- Should mitigate the extent of large drawdowns by reducing the equity risk.

Risk-Diversified + Tail Risk Hedge

- Overlay the risk-diversified mix with a dedicated tail risk hedging program.
- Further mitigates the negative effects of large drawdowns.

WHAT IS TAIL-RISK?

Tail-risks are extreme events which translate into financial market moves of at least **three standard deviations** from their mean.



Dow Jones Industrial Average 1928 - 2012 (21,130 Trading Days)

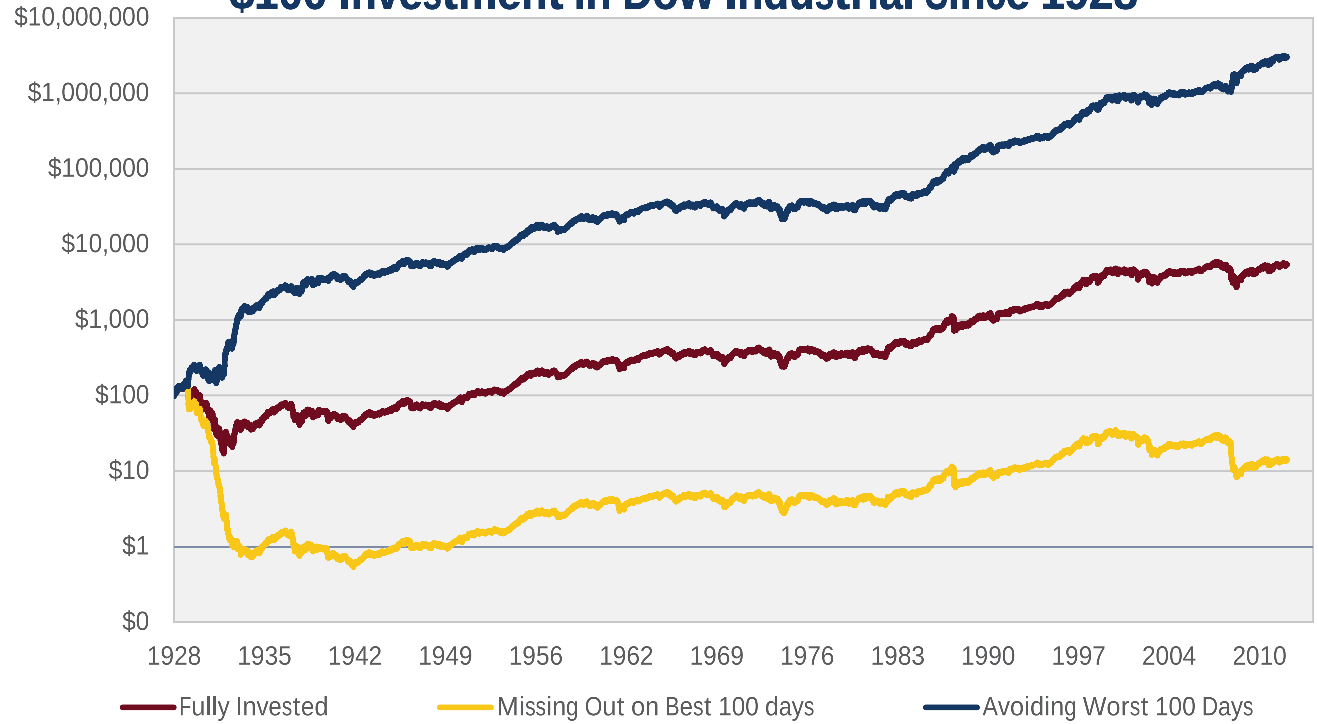
Daily Movement +/-	Implied Frequency of Occurence	Actual Occurence	Error Factor
>3%	57 days	1027 days	18 X
>4%	1 day	493 days	493 X
>8%	1 in 1,003,561,397,831,590 yrs.	48days	Large

Source: Dow Jones, Bloomberg, Wurts

From 1928 – 2012, a $100 investment in the Dow Jones Industrial would have:

- Increased by 5,349% by staying full invested throughout
- Decreased by 99.9% by missing the best 100 days
- Increased by 14,218% by avoiding the 100 worst days

$100 Investment in Dow Industrial Since 1928



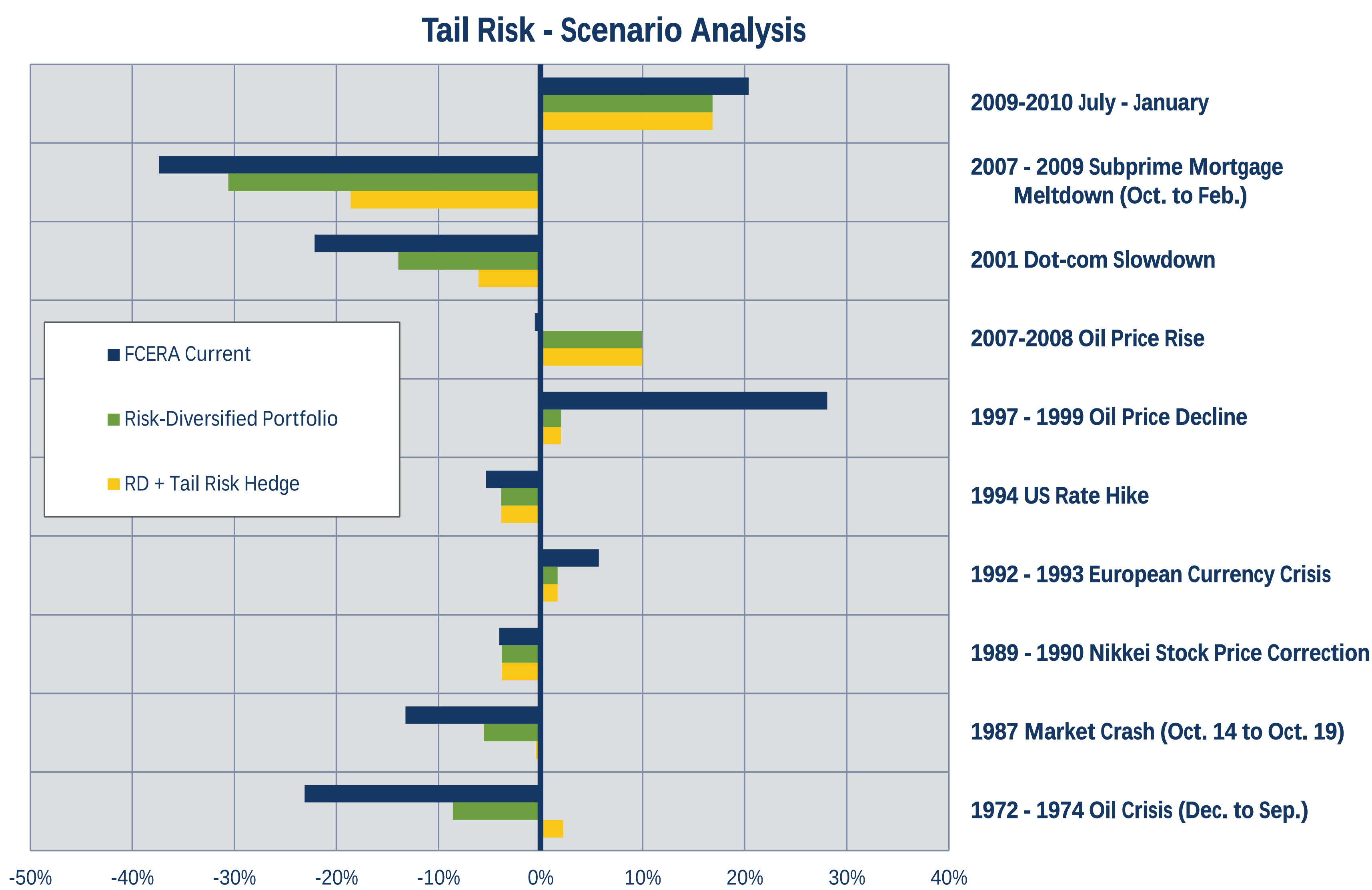
TAIL-RISK HEDGING

- Hedging is best thought of as insurance (reducing risk against a negative event)
  - Does not prevent the negative event, but reduces the event's impact
  - Occurs both in everyday life and in investment portfolios
    - Housing insurance
    - Car insurance
    - Life insurance
    - Tail-risk hedging

- Investment hedging is more complicated:
  - When to hedge (the premium is constantly changing)
  - Which instruments to use (asset class correlations changing)
  - What type of hedge

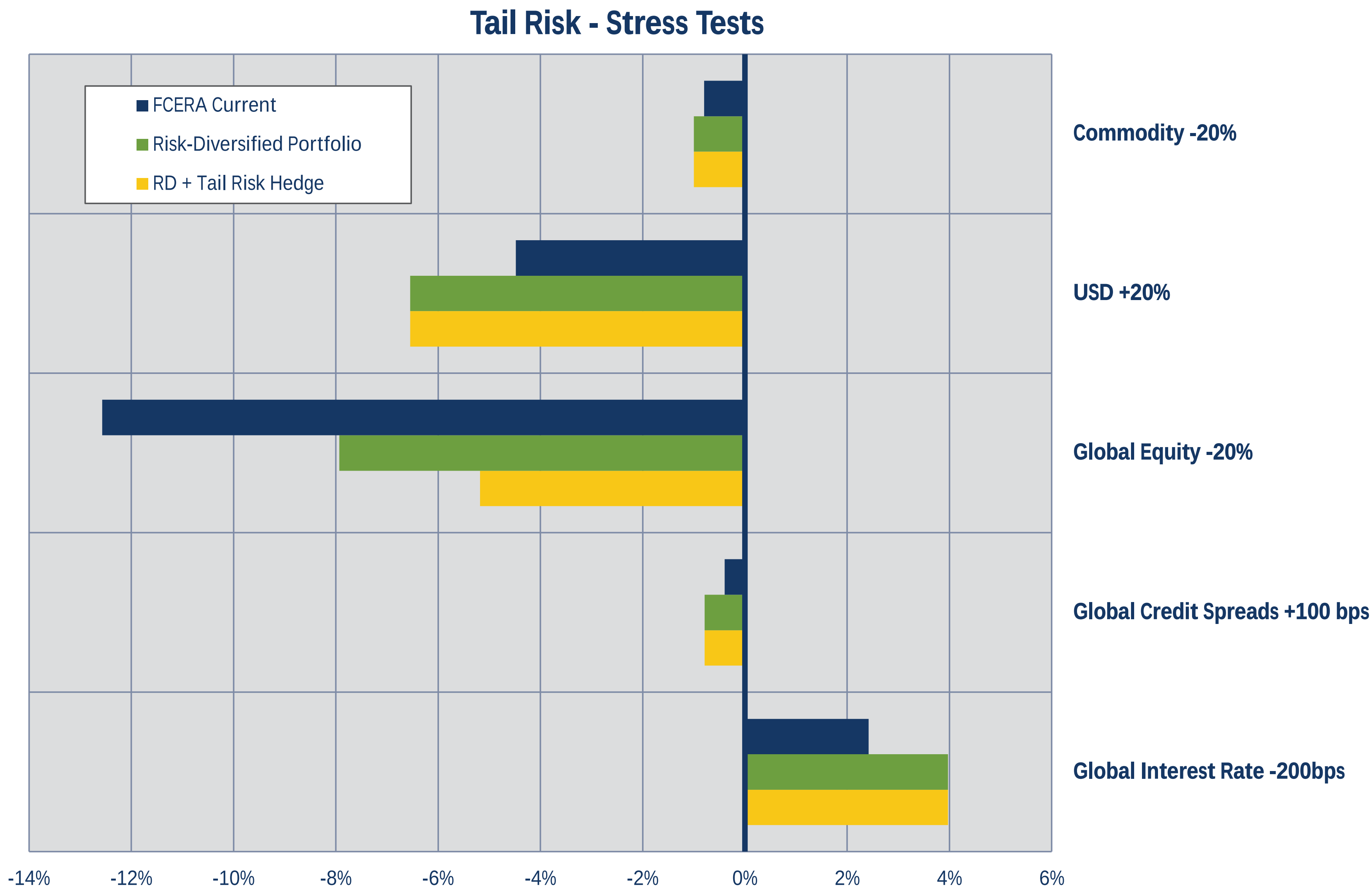
- Tail-risk hedging requires an experienced specialist to manage
  - Amount of information can be overwhelming
  - Experience is necessary to know when to enter and exit a hedge
  - Knowledge of what instruments and types of hedges to execute

TAIL-RISK: SCENARIO ANALYSIS



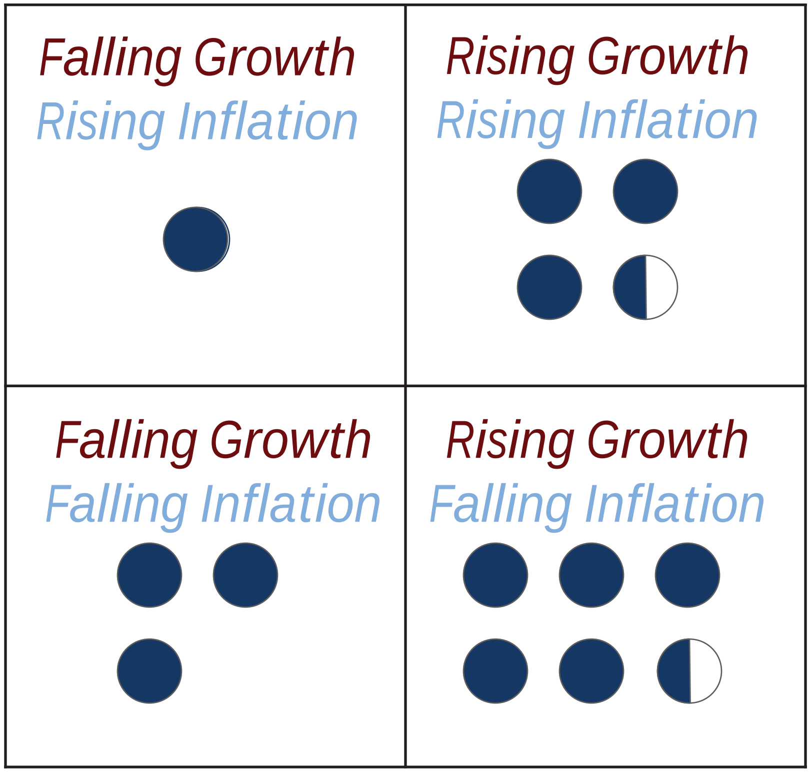
As of 6/30/2012. Analysis performed using BarraOne Risk Analytics.

TAIL-RISK: STRESS TESTS

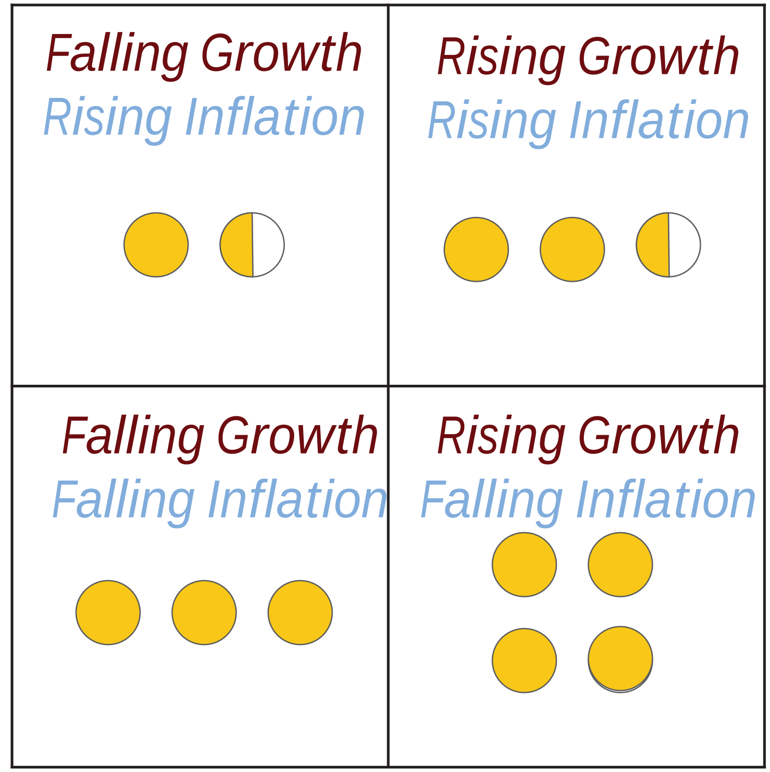


As of 6/30/2012. Analysis performed using BarraOne Risk Analytics.

FCERA Portfolio



Diversified Risk Portfolio



By holistically examining how different assets behave in different economic regimes, we can build a portfolio that relies less on economic growth and prosperity for success.

This is achieved not only through a focus on cash-flows, but also through greater geographic diversification. The portfolio is less directly impacted by the ebbs & flows of the U.S. economy.

STOCHASTIC MODELING

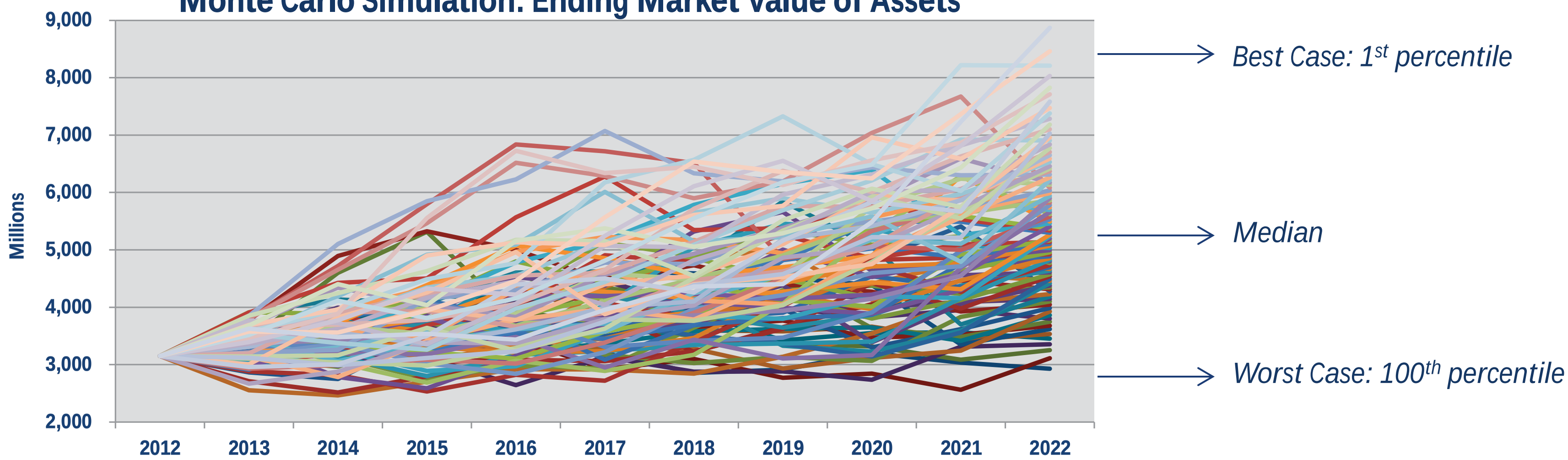
AN INTRODUCTION TO STOCHASTIC MODELING

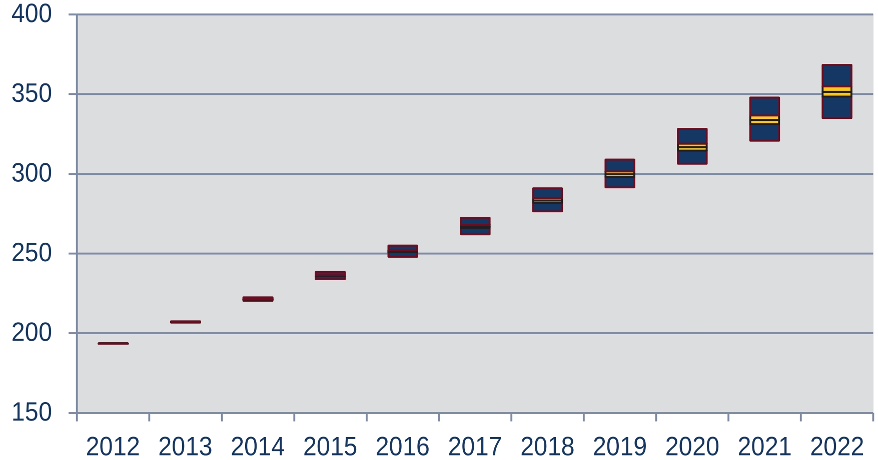
- Wurts & Associates partnered with Winklevoss Technologies to generate forecasts of FCERA's key metrics.

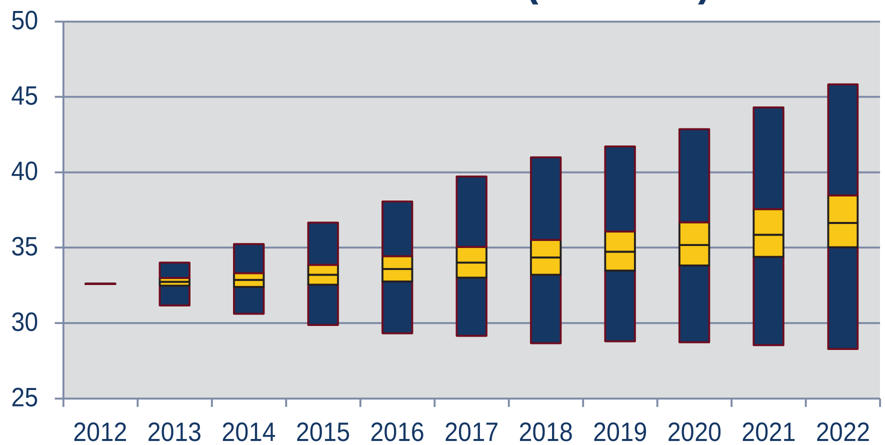
- The model incorporates:
  - Wurts & Associates' 2013 capital market assumptions
  - Liabilities as calculated by Segal.
  - FCERA's contribution & benefits policies

- By compiling the results, we can compare the 1^{st}, 25^{th}, 50^{th}, 75^{th}, & 100^{th} percentile outcome for each year, for each of the three strategies under consideration, with 5,000 independent trials.

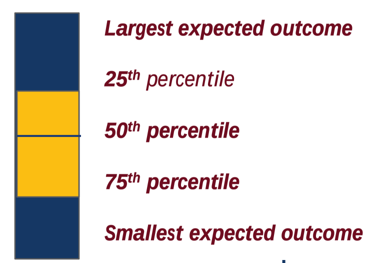
- **An important caveat:** *Each trial is a simulated random outcome; the randomness is determined by a normal distribution curve. As we have previously discussed, while this may help us determine a "most likely outcome", it understates the magnitude or probability of tail risk.*







- Regardless of the asset allocation, benefit payments are expected to increase.
- Benefit payments were $193.5 million for the 2012 plan year, $13.5 million more than the prior year.
- Depending on inflation and demographics, benefits are expected to be between $341 & $373 million in 2021 (roughly double the current levels).
- Member contributions are also independent of the asset allocation.
- Member contributions were $32.6 million for the 2012 Plan year and $32.3 million for the 2011 Plan year.
- The potential variance in member contributions is driven by future annuity costs as well as final year compensation (refer to slide 7 for the contribution policy).



STOCHASTIC MODELING: RESULTS

5 Year Forecast (2017)		FCERA Current Portfolio	Risk-Diversified Mix	Difference ($)	Difference (%)	Risk-Diversified + Tail Risk Hedge	Difference ($)	Difference (%)
Annual County Contributions	Median	$216	$216	$0	0%	$216	$0	0%
	Best Case	$0	$0	$0	0%	$0	$0	0%
	Worst Case	$429	$375	($54)	**-13%**	$336	($93)	**-22%**
Actuarial Funded Status	Median	80%	80%	n/a	0%	80%	n/a	0%
	Best Case	141%	133%		-8%	132%		-9%
	Worst Case	39%	49%		**10%**	57%		**18%**

10 Year Forecast (2022)		FCERA Current Portfolio	Risk-Diversified Mix	Difference ($)	Difference (%)	Risk-Diversified + Tail Risk Hedge	Difference ($)	Difference (%)
Annual County Contributions	Median	$236	$232	($4)	-2%	$230	($6)	-3%
	Best Case	$0	$0	$0	0%	$0	$0	0%
	Worst Case	$594	$536	($58)	**-10%**	$498	($96)	**-16%**
Actuarial Funded Status	Median	85%	86%	n/a	1%	86%	n/a	1%
	Best Case	245%	189%		-56%	184%		-61%
	Worst Case	43%	49%		**6%**	53%		**10%**
Present Value of Future County Contributions (10 years)	Median	$1,676	$1,676	$0	0%	$1,675	($1)	0%
	Best Case	$627	$658	$31	0%	$662	$35	0%
	Worst Case	$2,694	$2,513	($181)	**-7%**	$2,412	($282)	**-10%**

STOCHASTIC MODELING: OBSERVATIONS

County Contributions:

- The median outcomes are relatively consistent across all three portfolios.
- The worst-case scenarios are vastly improved, reducing the maximum potential contribution by 10-20%.

Funded Status:

While the actuarial funded status forecasting does differ under different investment portfolios, there are two reasons why it does not illustrate the range of outcomes effectively:

  - A poor investment return is amortized through actuarial smoothing policies.
  - A poor investment return is subsidized through higher contributions.

Still, we do observe some differences in the range of outcomes under each scenario.

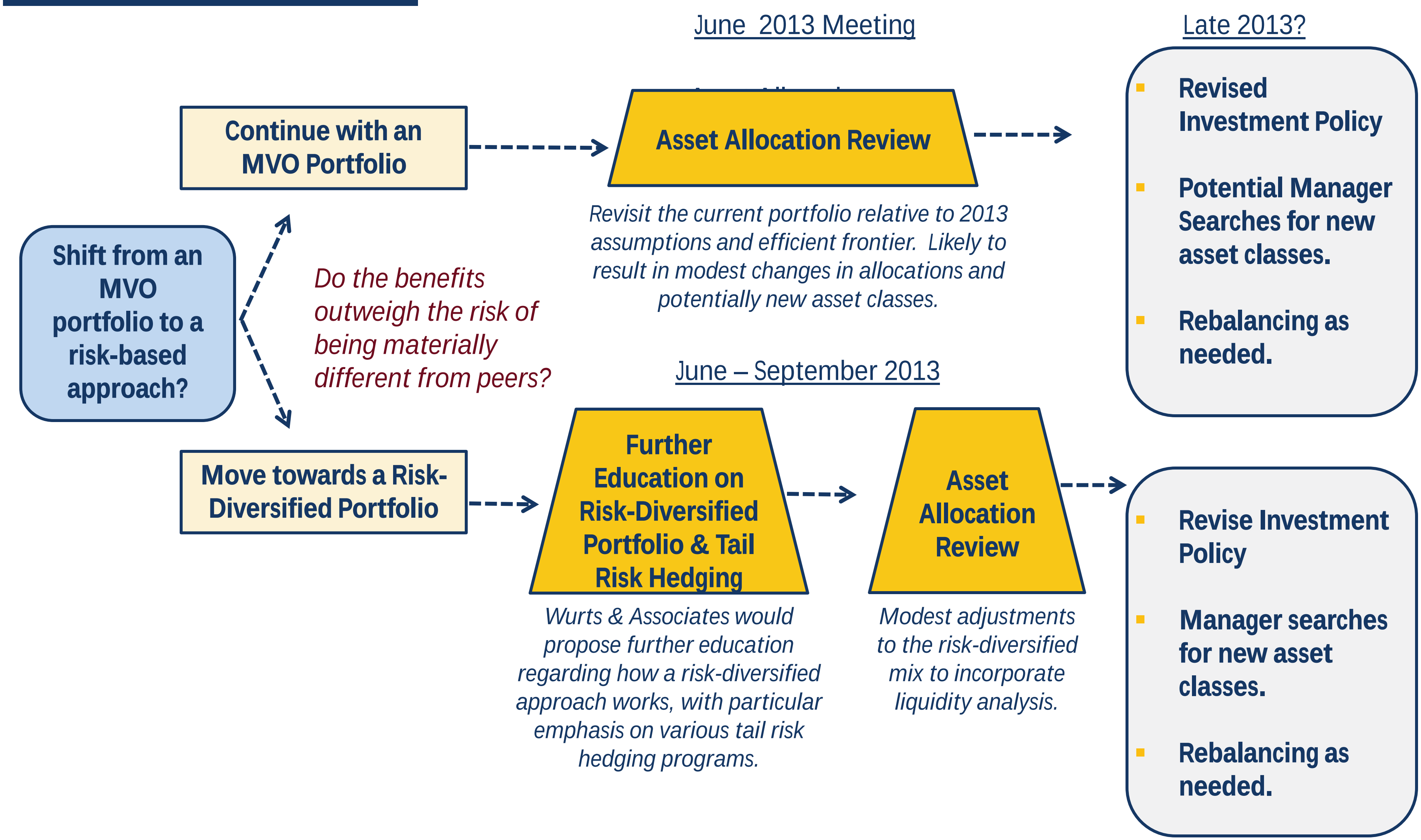
- Under worst-case scenarios, funded status improves anywhere from 8-17%.
- The median outcome under the different portfolios is relatively homogeneous.
- Because the risk-diversified portfolios benefit less from very large equity rallies, we do sacrifice some upside.

CONCLUSION & NEXT STEPS

PROS & CONS

Issue	FCERA Current Portfolio	Risk-Diversified Portfolio	Risk-Diversified Portfolio with Tail-Risk Hedge
Expected return	5.9%	5.9%	6.4% (8.5% increase likely offset by hedging costs)
Standard deviation of returns	10.83%	8.77% (19% reduction)	8.15% (25% reduction)
Diversifcation	Asset-diversified	Risk-Diversified. Reduction in equity-risk, focus on cash-flow investments, and greater geographic diversification	Risk-Diversified. Reduction in equity-risk, focus on cash-flow investments, and greater geographic diversification
Up-Market Capture	Strong performance in bull markets.	The portfolio should perform well, but not to the extent of the current portfolio.	The portfolio should perform well, but not to the extent of the current portfolio.
Down-Market Capture	Large drawdowns in bear markets.	Underperform by less than current portfolio.	The portfolio may experience some underperformance but the magnitude of drawdowns will be materially reduced.
Employer Contributions	Very volatile	Range of potential outcomes is reduced. The worst-case contribution level is reduced by 15% in 5 years and 11% in 10 years.	Range of potential outcomes is reduced. The worst-case contribution level is reduced by 20% in 5 years and 19% in 10 years.
Peer Risk	Minimal. Portfolio is relatively consistent with other SACRS counties.	Significant. Board may be uncomfortable with a new approach, which is materially different from peers. Risk of "failing unconventionally."	Significant. Board may be uncomfortable with a new approach, which is materially different from peers. Risk of "failing unconventionally."
Funded Status	Very volatile	The worst-case funded status expected to improve by 12% in 5 years and 8% in 10 years.	The worst-case funded status is expected to improve by 17% in 5 years and 15% in 10 years.

NEXT STEPS



June 2013 Meeting
Late 2013?
Shift from an MVO portfolio to a risk-based approach?
Continue with an MVO Portfolio
Move towards a Risk-Diversified Portfolio
Do the benefits outweigh the risk of being materially different from peers?
Asset Allocation Review
Revisit the current portfolio relative to 2013 assumptions and efficient frontier. Likely to result in modest changes in allocations and potentially new asset classes.
June – September 2013
Further Education on Risk-Diversified Portfolio & Tail Risk Hedging
Wurts & Associates would propose further education regarding how a risk-diversified approach works, with particular emphasis on various tail risk hedging programs.
Asset Allocation Review
Modest adjustments to the risk-diversified mix to incorporate liquidity analysis.
Revised Investment Policy
Potential Manager Searches for new asset classes.
Rebalancing as needed.
Revise Investment Policy
Manager searches for new asset classes.
Rebalancing as needed.

SAMPLE ASSET ALLOCATION STUDY

ASSET ALLOCATION STUDY

Sample

January 2013

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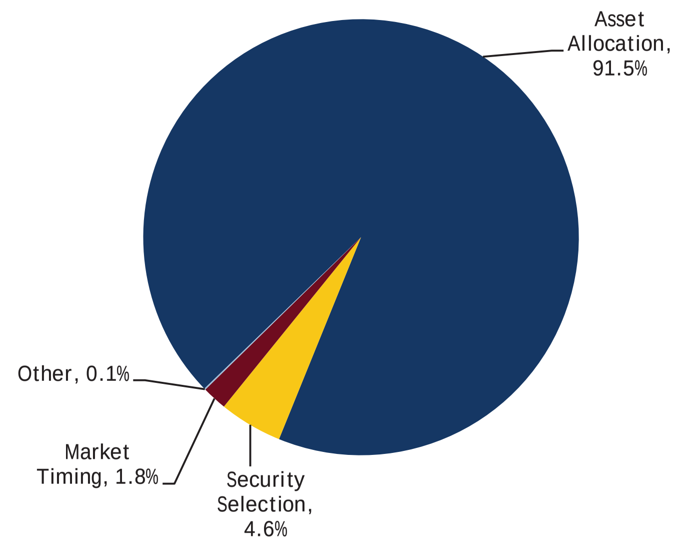
Asset allocation drives the bulk of the variation in portfolio returns over time.

Percent of Variation Explained



Academic Support:

- Gary P. Brinson, L. Randolph Hood, and Gilbert L. Beebower. "Determinants of Portfolio Performance". Financial Analysts Journal, July/August 1986.
- Gary P. Brinson, Brian D. Singer, and Gilbert L. Beebower. "Determinants of Portfolio Performance II: An Update". Financial Analysts Journal, 47, 3 (1991).
- Roger G. Ibbotson and Paul D. Kaplan. "Does Asset Allocation Policy Explain 40%, 90%, or 100% of Performance?" Financial Analysts Journal, January/February 2000.

Source: Brinson, Singer & Beebower: Determinants of Portfolio Performance II: An Update

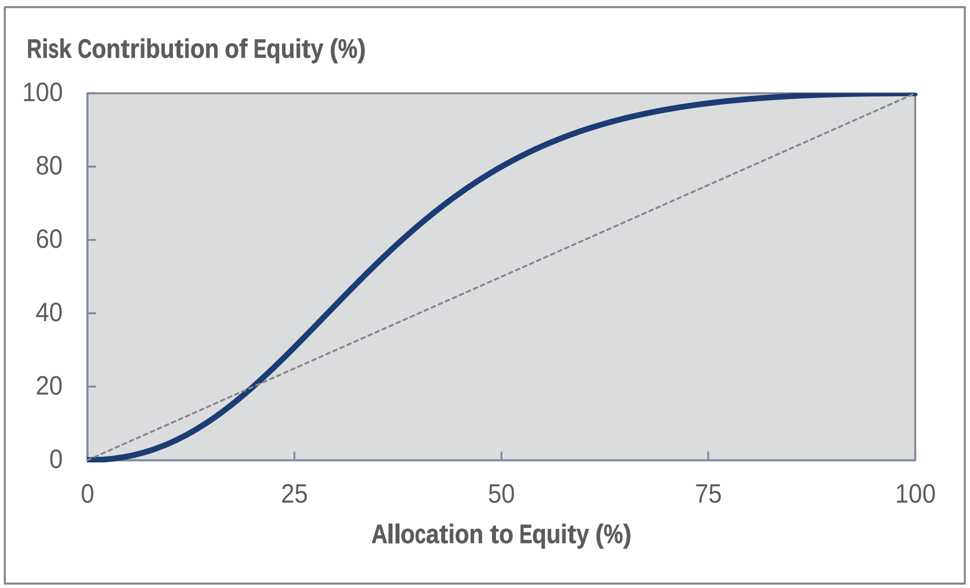
INVESTMENT APPROACH

- Focus on Un-Systematic Risks (Active Management)
  - Short term focused
  - Embracing security specific idiosyncratic risks
  - Proven to be unreliable and randomly successful
  - Nearly impossible for fiduciaries to fully understand and follow; very little transparency

- Focus on Systematic Risks (Asset Allocation)
  - Long term focused, but with short term awareness
  - Embracing market forces without security specific risk
  - Far more reliable than active management
  - Easier for fiduciaries to understand and follow strategies; 100% transparency into process

- The Equity/Fixed Income allocation is the *single most important decision* for public market portfolios.
  - Equities dominate a portfolio's risk exposure (see illustration below), and should be inextricably tied to an entity's risk tolerance
  - Should be analyzed through a long term valuation & risk premium framework

Risk Contribution of Equity at Various Allocations Levels



Note: The illustration above shows a simple two-asset portfolio and ignores correlation effects. Assumed volatilities of 20% for equity and 10% for fixed income.

Source: *At Par with Risk Parity?* Samuel Kunz, CFA. CFA Institute Conference Proceedings Quarterly, September 2011, Vol. 28, No. 3

ASSET ALLOCATION PHILOSOPHY

ASSET ALLOCATION PHILOSOPHY

Key Tenets of Wurts & Associates' Approach:

- Consideration of overall portfolio goals
- Asset class returns are driven by macroeconomic factors and valuations
- Portfolio design should not be made solely by historic risk and return modeling
- Macroeconomic sensitivities are considered, with a focus on global diversification

We view asset allocation not only through risk and return, but also through the various roles of asset classes as they relate to macroeconomic conditions.

Furthermore, we consider how risk factors associated with each asset class impact the true diversification of the portfolio.

THE ROLES OF ASSET CLASSES

Why do we invest in various asset classes?

What do we practically expect them to contribute to the portfolio over time?

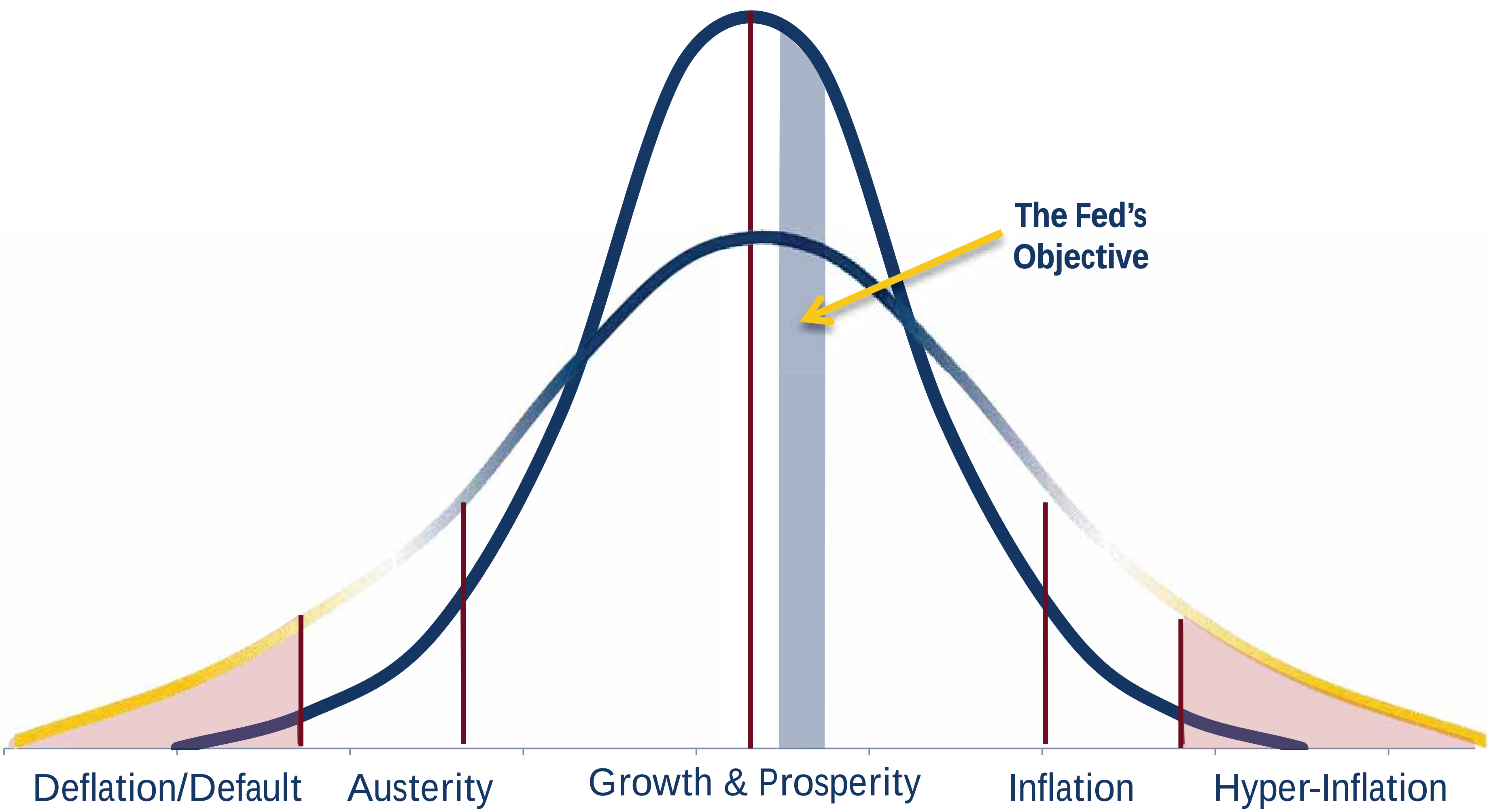
What will determine whether or not they serve the desired role?

	RETURN ROLES				DIVERSIFICATION & VOLATILITY ROLES			HOW MACRO OUTLOOK/ GDP AFFECTS ROLE	
	Benefit from GDP Growth	Earn Risk Premium	Produce Stable Income	Hedge Against Inflation	Low Absolute Volatility	Low Corr. To Other Assets	Reduce Portfolio Volatility	Elements of Return for Asset Class	Sensitivity of Role to GDP
Public Equities	High	Med. High	Low	Medium	None	Low	Low	PE's, Dividends, Earnings Growth	High
Private Equities	High	High	None	None	Low	Medium	Medium	PE's (exits), Financing, Opportunity Set	Med. High
Fixed (Treasury)	None	None	High	Low	High	Medium	High	Direct Link to Yields	Medium
Fixed (Credit)	Medium	Low	High	Low	Med. High	Medium	Med. High	Direct Link to Yields, Credit Spreads	Med. High
Hedge Funds (Perceived role)	None	Low	None	None	High	High	High	PE's, Credit Spreads, Fat Tails	Medium
Real Estate	Med. High	Medium	Med. High	High	Medium	Med. High	Medium	Unemployment, Vacancies, Cap Rates	High

MAGNITUDE HIGH MED. HIGH MEDIUM LOW NONE

ECONOMIC SENSITIVITY

POTENTIAL ECONOMIC OUTCOMES



PORTFOLIO CONSTRUCTION PROCESS

Strategic Long-term Policy Development

Client-Specific Considerations

- Time horizon
- Liquidity
- Stated return objectives
- Risk tolerance

Mean – Variance Analysis

- Forward looking asset class forecasts
- Historical correlations

Proprietary Scenario Analysis

- Current capital market valuations
- P/Es, interest rates, spreads, growth forecasts, inflation

Risk Factor Based Analysis

- Decomposition of risk factors in existing asset classes relative to baseline policy

Opportunistic Beta Strategies

- Dislocations in capital markets creating unique opportunities

Tactical Tilts

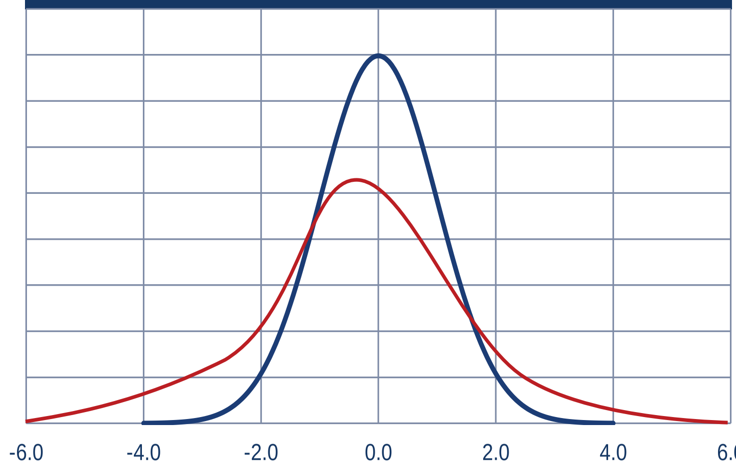
CLIENT-SPECIFIC CONSIDERATIONS

- What is the time-horizon?
- What are the liquidity constraints?
- What are the implicit or explicit liabilities?
- Is there an actuarial assumed rate of return?
- What is the willingness to take on risk?

MEAN VARIANCE OPTIMIZATION

- We employ Mean Variance Optimization (“MVO”) to integrate our capital market assumptions and project a policy return and standard deviation.
- MVO is an elegant mathematical formula but by itself is not well-suited to allocate assets in the real world.
  - Historic norms are typically used in assumptions.
  - Volatility fluctuates, particularly in the case of “fat tails.”
  - Correlations are not stable over time.
  - MVO assumes that the range of possible return is normally distributed (blue curve at right); unfortunately this assumption does not hold in the real world (red curve at right).

Normal versus Fat-Tailed Distribution



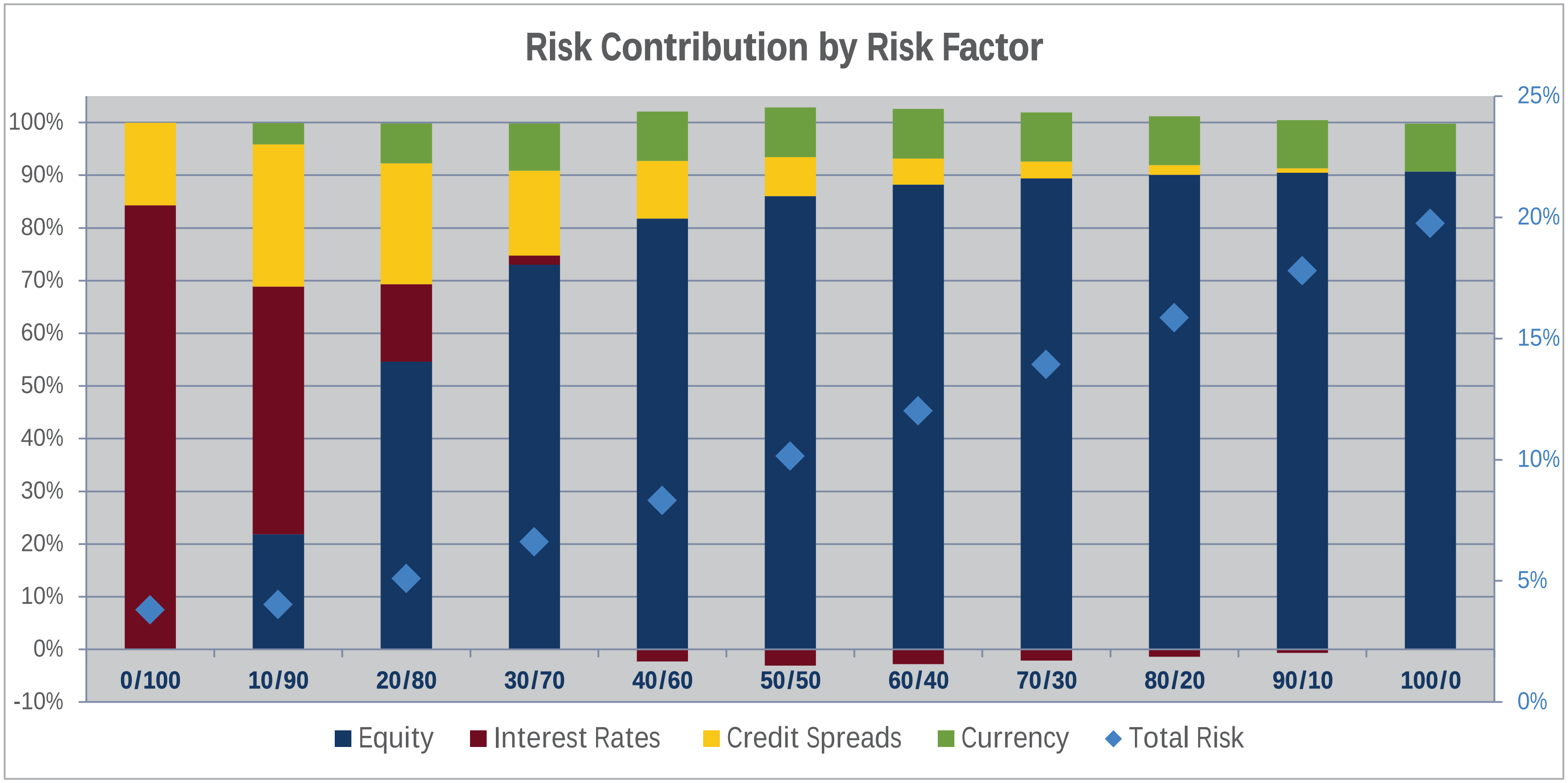
- For all of its shortcomings, MVO is still the most widely used tool in the industry.
- To address these issues, we view asset allocation through additional lenses:
  - Scenario Analysis
  - Risk Decomposition

SCENARIO ANALYSIS

- We subject the policy portfolios to a variety of asset valuation scenarios to estimate total portfolio drawdown risk.
- Wurts & Associates utilizes proprietary scenario analysis methodology to model the anticipated effects of various economic regimes (stagflation, strong economic growth and inflation) to confirm and validate our approach to economic diversification.
- Our proprietary scenario analysis methodology considers current valuation relative to potential future valuation based on well-established metrics.
- Additionally, we can examine how the portfolio would have behaved if we were to relive certain crises again (e.g. 2008 subprime meltdown, dot-com bubble, etc.)

Wurts Economic Scenario Analysis

10 Year Return Forecast						
Stagflation	4.2	4.3	4.1	4.4	5.0	4.4
Weak Economy	3.6	3.6	3.5	3.8	4.1	3.7
Average Economy	***5.3***	***5.5***	***4.9***	***5.6***	***6.1***	***5.5***
Strong	7.4	7.6	6.5	7.7	8.3	7.6
Range of Scenario Forecast	*3.8*	*4.0*	*3.0*	*3.9*	*4.2*	*3.9*
Economic Shock (1 year)	*-30.7*	*-31.7*	*-26.3*	*-31.9*	*-32.9*	*-31.6*
10 Year Real Return Forecast						
Stagflation	0.4	0.5	0.3	0.6	1.2	0.6
Weak Economy	1.3	1.3	1.2	1.5	1.8	1.4
Average Economy	*3.0*	*3.2*	*2.6*	*3.3*	*3.8*	*3.2*
Strong	4.3	4.5	3.4	4.6	5.2	4.5
Range of Scenario Forecast	*4.0*	*4.1*	*3.2*	*4.1*	*4.1*	*4.0*

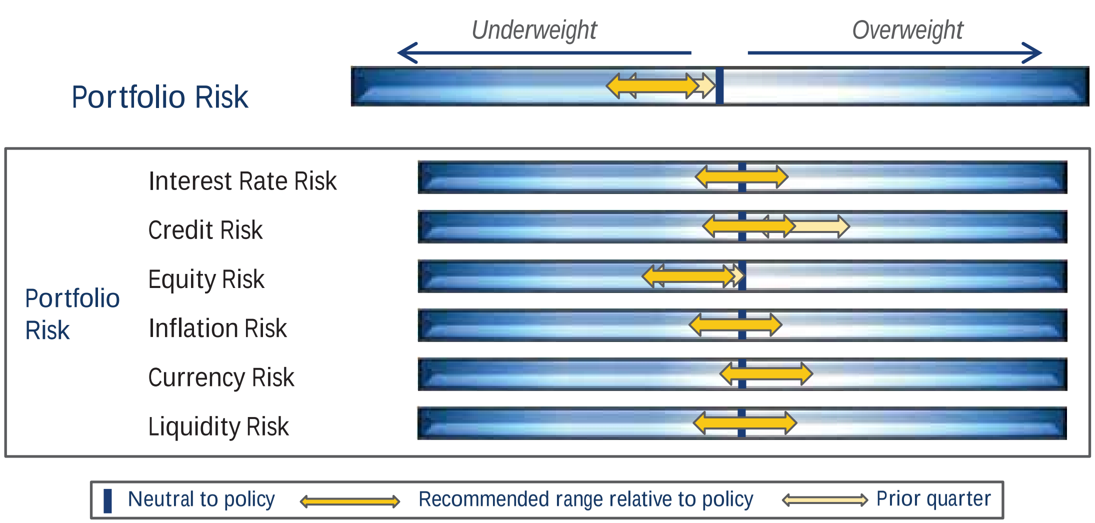


Note: The above analysis was performed utilizing BarraOne. A progression of simple two-asset class portfolios were modeled beginning with a 100% allocation to fixed income on the left through a 100% allocation to equities on the right. Index proxies were used for both asset classes: Barclays U.S. Universal (fixed income) and MSCI ACWI (equities).

RISK DECOMPOSITION, CONTINUED…

Interest Rate Risk	US Interest Rate Risk Developed (ex-US) Interest Rate Risk Emerging Market Interest Rate Risk
Credit Risk	Investment Grade Credit Risk High Yield Credit Risk Emerging Market Corporate Credit Risk
Equity Risk	US Equity Risk Developed (ex-US) Equity Risk Emerging Market Equity Risk Large/Small Cap Equity Risk Value/Growth Equity Risk
Inflation Risk	TIPS Risk Real Estate Risk Commodity Risk
Currency Risk	Developed (ex-US) Currency Risk Emerging Market Currency Risk

- Assets are driven by their exposure to various risk factors.
- Many asset classes carry similar risks. A portfolio that is diversified by asset classes may be diversified in name only.
- Analyzing risk factors provides a better understanding of the true drivers of risk within the portfolio.



OPPORTUNISTIC BETA STRATEGIES

- Wurts & Associates overlays our Capital Markets Research on the policy portfolio to determine if any strategic tilts are warranted or special opportunities exist.
- Given our heavy emphasis on understanding the economic environment and relative valuations, we may recommend modest tilts relative to the policy portfolio to improve returns.
  - Capitalization tilt within the equity portfolio
  - Heavier weighting towards credit
  - Overweight to certain regions of the world
- Special opportunities may not always be present, but we constantly look for them. Recent examples include:
  - Opportunistic allocation to distressed debt
  - Investment opportunities related to special programs like TALF

ASSET ALLOCATION STUDY

ASSET ALLOCATION MIXES

	Current Portfolio	Policy Targets	Conservative	Moderate	Aggressive	Alternative	CMA's (10 Yr)
Large Cap US Equity	26.6	24	20	22	18	21	*6.3*
Small/Mid Cap US Equity	9.4	10	6	6	5	10	*6.9*
Total Domestic Equity	***36.0***	***34***	***26***	***28***	***23***	***31***	
International Large	13.1	16	15	18	14	16	*8.0*
Emerging Markets	5.5	5	4	9	8	7	*9.6*
Total Int'l Equity	***18.6***	***21***	***19***	***27***	***22***	***23***	
Total Equity	***54.6***	***55***	***45***	***55***	***45***	***54***	
US Core Fixed Income	27.3	25	35	25	15	25	*2.0*
TIPS	2.8	5	5	5	5	5	*2.2*
Total Fixed Income	***30.1***	***30***	***40***	***30***	***20***	***30***	
Commodities	4.4	5	5	5	5	5	*4.3*
Real Estate	5.8	5	10	5	10	6	*5.6*
Total Real Assets	***10.2***	***10***	***15***	***10***	***15***	***11***	
Liquid Alts/HFoF	0.0	0	0	0	10	0	*5.4*
Private Equity/VC	3.6	5	0	5	10	5	*9.9*
Total Non-Public Investments	***3.6***	***5***	***0***	***5***	***20***	***5***	
Cash	1.5	0	0	0	0	0	*1.7*
Total Allocation	**100**	**100**	**100**	**100**	**100**	**100**	

	Current Portfolio	Policy Targets	Conservative	Moderate	Aggressive	Alternative
Expected 10 Year Return[1]	**5.7**	**5.9**	**5.1**	**6.0**	**6.5**	**5.9**
Mean Variance Optimizer Analysis						
Forecast 10 Year Return	***6.1***	***6.3***	***5.4***	***6.5***	***7.0***	***6.4***
Standard Deviation	10.6	10.9	8.7	11.2	11.2	10.9
Return/Std. Deviation	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*
1st percentile ret. 1 year	*-16.6*	*-17.0*	*-13.7*	*-17.4*	*-16.9*	*-17.0*
Sharpe Ratio	0.32	0.33	0.31	0.33	0.38	0.34
Wurts Economic Scenario Analysis						
10 Year Return Forecast						
Stagflation	4.2	4.3	4.1	4.4	5.0	4.4
Weak Economy	3.6	3.6	3.5	3.8	4.1	3.7
Average Economy	***5.3***	***5.5***	***4.9***	***5.6***	***6.1***	***5.5***
Strong	7.4	7.6	6.5	7.7	8.3	7.6
Range of Scenario Forecast	*3.8*	*4.0*	*3.0*	*3.9*	*4.2*	*3.9*
Economic Shock (1 year)	*-30.7*	*-31.7*	*-26.3*	*-31.9*	*-32.9*	*-31.6*
10 Year Real Return Forecast						
Stagflation	0.4	0.5	0.3	0.6	1.2	0.6
Weak Economy	1.3	1.3	1.2	1.5	1.8	1.4
Average Economy	*3.0*	*3.2*	*2.6*	*3.3*	*3.8*	*3.2*
Strong	4.3	4.5	3.4	4.6	5.2	4.5
Range of Scenario Forecast	*4.0*	*4.1*	*3.2*	*4.1*	*4.1*	*4.0*

1. Expected return is average of MVO forecast and “average economy” scenario forecast

AN ILLUSTRATION OF RISK DECOMPOSITION

	Current Policy	Mix 1	Mix 2	Mix 3	CMA's (10 Yr)
Large Cap US Equity	13.0	20.0	24.0	24.0	7.0
Small/Mid Cap US Equity	3.0	5.0	6.0	6.0	5.5
Total Domestic Equity	*16.0*	*25.0*	*30.0*	*30.0*	
International Large	11.5	17.0	20.0	20.0	7.6
International Small	0.0	0.0	0.0	0.0	6.4
Emerging Markets	2.5	8.0	10.0	10.0	8.6
Total International Equity	*14.0*	*25.0*	*30.0*	*30.0*	
Total Equity	*30.0*	*50.0*	*60.0*	*60.0*	
US Core Fixed Income	35.0	20.0	16.0	14.0	2.2
High Yield Fixed Income	0.0	3.0	4.0	3.0	5.7
Emerging Market Debt	0.0	2.0	0.0	3.0	5.8
TIPS	15.0	5.0	5.0	2.5	2.6
Total Fixed Income	*50.0*	*30.0*	*25.0*	*22.5*	
Commodities	0.0	5.0	5.0	2.5	5.4
Real Estate	0.0	5.0	10.0	5.0	6.0
Total Real Assets	*0.0*	*10.0*	*15.0*	*7.5*	
Liquid Alternatives/HFoFs	0.0	5.0	0.0	5.0	5.6
Private Equity/VC	0.0	5.0	0.0	5.0	10.0
Total Non-Public Investments	*0.0*	*10.0*	*0.0*	*10.0*	
Cash / Short-Term	*20.0*	*0.0*	*0.0*	*0.0*	1.9
Total Allocation	**100.0**	**100.0**	**100.0**	**100.0**	

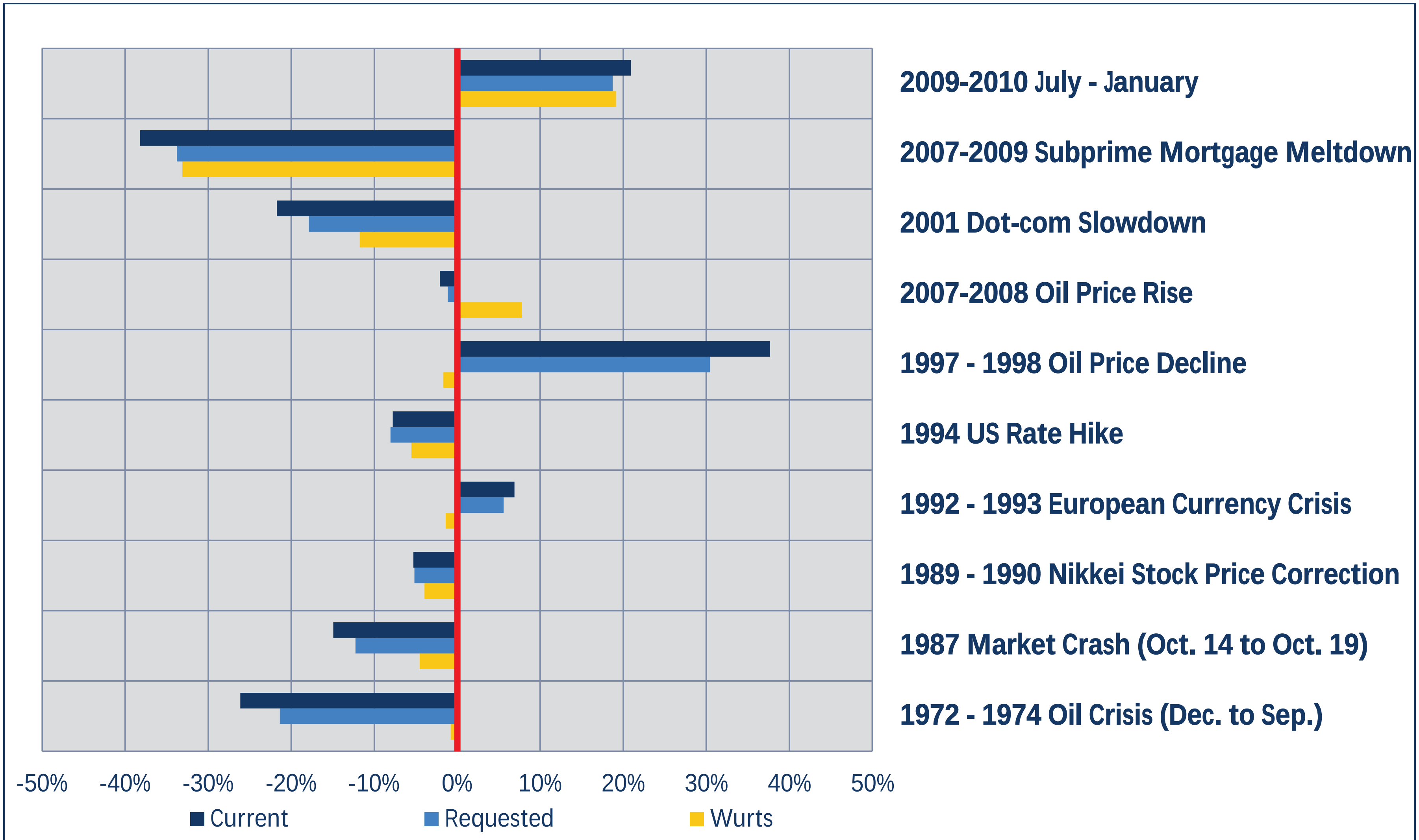
Risk Factor Decompostion*

Risk Factor	Current Policy	Mix 1	Mix 2	Mix 3
Equity	78%	79%	73%	73%
Interest Rates	5%	-1%	-1%	-1%
Credit Spreads	6%	2%	3%	3%
Currency	10%	8%	9%	9%
Inflation	0%	12%	16%	16%

- Risk factor decomposition analysis performed utilizing BarraOne*
- To model each asset class, the following indices were employed:
  - Large Cap US Equity (Russell 1000)
  - Small/Mid Cap US Equity (Russell 2000)
  - International (MSCI EAFE)
  - Emerging Markets Equity (MSCI EM)
  - US Core Fixed Income (Barclays US Aggregate)
  - High Yield Fixed Income (Barclays US Corporate High Yield)
  - Emerging Markets Debt (JPM EMBI Global)
  - TIPS (Barclays US Treasury TIPS)
  - Commodities (DJ UBS Commodity)
  - Real Estate (NFI ODCE)
  - Hedge Funds (HFRI Fund of Funds Composite)
  - Private Equity (Russell 3000 + 250 bps)

*Due to the complexity of running risk decomposition analysis across multiple portfolios, the results shown are for representative proxies.

SCENARIO ANALYSIS: DRAWDOWN MODELING



RISK DECOMPOSITION

RISK DECOMPOSITION

Asset Allocation of Representative Portfolios

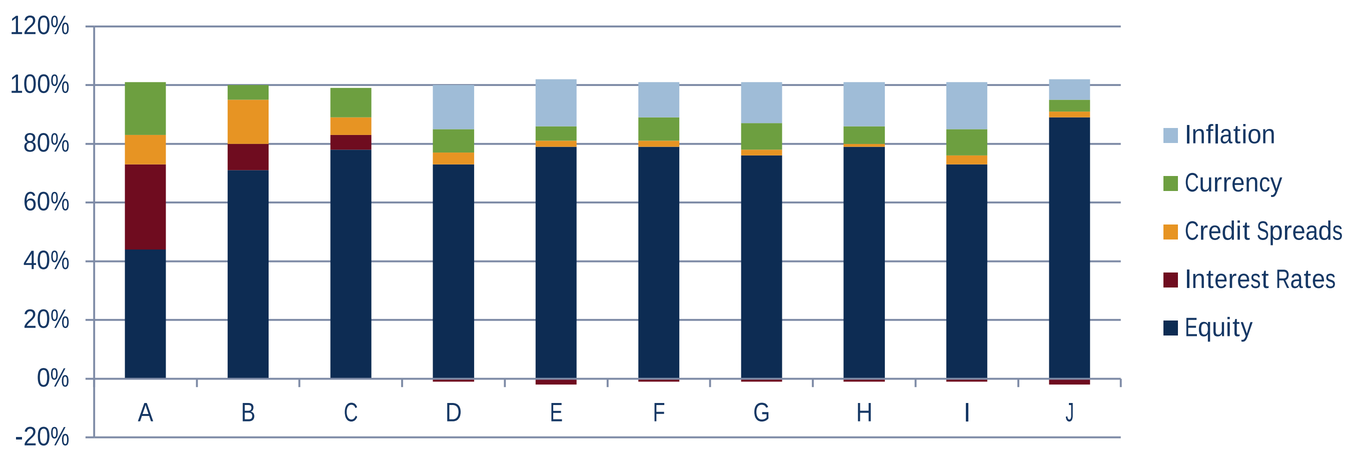
	A	B	C	D	E	F	G	H	I	J
Large Cap U.S. Equity	10	14	13	14	30	25	22	22	25	35
Small/Mid Cap U.S. Equity	0	4	3	4	4	0	5	5	7	13
International Large Cap	5	6	12	10	11	20	17	27	18	17
International Small Cap	0	0	0	3	0	0	2	0	0	0
Emerging Markets	0	1	3	5	4	5	8	0	10	2
Total Equity	*15*	*25*	*30*	*35*	*49*	*50*	*54*	*54*	*60*	*67*
U.S. Core Fixed Income	40	75	35	17	21	25	12	21	16	25
High Yield Fixed Income	0	0	0	4	0	0	3	0	4	0
Short Duration Fixed Income	15	0	20	0	0	0	0	0	0	0
Emerging Market Debt	10	0	0	4	0	0	0	0	0	0
TIPS	20	0	15	5	0	5	4	0	5	0
Total Fixed Income	*85*	*75*	*70*	*30*	*21*	*30*	*19*	*21*	*25*	*25*
Commodities	0	0	0	5	0	5	5	0	5	0
Real Estate	0	0	0	5	10	5	7	10	10	5
Total Real Assets	*0*	*0*	*0*	*10*	*10*	*10*	*12*	*10*	*15*	*5*
Liquid Alternatives/HFoF	0	0	0	15	20	5	15	5	0	0
Private Equity/VC	0	0	0	10	0	5	0	10	0	3
Total Non-Public Investments	*0*	*0*	*0*	*25*	*20*	*10*	*15*	*15*	*0*	*3*
Total Allocation	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Risk Factor Decomposition of Representative Portfolios

Risk Factor	A	B	C	D	E	F	G	H	I	J
Equity	44%	71%	78%	73%	79%	79%	76%	79%	73%	89%
Interest Rates	29%	9%	5%	-1%	-2%	-1%	-1%	-1%	-1%	-2%
Credit Spreads	10%	15%	6%	4%	2%	2%	2%	1%	3%	2%
Currency	18%	5%	10%	8%	5%	8%	9%	6%	9%	4%
Inflation	0%	0%	0%	15%	16%	12%	14%	15%	16%	7%

RISK DECOMPOSITION - CONTINUED

Asset Allocation of Representative Portfolios	A	B	C	D	E	F	G	H	I	J
Large Cap U.S. Equity	10	14	13	14	30	25	22	22	25	35
Small/Mid Cap U.S. Equity	0	4	3	4	4	0	5	5	7	13
International Large Cap	5	6	12	10	11	20	17	27	18	17
International Small Cap	0	0	0	3	0	0	2	0	0	0
Emerging Markets	0	1	3	5	4	5	8	0	10	2
Total Equity	*15*	*25*	*30*	*35*	*49*	*50*	*54*	*54*	*60*	*67*
U.S. Core Fixed Income	40	75	35	17	21	25	12	21	16	25
High Yield Fixed Income	0	0	0	4	0	0	3	0	4	0
Short Duration Fixed Income	15	0	20	0	0	0	0	0	0	0
Emerging Market Debt	10	0	0	4	0	0	0	0	0	0
TIPS	20	0	15	5	0	5	4	0	5	0
Total Fixed Income	*85*	*75*	*70*	*30*	*21*	*30*	*19*	*21*	*25*	*25*
Commodities	0	0	0	5	0	5	5	0	5	0
Real Estate	0	0	0	5	10	5	7	10	10	5
Total Real Assets	*0*	*0*	*0*	*10*	*10*	*10*	*12*	*10*	*15*	*5*
Liquid Alternatives/HFoF	0	0	0	15	20	5	15	5	0	0
Private Equity/VC	0	0	0	10	0	5	0	10	0	3
Total Non-Public Investments	*0*	*0*	*0*	*25*	*20*	*10*	*15*	*15*	*0*	*3*
Total Allocation	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**



APPENDIX

SUMMARY OF ASSUMPTIONS: RETURNS

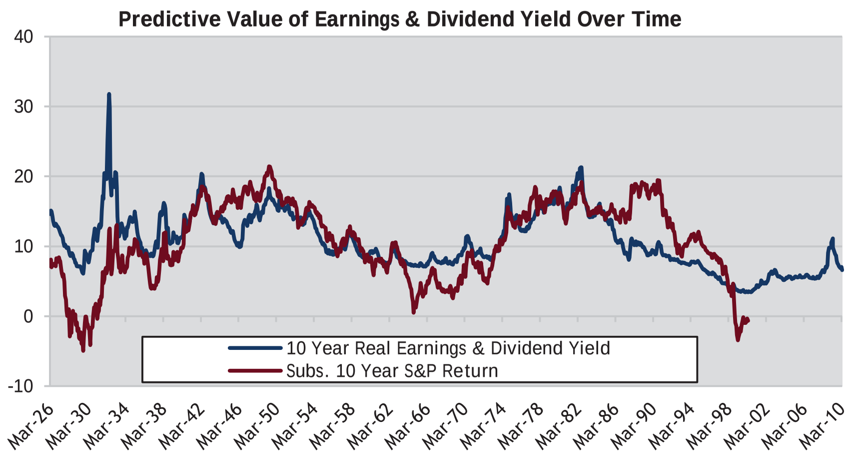
Asset Class	Index Proxy	2012 Ten Year Forecast	2013 Ten Year Return Forecast	2013 Ten Year Annual Standard Deviation Forecast	Change in Return Expectations '12-'13
Equities					
US Large	S&P 500	7.0	6.3	16.8	-0.7
US Small	Russell 2000	5.5	6.9	21.1	1.4
International Developed	MSCI EAFE	7.6	8.0	19.1	0.4
International Small	MSCI EAFE Small Cap	6.4	8.3	22.8	1.9
Emerging Markets	MSCI EM	8.6	9.6	27.6	1.0
Private Equity	Cambridge Private Equity	10.0	9.9	32.8	-0.1
Fixed Income					
Cash	30 Day T-Bills	2.7	1.7	1.0	-1.0
US TIPS	Barclays US TIPS Index	2.6	2.2	4.6	-0.4
Core Fixed Income	Barclays US Aggregate Bond	2.2	2.0	3.8	-0.2
Investment Grade Corp. Credit	Barclays US Credit	3.5	3.0	5.2	-0.5
High Yield Corp. Credit	Barclays High Yield	5.7	4.9	9.9	-0.8
Global Sovereign	Barclays Global Treasury ex US	2.9	2.2	3.5	-0.7
Global Credit	Barclays Global Credit	4.4	3.7	7.0	-0.7
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	5.8	5.0	12.8	-0.8
Emerging Markets Debt (Local)	JPM GBI EM Global Diversified	6.5	5.7	11.3	-0.8
Other					
Commodities	S&P GSCI	5.4	4.3	16.6	-1.1
Hedge Funds	HFR Fund of Funds	5.6	5.4	11.5	-0.2
Core Real Estate	NCREIF Property	6.0	5.6	10.9	-0.4
REITs	Wilshire REIT	6.0	5.6	21.8	-0.4
Inflation	Blend	2.7	2.6		-0.1

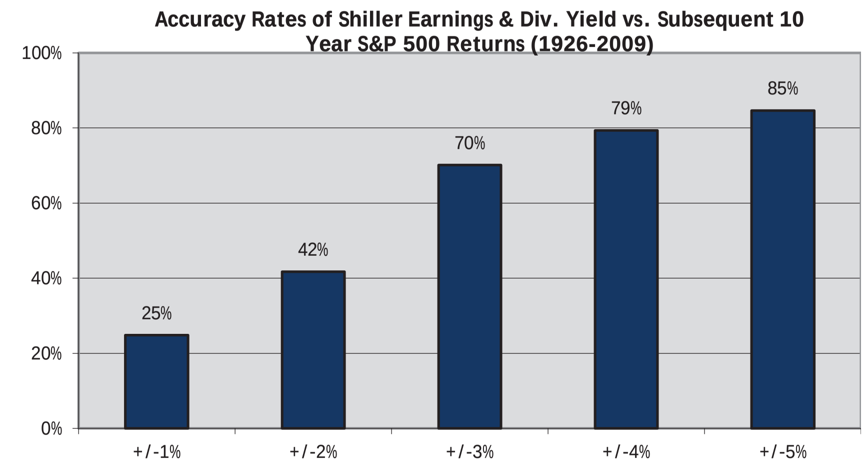
Estimated returns are gross of manager fees.
Historic standard deviations are based on the last 20 years or since inception of the index if 20 years of data is not available.
Hedge Funds' standard deviations was subjectively increased 50% in order to more accurately reflect the volatility of this asset class.
We apply our US Small Sharpe ratio estimate of 0.25 to our Private Equity return forecast to calculate a standard deviation for Private Equity.
Core Real Estate standard deviation was subjectively assumed to be 50% of the REIT standard deviation.

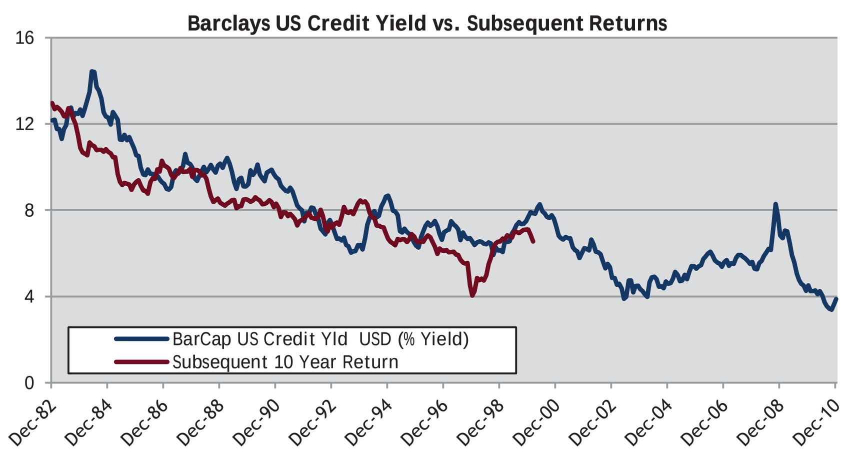
	S&P 500	Russell 2000	MSCI EAFE	MSCI EAFE Small Cap	MSCI EM	Private Equity	Cash	US TIPS	Core Fixed Income	Investment Grade Corporate Credit	High Yield Corporate Credit	Global Sovereign	Global Credit	Emerging Market Debt	Emerging Market Debt Local	Commodities	Hedge Funds	Core Real Estate	REITS	Inflation
S&P 500	1.0																			
Russell 2000	0.8	1.0																		
MSCI EAFE	0.8	0.7	1.0																	
MSCI EAFE Small Cap	0.8	0.8	0.9	1.0																
MSCI EM	0.7	0.7	0.8	0.9	1.0															
Private Equity	0.2	0.1	0.3	0.2	0.2	1.0														
Cash	0.1	0.0	0.0	-0.1	-0.1	0.1	1.0													
US TIPS	0.0	0.0	0.1	0.2	0.1	-0.2	-0.1	1.0												
Core Fixed Income	0.1	-0.1	0.0	0.1	0.0	-0.1	0.1	0.7	1.0											
Investment Grade Corporate Credit	0.3	0.2	0.3	0.4	0.2	-0.1	0.0	0.7	0.9	1.0										
High Yield Corporate Credit	0.6	0.6	0.6	0.7	0.6	0.1	-0.1	0.3	0.2	0.5	1.0									
Global Sovereign	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0.2	0.4	0.7	0.6	0.0	1.0								
Global Credit	0.5	0.4	0.6	0.7	0.6	0.0	-0.1	0.6	0.6	0.8	0.7	0.3	1.0							
Emerging Market Debt	0.5	0.5	0.5	0.6	0.7	0.0	0.0	0.4	0.4	0.5	0.5	0.2	0.8	1.0						
Emerging Market Debt Local	0.6	0.6	0.8	0.7	0.8	0.0	0.0	0.4	0.3	0.5	0.6	0.0	0.8	0.7	1.0					
Commodities	0.3	0.3	0.4	0.5	0.3	0.1	0.0	0.3	0.0	0.1	0.3	-0.1	0.4	0.2	0.4	1.0				
Hedge Funds	0.6	0.6	0.6	0.7	0.7	0.3	0.1	0.1	0.1	0.3	0.5	0.0	0.6	0.6	0.6	0.4	1.0			
Core Real Estate	0.0	0.0	0.0	0.0	0.0	0.6	0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	0.0	-0.1	0.1	0.1	1.0		
REITS	0.6	0.6	0.5	0.6	0.5	0.0	0.0	0.2	0.1	0.3	0.6	0.0	0.5	0.4	0.6	0.2	0.3	0.0	1.0	
Inflation	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-0.2	-0.1	0.1	-0.1	0.0	0.1	0.1	0.3	0.2	0.1	0.1	1.0

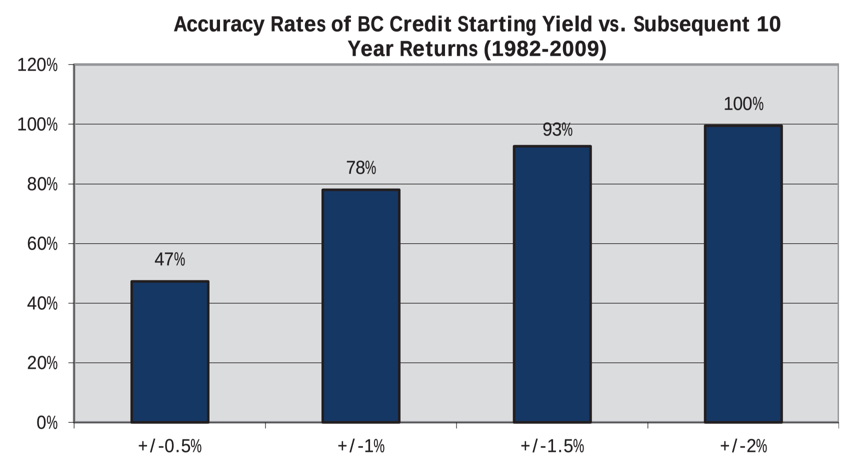
Note: Correlation assumptions are based on historical observations

WHAT'S THE RELIABILITY OF BETAS?







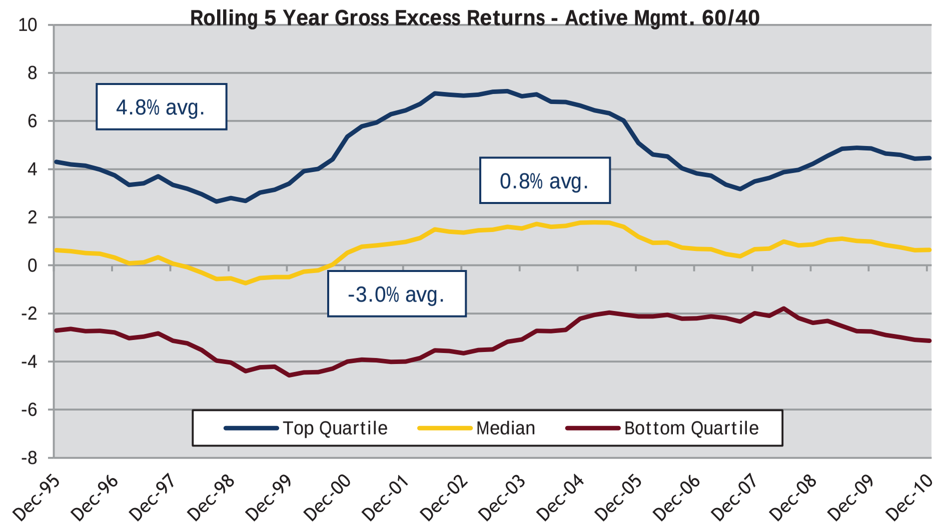


The Equity/Fixed Allocation is the Single Most Important Decision for Public Market Portfolios

- Should be analyzed through a long term valuation & risk premium framework
- Most reliably done through PE ratios, dividends, and yields to maturity

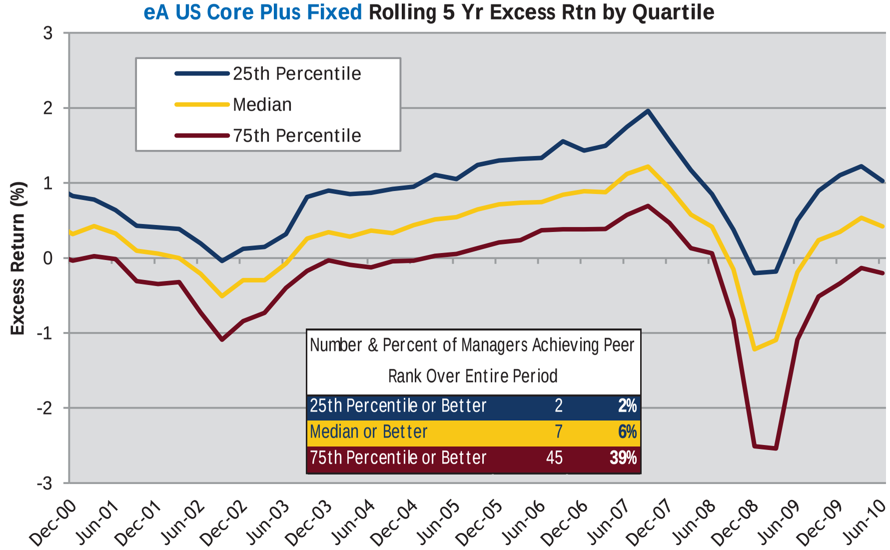
WHAT'S THE RELIABILITY OF "ALPHA?"

What people think they're getting with active management

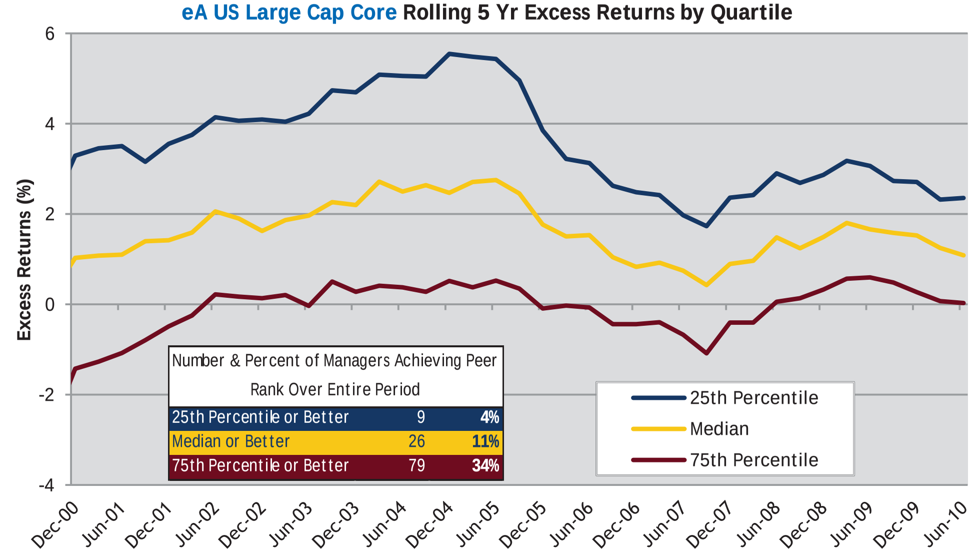


How likely they are to get it...*not very!*

eA US Core Plus Fixed Rolling 5 Yr Excess Rtn by Quartile

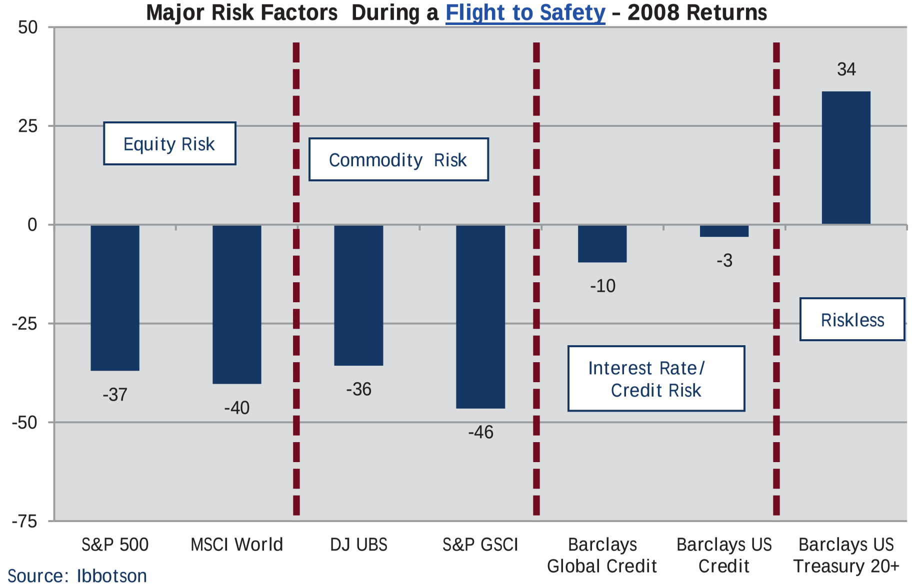


eA US Large Cap Core Rolling 5 Yr Excess Returns by Quartile



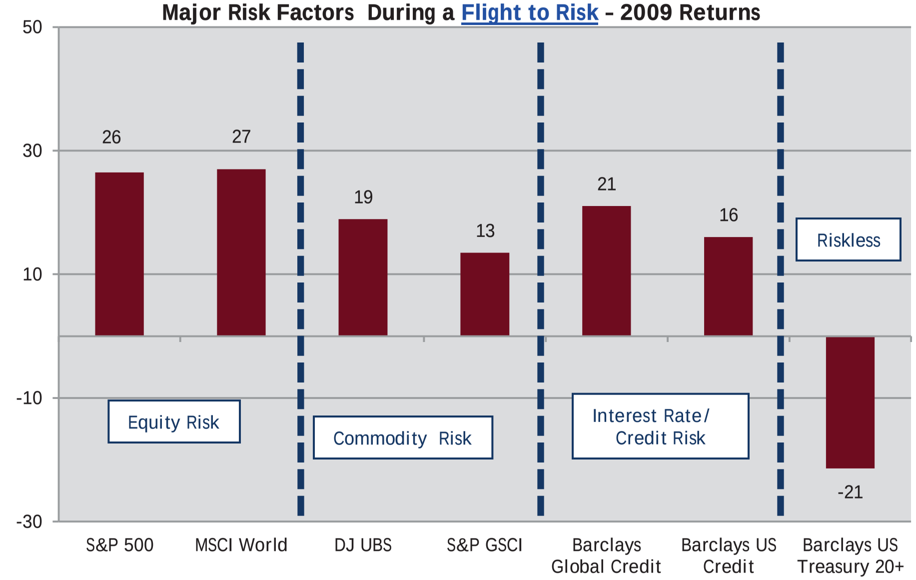
MACRO FACTORS DRIVE THE BULK OF DIVERSIFICATION

Major Risk Factors During a Flight to Safety - 2008 Returns



Source: Ibbotson

Major Risk Factors During a Flight to Risk - 2009 Returns

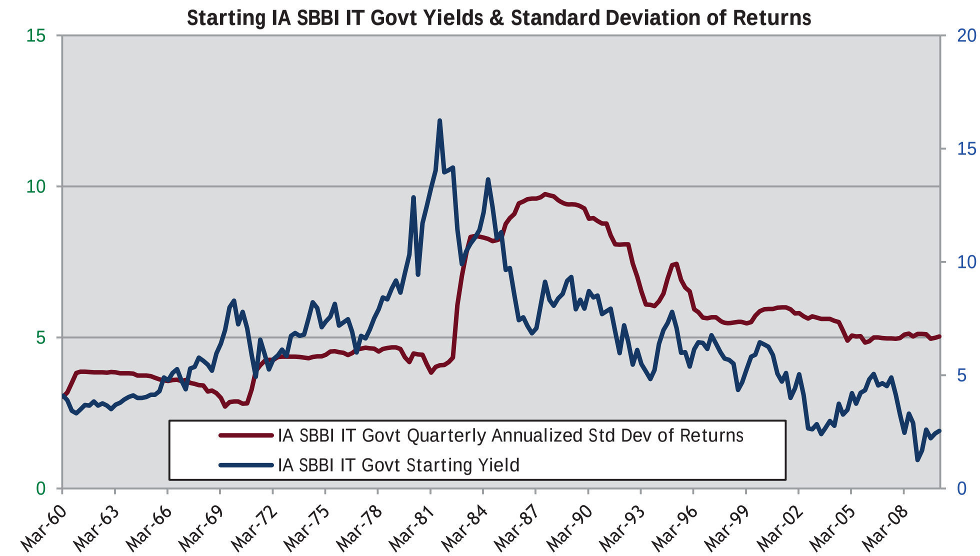


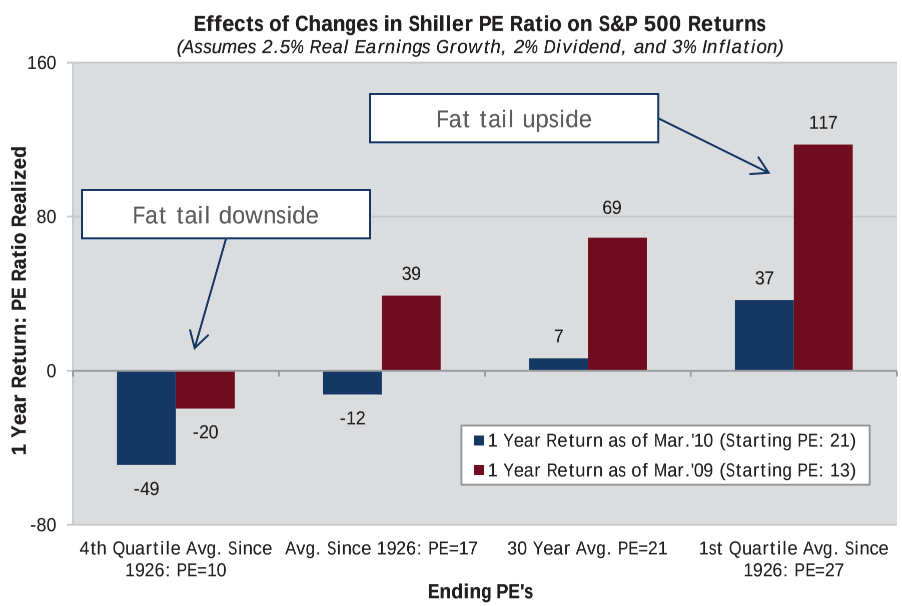
RISK & DOWNSIDE ARE FUNCTIONS OF VALUATIONS, NOT HISTORY

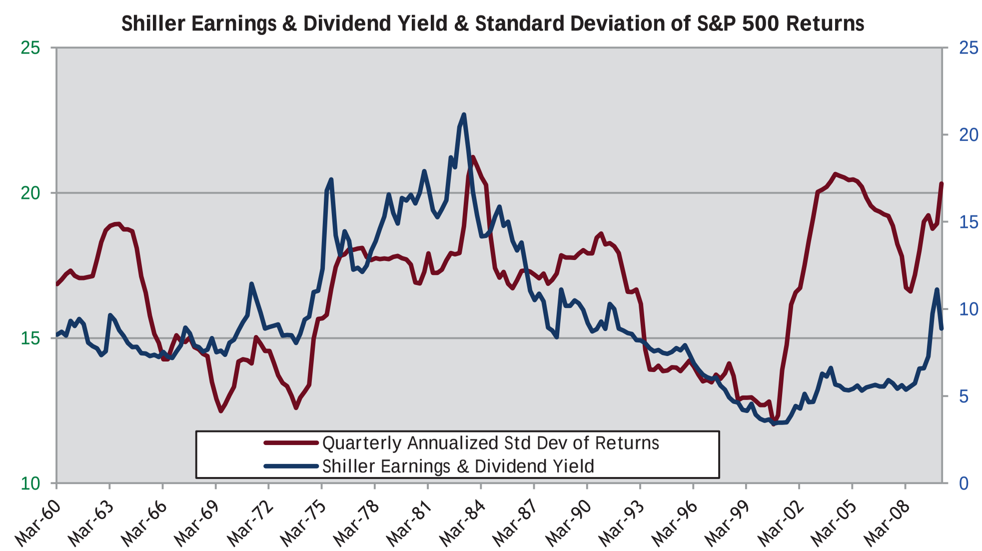
Historic norms are typically used in assumptions

The fluctuating nature of volatility makes mean variance optimization ("MVO") forecasts and optimizations unreliable

This is especially true in the case of "fat tails"





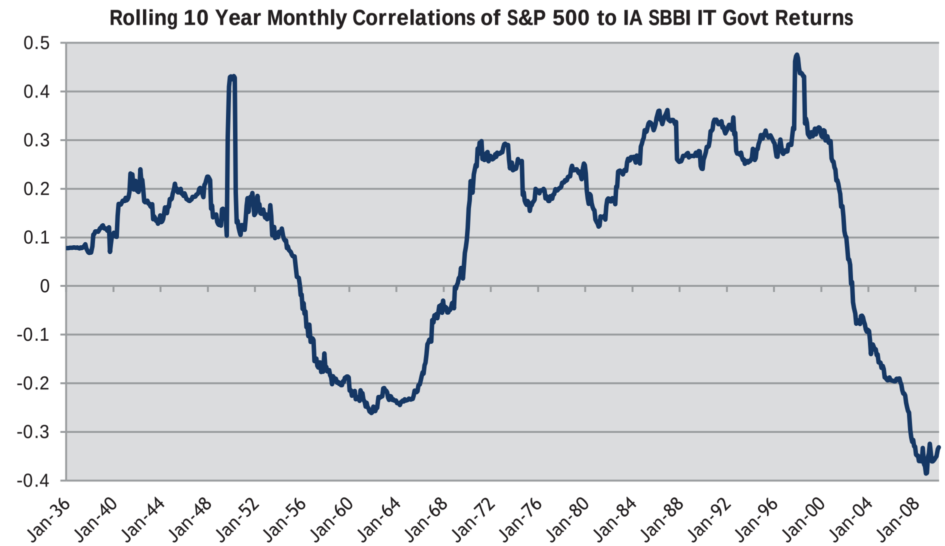


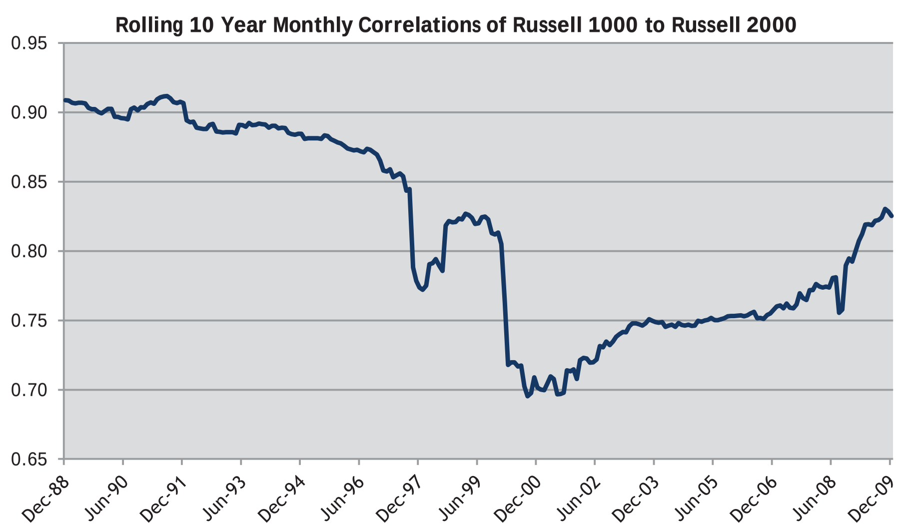
CORRELATIONS, THE BASIS OF DIVERSIFICATION, FLUCTUATE

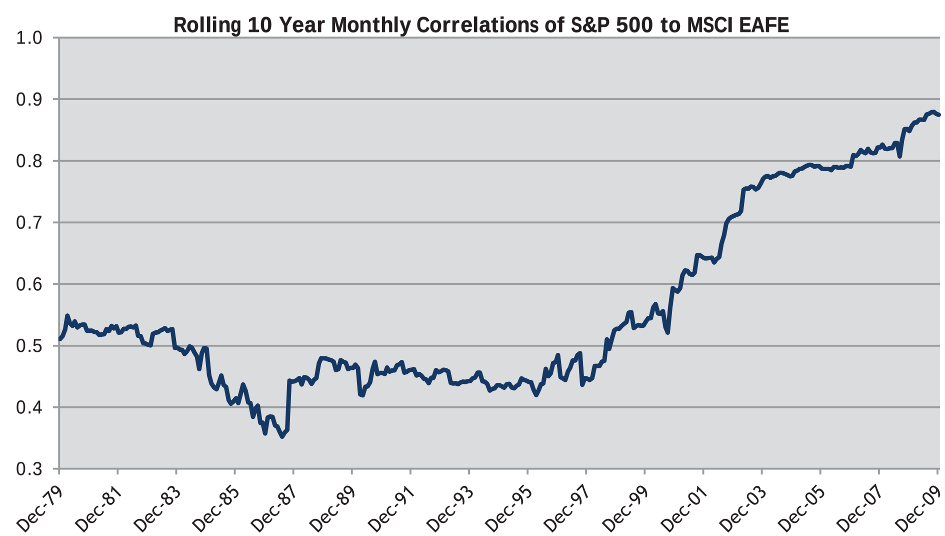
If correlations hold true over time, diversification is achieved on a monthly basis

Unfortunately, they don't

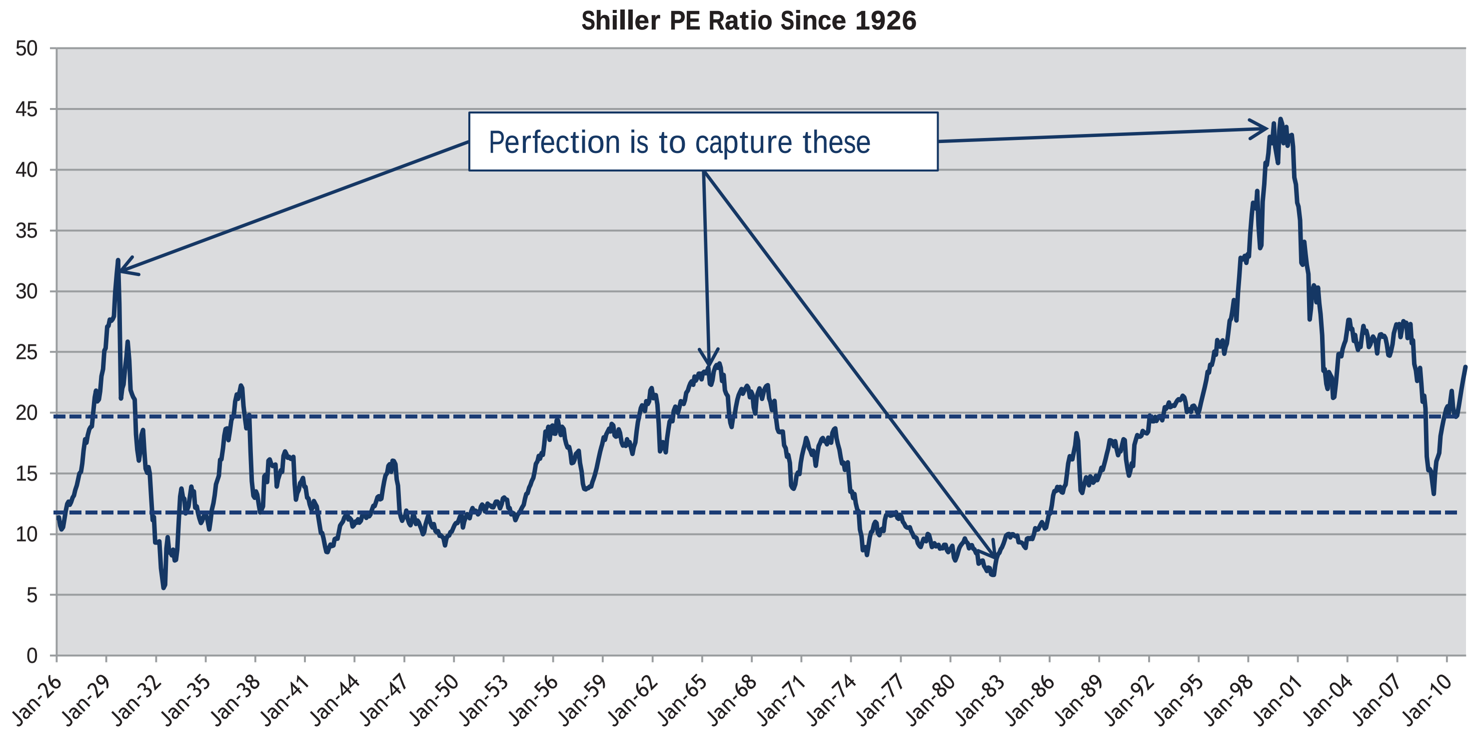
In other words, MVO diversification forecasts are highly unlikely to be correct





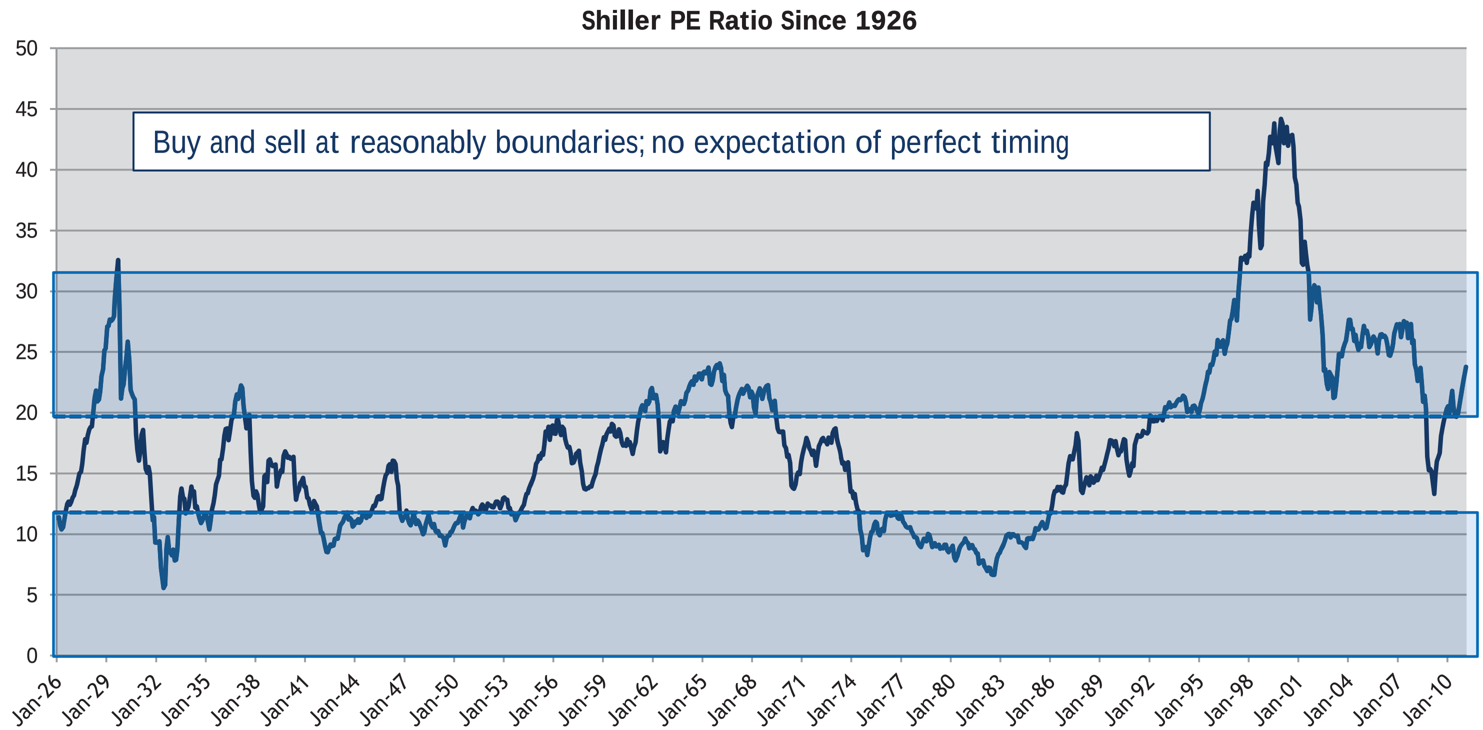


THE CONVENTIONAL WISDOM & HOLY GRAIL OF INVESTING



- In an ideal world, we want to capture peaks and troughs of valuations…in reality it can't happen
- So the conventional wisdom concludes give up and do nothing (i.e., static portfolio)
- We disagree

A LOGICAL ALTERNATIVE TO THE PURSUIT OF PERFECTION



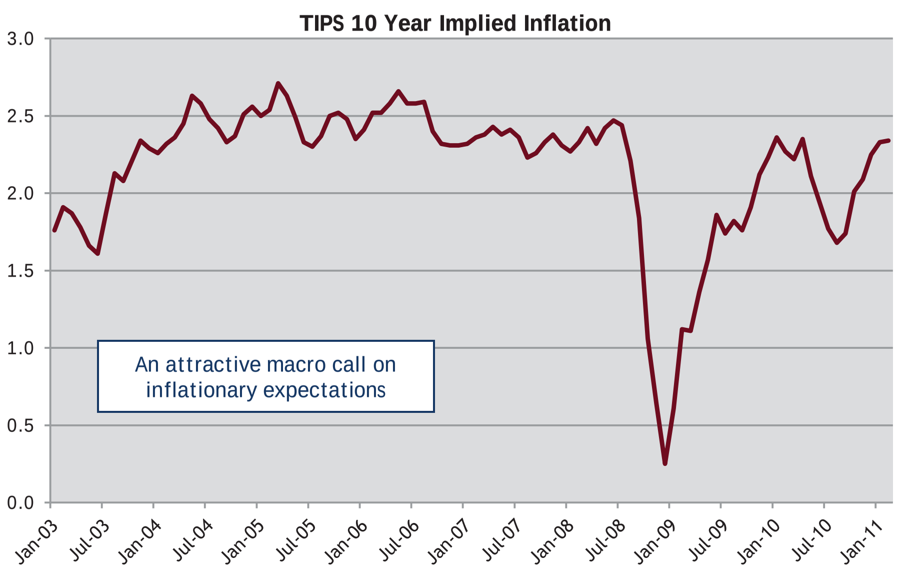
- We know we'll never capture peaks and troughs, but why not try at all?
- The key is having the discipline to believe a certain valuation is “good enough” to warrant a shift
- *Is this market timing or simply rational investing?*
- We believe the latter

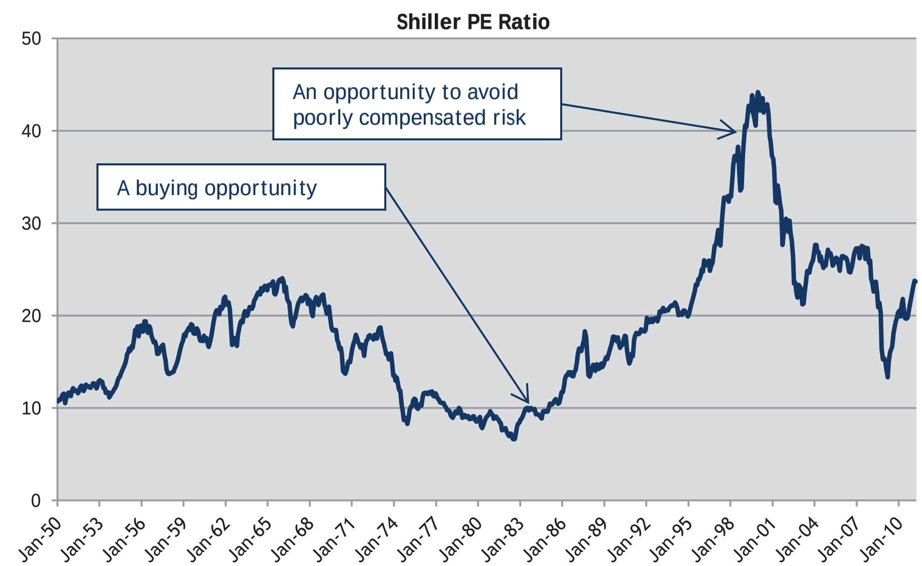
YOU WON'T FIND BETA OPPORTUNITIES IF YOU'RE NOT LOOKING

Compelling beta opportunities may not present themselves all the time

But when they do, it makes sense to act upon them

And the potential value added is far greater than active asset class management





SUMMARY OF MACRO/ASSET ALLOCATION VIEWS

Overarching Themes:

- Marginally tilt away from equity risk in favor of credit as rates rise/capital market line shifts upwards
- Focus on cash flowing investments to mitigate portfolio volatility
- Protect against inflationary pressures
- Maintain liquidity to act on opportunistic situations

Equity:

- Domestic Equity
  - US Large Cap: 80% of domestic equity
  - US Small/Mid Cap: 20% of domestic equity
- International Equity: 50% of total equity
  - Emerging Markets: 1/3rd of international equity

Fixed Income (intermediate mandate):

- 25% Risk Free (Treasuries and Agencies, TIPS)
- 75% Credit (investment grade, high yield, EM debt)

Real Assets:

- Commodities: 50% of real assets
- Real Estate: 50% of real assets

Alternatives (0-20%):

- Private Equity: 0-10%
- Hedge Funds: 0-10%

CURRENT MACRO/ASSET ALLOCATION VIEWS

Equities

- *Globally Biased Equity Allocation* – We believe global valuations and macroeconomic risks in US economy warrant a departure from home country bias and an allocation more along the lines of global capitalization weightings.
- *Slight Explicit Underweight to Small/Mid-Cap* – Small-caps stocks do not appear priced to outperform large-cap stocks on a risk-adjusted basis. Also, US large-cap managers tend to dip into mid-cap range to add value.
- *Neutral Style Weights* - Conflicting valuation and technical indicators do not justify policy tilts.
- *Emerging Market Overweight* – Lower valuations and higher expected GDP growth warrant embracing marginal risk.

Fixed

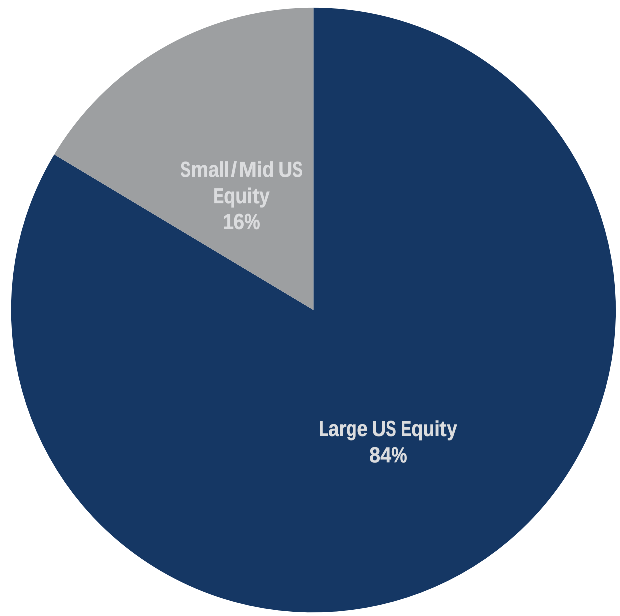
- *Low Exposure to Core Fixed* – Risk free yields are low due to weak economy and Fed suppression of interest rates. Rates are also likely to rebound as GDP strengthens and/or inflationary expectations rise; risk free assets will be impacted the most.
- *Allocate to TIPS* – TIPS will provide insurance against potential inflation and are likely poised to outperform other risk free assets.
- *Emphasize Core-Plus/Credit & High Yield* – Credit spreads offer ample compensation for bearing credit risk. Furthermore, credit spreads are generally unaffected by inflation and may still narrow from current levels if GDP strengthens.
- *Emerging Market Debt* – Current yields offer significant compensation against potential currency shifts and defaults, and macro conditions for emerging markets imply superior credit quality to developed nations (i.e., balance of payments and GDP growth)

Alternatives

- *Modest Private Equity Exposure* – Most private equity strategies are burdened with a significant overhang of uncalled capital, alongside higher valuations and diminished exit opportunities. Also, credit conditions make financial engineering more costly.
- *Modest Hedge Fund Exposure* – Likely prospective market conditions may be challenging for hedge fund strategies, as they inherently require predictable market volatility and/or narrowing risk premiums to provide desired diversification benefits.

REFERENCE POINTS: US EQUITY *(AS OF 9/30/12)*

Russell 3000 Composition (9/12)

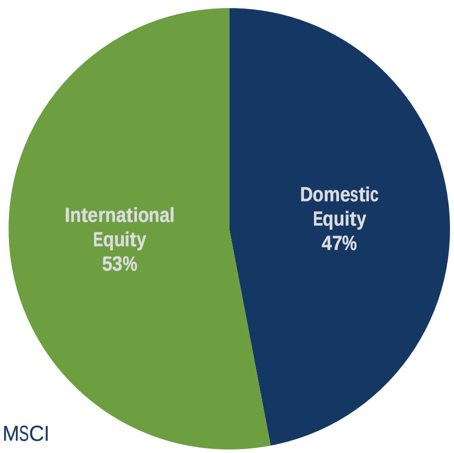


Source: Russell

- *Market Weight* – Small-caps stocks do not appear priced to outperform large-cap stocks, but should still exhibit historic volatility. Also, US large-cap managers tend to dip into mid-cap range to add value.

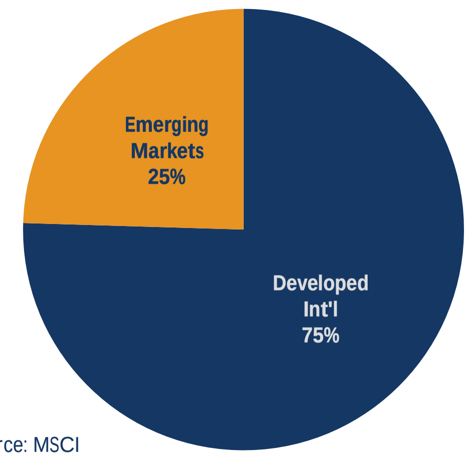
REFERENCE POINTS: INTERNATIONAL EQUITY *(AS OF 9/30/12)*

MSCI All Country World Index (9/12)



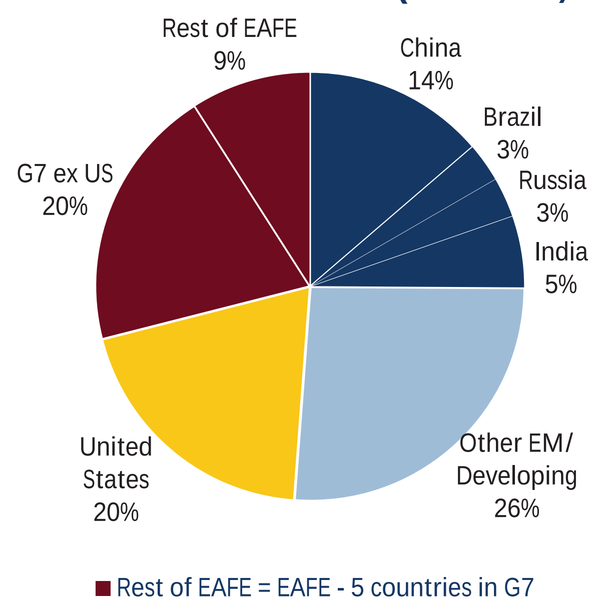
Source: MSCI

MSCI ACWI ex-US Equity (9/12)



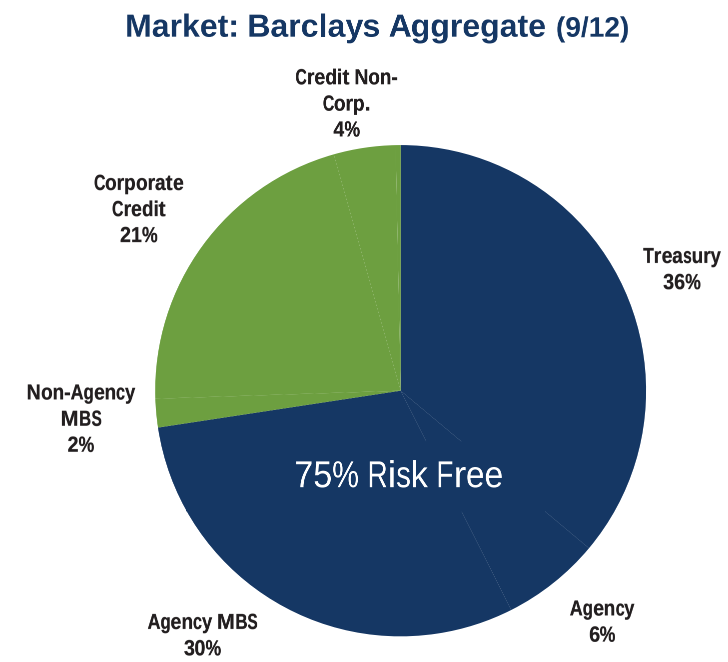
Source: MSCI

World GDP Breakdown (PPP based)



- *Globally Biased Equity Allocation* – We believe global valuations and macroeconomic risks in US economy warrant a departure from home country bias and an allocation more along the lines of global capitalization weightings.
- *Slight Emerging Market Overweight* – Lower valuations and higher expected GDP growth warrant embracing marginal risk.

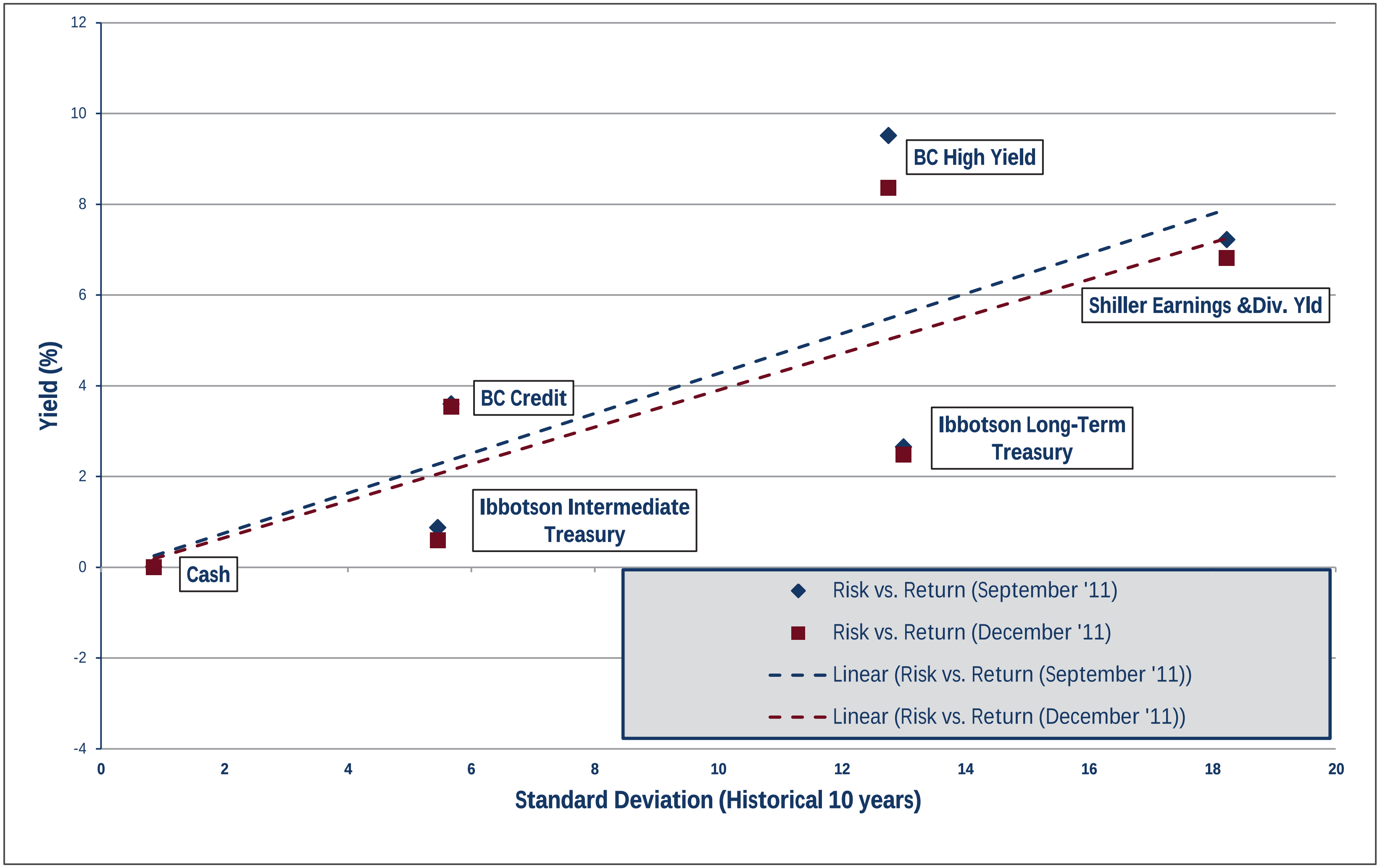
REFERENCE POINTS: DOMESTIC FIXED *(AS OF 9/30/12)*



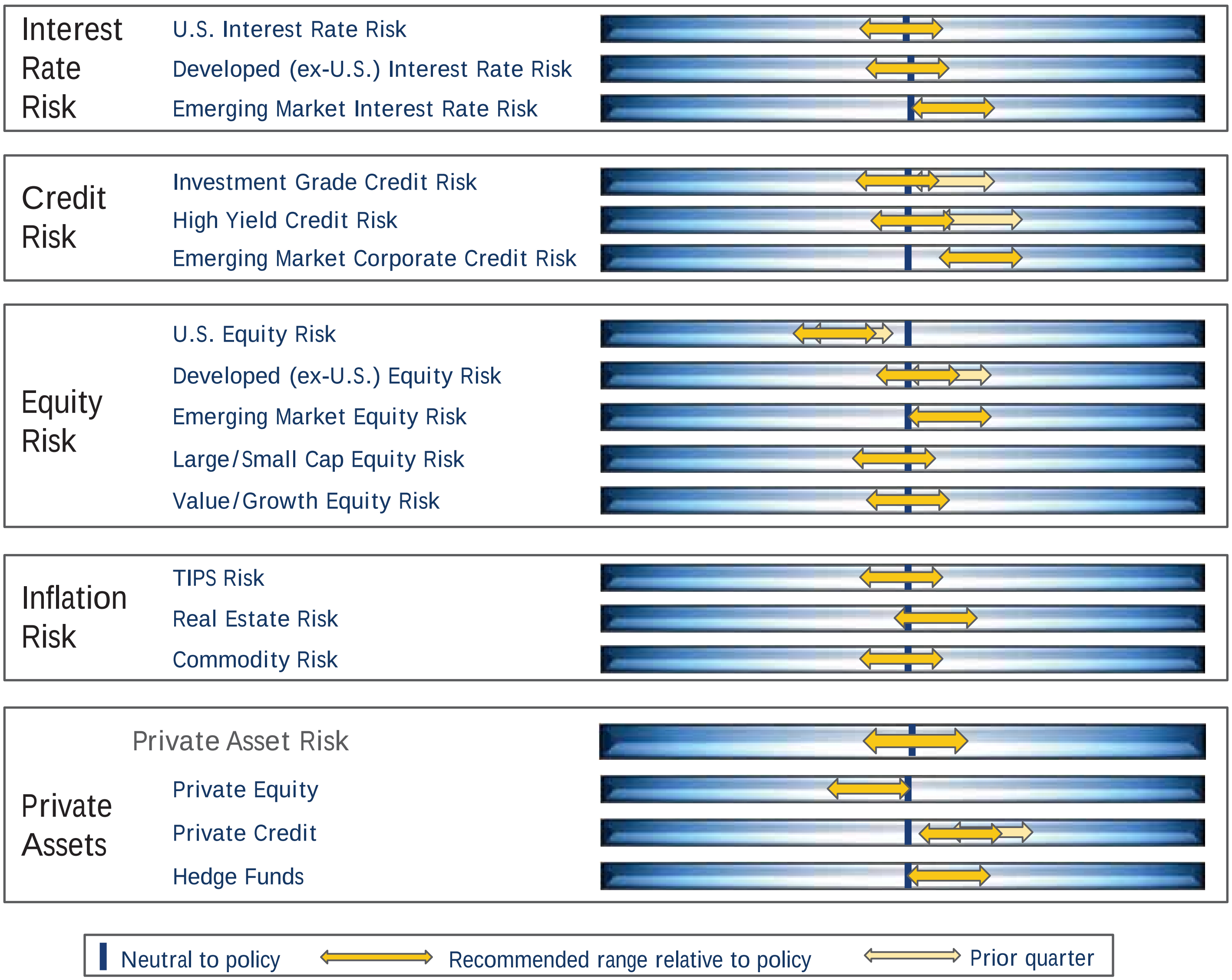
- *Reduction in Core Fixed* – Risk free yields are low due to weak economy and Fed suppression of interest rates. Rates are also likely to rebound as GDP strengthens and inflationary expectations rise.
- *Maintain Core-Plus/Credit & High Yield* – Credit spreads offer ample compensation for bearing credit risk. Furthermore, credit spreads are generally unaffected by inflation and may still narrow from current levels of GDP strengthens.

CURRENT MARKET VIEWS

Risk versus Return



PORTFOLIO RISK ALLOCATION (DETAIL)



VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003-6572
(805) 339-4250 • Fax: (805) 339-4269
http://www.ventura.org/vcera

September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: WESTERN TOTAL RETURN UNCONSTRAINED BOND FUND TRANSITION UPDATE AND CHAIR AUTHORIZATION TO EXECUTE DOCUMENTS

Dear Board Members:

Background

On July 15, 2013 the Board received a presentation from Western Asset Management (WAM) on its WAM Total Return Unconstrained (TRU) Bond Fund and approved the transition of 100% of VCERA's WAM Core Bond Fund to the WAM TRU Bond Fund.

Discussion

This investment has been approved at a management fee of 40 bps, and comprises over 1000 pages of legal documents contained within six confidential offering memorandums, six subscription agreements, nine Limited Liability Company Agreements, revised investment guidelines, Form ADVs, and a short five page amendment to the Investment Management Agreement.

Staff has reviewed these documents and formulated three pages of questions for WAM. Board Counsel is reviewing the documents, staff's questions, and considering the applicability of a side letter agreement. While extensive, the information contained within these documents is of a more traditional investment nature (contrasted by Bridgewater's documents) and, at present, staff does not believe an outside legal review is required. A full review, including the consultant's confirmation, will be completed this month or early next.

Please receive and file this transition update and authorize the Chair to execute the necessary documents to effectuate the transition once the review is complete. A binder containing the documents is available for trustee review at VCERA's office.

Lori and I would be happy to respond to any questions you may have on this matter.

Sincerely,

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

A model of excellence for public pension plans around the World.

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September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: PENSION ADMINISTRATION SYSTEM (PAS) PROJECT UPDATE

Dear Board Members:

Attached is the Ventura County Employees Retirement Information System ("VCERIS") project Quarterly Report. This report was inadvertently omitted from the July 15th update to the Board.

(1) Project History—March 2012 to the Present

The VCERIS implementation is a multi-year effort to replace a legacy mainframe pension system, RDBS, with a modern, integrated pension administration system that will eventually automate many of VCERA's manual processes. Vitech Systems, Inc. was selected through an RFP process to provide functionality that supports all member processes—active member account tracking, retirement calculations, benefit setup, pension payroll, web-based access for members to the system, and a module to store member documents. This system requires an extensive server and database infrastructure, including regular IT support, and so VCERA elected to have Vitech host the system at its secure hosting facility in New Jersey. VCERA staff will access the system via a secure internet connection hosted by County ITS.

The other vendors involved in the project are Linea Solutions (Linea) and Managed Business Solutions (MBS). Both vendors were selected via RFP processes. Linea Solutions is providing project oversight, assisting with design, requirements tracking, managing the testing effort, performing testing and writing test scenarios, assisting with developing and executing staff training and training resources, and participating in data conversion and the active payroll interface tasks. Linea's services are therefore both technical and project management in nature. MBS was selected to perform the data conversion from the legacy systems to Vitech's database. These services are strictly technical: they are ensuring the data are cleansed, transformed, and reconciled between the two systems.

The project's initial budget was approved for $8,436,107. Included in the total were the costs for the three vendors noted above (Linea, MBS, and Vitech), funds for temporary fixed-term staff positions, and for additional hardware and software needed to support the project. A 10%

contingency of $843,610 was subsequently established for change orders, increasing the total project budget to $9,279,718.

The implementation project began in March of 2012. The initial, proposed schedule was 33 months. However, VCERA management concluded that, given the 20%+ staffing vacancies experienced, the internal staffing was insufficient to meet this schedule. The schedule was then extended to 39 months, to conclude in June 2015. Although the additional six months translated into significantly more hours and cost required for Vitech Systems and Linea, both vendors agreed to make this change at no cost, essentially avoiding an $800,000 increase to the project budget.

The initial plan called for three rollouts. The active member system and associated processes would be completed in October, 2013. The retired member system and associated processes would be completed by March of 2015. The member web portal, which will allow members to access account information and submit forms via the web, would be completed by June of 2015.

Even though discussions commenced shortly after launch in March of 2012, it was not until January 2013, that the team definitively learned that the Auditor-Controller was having issues in producing all of the requested data elements for the active payroll interface, the main data feed to Vitech's V3 system. The file needed to be completed by June of 2013 in order to keep the first rollout on schedule. Over the five months that ensued, VCERA management and the Auditor-Controller worked together to develop two plans to move forward—the preferred plan is to have Auditor-Controller develop an automated interface between Peoplesoft and V3. The back-up plan is to have several key data elements hand-keyed into a pre-formatted spreadsheet. In either case, both sides are committed to having a solution in place by March of 2014.

In February of 2013, VCERA management concluded that, while staffing was now 100%, the Benefits staffing was inadequate to both support operations and the VCERIS project. Operations has had significant issues with medical leaves and turnover over the past three years, and management determined that an additional two staff members were needed to ensure both operations and the project could move forward. Additionally, the two temporary staff members would be converted to permanent staff members. Two additional positions were approved in April and the recruitment was completed successfully in July of 2013. VCERA management estimated that the staff could be sufficiently cross-trained to allow for two more resources to be allocated to the VCERIS project by January of 2014.

From February of 2013 to June of 2013, the project team and VCERA management collaboratively analyzed the impact of staffing issues and the Active Member Interface on the project schedule, and concluded that the safest and most cost effective solution would be to combine the first and second rollouts, and have both go live in August of 2015, approximately five months later than originally scheduled. The member web would be completed by November of 2015. Vitech and Linea both offered heavily discounted change orders for this project extension, which has allowed the project to remain under budget.

The change in rollout strategy will allow Auditor-Controller until March of 2014 to complete the interface (either automated or manually edited) and will give the Benefits department adequate time to train the new resources. The project team generated over a dozen ideas, analyzing the 5 most viable options, and decided on the above because the four alternative plans would have significantly greater impacts to schedule and cost. This plan, and associated change orders totaling $314,800, were approved in July of 2013, and includes an extension of the RDBS system for one year, costing approximately $236,250 for maintenance by CMP & Associates, as well as unidentified staff costs.

This plan provides all of the functions outlined in the original contract.

(2) Discussion of Alternatives Considered for Change in Project Schedule

At the July 15, 2013 Board Meeting, the project team was asked what alternatives were considered to the recommend change in rollout strategy and project extension. In the table below, we present the four most viable alternatives to the proposal considered, and why each was ultimately not recommended.

#	Description of Strategy	Cost and Duration Impact	Reason not Recommended
1	Combine rollouts 1 and 2, postpone implementation of member web to an undetermined future date	~$350,000; no delay. *Project is still within budget, but without MSS.*	Member Self Service (MSS) is considered a significant benefit to members and staff; Vitech/Linea agreed to heavy discounts to include this scope in the project.
2	Maintain original two rollouts; postpone implementation of member web to an undetermined future date	~$800,000 / additional six month delay (go-live in December 2015)	Member web is considered significant benefit to members and staff, and there would still be significant cost and delay
3	Maintain three rollouts; delay rollout 1 until June 2014.	~$1.8 million / additional 9 month delay (final go-live in March 2016)	Cost and duration impact considered unacceptable. Additional cost exceeds project contingency.
4	Reorder the rollouts so that the retired member functionality is performed first to mitigate delay to Active Payroll Interface	Not applicable.	The data conversion effort and development efforts to date have focused on rollout 1, which is active member data and functionality. It is not possible to switch to retired member data and functionality at this point; as too much has already been accomplished on rollout 1, and roll out 2 efforts have already started.

Per the table above, the project team concluded that the strategy of combining rollouts 1 and 2 and delaying the overall implementation date by five months would have the least impact to cost, duration, and would ensure no reduction in the scope of the project. It was also the only strategy that keeps the project on budget.

(3) Alternative Means of Reporting VCERIS Progress to the Board

The project team is concerned that the current reporting method or frequency is not sufficient for maintaining the Board's confidence in the project. Given the length of the discussion at the July 15, 2013 meeting, the project team is requesting the Board's input on the project reporting method and frequency to the Board. For example, if the Board desires, staff can report more frequently to the Board and proposes providing the Monthly Status Reports that are currently prepared for the VCERA Project Sponsor under Linea's PM 1 task in Linea's Statement of Work. Please find the two most recent Monthly Status Reports attached. There would be no additional project cost for this and minimal additional staff time. Staff and Linea believe that this additional reporting would satisfy the request outlined in Mr. Goulet's letter, also on today's agenda.

Alternatively, the Board may wish to form a VCERIS subcommittee that could serve as an advisory body to both the project team and the full Board. It is very important for the project team to have the Board's confidence. It is also important that the project management team maintains its ability to manage the project on a day-to-day basis. Additional costs and time are anticipated for this option, and Linea could prepare a change order, should the Board desire to pursue it. We recommend considering the more frequent reporting proposed above before making any other changes.

Lastly, this report staff report containing the VCERIS Quarterly Report is in addition to the normal quarterly reports; however, there is no additional project cost as the Quarterly Report was inadvertently omitted by staff from the July 15th update.

We would be happy to discuss any other options and would be pleased to respond to any questions you may have on this letter at the September 9, 2013, Board meeting.

Sincerely,

Donald C. Kendig

DONALD KENDIG
Retirement Administrator

BRIAN COLKER
Linea Solutions, Inc.

Attachments (3)

Reporting to: Board of Retirement | Report Date: 7/15/2013
Written by: Brian Colker

Board of Retirement Ventura County Employees' Retirement Information System (VCERIS) Report

Reporting period: April 1, 2013 – June 30, 2013

Current Project Plan

DATA AS OF 6/30/13:

Rollout 1: Active Member & Retiree Combined	**Rollout 2: Member Web**
Actual % Complete: 31.41%	**Actual % Complete:** N/A
Planned % Complete: 31.41%	**Planned % Complete:** N/A
Variance: 0%	**Variance:** N/A
Rollout Timeline, Initial: July 2012 – October 2013	**Rollout Timeline, Initial:** January 2015 – June 2015
Rollout Timeline, Revised: July 2012 – August 2015	**Rollout Timeline, Revised:** September 2015 – November 2015

Initial Plan

Rollout 1: Active Member	**Rollout 2: Retiree**	**Rollout 3: Member Web**
Rollout Timeline, Initial: July 2012 – October 2013	**Rollout Timeline, Initial:** November 2013 – April 2015	**Rollout Timeline, Initial:** January 2015 – June 2015

Accomplishments for the Period 4/1/2013 – 6/30/2013

- Completed design for Segment C functionality.
- Completed testing for Segment B functionality and began testing for Segment C functionality.
- To date, 623 tests have been executed, 141 defects were created, and 39 defects remain unresolved.
- A complete set of new data conversion files were extracted transformed and loaded into V3. Have begun analyzing the errors and exceptions reports and are identifying actions needed to resolve the issues.
- Plan Sponsors – Continue to work closely with the Auditor-Controller's office and VRSD to find solutions to provide the required data to VCERA. We have made considerable progress since the last report:
    - Auditor-Controller has successfully delivered two of the four files and the file contents have passed initial QA tests with only minor issues requiring changes. The remaining two files will both have the same format, but one will be for regular contributions and one will be for retroactive adjustments. Current open design questions are related to determining how to split the adjustments into a separate file and determining compensation earnable for members who work less than their full schedule in a pay period.
    - VRSD has successfully delivered one of the four files and the file contents have passed initial QA tests. The developer is currently working on the remaining three files.

Reporting to: Board of Retirement | Report Date: 7/15/2013
Written by: Brian Colker

Budget:

Summary

Cost Item	Budget	Change Orders	Amended Budget[1]	Expended to Date	Remaining
Vitech (software, implementation, hosting)	$4,986,500	0	$4,986,500	$1,596,600	$3,389,900
Linea (project oversight, design, data conversion, testing, training)	2,088,407	54,000	2,142,407	914,636	1,227,771
External Costs	100,000	60,200	160,200	80,400	79,800
Third party data conversion	680,000	(91,788)	588,212[2]	258,333	329,879
Limited Term Positions	581,200	(480,296)[3]	100,904	100,904	0
Project Budget Subtotal	$8,436,107	($457,884)	$7,978,223	$2,950,873	$5,027,350
Project Contingency	843,611	0	843,611	0	843,611
Total Project Budget	$9,279,718	($457,884)	$8,821,834	$2,950,873	$5,870,961

[1]Amended Budget reflects only *approved* change orders
[2]Includes additional budget reductions
[3]Limited positions were converted to full-time employees as of 3/31/2013; costs will be reflected in Staff Costs from this report onward.

Detail

Milestone Description	Scheduled Invoice Date	Amended Budget	Holdback (15%)	Net Scheduled Payment	Amount Incurred
Project Initiation / Initial License Payment (Development License)	March-12	$ 200,000	$ -	$ 200,000	$ 200,000
QA Hardware and Software Installed and Configured	May-12	128,000	(19,200)	108,800	108,800
Detailed Implementation Plan Approved	June-12	96,000	(14,400)	81,600	81,600
V3 Baseline Application Configuration & Demonstration Complete	August-12	224,000	(33,600)	190,400	190,400
Rollout 1: VCERA Confirms Segment A Functionality Delivered and Validated	November-12	224,000	(33,600)	190,400	190,400
Rollout 1: VCERA Confirms Segment B Functionality Delivered and Validated	January-13	224,000	(33,600)	190,400	190,400
Rollout 1: VCERA Confirms Segment C Functionality Delivered and Validated	April-13	224,000	(33,600)	190,400	-
Rollout 1: VCERA Confirms Segment D Functionality Delivered and Validated	May-13	224,000	(33,600)	190,400	-
Rollout 1: VCERA Begins UAT	July-13	288,000	(43,200)	244,800	-
Rollout 1: VCERA Accepts System for Production	October-13	576,000		576,000	-
Release Holdback	October-13		100,800	100,800	-
Rollout 2: VCERA Confirms Segment A Functionality Delivered and Validated	February-14	160,000	(24,000)	136,000	-

Reporting to: Board of Retirement | Report Date: 7/15/2013
Written by: Brian Colker

Milestone Description	Scheduled Invoice Date	Amended Budget	Holdback (15%)	Net Scheduled Payment	Amount Incurred
Rollout 2: VCERA Confirms Segment C Functionality Delivered and Validated	May-14	144,000		144,000	-
Rollout 2: VCERA Confirms Segment B Functionality Delivered and Validated	June-14	128,000		128,000	-
Rollout 2: VCERA Confirms Segment D Functionality Delivered and Validated	October-14	128,000		128,000	-
Rollout 2: VCERA Begins UAT	November-14	160,000		160,000	-
Rollout 2: VCERA Accepts System for Production	February-15	128,000		128,000	-
Rollout 3: VCERA Validates Functionality	April-15	40,000		40,000	-
Rollout 3: VCERA Begins UAT	April-15	40,000		40,000	-
Rollout 3: VCERA Accepts System for Production	June-15	64,000		64,000	-
Release Holdback	June-15		168,000	168,000	-
Warranty Complete: One Year After System Live Date	May-16 (EST)	100,000	-	100,000	-
Change orders					-
Vitech Implementation Services Subtotal:		**$3,500,000**	**$ -**	**$3,500,000**	**$ 961,600**

Vitech Other Costs		Amended Budget		Incurred This Qtr.	Cumul.
Vitech V3 License Fee	August-12	$ 575,000			$ 575,000
Vitech V3 Upgrade Fee -	Various	450,000			-
Infrastructure Hosting	Various	376,000			25,000
Travel	On-going	82,500		7,500	35,000
Software Escrow Agreement	FY 13/14	3,000			
Change orders					
Vitech Other Costs Subtotal:		**$ 1,486,500**		**$ 7,500**	**$ 635,000**
Vitech Services Total:		**$ 4,986,500**		**$ 7,500**	**$ 1,596,600**

Linea - Project Oversight and Integrating Services Description:		Amended Budget		Incurred This Qtr. *	Cumul.
Project Oversight	On-going	$ 704,040		$ 96,865	$472,764
Design Consulting	On-going	484,000		1,995	53,598
Testing	On-going	412,550		71,060	229,748
Interfaces	On-going	165,360		8,075	42,039
Cut-Over Support	On-going	140,700		-	-
Training	On-going	11,460		2,185	8,496
Data Conversion	On-going	65,600		4,560	40,191
Travel Expenses	On-going	158,697		14,779	67,800
Project Oversight and Integrating Services Total:		**$ 2,142,407**		**$ 199,519**	**$ 914,636**

Ventura County Employees' Retirement Information System
Quarterly Status Report

Reporting to: Board of Retirement | Report Date: 7/15/2013
Written by: Brian Colker

Milestone Description	Scheduled Invoice Date	Amended Budget	Holdback (15%)	Net Scheduled Payment	Amount Incurred
External Costs:		**Budget**		**Paid this Qtr**	**Cumul.**
Software	Varies	$ 65,900		$ -	$ 48,691
Hardware	Varies	30,000		2,087	14,080
Broadband to Host Facility	On-going	14,800		-	1,159
Data Conversion		588,212		93,655	258,333
Additional Project Workspace		49,500		5,052	16,470
Limited Term Positions	To 3/31/13	100,904		-	100,904
3rd Party Hardware / Software Total:		**$ 849,316**		**$ 100,794**	**$439,637**
Total Project Expenditures					**$ 2,950,873**
Total Amended Project Budget		**$7,978,223**			

Original Project Budget	**$8,436,107**	Variance from Original	**($457,884)**

Proposed Change Orders (see next page)	**$379,506**
Proposed Amended Budget	**$8,357,729**
Updated Variance From Original	**($78,378)**

Total Project Cost Summary

Total Project Expenditures	$ 2,950,873
Staff Support Costs for the quarter (not in project budget)	67,588
Staff Support Costs to date (not in project budget)	265,926
Total Project Costs	$3,216,799

Change Orders This Period

Name	Description	Cost Impact	Budget Year
Vitech CO 3489 – Revised Implementation Plan	Vitech submitted a change order adjusting the implementation schedule to extend the overall project by 5 months. They changed the payment milestones as part of the negotiation. Vitech has offered a significant discount for these services; the normal cost for a 5 month extension would be $675,000 ($135,000 per month for 5 months)	$250,000	FY'15-'16: $250,000
Linea Change Order #3	Linea submitted a change order to adjust the implementation schedule to extend the overall project by 5 months. These fees include project management, testing, training, design, QA, requirements confirmation and traceability. Linea has offered a significant discount for these services; the normal cost for a 5 month extension would be $167,400 ($33,480 per month for 5 months)	$64,800	FY'15-'16: $64,800
Construction costs for project office space	The additional leased office space on the first floor needs to be modified in order to accommodate the increase in Vitech and Linea resources that will be moving into the space after the first of the year.	$3,000	FY'13-'14: $3,000
Additional Assima License	This license will be needed to create training scripts for UAT testing. VCERA currently does not have enough licenses for the SMEs for this purpose.	$9,600	FY'14-'15: $9,600
Additional Data Conversion Assistance	Additional hours for CMP & Associates to assist with data conversion (previously approved by Board)	$14,500	FY'13-'14: $14,500 On 07/01/13 Board approved increase of $9,300. No additional appropriations required.
Beneficiary designation form updates	V3 requires beneficiary information to provide accurate retirement estimates for members. RDBS does not currently contain beneficiary information so VCERA is going to conduct a mass mailing to members requesting new beneficiary forms be completed. Once returned to VCERA, the data will be entered onto a spreadsheet so it can be uploaded into V3 at go-live.	$37,606	FY'13-'14: $37,606
TOTAL		$379,506	FY'13-'14: $55,100 FY'14-'15 $9,600 FY'15-'16: $314,800

Approved Change Orders (All To Date)

Name	Description	Cost Impact	Budget Year
Vitech CO 3223 – Revised Implementation Plan	Vitech submitted a change order adjusting the implementation schedule to extend the overall project by 6.5 months. They changed the payment milestones as part of the negotiation.	None (net over course of project)	FY'12-'13: $163,200 FY'13-'14: $147,388 FY'14-'15: ($310,589)
Linea Change Order #1	Linea submitted a change order to adjust the implementation schedule to extend the overall project by 6.5 months.	None	N/A
Additional project workspace	The project team has determined that there is considerable advantage to in-person meetings.	$49,500	FY'12-'13: $13,500 FY'13-'14: $18,000 FY'14-'15: $18,000
Increased cost of Broadband to Host Facility	The secure point-to-point connection from VCERA to Vitech's hosting facility is considerably more expensive than anticipated.	$68,100	FY'12-'13: $0 FY'13-'14: $3,300 FY'14-'15:$32,400 FY'15-'16:$32,400
Additional Project Software	This change covers the purchase of the Assima training tool.	$43,900	FY'12-'13: $22,900 FY'13-'14: $7,000 FY'14-'15: $7,000 FY'15-'16: $7,000
Additional Data Conversion Assistance	This change covers VCERA's additional data conversion resources needed to support MBS in performing the data conversion.	$147,000	FY'12-'13: $75,000 FY'13-'14: $50,000 FY'14-'15: $22,000
Document Conversion Assistance	The change order is for Novanis, the current imaging company, to assist with converting images into V3.	$50,250	FY'13-'14: $50,250 (was previously allocated to FY'14-15)
County providing Broadband	County ITS was able to provide a secure broadband connection to Vitech's hosting facility, considerably decreasing the required cost for this service.	$(101,300)	FY2012-2013 $(7000) FY2013-2014 $(31,200) FY2014-2015 $(31,200) FY2015-2016 $(31,200)
Total		$257,450	

#	ISSUES / RISKS – Explanation of Issues	MITIGATION - Explanation of Action Needed	UPDATE – Current Status of Issue
1	The Auditor Controller has informed VCERA that PEPRA and the launch of VCFMS may impact its ability to meet the project schedule. Additionally, it has been communicated that some of the requested critical modifications either may not be possible or may not be possible in a timely fashion. If the Auditor Controller is not able to produce the completed interface by June 2013, this will cause the Rollout #1 schedule to be delayed.	By combining rollouts 1 and 2, the date the completed interface is needed has moved from June 2013 to March 2014. This will give the Auditor Controller sufficient time to complete the interface.	The Auditor Controller is in the process of developing the four files required for the active payroll interface. Two of the four files have been initially completed, and a third will be completed shortly. The project team and Auditor Controller have an agreement on the modifications that will be needed to the way the data is reported. The Auditor Controller must complete the analysis of the changes in order to determine the completion date. RISK IS CONSIDERED MEDIUM
2	Recently the Benefits staff has been impacted by illness and family issues. Given that the project is currently utilizing the absolute minimum number of resources, VCERA must add additional staff resources in order to ensure the project timeline is not impacted.	VCERA Management is in the process of recruiting resources to be added to VCERA's staff to assist with operations. The recruitment and training of these resources will allow VCERA to add two resources to the project as required.	Two new staff members will start on 7/21/13. These staff members must be trained over the next six months to be able to backfill for the additional SMEs on the project. RISK IS CONSIDERED MEDIUM

Progress on Critical Success Factors

Factor	Acceptance Criteria	Short Term Impact?	Long-Term Impact?	Current State
Automation of Benefits Processes	• System uses "wizards" to move through processes • Minimal manual workarounds • Reports support each process • Online member access	HIGH	HIGH	On Track
Payroll Interface Data	• Active payroll data allows for significant automation of benefit estimates and benefit calculation • VCERA receives full data elements needed for all calculations	HIGH	HIGH	On Track
Moving to Current Technology	• System utilizes current database technology • System utilizes current application technology	MEDIUM	HIGH	On Track
Project Cost	• Project is within 15% of the original budget	MEDIUM	LOW	On Track
Project Duration	• Project completes within 20% of original duration	HIGH	LOW	On Track

Explanation of "At Risk" Current State:

Not applicable.

Accomplishments Planned for Next Period (7/1/2013 – 9/30/2013)

- Complete testing for Segment C functionality
- Begin data mapping activities for retiree payroll
- Begin design activities for Segment D functionality
- Continue to work with Plan Sponsors to develop new transmittal
- Begin testing for Segment D functionality

Project Segment: Deployment Phase – Rollout 1

June project activities focused on completing Segment C design and testing activities, continuing data conversion, implementing the new Big Bang approach, and preparing for the July 15th Board meeting.

The following activities were conducted in June:

Project Management:

- Implementation activities for Segment D to support the new big bang approach were started on 6/13/2013. With the revised scope of Segment D, it solidified the change in direction. If the Board does not approve the change and we are directed to go back to a multi-phase approach, all of the work done after 6/13/13 would be considered "throw away" for Rollout 1, and additional time would be needed to complete Rollout 1 as originally planned.
- On 6/21/13 Michelle and Rebekah reported to Julie that the current approach of creating and executing test cases along with working on design for a new segment does not give them adequate time to complete the testing cycle for the closing segment. To address their concerns through changes to the project schedule would require adding three weeks between each segment. This would require adding an additional three – four months to the overall project schedule. This is not feasible since we are already preparing to ask the Board for a five month extension. Kim proposed that she and Jerry start executing tests instead of Michelle and Rebekah. Michelle and Rebekah would still be the ones to create all of the tests, so they could feel confident that all functionality is being adequately tested. Once tests are executed, if they pass, no further effort is required by anyone. If a test fails, Michelle and Rebekah will review to determine what action needs to be taken. Since the majority of tests pass, this means the amount of time Michelle and Rebekah need to spend on test activities after they are written should be greatly reduced. We will try this approach and see if it addresses their original concerns. If not, we will explore other alternatives.
- We discussed the Accounting & Reporting sprint with Henry. It appears that his direct involvement is required for all design elements in this area because he is the one with the full knowledge of the processes involved. Because his availability may be limited due to jury duty, it was decided that we would not have a separate Accounting and Reporting sprint. We will cover all accounting integration points within each sprint that they occur. This means we will be spread out the Accounting and Reporting requirements throughout the remainder of the sprints.
- We began preparing Board materials for the 7/15/13 Board meeting.

Implementation Phase – Rollout 1

- Weekly build releases for Segment C were received and Michelle and Rebekah continued creating test cases and identifying data requirements.
- Weekly test review and demo sessions continued to be held. These are very beneficial to ensuring report defects and issues are understood and adequately categorized and that new release functionality is operating as expected and understood by Michelle and Rebekah prior to them executing related tests.
- Michelle and Rebekah have created 254 test cases for Segment C so far. At this time, they have executed 163 of them and only 21 of those executed failed.
- Since we just implemented the new project plan, we are right on schedule at this time.
- Continued working with plan sponsors to develop the new transmittal. Both plan sponsors are making progress.
    - Auditor-Controller has successfully delivered two of the four files and the file contents have passed initial QA tests with only minor issues requiring changes. The remaining two files will both have the same format, but one will be for regular contributions and one will be for retroactive adjustments. Current open design questions are related to determining how to split the adjustments into a separate file and determining compensation earnable for members who work less than their full schedule in a pay period.
    - VRSD has successfully delivered one of the four files and the file contents have passed initial QA tests. The developer is currently working on the remaining three files.

Data Conversion:

- Continued updating data mapping documents to reflect changes required as a result of new design requirements and data conversion issues. This will be a continual process through the end of the project.
- MBS updated/refined QA sheets for all files converted.
- Vitech provided unscrambled scorecard results on 6/5/13. We have been working to resolve identified issues.
- We continued having weekly data scorecard review sessions for open data conversion issues.
- We finalized the schedule for MBS's July on-site visit and the JAD session for October.
- Data cleansing continued.

Infrastructure / Hosting:

- No infrastructure/hosting activities were conducted in June.

Project risks are continually being assessed throughout the project duration. Risks will be added to the table below as they are identified.

ISSUES / RISKS – Explanation of Issues	MITIGATION – Explanation of Action Needed
Auditor-Controller not able to provide transmittal requirements. This may result in an impact to the project schedule and loss of automation expected with V3.	Auditor-Controller has indicated they may not be able to provide all of the requirements identified in the transmittal specifications. We are working closely with Auditor-Controller to try to determine how much time they need to thoroughly analyze and develop the sytem enhancements that would be necessary to meet VCERA's requirements. We anticipate being able to provide the Board with the details and their time requirements at the May 6th Board meeting. UPDATE (7/1) – Auditor-Controller has continued to work on identifying automated solutions to providing VCERA with the data required for V3. They have not provided an estimated time that they would be able to provide the data. We will continue to monitor this risk. UPDATE (6/1) – Auditor-Controller provided their initial response, generally indicating they would not provide the new information VCERA is requesting. The Board directed Auditor-Controller and VCERA to work together to find solutions that would work. Both offices are committed to working together. Additionally, since Auditor-Controller's initial response was submitted, legal provided an opinion to Auditor-Controller that they are legally required to provide the data being requested so they now understand a solution is required. The change to the big bang approach will allow additional time to develop the best solutions. Auditor-Controller has contracted with the original developer for VCHRP to analyze what system changes would be needed and how long it would take to implement those changes. Once we have the results of that analysis we may be able to remove this risk. UPDATE (5/1) – Auditor-Controller informed us on 4/29 that they were just finishing their response to our formal request and would deliver it to VCERA on Friday, 5/3. This will not provide us adequate time to review their response and prepare options to present to the Board at the May 6th Board meeting. We will work to complete the analysis and prepare our proposed options as quickly as possible. UPDATE (4/1) – We are preparing a formal request for the critical data required from Auditor-Controller. The

	request will ask them to provide us a timeline they would need to fully analyze/develop the system enhancements they would need to provide the data. We do not anticipate having their response in time to present to the Board at the May 6th Board meeting. We will present to the Board as soon as we have the information and can create a revised plan proposal.

Reporting to: VCERA
Written by: Kim Zierath

Report Date: 07/15/13
Reporting Period: 06/01/2013 – 06/30/2013

The milestones below do not reflect the milestons as defined in the big bang approach since the change was made mid-month. The table below will be changed for July's status report.

Work Segments

Deployment Phase - Rollout 1 Project Plan Tasks	% Complete	Milestone Date	Date Completed
Segment A Data Mapping Documents Completed	100%	10/26/2012	11/30/2012*
Segment A Functionality Completed	100%	11/30/2012	11/30/2012
Segment B Data Mapping Documents Completed	100%	12/28/2012	1/28/2013*
Segment B Functionality Completed	100%	02/22/2013	4/5/2013
Segment C Functionality Completed	100%	04/12/2013	6/28/13
Segment E Functionality Completed	30%	05/03/2013	
Data Conversion Runs Completed	85%	05/31/2013	
Segment D Functionality Completed	15%	06/07/2013	
VCERA Acceptance of Production Infrastructure	0%	06/7/2013	
UAT Start	0%	06/10/2013	
UAT Completed	0%	09/20/2013	
Go-Live	0%	10/29/2013	

*Please not that data mapping updates can occur throughout the project as a result of new functionality design. The 100% completion indicates initial data mapping efforts are complete.

Vitech Contract Limits

Contract-Limited Item	Contract Limit	Currently Assigned to Vitech/Used	Number Remaining for Vitech
Documents / Letters	20	10	10
Reports / Queries	25	7	18
Workflows	10	6	4
Interfaces	6	1	5
Data Conversion Hours	3,500	2,370.50	1,129.50

Planned Tasks for Next Period
• Continue working with Auditor-Controller and VRSD to develop solutions for the transmittal. • Finalize Board materials and present to the Board in 7/15/13. • Continue analyzing new data extracted from RDBS and loaded into V3. • Continue conducting data cleansing activities. • MBS on-site visit 7/15/13 – 7/19/13. • Finalize Segment C design. • Continue writing test cases for Segment C functionality and identifying data requirements. • Continue executing Segment C testing. • Begin Segment D design.

Signatures

The content of this report has been reviewed and approved by:

Donald Kendig (signature) — Date: 8/1/2013

Donald Kendig
Retirement Administrator
VCERA Project Sponsor

Date: 8/1/2013

Hammad Zaigham
Vitech Project Manager

Date: 8/1/2013

Kim Zierath
Linea Project Manager

Date: 8/1/2013

Project Segment: Deployment Phase – Rollout 1

July project activities focused on completing Segment C design and testing activities, beginning Segment D design and testing activities, continuing data conversion, implementing the new Big Bang approach, and preparing for the July 15th Board meeting.

The following activities were conducted in July:

Project Management:

- At the July 15th Board meeting, the Board approved the change to the Big Bang approach and approved the change orders for both Vitech and Linea. Per the new plan, the old Rollout 1 and Rollout 2 are combined into a single Rollout 1 and the old Rollout 3 (Member Self Service) is the new Rollout 2. The new final go-live for the project is November 2015.
- At the July 15th Board meeting, Jeff Burgh and Valerie Barraza confirmed that the Auditor-Controller's project team is actively working toward completing the transmittal development along with the requested improvements by the March 2014 deadline. Valerie indicated their team is 85% confident that they will have a solution for compensation earnable and retroactive adjustments by that time.
- The Board advised the VCERIS project team to identify a back-up plan in the event that the Auditor-Controller's office is not able to meet the March 2014 deadline. The goal is that we should not have to go to the Board with another project extension request due to issues with development of the transmittal, and that we will have a work-around to maintain the current go-live date.
- The Board also advised the VCERIS project team that they felt like they were not given any options to consider. In the future, they expect us to come to them as soon as we know there is an issue and we need to present them with all of the options considered, as opposed to just the recommended and second best.
- Vitech began the process to upgrade VCERA from version 9.6 to version 9.9 on 7/18/13. The expected completion date was 7/23/13; however it was not completed by that date. The expected completion date is now 8/5/13. Although we only have limited access to the system during the upgrade period, we do not expect there to be any project delays due to the extended completion time.
- On July 16 & 23, held internal meetings to discuss the Board's perception of the project and identified suggestions for improvement. Donald will present the suggestions at the September 9th Board meeting.
- On July 24, conferenced with members of ADP to discuss data extract options for ADP data and the conversion of 1099 and other payroll history data.
- On July 25, discussed Member Self Service programming options and potential scenarios.
- On July 31, conferenced with members of ADP to discuss 1099 processing options and other possible ADP service structures (from check printing to full payroll processing).

Implementation Phase – Rollout 1

- Weekly build releases for Segment C and Segment D were received and Michelle and Rebekah continued creating test cases and identifying data requirements.
- Weekly test review and demo sessions continued to be held. These are very beneficial to ensuring report defects and issues are understood and adequately categorized and that new release functionality is operating as expected and understood by Michelle and Rebekah prior to them executing related tests.
- Michelle and Rebekah have created 339 test cases for Segment C so far. At this time, they have executed 219 of them and only 29 of those executed failed.
- The project is on schedule per the project plan.
- Continued working with plan sponsors to develop the new transmittal. Both plan sponsors are making progress.
- Design for Segment D Sprint 1 – Other Refunds has been completed and Sprint 2 – Actuarial Extracts is in execution.

Data Conversion:

- Continued updating data mapping documents to reflect changes required as a result of new design requirements and data conversion issues. This will be a continual process through the end of the project.
- MBS updated/refined QA sheets for all files converted.
- MBS was on-site the week of 7/15/13. We held daily group work sessions to resolve data conversion and data mapping issues. We also met with Vio to get a preliminary understanding of the RIS and ADP data conversion tasks.
- Vitech and MBS continued to work through the scorecard issues identified in Cycle 5.
- We continued having weekly data scorecard review sessions for open data conversion issues.
- Data cleansing continued.

Infrastructure / Hosting:

- No infrastructure/hosting activities were conducted in June.

Project risks are continually being assessed throughout the project duration. Risks will be added to the table below as they are identified.

ISSUES / RISKS – Explanation of Issues	**MITIGATION – Explanation of Action Needed**
Auditor-Controller not able to provide transmittal requirements. This may result in an impact to the project schedule and loss of automation expected with V3.	Auditor-Controller has indicated they may not be able to provide all of the requirements identified in the transmittal specifications. We are working closely with Auditor-Controller to try to determine how much time they need to thoroughly analyze and develop the system enhancements that would be necessary to meet VCERA's requirements. We anticipate being able to

	provide the Board with the details and their time requirements at the May 6th Board meeting. UPDATE (8/1) – No change. Continuing to monitor. UPDATE (7/1) – Auditor-Controller has continued to work on identifying automated solutions to providing VCERA with the data required for V3. They have not provided an estimated time that they would be able to provide the data. We will continue to monitor this risk. UPDATE (6/1) – Auditor-Controller provided their initial response, generally indicating they would not provide the new information VCERA is requesting. The Board directed Auditor-Controller and VCERA to work together to find solutions that would work. Both offices are committed to working together. Additionally, since Auditor-Controller's initial response was submitted, legal provided an opinion to Auditor-Controller that they are legally required to provide the data being requested so they now understand a solution is required. The change to the big bang approach will allow additional time to develop the best solutions. Auditor-Controller has contracted with the original developer for VCHRP to analyze what system changes would be needed and how long it would take to implement those changes. Once we have the results of that analysis we may be able to remove this risk. UPDATE (5/1) – Auditor-Controller informed us on 4/29 that they were just finishing their response to our formal request and would deliver it to VCERA on Friday, 5/3. This will not provide us adequate time to review their response and prepare options to present to the Board at the May 6th Board meeting. We will work to complete the analysis and prepare our proposed options as quickly as possible. UPDATE (4/1) – We are preparing a formal request for the critical data required from Auditor-Controller. The request will ask them to provide us a timeline they would need to fully analyze/develop the system enhancements they would need to provide the data. We do not anticipate having their response in time to present to the Board at the May 6th Board meeting. We will present to the Board as soon as we have the information and can create a revised plan proposal.

The milestones below have been changed to reflect the new implementation plan approved 7/15/13.

Work Segments

Deployment Phase - Rollout 1 Project Plan Tasks	% Complete	Milestone Date	Date Completed
Segment A Data Mapping Documents Completed	100%	10/26/2012	11/30/2012*
Segment A Functionality Completed	100%	11/30/2012	11/30/2012
Segment B Data Mapping Documents Completed	100%	12/28/2012	1/28/2013*
Segment B Functionality Completed	100%	02/22/2013	4/5/2013
Segment C Functionality Completed	100%	04/12/2013	6/28/13
Segment D Track 1 Functionality Delivered	33%	09/02/2013	
Segment D Track 2 Functionality Delivered	0%	12/30/2013	
Segment F Functionality Delivered	0%	3/24/2014	
Segment G Functionality Delivered	10%	7/28/2014	
Segment H Functionality Delivered	15%	8/25/2014	
Parallel Testing of Transmittal Files Begins	0%	10/20/2014	
Segment I Functionality Delivered	10%	12/29/2014	
UAT Begins	0%	3/20/2015	
VCERA Accepts System for Production	0%	7/6/2015	

*Please note that data mapping updates can occur throughout the project as a result of new functionality design. The 100% completion indicates initial data mapping efforts are complete.

Reporting to: VCERA
Written by: Kim Zierath

Report Date: 08/15/13
Reporting Period: 07/01/2013 – 07/31/2013

Vitech Contract Limits

Contract-Limited Item	Contract Limit	Currently Assigned to Vitech/Used	Number Remaining for Vitech
Documents / Letters	20	12	8
Reports / Queries	25	7	18
Workflows	10	11	0
Interfaces	6	3	3
Data Conversion Hours	3,500	2,467	1033

Planned Tasks for Next Period

- Continue working with Auditor-Controller and VRSD to develop solutions for the transmittal.
- Prepare first draft of Board materials for the 9/9/13 Board meeting.
- Continue analyzing data extracted from RDBS and loaded into V3.
- MBS to provide Cycle 6 data.
- Continue conducting data cleansing activities.
- Finalize Segment C design.
- Continue writing test cases for Segment C functionality and identifying data requirements.
- Continue executing Segment C testing.
- Begin Segment D design.
- Begin writing test cases for Segment D functionality and identifying data requirements.

Signatures

The content of this report has been reviewed and approved by:

Donald Kendig

Donald Kendig
Retirement Administrator
VCERA Project Sponsor

08/28/13
Date

8/28/2013

Hammad Zaigham
Vitech Project Manager

Date

8/26/13

Kim Zierath
Linea Project Manager

Date

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

1190 South Victoria Avenue, Suite 200
Ventura, CA 93003-6572
(805) 339-4250 • Fax: (805) 339-4269
http://www.ventura.org/vcera

August 8, 2013

Subject: Frequency of VCERIS reports

Dear Board Members:

As you will recall, on July 15, the Board approved a change in the sequence in which the increments of VCERIS would be received, and to extend the timeline for completion of VCERIS by five months, at increased contractor and consultant costs of $551,050, plus additional staff costs.

At the time the aforesaid changes were recommended, the Board was told it really had no choice but to approve the recommendation. As I recall, Trustee Towner remarked that "we had been placed in a box."

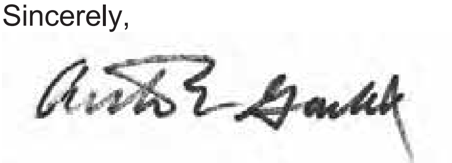
It's my belief part of the problem of being "placed in a box" resulted from the frequency with which the Board receives reports on the progress of VCERIS, along with identification of pending issues. These reports are received quarterly, and in the instant case, allegedly too late but to approve the recommended changes.

As the Board is aware, the VCERIS project is an important and expensive undertaking, and we certainly don't need to be placed in the position of having to devote even more of the system's assets to it, especially when we are told we have no choice.

Accordingly, it is my recommendation that the schedule of progress reports be changed from quarterly to bi-monthly. It is my understanding that VCERA's contract with Linea provides for quarterly reports. Nonetheless, I think it is our best interest to have these reports more frequently, to head off any similar experience. If Linea is unwilling to increase the frequency of reporting at no change in the contract cost, I suggest that the Board direct staff to fill the breach and prepare reports itself. They don't need to be as comprehensive as the Linea reports. We just need to be made aware of potential problems early, to provide us the opportunity to give direction so they may be avoided.

I would be happy to respond to any questions the Board might have.

Sincerely,



Arthur E. Goulet
Retiree Member

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September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: RISK MANAGEMENTS INTENDED USE OF THE "REFERRAL FOR INDEPENDENT MEDICAL EXAMINATION" TEMPLATE

Dear Board Members:

Background

On June 3, 2013, upon recommendation by Ms. Paladino, VCERA's disability process consultant, the Board adopted a cover letter template for requests to doctors for Independent Medical Evaluations (IME's) and asked Risked Management to respond on how they will use it.

Discussion

Board Counsel has reviewed Risk Management's response and has provided input for this Board letter. The primary purpose for the IME letter template is to improve the quality of the medical reports by educating the doctors on the 1937 Act legal standards. Ms. Paladino's "best practices" recommendation is that Risk Management sends out the complete IME letter in every case before taking a position. As indicated in its response, Risk Management plans to tailor the letter to the specific issues on which further opinion is needed in each case. Under our current procedures, VCERA cannot compel Risk Management to utilize the template or to obtain an IME in every case. Staff believes that Risk Management's decision to use the letter or portions of the letter, although not as originally recommended, is a clear step in the right direction. Staff also believes that Risk Management's proposal to tailor the letter to individual circumstances to support its position (or to determine its position) is acceptable, given how our current process is set up, as long as any revisions continue to accurately describe the specific legal standards for finding "permanent incapacity" and "service-connection" under the CERL and associated case law.

The Board's fiduciary duty is to manage the assets of the trust fund and to administer the system in accordance with the law (Cal. Const., art. XVI, § 17.). Where the burden is upon an applicant to present evidence establishing entitlement to a right under the disability statutes, the benefit may be awarded only if the Board finds sufficient proof that the applicant qualifies.

No member is simply 'entitled' to a disability pension upon application and submission of a favorable doctor's report. The award of the disability pension depends upon "substantial evidence," proof that the facts meet the specific legal standards under the retirement law. It is the Board's job to 'determine' whether sufficient proof has been made, and it must do so to its satisfaction (Masters v. San Bernardino County Employees Retirement Assn. (1995) 32 Cal.App.4th, 30, 47.).

Where Risk Management is challenging an application, the Board's fiduciary duties are satisfied because the parties have adverse interests. An impartial Hearing Officer reviews all of the evidence and determines whether the evidence meets the specific legal standards under the CERL for granting a disability retirement.

Where Risk Management has determined NOT to challenge the application, the Board needs to make sure that the evidence presented in support of the application meets the criteria as "substantial evidence" and meets the proper legal standards.

Under our current procedures, where the employer is the sole investigator of disability retirement applications, there is some risk that Risk Management, a County agency, might align itself with the County or the Appointing Authority (the department or agency for whom the applicant works) and try to use the disability process to get rid of a "problem" employee, use the disability process to obtain a "global settlement" of an employee personal injury claim, or grant a favor to the employee. In our long relationship with Risk Management, and many meetings on our disability process, we have concluded that this risk is low, and we believe that the Board and Ms. Paladino have drawn the same conclusion. However, if the Board ever feels that the medical analysis in support of an application is lacking, the Board has the authority to order an Independent Medical Examination (IME) on its own.

Please receive and file this cover letter and the attached letter from Risk Management documenting its intended use of the IME template. Staff will utilize the full template for any Board requested IME's.

Lori and I would be happy to respond to any questions you may have on this matter.

Sincerely,

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

Attachment

county of ventura

COUNTY EXECUTIVE OFFICE
MICHAEL POWERS
County Executive Officer

J. Matthew Carroll
Assistant County Executive Officer

Paul Derse
Assistant County Executive Officer/
Chief Financial Officer

Catherine Rodriguez
Assistant County Executive Officer/
Labor Relations & Strategic Development

RECEIVED

AUG 02 2013

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

July 30, 2013

Donald Kendig, Retirement Administrator
Ventura County Employees' Retirement Association
1190 S. Victoria Avenue, Suite 200
Ventura, California 93003

Re: Risk Management's Intended Use of "Referral for Independent Medical Examination" Document

Dear Mr. Kendig:

In May, consultant, Annette Palidino submitted a proposed "Referral for Independent Medical Examination" packet to send to examining physicians for disability retirement cases. The packet was adopted for VCERA's use in June. Risk Management was asked to report back to this Board on its intended use of the adopted packet, which is the subject of this letter.

By way of background, physicians retained by Risk Management or assigned counsel who are requested to examine an applicant are sent an introductory letter outlining the evidence to review and the issues to address. Risk Management and its retained counsel are selective in the physicians chosen to conduct such evaluations, using specialists in the needed field that have demonstrated an acumen in forensic reporting of disability issues.

These letters are generally concise; usually a page or two. We believe we have been successful in assembling the needed information and evidence. However, in adopting the proposed packet, the VCERA Board has expressed a desire to provide further details to an examining physician regarding the law that is applied.

To that end, when Risk Management arranges for an examination of an applicant, it will prepare correspondence to the physician, providing pertinent portions of the adopted packet, covering the issues the physician is asked to address. Risk Management will also provide a copy of the adopted packet to its retained counsel. However, Counsel will have the latitude to exercise their discretion whether or not to use all or part of the packet, depending on the circumstance and needs of a particular case. In the case of litigation, counsel must be able to develop the record and evidence in a way that best suits the litigation.

Medical examinations requested by Risk Management and its retained counsel are usually specific to issues in need of review. That is, if there is already sufficient evidence to support or refute one issue of a case, the examining physician will not be asked to reexamine that issue. Therefore, the law and discussion regarding issues for which the physician is not being asked to comment will not be provided in the packet prepared for that examination.

Further, the adopted packet contains some duplicative requests of the physician, which will not be included in requests made by Risk Management. Specifically, Page 5 of 10 of the adopted packet outlines eight areas that the physician is directed to address (items "A" through "H") in addition to item "I" which requests responses to 11 specific questions posed at pages 7 through 10. Several of the numbered questions on pages 7 to 10 are duplicative of the lettered items on page 5. For example:

- Question No. 1 on Pg. 7 requests information regarding "Objective Findings" which is also item "D" on page 5.
- Question Nos. 2 and 3 on Pg. 7 request information regarding "applicant subjective complaints and symptoms" and "the presence of pain" respectively, which is also requested in item "C" "current condition" on page 5.
- Question No. 7 on Pg. 9 requests information on "Permanency" as does Item "G" on Pg. 5.
- Question No. 9 and 10 on Pgs. 9 to 10 request information on "causation" as does Item "H" on Pg. 5.

To address this potential duplication, simplify the physician's task in preparing the medical report and minimize the chance of developing conflicting evidence; we envision streamlining the specific issues presented for the physician to address.

We would be happy to address any questions the Board may have regarding the use of the adopted packed outlined herein.

Sincerely,

Charles S. Pode
Deputy Executive Officer – Risk Manager

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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Ventura, CA 93003-6572
(805) 339-4250 • Fax: (805) 339-4269
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September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: DISABILITY RETIREMENT PROCESS REVIEW AND CONSULTANT RECOMMENDATIONS

Dear Board Members:

Background

This is part V of a multi-part review and educational effort to enhance the quality of the VCERA disability retirement process. On April 1, June 3 & 17, and July 1, 2013, VCERA's consultant, Annette Paladino, addressed your Board with PowerPoint presentations on the elements of a strong disability program, the CERL disability legal standards, and the role of hearings and hearing officers. She provided recommendations for revisions to the application packet, letters to examining physicians, Board letters, hearing officer selection/evaluation procedures, and hearing procedures that would affect disability processing time.

On June 3, 2013, the Board adopted 1) an updated disability application packet, with comprehensive instructions, for posting on-line and which incorporates electronically fillable form fields, 2) a cover letter template for requests to doctors for Independent Medical Evaluations (IMEs) and 3) a Board letter template for Risk Management's use. On June 17, 2013, the Board received and filed an orientation and information kit for new hearing officers outlining their duties and responsibilities and a suggested hearing officer report outline as well as a proposed hearing officer evaluation process, and directed staff to return to the Board at a future date with specific recommendations. The Board also approved a contract with Ms. Paladino for a period of July 1, 2013 to September 30, 2013 for 120 hours not to exceed $9,000. On July 1, 2013, the Board received a report on the timeline for the current disability procedures and initial proposals on modifications that could yield time savings.

Discussion

Today, Ms. Paladino will review her fifteen (15) recommendations to improve upon VCERA's disability process, obtaining the Board's direction, and staff will propose a plan for revising the disability procedures.

1. Ms. Paladino's Fifteen Recommendations

Attached is Ms. Paladino's comprehensive final report consolidating previous recommendations (and Board actions) and additional recommendations for improving the VCERA disability retirement program.

2. Staff Proposal for Revising the Disability Procedures

Presently, the VCERA Disability Retirement Hearing Procedures ("hearing procedures") are incorporated into the Board's bylaws, which require County Board of Supervisor approval for any changes to take effect, and upon review, the Board meeting of September 16 does not provide a sufficient amount of time for Ms. Paladino to modify the hearing procedures incorporating all of the Board-approved procedural changes.

Ms. Paladino's contract is set to expire on September 30, 2013, and staff proposes a contract extension to December 31, 2013. The present contract hours and dollar limit are still sufficient for her to complete this task. Alternatively, the Board may allow the contract to expire, and staff will complete the modification of the disability procedures prior to March 31, 2014.

In either case, it has been the intent of staff, from the beginning of the review of the hearing procedures, to separate them from the bylaws such that they can be more easily modified over time. Staff intends to bring the bylaws to the Board prior to December 31, 2013. The bylaws would incorporate a general reference to hearing procedures and the hearing procedures would stand alone.

Board Counsel and Staff's preference would be to assign the modification of the hearing procedures to Ms. Paladino.

Annette and I would be pleased to respond to any questions you may have on this matter and we look forward to your direction on the recommendations to follow.

Sincerely,

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

Attachment

CONSULTANT REPORT

By Annette A. Paladino, Disability Retirement Consultant

RECOMMENDATIONS

FOR

VCERA

DISABILITY RETIREMENT

PROCEDURES

September 9, 2013

Introduction

This consultation was performed at the request of Retirement Administrator Donald Kendig on behalf of the VCERA Board of Retirement. The assignment was to evaluate current disability retirement procedures and provide recommendations for improving the accuracy and efficiency of the program. The duration of consultation period was from February 2013 and to September 2013.

The consultant frequently met with the VCERA Retirement Administrator, VCERA staff, Risk Management staff, and VCERA General Counsel to discuss current procedures and policies. The consultant interviewed trustees and hearing officers, and also reviewed all pertinent program documents.

The following criteria were used to evaluate each procedural segment of the current disability program:

- **Compliance with governing statutes and applicable case law**
- **Compliance with due process**
- **Fulfillment of the Board's fiduciary duty**
- **Compiling a full and comprehensive record**
- **Providing clear and concise communication**
- **Time and cost efficiencies**

Attached, for the Board's consideration, are recommendations for procedural revisions to the VCERA Disability Retirement Program.

RECOMMENDATION SUMMARY

Recommendation 1	Revise the format of the disability retirement application. *(Adopted 06/03/13)*
Recommendation 2	Direct Risk Management to obtain an Independent Medical Examination of the applicant in each case prior to taking a position on the application, and use the suggested cover-letter to communicate disability retirement legal standards to the examining physician. *(Partially adopted 06/03/13)*
Recommendation 3	Direct Risk Management to use the suggested Board Rpt Format to insure consistent presentations, with emphasis on objective evidence, and compliance with specific disability retirement legal standards. *(Adopted 06/03/13)*
Recommendation 4	Send an information packet to VCERA hearing officers listing duties/responsibilities, recommended hearing report format, SACRS Disability Resource and VCERA Disability Hearing Procedures. *(Receive and File. Directed staff to return with specific recommendations. 06/17/13)*
Recommendation 5	Periodically evaluate Hearing Officer job performance using suggested Hearing Officer Evaluation Kit: a statement of the board's hearing officer evaluation policy, a description of the evaluation procedures, a memo to raters and a performance rating sheet. (*Receive and File. Directed staff to return with specific recommendations. 06/17/13)*
Recommendation 6	Implement a telephonic hearing setting conference prior to the hearing in every case. *(06/17/13 No Action Taken)*
Recommendation 7	Eliminate the 120- day period for the applicant to submit additional documentation in support of his/her application. *(07/01/13 No Board Action Requested)*
Recommendation 8	Authorize an option for Risk Management to recommend an application be placed in "suspense" status (temporary period of no further Board action) until the permanency of the incapacity can be ascertained. *(07/01/13 No Board Action Requested)*
Recommendation 9	If the Board eliminates the applicant's 120-day period to file additional information, and implements the option to recommend an application be placed in suspense status, establish a deadline of 120 days (4 months), with one 60-day extension (2 month), if necessary) from receipt of a "completed application" for the employer (Risk Management) to file a Notice of Position. *(07/01/13 No Board Action Requested)*
Recommendation 10	Set a 60-day time frame from service of "Notice of Opposition" to assign a potential Hearing Officer to a matter. *(07/01/13 No Board Action Requested)*
Recommendation 11	Implement a 180-day deadline from receipt of Notice of Hearing by which a hearing must take place and on which the assigned Hearing Officer's jurisdiction over the matter ends. *(07/01/13 No Board Action Requested)*
Recommendation 12	Reduce time a Hearing Officer has to produce a report from 90 to 60 days. *(07/01/13 No Board Action Requested)*
Recommendation 13	Implement a deadline for placing unopposed applications on the Board agenda. Within 60 days of filing a "Notice of No Opposition", Risk Management must file the Medical Analysis for placement on the agenda *(07/01/13 No Board Action Requested)*
Recommendation 4	Keep data on statistical factors in a format that enables easy analysis. *(No prior Board Agenda Requested)*
Recommendation 15	At a future time, place on the agenda an item to assess trustee interest in exploring development of new procedures in which VCERA staff investigates disability applications and makes recommendations to the Board. *(04/01/13 No Board Action Requested)*

1. DISABILITY RETIREMENT APPLICATION	
RECOMMENDATION 1	**Revise the format of the disability retirement application.**
PRIOR BOARD AGENDA 06/03/13	**Adopted:** The Board adopted the recommended format with revisions, including a cover-letter, the text of pertinent code sections, enhanced information on re-employment in lieu of disability retirement, revised authorizations for release of records and a treating physician statement.
2. INDEPENDENT MEDICAL EXAMINATION	
RECOMMENDATION 2	**Direct Risk Management to obtain, in each case, an Independent Medical Examination (IME) of the applicant prior to taking a position on the application, and to use the suggested cover-letter to communicate disability retirement legal standards to the examining physician.**
PRIOR BOARD AGENDA 06/03/13	**Partially Adopted:** The Board adopted use of the suggested IME cover-letter and requested Risk Management to use all or applicable portions of the cover-letter in their current procedures and report back to the Board regarding which portions of the letter they are using.
3. BOARD REPORT FORMAT	
RECOMMENDATION 3	**Direct Risk Management to use the suggested Board Report format to insure consistent presentations, with emphasis on objective evidence and compliance with disability retirement legal standards.**
PRIOR BOARD AGENDA 06/03/13	**Adopted:** The Board adopted the suggested format, with deletion of "confidential" from the footer and deletion of "County Counsel" from the signature block.
4. HEARING OFFICER INFORMATION PACKET	
RECOMMENDATION 4	**Send an information packet to VCERA hearing officers listing duties/responsibilities, recommended hearing report format, SACRS Disability Resource and VCERA Disability Hearing Procedures.**
PRIOR BOARD AGENDA 06/17/13	**Received and Filed Hearing Officer Information Packet**. The Board directed staff to return to the Board at a future date with specific recommendations.
5. HEARING OFFICER EVALUATION KIT	
RECOMMENDATION 5	**Periodically evaluate hearing officer job performance using suggested Hearing Officer Evaluation Kit: a statement of the board's hearing officer evaluation policy, a description of the evaluation procedures, a memo to raters and a performance rating sheet**.
PRIOR BOARD AGENDA 06/17/13	**Received and Filed Hearing Officer Evaluation Kit**. The Board directed staff to return to the Board at a future date with specific recommendations.

6. TELEPHONIC HEARING SETTING CONFERENCE	
RECOMMENDATION 6	**Implement a telephonic hearing setting conference prior to each evidentiary hearing in all cases.**
PRIOR BOARD AGENDA 06/17/13	**No Action Taken**
CURRENT STATUS	Current procedures do not include a telephonic hearing setting conference of the hearing officer and the parties.
DISCUSSION	Preliminary matters such as hearing date, issues to be heard, estimated time for presenting the case, briefing schedules, discovery deadlines, witness availability, admissibility of evidence, etc are currently addressed at the hearing often causing wasted hearing time, costly adjournment, and delayed re-scheduling to complete the hearing. Also, unrepresented applicants are frequently overwhelmed at hearing, not having received prior meaningful information on the hearing procedures and environment. A pre-hearing telephonic conference would strengthen current hearing procedures in two ways: • Provides pre-hearing planning on hearing date and preliminary issues to avoid hearing delay or needless continuances • Provides an opportunity to inform the unrepresented applicant about the evidentiary hearing process This procedure fulfills the Board's fiduciary duty of care to its members.
PROPOSED ACTION	**Consider recommendation and take appropriate action to amend the procedures to include telephonic hearing setting conferences in all cases.**

7. TIMELINE – TIME TO SUBMIT ADDITIONAL DOCUMENTATION

RECOMMENDATION 7	**Eliminate the 120-day period for applicant to submit additional documentation in support of his/her application.**
PRIOR BOARD AGENDA 07/01/13	No Requested Action
CURRENT STATUS	Currently, the applicant has 120 days, plus lengthy extensions, in which to submit additional materials in support of his/her application. The timeline for Risk Management to take a position is measured from the expiration of the 120 day period minus waived time, plus granted extensions.
DISCUSSION	Extensions of this deadline unnecessarily lengthen the time for the employer to state a position. The 120 day time period is actually meaningless as applicant is entitled to submit additional information at any time up to the hearing evidence exchange deadline. Eliminating the 120 day period does not prejudice the applicant and fulfills the Board's fiduciary duty to promptly deliver benefits to which the member is entitled. The employer's time to state a position would be measured from the time of receipt of a completed application.
PROPOSED ACTION	**Consider recommendation and take appropriate action eliminating the 120 day period for applicant to submit additional documentation in support of his/her application.**

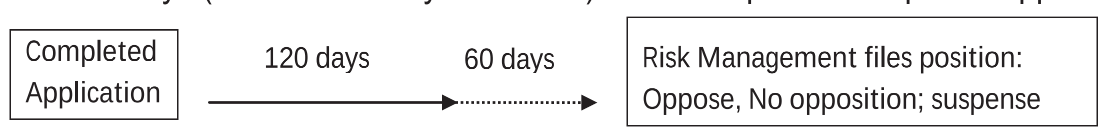
8. OPTION TO PLACE APPLICATION IN SUSPENSE STATUS

RECOMMENDATION 7	**Authorize Risk Management an option to recommend an application be placed in “suspense” status (temporary period of no further Board action) until the permanency of the incapacity can be ascertained**
PRIOR BOARD MEETING None	**N/A**
CURRENT STATUS	Current procedures do not include an option for Risk Management to recommend that an application be placed in “suspense” status until the permanency of the incapacity can be assessed.
DISCUSSION	Evaluation of applications is frequently delayed because of incomplete information on permanency issues such as P &S status, reasonable accommodations, trial return to work, completion of new medical treatment, etc. Placing the application in “suspense” status until after the resolution of permanency related issues prevents lengthy hearing delays and unnecessary hearing costs, and avoids the appearance of due process abuses, due to delayed hearings. **Process**: Within 120 days(plus 60 day ext) after receipt of completed application (or any other timeline the Board establishes), if RM determines that the permanency of the applicant’s incapacity cannot be ascertained, RM must file with VCERA a “Notice of Position” indicating “Recommend application be placed in suspense until permanency can be ascertained”, and providing a brief explanation of why permanency cannot be ascertained: i. e. Applicant is undergoing a new treatment which may materially improve functionality; applicant is not P&S; final work restrictions are not yet established; applicant and employer are exploring reasonable accommodation; applicant is engaged in a trial return to work; etc. The case is then placed on the agenda (Consent calendar is an alternative). The item will indicate Risk Management’s position that the application be placed in suspense and will state the supporting reason. If the Board denies the request, the Board will order Risk Management to file a new position (oppose or not oppose) with the remaining timeline or within any new timeline determined by the board. Notice shall be given to the applicant that the item has been placed on the agenda (or consent calendar). The applicant would have the right to appear and address the Board either to support or object to the recommendation.
PROPOSED ACTION	**Consider recommendation and take appropriate action providing Risk Management with a third option to recommend an application be placed in “suspense” status until the permanency of the incapacity can be ascertained.**

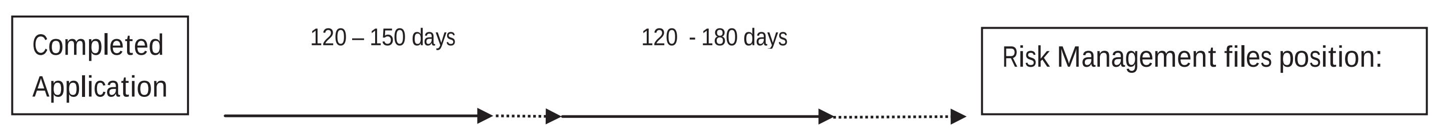
9. TIMELINE – TIME FOR RISK MANAGEMENT TO FILE NOTICE OF POSITION

<table>
<tr><td>RECOMMENDATION 8</td><td>If the Board eliminates the applicant’s 120-day period to file additional information, and implements the option to recommend an application be placed in suspense status, establish a deadline of 120 days (4 months), with one 60-day extension (2 months), if necessary) from receipt of a “completed application” for the employer (Risk Management) to file a Notice of Position.
(Completed application = receipt of all application parts, plus treating physician records.)</td></tr>
<tr><td>PRIOR BOARD AGENDA
07/01/13</td><td>No Requested Action</td></tr>
<tr><td>CURRENT STATUS</td><td>Risk Management has 60 days (plus “reasonable extensions”) from notification of expiration of the time for applicant to submit additional documentation, to file a Notice of Position. (180 days + extensions - 6-8 months)</td></tr>
<tr><td>DISCUSSION</td><td>

If the Board eliminates the 120-day period in which an applicant may submit additional information, the Board must also establish a new point from which the time for Risk Management to file a “Notice of Position” is measured. The deadline for Risk Management to state a position on an application is properly measured from the time VCERA receives a completed application and transmits it to the Sponsor (Risk Management for the County). A completed application is defined as receipt of Parts, A, B, C, D, E and the treating physician records. If the Board also authorizes an option to place an application in “suspense” until the permanency of the incapacity can be ascertained, a reasonable timeline for Risk Management to file a “Notice of Position” is 120 days (with one 60-day extension) from receipt of a completed application.



If the Board preserves the current procedures (does not eliminate the 120 – 150 day period for applicant to submit additional information (Rec.7), and does not implement the option to recommend an application be placed in suspense (Rec.8), then the Board may consider lengthening the time Risk Management has to state a position from the current 60 days after expiration of the applicant’s time to submit additional information to 120 days (plus one 60-day extension) after the expiration of the applicant’s submission period. Extending the timeline during the investigation phase is preferable to lengthy delays occurring after a hearing has been requested.



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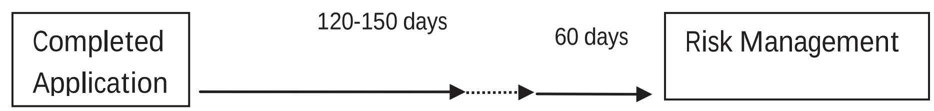
<td>If the Board preserves the applicant’s 120 -150 day period to submit additional information (does not adopt Rec.7, but adopts Rec. 8 to implement the option to recommend that an application be placed in suspense status, then the Board may wish to preserve the current 60-day deadline from the expiration of the applicant’s time to submit additional information for Risk Management to state a position. (oppose, no opposition, place in suspense)

</td>
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<tr>
<td>PROPOSED ACTION</td>
<td>Consider recommendation and take appropriate action to either:
(If the Boards adopts Recommendations 7 and 8) Establish 120-day timeline (plus one 60 day extension) from receipt of a completed application for Risk Management to file a Notice of Position, or
(If the Board does not adopt Recommendations 7and 8) Lengthen the current 60-day timeline to 120 days (plus one 60-day extension) from the expiration of applicant’s 120 day period to submit additional information.
(If the Board does not adopt Recommendation 7, but does adopt Recommendation 8) Reaffirm the current 60-day timeline from expiration of the applicant’s 120-day period to submit additional information</td>
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10. TIMELINE – TIME TO ASSIGN A HEARING OFFICER

RECOMMENDATION 10	**Set a 60 day time frame from service of "Notice of Opposition" to assign a potential Hearing Officer to a matter.**
PRIOR BOARD AGENDA 07/01/13	No Requested Action
CURRENT STATUS	Currently, a Hearing Officer may not be assigned to a matter until the expiration of the time period allowed for applicant to retain counsel (up to 120 days).
DISCUSSION	Delaying assignment of a potential hearing officer for up to 120 days to allow the applicant to retain counsel unnecessarily protracts the hearing timeline. Assigning a potential hearing officer **60** days following service of Notice of Opposition gives applicant adequate time to retain counsel. This reduced time period does not prejudice the applicant because, following the assignment of a potential hearing officer, the parties have 15 days in which to disqualify the assigned potential hearing officer and, following the expiration of the disqualification period, the matter may not be heard for another 60 days; thus, the applicant has additional time (75 days), if needed, to retain counsel and can retain counsel at any point during the process.
PROPOSED ACTION	**Consider recommendation and take appropriate action to set a 60 day time frame from service of "Notice of Opposition" to assign a potential Hearing Officer to a matter.**

11. TIMELINE – DEADLINE FOR SETTING A HEARING

RECOMMENDATION 11	**Implement a 180-day deadline from receipt of Notice of Hearing by which a hearing must take place on which the assigned Hearing Officer's jurisdiction ends, and implement procedures to be followed, if the matter cannot reasonably be set within the 180-day period.**
PRIOR BOARD AGENDA 07/01/13	No Requested Action
CURRENT STATUS	A case may not be heard earlier than 60 days from receipt of the Notice of Hearing; however, there is no control on the latest time a case must be heard.
DISCUSSION	Once it is determined a hearing is necessary to evaluate an application, lengthy delay in hearing the matter prejudices the applicant's right to a timely adjudication. Placing a control on the time period by which a hearing must be held and requiring Board approval of continuances fulfills the Board's fiduciary duty to provide prompt delivery of benefits. The Board may wish to consider the following procedure to address continuances: A Hearing Officer appointed to a matter shall set a hearing date that is no more than 180 days from receipt of the Notice of Hearing. If a Hearing Officer determines that a hearing cannot reasonably be set within the designated period, he/she shall submit, for placement on the Board agenda, a written request for an extension of time to hear the matter, along with an explanation of the circumstances necessitating the request. The Board will consider the stated reasons and shall decide whether to grant an extension and shall determine the length of a granted extension. If the Board denies the continuance, the Board may take further action such as instruct the Hearing Officer to consider additional dates within the 180 day period- i.e. weekends, holidays, partial days, etc. or assign a new hearing officer.
PROPOSED ACTION	**Consider recommendation and take appropriate action to implement 1) a 180-day deadline from receipt of the Notice of Hearing by which a hearing must occur and on which the assigned Hearing Officer's jurisdiction ends, and 2) a procedure for the Board to either grant a request for extension of the 180 days or direct the hearing officer to use dates/times outside normal business hours within the 180 day period, or direct staff to assign a new hearing officer to set the matter within the 180 day period.**

12. TIMELINE – HEARING OFFICER REPORT

RECOMMENDATION 12	**Reduce the time in which a Hearing Officer must produce his/her report from 90 days to 60 days.**
PRIOR BOARD AGENDA 07/01/13	No Requested Action
CURRENT STATUS	Currently, Hearing Officers have 90 days from the end of the closing brief period to produce their written report.
DISCUSSION	60 days to evaluate evidence and write a report is reasonable. Shortening the timeline fulfills the Board's fiduciary duty to promptly deliver benefits to which the member is entitled.
PROPOSED ACTION	**Consider recommendation and take appropriate action to set the time the Hearing Officer must provide his/her report and recommendation at 60 days after the matter is submitted.**

13. TIMELINE – UNOPPOSED APPLICATIONS BEFORE THE BOARD

RECOMMENDATION 13	**Implement a deadline for placing unopposed applications on the Board agenda:** • **Within 60 days of filing a "Notice of No Opposition", Risk Management must file the Medical Analysis for placement on the agenda**
PRIOR BOARD AGENDA 07/01/13	No Requested Action
CURRENT STATUS	After filing a "Notice of No Opposition", there is no deadline for placing the application before the Board.
DISCUSSION	A timeline for bringing uncontested applications to the Board fulfills the Board's fiduciary duty to promptly deliver benefits to which the member is entitled.
PROPOSED ACTION	**Consider recommendation and take appropriate action requiring Risk Management to file a Medical Analysis within 60 days of filing the "Notice of No Opposition" for immediate placement on the agenda**

14. DATA ANALYSIS

RECOMMENDATION 14	**Keep data on statistical factors in a format that enables easy analysis**
PRIOR BOARD AGENDA NONE	N/A
CURRENT STATUS	Case developments are currently documented by entries to a “word” document (Status Report).
DISCUSSION	Comparative statistical trends are not easily discerned from current record keeping formats. Spread sheets or other data comparison reporting systems of case statistics enable trend analysis to evaluate procedure efficiency, workload levels, staffing levels, board action history, etc. Such data can also be used to construct an annual Disability Statistics Report for trustee information and discussion.
PROPOSED ACTION	**Consider recommendation and take appropriate action directing staff to create statistics for disability cases outstanding as of June 30, 2013, for annual reporting within the first quarter of the subsequent fiscal year containing the following items:** **Application file date; applicant membership status S/G; employer (County/District) name; employer position: opposed/unopposed; Notice of No Opposition file date; Medical Analysis file date: disposition: grant/denial; benefit granted:SCD, NSCD; Board action date; Request for Hearing file date; hearing date; Hearing Officer name; request for continuance: Yes/No; party requesting continuance; new hearing date; Applicant represented:Yes/No; date applicant represented; applicant counsel name; employer counsel name; pre-Hearing Conference date; Hearing Officer Report date; Request for Reconsideration: Yes/No/Date: Granted/Denied; Board IME:Yes/No**

15. VCERA INVESTIGATION OF DISABILITY RETIREMENT APPLICATIONS	
RECOMMENDATION 15	**At a future time, place on the agenda an item to assess trustee interest in exploring development of new procedures in which VCERA staff investigates disability applications and makes recommendations to the Board.**
PRIOR BOARD AGENDA 04/01/13	No Action requested.
CURRENT STATUS	Ventura County Risk Management, on behalf of the employer (County of Ventura) investigates applications for disability retirement and makes recommendations to the VCERA Board of Retirement. VCERA staff has no role in the investigation, analysis or recommendation process.
DISCUSSION	In evaluating whether to maintain the current disability procedures or move to an “in-house” VCERA disability program, the Board may wish to contemplate the following issues: • What is the employer’s motivation for investigating and making recommendations regarding the disposition of disability applications? • Are trustees comfortable with the Board’s current level of control and oversight of the quality of the investigation and hearing, the consistency of procedures, the compliance with timelines, the accuracy of the legal standards applied, and the competency and conduct of participating professionals (staff, attorneys, evaluating physicians) • Does the present procedural approach best fulfill the Board’s fiduciary duty 1) to implement fair and equitable procedures that accurately identify entitlement to disability benefits under the CERL, 2) to maintain a relationship of trust and care with VCERA members and 3) to promptly grant benefits to which the member is legally entitled? • Do potential inconsistencies in the methods used by the various participating Plan Sponsors (Ventura County, Superior Court, Sanitation District) to investigate service and non-service connected applications result in inequities to VCERA members and breach of fiduciary duty? • Is the Board vulnerable to legal challenges created by delegating investigation of disability applications to the Plan Sponsors? • What additional costs would VCERA incur if an “in-house” program is implemented and are the costs a justifiable expenditure of the funds? (current costs include Disability Specialist [Angie Tolentino] salary, Disability Assistant salary, mailing costs, Board-directed medical exam fees, hearing officer fees, court reporter fees, agenda prep costs).
PROPOSED ACTION	**Consider recommendation and take appropriate action directing staff to place on the July 2016 agenda, if not sooner, an item to assess trustee interest in exploring development of new procedures in which VCERA staff investigates disability applications and makes recommendations to the Board.**

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

1190 South Victoria Avenue, Suite 200
Ventura, CA 93003-6572
(805) 339-4250 • Fax: (805) 339-4269
http://www.ventura.org/vcera

September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: WALTER SCOTT & PARTNERS DUE DILIGENCE SITE VISIT - EXCEPTION TO EDUCATION AND TRAVEL POLICY REQUEST

Dear Board Members:

Background

On June 3, 2013, (Item VII.B) your Board approved a due diligence site visit with our investment manager Walter Scott & Partners in Edinburgh, Scotland and authorized Mr. Towner and Mr. Wilson, and alternate Ms. McCormick, to conduct the site visit. Ultimately, Ms. McCormick and Mr. Towner will conduct the site visit. At the time of the Board meeting, the site visit was to occur on October 9 or 10, 2013, with a return date of October 11, 2013. Staff has had an opportunity to plan the trip and could realize material savings if trustees were to extend their stay. However, our current Education and Travel Policy (Policy) does not allow the flexibility to schedule the travel in such a way as to realize these savings.

Discussion

Our current Policy for travel outside California allows lodging and other travel-related expenditures for the evening prior to the meeting and the evening of the final day if the meeting ends after 2:00 p.m. A business class seat purchased for travel occurring within the policy requirements would cost approximately $7,300. By allowing a longer stay, the plan could experience savings. Given the international travel, a minimum of one additional night would be required for the change in time zones and rest. A trip of six days or longer departing/returning on a Saturday will reduce the business class airfare to about $5,200, saving $2,100. The cost of lodging for an additional three nights would be approximately $600 plus meals and incidentals of approximately $270 resulting in a savings of $1,230 per person. Given that airfare is constantly changing/increasing, Staff/Trustees have already booked the airfare and hotels to achieve the savings indicated, in advance of your Board's approval, and therefore request your approval for the airfare and hotel in order to lock in the savings and keep those reservations.

In addition, the current Policy allows meal reimbursements outside of California up to a maximum of $76.00 per day, with individual limits for breakfast, lunch and dinner. Given the high cost of Europe and reduced value of the dollar when converted to the Euro, staff is proposing that the limit for this trip be increased to a maximum of $90.00 per day based on actual costs with no individual meal sublimits for this trip.

By increasing the meal limit per day, staff believes this will allow flexibility to dine at the booked hotel or other establishments in the area.

Staff recommends your Board authorize the additional three nights lodging, totaling five (5), and increase the maximum meal limit to $90.00 per day with no individual meal limit, for the Walter Scott site visit trip.

We would be happy to answer any questions you may have.

Sincerely,

Henry C. Solis, CPA
Chief Financial Officer

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Ave, Suite 200
Ventura, CA 93003

SUBJECT: STATE ASSOCIATION OF COUNTY RETIREMENT SYSTEMS (SACRS) 2013 FALL CONFERENCE ITEMS

Dear Board Members:

Submitted for your consideration are the following items for the upcoming SACRS Fall Conference taking place November 12-15, 2013, in Indian Wells:

- Conference Agenda
- Hotel Information
- Transportation Information
- Conference Registration Information
- SACRS Proxy Voting Information

The conference will be held at:

Renaissance Esmeralda Resort and Spa
44400 Indian Wells, CA 92210
Phone: 760-773-4444
www.renaissancehotels.com
SACRS room rate $215 per night (excluding tax & service fees)

Registration materials were provided to you via email on August 28 due to an early registration deadline of September 15. If you are planning to attend, please return the registration materials to Glenda Jackson no later than September 11.

Please designate a delegate and alternate voting delegate.

Staff would be happy to answer any questions you may have.

Sincerely,

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

Attachments (5)

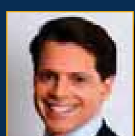
SACRS *Fall* CONFERENCE

NOVEMBER 12-15

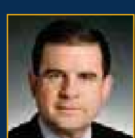
RENAISSANCE
ESMERALDA RESORT & SPA
INDIAN WELLS

2013

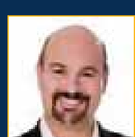
KEY NOTE SPEAKERS



ANTHONY SCARAMUCCI



BOB DOLL



JON NAJARIAN

PRELIMINARY AGENDA

TUESDAY, NOVEMBER 12, 2013	
	CELEBRITY GOLF COURSE THE RENAISSANCE HOTEL Don't miss the Annual Golf Tourney at SACRS Fall Conference that is being held at the Celebrity Course in Indian Wells, California. This 36-hole Palm Springs golf resort features a magnificent 53,000 square-foot clubhouse (IW Club) and is the only facility in California with two courses ranked in the Top 20 "Best Courses You Can Play" in California by Golfweek Magazine. Golf Channel's popular Big Break series was contested at Indian Wells Golf Resort for its 15th season and showcased the resort's two championship golf courses - Celebrity Course & Players Course. The Celebrity Course is a two-time host to the PGA TOUR's Skins Game. Celebrity Golf Course is conveniently located within walking distance from the SACRS Conference Hotel, the Renaissance Esmeralda Resort & Spa. *For more information and to register contact Kristin Hamlin, StepStone Group khamlin@stepstonebglobal.com or 858.768.7622*
3:00 P.M. - 6:30 P.M.	REGISTRATION
1:00 P.M. - 3:00 P.M.	SAFETY BREAKOUT
3:00 P.M. - 5:00 P.M.	NEW TRUSTEE BREAKOUT
3:00 P.M. - 5:00 P.M.	ADVANCE TRUSTEE BREAKOUT **Speaker:** Damien Hooper-Campbell, Goldman Sachs
3:00 P.M. - 5:00 P.M.	DISABILITY/OPS BREAKOUT Application timeliness
5:30 P.M. - 6:30 P.M.	SACRS WELCOME RECEPTION

WEDNESDAY, NOVEMBER 13, 2013	
6:30 A.M. - 7:30 A.M.	YOGA WITH SACRS Want to impress your benefits manager when you go back to the office? Participate in the SACRS Wellness Sessions! Yoga with SACRS is open to all levels, from beginner to expert. Although yoga poses are physical exercise, they have the added benefit of bringing great balance to the mind, body and spirit. A morning yoga session is a great way to energize before our busy conference day. **Professional Yoga instructor, Dotsy Marquez ~ Pilates Mama, will lead class, no fee to participate for conference attendees & guests, pre-registration required, towels and water will be available, and all participants must submit a waiver prior to class.*
7:30 A.M. - 8:30 A.M.	SACRS BREAKFAST
8:00 A.M. - 6:00 P.M.	REGISTRATION
8:30 A.M. - 9:00 A.M.	GENERAL SESSION – WELCOME, FLAGS, AWARDS
9:00 A.M. - 10:00 A.M.	GENERAL SESSION **Speaker:** Anthony Scaramucci, SkyBridge Cap
10:00 A.M. - 10:30 A.M.	NETWORKING BREAK
10:30 A.M. - 11:30 A.M.	GENERAL SESSION – POLITICS AND THE ROLE OF THE FIDUCIARY **Speakers:** Steve Yoakum, PSRS/PEERS Anne Sheehan, CalSTRS

WEDNESDAY, NOVEMBER 13, 2013 CONTINUED	
11:40 A.M. - 12:40 P.M.	GENERAL SESSION **Speaker:** Jon Najarian, CNBC
12:40 P.M. - 1:45 P.M.	SACRS LUNCH
2:00 P.M. - 3:00 P.M.	GENERAL SESSION – RV KUHNS ANNUAL SACRS SYSTEMS REPORT **Speaker:** RV Kuhns Representative
3:15 P.M. - 5:00 P.M.	ADMINISTRATORS BREAKOUT
3:15 P.M. - 5:00 P.M.	AFFILIATE BREAKOUT
3:15 P.M. - 5:00 P.M.	ATTORNEY BREAKOUT
3:15 P.M. - 5:00 P.M.	DISABILITY BREAKOUT
3:15 P.M. - 5:00 P.M.	INTERNAL AUDITORS BREAKOUT
3:15 P.M. - 5:00 P.M.	INVESTMENT BREAKOUT
3:15 P.M. - 5:00 P.M.	IT BREAKOUT
3:15 P.M. - 5:00 P.M.	OPS/BENEFIT BREAKOUT
3:15 P.M. - 5:00 P.M.	TRUSTEE BREAKOUT CAAP **Speaker:** Doug Rose, San Diego CERA
SACRS LEGISLATIVE COMMITTEE MEETING **Speaker:** Richard Stensrud, Committee Chair	
6:30 P.M.- 10:00 P.M.	WEDNESDAY NIGHT EVENT – OFFICIAL DAY ENDS AT 10 P.M.

THURSDAY, NOVEMBER 14, 2013	
6:45 A.M. - 7:45 A.M.	SACRS 5K FUN RUN/WALK Don't miss SACRS Inaugural 5K Fun Run/Walk! Enjoy the cool dessert morning with an invigorating walk, jog or run with fellow SACRS conference attendees along an easy 5K (3.1 miles) course. New to the SACRS Wellness Sessions, the 5K Fun Run/Walk is a great way for SACRS conference attendees and guests to come together and get moving before the day's educational sessions. All participants receive a SACRS Fun Run/Walk T-Shirt, water and a snack at the end of the Run/Walk. **Registration is $10 per person, the course is flat and paved, direction signs will be along course, with pocket maps, pre-registration required, and all participants must submit a waiver prior to Run/Walk.*
7:30 A.M. - 8:30 A.M.	SACRS BREAKFAST
8:00 A.M. - 6:00 P.M.	REGISTRATION
8:30 A.M. - 9:00 A.M.	GENERAL SESSION – VETERAN'S DAY CEREMONIES **Speaker:** Video & local rep presentation
9:00 A.M. - 10:00 A.M.	GENERAL SESSION – US EQUITIES- BOOM OR BUST? A look at the current economy and impact on US Stock market. **Speaker:** Bob Doll, Nuveen Asset Mgt

THURSDAY, NOVEMBER 14, 2013 CONTINUED	
10:00 A.M. - 10:30 A.M.	NETWORKING BREAK
10:30 A.M. - 11:30 A.M.	GENERAL SESSION – FIXED INCOME: MORE RISK- LESS RETURN? **Speaker:** Chris Pariseault, Pyramis Global Advisors
11:30 A.M. - 12:45 P.M.	SACRS LUNCH
1:00 P.M. - 2:00 P.M.	CONCURRENT SESSIONS
	CONCURRENT SESSION A – INVESTMENT SENIOR LOAN STRATEGY/SENIOR BANK LOANS **Speaker:** ING & Morgan Stanley
	CONCURRENT SESSION B OPERATIONS/DISABILITY
	CONCURRENT SESSION C HOT TOPIC – MOODYS/FITCH RATINGS
2:00 P.M. - 2:30 P.M.	SACRS NETWORKING BREAK
2:30 P.M. - 3:30 P.M.	CONCURRENT SESSIONS
	CONCURRENT SESSION A INVESTMENT
	CONCURRENT SESSION B OPERATIONS/DISABILITY
	CONCURRENT SESSION C HEDGE FUNDS- TOP TEN THINGS I HATE ABOUT HEDGE FUND INVESTING Catch the many perspecitve's from Academia, a Hedge Fund manager and a SACRS CIO.
3:40 P.M. - 5:00 P.M.	CONCURRENT SESSIONS
	CONCURRENT SESSION A SACRS LEGISLATIVE UPDATE
	CONCURRENT SESSION B SACRS MOVIE
5:00 P.M. - 5:30 P.M. EDUCATION COMMITTEE MEETING	
5:30 P.M. - 6:30 P.M.	SACRS RECEPTION

FRIDAY, NOVEMBER 15, 2013	
7:30 A.M. - 8:30 A.M.	SACRS BREAKFAST
8:45 A.M. - 9:45 A.M.	GENERAL SESSION – PEPRA
9:45 A.M. - 10:00 A.M.	BREAK
10:00 A.M. - UPON ADJ	SACRS BUSINESS MEETING **Speakers:** SACRS Board of Directors
UPON ADJ	SACRS BOD **Speakers:** SACRS Board of Directors

HOTEL INFORMATION

HOST HOTEL:
Renaissance Esmeralda Resort and Spa
44400 Indian Wells, CA 92210
Phone: 760-773-4444
www.renaissancehotels.com

SACRS CONFERENCE ROOM RATE:
$215 per night (not including Tax & Service fees)
$15.00 per room per night for discounted resort fee. Includes High Speed Guest Room Internet Access, Unlimited Local Calls, Bottled Water (2 per day), Fitness Classes, Resort Bicycles and Golf Bag Storage at Resort

To make your Staff & Trustee hotel reservations at the Renaissance Esmeralda Resort & Spa, please follow the directions below:

1. **Complete the hotel rooming list form and the payment form in this packet**

2. **E-Mail the completed forms prior to September 15, 2013, to:**
   CLARA S. FLORES | GROUP HOUSING/BILLING COORDINATOR
   Email: Clara.Flores@renaissancehotels.com
   Phone: 760.836.1255 Fax: 760.773.9250

All rooming lists must be submitted no later than Noon –September 15, 2013. SACRS cannot guarantee rooms at the Renaissance Esmeralda Resort and Spa to those Systems that do not meet this deadline.

Each System will have a 10-room block held for them (25 rooms for Los Angeles County). Due to high attendance, our room block is expected to fill up fast. All reservations made after the room block has been filled or after the deadline will be at the Renaissance Esmeralda Resort and Spa normal hotel "rack" rate and on a space-available basis.

PARKING:
Self-Parking – included in the $15 resort fee
Valet Parking - $25 overnight guest & $8 day rate

CHECK-IN/CHECK-OUT:
Guest accommodations are available at 4:00 pm on arrival and reserved until Noon on departure day. Attendees wishing special consideration for early arrival/late check-out should contact the hotel prior to arrival to avoid fees.

SACRS
State Association of County Retirement Systems
Staff • Trustees • Affiliates • Success
A California Non Profit Corporation

TRANSPORTATION INFORMATION

From Palm Springs International Airport
Turn left on El Cielo, then left on Ramon Road to Interstate 10 East. Take Interstate 10 East to Cook Street. Turn right on Cook Street, left on Hwy.111, then left on Indian Wells Lane. The resort will be on your right.

From Los Angeles
Exit the Airport to Sepulveda Boulevard. Enter Century 105 going east. Continue east on 105 to 605 North. Continue on 605 North to Interstate 10 East. Exit Cook Street and turn right. Go 4.5 miles to Hwy. 111 and turn left. Go 2 miles to Indian Wells Lane and turn left. The resort will be on your right.

From Ontario Airport
Exit Ontario Airport to Archibald Avenue North. Take Archibald Avenue to Interstate 10 East. Take Interstate 10 East for 83 miles. Exit Cook Street and turn right. Go 4.5 miles to Hwy. 111 and turn left. Go 2 miles to Indian Wells Lane and turn left. The resort will be on your right.

From San Diego Airport
Take 5 North to 163 North to 15 North. Take 15 North to 215 North to 60 East. Continue 50 miles to Interstate 10 East. Take 10 East for approximately 45 miles. Exit Cook Street and turn right. Go 4.5 miles to Hwy. 111 and turn left. Go 2 miles to Indian Wells Lane and turn left. The resort will be on your right.

Airport Transportation Services:

Destinations by Renaissance
From group tours to group airport transfers, Destinations by Renaissance can coordinate all of your transportation needs. Contact Destinations by Renaissance at 760-773-4638.

1415 L St. Suite 1000 | Sacramento, CA 95814 | **T** (916) 441-1850 | **F** (916) 441-6178 | www.sacrs.org

CONFERENCE REGISTRATION INFORMATION

CONFERENCE REGISTRATION FEE:
System Members (Trustees & Staff) $120.00 per attendee

CONFERENCE REGISTRATION:
Online registration is now open; please visit the SACRS.ORG website to register your System's attendees. Conference brochures will be mailed to your System; you may also complete a paper form for each attendee and mail along with payment to – SACRS, Attn: Sulema Peterson 1415 L Street, Suite 1000, Sacramento, California 95814.

CANCELLATION:

- **Conference Cancellation Policy**
  In order to receive a Conference Registration refund, you must cancel your registration by October 1, 2013. Please email cancellation to: Sulema@sacrs.org

- **Hotel Cancellation Policy**
  Any Hotel Room cancellations made within 21 days of the conference will incur a fee of $50 per cancellation. Name changes between same system staff/trustees will not incur the fee nor will medically necessary cancellations. If you need to cancel any of your room nights at any time, please contact SLGS at (916) 441-1850 rather than the hotel. Your room(s) will be given to other SACRS members who are on our waiting list. Cancellations must be received via email.

CONFERENCE ATTIRE:
All sessions and social functions at SACRS Fall Conference 2013 are business casual.

WEATHER:
The average temperature for the Indian Wells area in November is delightful; attendees should plan on cool mornings, sunny afternoon and temperature drop in the evenings.

- Daytime Highs: 75F – 80F
- Evening Lows: 48F – 52F

1415 L St. Suite 1000 | Sacramento, CA 95814 | T (916) 441-1850 | F (916) 441-6178 | www.sacrs.org
OPERATING UNDER COUNTY EMPLOYEES RETIREMENT LAW OF 1937, GOVERNMENT CODE 31450 ET SEQ

SACRS
State Association of County Retirement Systems
Staff * Trustees * Affiliates * Success

SACRS VOTING PROXY FORM

The following are authorized by the ___________________________ County Retirement Board to vote on behalf of the County Retirement System at the upcoming SACRS Conference *(if you have more than one alternate, please attach the list of alternates in priority order):*

_______________________________________ Voting Delegate

_______________________________________ Alternate Voting Delegate

These delegates were approved by the Retirement Board on _____ / _____ / _____.

The person authorized to fill out this form on behalf of the Retirement Board:

Signature: _________________________________

Print Name: _________________________________

Position: _________________________________

Date: _________________________________

Please send your system's voting proxy by **October 1, 2013** to:

SACRS
Attn: Sulema H. Peterson, SACRS Administrator
1415 L Street, Suite 1000
Sacramento, CA 95814
Tel: (916) 441-1850 / FAX: (916) 441-6178 / E-mail: Sulema@SACRS.org

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

1190 South Victoria Avenue, Suite 200
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September 9, 2013

Board of Retirement
Ventura County Employees' Retirement Association
1190 South Victoria Avenue, Suite 200
Ventura, CA 93003

SUBJECT: aiCIO ARTICLE: "UBS CALLS TIME ON RISK PARITY: BRIDGEWATER'S BOB PRINCE RESPONDS"

Dear Board Members:

Background & Discussion

Trustee Chris Johnston provided staff with the attached article for placement on the agenda.

Articles and information, such as this, can be emailed directly to the Board members or placed in Trustee folders before a Board meeting. Staff encourages trustees to share articles of general VCERA interest for forwarding or placement in trustee folders.

At times, information in articles encountered by trustees warrant discussion and can be placed on the agenda, just as Chris has done. Staff also welcomes this practice.

Please receive and file this item. I anticipate that Trustee Chris Johnston would be pleased to respond to any questions you may have on this article.

Sincerely,

Donald C. Kendig

Donald C. Kendig, CPA
Retirement Administrator

Attachment

Friday, August 09, 2013 5:33:52 AM

UBS Calls Time on Risk Parity: Bridgewater's Bob Prince Responds

Ding ding! Round two in the ongoing row over the future of risk parity funds in a tapering environment.

(August 9, 2013) -- UBS has rattled its sabre against risk parity funds, saying the losses witnessed in May and June this year were merely a "mild foretaste of what is to come".

In a whitepaper entitled "Will risk parity go wrong… again?" strategists Stephane Deo and Ramin Nakisa argued that if significant negative returns was the response to the Federal Reserve's hint that it would start to taper its asset purchase, the response to the onset of tapering was "likely to be more severe".

Given there is still no real timetable for tapering, the effect of tightening on fixed income assets is also unknown, UBS's strategists continued, leading them to develop a "speed limits" theory for analysing the susceptibility of fixed income to rising yield.

"We define the speed limit of bonds as the rate at which yield can increase such that it wipes out coupon income. Given the extraordinarily low coupon of most developed market sovereign debt, speed limits are below 2.5 basis points per month for treasuries, bunds, gilts and Japanese government bonds (JGBs). Investment grade is little better at 5.9 bp/month and even high yield corporate bonds can only absorb 13.1 bp/month," they wrote.

Add in the fact that historically the Fed tends to hike in 25 bp increments, and it is possible to anticipate repeated mark-to-market losses in the entire fixed income space each time the Fed moves, said UBS.

"Not only treasuries will be affected by the Fed's policy rate change—the high correlation between yield curves suggests the Fed may drag other sovereign yield curves higher with it in a process of policy contagion. This will destroy the sentiment of investors used to seeing treasuries, bunds, gilts and JGBs as safe stores of wealth, and may catalyze a large-scale re-allocation into equity," they concluded.

As one of the biggest players in the risk parity space, Bridgewater's CIO Bob Prince unsurprisingly disagreed. He told *aiCIO* that the onset of tapering was not going to lead to large hits of All Weather, because the surprise element isn't there—the markets are already pricing tapering in.

"What happened in the second quarter [of this year] was similar to what happened in 1994. In the second quarter, risk premiums rose, adversely affecting all assets due to a rapid, substantial change in the discounting of future monetary policy," he said.

"Prior to the second quarter, that tightening was not priced in. Now it is. So an incremental similar affect would have to be driven by a comparable surprise, relative to the tightening which is now priced in."

The markets are already discounting that five-year US treasury rates will rise to about 4.3% by 2018, up around 3% from today's level of 1.4%, Prince argued.

If interest rates rise as discounted, the effect will be minimal, he continued. They would have to rise much faster than what is discounted in order to have a similar effect as the second quarter.

"Losing periods occur when there is an actual or a discounted tightening of liquidity conditions. And the opposite is also true. Higher than normal returns, such as we experienced in the past couple of years, occur when liquidity expands and risk premiums fall."

Not everyone is convinced however. Robert White, a client portfolio manager in the global multi-asset group at JP Morgan, told *aiCIO* he would find it "very hard" to discern how risk parity products built around a framework of leveraged fixed income positions would be an attractive investment option in the current environment.

"When there's a negative performance of the underlying assets, history has dictated that the leverage goes out at an increasing rapid pace, causing a much more violent move in the price of the underlying asset class. I believe that this could happen again," he said.

"If you look at what happened in 1994 and 1998, that's really relevant to this. There was a lot of leveraged money invested in various forms of relative value fixed income. As those trades started to go against them they were forced to deal with redemptions, and unwind and decrease leverage.

"The movements that happened in the underlying asset classes were amplified and that had broad implications across the capital markets. There's a very real possibility that happens again."

Could this be the most testing time yet for risk parity funds? And what do you think of today's providers? Let us know what you think in *aiCIO*'s third annual risk parity investment survey by clicking here.

Related Content: Risk Parity: What Happened? and Risk Parity: What's Next?

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DUE DILIGENCE REPORT FROM THE TRIP TO BOSTON & MINNEAPOLIS

August 12, 2013, 0900 - 1200 at STATE STREET

State Street Global Markets was in a financial building located at One Lincoln St., Boston, MA 02111. Their building was very secure with multiple checks to get into the elevators and then their offices. They welcomed questions and had a lot of material to cover in 3 hours. The next three hours State Street representatives discussed areas HEK thought would be pertinent. These areas included: 1) Trading / Market Reviews, 2) Compliance Review, 3) Credit & Risk Overview, 4) SSgA Discussion, and 5) Transition Management Overview.

VCERA Trustees, Will Hoag, Chris Johnston, and Deanna McCormick, accompanied Steve Voss from HEK and met with John Muir. In addition, Peter Weiner, Thomas Motley, and Michael Mulka from State Street spoke with us about their areas of expertise and welcomed any questions asked.

State Street works closely with SSgA (State Street Global Advisors), their investment management division. This division works worldwide. Through this single system the Trader can see on line what the value is at that moment and make an informed decision.

There were many graphs and reviews of their investment strategies concerning VCERA. On one of the graphs on pg. 23, (pamphlet provided by State Street) it was shown how our yields have come down, however, it was noted that something with general collateral and easily shared items can be had at lower prices yet some of the small cap with smaller shares can demand higher returns. It was also noted that if a company is not doing well, they could negotiate better prices in a warm market situation. This may not work well with general shares. Pg 23 also revealed lower returns for the reinvestment spread as compared to 2013 however is still higher than 2011. Commingled funds are not counted in Lendable Returns, which was one reason the Lendable returns were also lower this year.

Repurchase agreements must have collateral. When considering this type of investment, investors must keep in mind that the United States must pay higher fees and may have lower outcomes since in the international markets U.S. companies must pay taxes where a company from France doing business in France would not have to pay that type or amount of tax. This adds extra expenses, which takes away from the bottom line.

State Street is our Custodian (our bank) and must check all borrowers to be sure they are the right fit - ie: make sure our money is valued correctly. They stated they were wrong about MF Global (a major global financial derivatives broker/ commodities brokerage firm). They did not predict that this company would have gone bankrupt causing a loss to many of their Clients.

For the lendable /loan trends State Street gathers all the entail on the market security finance, their data, and any other pertinent information from both the borrower and the lender. They also compare all others in that peer group to make sure that all the numbers are within the range before considering this type of business for their Clients. Currently there is a 70/30 split for this type of Securities Lending. For any type of default, State Street will collect everything including non-cash collateral to make their Client whole. If they can't make the Client whole, the Client must bear the loss.

State Street has more than 100 professionals located in six countries and have completed 650 transitions representing $352B in 2012. They stressed their operational efficiencies provide transparency through their transition management, exposure solutions, currency management, and their risk management research. However, there is still less lending/borrowing in all industries since the federal government passed new rules on all these businesses. Now, other international industries are getting involved and lending where the US used to have all the control over these areas. The Bond market is now more volatile, there has been no growth while the rates move up. The Feds are making it difficult by de-leveraging, which is making the economy slower.

A one-day sample transaction diagram on pg 61 showed the fundamentals of securities finance. This diagram gave the total spread that was yield minus rebate, which equaled 25 bps, annualized using a 360-day basis. The investment spread (yield - Fed funds rate) was 15 bps and the demand spread (Fed fund rate – rebate) was 10 bps using the same 360-day basis. Here it was explained that Quality D funds were like money market funds, they have short-term liquidity (25 - 30 days). While keeping things short can be a benefit, you give up the yield, there is an interest due of 0.05% divided over a 360 day period and then 50% of the earnings goes to the Client and 50% to the securities finance company.

Mr. Bernanke (an American economist and current chairman of the Federal Reserve) will be out soon with more comments that affect the market immediately. For instance, when he said the Federal Reserve needed to tapper its $65 billion bond-buying program, the market reacted negatively. Later he said the bond-buying program was not set in stone, this caused the market to react positively. State Street also feels Larry Summers (an American economist) could be a wild card in the Obama camp. In addition, Mr. Bernanke is not a fan of Quantitative Easing (an unconventional monetary policy used by central banks to stimulate the national economy when standard policies are ineffective).

State Street states the pendulum is still swinging and everyone is playing it very conservative; they don't think it is safe yet. They said the move on the Bank of Canada was a good move. In addition, keeping the investments on a short leash is prudent.

State Street has their own credit team doing their own audits on all lenders and borrowers, etc. The Feds are so involved, they feel we will be seeing more short sales with all the new regulations pending. It is cheaper to borrow using State Street.

ETF's are Exchange-Traded Funds, which is a security that tracks an index, a commodity or a basket of assets like an index fund, but trades like a stock on an exchange. ETFs cover everything with Asian or leveraging markets. Going to ETF may be cheaper at this time but would place VCERA at a greater risk for clashes. They are very conservative with lending but can only be successful if it goes very big.

State Street has a proprietary program, which pulls in option pricing, allowing them to check on everything before they show their cards. Brenda Bollettino, V.P. talked about Credit and Risk. She said to focus on the bottom line. Ms. Bollettino looks at the debt and exposure issues and oversight of all checks and balances for several companies. It was her opinion that non-cash collateral is more flexible. This is a larger market that pays 15% for certain types of collateral. It is the same with Convertible Bonds.

State Street started removing names from their list in 2010 and more in 2011 that they felt were risky. They decided to do this when there were decreases in stability, ie: Italy having 10% dept. Whoever was exposed to Italy and Spain was also cut from State Street's list of places to invest or do business.

Balances and exposures are down. State Street watches and monitors all of the financial issues around the world daily. They discuss via email what has happened around the world and what effect any discussion may have on the market and what they will risk exposure to, ie: discussions about Dell resulted in them taking another look at this company; if there is any further bad press, they will need to take them off the list.

State Street also discussed the Basel II Complaint Proprietary Models. Pg 38 discussed the risk ratings, which are tied to collateral acceptance and other risk parameters. Each company is rated with an S&P rating and a corresponding Moody's rating. They also noted that their opinion could differ from that of external agencies. In addition, because of this they can react more swiftly than the external agencies.

State Street's new VaR (Value at Risk) model is explained on Pgs 42-43. Their old model changed after the market fell in 2008. The current VaR model uses security-specific volatility, intra-index correlations in addition to security level correlations, differentiation by sector, rating, term, geography, maturity, additional granularity by asset class and non-normal idiosyncratic risk at the position level. The bottom line was stressed that lenders have three lines of defense against loss: they check the borrower quality, the collateral quality, and with State Street indemnification.

Counter-party defaults now take 5 days to unwind after Lehman creditors faced a very difficult task of unwinding their multiple business ventures, one of the most complex bankruptcies in US history. State Street does backtesting annually, which is reviewed by the Feds. Backtesting tests trading strategies on prior time periods. This is different than going forward, which could take years, now a trader can do a simulation of their trading strategy on relevant past data to gauge effectiveness. The goal here is having a liquid collateral, not to take all the securities and end up over weighted in any one area. If a bond has not sold in 3 days, an alert is sent to the PM (Portfolio Manager), State Street will check to see what the issue is and what needs to be done.

State Street's security & finance works closely with their business & legal departments. They report to Global and Compliance. They must comply with regulatory rules and conduct testing to be sure all their parameters work on a regular basis. State Street conducts risk assessment reviews and identifies all regulations to be sure they are being observed. They are also linked to the Feds and generate what the Feds want on a daily basis.

State Street's Corporate Audit includes laws and regulations passed, ie: Erisa (1974)– Employee Retirement Income Security Act – which set minimum standards for pension plans in private industry and Sarbanes-Oxley Act (2002)- Public Company Accounting Reform & Investor Protection Act, which makes penalties more severe and increased oversight role of the board of directors. All audits by the Feds, whether they are satisfied or unsatisfied, have required actions with their reports.

Local Brokers must abide by the law in the country where they are doing business; however, somehow there must be a way to stop the information leakage that occurs. State Street is a huge custodial bank and they work hard to ensure none of their Clients information gets out. In addition, it is not known when they move a Client's liquidity. State Street Custody Division now has two silos, which has transition with outside custodians - Mellon & JP Morgan - assets stay with their custodians.

There is a cost for raising money for pension funds and selling securities, (does this mean they get a percentage on both sides?). An interim exposure firm has a team that can take over assets and manage them without a fee for 6 months and they will also lock up future business so they can make their fees at the end. Changes are now more transparent which means an increase of costs (more work is required); however, 88% of the changes are via passive flow, which incurs no extra cost to the Client.

State Street cross checks twice a day with their new electronic system, which views thousands of trades. They check the cost at the opening of every day and at the close of each day. When trade is complete, it can be seen how well or bad it has done every 10 minutes. They have traders that just work on these transition flows.

Pg 35-40 discusses eliminating market risk. State Street does this by constantly rebalancing, hiring where needed, and maintain their current systems while always trying to improve their risk analysis procedures. Their Portfolio Managers pick stocks but does not trade them for the client. This goes through a few layers for security and safety of the Client's funds. State Street allocates more to SSgA - costs are increasing but if they get more security in place, there may have less issues or falls in the future.

August 12, 2013, 1330 - 1630 at GMO

The GMO building was located right next to the water overlooking the bay at 40 Rowes Wharf, Boston, MA, 02111. Attending the meeting were Trustees, Will Hoag, Chris Johnston, and Deanna McCormick with Steve Voss from HEK. The main spokes persons were Douglas Keith, Matthew Kadnar, Ben Inker, and John Mann for GMO. In addition, Mark Mitchelson also came in to discuss compliance issues.

GMO has more than 100 investment professionals and over 500 employees working for them in nine major areas around the world. According to the information provided, they have assets under management over $108 billion. Their offices were secured by security at the elevators. They appeared to be much more bare bones then the other companies visited on this trip. The offices appeared more transient and many were empty. There did not appear to be a lot of permanence where the employees were stationed at this location. Mr. Keith appeared well informed about the business and all the areas that were to be addressed on this visit.

The areas HEK asked to be addressed were the update on Global Equity Allocation Fund & Asset Allocation Views, strategies, objectives, performance, positioning and outlook. In addition, the team overview of trading and Global Equities, objectives, execution and checks & balances, and the overview of compliance & risk controls.

Their Client base is primarily from large corporations and pension funds around 75-80% with 20% subsidiaries. Currently they are de-risking on the corporation side and adding more into fixed income. Ben Inker and Sam Wilderman are co-heads of GMO's Asset Allocation team. They are a good team since Ben works more with Clients and Sam is more introspective.

Quality has resumed below 0.8 according to Catherine LeGraw from BlackRock. GMO stated Analysts are bullish on US high quality but thinks there is a strong and stable return on equity. High quality assets are more expensive in the international markets. Investors are moving more towards value (value stocks have low price-to-earnings ratios with the hope that they will increase in value when the broader market recognizes their full potential) verses growth (growth stocks have high price-to-earnings and are associated with high-quality, successful companies whose earnings are expected to continue growing at an above-average rate relative to the market).

GMO had other thoughts about what the market is doing and where it is going. In addition, they discussed what the market is currently doing. Japan investments are currently modestly cheap. REITs are currently depreciating. The emerging markets are currently under performing. China is very concerning and appears to be in a credit bubble since their emerging markets are breaking up into partitions. We should look at emerging markets with very high forecasts like copper, iron ore, etc. Equities are a long duration asset. Equities were strong last month so the bps dropped. Cash flow drops during a recession thus are not a high value asset at this time.

As State Street stated, GMO agreed that the international market is being watched closely since Italy and Spain may opt out of the Euro. They wanted to be sure VCERA knew to stay away from these Small Caps. The S&P can over and underweight US Equities by what they put out to the media. They feel the new forecast is not looking good for the market right now.

GMO also stated capital and fixed expenditures have been cut. Trend growth is no longer getting 2.5%. It is more like 1 to 1.5%. In addition, the GDP (Gross Domestic Product) and stocks do not have a positive outlook. European banks are currently cheaper but could be for a good reason. Thus investors need higher leveraging against them to make it worth the risk.

Mark Michelson talked to the group about compliance and legal issues. He said that all employees are closely monitored including any of their or their family's personal trades. Mark also talked about all the funds being audited every year.

August 13, 2013 0900 to 1200 – Loomis / Sayles

The building where Loomis/ Sayles has their office is close to State Street and GMO. The office was located at One Financial Center, Boston, MA, 02111. Stephanie Lord met with us the night before for dinner and was delightful. Mr. Voss from HEK, Chris Johnston, Will Hoag, and Deanna McCormick, (Trustees) met and spoke with Jae Park, John Gidman, Chad Gross, Donald Ryan, David Rolley, and Todd Vandam. They were all very friendly, personable, and appeared to be well educated and enjoyed sharing what they knew about our business and what they did for VCERA.

Their building was very secure and the offices appeared to be well inhabited. Jae Park the CIO of fixed income, equity group, and credit/equity research appeared very well versed. He was able to explain several areas in layman's terms. They have 12 Product Managers under the Deputy CIO, David Waldman. Jae stated in May when the market took its latest hit, fixed income and high yield investments got hurt. A lot of currency was hurt but Loomis /Sayles made the right decisions and their funding ended up quite well during this downward trend.

It was also explained that when interest is lower, more companies take chances with high-risk equities. Many businesses do not default when the economy is good. The government is like many companies where they are top-down organization. Here when the treasury yields increase, inflations and interest rates also go up. Bottom-up companies were explained as a single bond/ stock organization where each is looked at and the stock of each company mirrors how good or bad they are doing.

Tom Fabee, manager of the Macro Strategy Group stated his team is dedicated to follow-up, economic research, emerging markets, and works to avoid any type of financial crisis. This group felt the Mexican Currency was a very good investment. They also thought the Yen was being driven downward to make their money look better.

We were also informed about their thoughts on RMBS and CMBS. RMBS is Residential Mortgage-Backed Security where the security depends on the clash flow from residential debt such as mortgages, home-equity loans and subprime mortgages. It is usually comprised of a large amount of pooled residential mortgages; whereas CMBS is the commercial Mortgage-Backed Security. As compared to RMBS, a CMBS provides a lower degree of prepayment risk since it is most often set for a fixed term. Loomis stated that the CMBS is usually a lower quality. They also felt that the growth rate of any emerging market right now has slowed considerably.

S/L also felt we need to hold bonds longer and we should decrease equity sensitivity. Most of their other Clients allow them to freely convert over 90% however VCERA is one of the few that do not allow them to do this and has put a cap on 20%.

Diane Monteef has been their analyst for 25 years. She said the interest rates are increasing but will be more volatile. In addition, Mexico is very liquid and was 5 up in the market on the short end and is still currently very good. Brazil had a large windfall due to China buying up their resources. However, since they didn't budget for this, they are not a good investment due to an unstable infrastructure.

Dave Rolley spoke on Global Fixed Income and the strategic Alpha. His ideas on the currency market were correct that investing in the Yen would work and Spain and Italy would not work. The Yen bonds out preformed. It is also felt that China's growth will slow down and is currently only a soft growth. In addition, China will not allow their currency to appreciate. VCERA has invested in Korea, Thai, Malaysia and all have slowed down except Korea, which still have potential to grow.

Charlene Choo talked about The Australian currency and the bond market going down but feels they will possibly come up. There is a slow reaction from the U.S. while housing and oil output is rising, the budget deficit and unemployment is decreasing. The Feds have been over funded for years and need to taper back.

Loomis has made changes to prepare for the changes in energy production and communications. AT&T tried to buy Vodahone in Spain but the deal did not go through. Others Loomis are weary of Greece and Portugal. After the German elections other decisions will be made on the Global Market. Mexico is still having trouble getting oil out of the ground but once this is taken care of these funds will be on the upswing.

Don Ryan from Loomis's Legal & Compliance spoke to us next about making it clear he goes through everything to make sure there are no surprises. There are 34 people in the Legal Staff Department. If there is an error by Loomis they will make their Client whole. The Legal department examines all trades. They have electronic limits that have custom parameters set for each Client. They will notify the Client if there is something that can't be coded for the alert but most are currently coded. If they get any code violation, it is dealt with and then signed off by two program managers and then the Client is notified in writing. Clients can also track all their investments and any notifications on line. Their Code of Ethics also has an automated computer system. All the pre-trades are put through this system.

John Gidman has been at Loomis since 2000 and is responsible for researching and new product oversight. It is important to have risk awareness into technology. Since there will always be new technology, Loomis will always need internal research teams that meet weekly about new projects and daily concerning all trades.

<u>August 14, 2013, 0900 to 1200 – Clifton Group</u>

The Clifton Group was located within a large group of financial buildings at 3600 Minnesota Dr., Suite 325, Minneapolis, MN, 55435. We were met by Benjamin Lazarus, a very bright and well versed young man who introduced us to Jack Hansen, Vladimir Gomelsky, Justin Henne, Alex Gomelsky, Benjamin Hammes, and Chris Wisdom. In addition, Miriam Sjoblom and Angela Cantillon attended from Chicago as representatives from HEK.

The areas suggested and covered by Clifton was the operational view and reporting, risk managements, a system demonstration, compliance environment, and a tour of their offices. They discussed many areas of interest. Their program team that built a program showing how their overlay system works and how each Client has individual parameters. Since every Client has their own specific needs and demands, this was very interesting to see how the program was broken down and how well it worked. Vladimir Gomelsky is the Chief Technical Officer. He and his team personally construct specific overlays for each of their plus 200 Clients. Nine out of ten of their Clients use their Overlay Services.

Eaton Vance owns Hexavest and Tom Foust owns Eaton Vance and Parametric. Out of this, the Clifton / Parametric organization was formed and now has eight owners. They added more resources and increased their legal departments. Now that Eaton Vance is larger they needed more operating partners. They also have operating offices in Seattle and Boston, however, their legal and compliance is now in one building. Angela from HEK feels Clifton is very transparent.

Clifton is the broker for VCERA. Their job is to make sure no money just sits around after the money has been pulled from one fund before another is acquired. Currently, Clifton has 100 million of VCERA's funds which only 12 million is put up front to the clearinghouse.

They have a recommended clearing margin, which VCERA does not currently utilizing to the fullest. One question they posed asked VCERA to look at was if our risk was actually being realized. Carrying cash increases performance risk especially if the cash is not being used. They stated there is a return of 19 bps compounded annually in total by using this program.

There were some Bridgewater changes discussed. Their systems automatically move money to asset cash when the parameters are placed in the system. Bridgewater has large fixed income exposure. The increases are not reflected to have long real estate. Bridgewater can change to 50% other assets rather than US equity. They can also move ½ to fixed and ½ to no commodity or to the inflation bucket. They do not think anyone is being rewarded for having credit exposure.

The yearly audits do a deep dive by individuals that don't normally look at their records. Trade processing only happens after the second person approves of the transaction. Now that the market is electronic there is no time to miss or order a transaction. However, they do try to batch all the transactions together to get one price since it can be pricey and slower to do it one at a time. Once all the transactions are completed, all of them are checked for accuracy and to be sure they matched all the movement that was supposed to take place.

Justin Henne's compliance team has also designed a disaster recovery program, which is backed up to a few different areas across the United States. All data is automatically backed up and can be running in two hours. In addition, there is a backup system in Chicago that backs up every night. Time Warner has a backup as well and will have one in Washington State. They have storage networks and data connections that are dedicated to their system backup.

With the Compliance team, Justin discussed that all trading is completed per the rules defined by the compliance rules. Three of their team members check all the transactions as well as the systems own check system, which also has benchmarks that also set off alarms within the system to the managers and their senior managers. Every time something is entered into the system, it identifies who entered it and an explanation as to the adjustment must be entered at the same time. Every transaction sent to them from Don and or Henry is put into their system and documented into their system with backup emails. All warnings are seen by the PM's and if comment is required, this is also done and emails are sent back to Don and Henry at VCERA.

In summary, we conducted due diligence on four of our current investment managers located in Massachusetts and Minnesota. We have no concerns with these four investment managers.

Thank you,
Best regards,

Will Hoag, Trustee
Chris Johnston, Trustee
Deanna McCormick, Trustee