ALASKA RETIREMENT MANAGEMENT BOARD

BOARD OF TRUSTEES MEETING

September 18-19, 2014

Fairbanks Westmark Hotel
813 Noble Street
Fairbanks, Alaska
907 456-7722
907 451-7478 fax

Teleconference 1 800 315-6338 Code 12762#

Thursday, September 18, 2014

I.	9:00 am	Call to Order			
II.		Roll Call			
III.		Public Meeting Notice			
IV.		Approval of Agenda			
V.		Public/Member Participation, Communications, and Appearances (Three Minute Limit)			
VI.		Approval of Minutes – June 26-27, 2014			
VII.	9:05	Reports			
		1.	Chair Report, *Gail Schubert*		
		2.	Committee Reports		
			A.	Audit Committee, *Martin Pihl, Chair*	
			B.	Budget Committee, *Gail Schubert, Chair*	
			C.	Legislative Committee, *Gail Schubert Chair*	
			D.	Real Assets Committee, *Kris Erchinger, Chair*	
		3.	Retirement & Benefits Division Report		
			A.	Membership Statistics (informational)	
			B.	Buck Consulting Invoices (informational)	
			Chief Operating Officer Jim Puckett		
		4.	Treasury Division Report		
			A.	FY 16 Budget – Action	
			Pam Leary, Director, Treasury Division		
		5.	CIO Report, *Gary Bader*		
		6.	Fund Financial Report with Cash Flow Update		
			Scott Jones, Comptroller, Department of Revenue		
			Kevin Worley, CFO, Division of Retirement & Benefits		
	9:45-10:05	7.	A.	Real Assets FY15 Annual Plan	
				Real Estate Guidelines Policies and Procedures	
				Steve Sikes, State Investment Officer	

10:10-10:40 B. Consultant Evaluation of Real Estate Plan: Diversification, Compliance, & Performance Measurement
Micolyn Magee, Townsend Group

10:40 – Break
10 Minutes

10:50-11:00 C. Adoption: Real Assets FY 15 Plan & Policies
Board Discussion
Action: Real Assets FY15 Annual Plan
Res. 2014-14
Action: Real Estate Policies and Procedures
Res. 2014-15

11:05-11:35 8. UBS Real Estate
Tom Anathan and Jeff Maguire

11:40-12:00 9. Sentinel Real Estate Corporation
David Weiner and David Stenger

Lunch – 12:00 – 1:15 pm

Thursday Afternoon

1:15 10. Experience Study 2009-2013

1:15-1:45 A. Second Actuary Review
Leslie Thompson, Gabriel Roeder & Smith

1:50-3:20 B. Experience Study Analysis
Dave Slishinsky and Chris Hulla
Buck Consultants

C. Economic Assumptions Analysis
Dave Slishinsky, Buck Consultants

D. Action: Acceptance of GRS Review Report

Resolution 2014-16 - Acceptance of
Experience Study and Actuarial Assumptions

3:20 – Break
10 Minutes

3:30-4:00 11. FY16 Contribution Rate Setting

Action: Relating to FY16 PERS Contribution Rate
Resolution 2014-17
Action: Relating to FY16 PERS RMMI Contribution Rate
and FY16 PERS ODD Contribution Rate
Resolutions 2014-18 and 2014-19
Action: Relating to FY16 TRS Contribution Rate
Resolution 2014-20
Action: Relating to FY16 TRS RMMI Contribution Rate
and FY16 TRS ODD Contribution Rate
Resolutions 2014-21 and 2014-22
Action: Relating to FY16 NGNMRS Contribution Amount
Resolution 2014-23
Information: JRS Contribution
Mike Barnhill, Deputy Commissioner, DOA
Dave Slishinsky, Buck Consulting

End of Meeting Day

Friday, September 19, 2014

9:00		Call to Order
9:00-9:30	12.	Structured Alpha *Greg Tournant, Jeff Sheran and Melody McDonald* *RCM/Allianz*
9:35-10:35	13.	Performance Measurement – 2nd Quarter *Paul Erlendson and Dana Brown, Callan Associates, Inc.*

10:35 – Break
10 Minutes

10:45-11:15	14.	Investment Actions A. Allianz Structured Alpha 1000-Plus Mandate B. Defined Contribution Branded Funds C. Equity Guidelines: Resolution 2014-24 D. Private Equity Guidelines: Resolution 2014-25 D. Audit of Performance Consultant E. Adoption of ARMB Policy Manual F. Information: Historical ARMB Returns *Gary Bader, Chief Investment Officer*
11:15-11:45	15.	Board Governance Dynamics and Closing Comments *Rob Johnson, ARMB Legal Counsel*

VIII. Unfinished Business
1. Disclosure Report, *Judy Hall, Liaison Officer*
2. Calendar, *Judy Hall, Liaison Officer*
3. Legal Report, *Rob Johnson, Legal Counsel*

IX. New Business
X. Other Matters to Properly Come Before the Board
XI. Public/Member Comments
XII. Investment Advisory Council Comments
XIII. Trustee Comments
XIV. Future Agenda Items
XV. Adjournment

(Times are approximate. Every attempt will be made to stay on schedule; however, adjustments may be made.)

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Location:
Mariott Anchorage
Kenai-Denali Room
820 West Seventh Avenue
Anchorage, Alaska

MINUTES OF
June 26-27, 2014

Thursday, June 26, 2014

CALL TO ORDER

CHAIR GAIL SCHUBERT called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:02 a.m.

ROLL CALL

Eight ARMB trustees were present at roll call to form a quorum.

Board Members Present
Gail Schubert, *Chair*
Sam Trivette, *Vice Chair*
Gayle Harbo, *Secretary*
Kristin Erchinger (Telephonic)
Commissioner Angela Rodell
Tom Brice
Sandi Ryan
Martin Pihl

Board Members Absent
Commissioner Curtis Thayer

Investment Advisory Council Members Present
Dr. William Jennings
Dr. Jerrold Mitchell
Robert Shaw

Department of Revenue Staff Present
Gary M. Bader, Chief Investment Officer
Scott Jones, State Comptroller
Zachary Hanna, State Investment Officer

Pamela Leary, Director, Treasury Division
Judy Hall, Board Liaison

Department of Administration Staff Present
Jim Puckett, Chief Operating Officer, Division of Retirement & Benefits
Kevin Worley, Chief Financial Officer, Division of Retirement & Benefits

Consultants, Invited Participants, and Others Present
Tim Maloney, Abbott Capital Management
Jonathan Roth, Abbot Capital Management
Robert Johnson, ARMB Legal Counsel
David Slishinsky, Buck Consulting
Dana Brown, Callan Associates, Inc.
Paul Erlendson, Callan Associates, Inc.
Chris Poag, Department of Law
T.J. Duncan, Frontier Capital
Leslie Thompson, Gabriel Roeder Smith
Dana Woolfrey, Gabriel Roeder Smith
Jeff McCarthy, Jennison Associates
Peter Reinemann, Jennison Associates
Tom O'Halloran, Lord Abbett
Frank Paone, Lord Abbett
Steve Purvis, Luther King
Jim Chambliss, Pathway Capital Management
Canyon Lew, Pathway Capital Management
Trey Chenier, Alaska Permanent Fund Intern
Jeff Pantages, Alaska Permanent Capital Management

PUBLIC MEETING NOTICE

JUDY HALL confirmed that public meeting notice requirements had been met.

APPROVAL OF AGENDA

MS. RYAN moved to approve the agenda. MS. HARBO seconded the motion.

The agenda was approved.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS, AND APPEARANCES

JEFF PANTAGES, CIO of Alaska Permanent Capital Management, introduced the Alaska Permanent Fund summer intern, TREY CHENIER, and noted he will be present during the ARM Board meeting to learn.

APPROVAL OF MINUTES: April 24-25, 2014

MS. HARBO moved to approve the minutes of the April 24-25, 2014 meeting. MS. RYAN seconded the motion.

The minutes were approved.

REPORTS

1. CHAIR REPORT

CHAIR SCHUBERT expressed her appreciation and congratulated the Governor for signing the legislation transferring the three billion dollars into the retirement funds. She expressed her appreciation to the Trustees, staff and all who were involved in that effort.

2. COMMITTEE REPORTS

A. Audit Committee

MR. PIHL reported the Audit Committee met June 25, and members included Trustee PIHL, Trustee ERCHINGER and Trustee HARBO. Extensive discussion occurred regarding audit and disclosure requirements of GASB 67 and 68. MR. PIHL noted Buck will provide an explanation today regarding the lowered contributions for 2016 that were revised since the last ARMB meeting. The difference is of particular concern when coupled with the back-loading of contributions under percent of pay. MR. PIHL stated the Audit Committee believes the review should include long-range financial projections, rate sensitivity and risk analysis.

MR. PIHL reported that legal counsel, Robert Johnson, had no issues to report to the Audit Committee. The Department of Revenue staffing for the Board is full and in good shape. The Audit Committee is very pleased with the top financial positions in both Department of Revenue and Department of Administration. MR. PIHL recommended that the Board to review the provided Blue Ribbon Panel Report on retirement.

B. Evaluation Committee - General Consultant RFP

Chief Investment Officer GARY BADER reported the Committee met with the two consultant applicants in Juneau. The report on findings and recommendations to the Board will come as an action item later in the agenda.

3. RETIREMENT & BENEFITS DIVISION REPORT

A. Buck Consulting Invoices (informational)

JIM PUCKETT, Chief Operating Officer, referenced the Buck Invoice handout provided to the Board and noted the expenses with Buck for the first nine months of this fiscal year are a little higher than they were last year. This is due to the Board requesting more assignments from Buck. MR. PUCKETT noted there is nothing unusual with the Buck invoices.

MR. TRIVETTE asked when the contract with Buck expires. MR. PUCKETT requested Kevin Worley, CFO of the Division of Retirement and Benefits, answer that question during his report.

B. Membership Statistics

MR. PUCKETT reported the number of retirees and beneficiaries has increased 9% from last year. However, the number of retiree applications the Division has handled so far this year is unexpectedly lower than last year.

C. DRB Update

MR. PUCKETT stated the workload for the Division has calmed down and they are not receiving as many phone calls regarding the health plan transition. Both the Processing Team and the Survivor Team are meeting their turn-arounds.

MR. TRIVETTE asked what percentage of the new DC members are using managed accounts, since the time managed accounts were removed as the default. MR. TRIVETTE requested Mr. Puckett provide an answer to the Board at the next meeting.

4. TREASURY DIVISION REPORT

MS. LEARY stated she has no report to give and MR. BADER will cover most of the topics in his report.

5. CIO REPORT

MR. BADER referred to his report and noted the first few items relate to the number of times the pension funds were rebalanced since the last meeting. MR. BADER conveyed the recommendation to remove Brandes Partners from the performance watch list. For the six years ending March 31, the EAFE benchmark returned 1.97% and Brandes returned 4.04%.

<u>MS. HARBO moved to remove Brandes Partners from the performance watch list. MR. TRIVETTE seconded the motion.</u>

<u>The motion passed unanimously.</u>

MR. BADER conveyed the recommendation to remove RCM Allianz Large Cap from the watch list. For the six years ending March 31, the Russell Index was up 8.71% and RCM was up 9.59%.

<u>MS. HARBO moved to remove RCM Allianz Large Cap from the performance watch list. MS. RYAN seconded the motion.</u>

The motion passed unanimously.

MR. BADER conveyed the recommendation to remove Relational Investors from the watch list. For the six years ending March 31, the Russell 1000 Value Index was up 7.47% and Relational was up 9.9%.

MS. HARBO moved to remove Relational Investors from the performance watch list. MR. TRIVETTE seconded the motion.

The motion passed unanimously.

MR. BADER informed that Board staff has been in contact with MacKay Shields regarding their changes in portfolio manager. No recommendation will be made to place them on the watch list. MR. BADER noted Mr. Erlendson will comment more on this topic later in the agenda.

MR. BADER advised Item Five reports a 30 million-dollar commitment to the Resolute Fund Number Three of the Jordan Company, which operates in mid-market private equity investments. Their managers average 27 years' of experience and have returned an average IRR of over 25% in their last three mature funds.

MR. BADER reported a redemption of $10 million from the Crestline Blue Glacier Fund due to the Board-approved change in the investment mandate. Other items are related to this same Board-approved investment mandate change. Another transaction was to remove $150 million from Lazard Global Fund and invest $50 million with Advent Capital, the convertible bond manager, and $100 million with Analytic Investors Buy-Write.

MR. BADER continued to review his report noting that fixed income assets totalling $100 million were sold to fund the investment with Frontier Markets with Everest Capital. The total asset allocation was rebalanced on May 23 by selling $200 million of the Russell 1000 Value Index and $100 million of the Russell 1000 Growth. Fixed income was bought with the proceeds.

MR. BADER reported $1.9 million from cash was transferred to Blue Glacier Class B Fund on May 30, and an amendment was made to the Partnership Agreement. The signed Letter of Agreement is included in the Board's packet, worked on by legal counsel Mr. JOHNSON and Zachary Hanna, State Investment Officer. The commitment to the Blue Glacier Class B Fund increased from $264.7 million to $320 million. There was $50 million of the SSgA Russell 200 sold and put into cash to fund the J.P. Morgan infrastructure capital call.

MR. BADER noted the Board awarded a real estate consulting contract to the Townsend Group at the April meeting. When preparing the contract, Townsend informed staff they were uncomfortable with the requirement that performance be calculated in accordance with Global Investment Performance Standards (GIPS) standards. Townsend stated that the SEC advised them there should be no references to GIPS, unless Townsend is claiming to be compliant with GIPS, which is a designation reserved for investment managers. The contract has been modified to remove the reference to GIPS and instead, use language that defines GIPS. The performance calculations will be provided as requested and the substance of the contract is the same. MR. BADER noted staff intends to move forward with this contract, if there are no objections from the Board. CHAIR SCHUBERT reported there were no objections from the Board.

6. FUND FINANCIAL REPORT

State Comptroller SCOTT JONES and MR. WORLEY presented the Fund Financial Report. MR. JONES reviewed the financial statements for the month ending April 2014. The PERS system ended with $14.9 billion, the TRS system with $6.1 billion, the JRS with $161 million, the National Guard and Naval Militia with $37 million, SBS with $3.2 billion, and Deferred Comp with $763 million, for a total of $25.2 billion.

MR. JONES stated that since April, the nonparticipant-directed plans increased roughly 3% from $20.6 billion to $21.2 billion. All asset allocations were within the bands.

MR. WORLEY answered MR. TRIVETTE's previous question and advised Buck's contract will be ending next week. There were three firms who submitted bids for the actuary RFP and Buck was selected again to be the actuary. The audit RFP selection process also occurred and KPMG was awarded a new contract.

MR. WORLEY discussed the Division's cash flow supplement and the rebates for prescriptions under the Other category. The benefit payments for PERS was $51.8 million, PERS Health Care Trust was $33.7 million, Teachers Defined Benefit was $32.7 million and Teachers Health Care Trust was $10.5 million. Paid out refunds included $1.3 million for the PERS Defined Benefit, $95,000 for TRS Defined Benefit, $2.5 million for PERS Defined Contribution, and $215,000 for TRS Defined Contribution. The benefit payments for SBS was $13.6 million, of which $11.3 million was as a result of separation of service and $695,000 was related to retirements. The QDRO benefit payments for separation was $570,000. The Deferred Compensation Plan distributed $3.4 million.
MR. WORLEY noted staff is still working on the age distribution for the separations of service requested by Ms. Harbo at the prior meeting.

7. ABBOTT CAPITAL MANAGEMENT

TIM MALONEY and JONATHAN ROTH of Abbott Capital Management provided a review of the private equity markets, an update on the firm, and the performance of the ARMB Private Equity Portfolio. MR. ROTH stated the equity markets of 2013 provided great opportunity for the private equity sponsors to take their companies public. This is continuing into 2014. The venture capital conditions last year had a steady pace of investment and the IPO market is wide open. Mergers and acquisition exits was on the decline.

MR. ROTH believes the current market pricing is being driven by a strong equity market and by the current Fed policy of keeping interest rates low and forcing investors to find higher tracking rates of returns. This is considered to be a challenging time to be a buyer in the most developed private equity markets of North America and Europe. MR. ROTH discussed nontraditional investors in the changed landscape are beginning to get positions in private companies in advance of their going public.

MR. ERLENDSON asked if the nontraditional participants are seen as a threat or an opportunity for Abbot Capital's way of asset management. MR. ROTH stated he does not see it as a threat or an opportunity. It is viewed as a development which needs to be considered to understand the marketplace. MR. ERLENDSON asked if liquidity demands of large pools of capital changes the dynamics of the market. MR. ROTH believes when the liquidity needs impact the ability to maintain the equity investment in the privately held company, that is when there could be an opportunity for secondary buyers to provide that liquidity.

MR. TRIVETTE asked if the company efficiencies and smaller deal amounts are going to impact the returns. MR. ROTH stated it does provide a greater challenge to find and create ways to access smaller venture capital funds to stay ahead of the curve and be more proactive. The buyout market prices are full and fair, and the standards are set high in evaluating managers. The venture market has changed dramatically and opportunities will continue to be sought on a selective basis.

DR. MITCHELL requested comments regarding general partners and limited partners trends. MR. ROTH explained there has been an improved dynamic between general partners and limited partners over the last number of years because of more scrutiny from government reviews and better focus by limited partners.

MR. SHAW requested additional explanation of covenant-lite loans. MR. ROTH explained a typical buyout transaction includes leverage. For example, if a company is bought for a billion dollars and the equity contribution is considered to be 40%, then $400 million will be provided and the other $600 million will be in the form of a covenant-lite loan. The covenant-lite loans offer enormous amounts of flexibility by the general partner sponsor.

MR. SHAW noted Abbot Capital Management continues to be a steady firm, managing approximately seven billion dollars on behalf of institutional clients. There are 11 managing directors at the firm and no turnover at the senior level, other than the two co-founding partners retiring in 2000 and 2009, respectively.

MR. MALONEY reviewed the commitment activity and distribution activity in 2013 and year-to-date in 2014. Eleven commitments were made in 2013, totaling about $130 million and seven commitments in 2014 were made, totaling about $106 million. He believes the allocated target of $175 million will be reached this year. All of the funds are listed in the appendix. The IRR of the fund is at 9.5% and has increased steadily during the last few years after the great financial crisis. 2013 was a sellers' market and the fund returned about $216 million in distributions, which correlated to about $140 million net cash. The general partners are clearly taking advantage of the high valuation environment. Most of the portfolio has been allocated to developed private equity markets, the majority of which is in North America.

One of the themes of the overall portfolio is resiliency. Two major negative events occurred during the past 17 years of the portfolio, the financial crisis and the dot-com bubble in 2000. The portfolio has rebounded since the financial crisis and the portfolio diversification construction has been able to preserve value and will benefit when valuations increase. MR. MALONEY sees very strong opportunities for the rest of the year.

DR. MITCHELL requested comments on the paucity of investments in Asia. MR. MALONEY stated they have been covering the private equity market in Asia in earnest, but it is still a maturing market with few high quality opportunities and they do not want to sacrifice the quality of management.

CHAIR SCHUBERT noted when the original ASPIB Board considered hiring Abbott Capital, the deliberative investment process and their good contacts with various partnerships was important. She believes this is still the case and congratulated Abbott Capital.

CHAIR SCHUBERT recessed the meeting from 10:17 a.m. to10:34 a.m.

8. PATHWAY CAPITAL MANAGEMENT

JIM CHAMBLISS, Managing Director Pathway Capital Management, and CANYON LEW, Director Pathway Capital Management, provided an update on their firm, an overview of the private equity environment, and a review of the ARMB portfolio. Pathway's assets under management have increased since last year. There have also been two new investment professionals and a couple of new investment analysts hired. The expectation is to continue to hire at the junior level over the next six to nine months. Two new partners were invited to join the partnership, bringing the total to 18 partners at Pathway.

MR. CHAMBLISS noted the private equity environment is good and is a sellers' market. The M&A and IPO markets for private equity have been strong for the last 12 to 24 months, seeing record distributions in the industry. MR. CHAMBLISS believes one reason prices are increasing is that credit markets for private equity remain very accommodative. However, he would like to wait for an entire year's worth of data before making a full comment on whether there is increased pricing and froth in the marketplace.

MR. CHAMBLISS feels confident about the venture capital marketplace and believes the asset class has been shrinking for the last seven years. He believes it is a very competitive marketplace and valuations are increasing. MR. CHAMBLISS does not believe this is a good environment to purchase distressed companies.

DR. MITCHELL requested comments on the fund of funds gatekeeper environment. MR. CHAMBLISS believes the trend of the fund of funds, the institutional marketplace, is more interested in specialized funds, whether it is secondary funds or emerging markets. From a general institutional standpoint, he sees an increase in allocations to private equity.

MR. LEW noted last year was very good and very active. There were 14 new commitments added to the portfolio, totalling $151 million. Performance has been strong over the last year, with gains in all four quarters, totalling $173 million and a one-year net return of 24%. The portfolio monitoring remained active, which included the participation of 108 annual and advisory board meetings and 61 one-on-one meetings with managers in the portfolio. MR. LEW believes the tactical plan is on track with $74 million committed of the targeted $175 million annual commitment and feels good about their pipeline and ability to reach the target.

MR. LEW explained the portfolio remains comfortably within all of its long-term strategy targets. It is currently split 51% acquisitions, 26% venture capital and 23% special situations. There is a nice subdiversification within each of these core strategies and the portfolio is well-diversified by strategy, industry, and geographic region with no significant changes since the last Board meeting. The contribution activity fell for the second consecutive year in 2013, totaling $103 million, while the distributions have increased every year since 2009, establishing an all-time high of $225 million last year. The portfolio generated $123 million of positive net cash flow as distribution activity outpaced contribution activity by a ratio of more than two to one. In 2014, the distribution activity has remained strong. The portfolio's net return from March 31, 2013 to March 31, 2014 was 24%. The net IRR stands at 13.9%.

Last year was a particularly strong year for venture capital funds, returning 28%. The acquisition strategy generated a 25% one-year return and special situations generated an 18% one-year return. MR. LEW noted it has been a strong year for both IPOs and M&As.

MR. CHAMBLISS reviewed the performance comparison pages and the ARMB portfolio has been in the upper quartile all but twice in the last 11 years. The portfolio has outperformed both the Thomson Reuters' and Russell 3000 benchmarks over the last 11 years. The portfolio's out-performance of the Russell 3000 has resulted in nearly $300 million of incremental gains over the index since the program's inception.

DR. MITCHELL requested comments regarding publically traded general partnership versus private general partnerships. MR. CHAMBLISS stated publically traded general partners add complications and their interests may not be aligned with Pathway or with the ARMB portfolio. He does not generally like them because they seem to be asset gatherers rather than investment managers.

9. PERFORMANCE MEASUREMENT - 1ST QUARTER

MR. ERLENDSON expressed this has been a reasonably good year, but a little traumatic for some of the small cap managers. Inflation is subdued with capital market projections of 2.25%. The GDP growth rate has been improving. The Federal Reserve has begun to taper their quantitative easing. Markets will continue to react to that kind of behavior going forward. The Euro-zone GDP growth has been flat and there are broad concerns a period of deflation may be entered. This is causing investors to be cautious. The Federal Reserve lowered the 2014 GDP forecast from 2.9% to 2.2%, which suggests we are still in a very sensitive part of the recovery. Unemployment in the Euro-zone is above 10%, which means those people who are not working are not producing and if they are not producing, they do not have disposable income. Investments are just one part of the interrelated social fabric.

CHAIR SCHUBERT asked if these unemployment numbers are accurate or if they hide the fact some folks have simply given up looking for work. MR. ERLENDSON commented the structural unemployment is growing in concern because even though we are close to the same number of people officially employed before the financial crisis, a number of those people are in lower paying jobs or underemployed. There are also pockets of the economy, particularly in the technology fields, where the number of skilled workers within the U.S. are not available. MR. ERLENDSON believes, and stated some of the Federal Reserve Board members have spoken about, that the official unemployment rate understates how bad the employment situation is. The labor participation rate has decreased post recession from 67% to 63%, mainly because of retirement, disability, and people going back to school.

MS. HARBO asked if a lot of the people who have used up their unemployment are then using disability claims. MR. ERLENDSON noted he cannot answer that question, but has read that income awards based on disability continue to increase and less than 2% of those people who get disability claims ultimately go back into the workforce, which causes a significant drain to the economy.

CHAIR SCHUBERT asked about the impact of the student loan issue this generation of young adults is facing with large debt and little to no work for them. MR. ERLENDSON noted the last slide of the presentation addresses that issue, particularly concerning post-graduate education. The median amount of debt based on this research is almost $100,000. The think tank who did the research did not believe there was any cause for alarm and the debt for undergraduates was more manageable around $20,000. The debt for more than half of the people that have some college education is less than $10,000. However, this is debt that cannot be dismissed and is $10,000 or more of future earnings. MR. BROWN noted there is a phenomena of people who are in their 20's and underemployed moving back in with their parents, which does have negative long-term implications on the economy.

MS. HARBO commented the mindset of people going to college today and borrowing huge student loans is different from when she went to college, when a person paid for college as they went or worked until they could pay for college. MR. ERLEDNSON commented many of the more opportune places within the economy are in technical fields where advanced degrees are typically needed. This is where people are acquiring these large student loan debts.

MR. ERLENDSON reported the investment results across the markets since the recovery have been incredibly robust. Even the Russell 2000, the small cap benchmark, quarter-to-date is finally positive. For the one-year period, the equity-oriented asset classes have had higher returns. The three-month treasury bill over the last 10 years has returned less than 2% a year, which is less than inflation. MR. ERLENDSON discussed a recent survey of several thousand defined contribution participants to measure their financial literacy and only 10% of that population answered the five survey questions correctly. He suggested as more employees become reliant on their defined contribution balances, it is important to make sure their decisions are based on information, rather than emotion.

MR. ERLENDSON noted U.S. sector performance has been positive, except for consumer discretionary, where people are continuing to grow more concerned and discretionary spending has decreased. The current P/E valuations of the 10 major sectors are higher than the 10-year average, with the exception of telecom and information technology. Broadly speaking, the U.S. dollar has been declining in value and exhibits weakness versus most other currencies.

MR. ERLENDSON stated that private market real estate returned a significant rate of 12% last year. The publically traded REIT segment has been challenging, particularly for smaller-cap value managers, and global real estate securities have had even lower returns in the 2% to 3% area over the last year. Housing demands remain muted, but the housing starts are beginning to grow from a low rate. This will be a strong underpinning for a long-term healthy economy.

MR. ERLENDSON noted 88 basis points of excess portfolio return above the benchmark is due to the fact that the portfolio managers have beaten their benchmarks. This is the added value the managers bring to the portfolio. MR. ERLENDSON stated some managers will always be lagging because it is statistically impossible to have every manager beating their benchmark.

MR. BROWN advised the total fixed income pool exceeded its targets across all periods. The in-house portfolio has consistently outperformed over all the trailing time periods against its benchmark. The Non-U.S. Fixed Income manager has better than benchmark results for cumulative periods five years and longer, but has lagged the benchmark in nine of the 13 quarters since 2011.

MR. BROWN explained one of the lead managers of MacKay Shield departed the team earlier in the year for personal reasons. In discussions with MacKay Shield, they do not anticipate any change to their approach due to this departure and the rest of the team remains intact. The replacement is an experienced investment professional who has been with MacKay since 2006. MR. BROWN suggested paying attention to this going forward, but does not believe they should be added to the watch list. MR. ERLENDSON commented the senior management at MacKay Shield forwarded a letter to staff attesting to the fact the departure was purely for personal reasons and not for legal or regulatory issues.

MR. BROWN continued the review and noted total domestic equity is ahead of the benchmark and the peer group for the year. Page 37 shows a good example of how managers are combined to be complimentary. Within the small cap pool are the micro cap managers, DRZ, who is a value-oriented manager focused on high quality and dividends, paired with Lord Abbott, who is a growth-oriented manager. DRZ trailed their benchmark, even though they were up 22% this year, and Lord Abbott had very strong performance and was ahead of their benchmark, returning 59% this year. The combination of international managers has also worked well for performance of the composite over the last year and quarter. The total timber composite performance is good relative to the index, which is also due to the pairing of managers.

MR. BADER requested additional information as to why the Alaska Balanced Fund is red, even though it outperformed its benchmark, and is it misleading by calling it a balanced fund. MR. BROWN believes the peer group is more aggressively positioned and this fund has a more conservative positioning, which could possibly be misleading from one year to the next. MR. BADER informed the Board the Alaska Balanced Fund is a very conservatively managed portfolio and is achieving its target allocation. He believes the Board may want to address this issue so it does not appear like the Board is not paying attention. He suggested discussing this issue with the Defined Contribution Committee.

CHAIR SCHUBERT recessed the meeting from 11:57 a.m. to 1:32 p.m.

10. INVESTMENT/PROCUREMENT ACTIONS

MR. BADER added two more things to his CIO report. He noted MR. JOHNSON is planning a retirement and the Department of Law will issue two RFPs. One will be for legal counsel who would provide assistance with investment contracts, governance and counsel to the Board during meetings. The other legal counsel would be involved in reviewing things like limited partnership agreements and custody contracts.

A. Res 2014-11 Convertible Bond Investment Guidelines

MR. BADER advised Advent Capital is currently the only convertible bond manager and has done a very good job for the Board in managing this space. The guidelines require that Advent cannot hold non-rated convertible securities if they exceed 35% of the total market value of the portfolio. When the ARMB first began the relationship with Advent, the index had 20% of non-rated securities in it and this guideline was quite easy for Advent to work within. Advent has requested a change in the guidelines loosening the restriction on unrated securities in recognition of the changing investment environment by allowing 1.5 times the non-rated securities in the index to be held in the account. Staff recommends this change in Resolution 2014-11.

<u>MS. HARBO moved to adopt Resolution 2014-11.</u> <u>MS. RODELL seconded the motion.</u>

MR. TRIVETTE asked if there is any expected additional risk by adopting this resolution. MR. BADER believes the risk would be in diminished investment performance if this resolution were not passed. There may be risk in terms of the non-rated securities, but it is a tradeoff and this has been a very good manager in the portfolio.

A roll call vote was taken, and <u>the motion passed unanimously.</u>

B. Res 2014-12 Delegation of Authority

MR. BADER stated the Board approved an action memo at the April meeting granting discretion to the Chief Investment Officer (CIO) to contract with certain investment managers in good standing with the ARM in an amount up to $200 million. The Board requested, at that time, for staff to bring the item back to the Board in the form of a resolution and to consider whether the $200 million was a large enough amount of money or if it should be expressed in a different way.

MR. BADER explained Resolution 2014-12 grants the same authority to the CIO, and rather than having a fixed amount of authority, it places the amount per single transaction at 1% of the total Defined Benefit Plan investments, which today is about $200 million. When the assets of the fund expand in the future, the authority of the CIO would also expand. Staff believes this is efficient and is in keeping with the desires expressed by the Board in passing the previous action memo.

<u>MR. TRIVETTE moved to adopt Resolution 2014-12. MS. RYAN seconded the motion.</u>

MR. BRICE wanted to ensure there will still be communication to the Board regarding actions that are being taken and asked how the Board would express concerns during interim times. MR. BADER noted the same process would occur if the Board disapproved of an investment decision. MR. BRICE asked how would the Board communicate any questions regarding the allocation of the 1% to a particular program. CHAIR SCHUBERT noted the CIO already has authority to allocate funds and the report to the Board would be informational.

TRUSTEE RODELL believes MR. BRICE's concerns are from a governance standpoint and asked what mechanisms there are for the Board to ask staff to reconsider its investment decision. MR. BADER does not believe there is an entirely satisfactory way of reversing an investment decision. Some of the actions can be reversed within the cancellation within an investment contract. Other investments are firm commitments and could possibly be backed out of with some negotiation, but the contracts are relying on the authority to act.

MR. BRICE believes this is a question of process and the asset allocations should remain within their bands. MR. BRICE noted he supports this resolution with tentative concern and desires the Board participate and be engaged in these types of investment decisions. He encouraged MR. BADER to be very judicious in the exercise of the authority.

MS. RODELL commented she is in support of this resolution. She noted the Permanent Fund Corporation has a similar policy in place, which has allowed the staff to become very nimble in their responses to opportunities. MS. RODELL commented there is a tremendous amount of communication and briefing on potential actions. She believes there are corrective actions the Board can take in the future if this is in any way being abused or misused.

MR. JOHNSON advised the concept of delegation is certainly appropriate and a note of caution needs to be included. He suggested adding an indicator of consultation with one or more of the members of the IAC if a significant transaction exceeding half a percent is to occur.

CHAIR SCHUBERT stated she is confident with this delegation of authority to MR. BADER and if a new CIO were to come onboard, then the authority could be paused until a level of assurance was reached. MR. PIHL echoed those comments.

A roll call vote was taken and the motion passed unanimously.

C. Res 2014-13 Asset Allocation

MR. BADER explained the anticipated receipt of the appropriated three billion dollars will be in three installments, the first billion dollars on July 15, the next billion dollars four months after that, and the last billion dollars four months after that. The allocations will be according to the legislation and further divided up among the trust funds in accordance with recommendations from the actuary, as communicated by the Department of Administration.

A large influx of money into the plan will require a group of modifications to the asset allocation the Board approved in April. Because many of these assets cannot be immediately put to work in private equity, real estate, infrastructure and areas like that, there has to be some capability of holding more assets in some of the other asset classes. The proposed change to the asset allocation does not change the target amounts, but expands the band in three of the asset classes. The fixed income band would increase by plus or minus 3%. The alternative equity strategies band would increase by plus 2%. The cash band would increase to up to 7%. The intent is not to have the target asset allocation be 7% cash, but would allow that much cash to be held without being in violation of the policy, until it can be put to work.

MR. PIHL moved to adopt Resolution 2014-13. MR. BRICE seconded the motion.

MR. BRICE asked if this resolution gives enough room to accommodate for the three billion dollars. MR. BADER believes this resolution provides enough room and the public equity asset class band, which is also liquid, is large enough.

MS. RODELL requested more detail regarding the investment strategy for the three billion dollars. MR. BADER stated the plan is written down, but he does not have it with him today and will describe it by memory. The first billion dollars transferred on July 15 will be allocated with $100 million to go into a multi-strategy bond contract with Pyramis, $300 million to go into cash and/or fixed income, $400 million to go into international equity, and $200 million into Russell 1000 Growth or Russell 1000 Value, depending upon the portfolio's valuation. The next transfer of one billion dollars will be in November and the last one billion-dollar transfer will be in March. The determination as to allocation of these funds is still being reviewed. Board-approved investment searches will occur. Alternative equity strategies and investments with floating interest rates are being considered.

MR. BRICE asked what the IAC's involvement is in this asset allocation vetting conversation. MR. BADER stated he has not engaged the IAC in this conversation.

A roll call vote was taken and the motion passed unanimously.

D. Manager Search Approval

MR. BADER explained this action memo gives the CIO authority to engage the services of the investment consultant to do manager searchers and reviews.

MS. HARBO moved to authorize the CIO to engage the services of the Board's general consultant or real estate consultant for manager searches. MR. TRIVETTE seconded the motion.

A roll call vote was taken and the motion passed unanimously.

E. Cornerstone Real Estate Advisers

MR. BADER advised a proposed change in the portfolio manager by Cornerstone caused staff to reflect on the separate account relationships with the real estate managers. When Cornerstone was hired in 2003, they were to make new investments and expected to take over value-added assets to improve the core strategy holdings. Unfortunately, there were not many assets that were converted from value-added status to core status and the separate account managers were diminishing. There are currently two assets in the portfolio, an office building in Glendale, California, and an apartment building in Stanford, Connecticut.

Staff proposes to terminate Cornerstone Real Estate Advisor and transfer the office building to another of ARM's separate account managers, UBS Realty. The remaining dollars would be provided to Lasalle Equity Real Estate Advisors to invest. The apartment building would be transferred to Sentinel, who has been an apartment manager for the ARM for 25 years and has done a very good job.

MR. TRIVETTE moved to terminate Cornerstone Real Estate Advisers, LLC, as a core separate account manager and transfer the assets and remaining commitment to ARMB's other separate account advisors in a manner that staff determines will produce the best result. MS. HARBO seconded the motion.

A roll call vote was taken and the motion passed unanimously.

F. RFP Performance Consultant Audit

MR. BADER explained this action item would direct staff to prepare an RFP for an independent audit of the state's performance consultant as required under AS 37.10.22(a)(11).

MR. BRICE moved the Board direct staff to prepare an RFP for an independent audit of the state's performance consultant as required by AS 37.10.220(a)(11). MS. HARBO seconded the motion.

A roll call vote was taken and the motion passed unanimously.

G. RFP 2014-010 General Consultant Search

MR. BADER provided the Board with action memos related to actuaries and consultants. A Proposal Evaluation Committee for the general consultant was appointed by the Chair and consisted of MR. BRICE, MS. HARBO, MS. KATHY LEA and MR. BADER. The Committee conducted interviews, consolidated scoring sheets and recommends to the Board that staff publish a notice of intent to award the general investment consulting services contract to Callan Associates, and upon an expiration of a 10-day notice period with no objections, that a contract be entered into with Callan Associates. This is a three-year term with two optional one-year renewals.

<u>MR. BRICE moved to accept the recommendation of the Committee that staff publish a notice of intent to award the general investment consulting services contract to Callan Associates, Inc., and, upon expiration of a 10-day notice period, if there are not protests, that a contract be entered into with Callan Associates, Inc.</u> <u>MS. HARBO seconded the motion.</u>

A roll call vote was taken and <u>the motion passed unanimously.</u>

H. GRS Contract Option

MR. BADER explained Gabriel Roeder Smith (GRS) is currently the contractor of actuary review services. The contract period runs from July 1, 2013 to 2014, with three optional one-year extensions. Staff recommends the Board exercise the first one-year optional extension of the contract to June 30, 2015.

<u>MS. HARBO moved to direct staff to exercise the first one-year contract option, extending the contract with GRS until June 30, 2015.</u> <u>MS. RYAN seconded the motion.</u>

A roll call vote was taken and <u>the motion passed unanimously.</u>

11. ACTURAIAL REVIEW/ACCEPTANCE- Certification of FY13 Valuations

A. Update on Legislation
SCS HB385(FIN) and HCS CSSB119(FIN) AM H

MR. JOHNSON noted the Board is well aware of the recent legislation passed and signed by the Governor, SB 119, the appropriation of three billion dollars to the Retirement Funds, and HB 385, containing additional issues and matters related to the Retirement Funds. Copies of the legislation are provided in each Board member's packet. SB 119 provides the three billion dollars appropriation to be divided, two billion dollars to TRS, and one billion dollars to PERS, and was contingent upon passage of a version of HB 385, which occurred.

The Legislature provided two statements of intent in the appropriation. MR. JOHNSON explained a statement of intent is an expression of the will and desire of the Legislature. It is not binding law and it is not a directive that has to be specifically followed, but is important to consider. MR. JOHNSON stated the Attorney General transmitted to the Governor his opinion on the statements of intent and quoted, "If the Executive Branch agencies are considering not complying with the language, we request that the Department of law be consulted for a detailed and thorough analysis."

MR. JOHNSON advised it is the intent of the Legislature that the ARMB and the Department of Administration direct the plans' actuary to eliminate the two-year rate setting lag in the PERS and TRS actuarial valuations. The second intent of the Legislature is that the ARMB and Department of Administration direct the plans' actuary to eliminate asset value smoothing from the PERS and TRS actuarial valuations.

MR. JOHNSON explained the ARMB fiduciary obligations and responsibilities remain the same. HB 385 imposes a new rule on actions and deliberations which is, "The appropriate contribution rate for liquidating the past service liability of the Defined Benefit Retirement Plan under TRS or the past service liability of the Defined Benefit Plan under PERS, must be determined by a level percent of pay method, based on amortization of the past service liability for a closed term of 25 years." MR. JOHNSON believes the provisions instruct the Board to apply this new rule to the specific calculation action already taken for FY15. These are substantive provisions and are consistent with the Legislature's authority to enact.

MR. TRIVETTE asked if there is additional information in terms of the reasons behind these changes. MR. JOHNSON noted he has not found any written statements of specific legislative intent and only has the literal words of the statute to direct the responsibilities. MR. TRIVETTE asked if the Board has to redo the 2015 rates. MR. JOHNSON agreed the Board has to reinitialize the amortization of the past service liability of FY15.

MR. PIHL believes the change would only affect the amount of state assistance in 2015, but that would be replaced by the three billion dollars provided by legislation. MR. PIHL wondered if counsel at the Department of Law should be sought to see if this process and incurred costs need to occur. MR. JOHNSON stated the Department of Law should be consulted, but he does not know what the financial and numeric effects of these changes will be.

MR. TRIVETTE noted it seems the actuary report reviewed in April is no longer valid because of the new legislation. He suggests this new process be taken slowly so the Board will have a good understanding of what it means to comply with the legislation, as well as being clear on the financial impacts the statements of intent will create. MR. JOHNSON stated the Legislature presumes the Board will act deliberatively and do what is appropriate to make the correct decisions.

MR. BRICE sees the statutory direction as clear and the intent language needs further conversation and study. He suggested the payment for the actuarial work come out of the state general fund and not the retirement funds.

B. GRS Review Comments

LESLIE THOMPSON, of Gabriel Roeder Smith, expressed her appreciation to DAVID SLISHINSKY, of Buck Consulting, for the time he spent in providing her details for their recommended procedures for implementation of the funding method changes under HB 385 and SB 119. MS. THOMPSON noted GRS is in complete concurrence with Buck's valuations. She defines lag as the timing difference between a known rate and when the rate is actually implemented. Plans usually have a one-year lag. MS. THOMPSON does not believe a lag can be eliminated, which is what the statute is directing. She believes the plan can recognize the lag more fully immediately, which makes the contribution rate higher, except for this year, when the appropriations come in of one billion and two billion, which actually lowers the contribution rate.

MS. THOMPSON noted the elimination of smoothing creates the amortization over a 25-year closed period beginning in 2014. She believes this will create more volatility in the state assistance during that 25-year period. Initially, the state contribution is less because of the legislative contribution.

MR. PIHL asked if MS. THOMPSON, as an actuary, would support eliminating the smoothing. MS. THOMPSON stated the way she would support the elimination of smoothing is if she could ascertain that the level of resulting volatility is acceptable to the contributing plan sponsors. MR. PIHL asked if MS. THOMPSON would recommend not having smoothing. MS. THOMPSON stated she does not recommend going to market value for any of her clients because of their low tolerance for volatile contribution changes.

MR. TRIVETTE asked if the issue of eliminating smoothing was discussed in any of the work MS. THOMPSON recently did for the Senate Finance Committee. MS. THOMPSON answered the issue of smoothing did not come up.

MS. RODELL asked if the new GASB rules and this issue of smoothing are related. MS. THOMPSON noted they are not at all related. The financial statements will no longer reflect the benefit of any smoothing, but the actuarial reports may continue to show smoothing.

C. Presentation re Rate Setting Lag

MR. SLISHINSKY noted this has been a very busy spring with the changes in the funding method due to the passage of HB 385 and SB 119. He provided recommendations with regard to the implementation of those changes. The current ARM Board funding policy has employers contributing to both the Defined Benefit Plans and the Defined Contribution Plans for PERS and TRS. The PERS employers' rate is capped at 22% of total payroll and TRS is capped at 12.56%. If the actuarial rate is above those capped rates, the state makes an additional on-behalf-of contribution to both PERS and TRS.

The actuarial cost method adopted by the ARM Board determines the amount of the recurring costs and how any unfunded liabilities are amortized. The actuarial value of assets uses a rolling five-year smoothing. There is a corridor of 80% to 120% of the market value, which means if the actuarial value is outside 80% to 120% of the market value, then an adjustment to the actuarial value is made. The unfunded liability is amortized on a level dollar basis that was established in 2002 over a closed 25-year period. Changing assumptions will impact the unfunded liability, creating another base and a layering approach to the amortization.

SB 119 appropriates three billion dollars from the Constitutional Budget Reserve Fund, one billion to PERS and two billion to TRS in FY15. MR. SLISHINSKY noted the Legislature's intent is to eliminate the two-year rate setting lag for PERS and TRS. He understands this intent to be a nonbinding intent. Another intent is to eliminate the asset smoothing methodology from the actuarial valuations for PERS and TRS.

HB 385 also changes the amortization of the unfunded liability to a closed 25-year period, which MR. SLISHINSKY believes will eliminate the layering. Reinitializing the amortization back to 25 years, actually lengthens the amortization payments, extending the payments longer than under the current approach. HB 385 also changes the methodology back to the level percentage of pay, rather than a level dollar amount, which makes the initial payments of amortization less, but they increase each year as the payroll increases. Typically what happens during that first period of amortization is the interest on the unfunded liability is not even being met and as a result, the unfunded liability grows, until the amortization payment catches up. MR. SLISHINSKY noted his projections on the closed 25-year period in PERS and TRS shows an increase in the unfunded liability over the first eight-year period.

MR. SLISHINSKY discussed implementation of these changes. The contribution rates for FY15 have been set and the employer rates were capped. If the FY15 rates are recalculated under the new methodology, those amounts are only going to be less and since the three billion dollars appropriation for FY15 is greater, it seems a moot point to go back and recalculate the FY15 rates. MR. SLISHINSKY noted he can write a letter stating the appropriation in SB 119 meets the amortization schedule of HB 385 or he can recalculate the numbers, even though there will be no additional amount the state will have to contribute.

MR. TRIVETTE noted it makes common sense not to spend money having the actuary recalculate the numbers. MR. TRIVETTE noted, if there was no objection from the Board, he requests MR. SLISHINSKY provide a letter stating their position. There was no objection from the Board.

MR. SLISHINSKY advised when Buck issues a report on the 2014 valuation, the 25-year amortization will be shown and all the new changes will be adopted. The asset value to market value will be reinitialized. The question is not for the FY15 rates, but it is for the FY16 rates using these method changes. The OMB has stated they would like to see what the amount of the state's on-behalf-of contribution is and whether or not it will be the capped rates or less. They want to know by November 7th in order to set up their budgets for the coming fiscal year. The 2014 valuation is not going to be ready by November 7th. The data is collected in September and sometimes the audit report is not completed until the first part of November. All of the data is combined, screened, cleaned up, and valuation-ready to run through the valuation software to determine liabilities, which are then merged with the audited assets, calculating the actuarial value of assets to calculate the contribution rates, and put into a report by the end of December.

That report then goes to GRS to be reviewed. A draft report of projections also gets sent to GRS for review usually in January. The whole process takes until about April before the results are presented to the ARM Board, and rate setting action usually takes place during the June meeting.

MR. SLISHINSKY suggested using a process he believes is consistent with the intent of SB 119 to eliminate the lag by using a roll-forward valuation. He explained roll-forward valuations are common and are used every other year in JRS and National Guard valuations. GASB will allow roll-forward valuations for GASB purposes over a period of 24 months. The actuary calculates the liability side of the balance sheet and the accountants calculate the asset side of the balance sheet. If the audited assets can be provided as of June 30, 2014, that number can be used to meet the November 7th deadline. If the benefits payments for the year ending June 30, 2014, are known, the actual benefit payments can be used to roll forward the accrued liability in the 2013 valuation from June 30, 2013 to June 30, 2014. Also, if the benefit payment information is not available, then Callan could provide a rate of return for the year and roll the assets forward using the said rate of return as a proxy for the assets as of June 30, 2104.

MR. TRIVETTE asked if MR. SLISHINSKY expects direction from the Board today on these suggestions and issues. MR. SLISHINSKY does not expect any action from the Board today and would like to present his options and have a discussion. More time is necessary to review the issues before any decisions can be made. He does not believe the proposed state contribution number will be ready by the September Board meeting. To develop the contribution rates for FY16, the roll-forward valuations of assets and liabilities projected to June 30, 2015 will be used.

With regard to the intent to eliminate the asset smoothing, MR. SLISHINSKY recommends eliminating the asset smoothing as of June 30, 2014, and then reinitialize the five-year smoothing as of July 1, 2014. MR. SLISHINSKY believes this will effect the intent of the legislation to eliminate smoothing, but then reinitialize smoothing because it helps reduce the volatility on the contribution rate. He does not recommend eliminating asset smoothing completely.

MR. PIHL believes elimination of smoothing produces unintended consequences and complications. He recommends the Board continue smoothing and express appreciation to the Legislature for their intent. MR. PIHL requested Buck provide the Board with valuation projections with and without smoothing, and with and without the lag roll-forward valuation. MR. TRIVETTE agreed and would like to have figures on paper to review while these issues are being discussed. He believes it would be good to continue the current direction and discuss the unintended consequences with the Legislature in the winter.

MR. BADER commented the Legislature appropriated three billion dollars to the trust funds and if there is going to be an alternative method of preparing contribution rates, it ought to be supplemental to preparing contribution rates exactly as prescribed by the legislation and legislative intent.

MR. SLISHINSKY commented Buck will provide that information to DRB and Board members. He noted the last change he would recommend is to remove the 80% to 120% corridor. GASB is no longer using the corridor. MR. SLISHINSKY believes the five-year smoothing method is sufficiently short and meets actuarial standards of practice. MR. SLISHINSKY gave a detailed review of the roll-forward valuation calculations provided in the presentation used to eliminate the two-year lag.

CHAIR SCHUBERT recessed the meeting from 3:37 p.m. to 3:46 p.m.

D. Board Discussion/Questions

Action: Board Acceptance of GRS Certification for FY13 PERS/TRS, DC Plan, Roll-Forward NGNMRS, JRS

MR. PIHL moved to approve the certification from GRS of the actuarial review. MS. RYAN seconded the motion.

A roll call vote was taken and the motion passed.

Action: Board Acceptance of FY13 Buck Valuations for PERS/TRS, DC Plan

MS. HARBO moved to accept the actuarial valuation reports prepared by Buck Consultants for PERS and TRS Defined Benefit, and PERS and TRS DCR Plans. MR. PIHL seconded the motion.

A roll call vote was taken and the motion passed.

Action: Board Acceptance of FY13 Buck Roll-Forward NGNMRS Valuation

MS. RYAN moved to accept the roll-forward actuarial valuation for the National Guard and Militia Retirement Systems. MS. HARBO seconded the motion.

A roll call vote was taken and the motion passed.

Action: Setting contribution Rates/September 2014

MR. BADER explained that staff recommends, in coordination with the Office of Management and Budget and MR. BARNHILL from the Department of Administration, the Board direct the actuary to prepare contribution rates in accordance with law and sound actuarial practice for consideration at the September 18-19 meeting, or as soon as possible thereafter. MR. BADER understands this may be difficult for Buck to accomplish, given the timeliness of the data received from Retirement and Benefits. The Office of the Governor needs this information for the preparation of the FY16 budget.

MR. TRIVETTE moved to direct the actuary to prepare contribution rates in accordance with law and sound actuarial practice for consideration at the September 18 - 19, 2014 trustee meeting, or as soon as possible thereafter. MR. BRICE seconded the motion.

MR. PIHL requested Buck also prepare the contribution rates and long-range projection based on eliminating the smoothing and continuing the smoothing. CHAIR SCHUBERT noted this is a request to Buck and does not need to be included in the action item motion. MR. JOHNSON suggested Buck's analysis be linked tightly to the legislative intent and then compare alternative reports which include the lagging and rolling-forward issues.

MS. ERCHINGER acknowledged the tremendous amount of work the Department of Administration will endeavor during the next six months in preparing for GASB 67 and GASB 68, in addition to attempting to meet these really challenging deadlines placed on Buck Consulting. She noted it may be impossible for Buck to prepare the contribution rates by the next meeting.

A roll call vote was taken and the motion passed unanimously.

RECESS FOR THE DAY

CHAIR SCHUBERT recessed the meeting at 3:56 p.m.

Friday, June 27, 2014

CALL BACK TO ORDER

CHAIR SCHUBERT reconvened the meeting at 9:01 a.m.

Trustees Trivette, Harbo, Erchinger, Rodell, Brice, Ryan, and Pihl were also present.

12. ECONOMIC ROUND TABLE DISCUSSION

MR. BADER explained the round table discussion today includes representatives from the Board's small cap and micro managers, including Frontier, Jennison, Lord Abbett, and Luther King. The discussion will include the opinions on the economy, items of interest, and any questions the Board may have. The panelists introduced themselves; TOM O'HALLORAN, Lord Abbett, who manages the micro, small, and large growth strategies, T.J. DUNCAN, Frontier Capital, who co-manages the small cap value strategy, STEVE PURVIS, Luther King Capital, who manages the small cap core strategy, and JEFF MCCCARTHY, Jennison Associates, who is a portfolio specialist for the small cap core strategy.

MR. BADER asked what the view is of high frequency trading, given all the recent attention. MR. O'HALLORAN believes high frequency trading needs to be regulated, but in a manner that does not take away from the liquidity of the market, because that would make things worse. MR. DUNCAN stated it is hard to know exactly how high frequency trading has been impacting the portfolios. The traders at Frontier have discussed with their partners about implementing different strategies to try and avoid the gaming that is occurring with high frequency trading. MR. DUNCAN believes when someone is stepping in front of another person and then turning around and trading it back, that is creating false liquidity. He believes it is an insider's game.

MR. PURVIS believes the ability for people to get ahead of investors has been greatly reduced over the last 20 years. Unfortunately, there are always going to be bad guys in this industry and it needs to be cleaned up. MR. MCCARTHY noted the biggest concern is creating regulation without impacting liquidity. MR. O'HALLORAN added there are technological solutions being developed, which may be a better solution than regulation.

MR. BADER informed the Board high frequency trading is in the news now because of a best-selling book. There will be a presentation from a high frequency trader at the education conference, who will provide a different perspective.

MR. BRICE asked what the opinion is on how inflationary expectations will impact the small cap markets. MR. DUNCAN explained small caps have done well when GDP is less than 3.5%. When GDP gets stronger than 3.5%, small caps have tended to underperform large caps. A modest inflationary regime is fine for small caps, but exceptional inflation is probably not a good environment. MR. O'HALLORAN added the expectation for inflation appears to be about 2%, which is a good environment for small caps. Inflation above 3% and deflation below 1% both present problems for small caps.

MR. BADER inquired what economic force or trend is the market currently underappreciating. MR. DUNCAN believes asset classes, other than equities, may be underappreciated and the long-term risk-free rate is extraordinarily low. MR. PURVIS believes the market is underappreciating just how strong the underlying economy is. His opinion is the economy continues to be strong and in mid-cycle for several more years. MR. O'HALLORAN believes inflation risk is underappreciated. He believes the risk of terrorism is underestimated. He believes the power of innovation in this world is underappreciated, which is great for equities, especially small cap.

MR. BADER asked which industries or sectors are currently underappreciated. MR. DUNCAN expressed there is a lot of pessimism around property and casualty insurance and their standard deviation on a P/E basis is below their historical median. MR. MCCARTHY believes there is much pessimism around health care, but the overall utilization rates are improving, which translates positive for balance sheets.

MS. RYAN asked which sectors are small cap managers investing and which sectors are being avoided. MR. O'HALLORAN answered the sectors that have done well this year and are still fine to be in are utilities, REITs, semis, transports and oil. The secular growth names that are being moved back into include biotechs, social media companies, and cloud computing companies. He believes the biotech drug companies are greatly underappreciated. MR. PURVIS stated there is still good value in industrial stocks and some of the technology companies. MR. DUNCAN noted their weightings in technology have been increasing, particularly in semiconductors. He stated the REITs look very expensive now.

MR. PIHL requested opinions as to where we are in the current market cycle and how much upside is left. MR. DUNCAN believes there are two years left on this increasing returns cycle based on historical post-recessionary periods of small caps. MR. PURVIS noted interest rates have not been raised, which would suggest time left for the economy to continue to grow and expand. Typically, the stock market will follow the economic trends and earnings of the underlying economy fairly closely, but periodically there will be an external shock that will send concern and uncertainty into the market, including high oil prices, political and government unrest, or a terrorist attack.

MR. O'HALLORAD confidently added we are not in the first inning of this bull market, but he does not know whether we are in the fifth or ninth inning. He believes if the Federal Reserve ends the quantitative easing strategy, that could cause a 20% bear market, but for the moment, his firm opinion is the market will continue to go up.

MR. BADER asked what one asset class would these managers invest in, if they had to exclude small cap. MR. O'HALLORAN stated large cap growth would be one area, because the innovation is remarkable in America today. Real estate would be another area. MR. DUNCAN stated he would invest in mid-cap American companies. MR. PURVIS answered he would invest in an outside ownership in commercial real estate, because of the rebound in property values. MR. MCCARTHY believes large-cap growth looks attractive.

MR. BADER asked which is more sensitive to interest rate changes, large cap companies or small cap companies. MR. PURVIS noted his view is to stay away from the blanket statement that increasing interest rates would be bad for small cap. He stated tightening of credit, historically creates a headwind for small cap, but not all small cap. MR. DUNCAN believes rising interest rates would be more challenging for smaller companies than larger companies, but not as much as it has been in the past because of improved capital structure. MR. O'HALLORAN commented that in general, small caps are more exposed to interest rate risk, but factors like improved balance sheets, low debt-to-cap ratios, better cash-to-assets ratios could mitigate the impact rising interest rates would have on small caps.

MR. ERLENDSON asked what skill sets, five years from now, will investment asset managers need to be successful. MR. O'HALLORAN believes they will need to be technologically astute in order to utilize the technical analysis tools to strengthen fundamental research. MR. DUNCAN noted the volume of information one can receive has increased and the ability to take advantage of that information in a timely manner on a short-term basis is much harder today.

MR. BRICE asked each manager what is his biggest barrier in the small cap market. MR. MCCARTHY noted global activity has created a fairly volatile current backdrop and he is conscious of this as an ongoing trend. MR. PURVIS commented that as a high quality manager, there is not much he worries about at a company level. He would be concerned if excitement grew in the market and everyone wanted to own small cap stocks, because it would be hard to keep up in that environment. MR. O'HALLORAN stated he works hard and sleeps well at night, but he is concerned with industry trends and the unrelenting pressure on active portfolio managers from lower-cost technological alternatives. MR. DUNCAN stated the toughest thing for him is when the market returns are divested from the companies' profit fundamentals, which is when the companies who are leading the market are not earning money.

MR. BADER gave the scenario if a company was expected to earn a dollar a share for the quarter and they announced 80 cents, what action would each manager take within the next week. MR. O'HALLORAN noted it depends on the quality of the company and the reason for the miss, but typically he would sell when things change negatively. MR. DUNCAN stated he would have to understand contextually how that relates to the long-term thesis and earnings potential of the company. There is also a different reaction if he bought the company at 10 and it is now at 40 and starts missing numbers, as opposed to if he bought the company at 10, expecting it to go to 40, and now it is at eight and is missing numbers. MR. DUNCAN believes the most expensive time to sell is on the day the company reports.

MR. PURVIS commented, to be successful, the emotional aspect of the business needs to be removed. This business is about process, execution, day-to-day blocking and tackling. There are several processes in place to review the investment thesis over the next few weeks to understand why the company reported those numbers and what is the outlook going forward. MR. MCCARTHY noted their focus tends to be on annual results, rather than quarterly results. Many questions factor into the decision to sell within the first 10 days including, where was it trading on a valuation perspective, was it trading at a premium, is this a competitive positioning scenario, and is this a margin miss.

MR. BADER requested the panel provide their thoughts regarding the IPO market in general. MR. MCCARTHY noted they pay very close attention to the IPO market and tend to participate more often than not when it is a company who poses a threat to an existing position and is priced appropriately. He does not see a slow-down in IPO activity in the near-term. MR. PURVIS believes the IPO window has opened back up within their high quality strategy and they have bought three IPOs in the last year.

MR. DUNCAN noted as a small cap value manager, they do not play the IPO market, because it is not particularly helpful to their portfolio. MR. O'HALLORAN noted as a growth manager, they are keenly interested in the IPO market. He believes it was white hot last year, stone cold in March, and is now warming up again. He looks at it as the best opportunity for discovery.

MR. BADER expressed his appreciation to all the members of the panel for their discussion and different points of view. He congratulated the managers for the fine work they have done for the ARM Board. This has been a very good year.

13. FRONTIER CAPITAL (small cap mandate)

MR. DUNCAN provided a detailed PowerPoint presentation regarding the firm, their process, and the portfolio performance. Frontier Capital is over 30 years old and manages only institutional assets, with a focus on U.S. small and mid-cap equities. They manage about $13 billion across six portfolios. There are currently eight portfolio managers and nine analysts. They are looking to hire a person in September who is a recent graduate from the Tuck Business School at Dartmouth. Frontier has a history of investing in their employees, giving opportunities to grow as investors, start portfolios or join current portfolio teams.

The investment philosophy permeates the firm, not just the portfolios. Frontier Capital is looking for companies they would want to own, even if there was not a public market, and that the company will earn, over long periods of time, above their cost of capital. These companies are being bought, typically when they are not earning their cost of capital, which is when the valuations are attractive. The investment philosophy also considers the downside risk to investments and determining whether the upside potential outweighs the downside risk.

Performance is related to bottom-up individual stock decisions, rather than an overweight or underweight in any particular sector. The top 10 holdings are usually between 20% and 25% of the portfolio. Currently the portfolio is overweight in insurance companies and underweight in REITs. For annualized periods ending March 31, 2014, the one year performance was 24.9%, three-year was 20.0%, and five-year was 30.5%, all in excess of the benchmark Russell 2000 Value for the same periods.

MR. BADER asked if Frontier Capital advises any mutual funds. MR. DUNCAN stated yes, Frontier Capital sub-advises for a few mutual funds. In this portfolio, they are advisor for Vanguard's Explorer Value Fund.

MR. ERLENDSON requested further explanation on how Frontier allocates capacity while closing products to new assets. MR. DUNCAN advised existing relationships are allowed to add to their position. However, there is a maximum capped amount for the sub-advisory relationships because of the potential for huge disruption to the portfolio.

DR. MITCHELL inquired what percentage of sales are due to realizations, mistakes, and capitalization beyond the small cap space. MR. DUNCAN noted positions are sold if they get too large, usually around a 6.5 to seven billion-dollar market cap size, and his guess is it could be 20% of the portfolio. MR. DUNCAN believes 20% or so of their sales are due to mistakes and maybe 80% are successes and realizations.

DR. JENNINGS asked for comments regarding benchmarking small cap managers and perhaps a better way to evaluate small cap managers. MR. DUNCAN is worried the benchmark is creeping into becoming a financial services benchmark. In 1999, the financial services were about 24% of the benchmark and now, they are 40% of the benchmark. REITs are now part of the benchmark at about 14%. MR. DUNCAN believes the Russell 2000 Value Index is a fair benchmark.

14. JENNISON ASSOCIATES (small cap mandate)

PETER REINEMANN and MR. MCCARTHY of Jennison Associates provided a detailed PowerPoint presentation regarding the firm, their process, and the portfolio performance. Jennison is in its 45th year of business as an investment manager and is focused on generating results for clients while creating an environment that will attract and retain the best investment talent. There are approximately $178 billion of assets under management. The underlying common theme is selecting securities, fixed income or equity, that can add value by understanding the company at the company level. The fixed income business has tripled in the last five years. The global equity capability has grown to three billion dollars at this point. The small and SMID-cap has about seven billion dollars under management. The small cap does not have any openings in capacity. The SMID-cap does have an opening in its capacity and the portfolio manager makes the decision as to whether or not a capacity should remain open.

MR. REINEMANN noted, within the last 18 months, clients have expressed tremendous interest in unconstrained equity mandates in the multi-asset and opportunistic areas, where a manager has the latitude to go into stocks, regardless of their style, value or growth, and capitalization, as an additional source of value added. The relationship with the parent company Prudential Financial remains very strong.

MR. MCCARTHY advised the investment team philosophy is very much a hands-on, bottom-up, qualitative assessment of business models with the additional belief that the small cap asset class is inherently volatile. The typical end result of the investment process is a portfolio with characteristics including embedded earnings growth assumptions and discounted P/E ratios. The beta, which is a fallout of the process, has historically been below one, which is less volatile than the benchmark Russell 2000. The investment team is the most important component. JOHN MULLMAN is the head of the small and mid-cap team today and co-manages this portfolio with JASON SWIATEK. There have not been any changes within the last year.

MR. ERLENDSON noted MR. MULLMAN historically has been the lead manager and late last year MR. SWIATEK was appointed co-portfolio manager and received some shared responsibilities. He asked if there is a message about MR. MULLMAN's future plans. MR. MCCARTHY explained there is no message regarding MR. MULLMAN's future plans, but rather that as the assets of the portfolio have grown, it was a natural progression to add MR. SWIATEK as a co-manager to this portfolio. MR. SWIATEK has co-managed most of the small cap products since 2004.

There are currently 14 portfolio managers with an average of 28 years' experience and 31 analysts with an average of 17 years' experience. The collective group meets every morning chaired by SIG SEGALAS, founder and CIO, as an open information sharing among the growth team, value team, large cap, small cap, and review every open order with the head trader and discuss any relevant research that has come out the night before. The same exercise with just the small cap team is completed immediately following that meeting.

MR. REINEMANN believes one of the benefits the team enjoys from the open information structure is the large footprint that Jennison has as a growth equity investor, particularly for the IPO market, and to be able to sit in on sessions with MARK ZUCKERBERG, for instance, for the IPO of Facebook.

The sectors adding the most value in the portfolio have been industrials, financials, and tech. The portfolio has been overweight in financials for two-plus years. For the year-to-date period ending May 31, 2014, the portfolio's performance was down 1%. The benchmark Russell 2000 Index was down 2%. Fast forward three weeks later to today's performance, the portfolio is up 5.5% and the benchmark is up 2.5%. The longer trend performance numbers for 1-year, 3-year, and 5-year are all above the benchmark.

MR. ERLENDSON asked how Jennison evaluates cyber security threats to the industries and companies reviewed. MR. MCCARTHY stated security is a huge theme right now and has become a little volatile with the most recent announcement that the government no longer will control the ICON, the oversight for domain name coverage. Jennison tries to participate in where they see the strong revenue potential in companies who offer a renewable contract and have a recurring revenue structure. He believes the threat for cyber security appears to be here to stay. MR. REINEMANN added it is hard to emphasize how difficult it is to truly have a handle on the sorts of threats the company sees and their willingness and ability to protect against it. He believes this will be a terrific investment space, but at the same time, it is a very real threat that companies are investing a lot of money in prevention.

MR. PIHL requested comment on the relatively high P/E ratios in 2014 listed on page 15. MR. MCCARTHY noted much of the growth last year, broadly speaking, came from multiple expansions. Cavium is trading at 33 times current year's earnings and has realized substantial growth to associate with the earnings. This chart is showing the top 20 of the 125 positions and the P/E ratios begin to moderate as position sizes decrease.

CHAIR SCHUBERT recessed the meeting from 10:38 a.m. to10:47 a.m.

15. LORD ABBETT (small cap mandate)

FRANK PAONE and MR. O'HALLORAN provided a detailed PowerPoint presentation regarding the firm, their process, and the portfolio performance. Lord Abbett has had a singular focus on the management of money since 1929. They are investment-led and investor-focused.

There are 65 partners that own and operate the organization, within three distinct and collaborative groups; client services, investment services, and core services. There are 133 investment professionals with an average of 17 years in the business. They manage a global perspective, which spans the capital markets, at $142.2 billion in assets. There are 66% of those assets in fixed income and 34% of those assets in equity.

MR. PAONE believes MR. O'HALLORAN's background as a district attorney in Rhode Island gives him a competitive advantage in his understanding of management and personalities, which helps in the selection process of companies. MR. O'HALLORAN, ARTHUR WEISE, and VERNON BICE, manage the portfolio and are supported by three dedicated research analysts under Centralized Research, three risk officers under Risk Management, 29 additional investment professionals under Equity Resources, and 10 equity traders under Equity Trading.

MR. O'HALLORAN stated the investment approach for the fund is to seek out special companies: that 1) have a business model that as the company increases sales, it will become more profitable and have a smoother revenue stream; 2) have intelligent people who are focused, transparent, and honest; 3) are operating within healthy industry conditions; and 4) are the leading company or a company who is gaining market share. There are six big areas where these special companies are most prevalent; digitization, U.S. mass consumerism, emerging nations, modern medicine, the American manufacturing renaissance, and the North American energy revival.

MR. O'HALLORAN believes one of the reasons small caps got hit hard between January and May is because they got overheated last year. It is critical to understand when small caps are in favor and when small caps are out of favor. This is achieved by thinking about the macro economy and having an opinion on the market, as well as looking at the technical profile of individual stocks to deliver alpha, which is becoming increasingly difficult because of the competition from other alternatives.

MR. O'HALLORAN explained when the market embraces these types of companies, like it did last year, the portfolio gets aggressive, and when the market is hostile to these types of companies, like it was between January and May of this year, the portfolio protects as much as possible and moves toward more defensive names and pockets of strength. Then when the special companies stop going lower, the portfolio gets back involved again.

The portfolio maintains a well-diversified strategy, which is an important part of the process. The top 10 holdings make up 14.6% of the portfolio. MR. O'HALLORAN commented the portfolio will generally pay a reasonable premium from a valuation standpoint and the growth will generally be faster than that of the index. The portfolio was above the benchmark Russell 2000 Growth Index three out of the four recent quarters.

16. LUTHER KING (small cap mandate)

MR. PURVIS provided a detailed PowerPoint presentation regarding the firm, their process, and the portfolio performance. He noted the bottom line is Luther King is a great firm and continues to get stronger. The assets are growing. The investment staff is growing. The fee income continues to be reinvested to grow investment staff, which benefits clients. Small cap and mid-cap is very important to Luther King, making up over 20% of their total assets.

MR. PURVIS explained the goals are clearly to generate superior returns with lower volatility relative to the benchmark. The process is bottom-up and fundamentally-driven, identifying and investing in high quality companies that are competitively advantaged. The companies have proven their business model and tend to be profitable, generating free cash flow which can be reinvested back into the business to grow value over time.

MR. PURVIS and LUTHER KING are the portfolio managers. There are three small cap analysts and a fourth analyst will be added this month, as part of the continued investment staff build-out. The portfolio also utilizes the nine firm-wide sector analysts. The portfolio holds about 90 companies and will sell those companies when they grow out of the small cap. The benchmark used is the Russell 2000, which gets reset every year. The market cap is now up to four billion dollars and Luther King will increase their market caps to stay consistent with the benchmark.

The current portfolio is underweight in financials and utilities relative to the benchmark and those sectors have done well for the benchmark in the last six months. One of the reasons the portfolio is underweight financials is that sector includes about a 9% weighting to REITs. The managers believe there is a higher probability interest rates will increase resulting in a positive effect for the portfolio. The top 15 holdings comprise about 23% of the portfolio. The energy and materials sectors are currently adding value to the portfolio. MR. PURVIS commented it is essential to realize consolidation or a rest period in the market the first six months after a very strong year is not uncommon and believes this is being shown in the current market.

The return on equity of the companies in the portfolio is well above the benchmark and roughly the same return on equity as the S&P 500. The debt level at 28% is in line with the benchmark and below that of the S&P 500. The portfolio is diversified at the sector level and the stock level. The focus is on high quality companies that trade at sizeable share values and have good market caps.

The portfolio performance returns have trailed the benchmark on an annualized basis ending March 31st, on a year-to-date, one-year, and three-year periods. The five-year return was equal to the benchmark and the 10-year and since-inception returns were greater than the benchmark. The returns shown in the presentation are gross of fees.

MR. ERLENDSON asked what percentage of the composite assets in small cap are non-institutional, and is there a concern regarding an exodus of retail money from small cap because of short-term time horizons. MR. PURVIS stated there is roughly $2.3 billion in the small cap strategy, of which one billion dollars is in a non-institutional mutual fund. There has been rebalancing on the institutional side, given the strong previous year. The portfolio stopped taking new accounts when it reached two billion dollars in order to preserve capacity for existing clients. There are 45 total portfolios and 44 of those are institutional assets.

MR. TRIVETTE requested MR. PURVIS' definition of a high quality stock purchased for the portfolio. MR. PURVIS noted a key consideration is a company that is profitable with a well-capitalized balance sheet and has no excessive debt relative to cash flow. The debt-to-book ratio can get confusing with small stock and so the analysts look more intently on the debt to cash flow ratio.

UNFINISHED BUSINESS

1. Calendar
Action: Adopt Proposed 2015 Calendar

MS. HALL noted the proposed 2015 calendar was based on the 2014 calendar of meetings and in conjunction with the Permanent Fund Corporation's calendar to avoid conflicts.

<u>MS. HARBO moved to adopt the proposed 2015 calendar.</u> <u>MR. BRICE seconded the motion.</u>

A roll call vote was taken and <u>the motion passed unanimously.</u>

2. Disclosure Report

MS. HALL advised the Disclosure Report was included in the packet and there is nothing unusual.

3. Legal Report

MR. JOHNSON stated he presented much of his legal report to the Board yesterday with respect to the legislation passed last session. MR. JOHNSON informed he has been working with MR. CARSON and MR. MITCHELL on a number of transactional documents. He requested to provide a 20-minute presentation on governance issues to the Board at the

September meeting. CHAIR SCHUBERT agreed to include his presentation on the next agenda.

NEW BUSINESS

None

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

None

PUBLIC/MEMBER COMMENTS

None

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. MITCHELL addressed the questions during the round table discussion regarding, is the market too high, are valuations too high, are we in some sort of an equity bubble? DR. MITCHELL noted bubbles historically have occurred with some regularity every eight to 10 years. They are not unusual. The two basic valuations to pay attention to are price/earnings ratio and yield. At the moment, the market is slightly above average in price/earnings ratio and slightly below average in yield.

DR. MITCHELL believes one of the early warning signs in bubbles occur when people start saying that price/earnings ratios are not important, which one tends to hear these days is P/E ratios are not important because the Fed is keeping interest rates low. Another warning sign is hearing people talk about all the cash on the sidelines that as soon as the market goes down, all this cash is going to flow in the market and buoy it back up. DR. MITCHELL believes the market is currently on a bubble trajectory, heading up toward a bubble and it is time to be cautious. The ARMB portfolio is not immune to bubbles, but because of its diversification is in a lot better shape than those who only invest in equities. He does not advocate any radical changes and believes the Board and staff have done a great job diversifying the portfolio, but would be on the lookout.

DR. JENNINGS praised the approach of splitting the appropriation into three parts providing a phased dollar-cost averaging method to investments. DR. JENNINGS recommended having a 20-minute presentation on ARBM expenses, including investment management expenses and staffing costs. He realizes the Budget Committee normally has that focus, but believes taking a holistic look would be beneficial in highlighting the incredible value of the internal staff.

MR. SHAW commented he very much enjoyed the conversation around labor force participation and unemployment. He believes inflation is two years away and the conversation around college debt and people being under-employed is significant.

TRUSTEE COMMENTS

MR. TRIVETTE expressed his gratitude to MR. BADER and staff for their wonderful job. He appreciates the emails from MR. BADER providing a ballpark figure of the end of year numbers, even though final numbers will not be out for another two or three months. As a Trustee and public member, MR. TRIVETTE noted he receives numerous requests from people and appreciates the support from staff.

FUTURE AGENDA ITEMS

MS. RODELL informed the Board received a policy and procedures manual in early June, which needs to be reviewed and adopted by the Board. She requested this be added to the September meeting..

MR. PIHL requested the interest assumption be included on the agenda under Buck's experience analysis for the next meeting and requested the experts provide advice from all angles. MR. TRIVETTE suggested looking at all of the assumptions at the next meeting. MR. PIHL believes the experience analysis covers all of the assumptions, except the interest assumption.

ADJOURNMENT

There being no objection and no further business to come before the Board, the meeting was adjourned at 11:47 a.m. on June 27, 2014, on a motion made by MR. BRICE and seconded by MS. HARBO.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

____

Corporate Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Retirement System Membership Activity as of June 30, 2014

ACTION: ______

DATE: September 18, 2014

INFORMATION: **X**

BACKGROUND:

Information related to PERS, TRS, JRS, NGNMRS, SBS and DCP membership activity as requested by the Board.

STATUS:

Membership information as of June 30, 2014.

MEMBERSHIP STATISTICS AS OF SEPTEMBER 30, 2013

	PERS					TRS				JRS	NG	SBS	DCP
	DB			DC		DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	3,121	5,721	12,071	15,060	35,973	1,064	5,496	3,941	10,501	73	n/a	28,262	7,661
Terminated Members	2,353	5,201	11,336	6,945	25,835	474	2,576	1,476	4,526	4	n/a	13,696	2,602
Retirees & Beneficiaries	23,033	5,258	1,678	4	29,973	10,453	1,272	-	11,725	108	639	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,638	6,638	n/a	n/a	1,763	1,763	n/a	n/a	927	883
Retirements - 1st QTR FY14	237	164	93	n/a	494	194	176	n/a	370	-	50	n/a	n/a
Full Disbursements - 1st QTR FY14	20	71	139	429	659	17	39	108	164	-	n/a	630	143
Partial Disbursements - 1st QTR FY14	n/a	n/a	n/a	23	23	n/a	n/a	13	13	n/a	n/a	437	447

MEMBERSHIP STATISTICS AS OF DECEMBER 31, 2013

	PERS					TRS				JRS	NG	SBS	DCP
	DB			DC		DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	3,020	5,645	11,947	15,760	36,372	1,067	5,468	4,201	10,736	74	n/a	28,485	7,685
Terminated Members	2,296	5,139	11,285	7,114	25,834	457	2,570	1,407	4,434	4	n/a	13,881	2,653
Retirees & Beneficiaries	23,094	5,377	1,756	4	30,231	10,442	1,299	-	11,741	108	642	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,549	6,549	n/a	n/a	1,746	1,746	n/a	n/a	953	918
Retirements - 2nd QTR FY14	133	110	80	n/a	323	17	21	n/a	38	-	25	n/a	n/a
Full Disbursements - 2nd QTR FY14	23	26	133	379	561	12	27	50	89	-	n/a	544	124
Partial Disbursements - 2nd QTR FY14	n/a	n/a	n/a	32	32	n/a	n/a	10	10	n/a	n/a	485	460

MEMBERSHIP STATISTICS AS OF MARCH 31, 2014

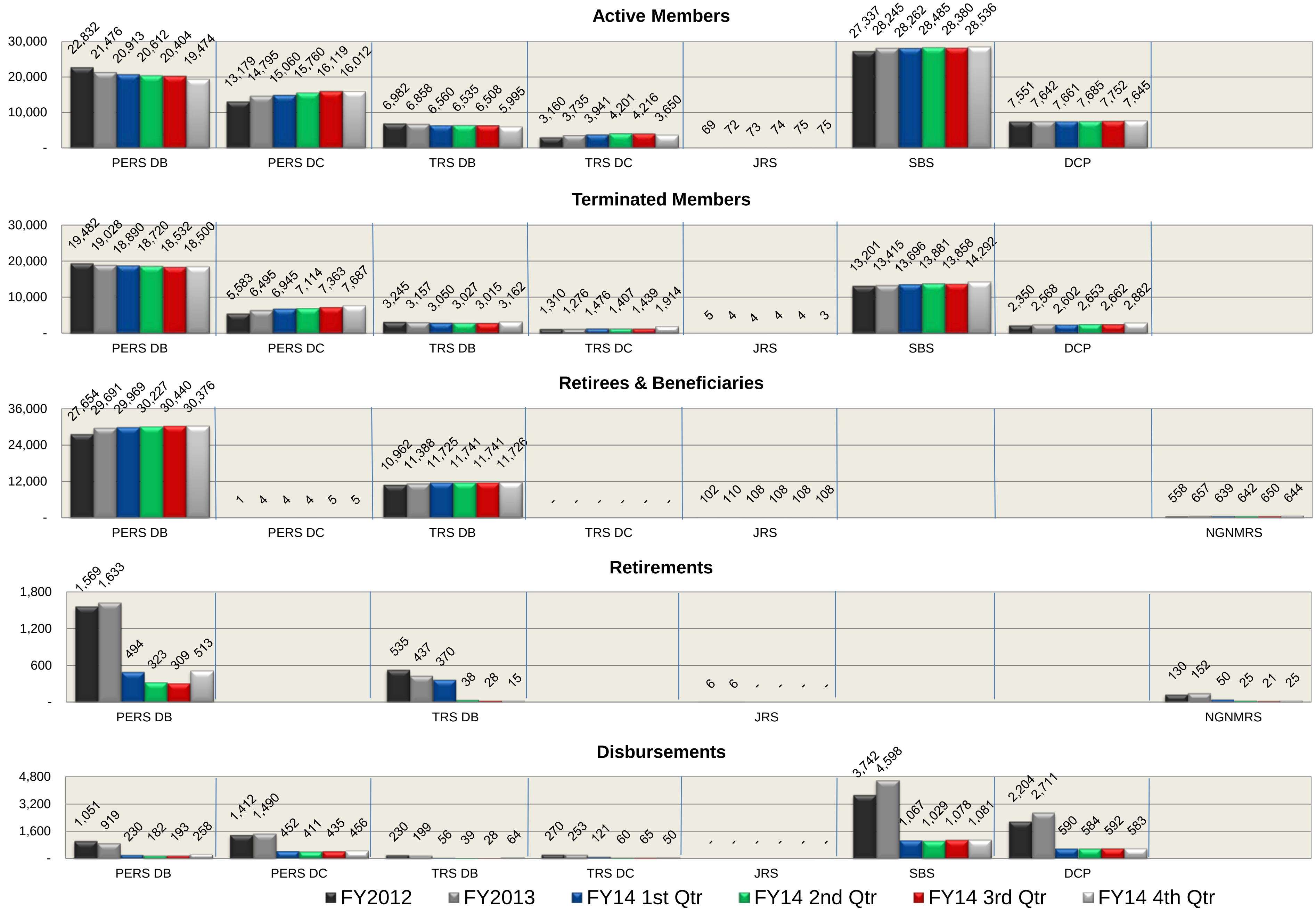
	PERS					TRS				JRS	NG	SBS	DCP
	DB			DC		DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	2,971	5,596	11,837	16,119	36,523	1,060	5,448	4,216	10,724	75	n/a	28,380	7,752
Terminated Members	2,208	5,090	11,234	7,363	25,895	450	2,565	1,439	4,454	4	n/a	13,858	2,662
Retirees & Beneficiaries	23,165	5,455	1,820	5	30,445	10,427	1,314	-	11,741	108	650	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,458	6,458	n/a	n/a	1,723	1,723	n/a	n/a	979	961
Retirements - 3rd QTR FY14	150	93	66	n/a	309	10	18	n/a	28	-	21	n/a	n/a
Full Disbursements - 3rd QTR FY14	17	39	137	403	596	3	25	56	84	-	n/a	543	119
Partial Disbursements - 3rd QTR FY14	n/a	n/a	n/a	32	32	n/a	n/a	9	9	n/a	n/a	535	473

MEMBERSHIP STATISTICS AS OF JUNE 30, 2014

	PERS					TRS				JRS	NG	SBS	DCP
	DB			DC		DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	2,656	5,336	11,482	16,012	35,486	869	5,126	3,650	9,645	75	n/a	28,536	7,645
Terminated Members	2,156	5,062	11,282	7,687	26,187	469	2,693	1,914	5,076	3	n/a	14,292	2,882
Retirees & Beneficiaries	23,106	5,447	1,823	5	30,381	10,416	1,310	-	11,726	108	644	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,384	6,384	n/a	n/a	1,712	1,712	n/a	n/a	1,022	1,021
Retirements - 4th QTR FY14	240	167	106	n/a	513	7	8	n/a	15	-	25	n/a	n/a
Full Disbursements - 4th QTR FY14	31	68	159	421	679	11	53	40	104	-	n/a	589	128
Partial Disbursements - 4th QTR FY14	n/a	n/a	n/a	35	35	n/a	n/a	10	10	n/a	n/a	492	455

FY 2014 QUARTERLY REPORT OF MEMBERSHIP STATISTICS

Annual & Quarterly Trends as of June 30, 2014



LEGEND

Active Members - All active members at the time of the data pull.
Terminated Members - All members who have terminated without refunding their account.
Retirees & Beneficiaries - All members who have retired from the plans, including beneficiaries eligible for benefits.
Managed Accounts - Individuals who have elected to participate in the managed accounts option with Great West.
Retirements - The number of retirement applications processed.
Full Disbursements - All types of disbursements that leave the member balance at zero.
Partial Disbursements - All types of disbursements that leave the member balance above zero. If more than one partial disbursement is completed during the quarter for a member, they are counted only once for statistical purposes.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Invoices & Summary of Monthly Billings - Buck Consultants, A Xerox Company	ACTION:	
DATE:	Sept 18, 2014	INFORMATION:	X

BACKGROUND:

AS 37.10.220(a)(8) prescribes that the Alaska Retirement Management Board (Board) "coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios...."

As part of the oversight process, the Board has requested that the Division of Retirement & Benefits provide a quarterly summary update to review billings and services provided for actuarial valuations and other systems requests.

STATUS:

Attached are the summary totals for the nine months ended June 30, 2014.

Buck Consultants
Billing Summary
For the Three Months Ended September 30, 2013

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations DB	$ 38,878	27,907	2,948	1,962	1,238	-	3,001	-	-	$ 75,934
Audit Request	3,579	2,985	-	-	-	-	-	-	-	6,564
Allocation of ER contributions between Pension & Healthcare to include salaries by ER	1,106	432	10	-	-	-	-	-	-	1,548
Actuarial cost calculation of the healthcare benefit for member	883	-	-	-	-	-	-	-	-	883
Research & discussions regarding projects results for PERS & TRS	629	629	-	-	-	-	-	-	-	1,258
Research & discussions re: membership statistics as of June 30, 2013 for ARMB meeting	317	124	3	12	-	-	-	143	34	632
Research & review of info re: amortztn method used in actuarial val confirming rolling amortztn is not used	1,085	424	-	-	-	-	-	-	-	1,509
Misc emails and phone calls	3,589	1,383	-	-	-	-	-	-	-	4,972
TOTAL	$ 50,064	33,884	2,961	1,974	1,238	-	3,001	143	34	$ 93,300

For the Three Months Ended December 31, 2013

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations DB	$ 104,481	62,739	-	-	-	-	4,940	-	-	$ 172,160
Audit Request	2,448	1,503	1,186	-	874	-	-	-	-	6,011
Allocation of ER contributions between Pension & Healthcare to include salaries by ER	2,620	2,143	190	-	-	-	-	-	-	4,953
COLA eligibility study for PERS and TRS	810	795	-	-	-	-	-	-	-	1,605
Consulting, research & analysis for the implementation of the new GASB accounting	8,116	5,588	-	-	-	-	-	-	-	13,704
Consulting, research & correspondence re: how death benefits during active military service required under the HEART Act are valued in the actuarial valuations	855	334	8	-	-	-	-	-	-	1,197
DCR healthcare study using DCR eligibility & DB tier medical plan	742	264	-	-	-	-	-	-	-	1,006
Misc emails and phone calls	4,013	1,547		-	-	-	-	-	-	5,560
TOTAL	$ 124,085	74,913	1,384	-	874	-	4,940	-	-	$ 206,196

For the Three Months Ended March 31, 2014

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations DB and DCR	$ 52,947	45,296	6,637	3,644	-	-	-	-	-	$ 108,524
Experience Analysis	20,576	15,523	5,295	1,844	-	-	-	-	-	43,238
Research, discussions, & review of new GASB 67 disclosure calcs as they apply to PERS & TRS	3,148	1,231	-	-	-	-	-	-	-	4,379
20 year projection of expected retiree populations for PERS & TRS, including changes each year for new retirees & deaths	3,850	2,347	-	-	-	-	-	-	-	6,197
Correspondence & discussions regarding the actuarial procedures used for part-time employees	1,030	403	-	-	-	-	-	-	-	1,433
Termination cost studies performed over the last three years	1,662	-	-	-	-	-	-	-	-	1,662
Presentation of February 7th for ARMB meeting, including extending the projections out 60 years	5,622	3,078	-	-	-	-	-	-	-	8,700
Projection of expected number of retirees & beneficiaries receiving benefit payments from 2013 to 2034	4,931	3,499	-	-	-	-	-	-	-	8,430
Review of motion for the Dept. of Law to assist in the matter involving the Aleutian Region SD	2,085	-	-	-	-	-	-	-	-	2,085
DCR expense policy study	2,280	2,280	-	-	-	-	-	-	-	4,560
Research & discussions of replacement ratios for DCR Plan	1,004	1,004	-	-	-	-	-	-	-	2,008
Consulting & discussions re proposed legislation on compound prescription drug claims & Aetna's responses, including fiscal impact	2,018	2,018	-	-	-	2,017	-	-	-	6,054
Misc emails and phone calls	3,774	1,455	-	-	-	-	-	-	-	5,229
TOTAL	$ 104,927	78,134	11,932	5,488	-	2,017	-	-	-	$ 202,499

For the Three Months Ended June 30, 2014

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Experience Analysis	$ 44,502	32,484	7,603	12,613	-	-	-	-	-	$ 97,202
ARMB Presentations	12,831	11,919	977	720	-	-	-	-	-	26,447
Healthcare actuarial study of cost impacts of changes to TRS DCR normal cost	-	15,822	-	-	-	-	-	-	-	15,822
Consulting & discussions re proposed legislation on compound prescription drug claims & Aetna's responses, including fiscal impact	-	-	-	-	-	53	640	-	-	693
Determination of estimate FY16 state assistance contribution to PERS and TRS under funding method changes proposed under HB385 and SB 119	9,332	7,945	-	-	-	-	-	-	-	17,277
Preparation of the roll-forward calculations showing the change in the expected funding ration after $3 billion state contribution in FY15, submitted May 2nd	4,154	-	-	-	-	-	-	-	-	4,154
Estimated NPL disclosure under GASB67 and 68 for PERS and TRS for FY 14 to FY 16	14,677	11,672	-	-	-	-	-	-	-	26,349
Misc emails and phone calls	3,189	1,230	-	-	-	-	-	-	-	4,419
TOTAL	$ 88,685	81,072	8,580	13,333	-	53	640	-	-	$ 192,363

Summary through the Twelve Months Ended June 30, 2014

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations DB and DCR	$ 196,306	135,942	9,585	5,606	1,238	-	7,941	-	-	$ 356,618
Audit Request	6,027	4,488	1,186	-	874	-	-	-	-	12,575
Experience Analysis	65,078	48,007	12,898	14,457	-	-	-	-	-	140,440
ARMB Presentations	12,831	11,919	977	720	-	-	-	-	-	26,447
Allocation of ER contributions between Pension & Healthcare to include salaries by ER	3,726	2,575	200	-	-	-	-	-	-	6,501
Actuarial cost calculation of the healthcare benefit for member	883	-	-	-	-	-	-	-	-	883
Research & discussions regarding projects results for PERS & TRS	629	629	-	-	-	-	-	-	-	1,258
Research & discussions re: membership statistics as of June 30, 2013 for ARMB meeting	317	124	3	12	-	-	-	143	34	632
Research & review of info re: amortztn method used in actuarial val confirming rolling amortztn is not used	1,085	424	-	-	-	-	-	-	-	1,509
COLA eligibility study for PERS and TRS	810	795	-	-	-	-	-	-	-	1,605
Consulting, research & analysis for the implementation of the new GASB accounting	8,116	5,588	-	-	-	-	-	-	-	13,704
Consulting, research & correspondence re: how death benefits during active military service required under the HEART Act are valued in the actuarial valuations	855	334	8	-	-	-	-	-	-	1,197
DCR healthcare study using DCR eligibility & DB tier medical plan	742	264	-	-	-	-	-	-	-	1,006
Research, discussions, & review of new GASB 67 disclosure calcs as they apply to PERS & TRS	3,148	1,231	-	-	-	-	-	-	-	4,379
20 year projection of expected retiree populations for PERS & TRS, including changes each year for new retirees & deaths	3,850	2,347	-	-	-	-	-	-	-	6,197
Correspondence & discussions regarding the actuarial procedures used for part-time employees	1,030	403	-	-	-	-	-	-	-	1,433
Termination cost studies performed over the last three years	1,662	-	-	-	-	-	-	-	-	1,662
Presentation of February 7th for ARMB meeting, including extending the projections out 60 years	5,622	3,078	-	-	-	-	-	-	-	8,700
Projection of expected number of retirees & beneficiaries receiving benefit payments from 2013 to 2034	4,931	3,499	-	-	-	-	-	-	-	8,430
Review of motion for the Dept. of Law to assist in the matter involving the Aleutian Region SD	2,085	-	-	-	-	-	-	-	-	2,085
DCR expense policy study	2,280	2,280	-	-	-	-	-	-	-	4,560
Research & discussions of replacement ratios for DCR Plan	1,004	1,004	-	-	-	-	-	-	-	2,008
Consulting & discussions re proposed legislation on compound prescription drug claims & Aetna's responses, including fiscal impact	2,018	2,018	-	-	-	2,070	640	-	-	6,747
Healthcare actuarial study of cost impacts of changes to TRS DCR normal cost	-	15,822	-	-	-	-	-	-	-	15,822
Determination of estimate FY16 state assistance contribution to PERS and TRS under funding method changes proposed under HB385 and SB 119	9,332	7,945	-	-	-	-	-	-	-	17,277
Preparation of the roll-forward calculations showing the change in the expected funding ration after $3 billion state contribution in FY15, submitted May 2nd	4,154	-	-	-	-	-	-	-	-	4,154
Estimated NPL disclosure under GASB67 and 68 for PERS and TRS for FY 14 to FY 16	14,677	11,672	-	-	-	-	-	-	-	26,349
Misc emails and phone calls	14,565	5,615	-	-	-	-	-	-	-	20,180
TOTAL	$ 367,762	268,004	24,857	20,795	2,112	2,070	8,581	143	34	$ 694,358

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY2016 ARMB Budget Proposal

ACTION: X

DATE: September 18, 2014

INFORMATION:

BACKGROUND:

Pursuant to its charter, the Alaska Retirement Management Board (ARMB) Budget Committee meets annually to review the actual expenditures in the immediately preceding fiscal year budget; consider and review the current fiscal year budget as approved by the legislature; and develop a proposed budget for the next fiscal year and make appropriate recommendations for action to the Board. The Budget Committee met September 19, 2012 and completed this review.

The Alaska Retirement Management Board (ARMB) budgets asset management related pension expenditures in the Alaska Budget System (ABS) as follows: the Alaska Retirement Management Board component and the Alaska Retirement Management Board – Custody and Management component. For presentation purposes, the attached schedule combines these into one schedule for FY2010 through FY2016 budget information.

STATUS:

Staff to the ARMB

The ARMB purchases personal services from the Treasury Division each year. The FY2016 budget is estimated to include $187,000 for personal services increases. Additional funds for new positions and further salary increases will be included in the budget proposal during discussions with OMB and the Legislature.

Investment Management Fees

Investment manager fees are charged as a percent of the market value of investments under management. Treasury staff compile the actual assets in each manager’s account and apply a growth rate to them through the end of the budget period. Actual market values of assets under management for the prior year are projected using the earnings assumption rate adopted by ARMB. The actual contractual fee rates of each manager are applied to the projected assets. The individual fees are added to arrive at a total projected cost of external management. Authorization in excess of actual fees lapses and these funds remain unspent. Some investment management fees are not paid directly by Treasury administrative staff; these expenses are netted from investment income. Total estimated FY16 investment management and custody fees are budgeted at $57,721,061. These fees will be included in the budget proposal during discussions with OMB and the Legislature.

RECOMMENDATION:

The ARMB Budget Committee and staff recommend that the ARMB adopt the FY16 Proposed Budget as attached, with the understanding that salary increases will be included during review by OMB and the Legislature.

Attachment: Budget Work Sheet

FY16 ARMB Working Budget

	A B C	F	G	H	J	K	L	M	N	P	R	S	T	U
1	**FY16 ARMB Working Budget**													
2														
3						FY14 Totals		Variance Auth v Actual						
4		FY10 Actual	FY11 Actual	FY12 Actual	FY13 Actual	Authorized	FY14 Actual	$	%age	FY15 Projected	FY16 Proposed	$ Change from FY15	% change	Remarks
5	Personal Services	2,729,563	2,885,912	**3,022,178**	3,229,215	3,913,500	3,446,651	(466,849)	-11.9%	3,740,679	3,927,712	187,034	5.0%	
6	Travel													
7	Staff	142,531	148,529	168,701	160,007	160,000	154,529	(5,471)	-3.4%	165,000	165,000			
8	Board	55,951	57,658	58,153	69,338	60,000	66,110	6,110	10.2%	70,000	70,000			
9		198,482	206,188	226,854	229,345	220,000	220,639	639	0.3%	235,000	235,000	0	0.0%	
10	Contractual													
11	Investment Management and Custody Fees													
12	Money Management	22,005,044	24,591,935	27,812,013	31,760,963	42,631,700	37,815,145	(4,816,555)	-11.3%	50,177,630	56,431,061			
13	Custody	1,123,221	1,126,639	1,130,155	1,128,202	1,275,000	1,289,343	14,343	1.1%	1,290,000	1,290,000			
14	Amount Reserved in budget for add'l unanticipated fee	0	0	0	0	0	0	0						
15		23,128,265	25,718,574	28,942,168	32,889,164	43,906,700	39,104,488	(4,802,212)	-10.9%	51,467,630	57,721,061	6,253,431	12.2%	
16	Investment Consulting													
17	General consultant and performance measurement	595,000	493,500	477,405	561,641	560,000	557,593	(2,407)	-0.4%	650,000	650,000			*Callan contract*
18	Real Estate - Townsend	101,665	100,000	100,000	100,000	100,000	105,000	5,000	5.0%	110,000	110,000			
19	Investment Advisory Council	94,179	107,305	110,548	113,973	119,550	106,580	(12,970)	-10.8%	150,000	150,000			
20		790,844	700,805	687,953	775,614	779,550	769,173	(10,377)	-1.3%	910,000	910,000	0	0.0%	
21	Investment Information Services													
22	Bloomberg	257,362	262,757	297,205	327,302	300,000	320,253	20,253	6.8%	325,000	325,000			*Annual cost increase for each user subscription*
23	Factset	185,207	189,876	196,964	236,235	240,000	285,117	45,117	18.8%	294,000	294,000			*Additional users/features added in 2013/2014*
24	Yieldbook	47,970	29,515	36,004	16,479	16,500	16,425	(75)	-0.5%	20,000	20,000			
25	SSB Private Edge	0	0	0	0	0	0	0		3,000	16,000			
26	Risk Management	0	113,349	170,050	96,243	0	54,996	54,996		50,000	150,000			*MAP Alternative Asset Mgmt contract expires 11/4/2014, Looking at future alternatives*
27	Standard & Poors	32,502	86,798	91,006	146,959	125,000	147,993	22,993	18.4%	150,000	150,000			Standard and Poor and S&P Indices CUSIP
28	Moody's	40,645	8,997	10,390	12,048	15,000	16,660	1,660	11.1%	17,000	17,000			
29	Credit Sights	18,000	8,820	2,904	2,701	2,500	2,390	(110)	-4.4%	5,000	5,000			
30	Trade Web	8,201	4,196	4,792	4,501	5,000	4,023	(977)	-19.5%	5,000	5,000			
31	TREPP	60,000	60,000	60,000	30,600	0	0	0		0	0			*Terminated 12/12/2012*
32	Institutional Investor Proxy Service for REIT Portfolio	6,506	6,506	6,506	8,346	10,000	9,063	(937)	-9.4%	10,000	10,000			
33	Zach Investments Research	40,000	40,000	51,250	51,250	51,250	51,250	0	0.0%	51,300	51,300			
34	FTSE International		14,135	14,842	15,510	15,000	16,230	1,230	8.2%	17,900	17,900			
35	Fitch Ratings		0	10,923	10,157	8,500	8,987	487	5.7%	0	0			*Contract Expires 9/30/2014. Not renewing*
36	Other	19,240	9,098	5,551	13,647	12,500	12,366	(134)	-1.1%	20,000	20,000			*MSCI, NYSE, Russell, Pens Fund Data, Barclays, RDQ Economics*
37		715,633	834,048	958,388	971,977	801,250	945,752	144,502	18.0%	968,200	1,081,200	113,000	11.7%	
38	Inter and Intra Departmental Charges													
39	Legal	171,364	122,134	63,897	77,029	90,000	96,930	6,930	7.7%	160,000	160,000			
40	DOR Admin Services	79,089	120,165	154,976	166,975	180,000	180,858	858	0.5%	192,000	204,000			
41	DOR Commissioner's Office		21,250	21,471	33,810	22,600	23,597	997	4.4%	25,000	26,000			
42	Building Maintenance	0	268	51	1,254	0	0	0		500	500			
43	Building Lease	143,279	94,409	84,135	92,024	80,000	80,286	286	0.4%	92,000	92,000			
44	DOA Human Resources	16,387	17,707	17,559	14,411	12,000	11,454	(546)	-4.6%	12,000	12,000			
45	ETS - Telecommunications & Computer Services	47,528	49,708	48,453	48,713	38,000	37,135	(865)	-2.3%	50,000	50,000			
46	Mail	5,589	6,430	4,217	3,636	3,000	2,748	(252)	-8.4%	7,000	7,000			
47	DOA Finance (AKSAS & AKPAY)		30,279	23,464	21,338	16,000	15,867	(133)	-0.8%	30,000	30,000			2017 IRIS charges expected
48	Other	5,213	3,762	3,329	6,341	4,200	4,101	(99)	-2.4%	5,000	5,000			
49		468,449	466,112	421,552	465,531	445,800	452,975	7,175	1.3%	573,500	586,500	13,000	2.3%	
50	Other professional services													
51	Actuarial Services - Buck & GRS	98,390	182,070	77,203	203,968	140,000	172,042	32,042	22.9%	200,000	170,000			
52	Peer Review of Actuarial Experience Study	0	0	0	170,900	0	0	0		0	170,000			*AON*
53	Performance consultant audit - IFS	0	121,000	0	0	0	0	0		130,000	0			
54	Other	4,059	1,000	24,330	16,655	10,000	10,520	520	5.2%	10,000	10,000			*Deloitte & Touche payments, Price Water Cooper payment*
55	IT Support				34,626	25,000	25,601	601	2.4%	35,000	35,000			
56	Financial Audit	83,900	86,650	89,400	92,000	92,000	92,000	0	0.0%	110,000	110,000			*KPMG contract*
57		186,349	390,720	190,933	518,149	267,000	300,162	33,162	12.4%	485,000	495,000	10,000	2.1%	
58	Subscriptions, training and other expenses													
59	Subscriptions	2,214	1,365	3,772	3,428	4,000	2,139	(1,861)	-46.5%	16,000	16,000			
60	Training, memberships and conferences	55,628	53,510	60,800	55,892	60,000	60,288	288	0.5%	62,000	62,000			
61	Courier and express services	4,667	4,033	2,814	2,139	3,000	2,260	(740)	-24.7%	5,000	5,000			
62	Phone and telecommunications	25,806	24,821	25,899	27,189	25,000	23,892	(1,108)	-4.4%	30,000	30,000			
63	Board meeting related expenses	61,642	74,534	74,496	56,884	70,000	72,502	2,502	3.6%	70,000	70,000			
64	Software & Software Support	111,315	15,578	61,079	55,198	35,000	34,607	(393)	-1.1%	40,000	40,000			
65	Advertising	6,473	9,025	7,355	14,421	14,000	15,052	1,052	7.5%	15,000	15,000			
66	Honoraria	61,124	62,842	55,088	74,021	86,200	71,445	(14,755)	-17.1%	86,200	86,200			
67	Other	5,163	43,649	7,096	9,178	6,000	2,272	(3,728)	-62.1%	16,700	16,700			
68		334,032	289,356	298,398	298,351	303,200	284,456	(18,744)	-6.2%	340,900	340,900	0	0.0%	
69	Contractual	25,623,572	28,399,615	31,499,393	35,918,786	46,503,500	41,857,007	(4,646,493)	-10.0%	54,745,230	61,134,661	6,389,431	14.9%	
70	Supplies and equipment	61,307	67,437	323,023	119,649	24,000	21,962	(2,038)	-8.5%	75,000	75,000	0	0.0%	
71	Personal Services & Travel	2,928,045	3,092,100	3,249,032	3,458,560	4,133,500	3,667,290	(466,210)	-11.3%	3,975,679	4,162,712	187,034	5%	
72	**Total all Expenses**	**28,612,924**	**31,559,151**	**35,071,448**	**39,496,995**	**50,661,000**	**45,546,259**	**(5,114,741)**	**-10.1%**	**58,795,909**	**65,372,373**	**6,576,465**	**13.9%**	
73														
74	Investment fees and custody	23,128,265	25,718,574	28,942,168	32,889,164	43,906,700	39,104,488	(4,802,212)	-10.9%	51,467,630	57,721,061	6,253,431	12.2%	
75	Operations	5,484,659	5,840,577	6,129,280	6,607,831	6,754,300	6,441,771	(312,529)	-4.6%	7,328,279	7,651,312	323,034	4.4%	
76	**Total all Expenses**	**28,612,924**	**31,559,151**	**35,071,448**	**39,496,995**	**50,661,000**	**45,546,259**	**(5,114,741)**	**-12.1%**	**58,795,909**	**65,372,373**	**6,576,465**	**13.9%**	

FY2016 Proposed Custody & Management Fees

Type	Manager		FY2014 Actuals	Asset Value as of 6/30/14	Projected Asset Value as of 6/30/15	Projected Asset Value as of 6/30/16	Fees in Basis Points	Fees in Basis Points	FY15 Projected	FY2016 Proposed
PE	Abbott Capital Management	AY85	1,928,010	768,955,246	907,367,190	979,956,566	0.002507	25.07	2,275,052	2,457,056
CB	Advent Capital	AY52	976,372	195,674,656	230,896,094	249,367,782	0.004990	49.90	1,152,119	1,244,289
LC	Allianz	AY38	729,920	352,570,887	416,033,647	449,316,338	0.002070	20.70	861,306	930,210
LC	Allianz (RCM)	AY4Y	307,931	-	-	-			-	-
LC	Analytic Buy Write Account	AY4X	210,940	237,310,881	280,026,840	302,428,987	0.000889	8.89	248,910	268,822
LC	Barrow Hanley Mewhinney & Strauss	AY4U	1,125,731	332,360,540	392,185,437	423,560,272	0.003387	33.87	1,328,363	1,434,632
SC	Barrow Hanley Mewhinney & Strauss	AY4Q	842,019	106,803,195	126,027,770	136,109,992	0.007884	78.84	993,582	1,073,069
Intl	Blackrock	AY6U	368,994	674,476,162	795,881,871	859,552,421	0.000547	5.47	435,413	470,246
Intl	Brandes Investment Partners LP	AY65	3,835,119	1,112,914,687	1,313,239,331	1,418,298,477	0.003446	34.46	4,525,440	4,887,476
RA	Brookfield	AYRE	168,173	83,452,289	98,473,701	106,351,597	0.002015	20.15	198,444	214,320
Intl	Capital Guadian Trust Co.	AY67	2,849,052	825,461,507	974,044,578	1,051,968,145	0.003451	34.51	3,361,881	3,630,832
SC	DePrince Race & Zollo Ince	AY4E	1,034,284	99,045,858	116,874,112	126,224,041	0.010442	104.42	1,220,455	1,318,092
RA	Advisory Research MLP(FAMCO)	AY1P	963,194	232,373,085	274,200,240	296,136,260	0.004145	41.45	1,136,569	1,227,495
LC	Frontier	AY5G	1,356,848	107,954,566	127,386,388	137,577,299	0.012569	125.69	1,601,080	1,729,167
TMB	Guggenheim Partners	AY1E (new manager, bp reflects full year)	113,559	110,083,833	129,898,923	140,290,837	0.002200	22.00	285,778	308,640
SC	Jennison	AY4G	1,175,150	144,085,916	170,021,381	183,623,091	0.008156	81.56	1,386,677	1,497,611
LC	Lazard Freres Asset Management	AY47	854,517	379,824,704	448,193,151	484,048,603	0.002250	22.50	1,008,330	1,088,996
Intl	Lazard Freres Asset Management	AY58	597,695	439,651,218	518,788,437	560,291,512	0.001359	13.59	705,281	761,703
RA	Lazard Infrastructure Private Pool	AYRF(new manager, bp relects full year)	158,874	81,268,879	95,897,277	103,569,059	0.006500	65.00	623,332	673,199
SC	Lord Abbett & Co.	AY4Z	1,080,415	105,622,845	124,634,957	134,605,754	0.010229	102.29	1,274,889	1,376,880
SC	Lord Abbett & Co.	AY5F	922,459	135,891,417	160,351,872	173,180,022	0.006788	67.88	1,088,501	1,175,581
SC	Luther King	AY4F	819,659	137,008,430	161,669,947	174,603,543	0.005983	59.83	967,198	1,044,573
DomFI	MacKay Shields LLC	AY9P	2,433,113	565,237,319	666,980,036	720,338,439	0.004305	43.05	2,871,073	3,100,759
LC	McKinley Capital Management, Inc.	AY48	1,091,431	350,119,125	413,140,568	446,191,813	0.003117	31.17	1,287,889	1,390,920
Intl	McKinley Capital Management, Inc.	AY69	1,787,058	395,042,373	466,150,000	503,442,000	0.004524	45.24	2,108,728	2,277,427
IntlSC	Mondrian Investment Partners Limited	AY5B	1,104,313	160,050,360	188,859,425	203,968,179	0.006900	69.00	1,303,089	1,407,337
IntlFI	Mondrian Investment Partners Limited	AY63	1,405,450	379,100,253	447,338,299	483,125,362	0.003707	37.07	1,658,431	1,791,106
PE	Pathway	AY98	2,270,000	804,846,110	949,718,410	1,025,695,883	0.002820	28.20	2,678,600	2,892,888
LC	Quantitative Management Associates	AY4V	1,011,891	333,883,841	393,982,932	425,501,567	0.003031	30.31	1,194,031	1,289,554
IntlSC	Schroeder	AY5D	1,198,677	166,097,020	195,994,484	211,674,042	0.007217	72.17	1,414,439	1,527,594
LC	SSgA - Buy Write (AY4W)	AY4W	16,456	238,299,942	281,193,932	303,689,446	0.000069	0.69	19,418	20,972
LC	SSgA - Futures Large Cap (AY6B)	AY6B	12,297	13,360,804	15,765,749	17,027,009	0.000920	9.20	14,510	15,671
SC	SSgA - Futures Small Cap (AY6A)	AY6A	10,474	11,278,917	13,309,122	14,373,852	0.000929	9.29	12,359	13,348
LC	SSgA 1000 Value Index Fund (AY4M)	AY4M	139,207	1,167,641,781	1,377,817,302	1,488,042,686	0.000119	1.19	164,264	177,405
LC	SSgA 200 Index Fund (AY4R)	AY4R	61,079	537,915,439	634,740,218	685,519,435	0.000114	1.14	72,073	77,839
SC	SSgA 2000 Index Fund (AY4N)	AY4N	8,327	17,703,614	20,890,265	22,561,486	0.000470	4.70	9,825	10,611
Intl	SSgA MSCI All Country World (AY68)	AY68	375,862	673,996,571	795,315,954	858,941,230	0.000558	5.58	443,517	478,998
LC	SSgA Russell 1000 Growth Index Fund (AY4L)	AY4L	138,440	1,235,884,746	1,458,344,000	1,575,011,520	0.000112	1.12	163,359	176,428
SC	SSgA Russell 2000 Value Index Fund (AY4P)	AY4P	30,141	64,862,403	76,537,636	82,660,646	0.000465	4.65	35,566	38,412
RA	Tortoise	AY1Q	1,299,827	255,880,585	301,939,090	326,094,218	0.005080	50.80	1,533,796	1,656,500
SC	Victory Capital Management	AY5H	809,612	110,666,906	130,586,949	141,033,905	0.007316	73.16	955,342	1,031,769
TMB	Western Asset Management	AY1D	192,576	112,255,181	132,461,114	143,058,003	0.001716	17.16	227,239	245,418
	Total Management Fees		37,815,145	14,256,914,091	16,823,158,627	18,169,011,318			44,846,151	48,433,844
					2,000,000,000	3,000,000,000			5,331,478	7,997,217
	Total Potential Management Fees								50,177,630	56,431,061
					0.002665739					
CB	Convertible Bond		976,372							
DomFI	Domestic Fixed Income		2,433,113							
IntlSC	International Equities Small Cap		2,302,990							
Intl	International Equities		9,813,780							
IntlFI	International Fixed Income		1,405,450							
LC	Domestic Equity Large Cap		7,056,688							
PE	Private Equity		4,198,010							
TMB	Municipal Bond		306,135							
SC	Domestic Equity Small Cap		6,732,538							
RA	Real Assets		2,590,068							
	Total Management Fees		37,815,145							
	Total Management Fees		**37,815,145**							
	Total Custody Fees ARMB C&M		**1,289,343**						**1,290,000**	**1,290,000**
		Actual	39,104,488					Projected		
									51,467,630	57,721,061
		Authorized	43,906,700				Authorized		43,906,700	n/a
		Lapse	4,802,212							
	P:\FY2015\ARMB Meeting\FY14 Actuals Mgmt Custody Fees.xls								(7,560,930)	

CHIEF INVESTMENT OFFICER REPORT

- Rebalanced Defined Benefit Funds seven times: June 18, June 19, June, June 20, June 27, August 1, August 14, and September 3.
- Several transfers into and out of Cash Account and Absolute Return Managers.
- Rebalanced Buy-Write Account Balances by $8,000,000 between State Street Global Advisors and Analytic Investors.
- Disbursement of the first $1 Billion of the $3 billion. $300 million remained in Cash.
- Transferred $100 million from BlackRock ACWI Ex-US to Eaton Vance Emerging Market ($50 million) and Lazard Emerging Market ($50 million).
- Relational Investors Press Release
- __________
- __________

9/3/2014	DC Medical		DC Health Reimburesement		DC OD&D		
Rebalancing Trades (Final)	PERS	TRS	PERS	TRS	PERS	TRS	P&F
	AYX2	AYX3	AYY2	AYY3	AY6G	AY6H	AY6I
Broad Domestic Equity							
Large Cap Pool (AYQK)	133,646	13,297	319,113	64,241	21,531	3,048	12,345
Small Cap Pool (AYQC)	27,417	2,727	65,465	13,179	4,417	625	2,532
Alternative Equity Strategies							
Advent Capital Convertible Bond (AY52)	5,222	518	12,456	2,505	841	119	482
Alternative Equity Strategies Pool (AYYK)	16,451	1,632	39,237	7,891	2,647	374	1,518
Global Equity Ex-US							
International Equity Pool (AYRC)	115,947	11,511	276,600	55,632	18,662	2,637	10,703
International Equity - Small Cap Pool (AYRK)	8,497	843	20,268	4,077	1,367	193	784
Emerging Markets Pool (AYSC)	19,703	1,956	47,003	9,454	3,171	449	1,819
Frontier Market Pool (AYMC)	2,753	274	6,567	1,321	444	62	255
Private Equity							
Private Equity Pool (AYSK)	47,561	4,719	113,436	22,811	7,653	1,081	4,389
Real Assets							
Real Estate Pool (AYVK)	36,517	4,043	91,356	19,209	6,178	945	3,494
JP Morgan Real Estate (AY7A)							
REIT Holdings (AYPC)	10,014	994	23,884	4,803	1,611	228	924
Farmland Pool (AYTK)	18,921	1,877	45,127	9,075	3,045	430	1,746
Timber Pool (AYUK)	9,514	944	22,693	4,563	1,531	217	878
Energy Pool (AYVC)	2,773	275	6,613	1,330	446	63	256
TIPS Internally Managed (AY6N)	932	93	2,223	447	150	21	86
MLP Pool (AYWK)	13,206	1,310	31,498	6,334	2,125	301	1,219
Private Infrastructure (AYZK)	2,666	265	6,357	1,278	429	60	246
Public Infrastructure (AYMK)	4,435	440	10,578	2,127	714	101	410
Absolute Return							
Absolute Return Pool (AYTC)	25,510	2,531	60,843	12,235	4,105	580	2,354
Fixed Income							
Taxable Municipal Bond Pool (AYZC)	6,014	597	14,349	2,886	969	136	555
US Treasury Fixed Income Pool (AY1A)	35,513	3,513	84,596	16,990	5,707	805	3,274
Mondrian Inv. Partners Inc (AY63)	9,890	976	23,540	4,724	1,588	224	911
High Yield Pool (AYPK)	15,045	1,493	35,885	7,217	2,421	343	1,389
Lazard Emerging Income (AY5M)	4,045	402	9,650	1,941	651	92	374
Short-term Fixed Income							
State of AK Short Term Pool (AY70)	(572,192)	(57,230)	(1,369,337)	(276,270)	(92,403)	(13,134)	(52,943)

9/3/2014	Pension				Health Care		
Rebalancing Trades (Final)	PERS	TRS	JRS	Mil	PERS	TRS	JRS
	AY21	AY22	AY23	AY24	AYW2	AYW3	AYW4
Broad Domestic Equity							
Large Cap Pool (AYQK)	(2,516,359)	(3,615,757)	(3,182)	(89,081)	4,425,651	1,204,493	27,014
Small Cap Pool (AYQC)	(516,227)	(741,764)	(652)	(18,275)	907,914	247,100	5,542
Alternative Equity Strategies							
Advent Capital Convertible Bond (AY52)	(99,688)	(142,097)	(148)		172,001	46,736	1,053
Alternative Equity Strategies Pool (AYYK)	(314,033)	(447,622)	(464)		541,828	147,226	3,315
Global Equity Ex-US							
International Equity Pool (AYRC)	(2,207,668)	(3,151,475)	(3,179)	(14,328)	3,822,587	1,038,993	23,378
International Equity - Small Cap Pool (AYRK)	(161,769)	(230,927)	(233)	(1,050)	280,104	76,133	1,713
Emerging Markets Pool (AYSC)	(375,148)	(535,533)	(540)	(2,435)	649,572	176,556	3,973
Frontier Market Pool (AYMC)	(52,420)	(74,832)	(75)	(340)	90,766	24,670	555
Private Equity							
Private Equity Pool (AYSK)	(907,862)	(1,294,072)	(1,342)		1,566,414	425,628	9,584
Real Assets							
Real Estate Pool (AYVK)	(1,072,372)	(1,002,557)	(11,323)		1,488,529	427,642	8,339
JP Morgan Real Estate (AY7A)	105,788	(110,783)	4,995				
REIT Holdings (AYPC)	(191,140)	(272,465)	(287)		329,802	89,614	2,018
Farmland Pool (AYTK)	(361,160)	(514,810)	(531)		623,146	169,322	3,812
Timber Pool (AYUK)	(181,617)	(258,893)	(266)		313,370	85,149	1,917
Energy Pool (AYVC)	(52,925)	(75,449)	(76)		91,321	24,814	559
TIPS Internally Managed (AY6N)	(17,794)	(25,362)	(27)		30,701	8,342	188
MLP Pool (AYWK)	(252,081)	(359,320)	(373)		434,938	118,182	2,661
Private Infrastructure (AYZK)	(50,878)	(72,522)	(75)		87,784	23,853	537
Public Infrastructure (AYMK)	(84,662)	(120,677)	(126)		146,074	39,692	894
Absolute Return							
Absolute Return Pool (AYTC)	(486,949)	(694,100)	(720)		840,176	228,294	5,141
Fixed Income							
Taxable Municipal Bond Pool (AYZC)	(114,362)	(163,375)	(162)	(1,121)	198,374	53,927	1,213
US Treasury Fixed Income Pool (AY1A)	(688,011)	(972,262)	(1,173)	25,973	1,162,606	315,337	7,132
Mondrian Inv. Partners Inc (AY63)	(193,436)	(271,846)	(358)	11,940	322,497	87,368	1,982
High Yield Pool (AYPK)	(286,845)	(409,145)	(419)	(835)	495,706	134,712	3,033
Lazard Emerging Income (AY5M)	(76,920)	(109,886)	(109)	(754)	133,427	36,271	816
Short-term Fixed Income							
State of AK Short Term Pool (AY70)	11,156,538	15,667,531	20,845	90,306	(19,155,288)	(5,230,054)	(116,369)

ARMB Absolute Return Cashflows 6/20/14-9/3/14

Crestline

Date	Class A Contributions	Class A Redemptions	Class B Contributions	Class B Redemptions	Net Inflows/ (Outflows)
June 20, 2014		2,250,000			
June 27, 2014		2,200,000			
July 15, 2014		10,500,000			
July 30, 2014		2,750,000			
August 27, 2014			(998,944)		
September 3, 2014			(1,598,258)		
Crestline Total	-	**17,700,000**	**(2,597,202)**	-	**15,102,798**

Prisma

Date	Class A Contributions	Class A Redemptions	Class B Contributions	Class B Redemptions	Net Inflows/ (Outflows)
July 30, 2014	(75,000,000)				
August 28, 2014			(7,600,000)		
Prisma Total	**(75,000,000)**	-	**(7,600,000)**	-	**(82,600,000)**

GAM

Date	Class A Contributions	Class A Redemptions	Class B Contributions	Class B Redemptions	Net Inflows/ (Outflows)
July 30, 2014	(37,500,000)				
GAM Total	**(37,500,000)**	-	-	-	**(37,500,000)**

Grand Total	**(112,500,000)**	**17,700,000**	**(10,197,202)**	-	**(104,997,202)**

THE STATE
of ALASKA

GOVERNOR SEAN PARNELL

Department of Revenue

ALASKA RETIREMENT MANAGEMENT BOARD

333 Willoughby Avenue, 11th Floor
PO Box 110405
Juneau, Alaska 99811-0405
Main: 907.465.3749
Fax: 907.465.2389

July 3, 2014

Ms. Amanda Polidoro
Morgan Stanley Prime Brokerage
555 California Street, Suite 2200
San Francisco, CA 94104

Dear Ms. Polidoro,

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Thursday, July 10, 2014. Please process the following cash transfer as early as possible on that day:

State Street Global Advisors (038CDCJN0)	< $8,000,000 >
Analytic Investors (038CDCNT2)	$8,000,000

If you have any questions, please do not hesitate to contact me at (907) 465-4399.

Sincerely,

FOR Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Commissioner
Pam Leary, Director
Scott Jones, State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Sean Howard, State Investment Officer

GMB/sjc

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Revenue
ALASKA RETIREMENT MANAGEMENT BOARD
333 Willoughby Avenue, 11th Floor
PO Box 110405
Juneau, Alaska 99811-0405
Main: 907.465.3749
Fax: 907.465.2389

July 11, 2014

Mary Ellen MacDonald
State Street Global Services
IIS Public Funds
1200 Crown Colony Drive, CC5
Quincy, MA 02169

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests to have the following transfers made on July 15, 2014:

	AY21
AY4M	$ 16,700,000
AY4L	$ 50,000,000
AYLP	$ 66,700,000
AYLR	$ 66,700,000
AY1A	$ 33,400,000
AY70	$ (233,500,000)

	AY22
AY4M	$ 27,700,000
AY4L	$ 83,100,000
AYLP	$ 110,800,000
AYLR	$ 110,800,000
AY1A	$ 55,400,000
AY70	$ (387,800,000)

	AYW3
AY4M	$ 5,600,000
AY4L	$ 16,900,000
AYLP	$ 22,500,000
AYLR	$ 22,500,000
AY1A	$ 11,200,000
AY70	$ (78,700,000)

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Revenue

ALASKA RETIREMENT MANAGEMENT BOARD

333 Willoughby Avenue, 11th Floor
PO Box 110405
Juneau, Alaska 99811-0405
Main: 907.465.3749
Fax: 907.465.2389

August 5, 2014

Mary Ellen MacDonald
State Street Global Services
IIS Public Funds
1200 Crown Colony Drive, CC5
Quincy, MA 02169

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Wednesday, August 20, 2014. Please process the following cash transfer using the currently applicable sending pool ratios:

BlackRock ACWI Ex-US IMI (AY6U)	< $100,000,000 >
Eaton Vance Emerging Markets (AY6Q)	$50,000,000
Lazard Emerging Markets (AY6P)	$50,000,000

Furthermore, please also take this letter as your authorization to wire the amounts listed above from accounts AY6Q and AY6P to the corresponding accounts per the wire instructions below.

The wire instructions for Eaton Vance Emerging Markets (AY6Q) are as follows:

Bank of NY Mellon
135 Santilli Highway
Everett, MA 02149
ABA# 011001234
Account# 0000734942
Account Name: BNY Mellon Investment Servicing (US) Inc. as Agent for Eaton Vance Funds.
Further Credit: Alaska Retirement Management Board
Account Number: 5038110960
Fund Number: 0083

The wire instructions for Lazard Emerging Markets (AY6P) are as follows:

ABA# 011000028
State Street Bank and Trust Company
Boston, Massachusetts
Custody and Shareholder Services Division
DDA 9905-2375
Attention: Lazard Emerging Markets Portfolio – Inst Shares (Fund 638)
The Lazard Funds Inc.
Ref: Alaska Retirement Mgmt Board (AY6P) – Account 1001660075

RELATIONAL INVESTORS

Client Communication
July 28, 2014

RELATIONAL INVESTORS TO FOCUS EXCLUSIVELY ON CURRENT INVESTMENTS DURING RALPH WHITWORTH'S LEAVE OF ABSENCE

San Diego, CA – July 28, 2014 – Relational Investors LLC today informed its clients that it will focus exclusively on its current investments and will not initiate new investment projects during Ralph Whitworth's previously announced leave of absence.

Co-Founder and Principal David Batchelder stated, "Although we have decided not to invest in new situations at this time, we will continue to actively manage our portfolio and vigorously pursue the value-enhancing agendas associated with our existing investments."

About Relational Investors LLC
Relational Investors LLC, founded in 1996 by David H. Batchelder and Ralph V. Whitworth, is a privately held, multi-billion dollar asset management firm and registered investment adviser. Relational invests in publicly traded companies that it believes are undervalued in the marketplace.

CONTACT:
Sard Verbinnen & Co.
Anna Cordasco
212-687-8080

ALASKA RETIREMENT MANAGEMENT BOARD
FINANCIAL REPORT

As of July 31, 2014

ALASKA RETIREMENT MANAGEMENT BOARD
Schedule of Investment Income and Changes in Invested Assets by Fund
For the One Month Ending July 31, 2014

	Beginning Invested Assets	Investment Income[1]	Net Contributions (Withdrawals)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income[2]
Public Employees' Retirement System (PERS)						
Defined Benefit Plans:						
Retirement Trust	$ 7,720,341,308	$ (88,464,008)	$ 304,046,443	$ 7,935,923,743	2.79%	-1.12%
Retirement Health Care Trust	6,948,399,164	(78,391,346)	(10,194,693)	6,859,813,125	-1.27%	-1.13%
Total Defined Benefit Plans	14,668,740,472	(166,855,354)	293,851,750	14,795,736,868	0.87%	-1.13%
Defined Contribution Plans:						
Participant Directed Retirement	491,615,700	(9,423,297)	6,461,979	488,654,382	-0.60%	-1.90%
Health Reimbursement Arrangement	155,432,460	(1,776,659)	2,558,761	156,214,562	0.50%	-1.13%
Retiree Medical Plan	28,293,975	(322,645)	641,866	28,613,196	1.13%	-1.13%
Defined Benefit Occupational Death and Disability:						
Public Employees	10,850,124	(123,666)	135,364	10,861,822	0.11%	-1.13%
Police and Firefighters	5,165,027	(59,035)	92,298	5,198,290	0.64%	-1.13%
Total Defined Contribution Plans	691,357,285	(11,705,302)	9,890,268	689,542,252	-0.26%	-1.68%
Total PERS	**15,360,097,757**	**(178,560,656)**	**303,742,018**	**15,485,279,120**	0.81%	-1.15%
Teachers' Retirement System (TRS)						
Defined Benefit Plans:						
Retirement Trust	3,770,919,368	(47,618,805)	523,912,819	4,247,213,382	12.63%	-1.18%
Retirement Health Care Trust	2,264,530,724	(26,799,779)	105,342,895	2,343,073,840	3.47%	-1.16%
Total Defined Benefit Plans	6,035,450,092	(74,418,584)	629,255,714	6,590,287,222	9.19%	-1.17%
Defined Contribution Plans:						
Participant Directed Retirement	215,005,412	(4,028,840)	757,188	211,733,760	-1.52%	-1.87%
Health Reimbursement Arrangement	49,102,919	(558,447)	372,804	48,917,276	-0.38%	-1.13%
Retiree Medical Plan	11,565,438	(131,344)	75,127	11,509,221	-0.49%	-1.13%
Defined Benefit Occupational Death and Disability	3,074,708	(34,709)	(9)	3,039,990	-1.13%	-1.13%
Total Defined Contribution Plans	278,748,477	(4,753,340)	1,205,110	275,200,247	-1.27%	-1.70%
Total TRS	**6,314,198,569**	**(79,171,924)**	**630,460,824**	**6,865,487,469**	8.73%	-1.19%
Judicial Retirement System (JRS)						
Defined Benefit Plan Retirement Trust	139,434,530	(1,527,601)	4,755,618	142,662,547	2.32%	-1.08%
Defined Benefit Retirement Health Care Trust	26,405,394	(297,959)	(7,982)	26,099,453	-1.16%	-1.13%
Total JRS	**165,839,924**	**(1,825,560)**	**4,747,636**	**168,762,000**	1.76%	-1.09%
National Guard/Naval Militia Retirement System (MRS)						
Defined Benefit Plan Retirement Trust	37,555,947	(442,026)	508,597	37,622,518	0.18%	-1.17%
Other Participant Directed Plans						
Supplemental Annuity Plan	3,312,097,202	(36,071,140)	(1,313,339)	3,274,712,723	-1.13%	-1.09%
Deferred Compensation Plan	785,486,812	(11,707,367)	286,611	774,066,056	-1.45%	-1.49%
Total All Funds	**25,975,276,211**	**(307,778,673)**	**938,432,347**	**26,605,929,886**		
Total Non-Participant Directed	21,171,071,086	(246,548,029)	932,239,908	21,856,762,965	3.24%	-1.14%
Total Participant Directed	4,804,205,125	(61,230,644)	6,192,439	4,749,166,921	-1.15%	-1.27%
Total All Funds	**$ 25,975,276,211**	**$ (307,778,673)**	**$ 938,432,347**	**$ 26,605,929,886**	**2.43%**	**-1.16%**

Notes:

(1) Includes interest, dividends, securities lending, expenses, realized and unrealized gains/losses

(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates and can be found at: http://www.revenue.state.ak.us/treasury/programs/programs/other/armb/investmentresults.aspx

ALASKA RETIREMENT MANAGEMENT BOARD
Schedule of Investment Income and Changes in Invested Assets by Fund
For the Month Ended June 30, 2014

	Beginning Invested Assets	Investment Income[1]	Net Contributions (Withdrawals)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income[2]
Public Employees' Retirement System (PERS)						
Defined Benefit Plans:						
Retirement Trust	$ 7,720,341,308	$ (88,464,008)	$ 304,046,443	$ 7,935,923,743	2.79%	-1.12%
Retirement Health Care Trust	6,948,399,164	(78,391,346)	(10,194,693)	6,859,813,125	-1.27%	-1.13%
Total Defined Benefit Plans	14,668,740,472	(166,855,354)	293,851,750	14,795,736,868	0.87%	-1.13%
Defined Contribution Plans:						
Participant Directed Retirement	491,615,700	(9,423,297)	6,461,979	488,654,382	-0.60%	-1.90%
Health Reimbursement Arrangement	155,432,460	(1,776,659)	2,558,761	156,214,562	0.50%	-1.13%
Retiree Medical Plan	28,293,975	(322,645)	641,866	28,613,196	1.13%	-1.13%
Defined Benefit Occupational Death and Disability:						
Public Employees	10,850,124	(123,666)	135,364	10,861,822	0.11%	-1.13%
Police and Firefighters	5,165,027	(59,035)	92,298	5,198,290	0.64%	-1.13%
Total Defined Contribution Plans	691,357,285	(11,705,302)	9,890,268	689,542,252	-0.26%	-1.68%
Total PERS	**15,360,097,757**	**(178,560,656)**	**303,742,018**	**15,485,279,120**	0.81%	-1.15%
Teachers' Retirement System (TRS)						
Defined Benefit Plans:						
Retirement Trust	3,770,919,368	(47,618,805)	523,912,819	4,247,213,382	12.63%	-1.18%
Retirement Health Care Trust	2,264,530,724	(26,799,779)	105,342,895	2,343,073,840	3.47%	-1.16%
Total Defined Benefit Plans	6,035,450,092	(74,418,584)	629,255,714	6,590,287,222	9.19%	-1.17%
Defined Contribution Plans:						
Participant Directed Retirement	215,005,412	(4,028,840)	757,188	211,733,760	-1.52%	-1.87%
Health Reimbursement Arrangement	49,102,919	(558,447)	372,804	48,917,276	-0.38%	-1.13%
Retiree Medical Plan	11,565,438	(131,344)	75,127	11,509,221	-0.49%	-1.13%
Defined Benefit Occupational Death and Disability	3,074,708	(34,709)	(9)	3,039,990	-1.13%	-1.13%
Total Defined Contribution Plans	278,748,477	(4,753,340)	1,205,110	275,200,247	-1.27%	-1.70%
Total TRS	**6,314,198,569**	**(79,171,924)**	**630,460,824**	**6,865,487,469**	8.73%	-1.19%
Judicial Retirement System (JRS)						
Defined Benefit Plan Retirement Trust	139,434,530	(1,527,601)	4,755,618	142,662,547	2.32%	-1.08%
Defined Benefit Retirement Health Care Trust	26,405,394	(297,959)	(7,982)	26,099,453	-1.16%	-1.13%
Total JRS	**165,839,924**	**(1,825,560)**	**4,747,636**	**168,762,000**	1.76%	-1.09%
National Guard/Naval Militia Retirement System (MRS)						
Defined Benefit Plan Retirement Trust	37,555,947	(442,026)	508,597	37,622,518	0.18%	-1.17%
Other Participant Directed Plans						
Supplemental Annuity Plan	3,312,097,202	(36,071,140)	(1,313,339)	3,274,712,723	-1.13%	-1.09%
Deferred Compensation Plan	785,486,812	(11,707,367)	286,611	774,066,056	-1.45%	-1.49%
Total All Funds	**25,975,276,211**	**(307,778,673)**	**938,432,347**	**26,605,929,886**		
Total Non-Participant Directed	21,171,071,086	(246,548,029)	932,239,908	21,856,762,965	3.24%	-1.14%
Total Participant Directed	4,804,205,125	(61,230,644)	6,192,439	4,749,166,921	-1.15%	-1.27%
Total All Funds	**$ 25,975,276,211**	**$ (307,778,673)**	**$ 938,432,347**	**$ 26,605,929,886**	**2.43%**	**-1.16%**

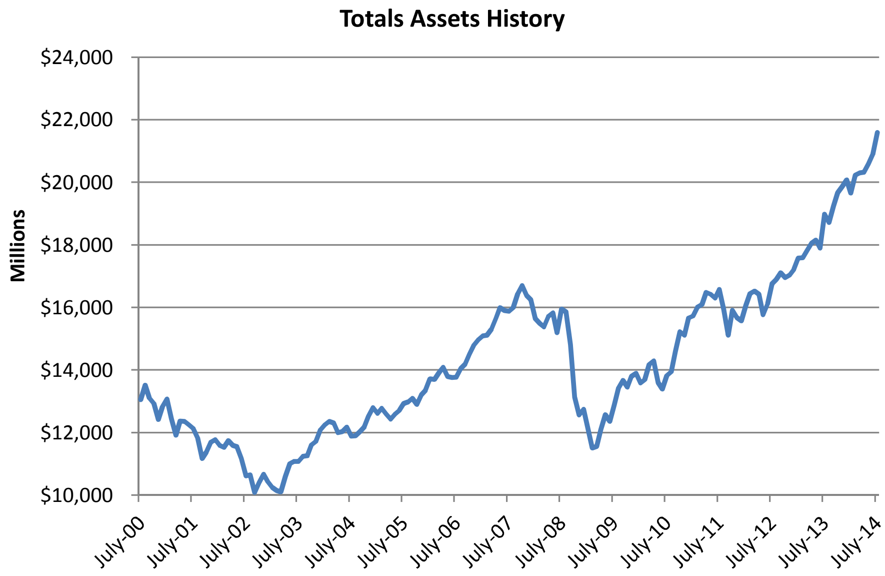
Notes:

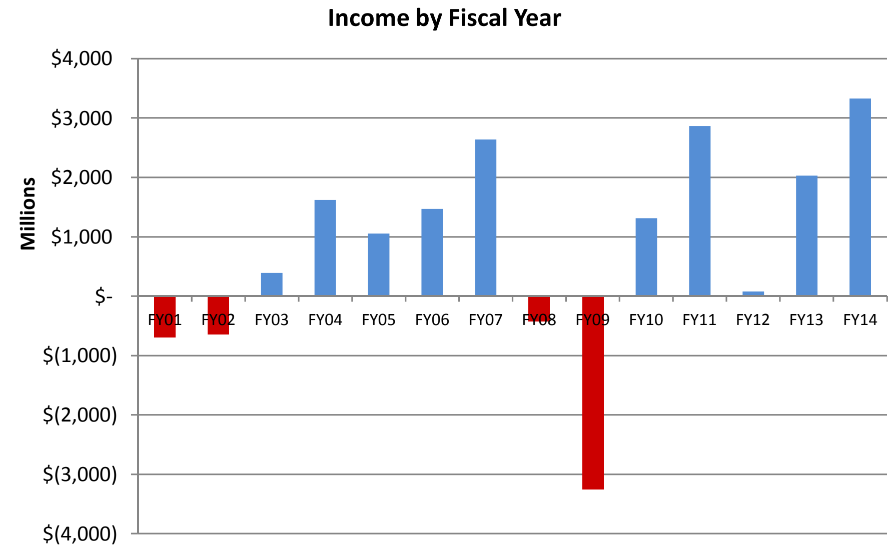
(1) Includes interest, dividends, securities lending, expenses, realized and unrealized gains/losses

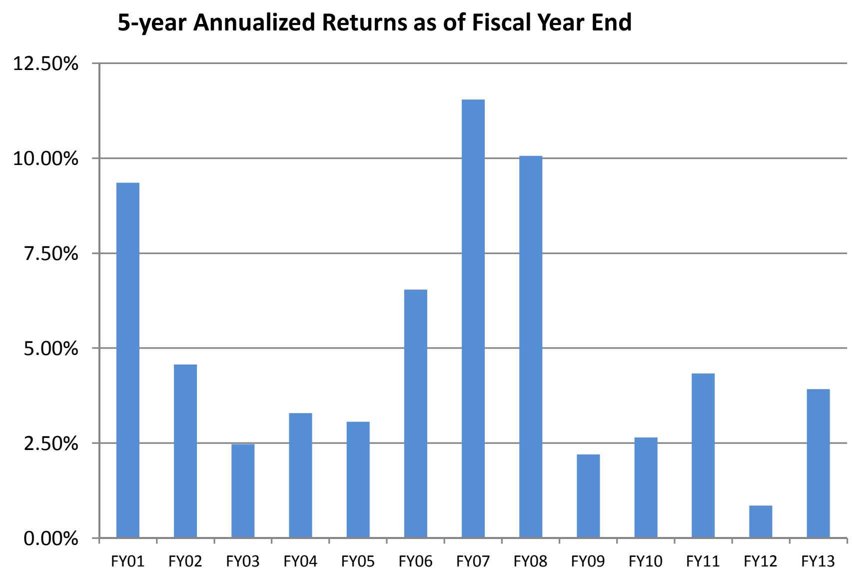
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates and can be found at: http://www.revenue.state.ak.us/treasury/programs/programs/other/armb/investmentresults.aspx

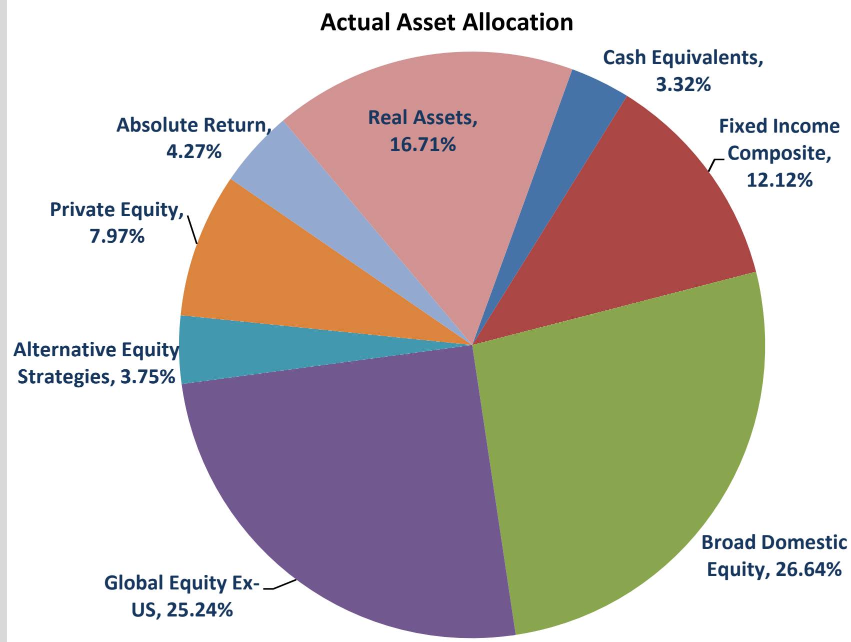
Total Defined Benefit Assets

As of July 31, 2014



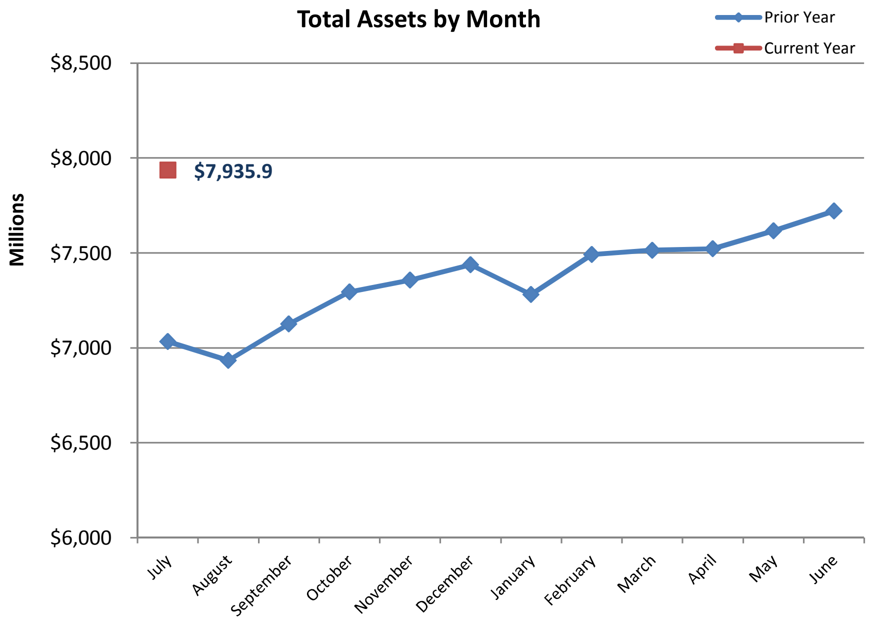


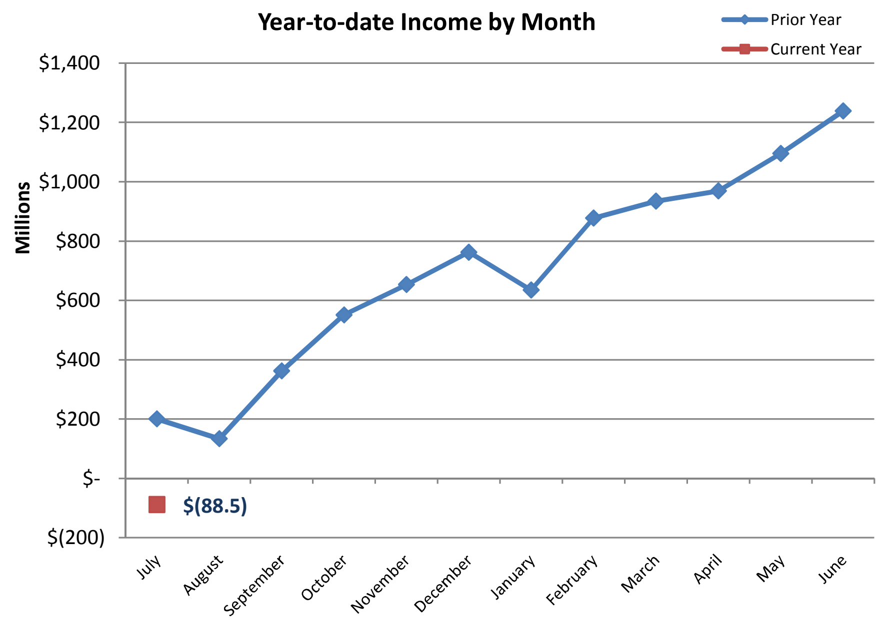


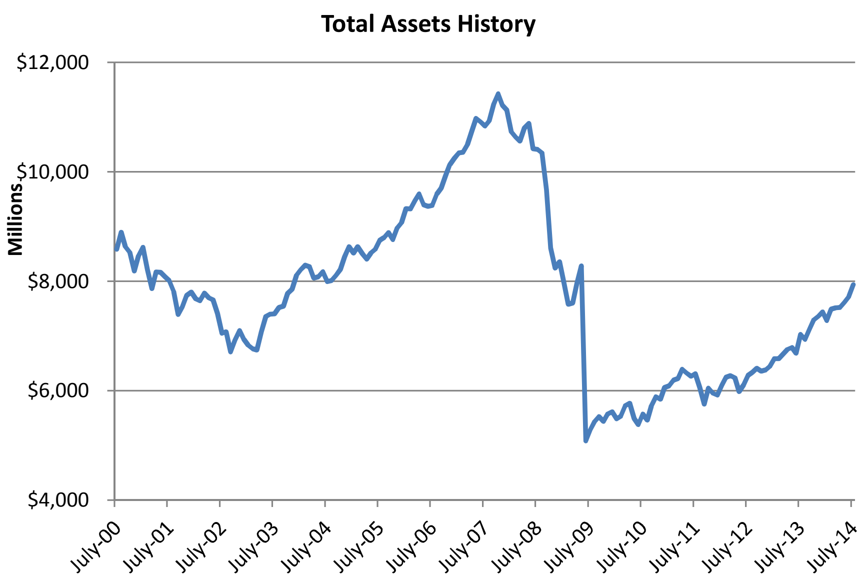


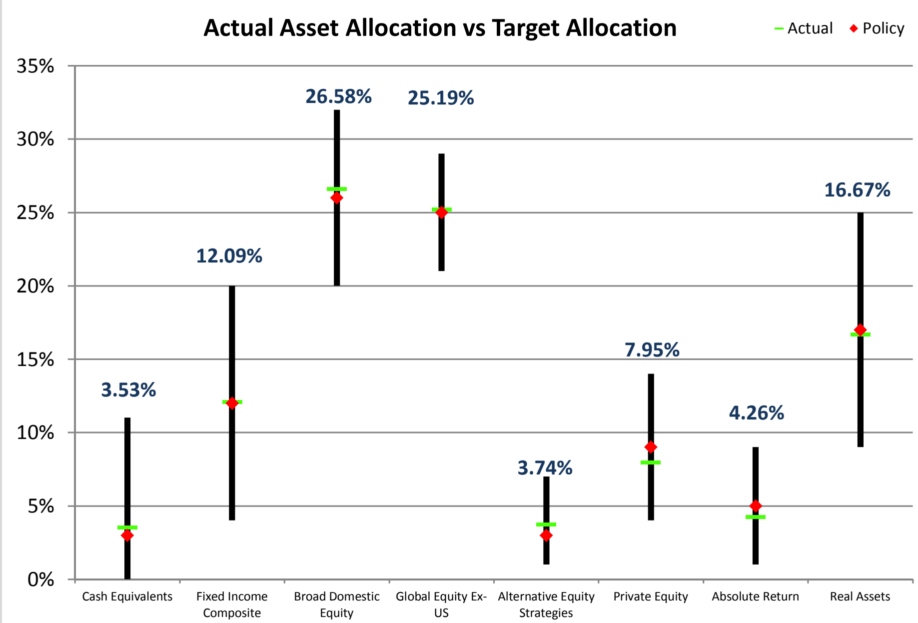
Public Employees' Retirement Pension Trust Fund

For the One Month Ending July 31, 2014



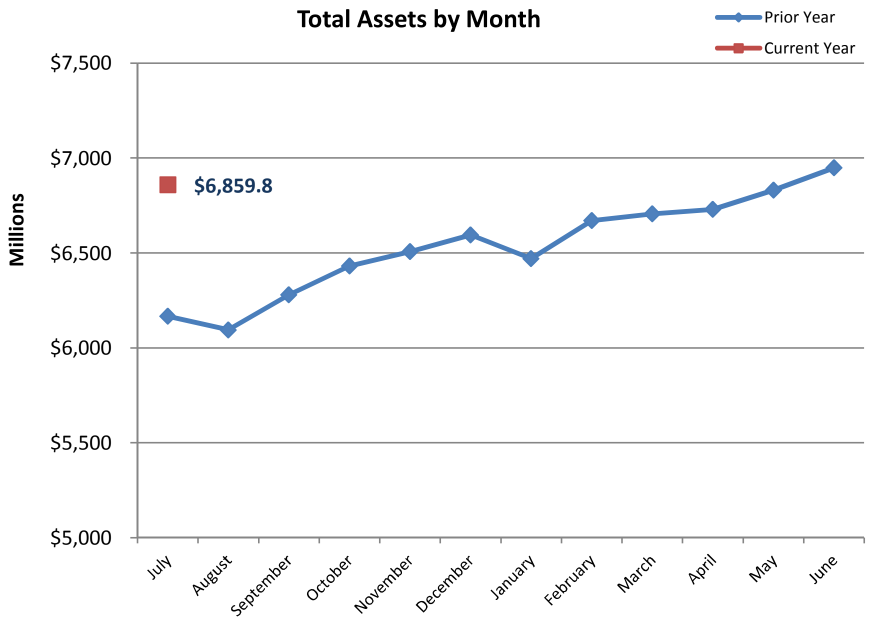


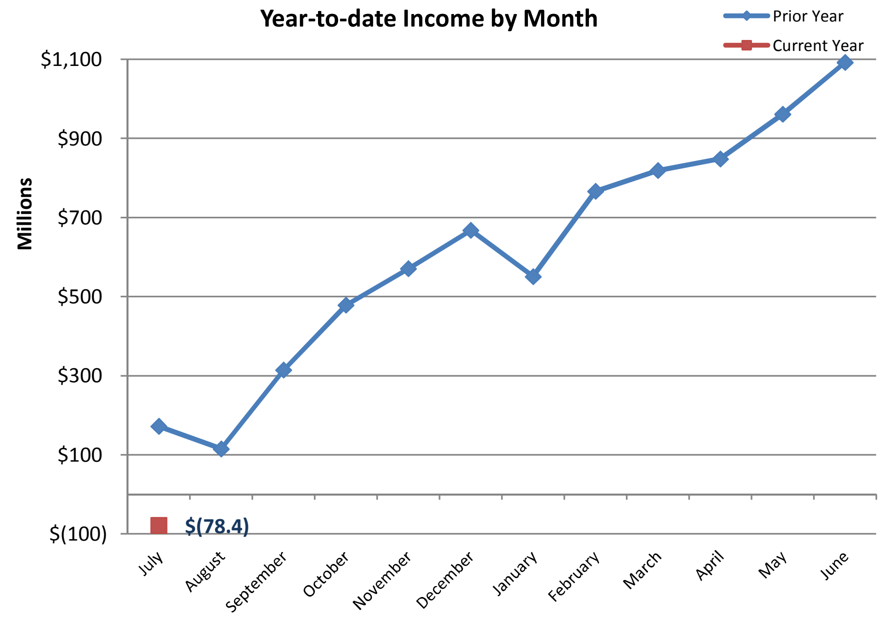


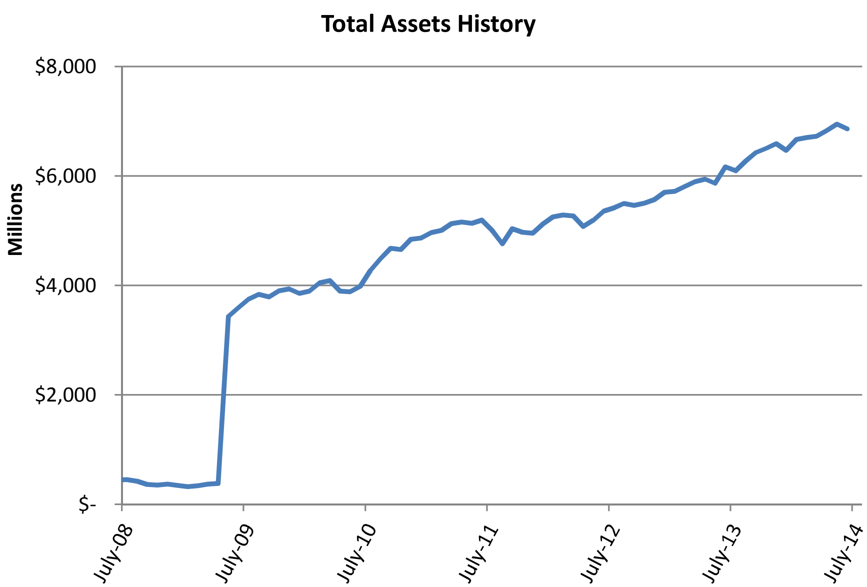


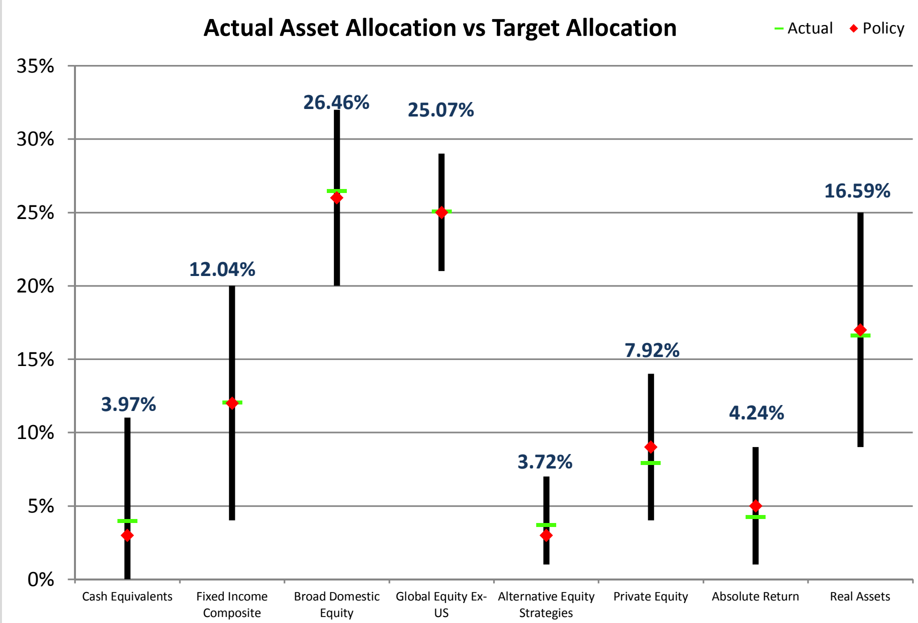
Public Employees' Retirement Health Care Trust Fund

For the One Month Ending July 31, 2014



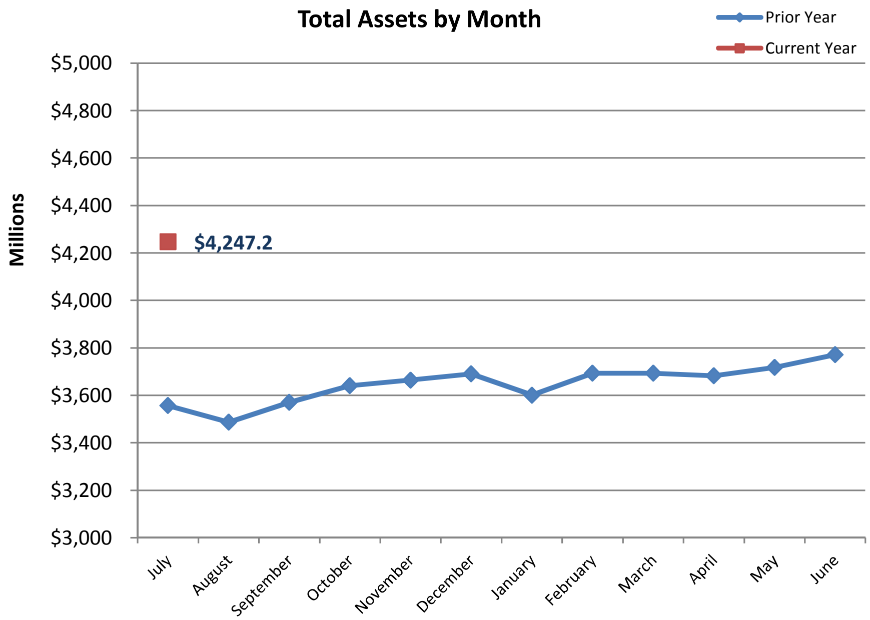


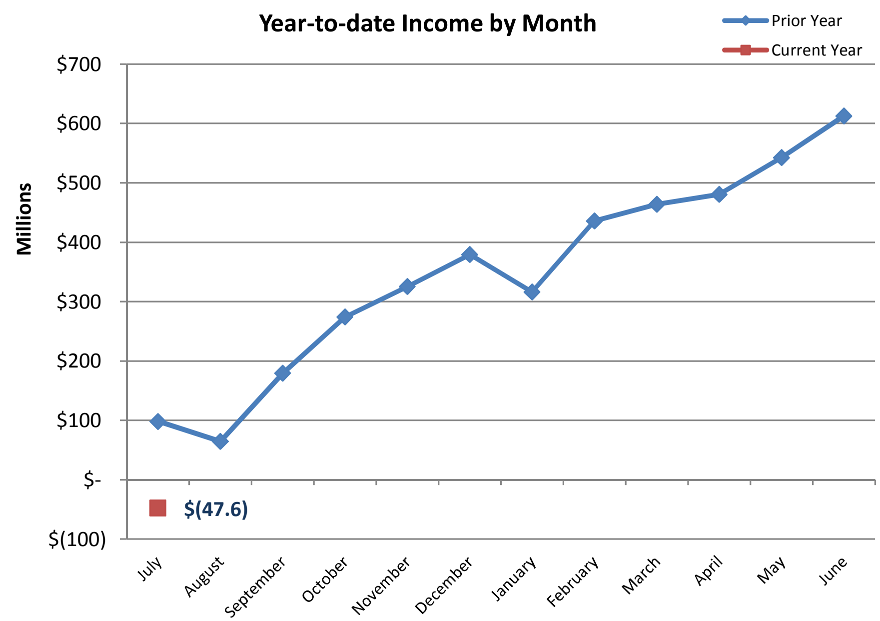


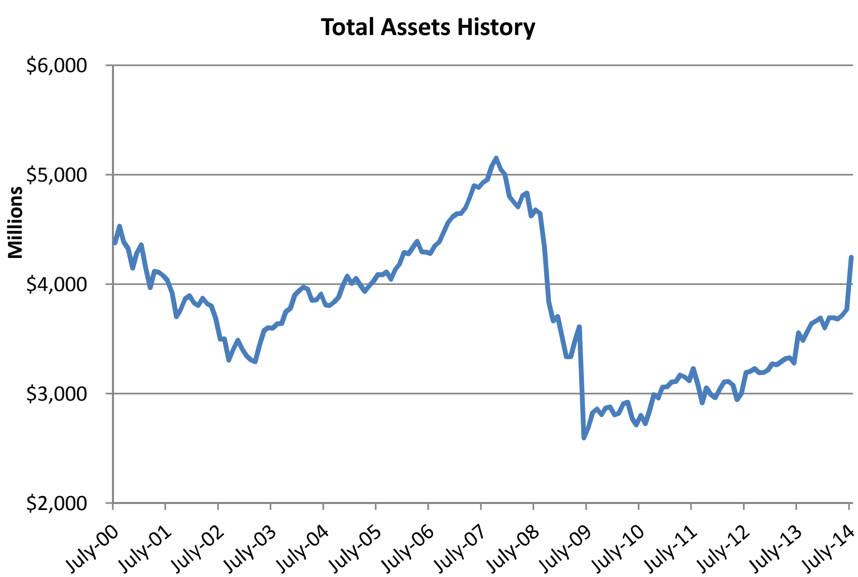


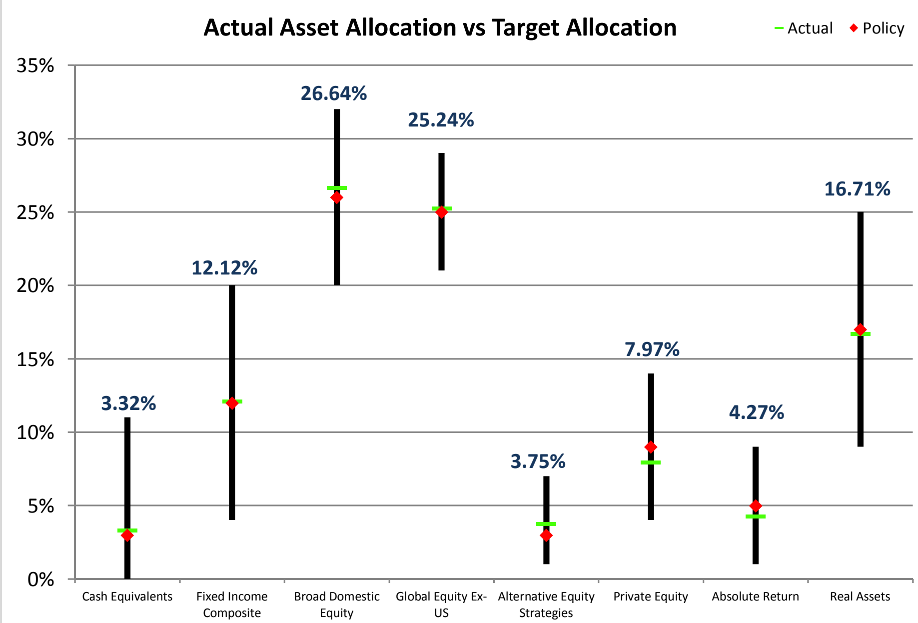
Teachers' Retirement Pension Trust Fund

For the One Month Ending July 31, 2014



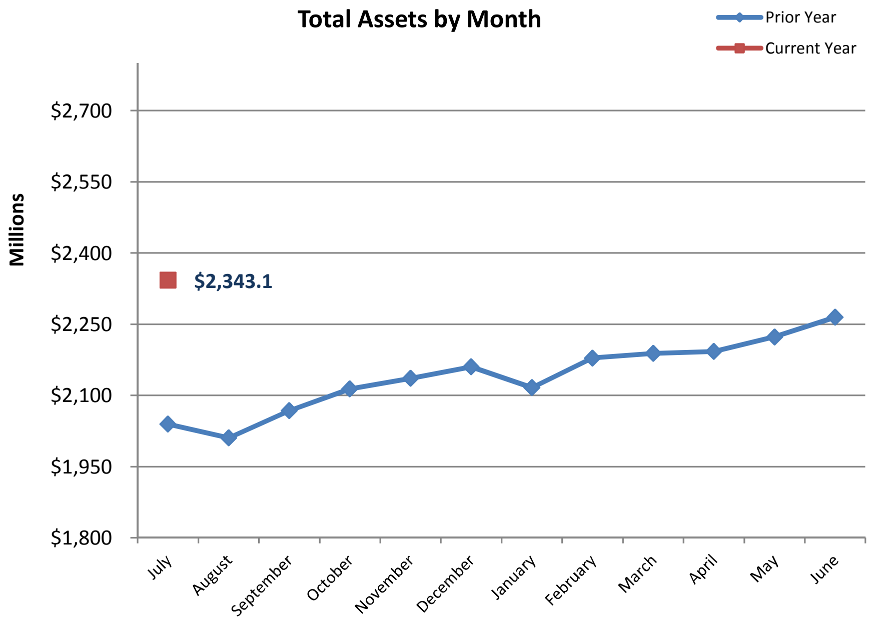


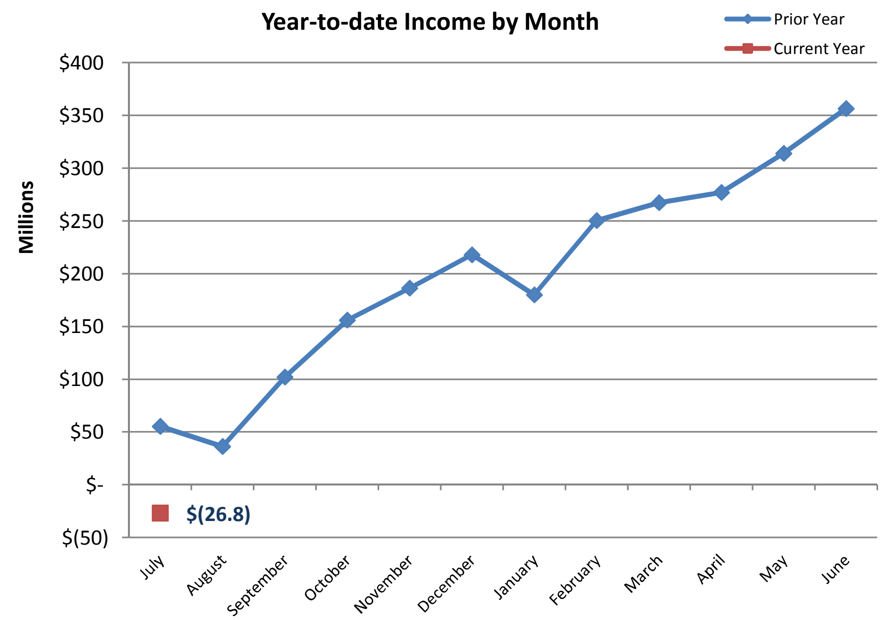


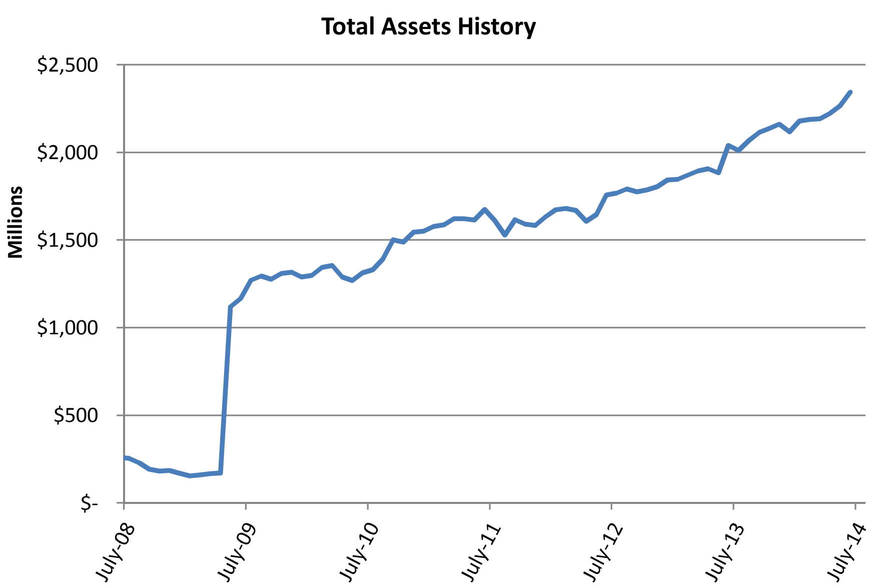


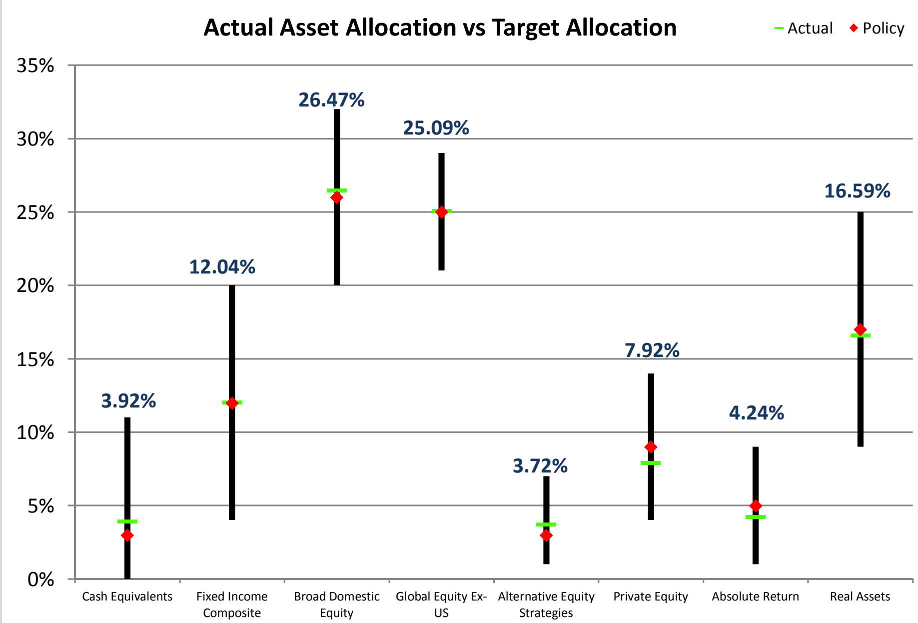
Teachers' Retirement Health Care Trust Fund

For the One Month Ending July 31, 2014



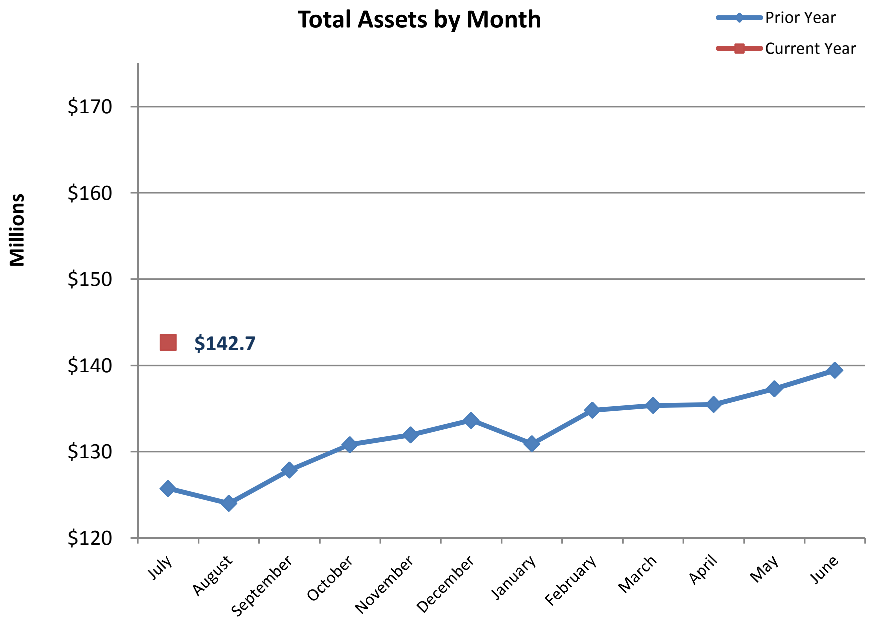


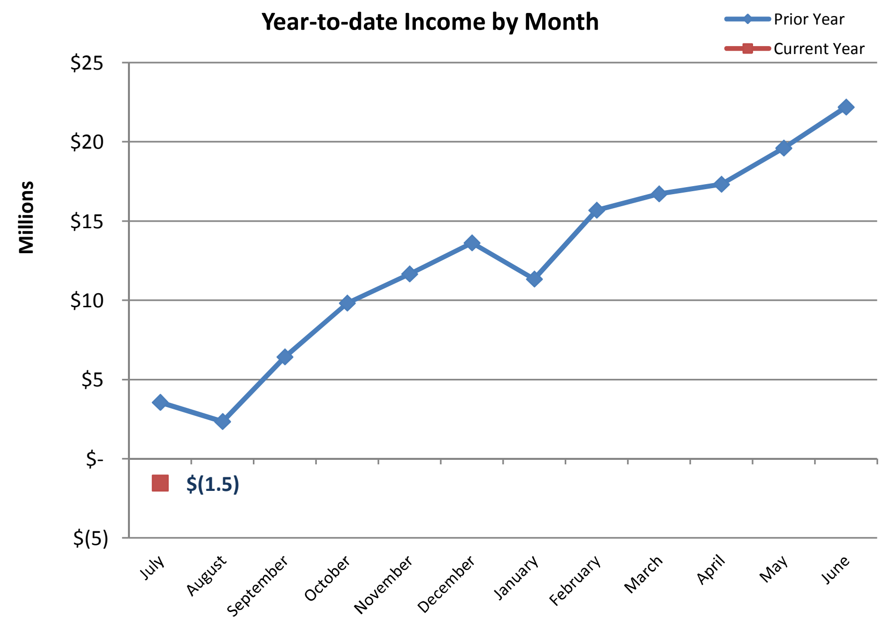


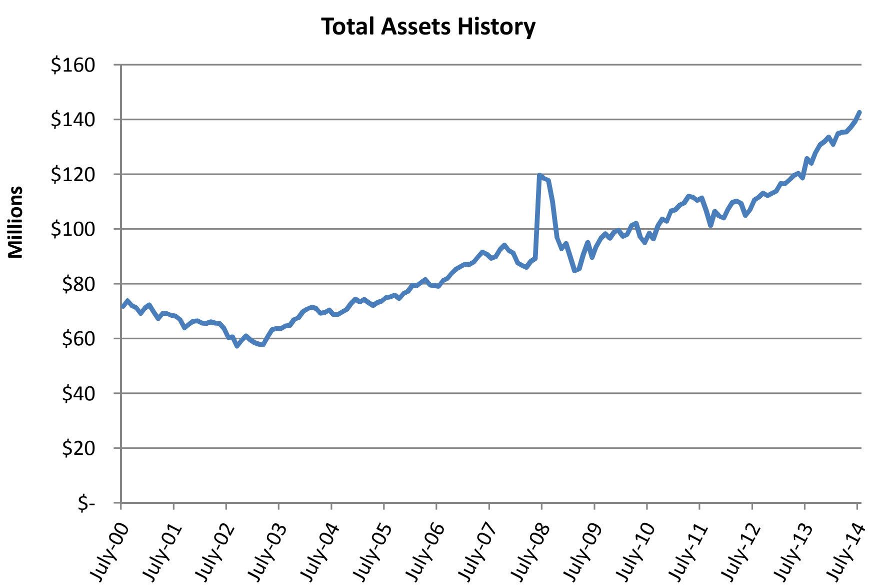


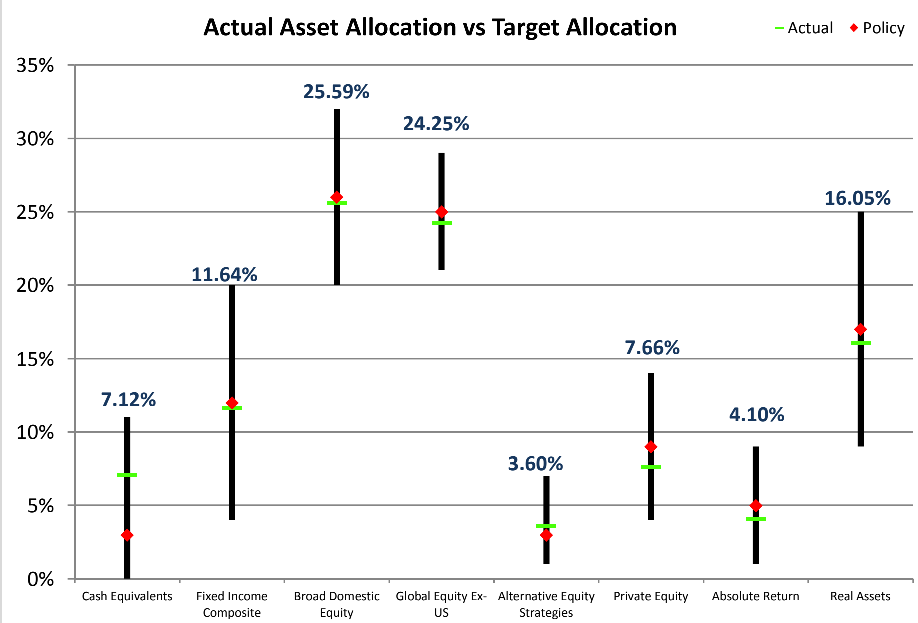
Judicial Retirement Pension Trust Fund

For the One Month Ending July 31, 2014



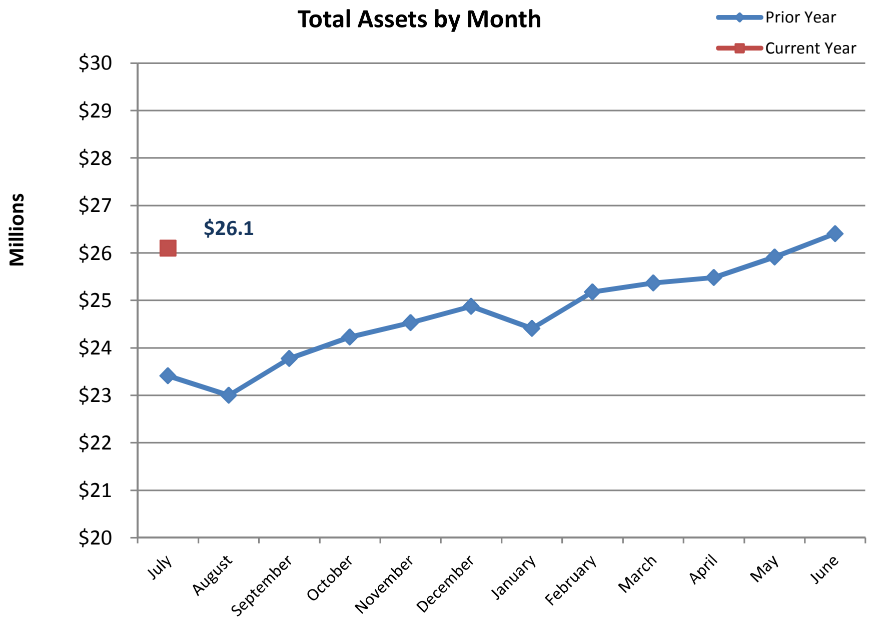


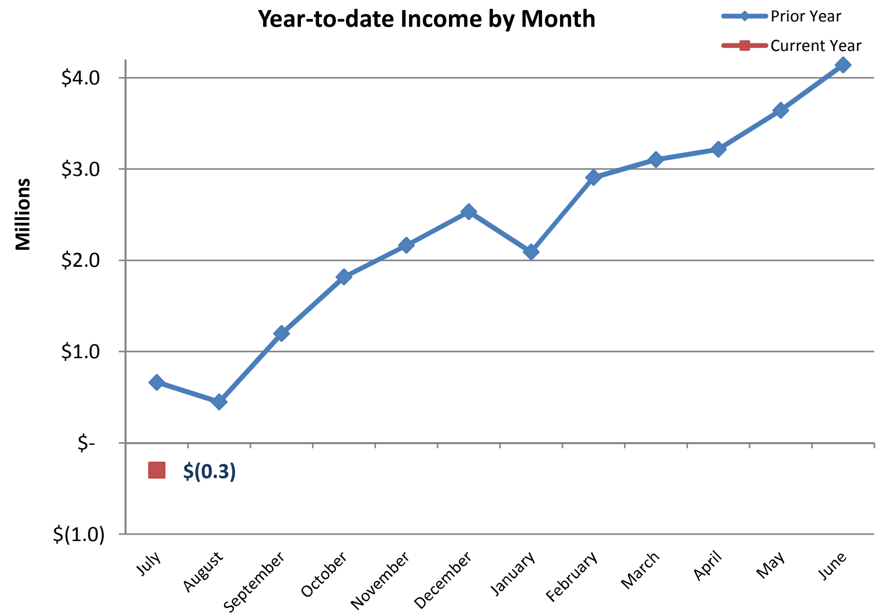


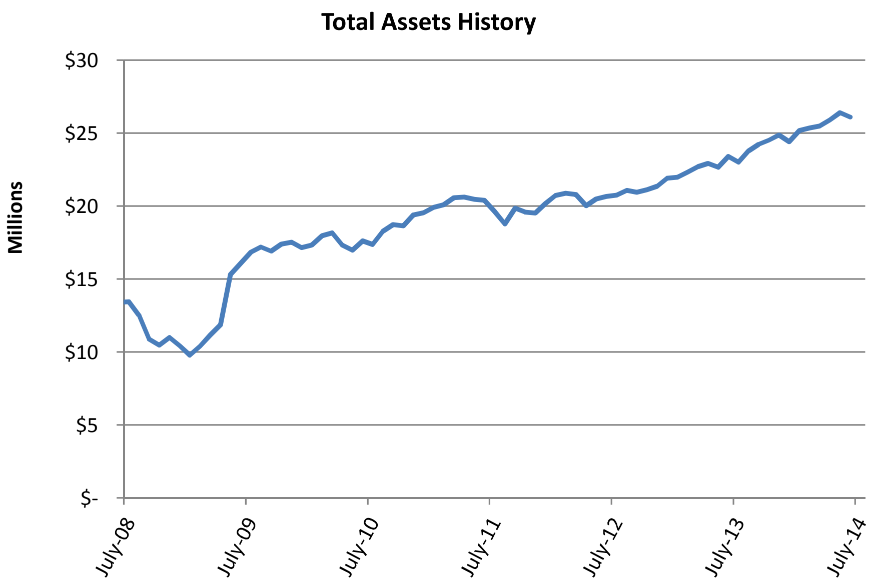


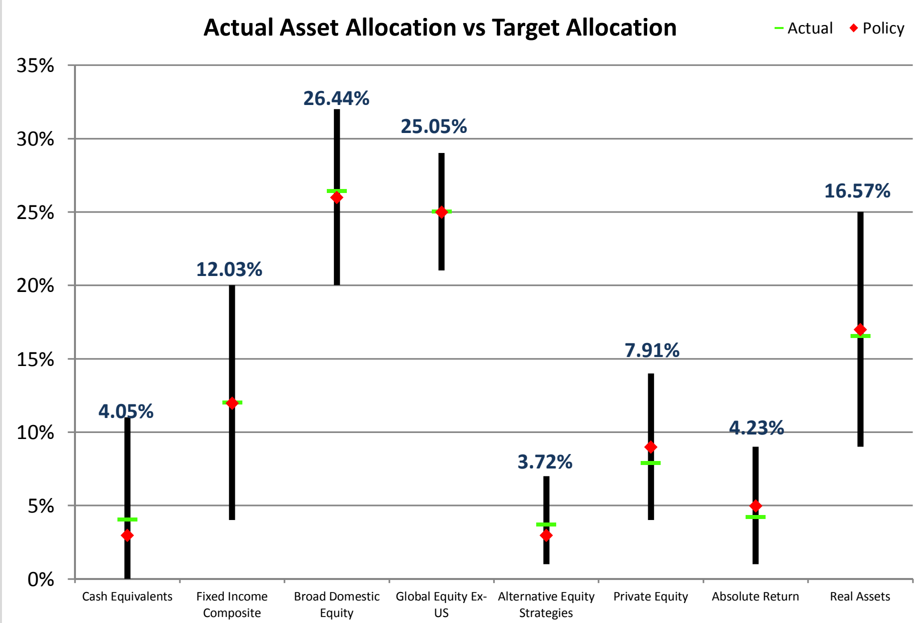
Judicial Retirement Health Care Trust Fund

For the One Month Ending July 31, 2014



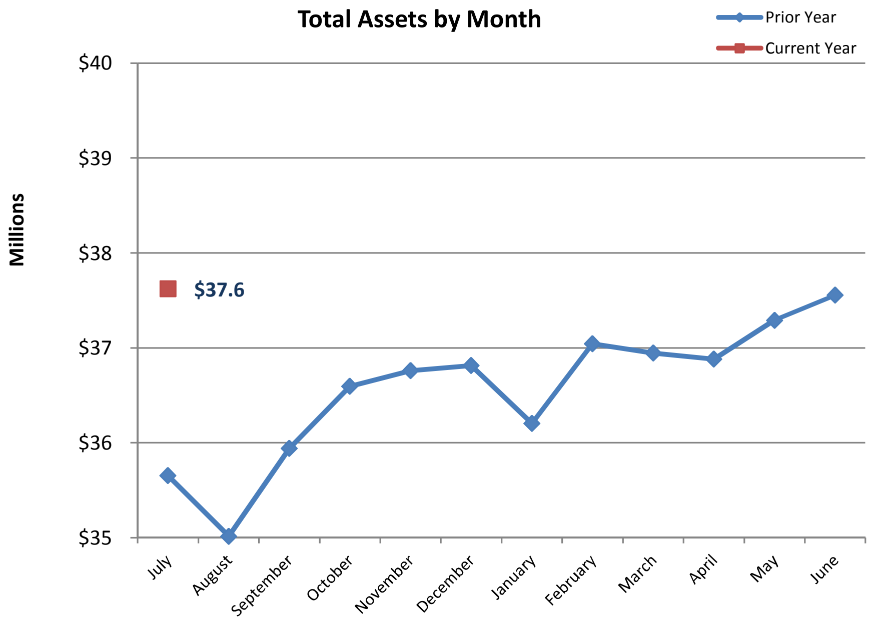


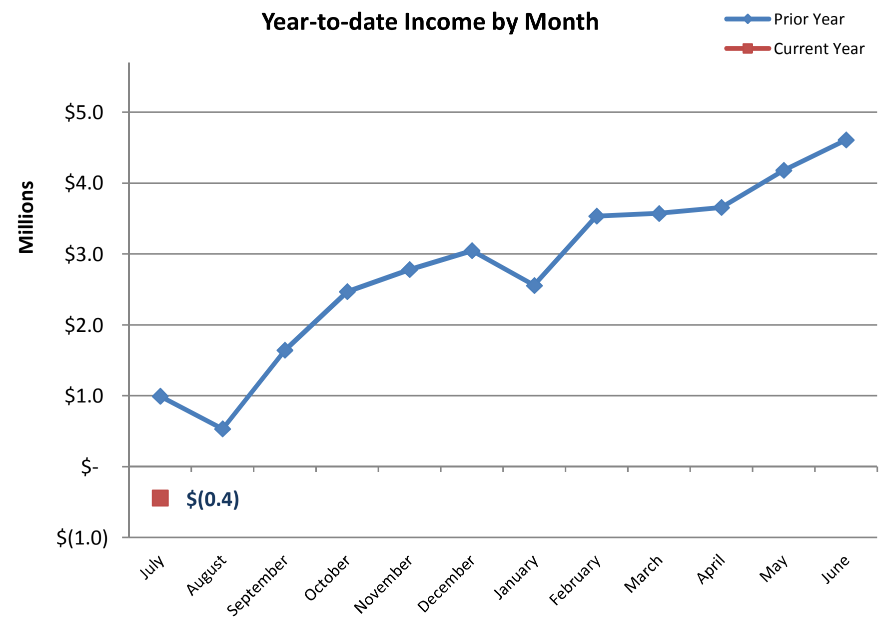


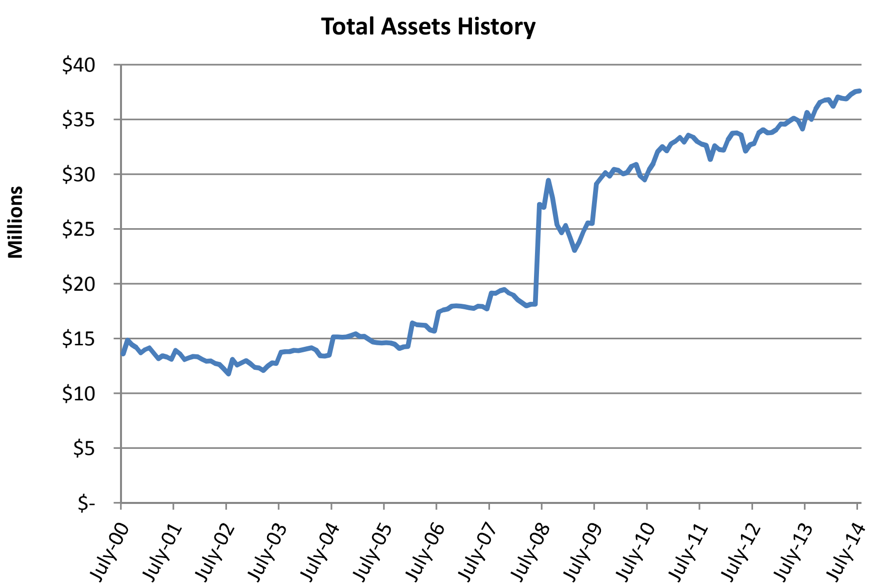


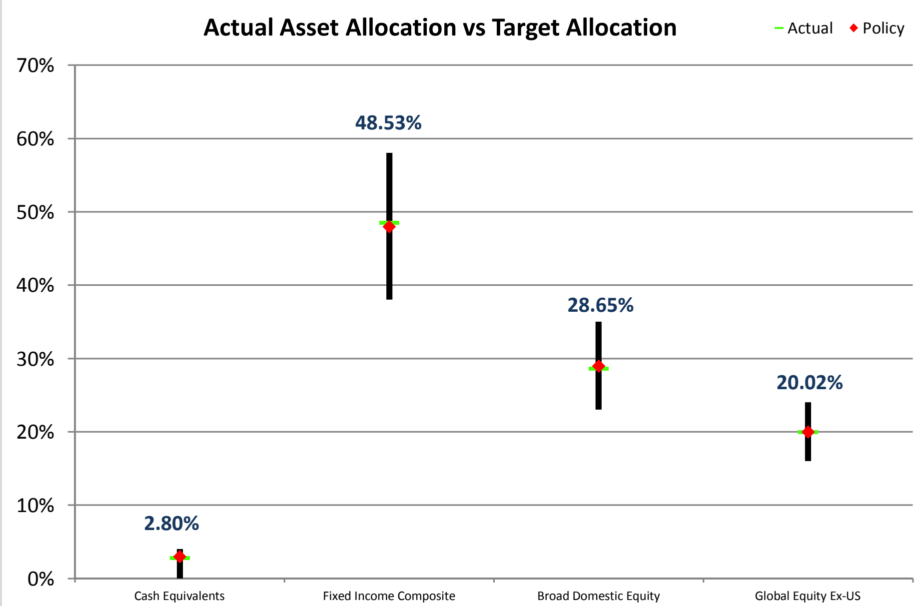
Military Retirement Trust Fund

For the One Month Ending July 31, 2014









ALASKA RETIREMENT MANAGEMENT BOARD

Reporting of Funds by Manager

All Non-Participant Directed Plans

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For The Month Ended July 31, 2014

	Beginning Invested Assets	Investment Income	Net Contributions and (Withdrawals)	Ending Invested Assets	% increase (decrease)
Cash					
Short-Term Fixed Income Pool	$ 687,497,064	$ 78,101	$ 121,541,928	$ 809,117,093	17.69%
Total Cash	687,497,064	78,101	121,541,928	809,117,093	17.69%
Fixed Income					
US Treasury Fixed Income	1,244,692,226	(2,754,023)	100,000,000	1,341,938,203	7.81%
Municipal Bond Pool					
Western Asset Management	112,255,181	412,120	-	112,667,301	0.37%
Guggenheim Partners	110,083,833	155,906	-	110,239,739	0.14%
	222,339,014	568,026	-	222,907,040	0.26%
International Fixed Income Pool					
Mondrian Investment Partners	379,100,253	(5,116,714)	-	373,983,539	-1.35%
High Yield Pool					
MacKay Shields, LLC	565,237,319	(5,770,384)	-	559,466,935	-1.02%
Emerging Debt Pool					
Lazard Emerging Income	153,426,381	27,469	-	153,453,850	0.02%
Total Fixed Income	2,564,795,193	(13,045,626)	100,000,000	2,651,749,567	3.39%

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For The Month Ended July 31, 2014

Domestic Equities					
Small Cap Pool					
Passively Managed					
SSgA Russell 2000 Growth	17,703,614	(1,063,750)	-	16,639,864	-6.01%
SSgA Russell 2000 Value	64,862,403	(3,905,479)	-	60,956,924	-6.02%
Total Passive	82,566,017	(4,969,229)	-	77,596,788	-6.02%
Actively Managed					
Barrow, Haney, Mewhinney & Strauss	106,803,195	(6,094,168)	-	100,709,027	-5.71%
DePrince, Race & Zollo Inc.- Micro Cap	99,045,858	(4,462,079)	-	94,583,779	-4.51%
Frontier Capital Mgmt. Co.	107,954,566	(7,098,084)	-	100,856,482	-6.58%
Jennison Associates, LLC	144,085,916	(6,274,337)	-	137,811,579	-4.35%
Lord Abbet Small Cap Growth Fund	135,891,417	(9,550,018)	-	126,341,399	-7.03%
Lord Abbett & Co.- Micro Cap	105,627,523	(9,124,012)	-	96,503,511	-8.64%
Luther King Capital Management	137,008,430	(9,061,791)	-	127,946,639	-6.61%
SSgA Futures Small Cap	11,278,917	(683,324)	-	10,595,593	-6.06%
Transition Account	-	-	-	-	-
Victory Capital Management	110,666,906	(6,371,979)	-	104,294,927	-5.76%
Total Active	958,362,728	(58,719,792)	-	899,642,936	-6.13%
Total Small Cap	1,040,928,745	(63,689,021)	-	977,239,724	-6.12%
Large Cap Pool					
Passively Managed					
SSgA Russell 1000 Growth	1,235,884,746	(21,639,919)	150,000,000	1,364,244,827	10.39%
SSgA Russell 1000 Value	1,167,641,781	(20,833,940)	50,000,000	1,196,807,841	2.50%
SSgA Russell 200	537,915,439	(5,471,763)	-	532,443,676	-1.02%
Total Passive	2,941,441,966	(47,945,622)	200,000,000	3,093,496,344	5.17%
Actively Managed					
Allianz Global Investors	352,777,633	(4,532,721)	-	348,244,912	-1.28%
Barrow, Haney, Mewhinney & Strauss	332,360,540	(7,347,690)	-	325,012,850	-2.21%
Lazard Freres	379,824,704	(9,849,182)	-	369,975,522	-2.59%
McKinley Capital Mgmt.	350,119,125	(6,262,774)	-	343,856,351	-1.79%
Quantitative Management Assoc.	333,883,841	(5,334,285)	-	328,549,556	-1.60%
SSgA Futures large cap	13,360,804	(154,524)	-	13,206,280	-1.16%
Transition Account	-	-	-	-	-
Total Active	1,762,326,647	(33,481,176)	-	1,728,845,471	-1.90%
Total Large Cap	4,703,768,613	(81,426,798)	200,000,000	4,822,341,815	2.52%
Total Domestic Equity	5,744,697,358	(145,115,819)	200,000,000	5,799,581,539	0.96%

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For The Month Ended July 31, 2014

Alternative Equity Strategies					
Alternative Equity Strategy Pool					
Relational Investors, LLC	325,905,163	(10,045,036)	(61,745,884)	254,114,243	-22.03%
Analytic Buy Write Account	246,267,708	(10,998,323)	-	235,269,385	-4.47%
Allianz Global Investors Buy-Write Account	-	-	-	-	-
ARMB Equity Yield Strategy	133,107,099	(2,206,944)	-	130,900,155	-1.66%
Total Alternative Equity Strategy Pool	705,279,970	(23,250,303)	(61,745,884)	620,283,783	-12.05%
Convertible Bond Pool					
Advent Capital	195,674,656	(2,033,253)	-	193,641,403	-1.04%
Total Alternative Equity Strategies	900,954,626	(25,283,556)	(61,745,884)	813,925,186	-9.66%
Global Equities Ex US					
Small Cap Pool					
Mondrian Investment Partners	160,050,360	(5,008,718)	-	155,041,642	-3.13%
Schroder Investment Management	166,097,020	(3,167,654)	-	162,929,366	-1.91%
Total Small Cap	326,147,380	(8,176,372)	-	317,971,008	-2.51%
Large Cap Pool					
Blackrock ACWI Ex-US IMI	674,476,162	(7,512,105)	-	666,964,057	-1.11%
Brandes Investment Partners	1,112,914,687	(22,023,142)	-	1,090,891,545	-1.98%
Cap Guardian Trust Co	825,461,507	(16,148,071)	-	809,313,436	-1.96%
Lazard Freres	439,651,218	(9,455,055)	-	430,196,163	-2.15%
McKinley Capital Management	395,042,373	(5,194,127)	-	389,848,246	-1.31%
SSgA Futures International	-	-	-	-	-
Allianz Global Investors	-	(3,398,799)	200,000,000	196,601,201	100.00%
Arrow Streey Capital	-	-	-	-	
Baillie Gifford Overseas Limited	-	(3,815,130)	200,000,000	196,184,870	100.00%
State Street Global Advisors	674,265,053	(7,319,272)	-	666,945,781	-1.09%
Total Large Cap	4,121,811,000	(74,865,701)	400,000,000	4,446,945,299	7.89%
Emerging Markets Equity Pool					
Lazard Asset Management	384,784,048	4,342,509	-	389,126,557	1.13%
Eaton Vance	235,872,856	1,774,592	-	237,647,448	0.75%
Total Emerging Markets Pool	620,656,904	6,117,101	-	626,774,005	0.99%
Frontier Market Pool					
Everest Capital Frontier Markets Equity	98,638,800	2,689,700	-	101,328,500	
Total Global Equities	5,167,254,084	(74,235,272)	400,000,000	5,493,018,812	6.30%

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For The Month Ended July 31, 2014

Private Equity Pool					
Abbott Capital	768,955,246	7,659,418	(476,387)	776,138,277	0.93%
Angelo, Gordon & Co.	8,454,150	-	(432,920)	8,021,230	-5.12%
Blum Capital Partners-Strategic	10,958,531	-	-	10,958,531	-
Lexington Partners	49,972,570	5	(1,291,174)	48,681,401	-2.58%
Merit Capital Partners	14,438,148	(1)	(216,040)	14,222,107	-1.50%
NB SOF III	5,008,072	2	1,482,774	6,490,848	29.61%
Resolute Fund III	153,141	-	85,734	238,875	55.98%
Onex Partnership III	24,235,700	2	(5,677,854)	18,557,848	-23.43%
Pathway Capital Management LLC	804,846,110	13,253,320	(9,143,877)	808,955,553	0.51%
Warburg Pincus Prvt Eqty XI	13,712,413	5	90,000	13,802,418	0.66%
Warburg Pincus X	26,416,783	4	(369,900)	26,046,887	-1.40%
Total Private Equity	1,727,150,864	20,912,755	(15,949,644)	1,732,113,975	0.29%
Absolute Return Pool					
Global Asset Management (USA) Inc.	315,622,530	3,490,153	37,500,000	356,612,683	12.99%
Prisma Capital Partners	323,880,966	3,633,308	75,000,000	402,514,274	24.28%
Mariner Investment Group, Inc.	-	-	-	-	-
Crestline Investors, Inc.	181,205,421	47	(13,250,000)	167,955,468	-7.31%
Total Absolute Return Investments	820,708,917	7,123,508	99,250,000	927,082,425	12.96%

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For The Month Ended July 31, 2014

Real Assets					
Farmland Pool					
UBS Agrivest, LLC	490,044,987	-	-	490,044,987	-
Hancock Agricultural Investment Group	219,824,023	-	-	219,824,023	-
Total Farmland Pool	709,869,010	-	-	709,869,010	-
Timber Pool					
Timberland Invt Resource LLC	261,642,667	-	-	261,642,667	-
Hancock Natural Resource Group	98,037,865	-	-	98,037,865	-
Total Timber Pool	359,680,532	-	-	359,680,532	-
Energy Pool					
EIG Energy Fund XV	39,132,088	811,505	-	39,943,593	2.07%
EIG Energy Fund XD	7,683,504	(315,687)	-	7,367,817	-4.11%
EIG Energy Fund XIV-A	52,475,675	1,937,293	-	54,412,968	3.69%
EIG Energy Fund XVI	7,620,329	650,360	-	8,270,689	8.53%
Total Energy Pool	106,911,596	3,083,471	-	109,995,067	2.88%
REIT Pool					
REIT Holdings	363,135,313	331,346	-	363,466,659	0.09%
Treasury Inflation Proof Securities					
TIPS Internally Managed Account	34,957,785	1,150	-	34,958,935	0.00%
Master Limited Partnerships					
Advisory Research MLP	232,373,085	(11,460,958)	-	220,912,127	-4.93%
Tortoise Capital Advisors	255,881,278	(12,611,312)	-	243,269,966	-4.93%
Total Master Limited Partnerships	488,254,363	(24,072,270)	-	464,182,093	-4.93%
Infrastructure Private Pool					
IFM Global Infrastructuer Fund-Private	-	-	-	-	-
JP Morgan Infrastructure Fund-Private	-	-	100,000,000	100,000,000	100.00%
Total Infrastructure Private Pool	-	-	100,000,000	100,000,000	#DIV/0!
Infrastructure Public Pool					
Brookfield Investment Mgmt.-Public	83,452,289	(1,171,469)	-	82,280,820	-1.40%
Lazard Asset Mgmt.-Public	81,268,879	(1,924,753)	-	79,344,126	-2.37%
Total Infrastructure Public Pool	164,721,168	(3,096,222)	-	161,624,946	-1.88%

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For The Month Ended July 31, 2014

Real Estate					
Core Commingled Accounts					
JP Morgan	207,215,457	4,520,314	(2,093,989)	209,641,782	1.17%
UBS Trumbull Property Fund	83,463,304	2,049,308	(601,983)	84,910,629	1.73%
Total Core Commingled	290,678,761	6,569,622	(2,695,972)	294,552,411	1.33%
Core Separate Accounts					
Cornerstone Real Estate Advisers Inc.	122,828,448	52	(212,712)	122,615,788	-0.17%
LaSalle Investment Management	150,817,671	(8)	(423,443)	150,394,220	-0.28%
Sentinel Separate Account	155,436,778	(18)	(597,728)	154,839,032	-0.38%
UBS Realty	305,757,402	116	(205,795)	305,551,723	-0.07%
Total Core Separate	734,840,299	142	(1,439,678)	733,400,763	-0.20%
Non-Core Commingled Accounts					
Almanac Realty Securities IV	17,115,573	(2)	(352,794)	16,762,777	-2.06%
Almanac Realty Securities V	22,695,749	-	(613,663)	22,082,086	-2.70%
BlackRock Diamond Property Fund	28,545,165	200,653	(21,599)	28,724,219	0.63%
Colony Investors VIII, L.P.	25,707,421	-	-	25,707,421	-
Cornerstone Apartment Venture III	7,271,879	-	-	7,271,879	-
Coventry	12,736,002	-	-	12,736,002	-
ING Clarion Development Ventures II	1,896,481	-	-	1,896,481	-
ING Clarion Development Ventures III	26,399,712	-	-	26,399,712	-
KKR Real Estate Partners Americas LP.	24,397,563	-	-	24,397,563	-
LaSalle Medical Office Fund II	6,050,536	-	-	6,050,536	-
Lowe Hospitality Partners	2,327,265	-	-	2,327,265	-
Silverpeak Legacy Pension Partners II, L.P.	61,329,481	-	-	61,329,481	-
Silverpeak Legacy Pension Partners III, L.P.	8,990,261	(5)	(898,325)	8,091,931	-9.99%
Tishman Speyer Real Estate Venture VI	42,807,706	-	-	42,807,706	-
Tishman Speyer Real Estate Venture VII	16,693,359	(5)	(4,834,461)	11,858,893	-28.96%
Total Non-Core Commingled	304,964,153	200,641	(6,720,842)	298,443,952	-2.14%
Total Real Estate	1,330,483,213	6,770,405	(10,856,492)	1,326,397,126	-0.31%
Total Real Assets	3,558,012,980	(16,982,120)	89,143,508	3,630,174,368	2.03%
Total Assets	$ 21,171,071,086	$ (246,548,029)	$ 932,239,908	$ 21,856,762,965	3.24%

ALASKA RETIREMENT MANAGEMENT BOARD

Reporting of Funds by Manager

Participant Directed Plans

Supplemental Annuity Plan
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
July 31, 2014

Interim Transit Account	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Treasury Division [(1)]							
Cash and Cash Equivalents	$ 943,440	$ 395	$ 6,008,451	$ -	$ 6,952,286	636.91%	0.01%
Participant Options							
T. Rowe Price							
Stable Value Fund	344,252,931	690,920	(1,853,103)	(5,622,408)	337,468,340	-1.97%	0.20%
Small Cap Stock Fund	139,403,810	(8,353,735)	(239,264)	(2,950,071)	127,860,740	-8.28%	-6.06%
Alaska Balanced Trust	1,195,791,680	(8,757,191)	(2,826,280)	(194,470)	1,184,013,739	-0.98%	-0.73%
Long Term Balanced Fund	529,258,605	(5,927,405)	(638,451)	(1,235,431)	521,457,318	-1.47%	-1.12%
AK Target Date 2010 Trust	8,649,015	(75,609)	(586,114)	322,436	8,309,728	-3.92%	-0.89%
AK Target Date 2015 Trust	103,348,510	(1,110,765)	(67,443)	(306,560)	101,863,742	-1.44%	-1.08%
AK Target Date 2020 Trust	63,035,456	(769,937)	139,664	133,229	62,538,412	-0.79%	-1.22%
AK Target Date 2025 Trust	38,104,912	(512,359)	222,709	(173,947)	37,641,315	-1.22%	-1.34%
AK Target Date 2030 Trust	26,211,173	(404,149)	211,364	943,649	26,962,037	2.86%	-1.51%
AK Target Date 2035 Trust	22,514,597	(353,961)	261,775	202,794	22,625,205	0.49%	-1.56%
AK Target Date 2040 Trust	23,024,841	(376,861)	189,388	233,279	23,070,647	0.20%	-1.62%
AK Target Date 2045 Trust	24,524,312	(401,262)	251,720	208,039	24,582,809	0.24%	-1.62%
AK Target Date 2050 Trust	25,895,360	(419,940)	387,812	(86,806)	25,776,426	-0.46%	-1.61%
AK Target Date 2055 Trust	16,997,416	(279,081)	333,763	2,687	17,054,785	0.34%	-1.63%
Total Investments with T. Rowe Price	2,561,012,618	(27,051,335)	(4,212,460)	(8,523,580)	2,521,225,243		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	37,375,223	1	(1,027,699)	231,994	36,579,519	-2.13%	0.00%
S&P 500 Stock Index Fund Series A	325,537,800	(4,492,875)	(1,114,010)	4,100,348	324,031,263	-0.46%	-1.37%
Russell 3000 Index	54,334,327	(1,067,815)	(213,477)	1,458,853	54,511,888	0.33%	-1.94%
US Real Estate Investment Trust Index	28,203,033	39,754	37,787	2,117,016	30,397,590	7.78%	0.14%
World Equity Ex-US Index	26,547,251	(398,732)	(802)	(55,142)	26,092,575	-1.71%	-1.50%
Long US Treasury Bond Index	10,379,050	50,313	(76,808)	326,366	10,678,921	2.89%	0.48%
US Treasury Inflation Protected Securities Index	16,791,983	413	(46,151)	(192,259)	16,553,986	-1.42%	0.00%
World Government Bond Ex-US Index	10,432,841	(131,143)	(66,087)	(89,090)	10,146,521	-2.74%	-1.27%
Global Balanced Fund	56,908,018	(618,063)	33,692	(22,681)	56,300,966	-1.07%	-1.09%
Total Investments with SSGA	566,509,526	(6,618,147)	(2,473,555)	7,875,405	565,293,229		
BlackRock							
Government/Credit Bond Fund	45,349,246	(67,283)	(105,319)	126,063	45,302,707	-0.10%	-0.15%
Intermediate Bond Fund	12,896,461	(33,999)	(170,993)	(183,379)	12,508,090	-3.01%	-0.27%
Total Investments with Barclays Global Investors	58,245,707	(101,282)	(276,312)	(57,316)	57,810,797		
Brandes Institutional							
International Equity Fund Fee	86,419,110	(2,000,049)	(338,988)	542,485	84,622,558	-2.08%	-2.31%
RCM							
Sustainable Core Opportunities Fund	38,966,801	(300,722)	(20,475)	163,006	38,808,610	-0.41%	-0.77%
Total All Funds	$ 3,312,097,202	$ (36,071,140)	$ (1,313,339)	$ -	$ 3,274,712,723	-1.13%	-1.09%

Notes: Source data provided by the record keeper, Great West Life. (1) Represents net contributions in transit to/from the record keeper.
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.

Supplemental Annuity Plan
Schedule of Invested Assets with
Schedule of Investment Income and Changes in Invested Assets
By Month Through the Month Ended
July 31, 2014
$ (Thousands)

Invested Assets (at fair value)		**July**
Investments with Treasury Division		
Cash and cash equivalents	$	6,952
Investments with T. Rowe Price		
Stable Value Fund		337,468
Small Cap Stock Fund		127,861
Alaska Balanced Trust		1,184,014
Long Term Balanced Fund		521,457
AK Target Date 2010 Trust		8,310
AK Target Date 2015 Trust		101,864
AK Target Date 2020 Trust		62,538
AK Target Date 2025 Trust		37,641
AK Target Date 2030 Trust		26,962
AK Target Date 2035 Trust		22,625
AK Target Date 2040 Trust		23,071
AK Target Date 2045 Trust		24,583
AK Target Date 2050 Trust		25,776
AK Target Date 2055 Trust		17,055
State Street Global Advisors		
State Street Treasury Money Market Fund - Inst.		36,580
S&P 500 Stock Index Fund Series A		324,031
Russell 3000 Index		54,512
US Real Estate Investment Trust Index		30,398
World Equity Ex-US Index		26,093
Long US Treasury Bond Index		10,679
US Treasury Inflation Protected Securities Index		16,554
World Government Bond Ex-US Index		10,147
Global Balanced Fund		56,301
Investments with BlackRock		
Government/Credit Bond Fund		45,303
Intermediate Bond Fund		12,508
Investments with Brandes Institutional		
International Equity Fund Fee		84,623
Investments with RCM		
Sustainable Core Opportunities Fund		38,809
Total Invested Assets	$	**3,274,713**

Change in Invested Assets		
Beginning Assets	$	3,312,097
Investment Earnings		(36,071)
Net Contributions (Withdrawals)		(1,313)
Ending Invested Assets	$	**3,274,713**

Source data provided by the record keeper, Great West Life.

Deferred Compensation Plan
Schedule of Invested Assets and Changes in Invested Assets
for the Month Ended
July 31, 2014

	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (1)
Participant Options							
T. Rowe Price							
Interest Income Fund	$ 181,921,769	$ 408,674	$ (560,987)	$ (1,567,758)	$ 180,201,698	-0.95%	0.23%
Small Cap Stock Fund	100,309,752	(6,033,201)	86,436	(2,798,715)	91,564,272	-8.72%	-6.10%
Alaska Balanced Trust	14,157,324	(106,695)	76,375	257,056	14,384,060	1.60%	-0.74%
Long Term Balanced Fund	51,582,740	(580,166)	69,286	(41,670)	51,030,190	-1.07%	-1.12%
AK Target Date 2010 Trust	2,901,853	(28,145)	43,987	105,157	3,022,852	4.17%	-0.95%
AK Target Date 2015 Trust	10,038,134	(104,757)	63,680	(225,829)	9,771,228	-2.66%	-1.05%
AK Target Date 2020 Trust	13,579,814	(170,304)	161,986	203,767	13,775,263	1.44%	-1.24%
AK Target Date 2025 Trust	6,801,000	(94,584)	100,704	68,337	6,875,457	1.09%	-1.37%
AK Target Date 2030 Trust	4,217,200	(68,377)	69,430	315,710	4,533,963	7.51%	-1.55%
AK Target Date 2035 Trust	3,294,425	(49,492)	20,350	(129,627)	3,135,656	-4.82%	-1.53%
AK Target Date 2040 Trust	2,795,537	(47,557)	61,519	86,006	2,895,505	3.58%	-1.66%
AK Target Date 2045 Trust	1,602,011	(26,386)	25,148	10,524	1,611,297	0.58%	-1.63%
AK Target Date 2050 Trust	1,250,269	(20,412)	12,556	7,794	1,250,207	0.00%	-1.62%
AK Target Date 2055 Trust	1,906,437	(31,483)	1,638	32,481	1,909,073	0.14%	-1.64%
Total Investments with T. Rowe Price	396,358,265	(6,952,885)	232,108	(3,676,767)	385,960,721		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	12,080,548	-	(63,879)	35,297	12,051,966	-0.24%	0.00%
Russell 3000 Index	19,215,222	(373,188)	65,756	402,804	19,310,594	0.50%	-1.92%
US Real Estate Investment Trust Index	9,992,654	12,407	31,570	1,314,863	11,351,494	13.60%	0.12%
World Equity Ex-US Index	9,008,418	(136,858)	49,942	51,605	8,973,107	-0.39%	-1.51%
Long US Treasury Bond Index	3,097,639	17,568	(71,738)	349,421	3,392,890	9.53%	0.54%
US Treasury Inflation Protected Securities Index	7,956,819	427	(28,949)	(95,868)	7,832,429	-1.56%	0.01%
World Government Bond Ex-US Index	3,895,113	(49,125)	(43,871)	66,474	3,868,591	-0.68%	-1.26%
Global Balanced Fund	41,513,022	(449,117)	75,711	(179,330)	40,960,286	-1.33%	-1.08%
Total Investments with SSGA	106,759,435	(977,886)	14,542	1,945,266	107,741,357		
BlackRock							
S&P 500 Index Fund	172,839,989	(2,408,165)	13,060	1,326,073	171,770,957	-0.62%	-1.39%
Government/Credit Bond Fund	28,931,971	(42,663)	(91,169)	251,795	29,049,934	0.41%	-0.15%
Intermediate Bond Fund	14,519,489	(38,025)	330	(6,915)	14,474,879	-0.31%	-0.26%
Total Investments with Barclays Global Investors	216,291,449	(2,488,853)	(77,779)	1,570,953	215,295,770		
Brandes Institutional							
International Equity Fund Fee	50,308,512	(1,165,182)	77,526	63,664	49,284,520	-2.04%	-2.31%
RCM							
Sustainable Core Opportunities Fund	15,769,151	(122,561)	40,214	96,884	15,783,688	0.09%	-0.77%
Total All Funds	$ 785,486,812	$ (11,707,367)	$ 286,611	$ -	$ 774,066,056	-1.45%	-1.49%

Notes: Source data provided by the record keeper, Great West Life.
(1) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.

Deferred Compensation Plan
Schedule of Invested Assets with
Schedule of Investment Income and Changes in Invested Assets
By Month Through the Month Ended
July 31, 2014
$ (Thousands)

Invested Assets (at fair value)		**July**
Investments with T. Rowe Price		
Interest Income Fund		
Cash and cash equivalents	$	6,053
Synthetic Investment Contracts		174,149
Small Cap Stock Fund		91,564
Long Term Balanced Fund		14,384
Alaska Balanced Trust		51,030
AK Target Date 2010 Trust		3,023
AK Target Date 2015 Trust		9,771
AK Target Date 2020 Trust		13,775
AK Target Date 2025 Trust		6,875
AK Target Date 2030 Trust		4,534
AK Target Date 2035 Trust		3,136
AK Target Date 2040 Trust		2,896
AK Target Date 2045 Trust		1,611
AK Target Date 2050 Trust		1,250
AK Target Date 2055 Trust		1,909
State Street Global Advisors		
State Street Treasury Money Market Fund - Inst.		12,052
Russell 3000 Index		19,311
US Real Estate Investment Trust Index		11,351
World Equity Ex-US Index		8,973
Long US Treasury Bond Index		3,393
US Treasury Inflation Protected Securities Index		7,832
World Government Bond Ex-US Index		3,869
Global Balanced Fund		40,960
Investments with BlackRock		
S&P 500 Index Fund		171,771
Government/Credit Bond Fund		29,050
Intermediate Bond Fund		14,475
Investments with Brandes Institutional		
International Equity Fund Fee		49,285
Investments with RCM		
Sustainable Opportunities Fund		15,784
Total Invested Assets	$	**774,066**
Change in Invested Assets		
Beginning Assets	$	785,487
Investment Earnings		(11,707)
Net Contributions (Withdrawals)		287
Ending Invested Assets	$	**774,066**

Source data provided by the record keeper, Great West Life.

Defined Contribution Retirement - Participant Directed PERS
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
July 31, 2014

Interim Transit Account		Beginning Invested Assets		Investment Income		Net Contributions (Withdrawals)		Transfers In (Out)		Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Treasury Division [1]												
Cash and Cash Equivalents	$	5,502,760	$	547	$	2,393,585	$	-	$	7,896,892	43.51%	0.01%
Participant Options												
T. Rowe Price												
Alaska Money Market		3,919,094		34		41,950		(31,290)		3,929,788	0.27%	0.00%
Small Cap Stock Fund		53,630,242		(3,209,279)		145,592		(1,623,129)		48,943,426	-8.74%	-6.07%
Alaska Balanced Trust		1,710,207		(12,493)		22,065		(30,843)		1,688,936	-1.24%	-0.73%
Long Term Balanced Fund		22,496,078		(258,427)		(12,408)		397,400		22,622,643	0.56%	-1.14%
AK Target Date 2010 Trust		1,609,922		(14,956)		3,863		-		1,598,829	-0.69%	-0.93%
AK Target Date 2015 Trust		6,621,984		(72,657)		91,351		14,487		6,655,165	0.50%	-1.09%
AK Target Date 2020 Trust		13,672,422		(169,087)		156,954		(7)		13,660,282	-0.09%	-1.23%
AK Target Date 2025 Trust		19,205,578		(264,088)		242,284		78		19,183,852	-0.11%	-1.37%
AK Target Date 2030 Trust		19,570,678		(293,673)		343,535		(14,487)		19,606,053	0.18%	-1.49%
AK Target Date 2035 Trust		22,358,340		(352,721)		370,550		900		22,377,069	0.08%	-1.56%
AK Target Date 2040 Trust		28,615,065		(468,777)		381,897		(11,120)		28,517,065	-0.34%	-1.63%
AK Target Date 2045 Trust		34,339,602		(565,097)		638,049		(19,758)		34,392,796	0.15%	-1.63%
AK Target Date 2050 Trust		39,967,857		(657,294)		717,306		(37,201)		39,990,668	0.06%	-1.63%
AK Target Date 2055 Trust		19,444,178		(323,250)		496,485		(25,432)		19,591,981	0.76%	-1.64%
Total Investments with T. Rowe Price		287,161,247		(6,661,765)		3,639,473		(1,380,402)		282,758,553		
State Street Global Advisors												
Money Market		1,125,663		-		17,342		(49,530)		1,093,475	-2.86%	0.00%
S&P 500 Stock Index Fund Series A		36,290,404		(498,858)		162,893		(211,408)		35,743,031	-1.51%	-1.38%
Russell 3000 Index		33,495,477		(669,801)		71,532		1,334,831		34,232,039	2.20%	-1.96%
US Real Estate Investment Trust Index		6,927,667		14,079		34,612		3,831		6,980,189	0.76%	0.20%
World Equity Ex-US Index		28,094,047		(398,392)		82,692		(1,531,452)		26,246,895	-6.57%	-1.46%
Long US Treasury Bond Index		537,613		1,945		7,477		(39,340)		507,695	-5.56%	0.37%
US Treasury Inflation Protected Securities Index		3,042,196		601		(3,407)		45,388		3,084,778	1.40%	0.02%
World Government Bond Ex-US Index		5,653,910		(72,619)		(28,883)		141,773		5,694,181	0.71%	-1.27%
Global Balanced Fund		11,458,048		(126,831)		23,856		166,745		11,521,818	0.56%	-1.10%
Total Investments with SSGA		126,625,025		(1,749,876)		368,114		(139,162)		125,104,101		
BlackRock												
Government/Credit Bond Fund		27,747,826		(39,802)		(67,290)		541,210		28,181,944	1.56%	-0.14%
Intermediate Bond Fund		403,389		(1,062)		7,035		2,377		411,739	2.07%	-0.26%
Total Investments with Barclays Global Investors		28,151,215		(40,863)		(60,255)		543,587		28,593,683		
Brandes Institutional												
International Equity Fund Fee		39,292,149		(935,688)		94,547		1,144,751		39,595,759	0.77%	-2.34%
RCM												
Sustainable Core Opportunities Fund		4,883,304		(35,651)		26,515		(168,774)		4,705,394	-3.64%	-0.74%
Total All Funds	$	491,615,700	$	(9,423,297)	$	6,461,979	$	-	$	488,654,382	-0.60%	-1.90%

Notes:Source data provided by the record keeper, Great West Life. (1) Represents net contributions in transit to/from the record keeper.
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.

Defined Contribution Retirement - Participant Directed PERS
Schedule of Invested Assets with
Schedule of Investment Income and Changes in Invested Assets
By Month Through the Month Ended
July 31, 2014
$ (Thousands)

Invested Assets (at fair value)		**July**
Investments with Treasury Division		
Cash and cash equivalents	$	7,897
Investments with T. Rowe Price		
Alaska Money Market		3,930
Small Cap Stock Fund		48,943
Alaska Balanced Trust		1,689
Long Term Balanced Fund		22,623
AK Target Date 2010 Trust		1,599
AK Target Date 2015 Trust		6,655
AK Target Date 2020 Trust		13,660
AK Target Date 2025 Trust		19,184
AK Target Date 2030 Trust		19,606
AK Target Date 2035 Trust		22,377
AK Target Date 2040 Trust		28,517
AK Target Date 2045 Trust		34,393
AK Target Date 2050 Trust		39,991
AK Target Date 2055 Trust		19,592
State Street Global Advisors		
Money Market		1,093
S&P 500 Stock Index Fund Series A		35,743
Russell 3000 Index		34,232
US Real Estate Investment Trust Index		6,980
World Equity Ex-US Index		26,247
Long US Treasury Bond Index		508
US Treasury Inflation Protected Securities Index		3,085
World Government Bond Ex-US Index		5,694
Global Balanced Fund		11,522
Investments with BlackRock		
Government/Credit Bond Fund		28,182
Intermediate Bond Fund		412
Investments with Brandes Institutional		
International Equity Fund Fee		39,596
Investments with RCM		
Sustainable Opportunities Fund		4,705
Total Invested Assets	$	**488,654**

Change in Invested Assets		
Beginning Assets	$	491,616
Investment Earnings		(9,423)
Net Contributions (Withdrawals)		6,462
Ending Invested Assets	$	**488,654**

Source data provided by the record keeper, Great West Life.

Defined Contribution Retirement - Participant Directed TRS
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
July 31, 2014

Interim Transit Account	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Treasury Division [1]							
Cash and Cash Equivalents	$ 1,985,139	$ 199	$ (49,274)	$ -	$ 1,936,064	-2.47%	0.01%
Participant Options							
T. Rowe Price							
Alaska Money Market	1,619,627	14	12,312	(37,812)	1,594,141	-1.57%	0.00%
Small Cap Stock Fund	21,618,972	(1,288,162)	22,218	(786,812)	19,566,216	-9.50%	-6.07%
Alaska Balanced Trust	249,705	(1,979)	730	14,436	262,892	5.28%	-0.77%
Long Term Balanced Fund	11,515,309	(132,814)	759	246,749	11,630,003	1.00%	-1.14%
AK Target Date 2010 Trust	566,018	(4,629)	(50,194)	-	511,195	-9.69%	-0.86%
AK Target Date 2015 Trust	2,047,165	(22,609)	39,454	-	2,064,010	0.82%	-1.09%
AK Target Date 2020 Trust	4,664,541	(58,010)	73,254	-	4,679,785	0.33%	-1.23%
AK Target Date 2025 Trust	6,345,229	(86,715)	56,637	(2,274)	6,312,877	-0.51%	-1.36%
AK Target Date 2030 Trust	6,888,030	(102,873)	111,731	(12,503)	6,884,385	-0.05%	-1.48%
AK Target Date 2035 Trust	10,473,839	(163,068)	54,396	(10,382)	10,354,785	-1.14%	-1.55%
AK Target Date 2040 Trust	11,491,816	(185,364)	40,317	(67)	11,346,702	-1.26%	-1.61%
AK Target Date 2045 Trust	19,992,219	(321,835)	58,734	(57,685)	19,671,433	-1.60%	-1.61%
AK Target Date 2050 Trust	26,727,624	(433,844)	170,487	-	26,464,267	-0.99%	-1.62%
AK Target Date 2055 Trust	5,045,676	(84,610)	152,958	-	5,114,024	1.35%	-1.65%
Total Investments with T. Rowe Price	129,245,770	(2,886,498)	743,793	(646,350)	126,456,715		
State Street Global Advisors							
Money Market	146,512	-	(24,029)	(11,797)	110,686	-24.45%	0.00%
S&P 500 Stock Index Fund Series A	13,173,746	(179,193)	28,674	(123,472)	12,899,755	-2.08%	-1.37%
Russell 3000 Index	15,084,374	(301,929)	11,144	636,440	15,430,029	2.29%	-1.96%
US Real Estate Investment Trust Index	2,552,540	5,309	3,297	(23,264)	2,537,882	-0.57%	0.21%
World Equity Ex-US Index	11,968,465	(166,586)	11,253	(796,837)	11,016,295	-7.96%	-1.44%
Long US Treasury Bond Index	97,503	527	67	494	98,591	1.12%	0.54%
US Treasury Inflation Protected Securities Index	1,206,767	157	2,815	23,452	1,233,191	2.19%	0.01%
World Government Bond Ex-US Index	2,666,743	(35,182)	(1,396)	148,480	2,778,645	4.20%	-1.28%
Global Balanced Fund	7,056,026	(74,564)	7,294	(164,432)	6,824,324	-3.28%	-1.07%
Total Investments with SSGA	53,952,676	(751,461)	39,119	(310,936)	52,929,398		
BlackRock							
Government/Credit Bond Fund	13,321,595	(19,468)	(2,365)	481,482	13,781,244	3.45%	-0.14%
Intermediate Bond Fund	87,936	(230)	922	178	88,806	0.99%	-0.26%
Total Investments with Barclays Global Investors	13,409,531	(19,698)	(1,443)	481,660	13,870,050		
Brandes Institutional							
International Equity Fund Fee	15,181,492	(362,415)	19,965	516,771	15,355,813	1.15%	-2.35%
RCM							
Sustainable Core Opportunities Fund	1,230,804	(8,967)	5,028	(41,145)	1,185,720	-3.66%	-0.74%
Total All Funds	$ 215,005,412	$ (4,028,840)	$ 757,188	$ -	$ 211,733,760	-1.52%	-1.87%

Notes: Source data provided by the record keeper, Great West Life. (1) Represents net contributions in transit to/from the record keeper.
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates.

Defined Contribution Retirement - Participant Directed TRS
Schedule of Invested Assets with
Schedule of Investment Income and Changes in Invested Assets
By Month Through the Month Ended
July 31, 2014
$ (Thousands)

Invested Assets (at fair value)		**July**
Investments with Treasury Division		
Cash and cash equivalents	$	1,936
Investments with T. Rowe Price		
Alaska Money Market		1,594
Small Cap Stock Fund		19,566
Alaska Balanced Trust		263
Long Term Balanced Fund		11,630
AK Target Date 2010 Trust		511
AK Target Date 2015 Trust		2,064
AK Target Date 2020 Trust		4,680
AK Target Date 2025 Trust		6,313
AK Target Date 2030 Trust		6,884
AK Target Date 2035 Trust		10,355
AK Target Date 2040 Trust		11,347
AK Target Date 2045 Trust		19,671
AK Target Date 2050 Trust		26,464
AK Target Date 2055 Trust		5,114
State Street Global Advisors		
Money Market		111
S&P 500 Stock Index Fund Series A		12,900
Russell 3000 Index		15,430
US Real Estate Investment Trust Index		2,538
World Equity Ex-US Index		11,016
Long US Treasury Bond Index		99
US Treasury Inflation Protected Securities Index		1,233
World Government Bond Ex-US Index		2,779
Global Balanced Fund		6,824
Investments with BlackRock		
Government/Credit Bond Fund		13,781
Intermediate Bond Fund		89
Investments with Brandes Institutional		
International Equity Fund Fee		15,356
Investments with RCM		
Sustainable Opportunities Fund		1,186
Total Invested Assets	$	**211,734**

Change in Invested Assets		
Beginning Assets	$	215,005
Investment Earnings		(4,029)
Net Contributions (Withdrawals)		757
Ending Invested Assets	$	**211,734**

Source data provided by the record keeper, Great West Life.

ALASKA RETIREMENT MANAGEMENT BOARD

FINANCIAL REPORT
(Supplement to the Treasury Division Report)

As of July 31, 2014

Prepared by the Division of Retirement & Benefits

ALASKA RETIREMENT MANAGEMENT BOARD
SCHEDULE OF NON-INVESTMENT CHANGES BY FUND
(Supplement to the Treasury Division Report)
For the One Month Ending July 31, 2014

	Contributions				Expenditures				Net
	Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	Contributions/ (Withdrawals)
Public Employees' Retirement System (PERS)									
Defined Benefit Plans:									
Retirement Trust	$ 35,193,408	$ 333,333,333	$ 5,422	$ 368,532,163	$ (56,245,577)	$ (1,293,542)	$ (6,946,601)	$ (64,485,720)	$ 304,046,443
Retirement Health Care Trust	18,554,976	-	-	18,554,976	(27,843,438)	-	(906,231)	(28,749,669)	(10,194,693)
Total Defined Benefit Plans	53,748,384	333,333,333	5,422	387,087,139	(84,089,015)	(1,293,542)	(7,852,832)	(93,235,389)	293,851,750
Defined Contribution Plans:									
Participant Directed Retirement	9,555,634	-	-	9,555,634	-	(2,992,349)	(101,306)	(3,093,655)	6,461,979
Health Reimbursement Arrangement (a)	2,558,761	-	-	2,558,761	-	-	-	-	2,558,761
Retiree Medical Plan (a)	641,866	-	-	641,866	-	-	-	-	641,866
Occupational Death and Disability: (a)									
Public Employees	143,238	-	-	143,238	(7,874)	-	-	(7,874)	135,364
Police and Firefighters	96,245	-	-	96,245	(3,947)	-	-	(3,947)	92,298
Total Defined Contribution Plans	12,995,744	-	-	12,995,744	(11,821)	(2,992,349)	(101,306)	(3,105,476)	9,890,268
Total PERS	**66,744,128**	**333,333,333**	**5,422**	**400,082,883**	**(84,100,836)**	**(4,285,891)**	**(7,954,138)**	**(96,340,865)**	**303,742,018**
Teachers' Retirement System (TRS)									
Defined Benefit Plans:									
Retirement Trust	4,398,836	554,233,333	447	558,632,616	(33,885,016)	(445,230)	(389,551)	(34,719,797)	523,912,819
Retirement Health Care Trust	1,630,505	112,433,333	-	114,063,838	(8,477,937)	-	(243,006)	(8,720,943)	105,342,895
Total Defined Benefit Plans	6,029,341	666,666,666	447	672,696,454	(42,362,953)	(445,230)	(632,557)	(43,440,740)	629,255,714
Defined Contribution Plans:									
Participant Directed Retirement	2,145,837	-	-	2,145,837	-	(1,349,739)	(38,910)	(1,388,649)	757,188
Health Reimbursement Arrangement (a)	372,804	-	-	372,804	-	-	-	-	372,804
Retiree Medical Plan (a)	75,127	-	-	75,127	-	-	-	-	75,127
Occupational Death and Disability (a)	(9)	-	-	(9)	-	-	-	-	(9)
Total Defined Contribution Plans	2,593,759	-	-	2,593,759	-	(1,349,739)	(38,910)	(1,388,649)	1,205,110
Total TRS	**8,623,100**	**666,666,666**	**447**	**675,290,213**	**(42,362,953)**	**(1,794,969)**	**(671,467)**	**(44,829,389)**	**630,460,824**
Judicial Retirement System (JRS)									
Defined Benefit Plan Retirement Trust	432,794	5,241,619	-	5,674,413	(875,103)	(42,771)	(921)	(918,795)	4,755,618
Defined Benefit Retirement Health Care Trust	44,080	-	-	44,080	(49,214)	-	(2,848)	(52,062)	(7,982)
Total JRS	**476,874**	**5,241,619**	**-**	**5,718,493**	**(924,317)**	**(42,771)**	**(3,769)**	**(970,857)**	**4,747,636**
National Guard/Naval Militia Retirement System (NGNMRS)									
Defined Benefit Plan Retirement Trust (a)	627,300	-	-	627,300	(111,761)	-	(6,942)	(118,703)	508,597
Other Participant Directed Plans									
Supplemental Annuity Plan	15,314,541	-	-	15,314,541	-	(16,101,709)	(526,171)	(16,627,880)	(1,313,339)
Deferred Compensation Plan	3,734,602	-	-	3,734,602	-	(3,255,947)	(192,044)	(3,447,991)	286,611
Total All Funds	**95,520,545**	**1,005,241,618**	**5,869**	**1,100,768,032**	**(127,499,867)**	**(25,481,287)**	**(9,354,531)**	**(162,335,685)**	**938,432,347**
Total Non-Participant Directed	64,769,931	1,005,241,618	5,869	1,070,017,418	(127,499,867)	(1,781,543)	(8,496,100)	(137,777,510)	932,239,908
Total Participant Directed	30,750,614	-	-	30,750,614	-	(23,699,744)	(858,431)	(24,558,175)	6,192,439
Total All Funds	**$ 95,520,545**	**$ 1,005,241,618**	**$ 5,869**	**$ 1,100,768,032**	**$ (127,499,867)**	**$ (25,481,287)**	**$ (9,354,531)**	**$ (162,335,685)**	**$ 938,432,347**

(a) Employer only contributions.

ALASKA RETIREMENT MANAGEMENT BOARD
SCHEDULE OF NON-INVESTMENT CHANGES BY FUND
(Supplement to the Treasury Division Report)
For the Month Ended July 31, 2014

	Contributions				Expenditures				Net
	Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	Contributions/ (Withdrawals)
Public Employees' Retirement System (PERS)									
Defined Benefit Plans:									
Retirement Trust	$ 35,193,408	$ 333,333,333	$ 5,422	$ 368,532,163	$ (56,245,577)	$ (1,293,542)	$ (6,946,601)	$ (64,485,720)	$ 304,046,443
Retirement Health Care Trust	18,554,976	-	-	18,554,976	(27,843,438)	-	(906,231)	(28,749,669)	(10,194,693)
Total Defined Benefit Plans	53,748,384	333,333,333	5,422	387,087,139	(84,089,015)	(1,293,542)	(7,852,832)	(93,235,389)	293,851,750
Defined Contribution Plans:									
Participant Directed Retirement	9,555,634	-	-	9,555,634	-	(2,992,349)	(101,306)	(3,093,655)	6,461,979
Health Reimbursement Arrangement (a)	2,558,761	-	-	2,558,761	-	-	-	-	2,558,761
Retiree Medical Plan (a)	641,866	-	-	641,866	-	-	-	-	641,866
Occupational Death and Disability: (a)									
Public Employees	143,238	-	-	143,238	(7,874)	-	-	(7,874)	135,364
Police and Firefighters	96,245	-	-	96,245	(3,947)	-	-	(3,947)	92,298
Total Defined Contribution Plans	12,995,744	-	-	12,995,744	(11,821)	(2,992,349)	(101,306)	(3,105,476)	9,890,268
Total PERS	**66,744,128**	**333,333,333**	**5,422**	**400,082,883**	**(84,100,836)**	**(4,285,891)**	**(7,954,138)**	**(96,340,865)**	**303,742,018**
Teachers' Retirement System (TRS)									
Defined Benefit Plans:									
Retirement Trust	4,398,836	554,233,333	447	558,632,616	(33,885,016)	(445,230)	(389,551)	(34,719,797)	523,912,819
Retirement Health Care Trust	1,630,505	112,433,333	-	114,063,838	(8,477,937)	-	(243,006)	(8,720,943)	105,342,895
Total Defined Benefit Plans	6,029,341	666,666,666	447	672,696,454	(42,362,953)	(445,230)	(632,557)	(43,440,740)	629,255,714
Defined Contribution Plans:									
Participant Directed Retirement	2,145,837	-	-	2,145,837	-	(1,349,739)	(38,910)	(1,388,649)	757,188
Health Reimbursement Arrangement (a)	372,804	-	-	372,804	-	-	-	-	372,804
Retiree Medical Plan (a)	75,127	-	-	75,127	-	-	-	-	75,127
Occupational Death and Disability (a)	(9)	-	-	(9)	-	-	-	-	(9)
Total Defined Contribution Plans	2,593,759	-	-	2,593,759	-	(1,349,739)	(38,910)	(1,388,649)	1,205,110
Total TRS	**8,623,100**	**666,666,666**	**447**	**675,290,213**	**(42,362,953)**	**(1,794,969)**	**(671,467)**	**(44,829,389)**	**630,460,824**
Judicial Retirement System (JRS)									
Defined Benefit Plan Retirement Trust	432,794	5,241,619	-	5,674,413	(875,103)	(42,771)	(921)	(918,795)	4,755,618
Defined Benefit Retirement Health Care Trust	44,080	-	-	44,080	(49,214)	-	(2,848)	(52,062)	(7,982)
Total JRS	**476,874**	**5,241,619**	**-**	**5,718,493**	**(924,317)**	**(42,771)**	**(3,769)**	**(970,857)**	**4,747,636**
National Guard/Naval Militia Retirement System (NGNMRS)									
Defined Benefit Plan Retirement Trust (a)	627,300	-	-	627,300	(111,761)	-	(6,942)	(118,703)	508,597
Other Participant Directed Plans									
Supplemental Annuity Plan	15,314,541	-	-	15,314,541	-	(16,101,709)	(526,171)	(16,627,880)	(1,313,339)
Deferred Compensation Plan	3,734,602	-	-	3,734,602	-	(3,255,947)	(192,044)	(3,447,991)	286,611
Total All Funds	**95,520,545**	**1,005,241,618**	**5,869**	**1,100,768,032**	**(127,499,867)**	**(25,481,287)**	**(9,354,531)**	**(162,335,685)**	**938,432,347**
Total Non-Participant Directed	64,769,931	1,005,241,618	5,869	1,070,017,418	(127,499,867)	(1,781,543)	(8,496,100)	(137,777,510)	932,239,908
Total Participant Directed	30,750,614	-	-	30,750,614	-	(23,699,744)	(858,431)	(24,558,175)	6,192,439
Total All Funds	**$ 95,520,545**	**$ 1,005,241,618**	**$ 5,869**	**$ 1,100,768,032**	**$ (127,499,867)**	**$ (25,481,287)**	**$ (9,354,531)**	**$ (162,335,685)**	**$ 938,432,347**

(a) Employer only contributions.

ALASKA RETIREMENT MANAGEMENT BOARD
SCHEDULE OF NON-INVESTMENT CHANGES BY FUND
PARTICIPANT DIRECTED REFUNDS BY PLAN AND BY TYPE
(Supplement to the Treasury Division Report)
For the month ended July 31, 2014

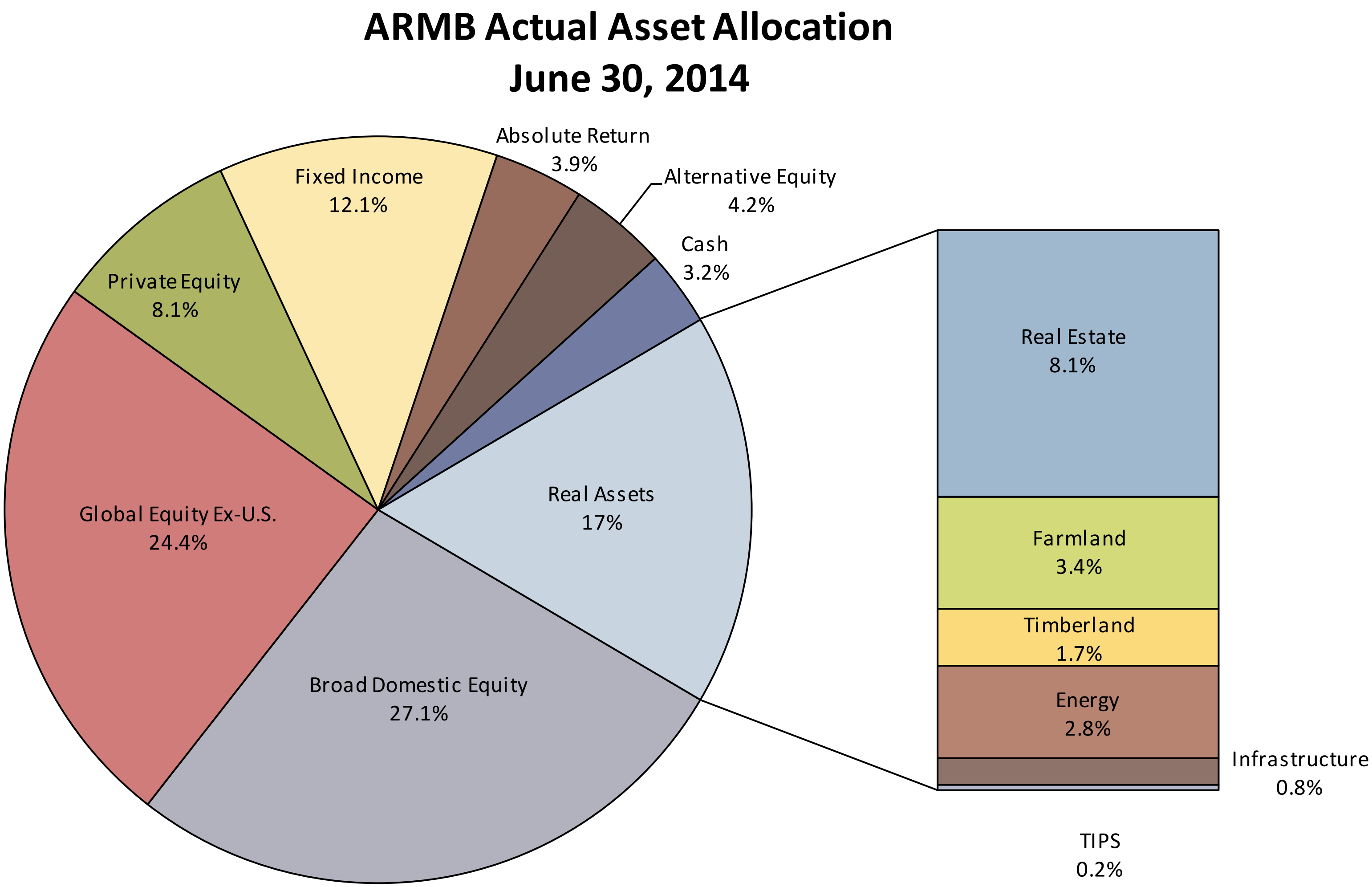
	PERS DCR Plan	TRS DCR Plan	Supplemental Annuity Plan	Deferred Compensation	TOTAL
Payment to Beneficiary	-	-	-	26,106	26,106
Death Benefit	-	-	217,012	16,283	233,295
Disability	-	-	45,829	-	45,829
Minimum Required Distribution	1,171	-	250,467	44,939	296,577
Qualified Domestic Relations Order	26,932	-	296,195	4,800	327,927
Separation from Service / Retirement	2,964,246	1,349,739	15,109,896	3,142,105	22,565,986
Purchase of Service Credit	-	-	116,897	21,714	138,611
Transfer to a Qualifying Plan	-	-	65,413	-	65,413
TOTAL	2,992,349	1,349,739	16,101,709	3,255,947	23,699,744

Real Assets
Fiscal Year 2015 Investment Plan

September 2014

Steve Sikes, Manager of Real Assets Investments

Real Assets Plan Level Allocation



Source: State Street Bank and Trust Company and manager reported NAVs for real estate, farmland, and timberland. Percentages reflect combined defined benefit pension and health care portfolios as of June 30, 2014. Percentages may not add due to rounding.

Real Assets Portfolio Approach

- Portfolio Role: The primary role of the Real Assets portfolio is to generate attractive returns in assets which provide portfolio diversification and inflation hedging to ARMB's total portfolio. Many of the asset sectors in Real Assets have historically exhibited lower volatility and a high income component of total return.
- Strategy: Lower risk, lower return approach. Conservative strategy employing low leverage and focusing on higher quality assets producing stable returns.
- Return Expectations: Long-term performance expectations for Real Estate, Farmland, Timberland, and Infrastructure are to exceed a 5% net real return over rolling 5-year periods. Custom benchmarks are also used to evaluate performance compared to market.
- Benchmark: At the asset class level, a custom benchmark of 50% NCREIF Property Index, 5% FTSE NAREIT Equity Index, 10% NCREIF Farmland Index, 10% NCREIF Timberland Index, 15% Barclays Capital US TIPS Index, and 10% S&P Global Infrastructure Index is employed.
- Structure: Except for the REIT, TIPS, MLP investments, and the public stock portion of the infrastructure portfolio the Real Assets portfolio is a collection of private, illiquid assets requiring long-term holding periods. Limited liability structures are utilized to hold the private assets.
- Implementation: Management of the portfolio is delegated among staff. Real Estate, Farmland, Timberland, and Infrastructure are managed by the real assets group. TIPS are managed by fixed income staff and Energy is managed by private equity staff. Discretionary authority is given to external managers to select and manage the investments.

Role of Real Assets

- Diversification – Low correlations with stocks and bonds, particularly with private market components.
- Inflation Hedge – Relatively high correlation with CPI driven by inflation linked payments (infrastructure), economic inputs (agriculture and timber), and/or economic sensitivity.
- Consistent income return driven by leased or contractual based cash flow structure (real estate, agriculture, infrastructure).

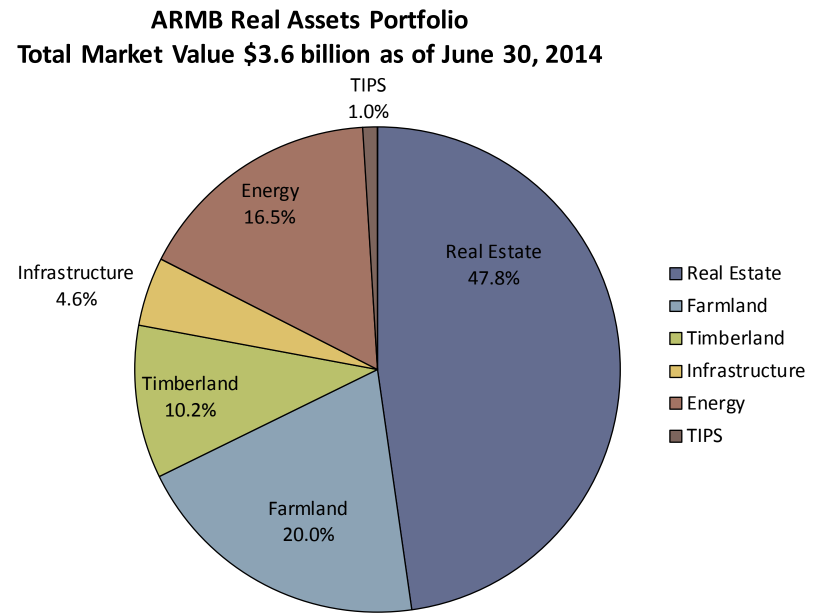
Selected Asset Returns 2007-2013

2007	2008	2009	2010	2011	2012	2013
S&P:GI Infr Idx **23.2%**	ARMB Farmland Idx **13.4%**	MSCI EAFE **31.8%**	NAREIT All Equity Index **27.9%**	ARMB Farmland Idx **14.9%**	NAREIT All Equity Index **19.7%**	S&P 500 **32.4%**
NCREIF:Timberland Index **18.4%**	NCREIF:Timberland Index **9.5%**	NAREIT All Equity Index **28.0%**	S&P 500 **15.1%**	NCREIF:Total Index **14.3%**	ARMB Farmland Idx **17.3%**	MSCI EAFE **22.8%**
ARMB Farmland Idx **17.1%**	Barclays Aggregate **5.2%**	S&P 500 **26.5%**	NCREIF:Total Index **13.1%**	NAREIT All Equity Index **8.3%**	MSCI EAFE **17.3%**	ARMB Farmland Idx **15.8%**
NCREIF:Total Index **15.8%**	NCREIF:Total Index **(6.5%)**	S&P:GI Infr Idx **25.3%**	MSCI EAFE **7.8%**	Barclays Aggregate **7.8%**	S&P 500 **16.0%**	S&P:GI Infr Idx **15.0%**
MSCI EAFE **11.2%**	S&P 500 **(37.0%)**	ARMB Farmland Idx **7.3%**	ARMB Farmland Idx **7.7%**	S&P 500 **2.1%**	S&P:GI Infr Idx **11.9%**	NCREIF:Total Index **11.0%**
Barclays Aggregate **7.0%**	NAREIT All Equity Index **(37.7%)**	Barclays Aggregate **5.9%**	Barclays Aggregate **6.5%**	NCREIF:Timberland Index **1.6%**	NCREIF:Total Index **10.5%**	NCREIF:Timberland Index **9.7%**
S&P 500 **5.5%**	S&P:GI Infr Idx **(39.0%)**	NCREIF:Timberland Index **(4.8%)**	S&P:GI Infr Idx **5.8%**	S&P:GI Infr Idx **(0.4%)**	NCREIF:Timberland Index **7.8%**	NAREIT All Equity Index **2.9%**
NAREIT All Equity Index **(15.7%)**	MSCI EAFE **(43.4%)**	NCREIF:Total Index **(16.9%)**	NCREIF:Timberland Index **(0.2%)**	MSCI EAFE **(12.1%)**	Barclays Aggregate **4.2%**	Barclays Aggregate **(2.0%)**

Source: Callan

Real Assets Portfolio Sector Allocation

- The Fiscal Year 2015 asset allocation target for Real Assets is 17% +/- 8%.
- The actual Real Assets allocation was 17% at June 30, 2014.
- ARMB added a dedicated infrastructure investment program to the Real Assets asset class in FY14 committing $150 million to two public infrastructure managers and $300 million to two private open-end funds. The public strategies were funded in FY14 but the private capital was not yet invested as of June 30, 2014.
- Real Asset sector allocations continue to migrate toward the long-term targets. New funds into the retirement system are expected to help fund the private infrastructure investments and not significantly dislocate the allocation to Real Assets.



ARMB Actual Sector Allocation Compared to Target Allocation as of June 30, 2014

Sector Allocation	Actual %	Target %	Target Band	Actual % (-) Target %
Real Assets				
Real Estate	47.8%	35%	+40%/-35%	12.8%
Farmland	20.0%	25%	+30%/-25%	-5.0%
Timberland	10.2%	15%	+30%/-15%	-4.8%
Infrastructure	4.6%	12.5%	+10%/-12.5%	-7.9%
Energy	16.5%	12.5%	+10%/-5%	4.0%
TIPS	1.0%	0%	+20%	1.0%

Source: State Street Bank and Trust Company and manager reported NAVs for real estate, farmland, and timberland. Percentages reflect combined defined benefit pension and health care portfolios as of June 30, 2014. Percentages may not add due to rounding.

Real Assets Performance

Returns for Periods Ended June 30, 2014

	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years
Real Assets(Prelim)	**4.41%**	**13.15%**	**11.23%**	**9.59%**
Real Assets Target (1)	3.50%	10.98%	10.24%	8.84%
Real Estate Pool(Prelim)	3.22%	12.35%	10.07%	9.15%
Real Estate Target (2)	3.33%	11.43%	11.49%	11.21%
Private Real Estate	2.24%	11.88%	9.68%	8.41%
NCREIF Total Index	2.91%	11.21%	11.32%	9.67%
REIT Internal Portfolio	7.16%	12.95%	11.67%	23.50%
NAREIT Equity Index	7.13%	13.02%	11.89%	23.65%
Total Farmland	1.30%	8.50%	13.05%	10.88%
UBS Agrivest	1.53%	9.57%	14.77%	11.78%
Hancock Agricultural(Prelim)	0.81%	6.54%	10.17%	9.45%
ARMB Farmland Target (3)	2.42%	12.05%	15.87%	12.58%
Total Timber	2.37%	10.49%	7.57%	4.83%
Timberland Investment Resources	3.45%	8.39%	5.63%	3.37%
Hancock Timber	0.00%	14.61%	11.17%	7.40%
NCREIF Timberland Index	1.08%	9.92%	6.73%	3.33%
TIPS Internal Portfolio	3.66%	4.19%	3.73%	5.27%
BC US TIPS Index	3.81%	4.44%	3.55%	5.55%
Total Energy Funds *	(1.01%)	(5.73%)	1.54%	4.98%
CPI + 5%	2.12%	7.05%	6.80%	7.16%
MLP Composite	16.99%	34.52%	-	-
Alerian MLP Index	14.18%	21.57%	18.96%	26.19%
Infrastructure	8.57%	-	-	-
Brookfield	10.21%	-	-	-
Lazard	6.94%	-	-	-
Global Infrastructure Idx	8.42%	30.42%	11.08%	14.03%

(1) As of 4/01/2014, Real Assets Target is 50% NCREIF Property Index, 10% NCREIF Farmland Index, 10% NCREIF Timberland Index, 15% Barclays Capital US TIPS Index and 10% S&P Global Infrastructure.
(2) ARMB Custom Real Estate Target is 90% NCREIF Property Index and 10% FTSE NAREIT All Equity REIT Index.
(3) ARMB Custom Farmland Target is leased-only properties in the NCREIF Farmland Index reweighted to reflect 90% row crops and 10% permanent crops until 1/1/08 and 80% row crops and 20% permanent crops thereafter .
Farmland and Timber data supplied by the manager and may vary from State Street returns due to timing variations.
* Return data supplied by State Street.

Source: Callan Associates June 30, 2014 Performance Report

Real Estate Portfolio

- Core portfolio returned 10.8% net for the fiscal year. The core portfolio underperformed the NCREIF Property Index benchmark return of 11.2%. Separate account activity reflected sales of four properties where ARMB's investment managers believed the capital could be better invested in real estate assets with a more attractive long term risk/return profile. One apartment building was acquired during the fiscal year. Cornerstone Real Estate Advisers was terminated as a separate account manager effective September 30, 2014.
- Non-core portfolio returned 14.7% net during the fiscal year benefitting from continued improvement in the economy, leveraged capital structures, and a mature portfolio.
- U.S. REIT portfolio returned 12.95% compared to FTSE NAREIT All Equity REITs Index of 13.02%.
- Staff committed $75 million to KKR Real Estate Partners Americas LP in 2014 to take advantage of the improving economy. The fund is an opportunistic real estate fund targeting 11-15% net returns. The fund will be primarily focused on real estate opportunities in North America with some exposure to Western Europe. Staff is selectively considering additional closed end fund exposure to increase the real estate returns.

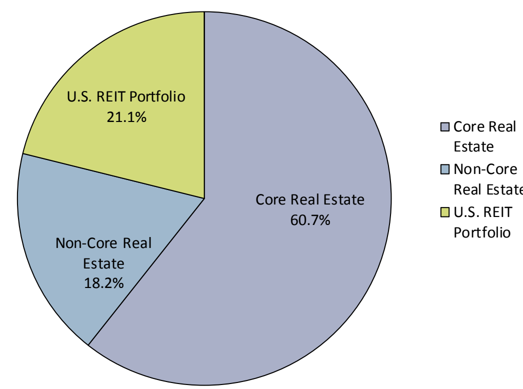
Real Estate Portfolio Profile

- Net Asset Value: $1.72 billion
- Number of Properties: 20 + commingled fund interests
- Core Structure: 3 separate accounts, 2 open-end funds
- Non-Core Structure: 15 commingled funds
- Remaining Separate Account Allocation: $182 million

Annual ARMB Real Estate Returns
Fiscal Year ending June 30

	2014	2013	2012	2011	2010	2009	2008	2007	2006
ARMB Core Income	4.8%	5.4%	5.7%	6.8%	7.3%	5.9%	5.6%	6.0%	6.6%
ARMB Core Appreciation	6.5%	4.7%	5.8%	11.3%	-8.0%	-27.7%	2.6%	11.5%	10.8%
ARMB Core Total (Net)	10.8%	9.6%	11.0%	17.8%	-1.9%	-23.7%	7.6%	17.2%	17.1%
ARMB Non-Core Total (Net)	14.7%	5.9%	3.1%	26.2%	-18.1%	-58.9%	3.2%	36.7%	27.0%
ARMB REIT (Net)	13.0%	9.5%	12.6%	35.5%	52.3%	-46.5%	-15.7%	12.2%	13.8%
ARMB Total Real Estate (Net)	12.3%	8.7%	9.2%	20.8%	-3.9%	-34.8%	5.1%	21.2%	18.5%
ARMB Custom Benchmark	11.4%	10.7%	12.4%	18.4%	3.7%	-21.1%	6.8%	16.9%	18.8%

ARMB Real Estate Portfolio
Strategy Weights as of June 30, 2014



Source: Townsend

Farmland Portfolio

- Farmland portfolio returned 8.50% net for the fiscal year. The farmland portfolio underperformed the ARMB Farmland Target benchmark return of 12.05%. Separate account activity reflects the sale of four properties during the year. One acquisition was made.
- The Farmland portfolio is within the row/permanent crop-type mix targets of 80%/20% +/- 10% and is well diversified based on location and crop type. The portfolio grows a wide variety of crops, the largest of which is corn at approximately 20%. Permanent crops include pistachios, almonds, apples, oranges, and wine grapes.
- Continuing the trend from past years, Farmland markets continue to be a challenging market to find acquisitions that fit the ARMB 3-year minimum going-in yield guidelines of 5% for the portfolio and 4% for individual properties. Land prices have appreciated faster than rent growth which has compressed current yields. Land owners have been reluctant to sell due to attractive commodity prices and the lack of more attractive alternatives for their capital.
- Historical ARMB farmland returns show consistently strong results with a relatively stable income return. More recent income returns have declined as a result of appreciation growth exceeding lease income growth. Underperformance compared to the index primarily reflects the underweight to permanent crops and the Corn belt.

Farmland Portfolio Profile

- Net Asset Value: $719 million
- Number of Properties: 85
- Total Acres: 149,990
- Structure: 2 separate accounts
- Remaining Separate Account Allocation: $140 million

Investment Location - Top 5 States

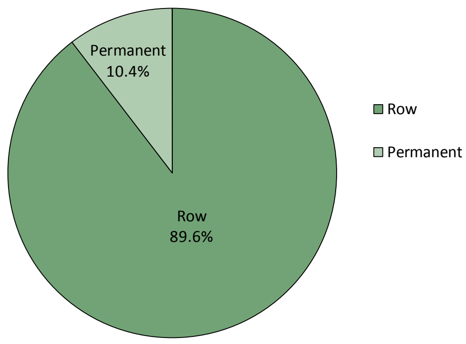
	ARMB Portfolio	Properties
Idaho	18.8%	15
California	18.1%	11
Illinois	12.0%	7
Texas	12.0%	9
Colorado	9.6%	9

Annual ARMB Farmland Returns
Fiscal Year ending June 30

	2014	2013	2012	2011	2010	2009	2008	2007	2006
ARMB Farmland Income Return	2.89%	3.25%	3.32%	4.88%	3.98%	3.77%	4.99%	5.06%	4.93%
ARMB Farmland Appreciation Return	5.49%	12.00%	11.61%	4.89%	1.49%	2.05%	9.68%	6.96%	3.20%
ARMB Farmland Total Net Return	8.50%	15.56%	15.23%	9.91%	5.52%	5.88%	15.05%	12.30%	8.26%
ARMB Farmland Custom Benchmark	12.05%	17.72%	17.92%	10.21%	5.47%	11.23%	18.03%	15.74%	20.25%

Source: Callan

ARMB Farmland Portfolio
Strategy Weights as of June 30, 2014



Timberland Portfolio

- Timberland portfolio returned 10.49% net for the fiscal year. The timberland portfolio outperformed the NCREIF Timberland Index benchmark return of 9.92%. Separate account activity reflects three acquisitions by Timberland Investment Resources, LLC.
- A significant amount of allocation is not invested. As this capital is deployed, the Timberland portfolio diversification will continue to improve.
- Returns have improved with the increased level of housing starts and wood product prices. ARMB returns have been primarily appreciation results thus far but improved income is expected with increased wood prices and the aging (growth) of its holdings. ARMB is well positioned for domestic growth given its overweight to the low cost production area of the South.

Timberland Portfolio Profile

- Net Asset Value: $367 million
- Number of Properties: 15
- Total Acres: 186,171
- Structure: 2 separate accounts
- Remaining Separate Account Allocation: $175 million

Annual ARMB Timberland Returns

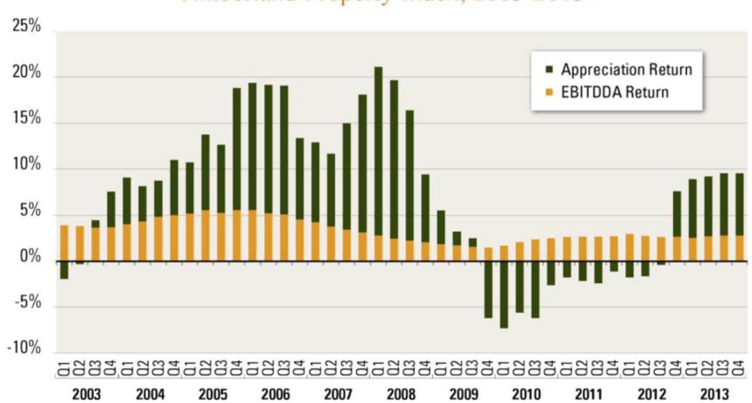
Fiscal Year ending June 30

Source: Callan

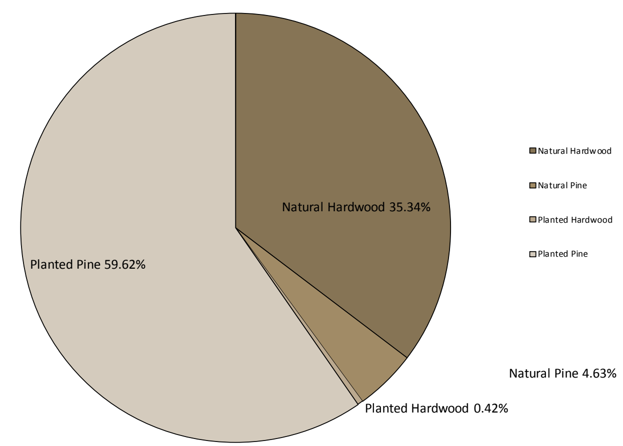
	2014	2013	2012	2011	2010
ARMB Timberland Total Net Return	10.49%	7.17%	5.11%	4.61%	-2.78%
NCREIF Timberland Index	9.92%	9.37%	1.13%	0.51%	-3.60%

Diversification by Geographic Region			
	ARMB Portfolio	NTI	Difference
South	57.0%	69.7%	-12.6%
Pacific Northwest	16.1%	23.4%	-7.4%
Northeast	10.8%	4.8%	6.1%
Lake States	16.0%	2.1%	13.9%

Rolling Four-Quarter Total Return of the NCREIF Timberland Property Index, 2003-2013

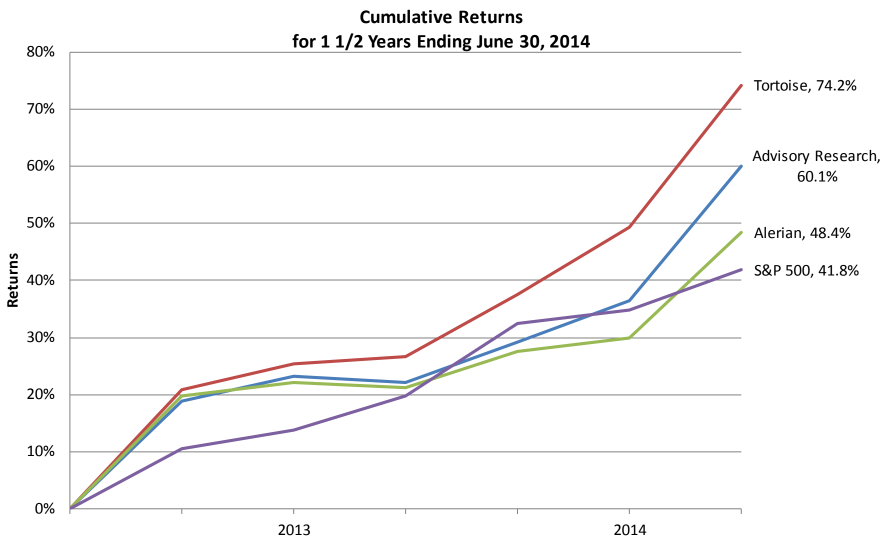


ARMB Timberland Portfolio
Portfolio Weights by Species as of June 30, 2014



Infrastructure and Energy Portfolios

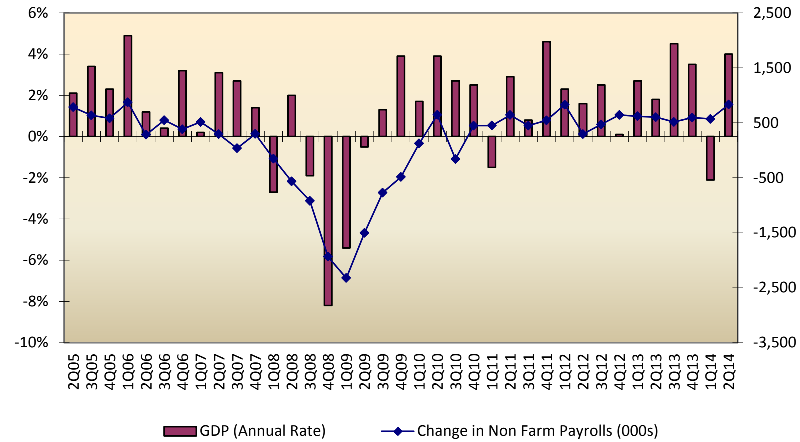
- In FY14, ARMB committed $450 million to a dedicated infrastructure investment portfolio as part of the Real Assets allocation.
- Lazard and Brookfield were hired to manage two global infrastructure stock portfolios. Both use a bottom-up stock picking strategy focusing on companies that own and operate real assets. Both Lazard and Brookfield focus on OECD countries with Brookfield also having some some emerging market exposure. Both managers are focused on pure-play infrastructure stocks which reflect stable and predictable cash flows with high current income and stable long-term growth prospects.
- Additionally, ARMB made commitments to two open end funds, managed by IFM and JPM, to invest in private infrastructure assets in OECD countries.
- As of June 30, 2014, the public stock portfolio was fully invested. Subsequent to year-end JPM has invested its commitment. The IFM investment is expected to occur over the next six to nine months at which time ARMB will be fully invested in the sector.
- Staff has been encouraged by the internal and external growth opportunities reported by both IFM and JPM which has confirmed the current yield plus growth story thesis of the investment decision.
- ARMB's Real Assets energy portfolio is comprised of private investments in four energy funds sponsored by EIG and two MLP portfolios managed by Advisory Research and Tortoise. MLPs have produced strong returns for ARMB benefiting from the growth in the US energy sector and the growing appeal toward its ability to provide both attractive yield and growth.
- While the return history is relatively short, beginning in 2013, ARMB's MLP managers have produced strong returns compared to the broad market.



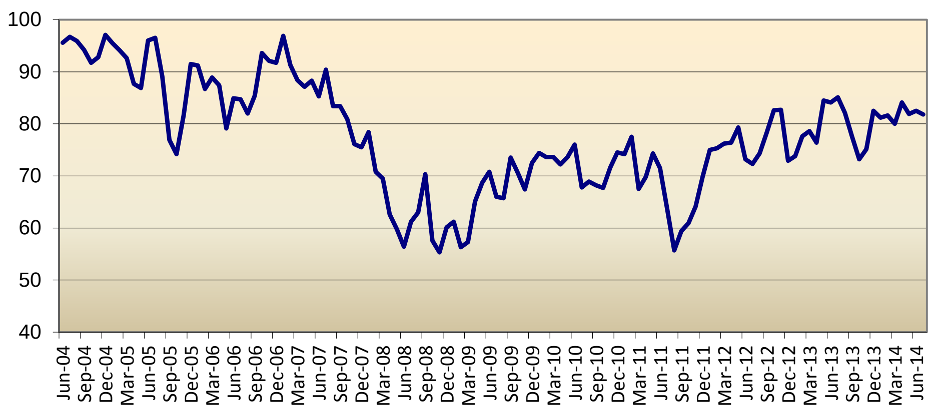
U.S. Economy

- The U.S. economy continues to demonstrate signs of strength and growth.
- GDP and employment growth have recovered from recession levels.
- Consumer confidence continues to improve.
- Housing market sales volume and prices continue to improve.

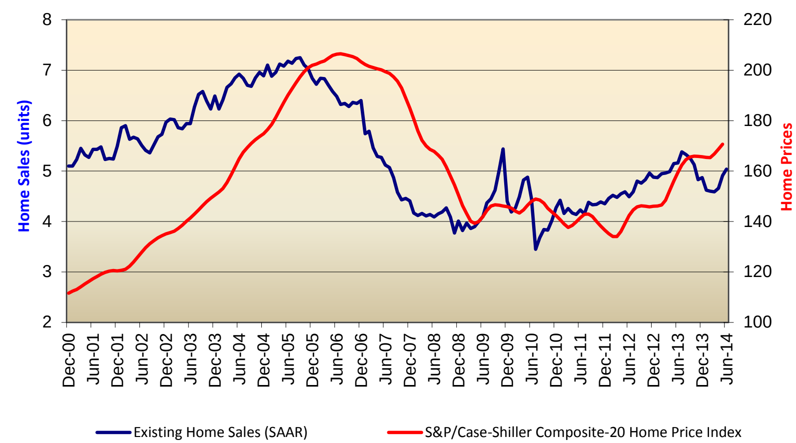
Quarterly GDP and Changes in Non Farm Payrolls
June 2005 through June 2014



University of Michigan Survey of Consumer Confidence Sentiment
June 2004 through July 2014



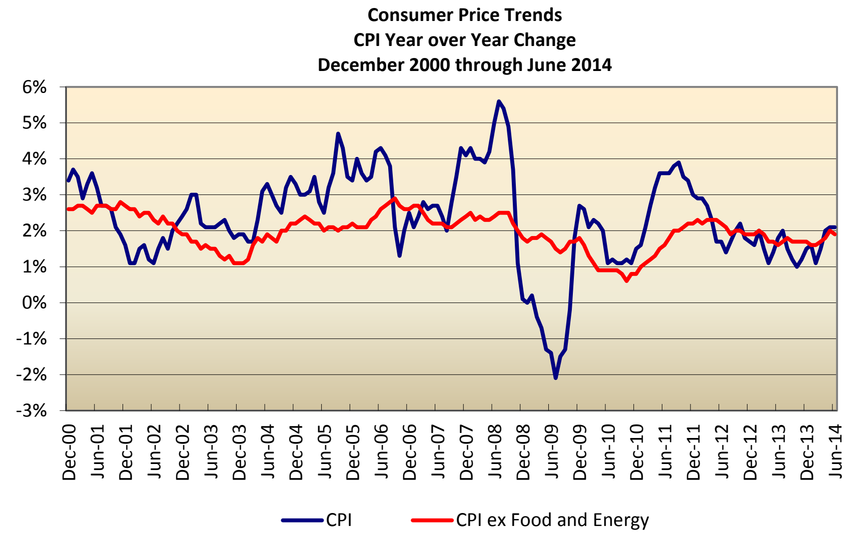
Existing Home Sales (millions) and Home Price Index
December 2000 through June 2014

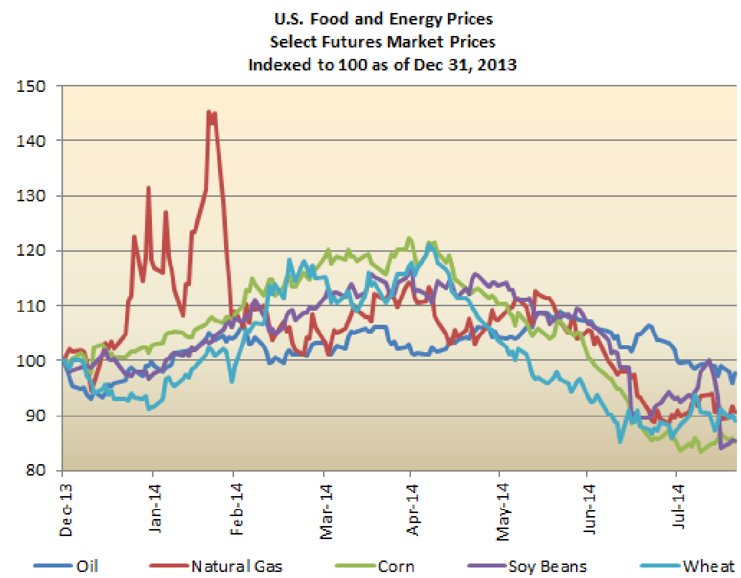


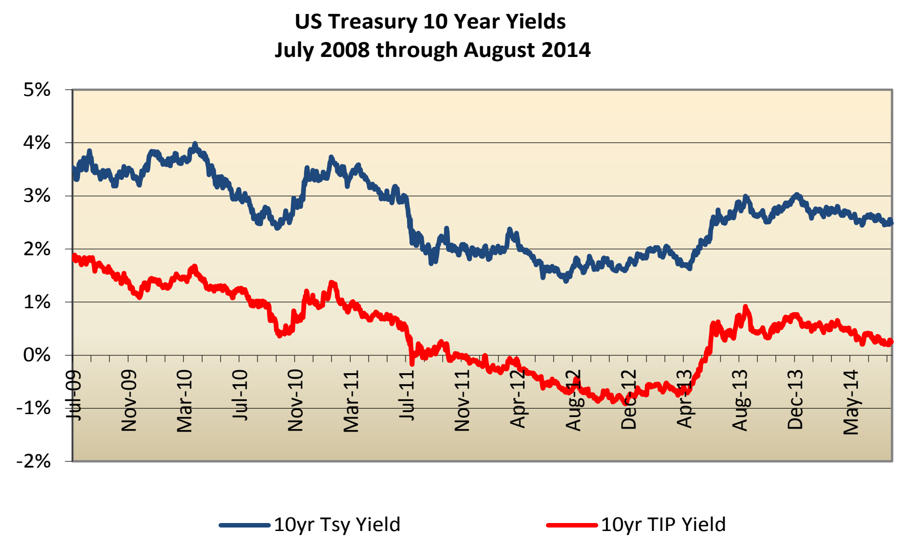
Source: Bloomberg

Inflation

Despite a protracted period of aggressive monetary policy by the Federal Reserve, inflation measures continue to reflect a relatively muted inflationary environment. The market currently expects approximately 2.19% inflation over the next 10 years as implied by the difference between U.S. Treasury nominal yields (2.39%) and US TIPS real yield (0.20%). Existing and expected inflation levels remain muted. The direction of commodity prices also suggest a continued benign inflation environment.

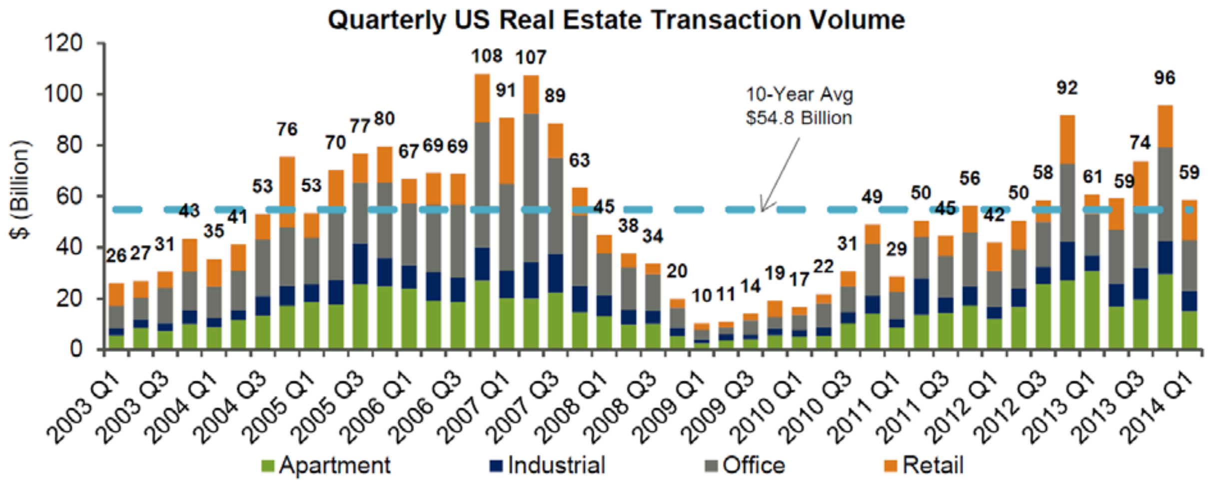




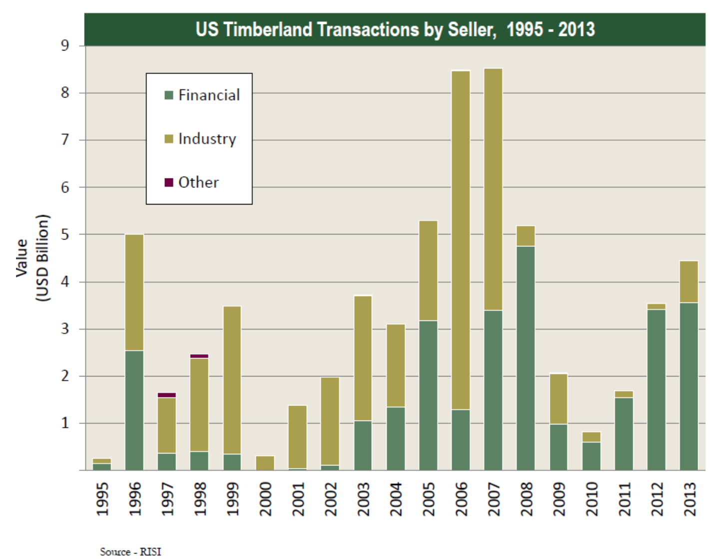


Source: Bloomberg

- Real Estate equity and debt markets are healthy and active. Primary markets are very liquid, and as pricing has increased, investors are moving into secondary markets. Strong transaction levels are expected to continue given capital availability and growing appetite for risk.
- The Timberland transaction market continues to improve but transaction volume has been below expectations, particularly in larger transactions. High quality timberland transactions have become very competitive.
- Farmland markets are healthy but attractive properties at acceptable prices are difficult to find. Farmland markets continue to benefit from good fundamentals, capital structure, and growing investor interest.



Source: RCA, LIM; Excludes privatizations; Includes transactions with a grossed up value of $5MM+ Data through April 2014

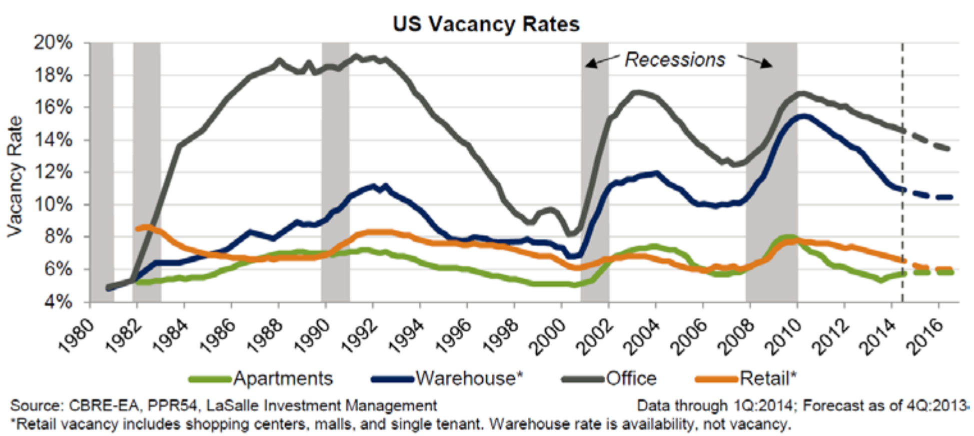


Source: Hancock Timber Resource Group

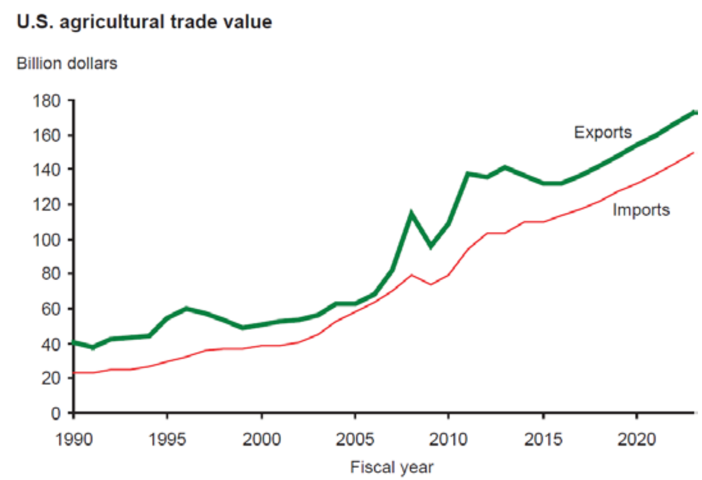
Fundamentals

- Real Estate fundamentals continue to improve in warehouse, office, and retail although vacancy levels are still elevated compared to prerecession levels. Apartment vacancy levels have increased slightly from a very healthy level in response to new supply. Fundamentals are improving beyond the primary markets. Rent growth is occurring across the sectors.
- Timberland fundamentals are expected to strengthen with continued growth in the residential construction market. The Asian timber deficit and increasing bioenergy demands are also expected to help U.S. timberland fundamentals. Southern sawtimber prices are expected to appreciate strongly over the next five years.
- U.S. net farm income is expected to decline over the next few years as record commodity prices moderate from record levels. However, a weak US dollar, a growing global food demand, and continued biofuel demand are expected to support long term growth.

Source: TIR



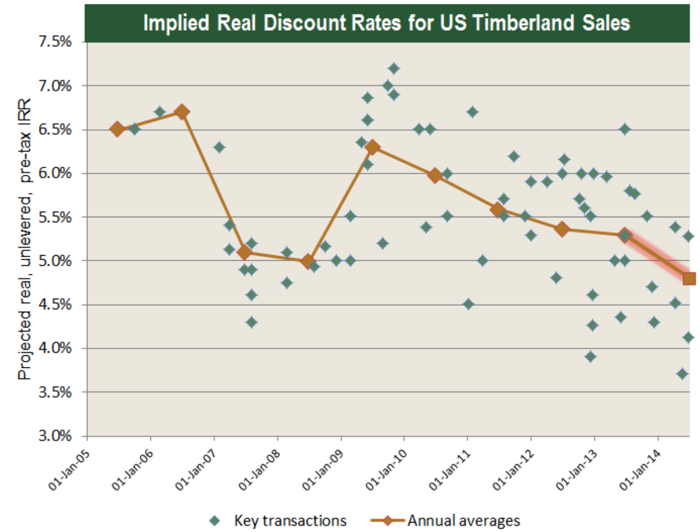
Source: LaSalle Investment Management



Source: USDA Long-term Projections, February 2014

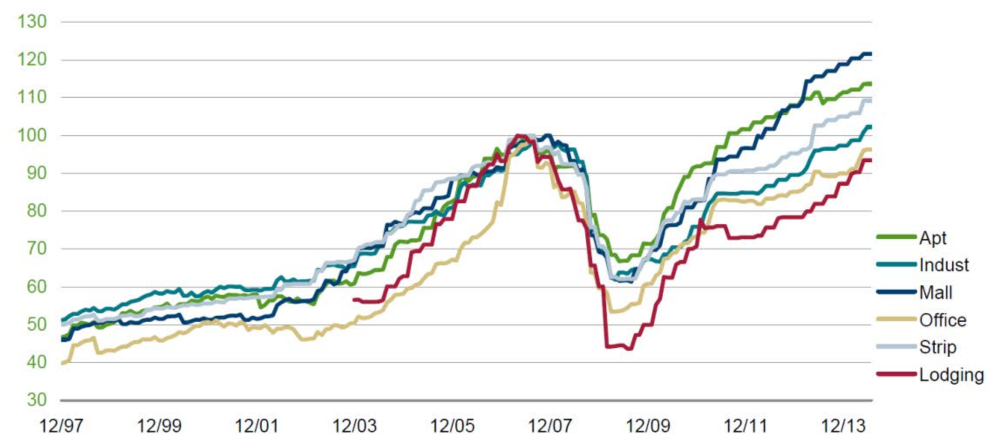
Current Market Opportunity

- Real Asset valuations have participated in the global asset value appreciation that has occurred since the 2008 global financial crisis with current valuations approximating pre-crisis levels in many areas.
- Due to its yield generating ability and demonstrated diversification ability the sector has attracted more investors thereby increasing competition and valuations.
- Current monetary policy has encouraged appreciation of yield assets. A change in that policy may negatively impact asset valuations. However, income growth should help to support returns over the long-run.



Source: Hancock Timber Resource Group, assumes 2.5% long-term inflation rate

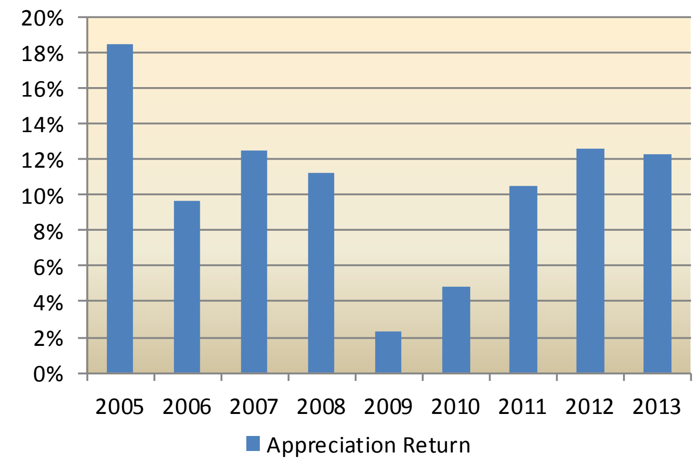
Green Street Property Sector Indices



Property sector indices are indexed to 100 at their '07 peaks.

Source: Green Street Advisors,

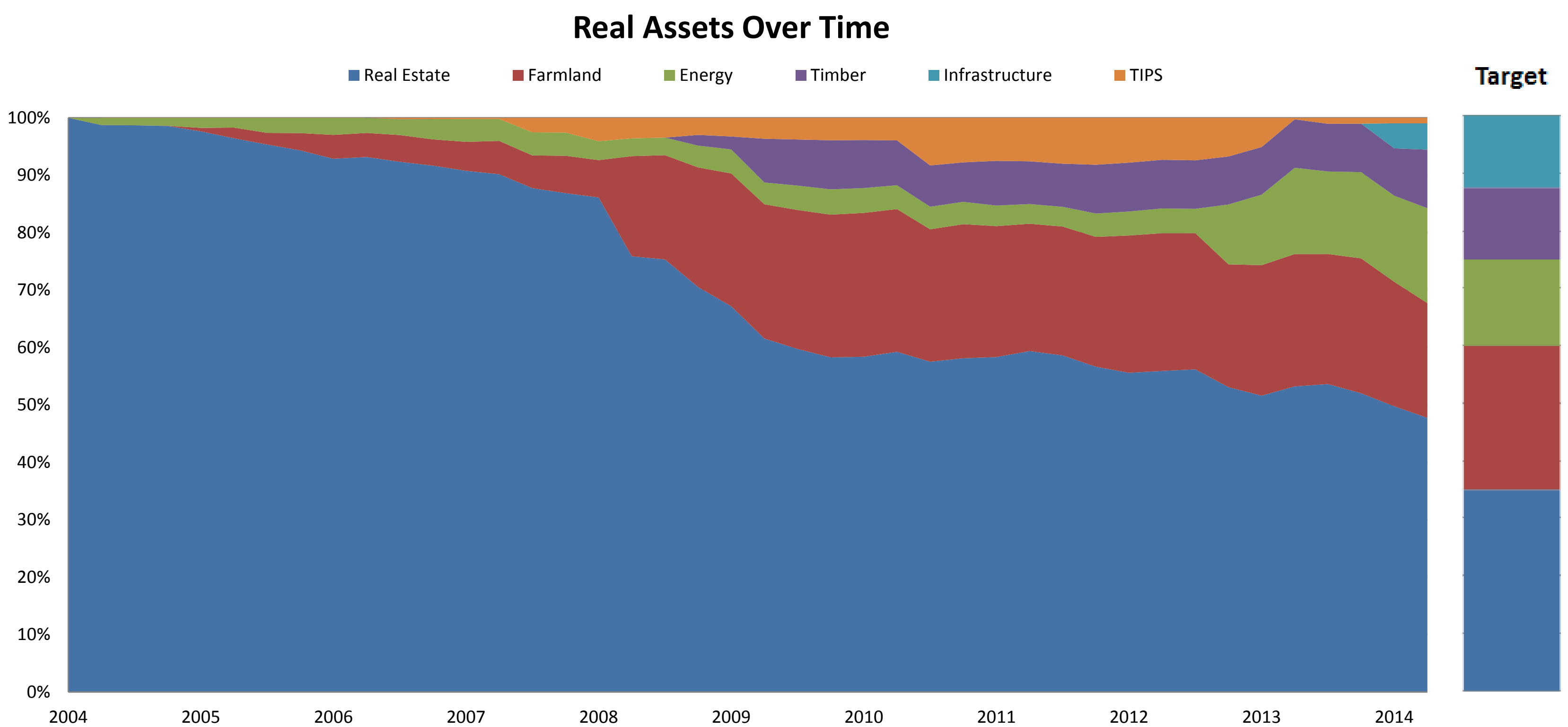
NCREIF Farmland Index
Row Cropland Appreciation Returns
2005 - 2013



Source: NCREIF

History of Real Assets Allocation

The Real Assets asset class continues to evolve and mature with each sector now approaching its target allocation.



Aggregate Real Assets Market Values ($ billions, as of June 30, 2014)

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
0.96	1.30	1.53	1.98	2.49	2.04	2.03	2.55	2.69	3.13	3.60

Projected Real Assets Allocation

- The Real Assets portfolio is currently on its target allocation of 17% and is projected to drop in FY15 and then grow over the following four years.
- The portfolio is expected to approximate its sector allocation targets over this time period.
- Liquid investments in REITS, MLPS, and open-end funds can be used to calibrate sector investment levels.

Actual Portfolio Weights as of June 30, 2014					Five Year Forecast				
Sector Allocation	**Actual %**	**Target %**	**Over/Under%**	**Band**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19**
Real Assets Allocation	17.0%	17.0%	0.0%	+/-8%	16.4%	17.3%	17.5%	17.8%	18.1%
Real Assets Sector Allocation									
Real Estate	47.8%	35.0%	12.8%	+40%/-35%	43.3%	40.5%	38.6%	37.7%	37.1%
Farmland	20.0%	25.0%	-5.0%	+30%/-25%	18.8%	18.5%	18.9%	19.2%	19.0%
Timberland	10.2%	15.0%	-4.8%	+30%/-15%	10.3%	11.5%	12.2%	12.0%	11.8%
Infrastructure	4.6%	12.5%	-7.9%	+10%/-12.5%	9.5%	11.8%	12.1%	12.5%	12.9%
Energy	16.5%	12.5%	4.0%	+10%/-5%	15.9%	15.6%	16.1%	16.6%	17.2%
TIPS	1.0%	0.0%	1.0%	+20%	2.2%	2.1%	2.0%	2.0%	2.0%
Private Real Estate Strategy Allocation									
Core	76.9%	100.0%	-23.1%	-25%	85%	88%	93%	94.5%	96.1%
Non-Core	23.1%	0.0%	23.1%	+27%	15%	12%	7%	5.5%	3.9%
Private/Public Real Estate Allocation									
Private	78.9%	90.0%	-11%	+/-10%	81%	80%	79%	78%	77%
Public	21.1%	10.0%	11%	+/-10%	19%	20%	21%	22%	23%

- Total pension fund assets based on projections from Buck Consultants, July 3, 2014, reflecting HB385 and SB119.
- Cash flow expectations based on manager and staff estimates.
- Projections include no future new allocations or commitments.
- Schedule includes changes in market values based on expected returns.

Fiscal Year 2015 Investment Recommendations

<table>
<tr><th>Category</th><th>Recommendation</th></tr>
<tr><td>Real Assets</td><td>No strategic recommendations.</td></tr>
<tr><td>Real Estate</td><td>No new allocations for current core separate account strategies or commitments to open-end funds. Core separate account advisors should continue to manage existing portfolios and allocations toward core assets located in markets with high barriers to entry. Separate account advisors should continue to take advantage of opportunities to sell non-strategic assets at attractive prices and improve the quality and income stability of the portfolio.

Staff intends to explore new real estate investments in the following areas:
- Medical Office (on agenda for October Education Conference)
- Value-Add and Opportunistic Real Estate Funds
- Participating Mortgage Investments

Given the full nature of the real estate allocation, funding for additional private real estate strategies will likely come from the REIT portfolio but will be dependent on the needs of the portfolio at that time.

Recommend increasing the bands around the private/public real estate target of 90%/10% to permit a larger REIT investment while private real estate investments are pursued.

<table>
<tr><th></th><th>Target Weight</th><th>Current Bands</th><th>Proposed New Bands</th></tr>
<tr><td>Private Real Estate</td><td>90%</td><td>+/-10%</td><td>+10%/-20%</td></tr>
<tr><td>Public Real Estate</td><td>10%</td><td>+/-10%</td><td>+20%/-10%</td></tr>
</table>

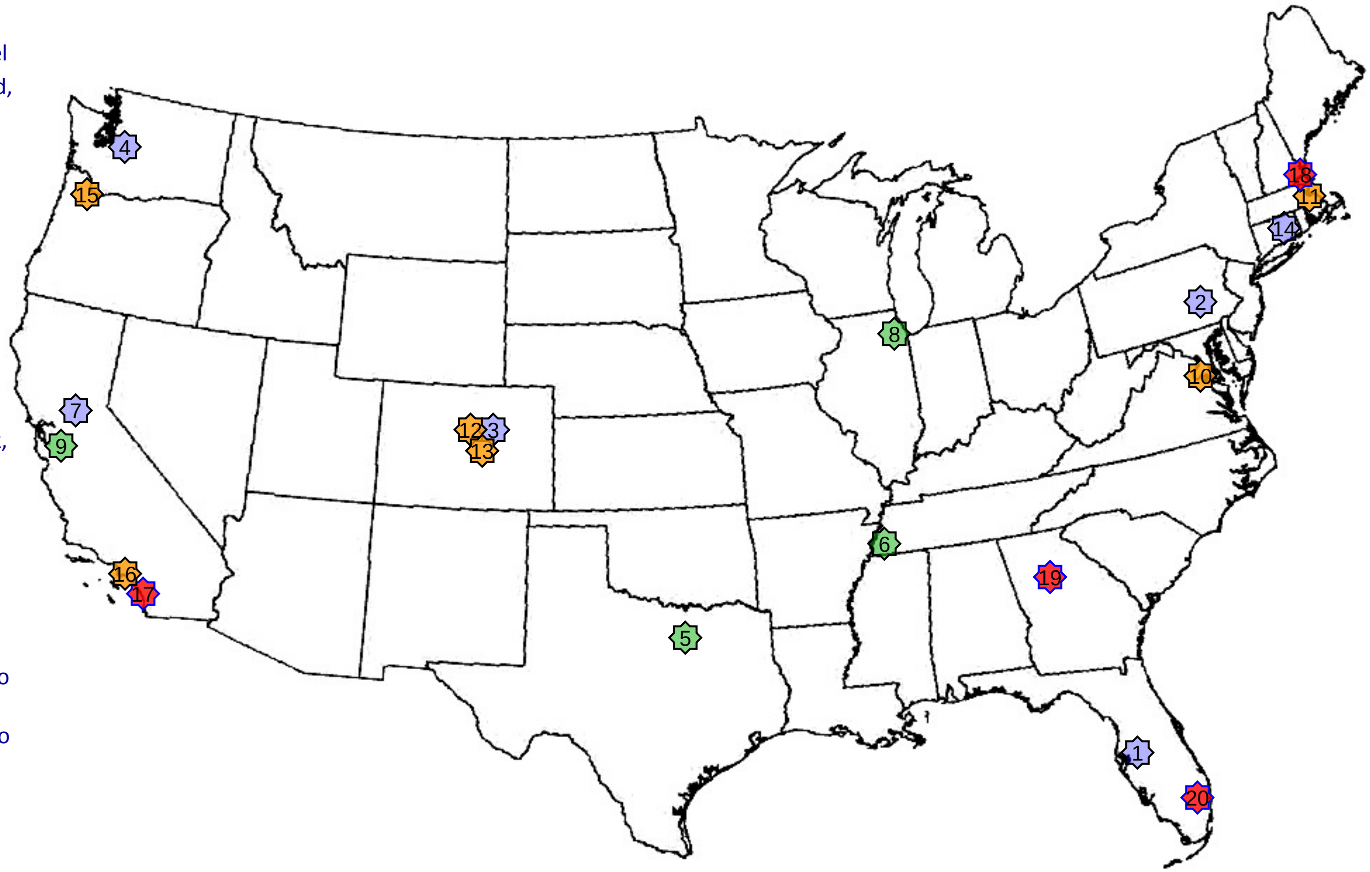
Recommend increasing the single manager limit from 35% to 45% to permit more investments with managers offering multiple products.</td></tr>
<tr><td>Farmland</td><td>No recommended changes to strategy or separate account manager allocations.</td></tr>
<tr><td>Timberland</td><td>No recommended changes to strategy or separate account manager allocations.</td></tr>
<tr><td>Infrastructure</td><td>No recommended changes to strategy.</td></tr>
<tr><td>TIPS and Energy</td><td>No recommended changes to strategy.</td></tr>
</table>

Appendix

Appendix A: Separate Account Real Estate Properties

Property List

1. Versant Place, Brandon, Florida - Sentinel
2. Valleybrook at Chadds Ford, Chadds Ford, Pennsylvania – Sentinel
3. Remington at Lone Tree, Denver, Colorado – UBS
4. Springbrook Apartments, Renton, Washington – UBS
5. Gateway Distribution Center, Roanoke, Texas – UBS
6. Memphis Industrial Park, Memphis, Tennessee – UBS
7. Glacier/Preserve Blue Ravine Inc., Folsom, CA – Sentinel
8. West 55th Street Industrial Park, McCook, Illinois – UBS
9. Winton Industrial Center, Hayward, California – UBS
10. Virginia Square, Arlington, Virginia – LaSalle
11. 400 Crown Colony, Quincy, Massachusetts - UBS
12. One Maroon Circle, Englewood, Colorado – UBS
13. Two Maroon Circle, Englewood, Colorado – UBS
14. Parallel 41, Stamford, Connecticut– Cornerstone
15. Amber Glen, Hillsboro, Oregon – LaSalle
16. 330 North Brand Boulevard, Glendale, California – Cornerstone
17. Aliso Creek, Laguna Beach, California – LaSalle
18. Westford Valley Marketplace, Westford, Massachusetts – UBS
19. Shallowford Corners, Roswell, Georgia – LaSalle
20. Winston Park Shopping Center, Coconut Creek Florida - UBS



Legend

Apartments	Blue	
Industrial	Green	
Office	Orange	
Retail	Red	

Appendix B: Glossary of Terms

Allocation	The total amount of investments a Separate Account Manager is authorized to make on behalf of the ARMB.
Barrier to Entry	Broad term used to describe a market environment that is supply constrained due to one or more factors such as zoning, lack of developable real estate, geography, etc.
Cap Rate	Capitalization Rate. One measure of expected return determined by dividing the first year expected annual net operating income from the property by the purchase price.
Closed-End Fund	A commingled fund that has a finite life. Investors ability to invest is limited to a certain time period at the inception of the fund. An investor's ability to sell the fund is often limited. Structures include limited partnerships, limited liability companies, and REITs.
Core Real Estate	Substantially leased, multi-tenant properties, greater than $5 million in size, in major metropolitan areas, with little or no mortgage debt. Makes up the largest share of most pension fund portfolios.
Commitment	The total amount of investment a commingled fund is authorized to make on behalf of the ARMB.
NCREIF Property Index - NPI	National Council of Real Estate Investment Fiduciaries - NCREIF Property Index. The NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment. As of June 30, 2014: 7,141 properties valued at over $382 billion.
NCREIF Farmland Index – NFI	The NCREIF Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual agricultural properties acquired in the private market for investment purposes only. All properties in the Farmland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment. As of June 30, 2014: 539 properties valued at over $4.5 billion.
NCREIF Timberland Index – NTI	The NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only. All properties in the Timberland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment. As of June 30, 2013: 461 properties valued at over $23 billion.
Net Asset Value	Total asset value – total liabilities = net asset value. In the context of REITs, net asset value is the value of real estate owned by the company less all debt owed by the company.
Non-Core Real Estate	Value-add or opportunistic real estate strategies involving higher risk than core investing. Investment strategies include relatively substantial redevelopment or releasing, buying distressed assets, new property development, and high leverage.
Open-End Fund	A commingled fund that has an infinite life. An investor may buy and sell shares of the fund. Similar to a mutual fund.
REIT	Real Estate Investment Trust – A company that owns and operates income producing real estate such as apartments, shopping centers, offices, hotels, and warehouses. A REIT must distribute at least 90% of taxable income to its shareholders annually. A REIT is a creation of the Internal Revenue Code which allows companies, who elect and meet stringent requirements, to avoid paying taxes on income passed through to shareholders.
Separate Account	An account with an investment manager that is invested exclusively for the ARMB and is not commingled with other client funds. Investments are made at the discretion of the Separate Account manager within the policy parameters approved by ARMB.

Alaska Retirement Management Board
Portfolio and Manager Performance Report

Second Quarter 2014

The Townsend Group

Table of Contents

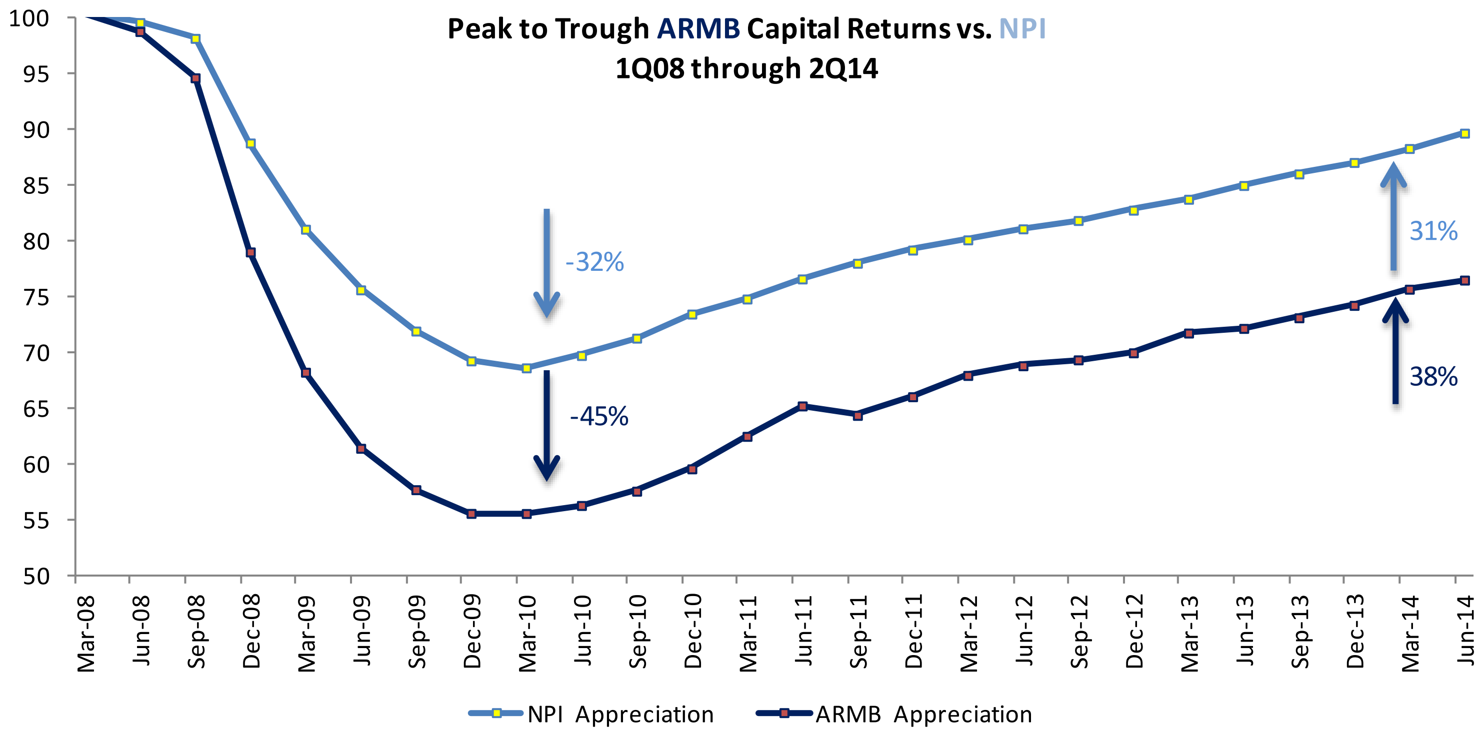
ARMB REAL ESTATE PORTFOLIO

Second Quarter 2013

The Townsend Group

Introduction

The ARMB portfolio peaked in March 2008 followed by a significant decline during the Global Financial Crisis. The portfolio began to reflect its recovery in March 2010. From its 2008 peak to the market trough, the portfolio experienced a decline of -45%. From the trough of March 2010 through June 2014, the portfolio has recovered 380%. Last fiscal year showed a 30% recovery for ARMB. Leverage within the ARMB portfolio compared to an unleveraged market benchmark (NPI) resulted in a greater than market decline as well as greater than market recovery.



Allocation Snapshot

A 2012 change in the allocation to portfolio structure made real estate a part of the Real Assets Portfolio thereby reducing the overall exposure to real estate. The current real estate portfolio represents 48% of Real Assets compared to a target of 35% real estate within the real assets portfolio.

Rebalancing will occur over time through allocations to other real asset investments (i.e. Farmland, Timber, Energy and TIPS) and liquidation of existing investments.

As of June 30, 2014 real estate represented 8.1% of the Total ARMB Portfolio; down from 9.2% at Fiscal Year 2013.

While the rebalancing of the real assets portfolio requires no additional investments, allocation flexibility allows for Staff to capitalize on market opportunity in order to enhance returns.

In Fiscal 2014, Staff made one new allocation of $75 million to KKR Real Estate Partners Americas. With market recovery continuing and return targets of 11%-15% net, KKR is expected to be accretive to the ARMB real estate portfolio total return.

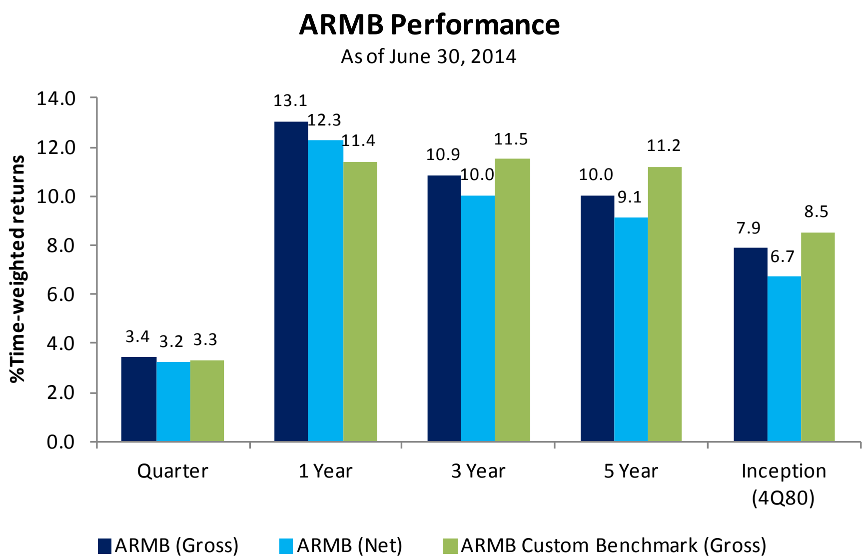
Portfolio Overview

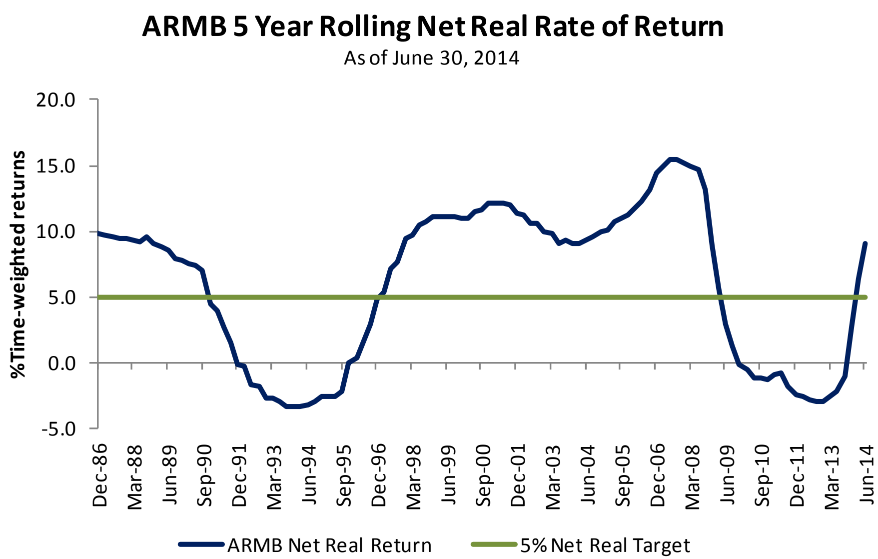
Second Quarter 2014

Portfolio Overview: Performance Objectives

As of June 30, 2014, the ARMB the portfolio exceeded its blended benchmark on a gross and net basis. Continued market recovery and strong core performance have significantly enhanced returns in the ARMB portfolio.

The ARMB rolling five year Real Rate of Return is 9.1% providing a return well above the 5% real rate of return target for the first time since the GFC. Strong market recovery and limited inflation both contribute to this performance and there are reasonable expectations for continued (albeit lower) outperformance over the near term.

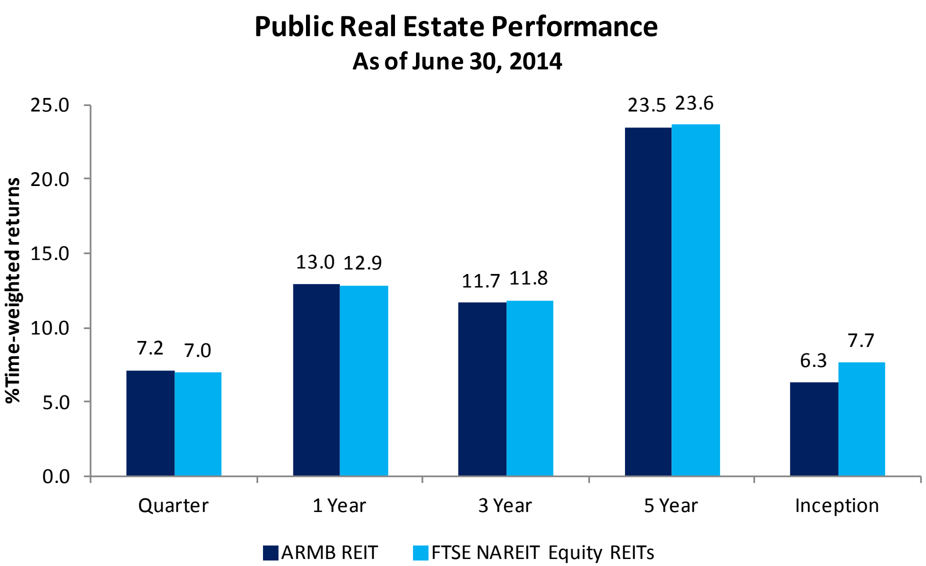


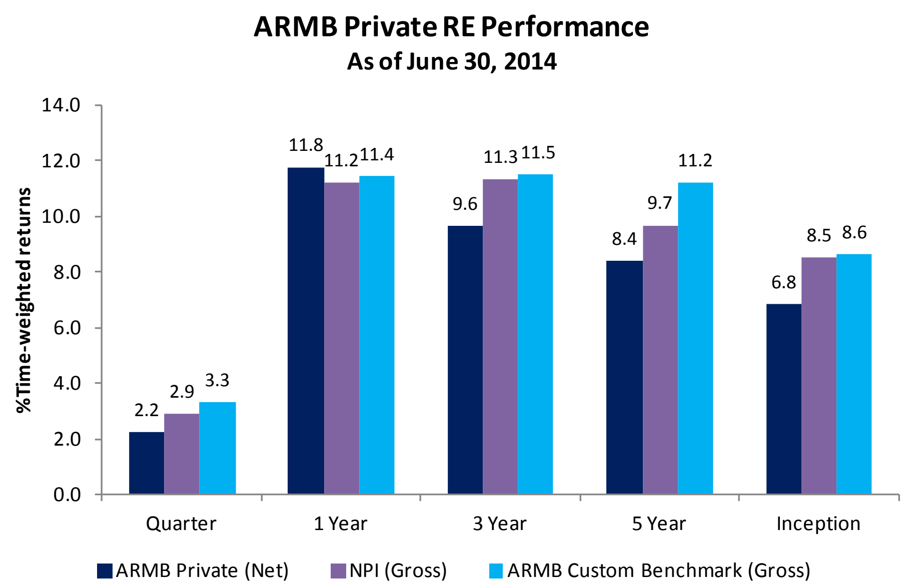


Portfolio Overview: Real Estate Performance

As of June 30, 2014, the Private Real Estate portfolio exceeded its benchmark posting returns of 11.8% and for the Fiscal Year. The returns continue to lag the benchmark for the three, five and since inception periods.

The REIT portfolio continues to show improving and competitive returns, with most time periods meeting or exceeding the benchmark except the since inception. This pattern demonstrates the success of the Staff shift in strategy.





Portfolio Overview: Strategic Objectives

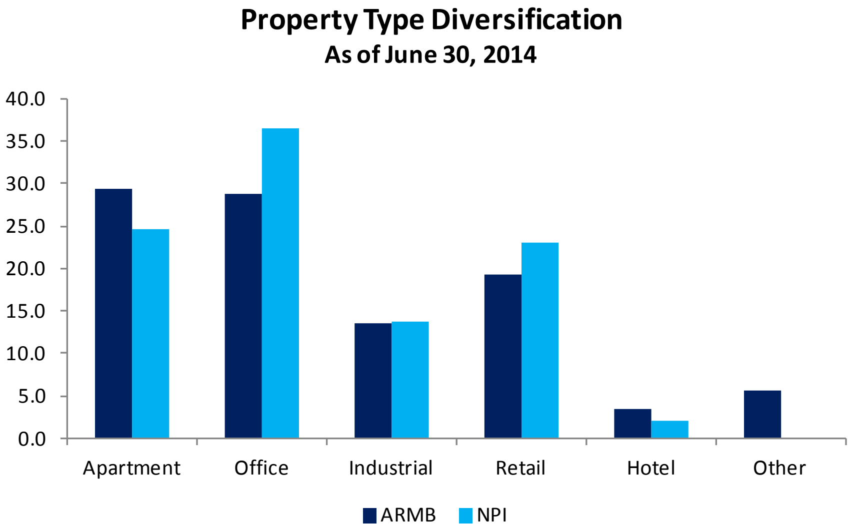
Objective	Status
1. Core Portfolio: Consider additional commitments under CIO discretionary authority if capacity and opportunity presents.	No new commitments have been made to the Core Portfolio.
2. Core Portfolio: Separate Accounts to focus on target markets and disposition of non-strategic assets.	Annual review of Separate Accounts reflects appropriate management of portfolios. Separate Account consolidation resulted in the redistribution of Cornerstone assets and unfunded commitments.
2. Non-Core Portfolio: Consider commitments under CIO discretionary authority and closely monitor existing investments	$75 million commitment to KKR

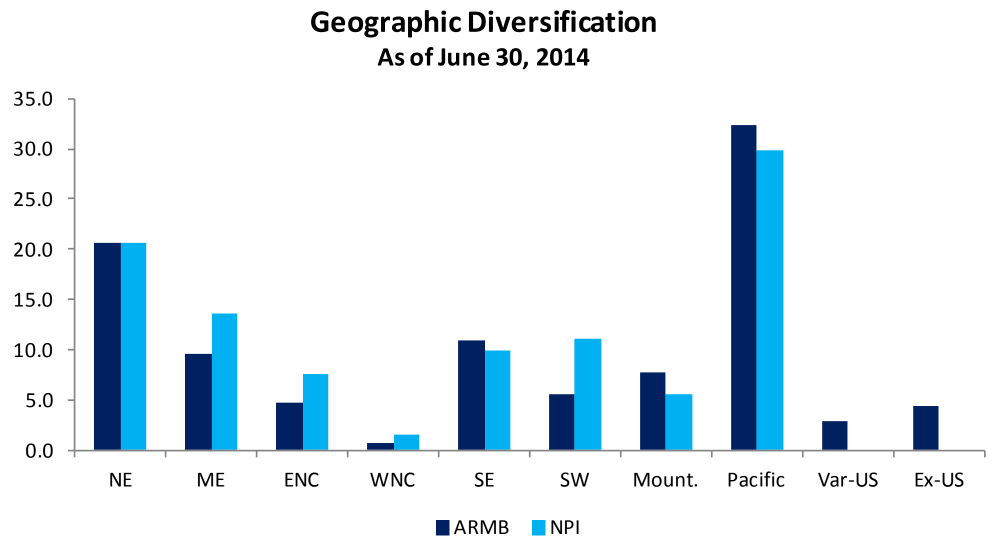
While Townsend continues to recommend that ARMB consider new investments to take advantage of the current vintage years, the market is in its fifth year of recovery making prudence and a selective approach critical when making new investments. It is fair to say that some of the best vintage years of the market recovery are likely behind us.

Portfolio Overview: Diversification

As of June 30, 2014, ARMB was diversified both with respect to geography and property type and in compliance with its targeted exposure.

Additional retail and office exposure should be considered in order to improve benchmark tracking. Outperformance is expected to come from industrial, retail and possibly sectors of the 'other' property category.





Core Portfolio

Second Quarter 2013

Core Portfolio: Performance

With continued market recovery and high demand for Core, stable assets, the ARMB core portfolio has continued to improve returns. The total Core Portfolio exceeds the target NPI return by 40 basis points. Only two manager portfolios lag the five year benchmark (Cornerstone I.M.A. and UBS Trumbull).

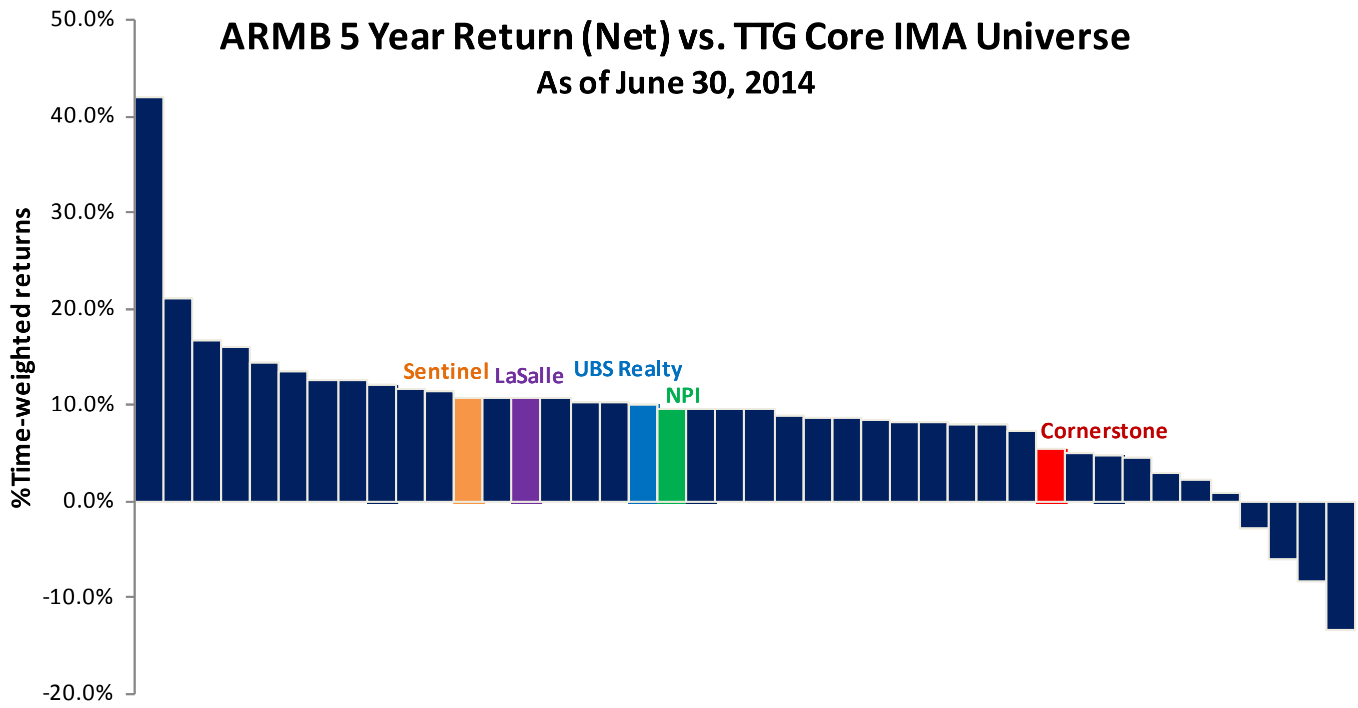
The five year net return of 9.3% demonstrates a strong improvement from the five year return of 1.4% posted for Fiscal 2013.

Net of fees, the portfolio continues to lag the NPI gross return for all periods.

Returns (%)	Quarter		Variance to NPI	1 Year		Variance to NPI	3 Year		Variance to NPI	5 Year		Variance to NPI
	TGRS	TNET		TGRS	TNET		TGRS	TNET		TGRS	TNET	
Core Portfolio												
Cornerstone I.M.A.	0.5	0.3	-2.4	6.1	5.6	-5.1	7.2	6.6	-4.1	6.0	5.4	-3.6
JP Morgan Strategic Property Fund	3.2	3.0	0.3	14.0	13.1	2.8	13.4	12.5	2.1	10.4	9.4	0.7
LaSalle I.M.A.	2.2	2.1	-0.7	9.0	8.3	-2.3	10.3	9.6	-1.0	11.5	10.8	1.9
Sentinel I.M.A.	2.1	2.0	-0.8	9.2	8.6	-2.0	11.4	10.8	0.1	11.5	10.8	1.8
UBS Realty I.M.A. - ARMB 1997	2.2	2.0	-0.7	15.5	14.8	4.3	12.6	11.9	1.2	10.7	10.0	1.0
UBS Trumbull Property Fund	2.4	2.2	-0.5	10.4	9.2	-0.8	10.4	9.3	-0.9	9.3	8.3	-0.4
Core Portfolio	**2.2**	**2.0**	**-0.7**	**11.5**	**10.8**	**0.3**	**11.2**	**10.5**	**-0.1**	**10.1**	**9.3**	**0.4**
NPI	2.9			11.2			11.3			9.7		

Core Portfolio: ARMB Core IMA Performance vs. TTG Universe

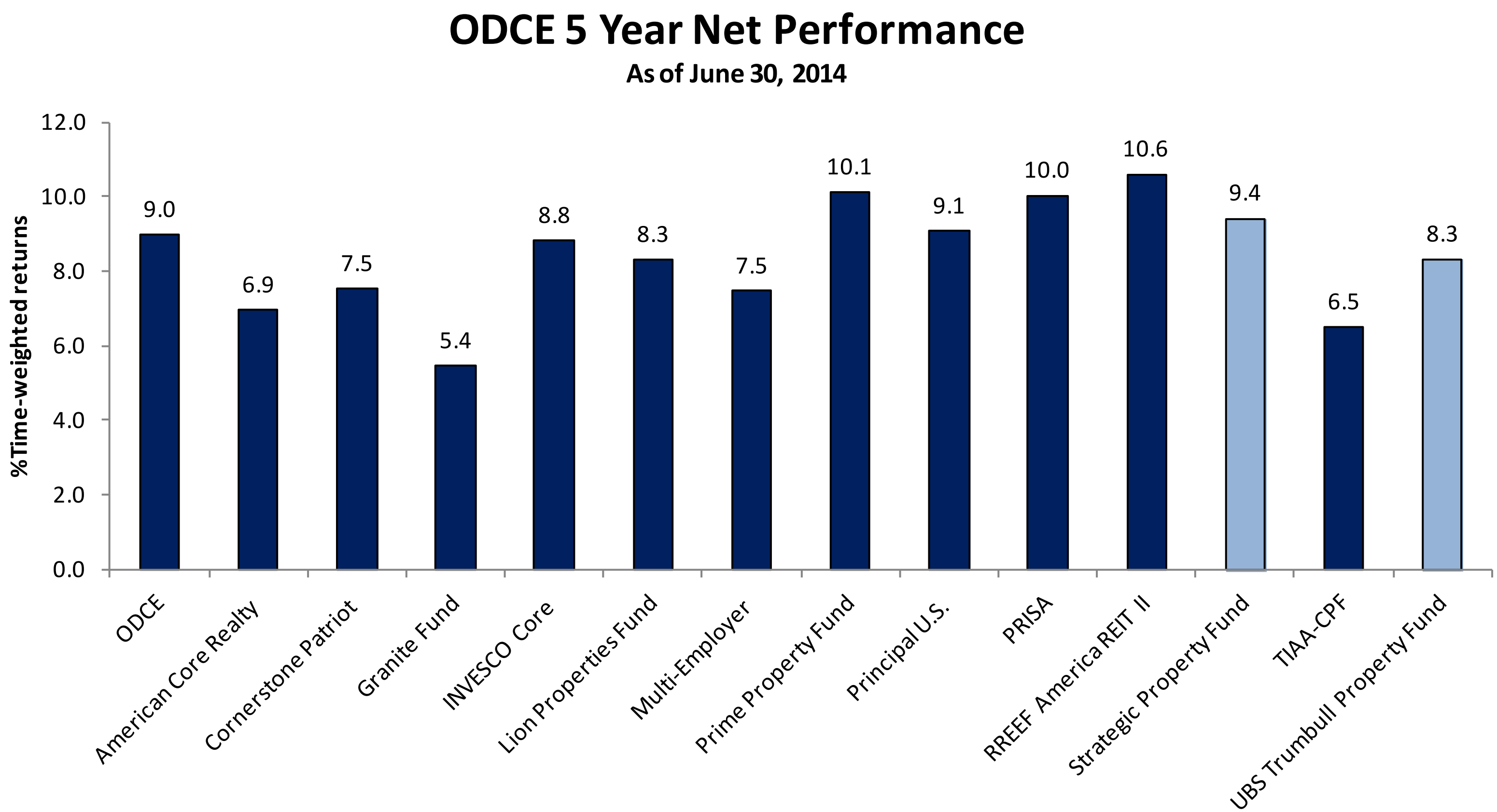
For the five year period ending June 30, 2014, Cornerstone was the only IMA to underperform the NPI return.



*The IMA Universe is not Risk Adjusted. All ARMB IMAs remain unlevered, consistent with the NPI.

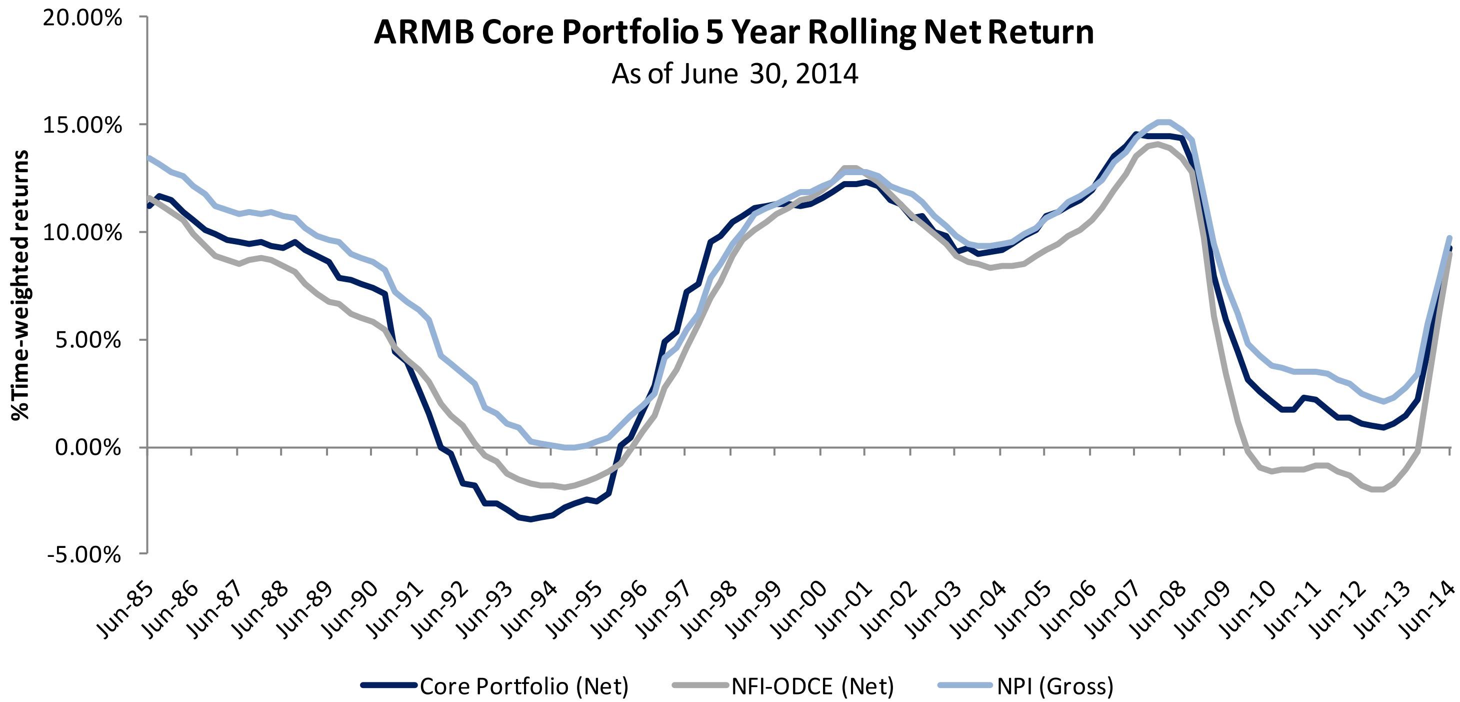
Core Portfolio: ARMB Open-End Core Funds vs. ODCE

For the five year period ending June 30, 2014 ARMB's two open-end core fund managers have begun to lag the top three performers. While Strategic Property Fund exceeds the aggregate ODCE ("Open-end Diversified Core Equity") by 30 basis points, the UBS Trumbull position lags the index by 70 basis points.



Core Portfolio: 5 Yr Rolling Net Return

On a rolling 5 year basis, the ARMB Core portfolio has underperformed the NPI over most rolling five year periods. The ODCE benchmark is provided to demonstrate the pattern of a leveraged portfolio. The ARMB Core portfolio has a 7.4% LTV as of June 30, 2014.



Non-Core Portfolio

Second Quarter 2014

Non-Core Portfolio: Performance

ARMB's Non-Core Portfolio is faced with challenging vintage year exposure and continues to underperform the unlevered core benchmark of the NPI.

The five year net return of 5.3% demonstrates a strong improvement from the five year return of -14.2% posted for Fiscal 2013.

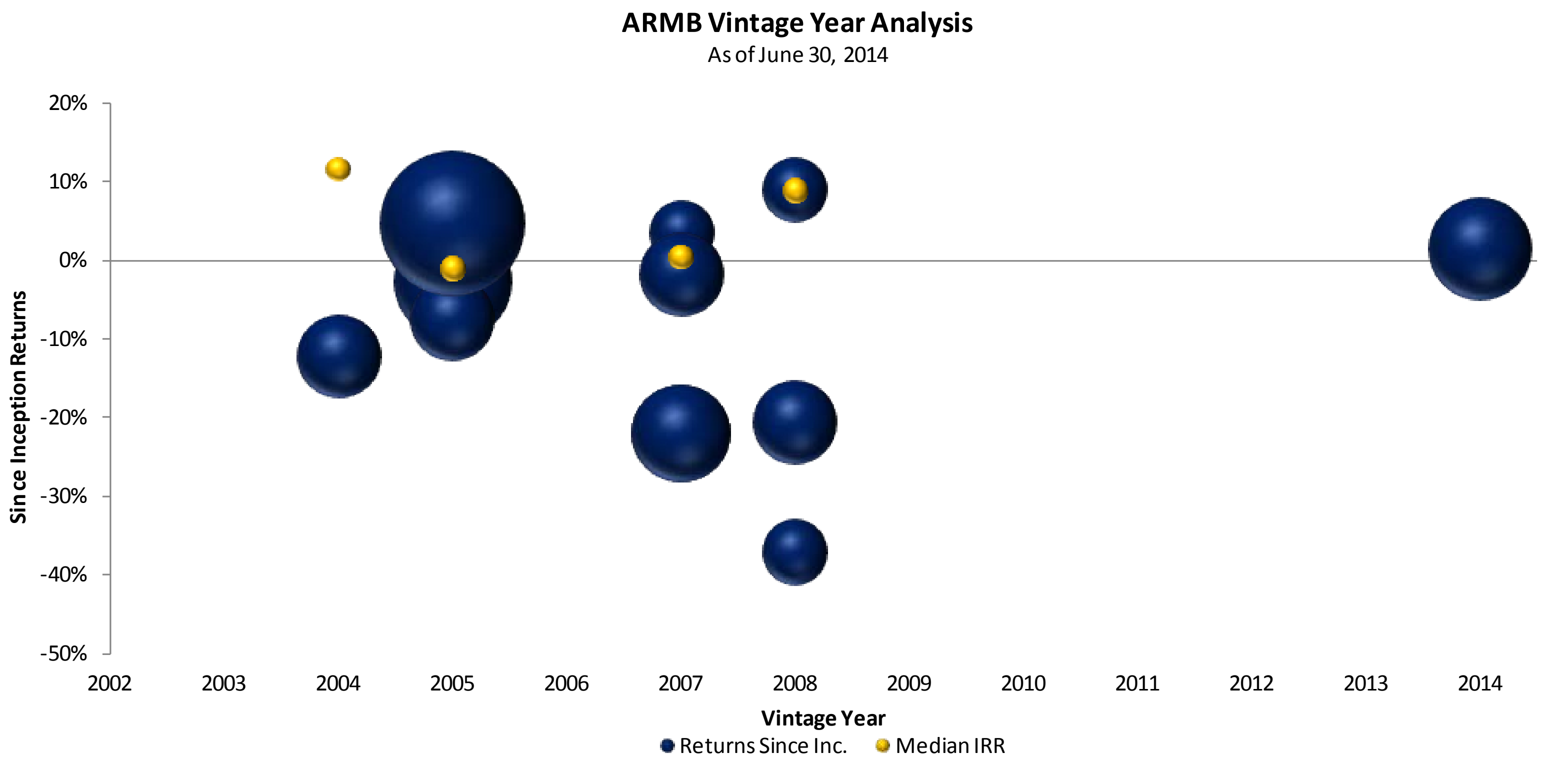
ARMB Non-Core Real Estate Portfolio
As of June 30, 2014

Returns (%)	Quarter TGRS	Quarter TNET	Variance to NPI	1 Year TGRS	1 Year TNET	Variance to NPI	3 Year TGRS	3 Year TNET	Variance to NPI	5 Year TGRS	5 Year TNET	Variance to NPI
Non-Core Portfolio												
Almanac Realty Securities IV, LP	1.7	1.3	-1.2	8.7	7.3	-2.6	9.2	8.1	-2.2	7.7	7.0	-2.0
Almanac Realty Securities V, LP	3.4	3.1	0.5	22.0	20.7	10.8	16.1	15.0	4.7	13.0	10.5	3.3
BlackRock Diamond Property Fund	1.0	0.7	-1.9	8.7	7.4	-2.5	9.3	8.0	-2.0	-1.9	-3.2	-11.6
Clarion Development Ventures II	-0.4	-0.4	-3.3	-3.1	-3.2	-14.3	7.7	6.7	-3.6	-9.3	-10.5	-18.9
Clarion Development Ventures III	4.7	4.3	1.7	6.0	4.7	-5.2	3.8	1.7	-7.5			
Colony Investors VIII	-0.5	-1.1	-3.4	35.6	32.5	24.4	6.0	3.1	-5.3	12.8	9.1	3.1
Cornerstone Apartment Venture III	1.2	0.9	-1.7	-4.1	-5.0	-15.3	7.0	6.0	-4.3	5.8	4.5	-3.8
Coventry Real Estate Fund II	0.1	-0.6	-2.8	-7.4	-9.7	-18.6	-13.7	-15.6	-25.0			
KKR Real Estate Partners Americas	5.1	1.5	2.2									
LaSalle Medical Office Fund II	1.6	1.2	-1.3	34.6	32.7	23.4	18.9	17.1	7.6	14.1	12.0	4.4
Lowe Hospitality Investment Partners	16.7	16.4	13.8	51.7	50.1	40.5	43.1	41.5	31.8	15.1	10.8	5.4
Silverpeak Legacy Partners II	4.7	4.4	1.8	23.0	21.7	11.8	10.2	9.1	-1.2	7.0	5.7	-2.7
Silverpeak Legacy Partners III	0.0	-0.5	-2.9	5.7	3.7	-5.5	-3.7	-5.2	-15.0	-5.2	-7.2	-14.9
Tishman Speyer Real Estate Venture VI	4.5	4.3	1.6	7.2	6.3	-4.0	5.2	4.2	-6.1	11.0	9.2	1.3
Tishman Speyer Real Estate Venture VII	8.5	8.2	5.6	16.4	14.7	5.1	15.4	13.7	4.1	-0.6	-8.9	-10.3
Non-Core Portfolio	**3.5**	**2.9**	0.6	**16.5**	**14.7**	5.3	**9.3**	**7.8**	-2.0	**7.0**	**5.3**	-2.7
NPI	2.9			11.2			11.3			9.7		

Non-Core Vintage Year Analysis

The vintage year of an investment plays a significant role in its return profile, along with the relative weighting of any single investment allocation within each vintage year and across the portfolio.

ARMB's non-core fund commitments are concentrated in peak vintage years and recovery within the ARMB portfolio has been muted partially due to the absence of investments in key recovery vintage years (2009-20012)

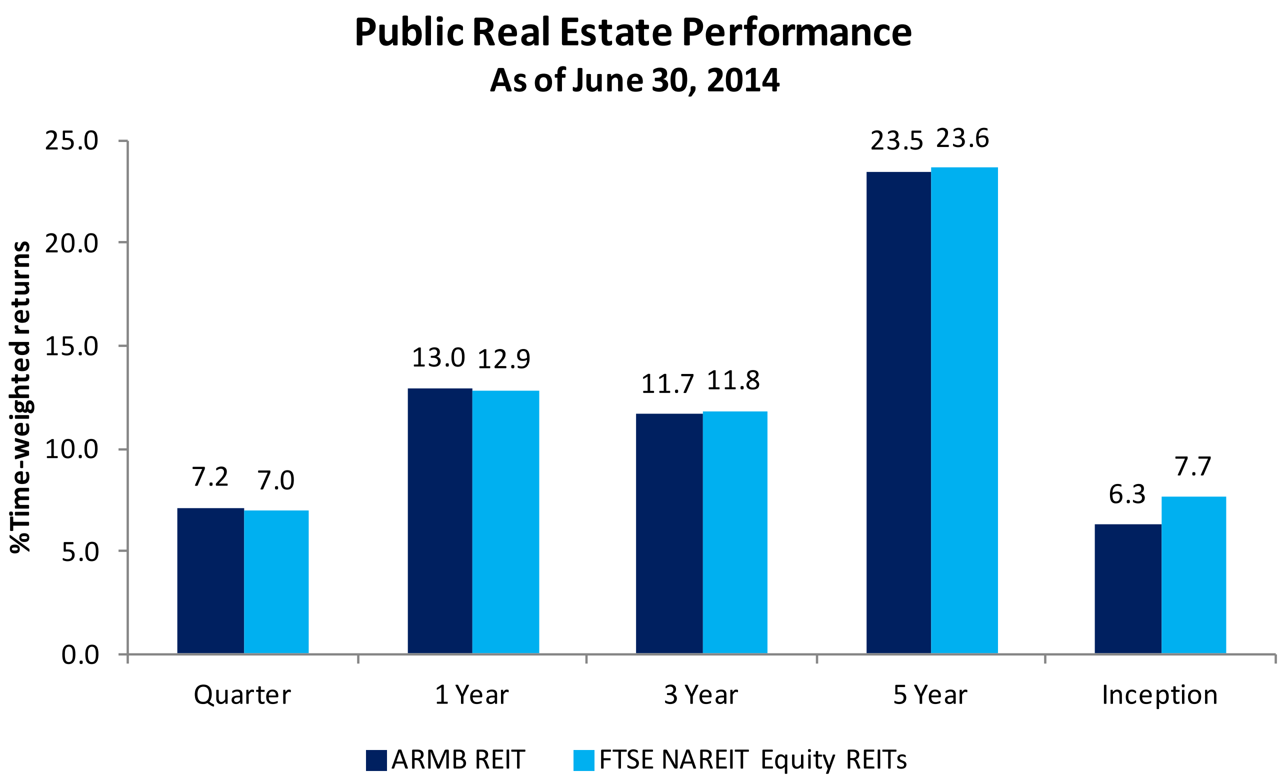


Public Portfolio

Second Quarter 2014

Public Portfolio: Performance

The REIT portfolio continues to show improving and competitive returns, with most time periods meeting or exceeding the benchmark except the since inception. This pattern demonstrates the success of the Staff shift in strategy.



View of the World–Executive Summary

Global Investment Perspective and Outlook for Real Estate

March 2014

World Growth to Accelerate in 2014

Eurozone economic growth bottomed in 2nd half 2013, with Spain and Portugal performing better than expected. Recent economic data suggests Europe is on track for a gradual recovery. Real GDP growth is expected to average near 1.4% in 2014.

United States economic growth strengthened in Q4 2013 on the back of solid consumer and business spending and stronger exports. Growth is expected to accelerate and gain momentum in 2014.

Abenomics has been supportive of Japanese growth as the economy is recovering for the first time in six years. By sharply weakening the yen, Abenomics has been good news for exporters.

Concerns growing regarding Emerging Markets due to weak PMI and GDP growth rates in China. India and Brazil are dealing with very high inflation rates. Thailand, Egypt, and Ukraine are witnessing social unrest. EM economic growth expected to downshift slightly in 2014.

Global Economic Outlook and Real Estate Investment Opportunities

Overweight Neutral Underweight	UNITED STATES GROWTH & RECOVERY	EUROPE STRESS & DEEP VALUE	CHINA URBANIZATION	JAPAN UPGRADE EXISTING STOCK
MACRO FACTORS GDP ('14) UNEMPLOYMENT ('14)	2.8% 6.6%	1.4% (UK 2.6%, GR 1.7%, FR 0.8%) 10.4%(UK 7.1%,GR 6.8%,FR 10.9%)	7.5% 4.1%	1.6% 3.8%
KEY REAL ESTATE THEMES	Core cap rates low, but justified relative to interest rates and offer good rent growth Value Added mispriced	Improving fundamentals as Europe emerges from recession Stressed loan positions finally being worked out	Urbanization trend requiring real estate development	Unfavorable demographic trend limiting rent growth Existing stock old & inefficient
OFFICE	CBD values up, but sustained rent growth offers reliable returns Select suburban offers good value from cash yields & lease-up	CBD values are up, but rents generally at cyclical lows Rental growth will vary market-to-market requiring disciplined buying	Overbuilding in a few locations Limited opportunity for distress level buy	Limited demand, but some stock is old and could be repositioned
INDUSTRIAL	Economic recovery driving demand leading to gradual rent & occupancy growth	Expected economic recovery will drive demand and current valuation offer attractive cash yield	Strong demand for high quality modern industrial properties supported by favorable government policy	Strong demand for modern logistics assets driven by 3PLs
RETAIL	Class A properties highly desirable by retailers Select B grade offers repositioning potential	Class A properties highly desirable by retailers Strong retailer demand for luxury and also discount retail	Retailers continue to expand with momentum growing in non-Core Tier I and Tier II-III cities	Limited demand due to declining demographic trend
RESIDENTIAL	Apartments have seen good rent growth & value appreciation Apartment supply building-up	Market remains generally undersupplied and fragmented, but limited opportunity to invest	Very strong demand, but limited good local partners and continued government interventions	Demand for aged care for growing number of seniors but limited good local partners

Source: Consensus Estimates-Bloomberg as of January 2014, The Townsend Group

The Townsend Group's views are as of the date of this publication and may be changed or modified at any time and without notice.

U.S. Key Investment Opportunities

Overweight
Neutral
Underweight

	CORE	NON-CORE
	Overall, healthy demand and supply fundamentals to continue Class A values have risen and in many cases are above previous highs Stable returns as economy continues to recover	Value Add mispriced with significant premium Demand and supply fundamentals improving gradually and positive net absorption to continue Critical to select right assets & locations
OFFICE	Significant capital appreciation in Core CBD locations reducing further upside potential Continued strong demand for space and limited supply to lead to gradual rent growth	Mispricing of risk leading to select attractive return opportunities from lease-up and repositioning Fringe CBD locations benefiting from growth areas such as tech, energy, and renewals are particularly attractive
INDUSTRIAL	Gradual economic recovery and rising Internet commerce will lead to sustained rent and occupancy gains in well located industrial assets	Limited rent growth, but good occupancy gain potential in well located assets Potential to reposition, develop, and generate portfolio premium through aggregation
RETAIL	Strong demand for desirable locations as retailers consolidate into fewer higher productivity locations Strong downside protection, but limited upside	Select attractive opportunities in good locations with re-tenanting and repositioning potential, arising out of few struggling tenants
RESIDENTIAL	Fully priced, but defensive, as multi-year rent growth is expected Offer counter-cyclical balance to office and industrial, as rentals preferred if economy weakens	Only a few markets with good employment growth offer attractive opportunities as supply is building up

Source: The Townsend Group

Townsend's views are as of the date of this publication and may be changed or modified at any time and without notice.

Europe Key Core Investment Opportunities – Low Returns But Reliable Growth

CORE VALUES HAVE RISEN, BUT IMPROVING ECONOMIC CONDITIONS LIKELY TO OFFER MULTI-YEAR RENT GROWTH

Overweight
Neutral
Underweight

	UNITED KINGDOM	FRANCE	GERMANY
OFFICE	Investors are paying for rental growth in London City resulting in record high prices offering limited return outlook Fundamentals improving in regional cities as employment & growth emerge supported by no new supply	Paris CBD office have high occupancy, but high values limit return potential Increasing supply and vacancy in La Défense in short term	Strong employment levels, low supply, and vacancy is leading to stable rent growth prospects for Class A office Yields are low, but growth is more reliable
INDUSTRIAL	Class A industrial in South East is well leased with limited supply, therefore, rent growth is likely to accelerate	Class A assets witnessing positive net take-up with rent growth Ingoing cash yields more attractive than many other areas of Core	Economic growth and exports leading to increased demand and rental growth
RETAIL	Retail warehouses expected to perform well as consumer and retailer demand grows Class A properties performing well, but limited stock to invest in	Class A retail sales growth higher than national average supporting rent growth Inflation indexation is an attractive feature	German consumers and retailers to become more positive supported by robust labor markets
RESIDENTIAL	UK residential significantly undersupplied, however, the "For Rental" market remains an immature/emerging market sector	Existing stock offers low bond like yields with inflationary rent growth due to low vacancy	Housing value growth over the past three years offers limited return outlook, albeit inflation linked

Source: The Townsend Group

Townsend's views are as of the date of this publication and may be changed or modified at any time and without notice. Past performance is not indicative of future results.

Europe Key Non-Core Investment Opportunities – Mispriced Risk Offering Attractive Returns

NON-CORE OFFERS ATTRACTIVE OPPORTUNITIES, BUT NEED TO BE SELECTIVE ON LOCATION AND QUALITY OF ASSETS

Overweight
Neutral
Underweight

	UNITED KINGDOM	FRANCE	GERMANY
OFFICE	Ability to acquire assets below replacement cost, lack of new supply, and improving occupier fundamentals	Opportunities exist for counter-cyclical investors from forced/motivated sellers resulting from the weak economic environment	Deep value below replacement cost for vacancy or imminent lease expiry risk and lack of new supply
INDUSTRIAL	Rent growth likely to be positive, driven by improving economic conditions Higher cap rates offer good income potential	Ile-de-France region preferred with rental growth emerging Lack of new supply	Low property valuations lead to high cash yields Economic growth and exports leading to increased take-up and rental growth offering attractive total returns
RETAIL	Class B assets with discounted valuations are available below replacement cost, however retailers remain cautious on Class B locations Repositioning and occupancy gain from potential in B-grade assets (Class A spillover)	Market bificurated with a focus on luxury retail for strong rent reversion and discount shopping catering to weak consumer sentiment Mid-market retail remains challenged	Class B retail assets yield higher than Class A, but lower than Class B office and logistics Opportunity to drive rental growth through active management and tenant re-mixing
RESIDENTIAL	Greater London market remains undersupplied offering "For Sale" development to local professionals Caution on assets valued >£1000psf	Greater Paris region is undersupplied, but difficult to access Evaluate opportunities on a case-by-case basis	Limited opportunities for housing construction due to poor demographic trends

Source: The Townsend Group

Townsend's views are as of the date of this publication and may be changed or modified at any time and without notice.

Asia Key Investment Opportunities (Non-Core)

Overweight
Neutral
Underweight

	CHINA	JAPAN	INDIA	AUSTRALIA
OFFICE	Strong demand to continue, but pockets of oversupply limit rent growth	Slow growth in demand, but pockets of Value Add opportunities exist like repositioning select Tokyo assets	Years of overbuilding leading to high vacancy, but limited potential to buy distressed assets and reposition	Take-up is still low and given existing vacancy levels, the rent growth is expected to be low
INDUSTRIAL	Significant need to build logistics/industrial assets to support growth in consumption, trade, and manufacturing	Growth in outsourcing logistics trends driving strong demand for modern facilities	Very strong demand for high quality assets, but very few developers with skill set and capital base	Strong demand for well located industrial assets leading to rent growth and capital value appreciation
RETAIL	Urbanization and strong growth in consumption fueling demand for retail space, especially in Tier II cities	Slow growth in demand for retail assets given declining demographic trends	Limited good quality investment and development opportunities Limited manager experience in the sector	Consumer spending likely to recover, leading to a modest recovery in rents
RESIDENTIAL	Urbanization driving demand for housing. Affordability in Tier II & III very attractive Government controlling measures expected to continue	Aging population driving demand for senior housing, but limited high quality managers/operators in the market	Population & income growth driven urbanization leading to significant growth in demand	Residential development picking-up, especially in NSW and QLD

Source: The Townsend Group

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Disclosure for The View of the World – Winter/Spring 2014

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Returns reflect the equal-weighted returns calculated during the periods indicated. Note: if including Core, this is value weighted. In addition, the valuations reflect various assumptions, including assumptions of actual unrealized value existing in such investments at the time of valuation. As a result of portfolio customization/blending and other factors, actual investments made for your account may differ substantially from the investments of portfolios comprising any indices or composites presented.

Returns that appear in the composites are net of all underlying manager fees and expenses. Net returns to the client would be reduced by any Townsend management fee. Returns include dividends and other earnings.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Fiscal Year 2015 Real Assets Annual Investment Plan	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND

The Real Assets Committee met on September 17, 2014 to review and recommend approval of the Real Assets Annual Investment Plan for Fiscal Year 2015.

STATUS

Staff, with the assistance of The Townsend Group, Callan, and ARMB's real assets advisors, has developed the Real Assets Annual Investment Plan for Fiscal Year 2015. The Real Assets Annual Investment Plan includes a presentation of historical performance, investment background, and a review of the current market for each sector followed with a Fiscal Year 2015 investment strategy.

Real Estate

No new allocations for current core separate account strategies or commitments to open-end funds are being recommended as part of the plan. Core separate account advisors should continue to manage existing portfolios and allocations toward core assets located in markets with high barriers to entry. Separate account advisors should continue to take advantage of opportunities to sell non-strategic assets at attractive prices and improve the quality and income stability of the portfolio.

Under CIO discretion, staff plans to explore medical office investments, value-add and opportunistic real estate funds, and participating mortgage investments.

Staff is recommending increasing the bands around the public real estate investment target from 10% +/- 10% to 10% +20%/-10% to allow more capacity to use REITs in the management of the Real Estate allocation and the overall Real Assets allocation. A corresponding adjustment would also be made to the private real estate target from 90% +/-10% to 90% +10%/-20%.

Farmland/Timberland/Infrastructure/TIPS/Energy

No recommended changes to strategy or separate account manager allocations.

RECOMMENDATION

The ARMB approve Resolution 2014-14 which adopts the Real Assets Annual Investment Plan for Fiscal Year 2015.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to Real Assets Annual Investment Plan

Resolution 2014-14

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, the Board contracts an independent consultant to provide experience and expertise in asset allocation and other investment matters to come before the Board; and

WHEREAS, the Board has established an asset allocation for the funds that considers earnings and liabilities on a current as well as a future basis; and

WHEREAS, the Board has authorized investments in Real Assets for the Public Employees' Retirement System, Teachers' Retirement System, and Judicial Retirement System, including investments for those systems in the State of Alaska Retirement and Benefits Plans Trust; and

WHEREAS, the Board will establish and on an annual basis review an investment plan for Real Assets asset class.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopt the Real Assets Annual Investment Plan for Fiscal Year 2015, attached hereto and made a part hereof.

DATED at Fairbanks, Alaska this ___ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Real Estate Investment Policies, Procedures and Guidelines	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND

The ARMB Real Estate Investment Policies, Procedures and Guidelines (Guidelines) were most recently revised and adopted by the Board on February 6, 2014. As part of the annual planning process for real estate, proposed changes to the Guidelines are recommended by staff and ARMB's real estate consultant (The Townsend Group) for approval by the Board.

STATUS

Staff recommends the following revisions:

1) Remove portfolio diversification requirement that restricts "Controlled Investments" to a maximum of 85% of the real estate portfolio. Controlled investments are defined as those that can be liquidated within 180 days.

2) Remove portfolio diversification requirement that restricts "Core Investments" to a maximum of 85% of the real estate portfolio.

3) Increase the single manager investment limit from 35% to 45% to create more individual capacity where multiple product lines help mitigate the single firm exposure risk.

RECOMMENDATION

The ARMB approve Resolution 2014-15 which adopts the revised Real Estate Investment Policies, Procedures and Guidelines.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to Real Estate Investment Policies, Procedures and Guidelines

Resolution 2014-15

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, the Board contracts an independent consultant to provide experience and expertise in asset allocation and other investment matters to come before the Board; and

WHEREAS, the Board has established an asset allocation for the funds that considers earnings and liabilities on a current as well as a future basis; and

WHEREAS, the Board has authorized investment in real estate assets for the Public Employees' Retirement System, Teachers' Retirement System, and Judicial Retirement System, including investments for those systems in the State of Alaska Retirement and Benefit Plans Trust; and

WHEREAS, the Board establishes and from time to time as necessary, modifies investment policies, procedures, and guidelines for real estate;

NOW THEREFORE, BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopts the revised **Real Estate Investment Policies, Procedures and Guidelines**, attached hereto and made a part hereof. This resolution replaces Resolution 2014-01, which is hereby repealed.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD
REAL ESTATE INVESTMENT
POLICIES, PROCEDURES AND GUIDELINES

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ALASKA RETIREMENT MANAGEMENT BOARD
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I. INVESTMENT OBJECTIVES

A. Investments in Real Estate and Other Real Estate Related Assets

The Alaska Retirement Management Board (ARMB) will invest in real estate with the goals of portfolio diversification and attaining the optimum return on the portfolio, consistent with the assumption of prudent risk and safety of principal. ARMB recognizes the need to use active investment management in order to obtain the highest attainable total investment return (measured as income plus appreciation) within ARMB's framework of prudence and managed risk.

ARMB will select Real Estate Investment Managers who have the discretion to invest in publicly traded equity and/or privately placed equity sectors, subject to ARMB's approval of an Annual Strategic/Tactical Plan and an Annual Investment Plan. In order for real estate investments to be considered, the Investment Manager must demonstrate that it is able to: add value through its real estate knowledge, experience and strategy; underwrite the risks of the investment which is contemplated; and at the time of investment, comply with the intent of the Real Estate Investment Policies, Procedures and Guidelines **(Guidelines)**.

Single property and multi property strategies will be considered as well as "pooled/commingled" fund investment vehicles.

B. Asset Allocation

The ARMB allocation to real estate investments shall be determined by the Board of Trustees and reviewed annually. Allocated capital to Investment Managers will be defined as invested capital based on ARMB's cost.

C. Portfolio Return Objective

1. **Total Return**
   Over rolling 5 year periods, the equity real estate investment portfolio is expected to generate a minimum total real rate of return (net of investment management fees) of 5% using a time-weighted rate of return calculation. The inflation index used to calculate the actual real rate of return is the CPI All Urban.

2. **Income Return**
   Income, which is defined as cash distributed to ARMB, is expected to produce 50-60% of the total return over rolling five-year periods.

3. **Index**

   The overall portfolio is expected to exceed the target index. The target index is composed of 90% NCREIF Property Index and 10% NAREIT Equity Index.

II. PROGRAM RISK MANAGEMENT AND IMPLEMENTATION

The selection and management of assets in the real estate portfolio of the ARMB will be guided by the principles of preserving investment capital, attaining the optimum return on the portfolio consistent with the assumption of prudent risk, generating current income, being sensitive to inflation, maintaining diversification of assets and diversification of management responsibility.

In real estate investment, there is an inherent risk that the actual income and return of capital will vary from the amounts expected. The ARMB will manage the investment risk associated with real estate in several ways**:**

A. Institutional Quality

All assets must be of institutional investment quality as evidenced by a precedent of institutional investment in similar properties; expert analysis which supports the economic viability of the market; high quality construction and design features; and a potential competitive position within the property's immediate market area**.**

B. Diversification

The real estate portfolio will be diversified as to style group, property type, industry sector, life cycle, economic driver, investment manager and geographical location. Diversification reduces the impact on the portfolio of any one investment or any single manager's investment style to the extent that an adversity affecting any one particular area will not impact a disproportionate share of the total portfolio. Portfolios for core investment managers and non-core or value added investment managers will carry the diversification characteristics set forth in the allocations and definitions set out below. Diversification compliance will be monitored on a quarterly basis for compliance with ARMB's Guidelines by staff and the real estate consultant.

For purposes of calculating diversification compliance, the overall real estate portfolio size will be considered the product of the greater of projected or target real estate allocation times the projected fiscal year-end overall plan assets as established in the Annual Investment Plan. The projected fiscal year-end overall plan assets will take into account the target allocations and projected returns of all asset classes in which plan assets are invested, and estimated net pay-outs to plan beneficiaries. Unless exceptional circumstances justify a deviation, the maximum percentage of the real estate portfolio investment for each of the identified categories is as follows:

~~Controlled Investments:~~	~~85 %~~
~~*(ARMB can liquidate within 180 days)*~~	
Non-Controlled Investments:	50%
(ARMB cannot liquidate within 180 days)	

~~Core Investments (See definition below):~~	~~85 %~~
Non-Core Investments (See definition below):	50%

Single Manager Limit: *(value of both Separate Account and Commingled Fund combined, if applicable)*	~~3~~45 %

Public Equity:	50 %
Public Debt:	0 %
Private Equity:	100 %
Private Debt:	0 %

Geographic:

ARMB will avoid over-concentration in areas of similar real estate performance. The consultant will monitor ARMB's concentrations in this area, considering indicators such as NCREIF sub-region, metropolitan areas and economic drivers. The consultant will report its conclusions regarding the acceptability of ARMB's concentration limits quarterly.

Outside United States:	20 %
Single Property Investment: *(acquisition cost plus projected capital additions and improvements)*	5 %
Single-Tenant (any one firm):	10 %
Property Type:	40 %

Manager Allocation – It is understood that Separate Account Investment Managers may exceed their Board-approved allocations by up to 5% for the purposes of capital improvements on existing assets and/or for the completion of an acquisition. A core Separate Account Investment Manager's portfolio may be invested up to 15% in core-plus style properties to assemble a core portfolio. A value-added Separate Account Investment Manager's portfolio shall include 70%-100% in value-added style properties, and may include up to 30% in opportunistic style properties.

Subject to CIO approval, upon the sale of a property held by a Separate Account Investment Manager in which the net sales proceeds are in excess of the property's cumulative basis, the advisor's allocation will increase in an amount equal to the lesser of the excess of the net sales proceeds over the property's cumulative basis or the aggregate portfolio net asset value over the aggregate portfolio cumulative basis adjusted to reflect actual sale proceeds. The CIO will also consider whether an allocation increase should be adjusted for any past realized losses incurred by the Separate Account Investment Manager. The intent of this provision is to allow a Separate Account Investment Manager to reinvest realized gains but only to the extent gains are greater than losses which have been experienced in other property investments in the Separate Account Investment Manager's portfolio.

Exceptional circumstances justifying a deviation – When circumstances arise of a temporary nature, such as an unexpected re-valuation of assets, a transfer of assets among managers, or an event in which it would be in the fiduciary interest of the ARMB to do so, the limits set forth in paragraph II.B of ARMB Policies may be exceeded provided that ARMB concurs.

CIO Discretionary Investment Authority – The CIO shall have the following discretionary investment authority:

a) To increase or decrease existing separate account allocations and investments in open-end funds;

b) To commit to new investment funds up to $100 million for each fund; and,

c) To engage consultants and take other action as may be necessary to ensure sufficient due diligence is performed on all investments under consideration.

The CIO shall exercise this discretion within Board approved asset allocations, investment plans, and guidelines as they may apply.

The CIO will provide prior notification to the Chairs of ARMB and the Real Assets Committee before committing to any investments under this authority. All discretionary CIO investment actions shall be reported to the Board.

Definitions

Core Investments

Primary Characteristics:

- Fully or substantially leased (85% occupancy or greater)
- Inconsequential turnover near term
- Inconsequential physical issues or renovation required
- Credit tenants
- Primary markets
- Quality property
- Income produces 50% or more of expected return
- Typically longer term holds
- Properties in markets with stable or improving economic conditions

Core-plus Investments

Primary Characteristics:

- Limited renovation, primarily deferred maintenance, limited physical issues or repositioning needed
- Modest near term lease roll over; modest vacant lease up
- Expected growth through increasing rents
- Poor prior management
- A- to B- quality
- Income produces 50% or more of expected return

Non-Core Investments

Value-Added Investments

Primary Characteristics:

- Asset renovation – lobbies, corridors, deferred maintenance
- Intermediate term (6-9 months) physical issues
- Current vacancies or rent loss
- Near term roll over exposure
- Repositioning, re-tenanting
- Distressed prior management
- Purchase of adjacent land to develop
- Alternative, turnaround markets and property types
- Income produces 50% or less of total return

Opportunistic Investments – These investments involve significant redevelopment risk, high leasing risk, and high development risk.

Primary Characteristics:

- Empty Buildings
- High near term turnover
- New development – spec or limited pre-leasing
- Significant rehabilitation and leasing, redevelopment into alternative uses
- Capital displacement in maligned markets: lack of investment capital due to level of risk
- Non-traditional asset type (mezzanine debt, land, etc.)
- Wide ranging investment structures
- Investing in non-performing notes
- Cross-border investing
- Holding periods typically 1 to 5 years
- Income produces less than 50% of total return

Note: *Properties within a multi-property investment will be categorized as either core or non-core.*

C. Implementation Approach

The ARMB will implement an investment process for real estate which will, over time, include a minimum of three (3) qualified Separate Account Investment Managers who have been selected on a competitive basis. The ARMB will endeavor to allocate specific funds to qualified managers on a separate account basis. Selected managers will seek real estate investment opportunities in publicly-traded equity and/or privately-placed equity sectors. Investments will be made on a discretionary basis subject to Staff approval of the Annual Strategic/Tactical Plans prepared by Separate Account Investment Managers and ARMB's approval of the Annual Investment Plan prepared by Staff. In addition to separate accounts, ARMB will selectively consider investments in "pooled/commingled" investment vehicles.

All allocation of funds to a manager (including additional investment with existing accounts) and investment strategy must be recommended to ARMB by Staff and the Real Estate Consultant and be accompanied by an investment report which, at a minimum, includes the following: market information; investment alternatives; fee structure and comparison to other alternatives; demonstration of compliance with Guidelines and the then current Annual Investment Plan; historical performance of Separate Account Investment Manager (cash–based internal rates of return and industry standard); projected returns (income and appreciation); and positive and negative attributes of the investment strategy.

On a selective basis, a member of ARMB may visit the site of a real estate investment for the purpose of rendering a report to ARMB supplementing reports provided by Staff, the Real Estate Consultant, or others**.**

D. Prudent Leverage

The total amount of leverage placed on the aggregate separate account assets will not exceed thirty five percent (35%) of the total market value of the real estate separate account portfolio. Directly-owned properties will not be leveraged by the Separate Account Investment Manager. Property encumbered by debt at the time of purchase, if justified on a risk-return basis by the Separate Account Investment Manager, may be acquired subject to Chief Investment Officer approval. With authorization by the ARMB, the Chief Investment Officer may place leverage on a pool of existing core real estate assets held in ARMB's separate account portfolio in a manner consistent with the ARMB's Guidelines.

The total amount of fund level leverage, at the time of investment, will not exceed 35% for core commingled funds investing in a core equity diversified asset strategy. The total amount of fund level leverage, at the time of investment, will not exceed 65% for non-core commingled funds investing in a value add or opportunistic equity diversified asset strategy.

E. Lease Structure

Multi-tenant and single tenant properties will be considered. When acquiring single tenant properties, consideration will be given to avoid multiple single-tenant exposure to any firm if those single tenant properties constitute more than 10% of the portfolio. A staggered lease structure for commercial properties will be emphasized.

F. Separate Account Investment Manager Business Plan; Annual Strategic/Tactical Plan; Disposition/Exit Strategy

A Business Plan (including property operating budgets) will be completed by each manager for each asset under its management. The Business Plan will identify the current and anticipated competitive position for each property in order to set tactical and strategic objectives and will prescribe in appropriate detail a disposition and exit strategy respecting the particular investments. Part of this process is to evaluate the potential timing of dispositions. A property is considered for sale when it is believed that the equity in the existing investment can achieve a higher return in another real estate investment of similar risk. The Annual Strategic/Tactical Plan will describe the expectation of the manager with respect to acquisitions and dispositions.

G. Fee Structure

Involvement in any venture will be done on a fee basis that is competitive. The preferred method of calculating manager fees will be based upon a formula, which considers both 1) the cost basis of assets under management and 2) investment performance. All fee structures will be approved by ARMB. For core managers, the return-based portion of a fee will emphasize actual cash available for distribution to ARMB.

H. Single Asset Ownership Structure (Applies to Separate Accounts Only)

Provided that the goals of these guidelines are followed, ARMB may invest in separate, specific real estate assets. However, such investments will be undertaken in a fashion structured to limit ARMB's liability to the amount of its investment.

I. Reporting System

Staff and the Real Estate Consultant will develop and implement a comprehensive and responsive reporting and monitoring system for the entire portfolio, individual investments and individual managers. The reporting and monitoring system will endeavor to identify under-performing investments, controlled portfolio diversification deficiencies and inherent conflicts of interest, thereby facilitating active portfolio management. A cash-based internal rate of return (IRR) will be used when evaluating the long-term performance of an investment. Time- weighted returns will be used to measure comparative performance.

J. Distribution of Current Income

All separate account income will be distributed immediately to ARMB or its designee and not automatically reinvested in the account.

K. Lines of Responsibility

Well defined lines of responsibility and accountability will be required of all participants in ARMB's real estate investment program. Participants are identified as:

ARMB – The fiduciaries appointed by the Governor to represent the beneficiaries' interest which shall retain final authority over all real estate investment decisions.

Real Estate Committee – Comprised of at least three (3) members of ARMB who continually review the role and performance of real estate.

Staff – Investment professionals on the staff of the Department of Revenue and assigned ARMB responsibilities who will assist in the Real Estate equity investment program's design, policy implementation and administration.

Real Estate Consultant – Professionals retained to support Staff and ARMB through the provision of expert real estate strategic planning, implementation and performance monitoring support.

Separate Account Investment Managers – Qualified entities who provide institutional real estate investment management services and maintain a discretionary relationship with ARMB subject to Staff's approval of Annual Business Plans and Annual Strategic/Tactical plans, prepared by Separate Account Investment Managers, and ARMB's approval of the Annual Investment Plan.

Commingled Fund Managers – Qualified entities who provide institutional real estate investment management services through open-end and closed-end real estate pools and other pooled/commingled vehicles.

III. CONFLICTS OF INTEREST

In real estate investment, separate and distinct from other asset classes, the Manager of a Separate Account or Commingled Fund may have direct or significant control over the operations of the assets. This inherent or potential conflict of interest if openly described and regulated may contribute to the lower volatility associated with the asset class, but it also creates a need for a higher oversight standard by the plan sponsor. Staff and ARMB will maintain this oversight in at least the following ways:

A. Property Valuation

The Separate Account Investment Manager will provide ARMB with annual appraisal valuations for all properties for which it has asset management responsibility as of the quarter ending March 31. Unless otherwise directed by ARMB, the appraisal will be prepared by a qualified independent third party entity in accordance with industry standards. Staff may waive the appraisal requirement for recent acquisitions or pending dispositions following a recommendation by the Separate Account Investment Manager that such appraisal would not be a cost effective exercise. For development assets, appraisals are to be conducted in the manner described above after substantial completion payment by ARMB is made. In addition, the Separate Account Investment Manager will mark each asset to market each quarter based on asset conditions and leasing, operations and capital market conditions for comparable properties in that market.

B. Property Management

The selection of on-site property management will generally be left to the discretion of the Separate Account Investment Manager. It is expected that the Separate Account Investment Manager will retain the highest caliber, market rate property management service either through a third party fee manager or the Separate Account Investment Manager's affiliated property management division. This business relationship will be periodically reviewed by Staff, the Real Estate Consultant and ARMB.

IV. INSURANCE COVERAGE

The Separate Account Investment Manager will obtain insurance for the physical properties and assets under its control. The coverage will be in such amounts and against such risks as, in the Separate Account Investment Manager's professional judgment, shall be in accordance with sound institutional practices applicable to such properties or assets in the specific geographic area. It is expected that such insurance will include, but not be limited to, casualty loss, including where deemed appropriate by the Separate Account Investment Manager, earthquake, flood and any other disaster-type insurance coverage; comprehensive general liability; and title insurance. Separate Account Investment Managers will provide proof of insurance to Staff annually.

V. UNRELATED BUSINESS INCOME TAX

Prior to entering into any transaction, the Manager will assess whether income generated from the property under consideration could qualify as unrelated business taxable income. If this risk exists, the Manager will provide ARMB with an opinion of counsel satisfactory to ARMB that the transaction will not generate unrelated business taxable income under the federal income tax law or any other tax provisions that could affect ARMB's tax-exempt status existing at the time. The Manager shall investigate as to whether ARMB shall be entitled to any property tax exemptions. Managers will provide letters of opinion on UBIT and property tax exemptions to Staff.

VI. ENVIRONMENTAL EVALUATIONS

As a standard procedure during the pre-acquisition analysis, the Separate Account Investment Manager will initiate a formal evaluation for each property through the selection of an environmental consultant. In carrying out the review, appropriate procedures based on standards of the locale and conditions known to exist in the locale shall be undertaken and such procedures should at a minimum include:

- Appointment of an environmental consultant with specific experience in testing and removal of asbestos and other environmental hazards.
- A site survey will be conducted to determine from the available evidence whether hazardous chemicals or environmentally dangerous materials exist or have existed on the subject property, including, at a minimum, a Phase I report.

ARMB may invest in properties, which contain asbestos and other toxic substances, only if the following conditions are met:

- The substance and potential risks are thoroughly disclosed.
- The property is not in violation of any federal, state or local law, ordinance, or regulation relating to the property's environmental condition.
- The estimated cost of the removal or containment programs will be reflected in the purchase assumptions.
- The substance can be properly contained or removed in accordance with the then current Environmental Protection Agency Standards.
- The leasing rollover pattern in the property will accommodate a removal program in the future.

Separate Account Investment Managers will provide the environmental evaluation reports to staff

VII. PROCEDURES FOR INVESTMENT

A. Delegation of Responsibilities

The real estate investment program will be implemented and monitored through the coordinated efforts of the ARMB; the Real Estate Committee; Staff; the Real Estate Consultant and; the qualified Manager(s). Delegation of responsibilities for each participant is described in the following sections: A summary of the delegation is attached:

1. ARMB

ARMB will retain final authority over all real estate investment strategy decisions except for Business Plan variances as set forth in the Guidelines Section VIII; approve the Guidelines, the Annual Investment Plan and any periodic revisions to these documents which ARMB deems to be appropriate and prudent for the investment of ARMB assets; retain qualified investment managers and real estate consultants; and set investment limits.

2. Real Estate Committee

Review and report the status of real estate portfolio annually to ARMB; participate in the selection of real estate consultants and investment managers; serve as ARMB's liaison with the Real Estate Consultant; recommend revisions to the Guidelines; review and recommend the Annual Investment Plan to Board for approval; and attend industry conferences at least every other year in order to keep abreast of industry trends.

3. Staff

Staff will coordinate program compliance among all participants and communicate the investment policies, objectives and performance criteria to the Separate Account Investment Managers and monitor diversification compliance on a quarterly basis. Staff will also coordinate the receipt and distribution of capital. Staff, in cooperation with the Real Estate Consultant, will periodically review the Separate Account Investment Managers' and portfolio's performance in relation to target returns; review and approve the Separate Account Investment Manager's Annual Business Plan and Annual Strategic/Tactical Plan; review and recommend investments in commingled vehicles; prepare and recommend an Annual Investment Plan; and recommend revisions to the Real Estate Investment Policy Procedures and Guidelines. Staff will also review and approve the detailed property operating budgets prior to the start of each fiscal year and revisions to the property operating budgets in accordance with Section VIII of these Guidelines.

4. Real Estate Consultant

In cooperation with Staff and as deemed appropriate by the Real Estate Committee and ARMB, the Real Estate Consultant will ensure program compliance; assist in the implementation of a multiple manager program; review all program documentation and management relationships; conduct manager searches when requested; provide performance measurement analysis of the portfolio; review the Annual Investment Plan as set forth in the Investment Procedures outlined below; and provide special project research pertaining to technical real estate issues.

The Real Estate Consultant will, as requested by ARMB, provide periodic reports for the real estate program including a performance evaluation of the total portfolio to include both ARMB's commingled fund investments and ARMB's separate account investments. The analysis will include both income and capital accounting; comparison to industry performance benchmarks (such as NCREIF); Manager reviews, and effects of "Pooled Leverage" on the real estate portfolio. The Real Estate Consultant will prepare a quarterly performance analysis report which will provide after-fee realized and unrealized gains/losses; monitor and report quarterly diversification compliance and the geographic concentration limits; time weighted returns including both current quarter returns and annualized returns since portfolio inception; and internal rates of return since inception based on actual cash flow from and to ARMB.

Additional responsibilities may include developing selection criteria in manager search efforts, coordinating/conducting manager searches, conducting manager reviews, and other special projects.

5. Managers

Separate Account Investment Managers will acquire and manage real estate investments on behalf of ARMB and in accordance with the then current and approved Annual Business, Annual Strategic/Tactical Plans, and the objectives set forth in the Annual Investment Plan and the Guidelines. Managers will prepare Annual Business (including property operating budgets) and Annual Strategic/Tactical Plans for Staff review and approval.

Commingled fund investment managers will acquire and manage real estate investments on behalf of ARMB and in accordance with the terms of any and all agreements between each respective Manager and ARMB.

B. Investment Procedure

Real estate investments, in compliance with ARMB's Policies, shall be acquired through the following process:

1. Separate Accounts:

Annually, Staff will prepare an Investment Plan after reviewing the Annual Business and Strategic/Tactical Plans of the Separate Account Investment Managers. This document will recommend, as appropriate, revisions to the ARMB Guidelines, additional allocations to existing managers, and revisions to the Annual Business and Strategic/Tactical Plans of each respective Separate Account Investment Manager. Any searches that may be recommended will be outlined. The Investment Plan will then be reviewed by the consultant and submitted, along with the Real Estate Committee's recommendations to ARMB for final approval. Staff and the Real Estate Consultant shall review the Separate Account Investment Manager's Annual Business Plans and Annual Strategic/Tactical Plans for consistency with the Annual Investment Plan. Staff will approve all Plans prepared by Separate Account Investment Managers.

Investments will be made on a discretionary basis by Separate Account Investment Managers in accordance with their approved Annual Business and Strategic/Tactical Plans. Separate Account Investment Managers must provide staff with copies of their internal "Investment Committee" reports for each asset purchased on ARMB's behalf.

2. Commingled Funds:

Investments in commingled funds will be recommended by Staff and the Real Estate Consultant on an individual fund basis in accordance with the Annual Investment Plan and the ARMB Guidelines.

VIII. DELEGATION OF AUTHORITY

ARMB shall delegate authority to Staff to approve the following:

- Each Separate Account Investment Manager's detailed property operating budgets for each fiscal year;
- Annual Business Plans and Annual Tactical/Strategic Plans prepared by ARMB's Separate Account Investment Managers;
- Revised property operating budgets and variances in approved Annual Business Plans for unanticipated, significant leasing activity; and
- Line item variances in approved capital expenditure budgets in amounts up to $300,000 with a cumulative fiscal year maximum of $3,000,000 per Separate Account Investment Manager for other capital expenditures not related to leasing activity (such as repairs for building damage or defects).

IX. CONFIDENTIALITY

Pursuant to 15 AAC 112.770, ARMB shall withhold from other persons all information furnished to it by Manager(s) or Consultant(s) which is reasonably designated by Manager(s) or Consultant(s) as being confidential or proprietary, within the meaning of Alaska Statutes regarding rights to public information, except to the extent that the information is needed by ARMB in order to adequately report on the status and performance of the portfolio, or to comply with a court subpoena or with an official criminal investigation.

Those portions of reports provided pursuant to Part II section I (Reporting System) of these Guidelines shall be considered confidential pursuant to 15 AAC 112.770 to the extent that information is reasonably designated by Manager(s) as being confidential or proprietary, or to the extent the disclosure of which would unfairly prejudice the ability of Manager(s) or ARMB to manage, lease, market or sell such property or Assets.

X. REVISIONS

This document replaces and consolidates the policies, procedures, and guidelines as of ~~September 19, 2013~~February 6, 2014.This document is to be reviewed no less than annually and revised as appropriate.

XI. REAL ESTATE SEPARATE ACCOUNT INVESTMENT MANAGERS

The following investment managers acquire institutional-grade properties on a discretionary basis for the Alaska Retirement Management Board:

UBS Realty Investors LLC
Property type – Core/apartments, industrial, retail and office
Contact - Jeffrey G. Maguire
Managing Director
10 State House Square
Hartford, CT 06103-3604
Telephone: 860-616-9086
Fax: 860-616-9104
E-mail: jeffrey.maguire@ubs.com
Web site: www.ubs.com

Sentinel Realty Advisors Corp.
Property type – Core/apartments only
Contact – David Weiner
Managing Director
1251 Avenue of the Americas
New York, NY 10020
Telephone: 212-408-2913
Fax: 212-603-5961
E-mail: weiner@sentinelcorp.com
Web site: www. sentinelcorp.com

LaSalle Investment Management
Property type – Core/apartments, industrial, retail and office (includes Takeover Assets)
Attn: George Duke
Managing Director
100 East Pratt Street, 20th Floor
Baltimore, MD 21202
Telephone: (410) 878-4810
Facsimile: (410) 878-4910
E-mail:
~~George.Duke@lasalle.com~~George.Duke@lasalle.com
Web site: www.lasalle.com

~~**Cornerstone Real Estate Advisers LLC**~~
~~*Property type* – Core/apartments, industrial, retail and office~~
~~*Attn:* Denise Stake~~
~~Portfolio Manager~~
~~One Financial Plaza, Suite 1700~~
~~Hartford, CT 06103-2604~~
~~*Telephone:* (860) 509-2311~~
~~*Facsimile: (860) 509-2296*~~
~~*Email:*dstake@Cornerstoneadvisers.com~~
~~*Web site:* www.cornerstoneadvisers.com~~

XII. REAL ESTATE COMMINGLED ACCOUNT INVESTMENT MANAGERS

UBS Realty Investors LLC
Contact: Thomas J. Anathan, Managing Director
10 State House Square
Hartford, CT 06103-3604
Telephone: 860-616-9128;
Facsimile: 860-616-9104
E-mail: thomas.anathan@ubs.com

J.P. Morgan Asset Management
Contact: Ann Cole, Managing Director Portfolio Manager; Kimberly Adams, Managing Director Portfolio Manager, Strategic Property Fund
270 Park Avenue, 7th Floor
New York, NY 10017
Telephone: (AC) 212-648-2152
Telephone: (KA) 312-732-6366
Facsimile: 917-464-7449
~~ann.e.cole@jpmorgan.com~~ann.e.cole@jpmorgan.com

~~kimberly.a.adams@jpmorgan.com~~kimberly.a.adams@jpmorgan.com

Clarion Partners
Contact: Doug Bowen
Managing Director
230 Park Avenue
New York, NY 10169
Telephone: 212-883-2506
Facsimile: 212-883-2806
E-mail:
doug.bowen@clarionpartners.com

Tishman Speyer Properties
Contact: Julie Lurie
45 Rockefeller Plaza, 7th Floor
New York, NY 10020
Telephone: 212-715-0329
Facsimile: 212-895-0129
E-mail:
~~JRLurie@tishmanspeyer.com~~JRLurie@tishmanspeyer.com

Almanac Realty Investors, LLC
Contact: Matt Kaplan, Managing Partner
1140 Avenue of the Americas, 17th Floor
New York, NY 10036
Telephone: 212-403-3522
Facsimile: 212-403-3520
E-mail:
matthew.kaplan@almanacrealty.com

ColonyCapital, LLC
Contact: Andrea Nicholas
2450 Broadway, 6th Floor
Santa Monica, CA 90404
Telephone: 310-552-7191
Facsimile: 310-407-7391
E-mail: ANicholas@colonyinc.com

LaSalle Investment Management
Contact: Steve Bolen, President
100 East Pratt Street, 20th Floor
Baltimore, MD 21202
Telephone: 410-347-0660
Facsimile: 410-347-0612 fax
E-mail: steve.bolen@lasalle.com

KKR & Co. L.P.
Contact: Dan McLaughlin, Director
555 California Street

Silverpeak Legacy Partners
Contact: Tanya M. Tarar-Oblak,
Managing Director
1330 Avenue of the Americas, Suite 1200
New York, NY 10019
Telephone: 212-716-2025
Facsimile: (646) 285-9271
E-mail: investorrelations@silverpeakre.com

Cornerstone Real Estate Advisers LLC
Contact: Patrick T. Kendall, Vice President
One Financial Plaza, Suite 1700
Hartford, CT 06103
Telephone: 310-234-2525
Facsimile: 949-852-9804
E-mail:
~~pkendall@Cornerstoneadvisors.com~~pkendall@Cornerstoneadvisors.com

Coventry Real Estate Fund II, LLC
Contact: Peter Henkel
888 Seventh Avenue, 12th Floor
New York, NY 10019
Telephone: 212-699-4109
Facsimile: 212-699-4124
E-mail: phenkel@coventryadvisors.com

BlackRock, Inc.
Contact: Ted Koros, Managing Director
50 California Street, Suite 300
San Francisco, CA 94111
Telephone: 415-670-6210
Facsimile: 646-521-4982
E-mail: theodore.koros@blackrock.com

Lowe Hospitality Investment Partners, LLC
Contact: Bleecker P. Seaman, Executive VP
11777 San Vicente Boulevard, Suite 900
P.O. Box 49021
Los Angeles, CA 90049-6615
Telephone: 310-571-4263
Facsimile: 310-207-1132
bseaman@loweenterprises.com

San Francisco, CA 94101
Telephone: 415-315-6573
E-mail: dan.mclaughlin@kkr.com

Attachment 1

REAL ESTATE INVESTMENT POLICY and PROCEDURES - Delegation of Responsibilities Attachment						
	Frequency	**Separate Account Investment Managers**	**Consultant**	**Staff**	**Real Estate Committee**	**Board**
Real Estate Investment Policy, Procedures, and Guidelines			R	P&R	R	A
Review and Revise	Annually		R	R	R	A
Separate Account Investment **Manager Selection**	Periodically		G&R	G&R	G&R*	A
Request For Proposal (RFP)			P&R	P&R	R	A
Real Estate **Consultant Selection**	Tri-Annually			G&R	G&R*	A
Request For Proposal (RFP)				P&R	R	A
Commingled Fund Selection**	Periodically		R	R	R	A
Real Estate Investment Plan**	Annually		R	P&R	R	A
Separate Account Business Plan**	Annually	P	R	R&A	RT	
Detailed Property Operating Budget	Annually	P	R	R&A		
Separate Account Strategic/Tactical Plan**	Annually	P	R	R&A	RT	RT
Quarterly Performance	Quarterly		P	RT		RT
Portfolio/Property Diversification Compliance	Quarterly		M	M		
Geographic Concentration Limit	Quarterly		M	RT		

A = Approves   RT = Reported To   * Grade Semi-finalists only
G = Grade   M = Monitor   ** Investment Decision (Shaded)
P = Prepares
R = Recommends

ALASKA RETIREMENT MANAGEMENT BOARD
REAL ESTATE INVESTMENT
POLICIES, PROCEDURES AND GUIDELINES

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ATTACHMENTS

ALASKA RETIREMENT MANAGEMENT BOARD
REAL ESTATE INVESTMENT
POLICIES, PROCEDURES AND GUIDELINES

I. INVESTMENT OBJECTIVES

A. Investments in Real Estate and Other Real Estate Related Assets

The Alaska Retirement Management Board (ARMB) will invest in real estate with the goals of portfolio diversification and attaining the optimum return on the portfolio, consistent with the assumption of prudent risk and safety of principal. ARMB recognizes the need to use active investment management in order to obtain the highest attainable total investment return (measured as income plus appreciation) within ARMB's framework of prudence and managed risk.

ARMB will select Real Estate Investment Managers who have the discretion to invest in publicly traded equity and/or privately placed equity sectors, subject to ARMB's approval of an Annual Strategic/Tactical Plan and an Annual Investment Plan. In order for real estate investments to be considered, the Investment Manager must demonstrate that it is able to: add value through its real estate knowledge, experience and strategy; underwrite the risks of the investment which is contemplated; and at the time of investment, comply with the intent of the Real Estate Investment Policies, Procedures and Guidelines **(Guidelines)**.

Single property and multi property strategies will be considered as well as "pooled/commingled" fund investment vehicles.

B. Asset Allocation

The ARMB allocation to real estate investments shall be determined by the Board of Trustees and reviewed annually. Allocated capital to Investment Managers will be defined as invested capital based on ARMB's cost.

C. Portfolio Return Objective

1. **Total Return**
   Over rolling 5 year periods, the equity real estate investment portfolio is expected to generate a minimum total real rate of return (net of investment management fees) of 5% using a time-weighted rate of return calculation. The inflation index used to calculate the actual real rate of return is the CPI All Urban.

2. **Income Return**
   Income, which is defined as cash distributed to ARMB, is expected to produce 50-60% of the total return over rolling five-year periods.

3. **Index**

   The overall portfolio is expected to exceed the target index. The target index is composed of 90% NCREIF Property Index and 10% NAREIT Equity Index.

II. PROGRAM RISK MANAGEMENT AND IMPLEMENTATION

The selection and management of assets in the real estate portfolio of the ARMB will be guided by the principles of preserving investment capital, attaining the optimum return on the portfolio consistent with the assumption of prudent risk, generating current income, being sensitive to inflation, maintaining diversification of assets and diversification of management responsibility.

In real estate investment, there is an inherent risk that the actual income and return of capital will vary from the amounts expected. The ARMB will manage the investment risk associated with real estate in several ways**:**

A. Institutional Quality

All assets must be of institutional investment quality as evidenced by a precedent of institutional investment in similar properties; expert analysis which supports the economic viability of the market; high quality construction and design features; and a potential competitive position within the property's immediate market area**.**

B. Diversification

The real estate portfolio will be diversified as to style group, property type, industry sector, life cycle, economic driver, investment manager and geographical location. Diversification reduces the impact on the portfolio of any one investment or any single manager's investment style to the extent that an adversity affecting any one particular area will not impact a disproportionate share of the total portfolio. Portfolios for core investment managers and non-core or value added investment managers will carry the diversification characteristics set forth in the allocations and definitions set out below. Diversification compliance will be monitored on a quarterly basis for compliance with ARMB's Guidelines by staff and the real estate consultant.

For purposes of calculating diversification compliance, the overall real estate portfolio size will be considered the product of the greater of projected or target real estate allocation times the projected fiscal year-end overall plan assets as established in the Annual Investment Plan. The projected fiscal year-end overall plan assets will take into account the target allocations and projected returns of all asset classes in which plan assets are invested, and estimated net pay-outs to plan beneficiaries. Unless exceptional circumstances justify a deviation, the maximum percentage of the real estate portfolio investment for each of the identified categories is as follows:

Non-Controlled Investments: (ARMB cannot liquidate within 180 days)	50%
Non-Core Investments (See definition below):	50%
Single Manager Limit: *(value of both Separate Account and Commingled Fund combined, if applicable)*	45 %
Public Equity:	50 %
Public Debt:	0 %
Private Equity:	100 %
Private Debt:	0 %

Geographic:

ARMB will avoid over-concentration in areas of similar real estate performance. The consultant will monitor ARMB's concentrations in this area, considering indicators such as NCREIF sub-region, metropolitan areas and economic drivers. The consultant will report its conclusions regarding the acceptability of ARMB's concentration limits quarterly.

Outside United States:	20 %
Single Property Investment: *(acquisition cost plus projected capital additions and improvements)*	5 %
Single-Tenant (any one firm):	10 %
Property Type:	40 %

Manager Allocation – It is understood that Separate Account Investment Managers may exceed their Board-approved allocations by up to 5% for the purposes of capital improvements on existing assets and/or for the completion of an acquisition. A core Separate Account Investment Manager's portfolio may be invested up to 15% in core-plus style properties to assemble a core portfolio. A value-added Separate Account Investment Manager's portfolio shall include 70%-100% in value-added style properties, and may include up to 30% in opportunistic style properties.

Subject to CIO approval, upon the sale of a property held by a Separate Account Investment Manager in which the net sales proceeds are in excess of the property's cumulative basis, the advisor's allocation will increase in an amount equal to the lesser of the excess of the net sales proceeds over the property's cumulative basis or the aggregate portfolio net asset value over the aggregate portfolio cumulative basis adjusted to reflect actual sale proceeds. The CIO will also consider whether an allocation increase should be adjusted for any past realized losses incurred by the Separate Account Investment Manager. The intent of this provision is to allow a Separate Account Investment Manager to reinvest realized gains but only to the extent gains are greater than losses which have been experienced in other property investments in the Separate Account Investment Manager's portfolio.

Exceptional circumstances justifying a deviation – When circumstances arise of a temporary nature, such as an unexpected re-valuation of assets, a transfer of assets among managers, or an event in which it would be in the fiduciary interest of the ARMB to do so, the limits set forth in paragraph II.B of ARMB Policies may be exceeded provided that ARMB concurs.

CIO Discretionary Investment Authority – The CIO shall have the following discretionary investment authority:

a) To increase or decrease existing separate account allocations and investments in open-end funds;

b) To commit to new investment funds up to $100 million for each fund; and,

c) To engage consultants and take other action as may be necessary to ensure sufficient due diligence is performed on all investments under consideration.

The CIO shall exercise this discretion within Board approved asset allocations, investment plans, and guidelines as they may apply.

The CIO will provide prior notification to the Chairs of ARMB and the Real Assets Committee before committing to any investments under this authority. All discretionary CIO investment actions shall be reported to the Board.

Definitions

Core Investments

Primary Characteristics:

- Fully or substantially leased (85% occupancy or greater)
- Inconsequential turnover near term
- Inconsequential physical issues or renovation required
- Credit tenants
- Primary markets
- Quality property
- Income produces 50% or more of expected return
- Typically longer term holds
- Properties in markets with stable or improving economic conditions

Core-plus Investments

Primary Characteristics:

- Limited renovation, primarily deferred maintenance, limited physical issues or repositioning needed
- Modest near term lease roll over; modest vacant lease up
- Expected growth through increasing rents
- Poor prior management
- A- to B- quality
- Income produces 50% or more of expected return

Non-Core Investments

Value-Added Investments

Primary Characteristics:

- Asset renovation – lobbies, corridors, deferred maintenance
- Intermediate term (6-9 months) physical issues
- Current vacancies or rent loss
- Near term roll over exposure
- Repositioning, re-tenanting
- Distressed prior management
- Purchase of adjacent land to develop
- Alternative, turnaround markets and property types
- Income produces 50% or less of total return

Opportunistic Investments – These investments involve significant redevelopment risk, high leasing risk, and high development risk.

Primary Characteristics:

- Empty Buildings
- High near term turnover
- New development – spec or limited pre-leasing
- Significant rehabilitation and leasing, redevelopment into alternative uses
- Capital displacement in maligned markets: lack of investment capital due to level of risk
- Non-traditional asset type (mezzanine debt, land, etc.)
- Wide ranging investment structures
- Investing in non-performing notes

- Cross-border investing
- Holding periods typically 1 to 5 years
- Income produces less than 50% of total return

Note: *Properties within a multi-property investment will be categorized as either core or non-core.*

C. Implementation Approach

The ARMB will implement an investment process for real estate which will, over time, include a minimum of three (3) qualified Separate Account Investment Managers who have been selected on a competitive basis. The ARMB will endeavor to allocate specific funds to qualified managers on a separate account basis. Selected managers will seek real estate investment opportunities in publicly-traded equity and/or privately-placed equity sectors. Investments will be made on a discretionary basis subject to Staff approval of the Annual Strategic/Tactical Plans prepared by Separate Account Investment Managers and ARMB's approval of the Annual Investment Plan prepared by Staff. In addition to separate accounts, ARMB will selectively consider investments in "pooled/commingled" investment vehicles.

All allocation of funds to a manager (including additional investment with existing accounts) and investment strategy must be recommended to ARMB by Staff and the Real Estate Consultant and be accompanied by an investment report which, at a minimum, includes the following: market information; investment alternatives; fee structure and comparison to other alternatives; demonstration of compliance with Guidelines and the then current Annual Investment Plan; historical performance of Separate Account Investment Manager (cash–based internal rates of return and industry standard); projected returns (income and appreciation); and positive and negative attributes of the investment strategy.

On a selective basis, a member of ARMB may visit the site of a real estate investment for the purpose of rendering a report to ARMB supplementing reports provided by Staff, the Real Estate Consultant, or others.

D. Prudent Leverage

The total amount of leverage placed on the aggregate separate account assets will not exceed thirty five percent (35%) of the total market value of the real estate separate account portfolio. Directly-owned properties will not be leveraged by the Separate Account Investment Manager. Property encumbered by debt at the time of purchase, if justified on a risk-return basis by the Separate Account Investment Manager, may be acquired subject to Chief Investment Officer approval. With authorization by the ARMB, the Chief Investment Officer may place leverage on a pool of existing core real estate assets held in ARMB's separate account portfolio in a manner consistent with the ARMB's Guidelines.

The total amount of fund level leverage, at the time of investment, will not exceed 35% for core commingled funds investing in a core equity diversified asset strategy. The total amount of fund level leverage, at the time of investment, will not exceed 65% for non-core commingled funds investing in a value add or opportunistic equity diversified asset strategy.

E. Lease Structure

Multi-tenant and single tenant properties will be considered. When acquiring single tenant properties, consideration will be given to avoid multiple single-tenant exposure to any firm if those single tenant properties constitute more than 10% of the portfolio. A staggered lease structure for commercial properties will be emphasized.

F. Separate Account Investment Manager Business Plan; Annual Strategic/Tactical Plan; Disposition/Exit Strategy

A Business Plan (including property operating budgets) will be completed by each manager for each asset under its management. The Business Plan will identify the current and anticipated competitive position for each property in order to set tactical and strategic objectives and will prescribe in appropriate detail a disposition and exit strategy respecting the particular investments. Part of this process is to evaluate the potential timing of dispositions. A property is considered for sale when it is believed that the equity in the existing investment can achieve a higher return in another real estate investment of similar risk. The Annual Strategic/Tactical Plan will describe the expectation of the manager with respect to acquisitions and dispositions.

G. Fee Structure

Involvement in any venture will be done on a fee basis that is competitive. The preferred method of calculating manager fees will be based upon a formula, which considers both 1) the cost basis of assets under management and 2) investment performance. All fee structures will be approved by ARMB. For core managers, the return-based portion of a fee will emphasize actual cash available for distribution to ARMB.

H. Single Asset Ownership Structure (Applies to Separate Accounts Only)

Provided that the goals of these guidelines are followed, ARMB may invest in separate, specific real estate assets. However, such investments will be undertaken in a fashion structured to limit ARMB's liability to the amount of its investment.

I. Reporting System

Staff and the Real Estate Consultant will develop and implement a comprehensive and responsive reporting and monitoring system for the entire portfolio, individual investments and individual managers. The reporting and monitoring system will endeavor to identify under-performing investments, controlled portfolio diversification deficiencies and inherent conflicts of interest, thereby facilitating active portfolio management. A cash-based internal rate of return (IRR) will be used when evaluating the long-term performance of an investment. Time- weighted returns will be used to measure comparative performance.

J. Distribution of Current Income

All separate account income will be distributed immediately to ARMB or its designee and not automatically reinvested in the account.

K. Lines of Responsibility

Well defined lines of responsibility and accountability will be required of all participants in ARMB's real estate investment program. Participants are identified as:

ARMB – The fiduciaries appointed by the Governor to represent the beneficiaries' interest which shall retain final authority over all real estate investment decisions.

Real Estate Committee – Comprised of at least three (3) members of ARMB who continually review the role and performance of real estate.

Staff – Investment professionals on the staff of the Department of Revenue and assigned ARMB responsibilities who will assist in the Real Estate equity investment program's design, policy implementation and administration.

Real Estate Consultant – Professionals retained to support Staff and ARMB through the provision of expert real estate strategic planning, implementation and performance monitoring support.

Separate Account Investment Managers – Qualified entities who provide institutional real estate investment management services and maintain a discretionary relationship with ARMB subject to Staff's approval of Annual Business Plans and Annual Strategic/Tactical plans, prepared by Separate Account Investment Managers, and ARMB's approval of the Annual Investment Plan.

Commingled Fund Managers – Qualified entities who provide institutional real estate investment management services through open-end and closed-end real estate pools and other pooled/commingled vehicles.

III. CONFLICTS OF INTEREST

In real estate investment, separate and distinct from other asset classes, the Manager of a Separate Account or Commingled Fund may have direct or significant control over the operations of the assets. This inherent or potential conflict of interest if openly described and regulated may contribute to the lower volatility associated with the asset class, but it also creates a need for a higher oversight standard by the plan sponsor. Staff and ARMB will maintain this oversight in at least the following ways:

A. Property Valuation

The Separate Account Investment Manager will provide ARMB with annual appraisal valuations for all properties for which it has asset management responsibility as of the quarter ending March 31. Unless otherwise directed by ARMB, the appraisal will be prepared by a qualified independent third party entity in accordance with industry standards. Staff may waive the appraisal requirement for recent acquisitions or pending dispositions following a recommendation by the Separate Account Investment Manager that such appraisal would not be a cost effective exercise. For development assets, appraisals are to be conducted in the manner described above after substantial completion payment by ARMB is made. In addition, the Separate Account Investment Manager will mark each asset to market each quarter based on asset conditions and leasing, operations and capital market conditions for comparable properties in that market.

B. Property Management

The selection of on-site property management will generally be left to the discretion of the Separate Account Investment Manager. It is expected that the Separate Account Investment Manager will retain the highest caliber, market rate property management service either through a third party fee manager or the Separate Account Investment Manager's affiliated property management division. This business relationship will be periodically reviewed by Staff, the Real Estate Consultant and ARMB.

IV. INSURANCE COVERAGE

The Separate Account Investment Manager will obtain insurance for the physical properties and assets under its control. The coverage will be in such amounts and against such risks as, in the Separate Account Investment Manager's professional judgment, shall be in accordance with sound institutional practices applicable to such properties or assets in the specific geographic area. It is expected that such insurance will include, but not be limited to, casualty loss, including where deemed appropriate by the Separate Account Investment Manager, earthquake, flood and any other disaster-type insurance coverage; comprehensive general liability; and title insurance. Separate Account Investment Managers will provide proof of insurance to Staff annually.

V. UNRELATED BUSINESS INCOME TAX

Prior to entering into any transaction, the Manager will assess whether income generated from the property under consideration could qualify as unrelated business taxable income. If this risk exists, the Manager will provide ARMB with an opinion of counsel satisfactory to ARMB that the transaction will not generate unrelated business taxable income under the federal income tax law or any other tax provisions that could affect ARMB's tax-exempt status existing at the time. The Manager shall investigate as to whether ARMB shall be entitled to any property tax exemptions. Managers will provide letters of opinion on UBIT and property tax exemptions to Staff.

VI. ENVIRONMENTAL EVALUATIONS

As a standard procedure during the pre-acquisition analysis, the Separate Account Investment Manager will initiate a formal evaluation for each property through the selection of an environmental consultant. In carrying out the review, appropriate procedures based on standards of the locale and conditions known to exist in the locale shall be undertaken and such procedures should at a minimum include:

- Appointment of an environmental consultant with specific experience in testing and removal of asbestos and other environmental hazards.
- A site survey will be conducted to determine from the available evidence whether hazardous chemicals or environmentally dangerous materials exist or have existed on the subject property, including, at a minimum, a Phase I report.

ARMB may invest in properties, which contain asbestos and other toxic substances, only if the following conditions are met:

- The substance and potential risks are thoroughly disclosed.
- The property is not in violation of any federal, state or local law, ordinance, or regulation relating to the property's environmental condition.
- The estimated cost of the removal or containment programs will be reflected in the purchase assumptions.
- The substance can be properly contained or removed in accordance with the then current Environmental Protection Agency Standards.
- The leasing rollover pattern in the property will accommodate a removal program in the future.

Separate Account Investment Managers will provide the environmental evaluation reports to staff

VII. PROCEDURES FOR INVESTMENT

A. Delegation of Responsibilities

The real estate investment program will be implemented and monitored through the coordinated efforts of the ARMB; the Real Estate Committee; Staff; the Real Estate Consultant and; the qualified Manager(s). Delegation of responsibilities for each participant is described in the following sections: A summary of the delegation is attached:

1. ARMB

ARMB will retain final authority over all real estate investment strategy decisions except for Business Plan variances as set forth in the Guidelines Section VIII; approve the Guidelines, the Annual Investment Plan and any periodic revisions to these documents which ARMB deems to be appropriate and prudent for the investment of ARMB assets; retain qualified investment managers and real estate consultants; and set investment limits.

2. Real Estate Committee

Review and report the status of real estate portfolio annually to ARMB; participate in the selection of real estate consultants and investment managers; serve as ARMB's liaison with the Real Estate Consultant; recommend revisions to the Guidelines; review and recommend the Annual Investment Plan to Board for approval; and attend industry conferences at least every other year in order to keep abreast of industry trends.

3. Staff

Staff will coordinate program compliance among all participants and communicate the investment policies, objectives and performance criteria to the Separate Account Investment Managers and monitor diversification compliance on a quarterly basis. Staff will also coordinate the receipt and distribution of capital. Staff, in cooperation with the Real Estate Consultant, will periodically review the Separate Account Investment Managers' and portfolio's performance in relation to target returns; review and approve the Separate Account Investment Manager's Annual Business Plan and Annual Strategic/Tactical Plan; review and recommend investments in commingled vehicles; prepare and recommend an Annual Investment Plan; and recommend revisions to the Real Estate Investment Policy Procedures and Guidelines. Staff will also review and approve the detailed property operating budgets prior to the start of each fiscal year and revisions to the property operating budgets in accordance with Section VIII of these Guidelines.

4. Real Estate Consultant

In cooperation with Staff and as deemed appropriate by the Real Estate Committee and ARMB, the Real Estate Consultant will ensure program compliance; assist in the implementation of a multiple manager program; review all program documentation and management relationships; conduct manager searches when requested; provide performance measurement analysis of the portfolio; review the Annual Investment Plan as set forth in the Investment Procedures outlined below; and provide special project research pertaining to technical real estate issues.

The Real Estate Consultant will, as requested by ARMB, provide periodic reports for the real estate program including a performance evaluation of the total portfolio to include both ARMB's commingled fund investments and ARMB's separate account investments. The analysis will include both income and capital accounting; comparison to industry performance benchmarks (such as NCREIF); Manager reviews, and effects of "Pooled Leverage" on the real estate portfolio. The Real Estate Consultant will prepare a quarterly performance analysis report which will provide after-fee realized and unrealized gains/losses; monitor and report quarterly diversification compliance and the geographic concentration limits; time weighted returns including both current quarter returns and annualized returns since portfolio inception; and internal rates of return since inception based on actual cash flow from and to ARMB.

Additional responsibilities may include developing selection criteria in manager search efforts, coordinating/conducting manager searches, conducting manager reviews, and other special projects.

5. Managers

Separate Account Investment Managers will acquire and manage real estate investments on behalf of ARMB and in accordance with the then current and approved Annual Business, Annual Strategic/Tactical Plans, and the objectives set forth in the Annual Investment Plan and the Guidelines. Managers will prepare Annual Business (including property operating budgets) and Annual Strategic/Tactical Plans for Staff review and approval.

Commingled fund investment managers will acquire and manage real estate investments on behalf of ARMB and in accordance with the terms of any and all agreements between each respective Manager and ARMB.

B. Investment Procedure

Real estate investments, in compliance with ARMB's Policies, shall be acquired through the following process:

1. Separate Accounts:

Annually, Staff will prepare an Investment Plan after reviewing the Annual Business and Strategic/Tactical Plans of the Separate Account Investment Managers. This document will recommend, as appropriate, revisions to the ARMB Guidelines, additional allocations to existing managers, and revisions to the Annual Business and Strategic/Tactical Plans of each respective Separate Account Investment Manager. Any searches that may be recommended will be outlined. The Investment Plan will then be reviewed by the consultant and submitted, along with the Real Estate Committee's recommendations to ARMB for final approval. Staff and the Real Estate Consultant shall review the Separate Account Investment Manager's Annual Business Plans and Annual Strategic/Tactical Plans for consistency with the Annual Investment Plan. Staff will approve all Plans prepared by Separate Account Investment Managers.

Investments will be made on a discretionary basis by Separate Account Investment Managers in accordance with their approved Annual Business and Strategic/Tactical Plans. Separate Account Investment Managers must provide staff with copies of their internal "Investment Committee" reports for each asset purchased on ARMB's behalf.

2. Commingled Funds:

Investments in commingled funds will be recommended by Staff and the Real Estate Consultant on an individual fund basis in accordance with the Annual Investment Plan and the ARMB Guidelines.

VIII. DELEGATION OF AUTHORITY

ARMB shall delegate authority to Staff to approve the following:

- Each Separate Account Investment Manager's detailed property operating budgets for each fiscal year;
- Annual Business Plans and Annual Tactical/Strategic Plans prepared by ARMB's Separate Account Investment Managers;
- Revised property operating budgets and variances in approved Annual Business Plans for unanticipated, significant leasing activity; and
- Line item variances in approved capital expenditure budgets in amounts up to $300,000 with a cumulative fiscal year maximum of $3,000,000 per Separate Account Investment Manager for other capital expenditures not related to leasing activity (such as repairs for building damage or defects).

IX. CONFIDENTIALITY

Pursuant to 15 AAC 112.770, ARMB shall withhold from other persons all information furnished to it by Manager(s) or Consultant(s) which is reasonably designated by Manager(s) or Consultant(s) as being confidential or proprietary, within the meaning of Alaska Statutes regarding rights to public information, except to the extent that the information is needed by ARMB in order to adequately report on the status and performance of the portfolio, or to comply with a court subpoena or with an official criminal investigation.

Those portions of reports provided pursuant to Part II section I (Reporting System) of these Guidelines shall be considered confidential pursuant to 15 AAC 112.770 to the extent that information is reasonably designated by Manager(s) as being confidential or proprietary, or to the extent the disclosure of which would unfairly prejudice the ability of Manager(s) or ARMB to manage, lease, market or sell such property or Assets.

X. REVISIONS

This document replaces and consolidates the policies, procedures, and guidelines as of February 6, 2014.This document is to be reviewed no less than annually and revised as appropriate.

XI. REAL ESTATE SEPARATE ACCOUNT INVESTMENT MANAGERS

The following investment managers acquire institutional-grade properties on a discretionary basis for the Alaska Retirement Management Board:

UBS Realty Investors LLC
Property type – Core/apartments, industrial, retail and office
Contact - Jeffrey G. Maguire
Managing Director
10 State House Square
Hartford, CT 06103-3604
Telephone: 860-616-9086
Fax: 860-616-9104
E-mail: jeffrey.maguire@ubs.com
Web site: www.ubs.com

Sentinel Realty Advisors Corp.
Property type – Core/apartments only
Contact – David Weiner
Managing Director
1251 Avenue of the Americas
New York, NY 10020
Telephone: 212-408-2913
Fax: 212-603-5961
E-mail: weiner@sentinelcorp.com
Web site: www. sentinelcorp.com

LaSalle Investment Management
Property type – Core/apartments, industrial, retail and office (includes Takeover Assets)
Attn: George Duke
Managing Director
100 East Pratt Street, 20th Floor
Baltimore, MD 21202
Telephone: (410) 878-4810
Facsimile: (410) 878-4910
E-mail: George.Duke@lasalle.com
Web site: www.lasalle.com

XII. REAL ESTATE COMMINGLED ACCOUNT INVESTMENT MANAGERS

UBS Realty Investors LLC
Contact: Thomas J. Anathan, Managing Director
10 State House Square
Hartford, CT 06103-3604
Telephone: 860-616-9128;
Facsimile: 860-616-9104
E-mail: thomas.anathan@ubs.com

J.P. Morgan Asset Management
Contact: Ann Cole, Managing Director Portfolio Manager; Kimberly Adams, Managing Director Portfolio Manager, Strategic Property Fund
270 Park Avenue, 7th Floor
New York, NY 10017
Telephone: (AC) 212-648-2152
Telephone: (KA) 312-732-6366
Facsimile: 917-464-7449
ann.e.cole@jpmorgan.com
kimberly.a.adams@jpmorgan.com

Clarion Partners

Silverpeak Legacy Partners

Contact: Doug Bowen
Managing Director
230 Park Avenue
New York, NY 10169
Telephone: 212-883-2506
Facsimile: 212-883-2806
E-mail:
doug.bowen@clarionpartners.com

Tishman Speyer Properties
Contact: Julie Lurie
45 Rockefeller Plaza, 7th Floor
New York, NY 10020
Telephone: 212-715-0329
Facsimile: 212-895-0129
E-mail: JRLurie@tishmanspeyer.com

Almanac Realty Investors, LLC
Contact: Matt Kaplan, Managing Partner
1140 Avenue of the Americas, 17th Floor
New York, NY 10036
Telephone: 212-403-3522
Facsimile: 212-403-3520
E-mail:
matthew.kaplan@almanacrealty.com

ColonyCapital, LLC
Contact: Andrea Nicholas
2450 Broadway, 6th Floor
Santa Monica, CA 90404
Telephone: 310-552-7191
Facsimile: 310-407-7391
E-mail: ANicholas@colonyinc.com

LaSalle Investment Management
Contact: Steve Bolen, President
100 East Pratt Street, 20th Floor
Baltimore, MD 21202
Telephone: 410-347-0660
Facsimile: 410-347-0612 fax
E-mail: steve.bolen@lasalle.com

KKR & Co. L.P.
Contact: Dan McLaughlin, Director
555 California Street
San Francisco, CA 94101
Telephone: 415-315-6573
E-mail: dan.mclaughlin@kkr.com

Contact: Tanya M. Tarar-Oblak,
Managing Director
1330 Avenue of the Americas, Suite 1200
New York, NY 10019
Telephone: 212-716-2025
Facsimile: (646) 285-9271
E-mail: investorrelations@silverpeakre.com

Cornerstone Real Estate Advisers LLC
Contact: Patrick T. Kendall, Vice President
One Financial Plaza, Suite 1700
Hartford, CT 06103
Telephone: 310-234-2525
Facsimile: 949-852-9804
E-mail: pkendall@Cornerstoneadvisors.com

Coventry Real Estate Fund II, LLC
Contact: Peter Henkel
888 Seventh Avenue, 12th Floor
New York, NY 10019
Telephone: 212-699-4109
Facsimile: 212-699-4124
E-mail: phenkel@coventryadvisors.com

BlackRock, Inc.
Contact: Ted Koros, Managing Director
50 California Street, Suite 300
San Francisco, CA 94111
Telephone: 415-670-6210
Facsimile: 646-521-4982
E-mail: theodore.koros@blackrock.com

Lowe Hospitality Investment Partners, LLC
Contact: Bleecker P. Seaman, Executive VP
11777 San Vicente Boulevard, Suite 900
P.O. Box 49021
Los Angeles, CA 90049-6615
Telephone: 310-571-4263
Facsimile: 310-207-1132
bseaman@loweenterprises.com

Attachment 1

REAL ESTATE INVESTMENT POLICY and PROCEDURES - Delegation of Responsibilities Attachment						
	Frequency	**Separate Account Investment Managers**	**Consultant**	**Staff**	**Real Estate Committee**	**Board**
Real Estate Investment Policy, Procedures, and Guidelines			R	P&R	R	A
Review and Revise	Annually		R	R	R	A
Separate Account Investment **Manager Selection**	Periodically		G&R	G&R	G&R*	A
Request For Proposal (RFP)			P&R	P&R	R	A
Real Estate **Consultant Selection**	Tri-Annually			G&R	G&R*	A
Request For Proposal (RFP)				P&R	R	A
Commingled Fund Selection**	Periodically		R	R	R	A
Real Estate Investment Plan**	Annually		R	P&R	R	A
Separate Account Business Plan**	Annually	P	R	R&A	RT	
Detailed Property Operating Budget	Annually	P	R	R&A		
Separate Account Strategic/Tactical Plan**	Annually	P	R	R&A	RT	RT
Quarterly Performance	Quarterly		P	RT		RT
Portfolio/Property Diversification Compliance	Quarterly		M	M		
Geographic Concentration Limit	Quarterly		M	RT		

A = Approves
G = Grade
P = Prepares
R = Recommends

RT = Reported To
M = Monitor

* Grade Semi-finalists only
** Investment Decision (Shaded)

UBS Realty Investors, LLC

Mandate: **Core Real Estate Separate Account** **Hired: 1997**

Firm Information	Investment Approach	Total ARMB Mandate
UBS Global Asset Management, Global Real Estate - US provides a comprehensive range of real estate investment advisory services in a variety of direct investment structures and commingled vehicles. The firm operates through its primary legal entity, UBS Realty Investors LLC (UBS Realty) and is headquartered in Hartford, CT. UBS Realty is organized as a limited liability company, and is an indirect, wholly owned subsidiary of UBS AG. UBS Realty is part of UBS Global Asset Management, one of UBS AG's four business divisions. **Key Executives:** ***Jeff Maguire,*** Senior Portfolio Manager ***Peter Gilbertie,*** Portfolio Manager ***Thomas Anathan,*** Managing Director	UBS Realty takes a team oriented approach in which portfolio managers are responsible for the execution of the portfolio strategy within the investment guidelines for the portfolio and the performance of their respective portfolios. The acquisition process utilizes a "top down and bottom up" approach. The Real Estate Research - US team identifies markets that are expected, from a macroeconomic perspective, to provide attractive risk/reward pricing. With this direction from research, UBS Realty's investment acquisition professionals search for specific real estate assets that meet the portfolio's investment criteria. **Benchmark:** NCREIF Property Index	Assets Under Management: 06/30/14: $312,025,410

Concerns: None

6/30/2014 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	2.19%	15.51%	12.55%	10.71%
Fee	0.15%	0.66%	0.67%	0.72%
Manager (net)	2.04%	14.85%	11.88%	9.99%
Benchmark	2.91%	11.21%	11.32%	9.67%

UBS Realty Investors, LLC

Mandate: **Trumbull Property Fund – Open-end Commingled Real Estate Fund** **Hired: 1980**

Firm Information

UBS Global Asset Management, Global Real Estate - US provides a comprehensive range of real estate investment advisory services in a variety of direct investment structures and commingled vehicles. The firm operates through its primary legal entity, UBS Realty Investors LLC (UBS Realty) and is headquartered in Hartford, CT.

UBS Realty is organized as a limited liability company, and is an indirect, wholly owned subsidiary of UBS AG. UBS Realty is part of UBS Global Asset Management, one of UBS AG's four business divisions.

Key Executives:
Kevin Crean, Senior Portfolio Manager
Thomas Anathan, Managing Director

Investment Approach

UBS Realty takes a team oriented approach in which portfolio managers are responsible for the execution of the portfolio strategy within the investment guidelines for the portfolio and the performance of their respective portfolios. The acquisition process utilizes a "top down and bottom up" approach. The Real Estate Research - US team identifies markets that are expected, from a macroeconomic perspective, to provide attractive risk/reward pricing. With this direction from research, UBS Realty's investment acquisition professionals search for specific real estate assets that meet the portfolio's investment criteria.

Benchmark: NFI – ODCE Index

Total ARMB Mandate

Assets Under Management:
06/30/14: $85,512,612

Concerns: None

6/30/2014 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	2.45%	10.37%	10.43%	9.31%
Fee	0.27%	1.14%	1.14%	1.05%
Manager (net)	2.18%	9.23%	9.29%	8.26%
Benchmark	2.93%	12.75%	12.45%	10.00%

UBS

Global Real Estate - US

Alaska Retirement Management Board

September 18, 2014

Table of contents

UBS

General risk disclosure

Certain sections of this presentation that relate to future prospects are forward looking statements and are subject to certain risks and uncertainties that could cause actual results to differ materially. This material is designed to support an in-person presentation, is not intended to be read in isolation, and does not provide a full explanation of all the topics that are presented and discussed.

An investment in real estate will involve significant risks and there are no assurances against loss of principal resulting from real estate investments or that the portfolio's objectives will be attained.

This is not a recommendation. Investors must have the sophistication to independently evaluate investment risks and to exercise independent judgment in deciding to invest in real estate funds. Investors must also have the financial ability and willingness to accept and bear the risks, including, among other things:

- **Risk of illiquidity.** Real estate is an illiquid investment and the account may not be able to generate sufficient cash to meet withdrawal requests from investors. Redemptions may be delayed indefinitely;
- **Risks of investing in real estate.** These risks include adverse changes in economic conditions (local, national, international), occupancy levels and in environmental, zoning, and other governmental laws, regulations, and policies;
- **Use of leverage.** Leverage will increase the exposure of the real estate assets to adverse economic factors, such as rising interest rates, economic downturns, or deteriorations in the condition of the properties or their respective markets and changes in interest rates; and
- **Limitations on the transfer of fund units**. There is no public market for interests in any of our funds and no such market is expected to develop in the future.
- **Legal & Taxation**. Investors should consult their own legal and tax advisers for potential US and/or local country legal or tax implications on any investment

Investors should evaluate all risk and uncertainties before making any investment decision. Risks are detailed in the respective fund's offering memorandum.

ARMB/UBS Realty *history*

- Relationship formed in 1980
  - First deposit into TPF; NAV of $85.5 million as of June 30, 2014
  - Since inception in September 1980, 8.59% annualized gross total return through June 30, 2014
- Separate account mandate in 1997 for unlevered core portfolio
  - Diversified portfolio with $312.1 million market value as of June 30, 2014
  - Since inception in May 1998, 9.22% annualized gross total return through June 30, 2014
- Takeover of PMRealty Separate Account in 2003
  - UBS Realty named takeover manager on February 7, 2003
  - On March 1, 2003, ten-property, $180 million portfolio under UBS Realty management
  - On October 1, 2003, properties divided between UBS Realty and LaSalle because of manager concentration limits
- Pending takeover of Cornerstone Separate Account asset
  - 330 N. Brand Boulevard, Glendale, California
  - 343,467 square foot office building, built 1983
  - Planned takeover date October 1, 2014

Section 1

Global Real Estate - Overview

UBS

US real estate *investment experience and mission*

As of June 30, 2014

- Over 35 years of core and value added real estate investment experience
- USD 23.8 billion of assets for over 500 clients
- Real estate organization with 189 employees and offices in California, Connecticut, and Texas
- Quality people, properties and relationships

Our mission is to provide both superior risk-adjusted investment performance for our clients through private real estate investment strategies and outstanding client service.

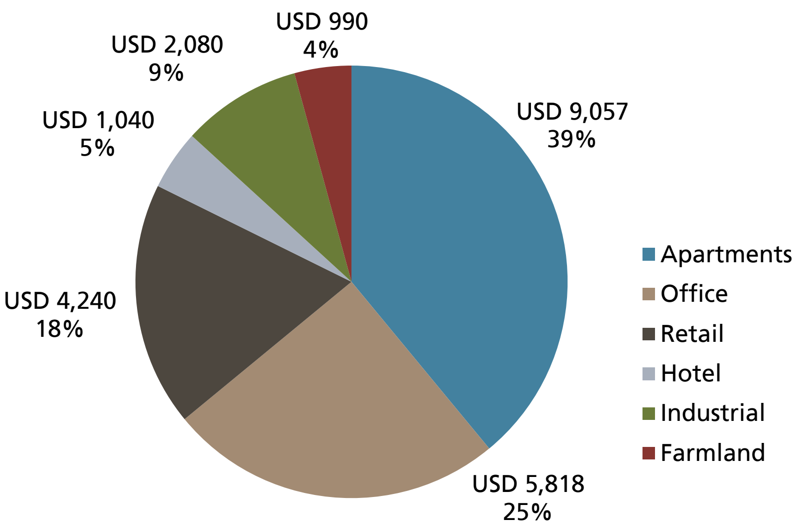
Source: UBS Global Asset Management, Global Real Estate – US

Global Real Estate funds in the US - *Overview*

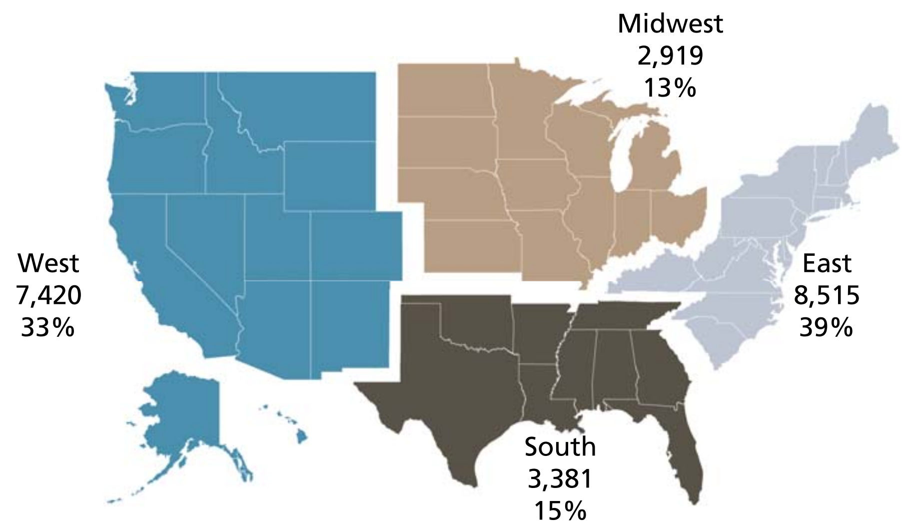
As of June 30, 2014

Gross assets – USD 23.8 billion

Assets by property type (USD in millions)



Assets by geographic region (USD in millions)



Source: UBS Global Asset Management, Global Real Estate – US Notes: Assets by property type and geographic regions represent real estate assets only and exclude other assets, such as cash, which are included in Gross Assets. Assets by geographic region exclude farmland.

US real estate – *strengths and distinguishing characteristics*

- Performance record for both value-added and core strategies
- National market presence; local expertise
- Continuity and experience of professional staff
- Commitment to client service
- Rigorous multi-disciplined acquisition process
- Expertise in all major property types
- Successful portfolio takeover experience
- Strong research department thoroughly integrated into all facets of our business
- Demonstrated sales discipline

53 State Street, Boston, MA
UBS-TPF

Section 2

UBS Realty/ARMB Separate Account

UBS

UBS Realty/ARMB Separate Account - *summary*

As of June 30, 2014

First investment:	May 29, 1998
Account allocation:	$305 million*
Number of investments:	11
Total assets:	$316.9 million
Average property value:	$28.4 million*
Remaining allocation:	$33 million*
Total returns:	9.22% since inception (8.49% net of fees)



Note: Allocation amount does not include pending takeover of 330 North Brand. Remaining allocation reflects remaining allocation after budgeted FY 2015 capital expenditures but before exercise of any CIO discretionary investment authority. Returns in this report for the UBS Realty/ARMB Separate Account include three former PMRealty assets for period beginning October 1, 2003.

UBS

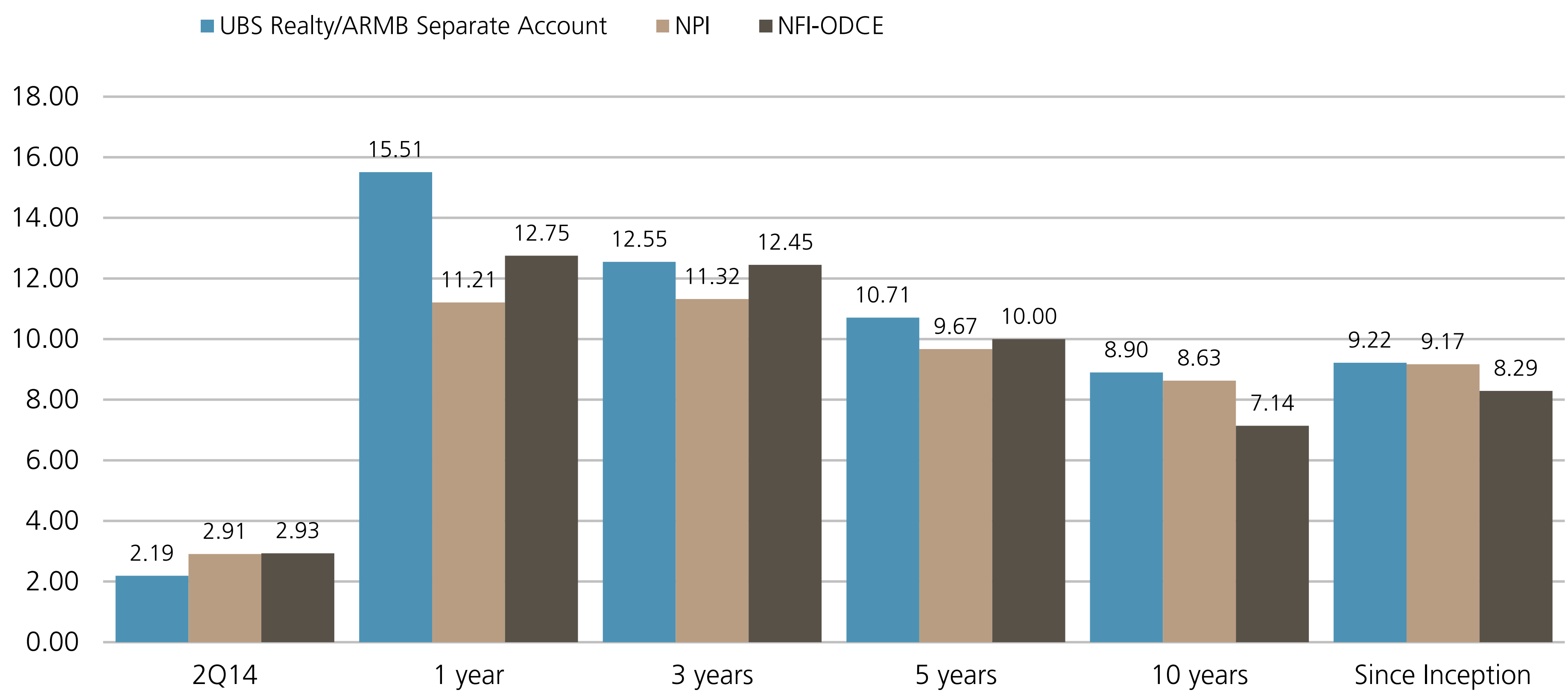
UBS Realty/ARMB Separate Account - *portfolio strategy*

As of June 30, 2014

- Actively-managed core strategy emphasizing current income and cash flow
- Acquired fully-leased office and industrial properties and new apartments
- 2003 PM Realty takeover properties added retail component and increased industrial weighting
- Reduce volatility by avoiding use of leverage
- Income growth from apartments and rent escalation provisions in commercial property leases
- Target supply-constrained markets for acquisitions

UBS Realty/ARMB Separate Account - NPI and ODCE Index

Long term outperformance



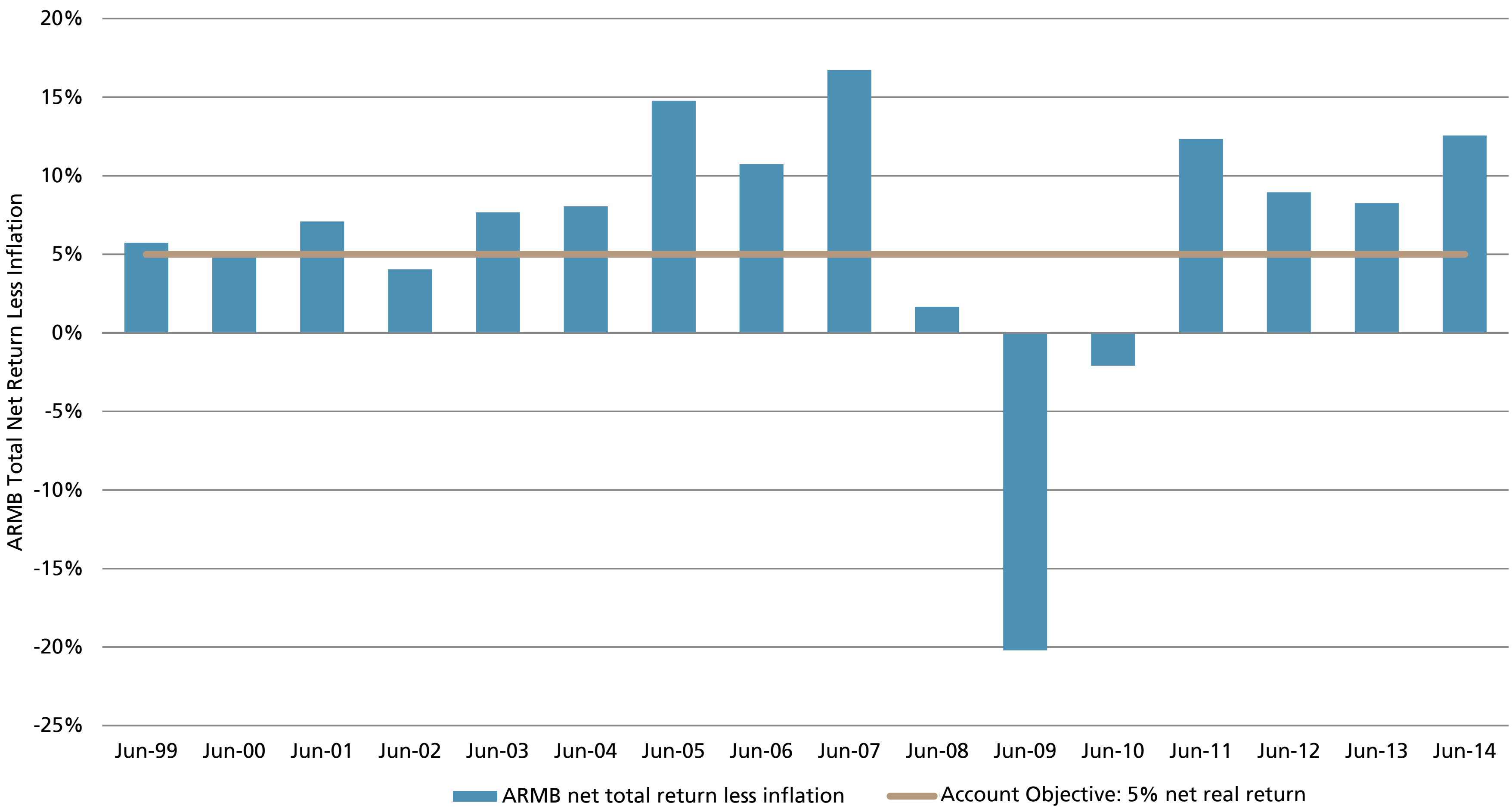
Data is as of June 30, 2014

UBS Realty/ARMB Separate Account total returns are before management fees. UBS Realty/ARMB Separate Account total returns for the quarter, one-, three-, five-, 10-year and since inception periods after the deduction of management fees through 6/30/14 were 2.04%, 14.85%, 11.88%, 9.99%, 8.22% and 8.49%, respectively. Additional information on fees is available upon request.

Please see page 46 for description of NPI and NFI-ODCE indices. Past performance is not indicative of future results and the possibility of loss does exist.

UBS Realty/ARMB Separate Account - *real return comparison*

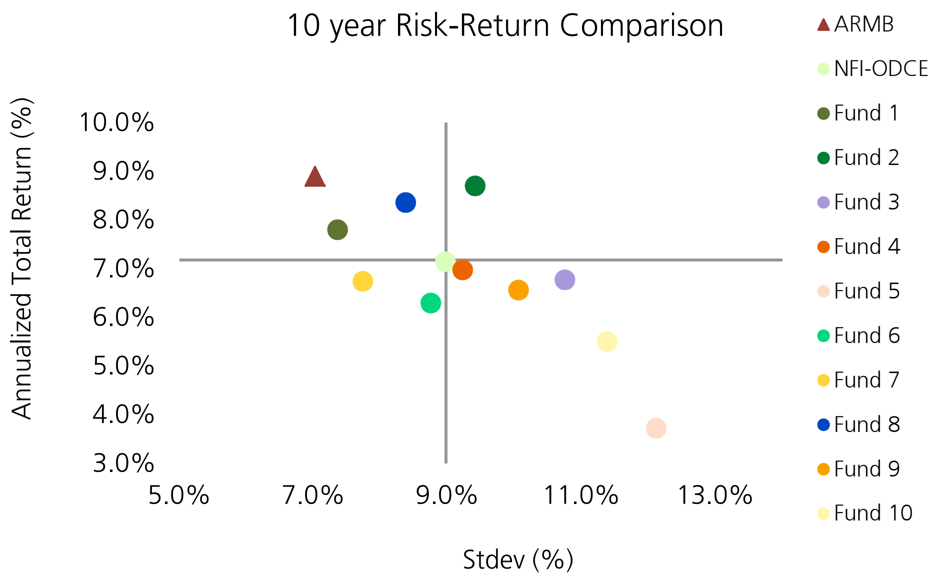
Annualized net real return of 6.09% since account inception exceeds objective by more than 20 percent



Data is as of June 30, 2014. Past performance is not indicative of future results.

UBS Realty/ARMB Separate Account - *risk-return profile*

Attractive risk-return profile compared to NFI-ODCE funds



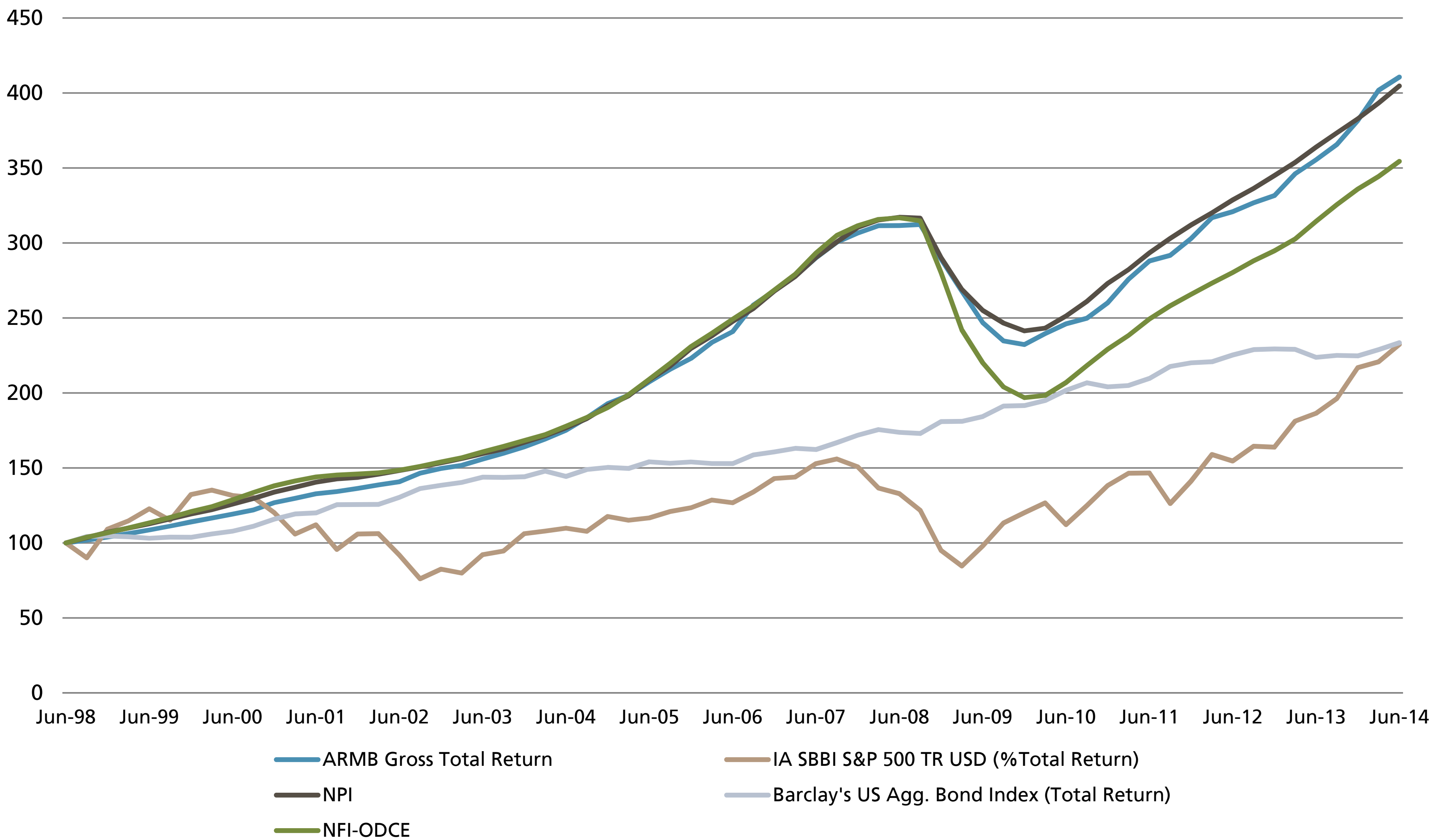
UBS Realty/ARMB Separate Account Risk Characteristics [1]

Measure	Definition	10 year value
Sharpe Ratio	Measures return per unit of risk	1.05
Std. Deviation	Annualized standard deviation measures the variability of fund returns	7.02

Source: UBS Global Asset Management and NCREIF
Data provided through competitor-shared data exchange universe available consistently throughout funds in the NFI-ODCE each time period. Total returns are annualized and are reported gross of management fees. Please see Required Notes pages for more information.
Data is as of June 30, 2014. Past performance is not indicative of future results.

UBS Realty/ARMB Separate Account - *wealth index (SI)*

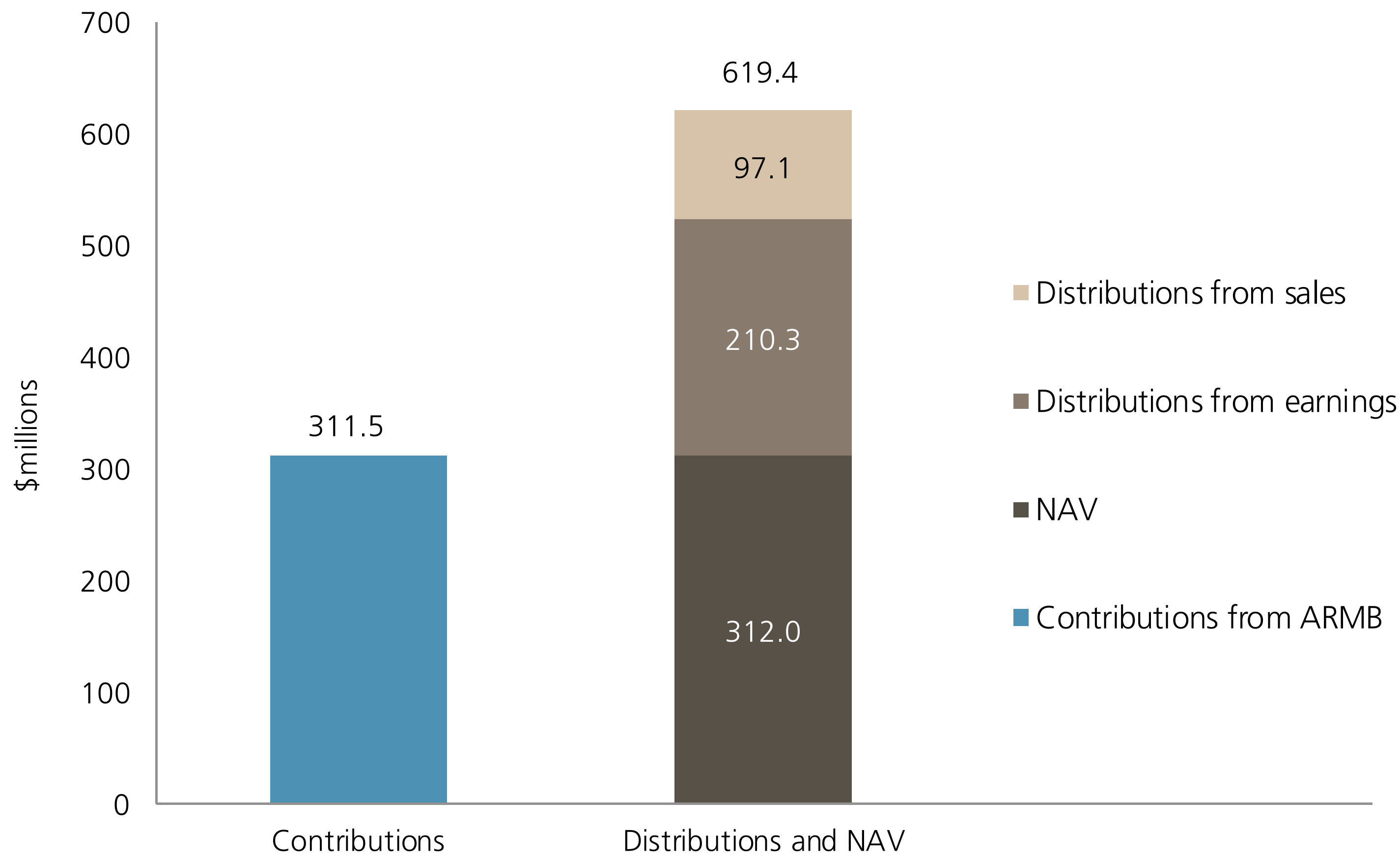
Strong performance compared to stocks and bonds



Note: Each return series indexed at 100 as of June 1998. Returns are before management fees. Past performance is not indicative of future results.
Data is as of June 30, 2014

UBS Realty/ARMB Separate Account – *capital flows*

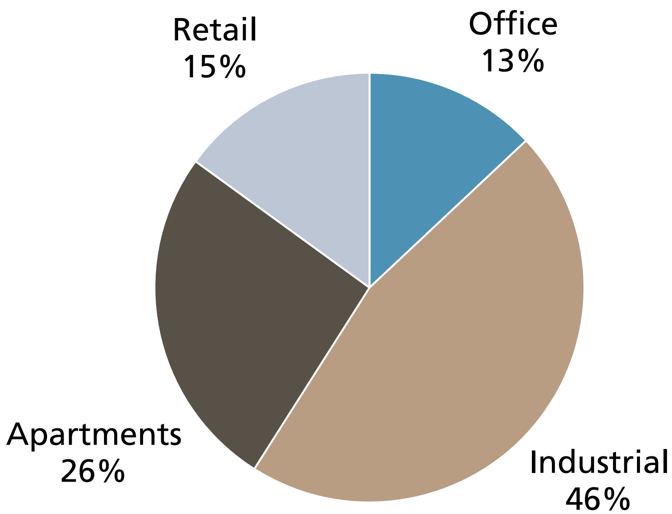
As of June 30, 2014



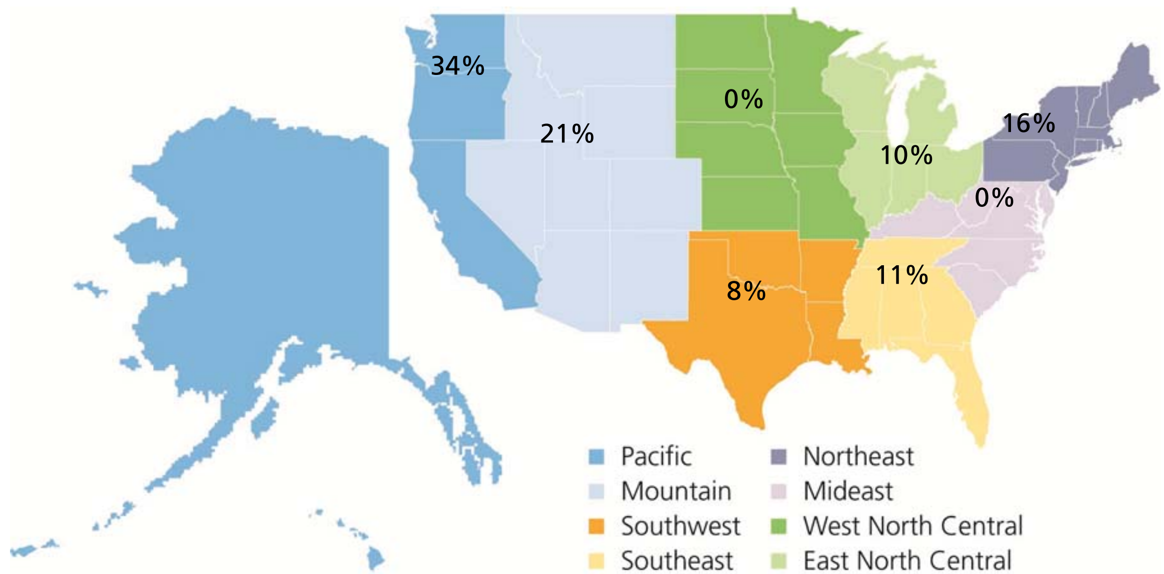
UBS Realty/ARMB Separate Account – *portfolio distribution*

As of June 30, 2014

Portfolio distribution by property type[1]



Portfolio distribution by geographic region[1]



Percentages may not sum due to rounding
Geographic regions as defined by NCREIF
[1]Distributions weighted by market value

UBS Realty/ARMB Separate Account - *recent highlights*

- Commercial leasing totaling 544,887 square feet in 22 transactions completed since July 2013, including:
  1. Ten-year lease renewal with CSG Systems, Inc. for the entire 85,681 square feet at Two Maroon Circle.
  2. Five leases totaling 304,416 square feet increasing leasing from 84% to 100% at Winton Industrial Park.
  3. New lease with TDX Chicago LLC for 55,546 square feet increasing leasing at West 55th Street from 85% to 100%.
  4. An 84-month lease with HDR Engineering for 30,287 square feet at One Maroon Circle.
- Unit interior upgrade program underway at Remington at Lone Tree at a cost of $12,900 per unit. Program is generating a 18% return on incremental cost.
- Resumed modest unit interior upgrade program at Springbrook Apartments. Upgrade cost of $3,525 per unit generating a 38% return on incremental cost.

UBS Realty/ARMB Separate Account - *summary*

As of June 30, 2014

- High-quality, core portfolio
- No debt
- History of strong income returns
- Leasing efforts expected to drive annualized net operating income increase of 8.6% during the next two fiscal years

UBS Realty/ARMB Separate Account – *apartment properties*

Remington at Lone Tree
Lonetree, CO

Springbrook Apartments
Renton, WA

UBS Realty/ARMB Separate Account - *industrial properties*

Gateway Distribution Center
Roanoke, TX

Memphis Industrial Park
Memphis, TN

West 55th Street
McCook, IL

Winton Industrial
Hayward, CA

UBS Realty/ARMB Separate Account - *office properties*

One Maroon Circle
Englewood, CO

Two Maroon Circle
Englewood, CO

400 Crown Colony Drive, Quincy, MA

UBS Realty/ARMB Separate Account - *retail properties*

Winston Park Shopping Center
Coconut Creek, FL

Westford Valley Marketplace
Westford, MA

UBS Realty/ARMB Separate Account *properties*

As of June 30, 2014

Property	Prop Type	Acq. Date	Net Rent. Sq.ft/units	Market Value ($mil)	% Leased
Two Maroon Circle Englewood, CO	O	3/00	85,681	$ 16.3	100
One Maroon Circle Englewood, CO	O	5/99	85,660	10..0	69
Memphis Ind. Park Memphis, TN	I	12/99	900,000	21.4	0
Remington at Lone Tree Lone Tree, CO	A	8/99	232 units	40.4	99
Gateway Dist. Ctr. Roanoke, TX	I	7/99	603,050	25.2	100
Springbrook Apartments Renton, WA	A	10/00	160 units	38.9	97
West 55th Street McCook, IL	I	8/01	367,870	31.8	100

UBS Realty/ARMB Separate Account *properties*

Property	Prop Type	Acq. Date	Net Rent. Sq.ft/units	Market Value ($mil)	% Leased
Winston Park S.C.[1] Coconut Creek, FL	R	10/98	67,787	$ 12.2	94
Westford Valley [1] Westford, MA	R	5/99	143,524	35.0	88
Winton Industrial Park [1] Hayward, CA	I	10/99	825,808	65.5	100
400 Crown Colony Quincy, MA	O	10/05	118,325	15.4	91
Total				$312.1	90%

Notes:
[1] Property originally acquired by PMRealty; transferred to Account effective October 1, 2003 based upon September 30, 2003 independent appraisal value.

Section 3

UBS Trumbull Property Fund (TPF)

UBS

ARMB *deposits and distributions*

UBS Trumbull Property Fund
September 1980 through June 30, 2014

Date	Deposits	Distribution/ Withdrawals	Market value 6/30/14
		$ in thousands	
1980	$ 7,500		
1981	7,501		
1995		$ 886	
1996	30,000	945	
1999		21,025	
2000		33,388	
2001		3,338	
2002		2,984	
2003		2,886	
2004		2,789	
2005		679	
2008		2,332	
2009		7,328	
2010		2,245	
2011		2,166	
2012		2,223	
2013		2,317	
2014		1,186	
Total	$45,001	$88,717	$85,513

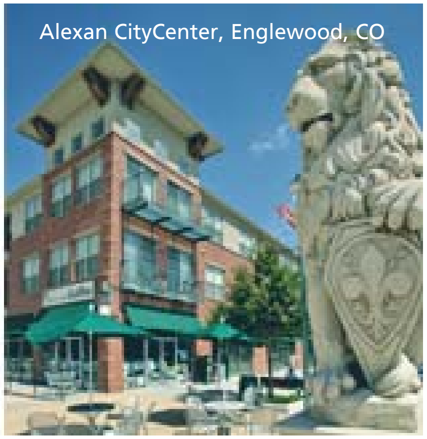
UBS-TPF *highlights*

As of June 30, 2014

- Core, open-end, direct US real estate fund
- USD 17.1 billion in gross assets
- 193 investments, 403 investors
- Quarterly income distribution option: 4.0%*
- 12.8% leverage on Gross Asset Value
- 7.80% annualized 10-year gross total return

Pleasanton Corporate Commons, Pleasanton, CA

Meridian Business Campus, Weston, FL



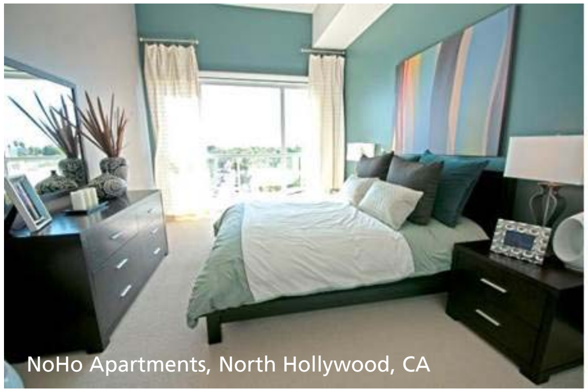
Alexan CityCenter, Englewood, CO

Source: UBS Global Asset Management, Global Real Estate - US
* Distribution return provided is a one-year gross rolling return.
Notes: Return supplements the Firm's Equity Composite previously provided or included herein. See required notes page at the end of this section or presentation. Past performance is not indicative of future results.

UBS-TPF *mission*

The Trumbull Property Fund provides:

- Access to high-quality core private real estate investments
- Allocation flexibility through the open-end format
- **Superior risk-adjusted returns** across real estate cycles



NoHo Apartments, North Hollywood, CA

ODS Tower, Portland, OR

Peninsula Center, Rolling Hills Estates, CA

Note: Past performance is not indicative of future results.

UBS-TPF *strategy*

Diversified Core Fund

- Income-focused
- Strategic low leverage approach
- Selective value added investment: "build to core"


CenterPoint Industrial, Gurnee, IL


Montage at Met 3, Miami, FL

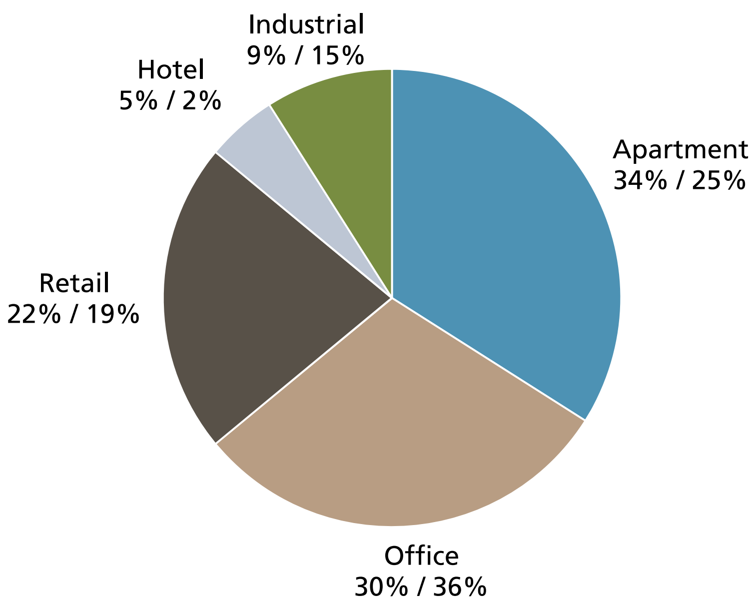

Shoppes at Blackstone Valley, Millbury, MA


New Village Apartments, Patchogue, NY

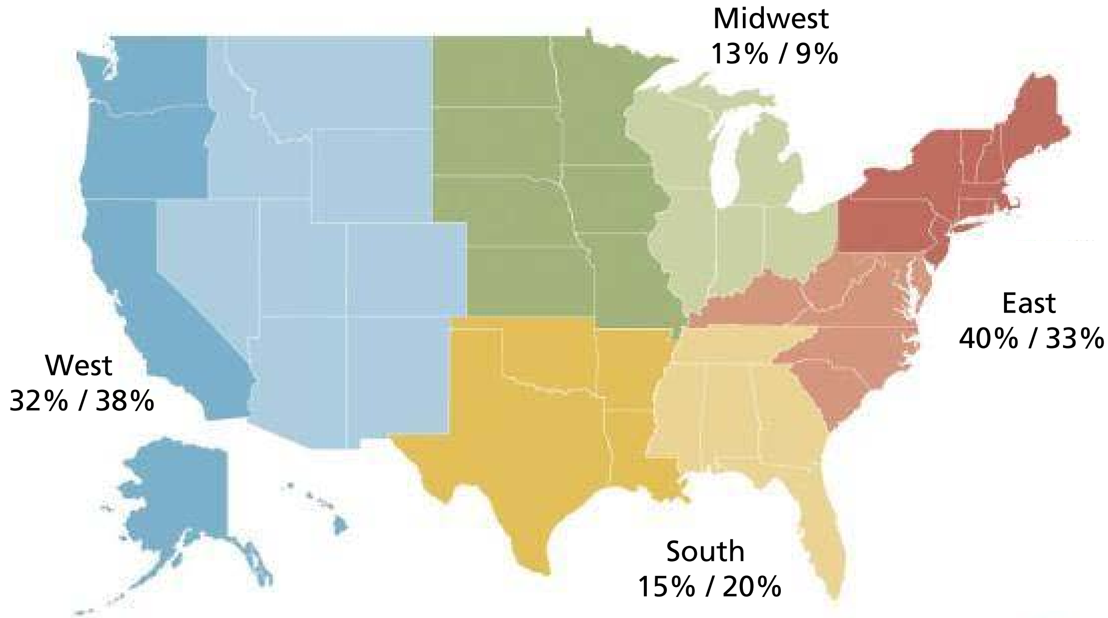
UBS-TPF *portfolio distribution*

As of June 30, 2014
UBS-TPF / NFI-ODCE

Assets by property type



Assets by geographic division



Source: UBS Global Asset Management, Global Real Estate – US
Notes: Percentages may not sum due to rounding. Geographic divisions as defined by NCREIF. Percentages are based on gross market value of real estate investments. Returns supplement the Firm's Equity Composite previously provided or included herein. As of June 30, 2014 the NFI-ODCE consisted of 22 active funds with total net assets of USD 115.8 billion. NFI-ODCE also includes 3% of Other.

UBS-TPF *ten largest assets*

As of June 30, 2014

Property name	Property type	Location	Gross market value (USD mil)	% Portfolio
135 West 50th Street	Office	New York	670.0	4.0%
53 State Street	Office	Boston	648.0	3.9%
CambridgeSide Galleria	Retail	Boston	552.5	3.3%
Galleria Dallas	Retail	Dallas	500.0	3.0%
Liberty Green-Liberty Luxe	Apartments	New York	465.0	2.8%
Water Tower Place	Retail	Chicago	439.9	2.6%
35 West Wacker	Office	Chicago	437.4	2.6%
120 Broadway	Office	New York	428.2	2.6%
Shops at Montebello	Retail	Los Angeles	276.0	1.6%
Columbia Center	Office	Washington DC	260.0	1.6%
			4,677.0	**28.0%**


CambridgeSide Galleria, Cambridge, MA


Galleria Dallas, Dallas, TX


135 West 50th Street New York, NY

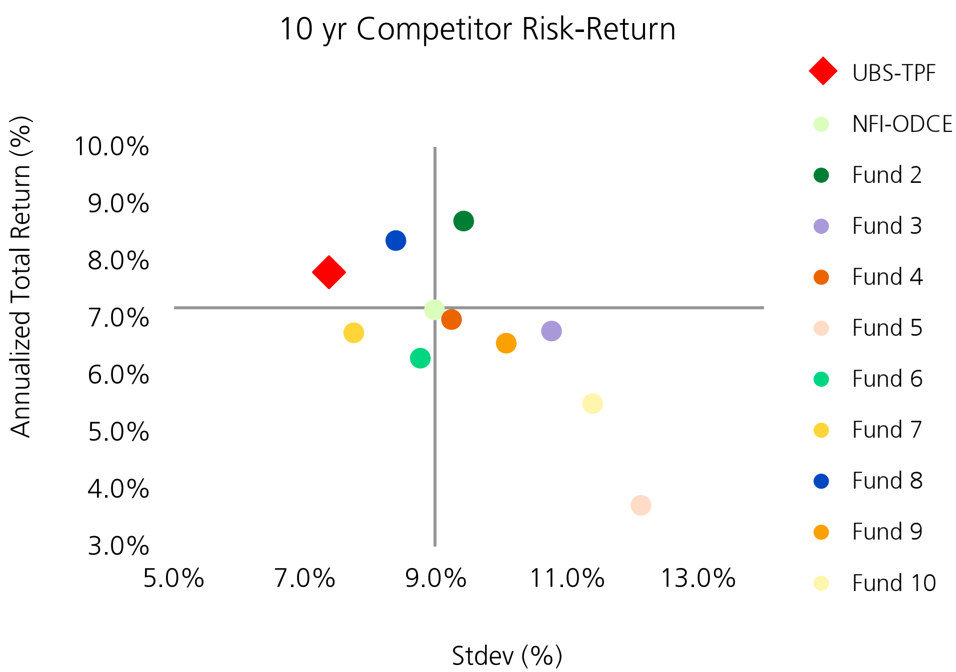

Liberty Green-Liberty Luxe, New York, NY


35 West Wacker, Chicago, IL

Source: UBS Global Asset Management, Global Real Estate – US
Note: Amounts may not sum due to rounding

UBS-TPF *risk-return profile vs. peers*

As of June 30, 2014



UBS-TPF Risk Characteristics

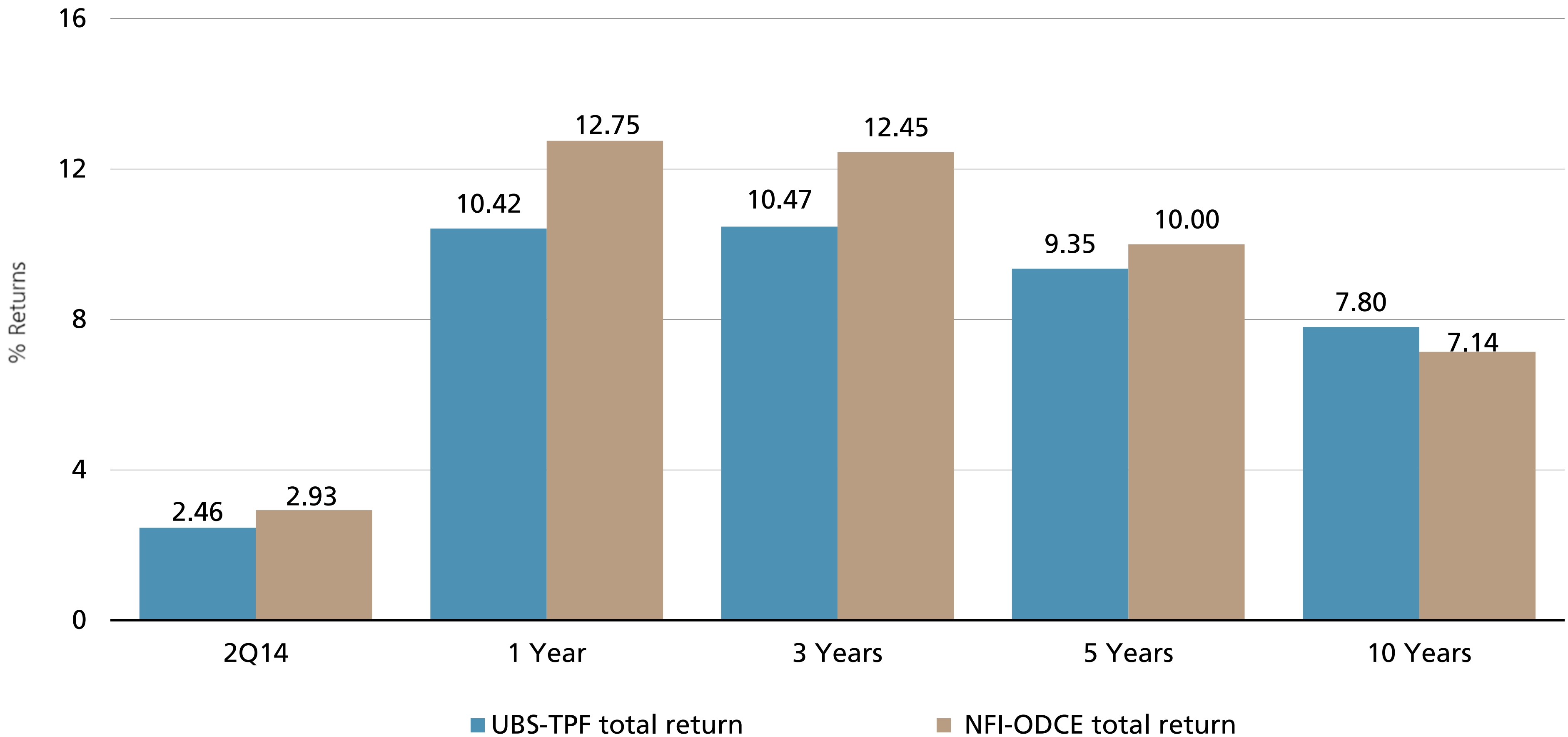
Measure	10 year value	Ranking (out of 10 Funds)
Sharpe Ratio	0.89	#1
Std. Deviation	7.36	#1
Jensen Alpha	0.02	#1

Notes: UBS-TPF Risk Characteristics : Sharpe Ratio measures return per unit of risk. Standard Deviation is an annualized standard deviation that measures the variability of fund returns. Jensen Alpha measures the excess fund return adjusted for systematic risk (risk-free rate and beta).

Data provided by NCREIF as of June 30, 2014. Total returns are annualized and are reported gross of management fees. Please see the Required Notes page for additional information. Past performance is not indicative of future results.

UBS-TPF *relative performance*

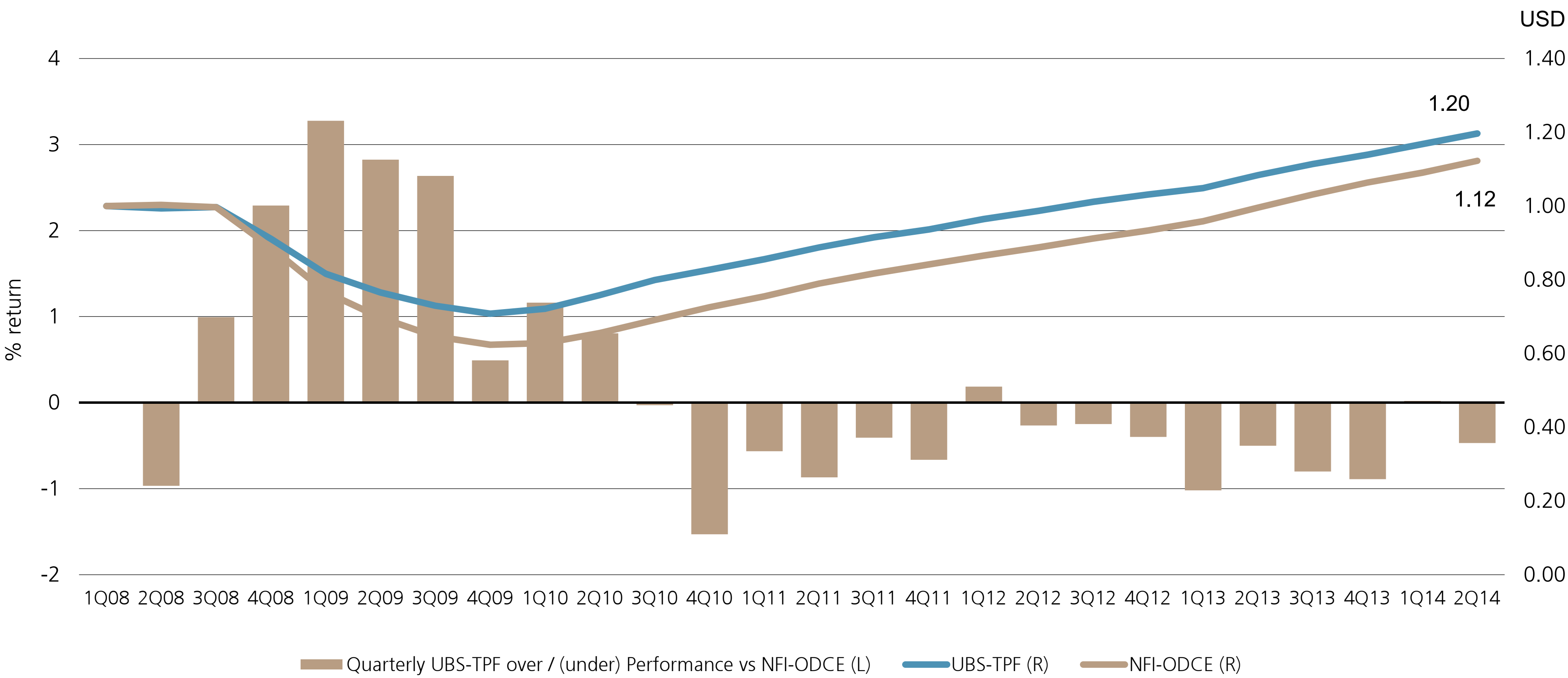
As of June 30, 2014



Sources: UBS Global Asset Management, Global Real Estate – US and NCREIF is the source of NFI-ODCE
Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. As of June 30, 2014 the NFI-ODCE consisted of 22 active funds with total net assets of $115.8 billion. See required notes pages at the end of this section or presentation. The manager seeks to achieve the stated objectives; however there is no guarantee the objectives will be met. Past performance is not indicative of future results.

UBS-TPF *performance*

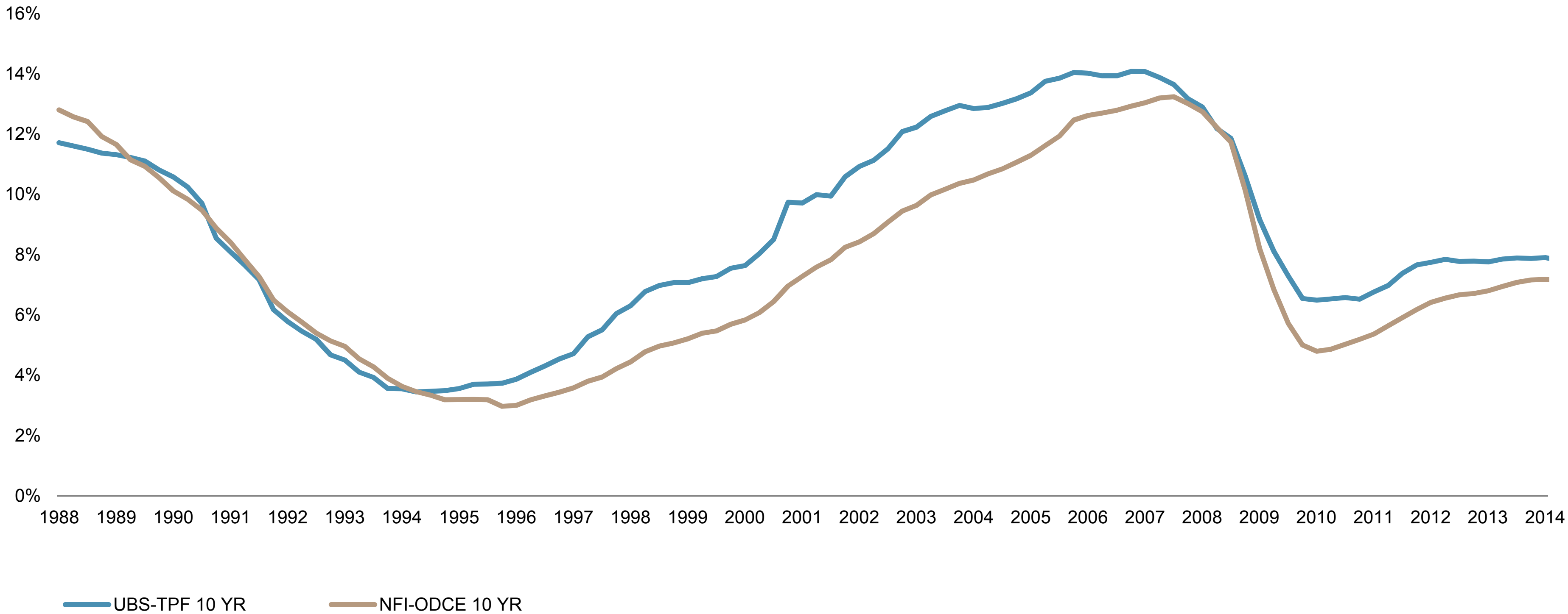
Quarterly performance through the cycle



Sources: UBS Global Asset Management, Global Real Estate – US and NCREIF is the source of NFI-ODCE
Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. Quarterly UBS-TPF excess return is calculated arithmetically. As of June 30, 2014 the NFI-ODCE consisted of 22 active funds with total net assets of $115.8 billion. See required notes pages at the end of this section or presentation. Solid lines show how USD 1.00 invested in 1Q08 would have grown over time before fees are deducted. Past performance is not indicative of future results.

UBS-TPF *performance*

Ten-year performance vs NFI-ODCE as of June 30, 2014



- UBS-TPF's income return outperformed NFI-ODCE 100% of the time
- UBS-TPF return outperformed NFI-ODCE 79% of the time
- Consistent strategy and proven track record

Sources: UBS Global Asset Management, Global Real Estate – US and NCREIF is the source of NFI-ODCE

Notes: Returns supplement the Firm's Equity Composite previously provided or included herein. As of June 30, 2014 the NFI-ODCE consisted of 22 active funds with total net assets of USD 115.8 billion. See required notes pages at the end of this section or presentation. Past performance is not indicative of future results.

UBS-TPF *competitive advantages*

- Consistent core strategy execution
- Competitive performance record
- Research/proprietary diversification model
- Significant apartment allocation
- Fund size and market presence
- Management fee tied to performance
- Team continuity and experience

Section 4

Biographies/exhibits

Thomas J. Anathan, CPA

Portfolio and Client Services Officer
Managing Director

Years of investment industry experience: 41

Education: Williams College (US), BA;
Wharton School, University of Pennsylvania (US), MBA

- Tom Anathan is a member of the Portfolio and Client Services Unit for the US real estate business of UBS Global Asset Management. He has significant client and consultant relationship responsibilities including marketing the company's capabilities to both commingled and individual account clients.
- In the past, he has had portfolio management responsibilities for both domestic and European clients. Tom also serves on the Strategy Team and Investment Committee. He joined the firm's predecessor organization in 1975.
- Tom is currently a member of the National Council of Real Estate Investment Fiduciaries (NCREIF). He participated in the formation of NCREIF and its research foundation. He served as president of NCREIF in 1991 and 1992 and was a member of the Board of Directors for six years. He was also a past chairman of the NCREIF Research Committee. Tom is a current member of the Pension Real Estate Association (PREA).
- Prior experience includes working for a real estate consulting and development firm. Tom has been a speaker at institutional investor seminars, NCREIF meetings and PREA conferences.

Jeffrey G. Maguire, CFA

Senior Portfolio Manager
Managing Director

Years of investment industry experience: 31

Education: University of Connecticut (US), BA; Wharton School, University of Pennsylvania (US), MBA; Yale Law School (US), JD

- Jeff Maguire, Senior Portfolio Manager, is a member of the Investment Committee, the Strategy Team and chairs the Performance Measurement and Reporting Committee.
- Before joining the company's predecessor organization in 1997, Jeff served as Senior Investment Officer - Real Estate for the Massachusetts Pension Reserves Investment Board (PRIM), where he managed its core and non-core real estate portfolios.
- Prior to his public service with PRIM, Jeff worked for Travelers Realty Investment Company, managing real estate equity and debt portfolios and restructuring debt transactions. He also managed the company's three largest borrower relationships in the New England region.
- Jeff is a member of the board of the National Multi Housing Council and a former board member of the Pension Real Estate Association (PREA). He is admitted to practice law in Connecticut. Jeff is a member of the CFA Institute.

Peter J. Gilbertie

Portfolio Manager
Executive Director

Years of investment industry experience: 27

Education: University of Connecticut (US), BS

- Since 2005, Pete Gilbertie has served as portfolio manager for a commingled closed-end fund and several individual accounts.
- Pete was previously responsible for the review of independent appraisals and internal valuations across the company's portfolio. He also provided technical and underwriting support to the Portfolio Management, Acquisitions, Sales and Asset Management areas.
- Prior to joining the firm's predecessor organization in 1997, Pete spent nine years as a real estate analyst and appraiser, including eight years with New England's largest commercial appraisal firm, Edward F. Heberger & Associates, where he held the position of Senior Appraiser.
- He is a former Connecticut State Certified General Real Estate Appraiser and has been qualified as an expert witness in both the Connecticut Superior and Federal Bankruptcy Courts on matters of real property valuation.

Matthew H. Lynch

Head of Global Real Estate – US
Managing Director

Years of investment industry experience: 30

Education: Harvard College (US), AB; Boston University School of Law (US), JD

- Matt Lynch has led the Global Real Estate – US investment management business of UBS Global Asset Management since 2004. A member of the firm's investment committee since 1996, Matt has been its Chair since 2004. Matt heads the US management committee and has been a member of the global management committee since its inception in 2002.
- He joined the firm in 1996 as general counsel and a member of the senior management team. In this role Matt had responsibility for legal and compliance issues, the development of products for the business, as well as assisting in the establishment of the company's global real estate organization.
- Matt joined Aetna Life Insurance Company's Law Department in 1994 as counsel in the Real Estate Investment Practice Group. He was previously a Partner in the Boston law firm of Hale and Dorr, practicing Real Estate and Environmental law for 10 years.
- Matt is a past member of the board of directors of the National Association of Real Estate Investment Managers, a member of the National Council of Real Estate Investment Fiduciaries, the Pension Real Estate Association, the Real Estate Roundtable, and the Real Estate Finance Association. He is admitted to practice law in Connecticut and Massachusetts.

William T. Hughes, Jr., PhD, CFA

Global Head of Research & Strategy, Global Real Estate
Managing Director

Years of investment industry experience: 19

Education: Georgia Institute of Technology (US), BIE;
University of Georgia (US), MBA, PhD

- Bill Hughes is the Global Head of Real Estate Research & Strategy. He is responsible for coordinating regional research and strategies, working closely with the research teams, portfolio managers, acquisitions and asset management groups. He directly leads the US team, providing economic, capital market, and real estate market analyses, as well as developing investment strategies and conducting portfolio analysis. He is Chairman of the US Strategy Team and a member of the US Investment Committee.
- Before joining UBS in 2005, Bill was a Director of Investment Strategy at Blackrock, Inc. (formerly SSR Realty Advisors) for two years, where he delivered research, portfolio analysis and investment strategy to institutional investors.
- Bill also held positions as President of Delphi Investment Advisors and Vice President of Research and Portfolio Management at Associated Estates Realty Corporation/MIG Realty Advisors, Inc.
- Prior to these positions, Bill was an Assistant Professor - Harrison Lecturer at Louisiana State University.
- Bill is a Counselor of Real Estate and current Chairman of the NCREIF Board of Directors.

Thomas J. O'Shea

Head of Portfolio and Client Services Unit

Managing Director

Years of investment industry experience: 22

Education: University of Hartford (US), BS; University of Connecticut (US), MBA; Georgetown University Law Center (US), JD

- Tom O'Shea is the Head of the Portfolio and Client Services Unit for the US real estate business of UBS Global Asset Management. Prior to assuming this position in 2014, Tom was the General Counsel for Global Asset Management – Global Real Estate. He was responsible for legal matters for the Global Real Estate business area.
- Tom is a member of the Investment Committee and the Strategy Team as well as the Global Real Estate Management Committee.
- Prior to joining UBS in April 2004, Tom was a Partner in the Real Estate Group of Bingham McCutchen LLP, where he was active in all aspects of real estate law with an emphasis on representing financial institutions in various debt and equity investment matters. He also was active in a wide variety of real estate asset management activities.
- Tom is a member of the Connecticut and American Bar Associations and he is admitted to practice law in Connecticut. Tom also is a member of the National Association of Real Estate Investment Managers (NAREIM), the Pension Real Estate Association (PREA), and the Commercial Mortgage Securities Association and the Real Estate Finance Association (REFA).

UBS Realty Investors Total Composite

Year	Number of accounts	Year-end Composite Net Assets (USD millions)	Year-end Total Firm Net Assets (USD millions)	Gross of fees (%) Income return	Gross of fees (%) Appreciation (depreciation)	Gross of fees (%) Total return	Benchmark return (%)	Net of fees (%) Total return	Range of Gross Returns (%) Max	Range of Gross Returns (%) Min	Asset weighted standard deviation	% of Composite assets valued externally[1]
2004	10	8,154	9,182	7.37	7.12	14.87	13.06	13.81	25.8	9.2	2.58	96
2005	10	9,867	10,910	6.78	12.69	20.10	21.39	19.03	38.2	14.1	3.19	95
2006	11	12,670	13,940	6.03	10.74	17.25	16.32	16.14	40.6	13.9	2.07	100
2007	10	13,551	14,798	5.20	8.64	14.16	15.97	13.11	38.6	11.7	2.80	100
2008	10	11,822	13,285	5.03	(11.61)	(7.01)	(10.01)	(7.79)	(1.3)	(41.0)	2.64	100
2009	10	9,042	10,232	6.49	(27.32)	(22.21)	(29.76)	(22.85)	(11.8)	(62.2)	4.17	100
2010	9	10,903	12,107	6.93	9.90	17.34	16.36	16.30	42.0	4.7	3.21	100
2011	9	13,892	15,241	5.52	8.24	14.09	15.99	13.00	35.3	8.6	2.71	100
2012	10	16,413	17,325	5.32	5.26	10.79	10.94	9.71	25.8	(2.5)	2.40	100
2013	12	18,196	19,206	5.09	5.38	10.68	13.94	9.59	26.5	(38.7)	2.57	100

1. Compliance Statement Global Real Estate - US claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Global Real Estate - US has been independently verified since January 1, 1993. Verification assesses whether (1) the Firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the Firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The UBS Realty Investors Total Composite has been examined for the periods January 1, 2004 through December 31, 2013. Verification does not ensure the accuracy of any specific composite presentation. The verification and performance examination report is available upon request.

2. The Firm The Firm is defined as UBS Realty Investors LLC and UBS AgriVest LLC, together Global Real Estate – US. Both entities are registered with the US Securities and Exchange Commission as investment advisors.

3. The Composite The UBS Realty Investors Total Composite (the "Composite") was created in 1999. Prior to 2006, the Composite name was the UBS Realty Investors Composite. All results are presented in US dollars. A complete list and description of Firm composites is available upon request. The Composite comprises all fee-paying, non-taxable discretionary accounts that invest in real estate including, but not limited to, the following property types: apartments, office, retail, industrial, and hospitality. The strategy of the accounts in the Composite is to acquire investments in US commercial and multifamily real estate (core and value-added properties) expected to provide attractive risk-adjusted returns consisting of current income and capital appreciation. As of December 31, 2013, mortgage assets constituted USD 2.6 billion of the Composite Net Assets. Since October 2003, a sub-adviser has managed cash for some of the pooled accounts included in the Composite. Initially, accounts must have at least USD 30 million in commitments or assets, including debt, to be included in the Composite. Composite dispersion for any year is represented by both the range and the asset-weighted standard deviation of the gross total returns of the accounts that were in the Composite for the entire calendar year. Discretion is broadly defined as the Firm having discretion over the selection, capitalization, asset management, and disposition of investments within the parameters of a given mandate.

Source: UBS Global Asset Management, Global Real Estate – US. Past performance is not indicative of future results.
[1]Generally for those assets held longer than six months.

UBS Realty Investors Total Composite

4. Valuation An independent appraisal of the underlying real estate for each investment is performed at least annually and includes a complete property inspection and market analysis. Starting October 1, 2009, independent appraisals are generally completed every quarter for most of the underlying real estate investments. For real estate investments that are held in funds where appraisals are not performed on a quarterly basis, the underlying real estate is scheduled to be appraised either once or twice a year. In the interim quarters, updated property and market information is reviewed. If this review indicates a potential material change in the value, the valuation is then updated by the independent appraiser. If this review indicates that any change in value is likely not material, the value is determined to remain unchanged. Valuations of real estate and debt use significant unobservable inputs. In general, each annual property appraisal includes at least an income approach using a discounted cash flow model and a sales comparison approach, which are considered in determining a final value conclusion. All appraisals are certified by members of the Appraisal Institute who hold the MAI designation. Third-party debt is stated at fair value. The valuation of debt is taken into consideration when determining the estimated fair value of the equity in the related investment.

5. Calculation of Performance Returns reflect the impact of leverage, which averaged approximately 14.0% of gross asset value (net asset value plus debt) during 2004 through 2013, and approximately 13.3% in 2013. Leverage has consisted primarily of mortgage loans payable with the related property serving as the collateral. The extent to which leverage is used varies by account strategy and may include either portfolio or property level debt. Expenditures, including tenant improvements and leasing commissions that extend the useful life or represent additional capital investments benefiting future periods, are capitalized as a component of cost. Annual returns are time-weighted rates of return calculated by linking quarterly returns. The sum of income and appreciation or depreciation may not equal total returns due to the linking of quarterly returns. Gross of fees returns are presented before all management fees, but after third-party expenses. Net returns are presented net of the management fees and third-party expenses. All returns are presented before any applicable insurance company contract charges in effect on certain funds through February 29, 2008. The policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

6. Investment Management Fees Management fees differ by account and reflect the complexity and value of services chosen, anticipated size, and the number and type of investments involved. Depending upon the services, the fee may represent any one or a combination of: fixed flat amounts; a percentage of purchase price, earnings, assets under management, or of sales proceeds; or incentive fees based on performance. The fee for investment in one of the Firm's commingled funds can be up to 150 bps per annum on net asset value based upon the fee scale and the investor's share of net asset value in the fund and other UBS Realty sponsored funds as of the beginning of the quarter with an incentive fee charged on various performance hurdles, for example, 15% above a 7% real return over sequential 3-year periods, subject to certain clawback provisions depending on the performance of the fund. Please see the applicable fee schedule(s) appropriate to the product or services being presented.

7. Benchmark Effective May 2009, the Firm changed the benchmark retroactively from the property-level NCREIF Property Index (“NPI”) to a fund-level Index, the NCREIF Fund Index-Open End Diversified Core Equity (“NFI-ODCE” or the “Index”). The Firm believes a fund-level index provides a more meaningful comparison for a fund-level composite. The NFI-ODCE, first published mid-2005, is a capitalization-weighted, time-weighted, fund-level return index beginning as of the first quarter of 1978, inclusive. It is presented gross of fees. As of December 31, 2013, the NFI-ODCE consisted of 21 active funds with total net assets of USD 106.9 billion.

8. Market Conditions Over the past decade, commercial real estate experienced historic highs and lows. Fundamental recovery following the 2001 recession, along with a dramatic increase in the availability and reduction in the cost of debt capital propelled commercial and multifamily performance to the highest level in NCREIF history. In 2005, the NCREIF Fund Index – ODCE recorded its highest calendar total return since its inception in 1978. A worldwide credit crisis initiated a new recession during 2008. Liquidity evaporated in most asset classes, including commercial real estate. Total returns turned negative in mid-2008, with 2009 producing the lowest performance on record. The downturn was swift, and 2010 through 2013 reflected a period of recovery.

Source: UBS Global Asset Management, Global Real Estate – US. Past performance is not indicative of future results.

Required notes

For limited distribution to accredited, institutional, and professional investors only. Returns herein, unless otherwise noted, are presented gross of fees.

Returns for periods greater than one year are annualized. For the period ending June 30, 2014 UBS-TPF's net total returns for the quarter, one-, three-, five-, and ten-year periods were 2.20%, 9.31%, 9.35%, 8.31%, and 6.80% respectively, after the deduction of management fees, but before the deduction of contract charges. Contract charges were only applicable through February 29, 2008. UBS-TPF returns reflect the reinvestment of income. Returns and dollars are USD denominated.

Additional information on fees is available in the ADV Part 2 for UBS Realty Investors LLC and is also available upon request. As fees are deducted quarterly, the compounding effect will be to increase the impact of the fees by an amount directly related to the gross account performance. For example, on an account with a 1% annual fee, if the gross performance is 10%, the compounding effect of the fees will result in a net performance of approximately 8.93%.

The NCREIF Property Index (NPI) (Source NCREIF) is a property-level index, which consists of existing properties only (development projects and participating mortgages are excluded), excludes cash balances and leverage, and other non-property related assets, liabilities, income and expenses.

NFI-ODCE (Source NCREIF) is a fund-level, capitalization weighted index of open-ended diversified core equity commercial real estate funds that includes cash balances and leverage and is reported gross of fees. The degree of leverage used varies among the funds included in NFI-ODCE.

Please note that past performance is not a guide to the future. The value of investments and the income received may go down as well as up, and investors may not get back the original amount invested.

Risks

- Investors should be aware that return objectives are subject to a number of assumptions and factors, a change in any of which could adversely affect returns. Accordingly, investors should note the limitations of an objective.
- Investments in direct real estate and real estate funds involve a high degree of risk. For instance, events in 2008 and 2009 such as the deterioration of credit markets and increased volatility have resulted in a historically unprecedented lack of liquidity and decline in asset values. The value of investments and income from them may increase or decrease. Investors must have the financial ability and willingness to accept and bear the risks (including, among other things, the risk of loss of investment) that are characteristic of real estate investing and investing in commingled fund for an indefinite period of time. Among the risks to be considered are:
  - **Risks of investing in real estate.** Risks include adverse changes in market and economic conditions, zoning, and other governmental laws, regulations, and policies, occupancy levels and the ability to lease space, and environmental risks, and risk of uninsured loses.
  - **Debt investment risk.** Risk includes risks of borrower defaults, bankruptcies, fraud and special hazard losses that are not covered by standard hazard insurance
  - **Restrictions on redemption and transferability of shares or units; illiquidity.** Real estate is an illiquid investment and the account may not be able to generate sufficient cash to meet withdrawal requests from investors.
  - **Reliance on controlling persons and third parties.** The exercise of control over an entity can impose additional risks and the fund can experience a significant loss. The risk of third parties includes a conflict between their objectives and those of the account or fund.
  - **Use of leverage.** Leverage will increase the exposure of the real estate assets to adverse economic factors, such as rising interest rates, economic downturns, or deteriorations in the condition of the properties or their respective markets and changes in interest rates
  - **Legal & Taxation.** Investors should consult their own legal and tax advisers for potential US and/or local country legal or tax implications on any investment
  - **Currency risk.** The funds and accounts managed by UBS Realty Investors LLC are denominated in US Dollars. There is a potential for loss due to currency fluctuations for non-US investors.
  - **Lack of diversification**. Individually managed accounts and funds in their initial investment periods may have investments that are relatively large compared to the account's or fund's anticipated total value. Any limit to diversification increases risk because the unfavorable performance of even a single investment might have an adverse effect on the aggregate return.
  - **Unspecified investments**. There can be no assurance that the advisor will be able to continually locate and acquire assets meeting the fund or account's objective. Competition for assets may generally reduce the number of suitable prospective assets available.
- In considering an investment in a commingled real estate fund, prospective investors must rely on their own examination of the partnership agreement, private placement memorandum, and all terms of the offering, including merits and details of these and other risks involved. If there are any discrepancies in fund terms between this presentation and the private placement (offering) memorandum, the memorandum shall prevail.
- This is not a recommendation to invest in any product or services. Investors must have the sophistication to independently evaluate investment risks and to exercise independent judgment in deciding whether or not to invest in real estate and real estate funds.

Updated: June, 2012

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Contact information

Thomas J. Anathan
Portfolio and Client Services
UBS Realty Investors LLC
10 State House Square, 15th Floor
Hartford, CT 06103-3604
thomas.anathan@ubs.com

Tel. +1-860-616 9128
Fax: +1-860-616 9104

www.ubs.com/realestate
.

Jeffrey G. Maguire
Senior Portfolio Manager
UBS Realty Investors LLC
10 State House Square, 15th Floor
Hartford, CT 06103-3604
jeffrey.maguire@ubs.com

Tel. +1-860-616 9086
Fax: +1-860-616 9104

www.ubs.com/realestate
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Dated: February 29, 2012

Sentinel Real Estate Advisors Corporation

Mandate: **Real Estate Separate Account** **Hired: 2000**

Firm Information	Investment Approach	Total ARMB Mandate
Sentinel is an independent, privately held real estate investment manager headquartered in New York, NY. Sentinel and its affiliates comprise a fully integrated organization that provides real estate investment management services to institutional and qualified private investors in the United States and abroad. Sentinel manages pooled and separate accounts holding diversified portfolios of real estate properties valued at $4.8 billion. These portfolios include many types of income-producing properties, from multifamily rental properties to office buildings, industrial facilities and shopping centers. **Key Executives:** ***David Weiner***, Vice Chairman/Co-Portfolio Manager ***David Stenger***, Vice President/Co-Portfolio Manager	Sentinel's mandate is unique among ARMB's real estate separate accounts focusing specifically on multifamily investments. Sentinel's organization structure is vertically integrated so virtually all professionals working on an investment property are Sentinel employees. The strategy for ARMB is to construct a portfolio of core multifamily properties in markets with high barriers to entry with a focus on income and long term appreciation. Once a property is acquired, Sentinel seeks to add value to that investment. Sentinel's asset and property management teams take an active role in maximizing the property's potential through aggressive leasing strategies, continuous maintenance and capital improvement programs and cost controls. **Benchmark:** NCREIF Apartment Subindex	Assets Under Management: 06/30/14: $158,499,873

Concerns: None

6/30/2014 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	2.10%	9.19%	11.39%	11.46%
Fee	0.14%	0.59%	0.61%	0.66%
Manager (net)	1.96%	8.60%	10.78%	10.80%
Benchmark	2.41%	9.93%	11.29%	10.81%

Sentinel

Presentation for:
Alaska Retirement Management Board (ARMB)

  

By:
SENTINEL REALTY ADVISORS CORPORATION

September 18, 2014

David Weiner, Vice Chairman/Co-Portfolio Manager
David Stenger, Vice President/Co-Portfolio Manager

Sentinel

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Sentinel

SENTINEL PROFILE

- Established in 1969.
- AUM as of June 30, 2014: $4.9 billion.
- Stable and experienced senior management team that averages over 20 years with the firm. Current Co-Portfolio Managers have managed the ARMB account for eight years.
- Nearly 1,000 employees including on-site property management.
- Wide range of multifamily and commercial investment strategies.
- Assets geographically diversified across the US.
  - Over 30,000 apartment units.
  - Over 8,100,000 square feet of commercial real estate.
- Sentinel's relationship with ARMB dates to 1984.

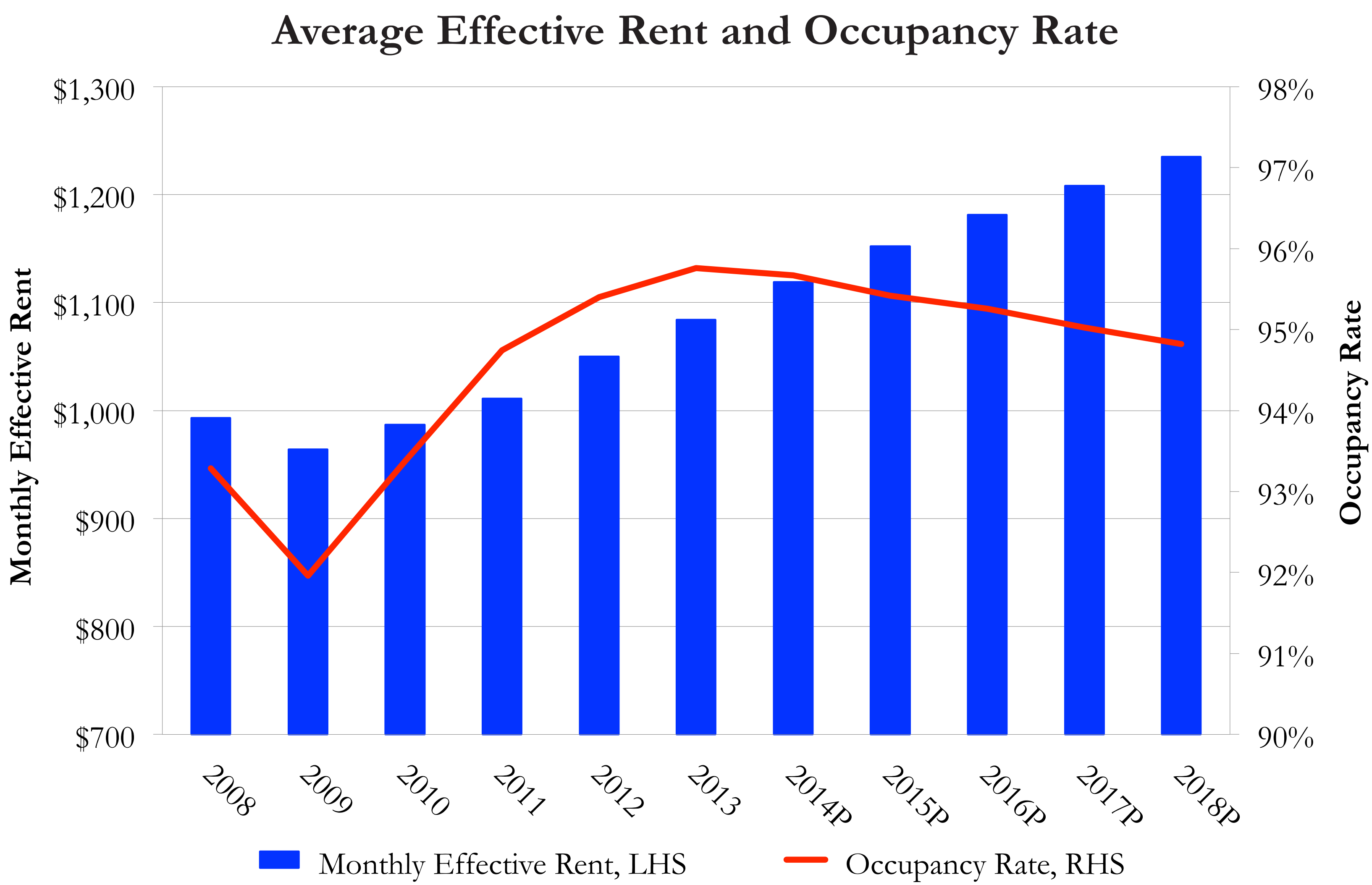
US APARTMENT MARKET OVERVIEW

- Rents are projected to continue to rise through 2018.
  - Effective rents increased by annual average of 2.1% from 2008 to 2013.
  - Projections call for effective rents to grow by 2.5% annually from 2014 to 2018.
  - Projections call for the average occupancy rate to remain in the mid-90% range through 2018.

Source: REIS, Inc.

US APARTMENT MARKET OVERVIEW

Sentinel



Source: REIS, Inc.

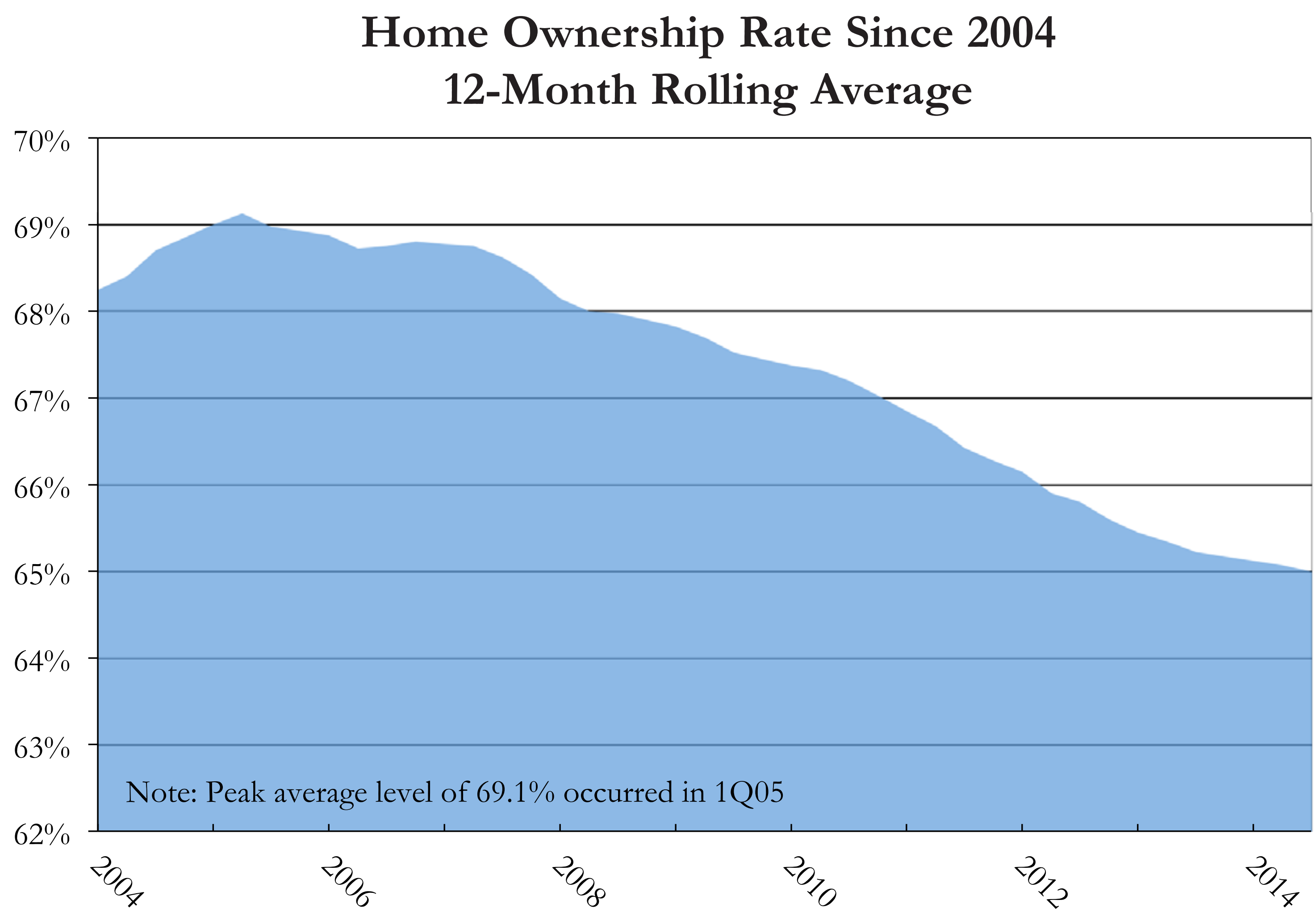
(P) Projected

US APARTMENT MARKET OVERVIEW

- A favorable balance between demand and supply is projected for at least the next 3-4 years.
  - The US multifamily inventory is expected to grow by 1.3% annually through the end of 2018.
  - New construction is projected to peak in 2014 at roughly 190,000 units or 1.9% of the total inventory, and then fall sharply to 1.0% by 2018.
- The US home ownership rate is declining toward levels seen prior to the housing boom.

Source: REIS, Inc.

US APARTMENT MARKET OVERVIEW



Source: US Census Bureau

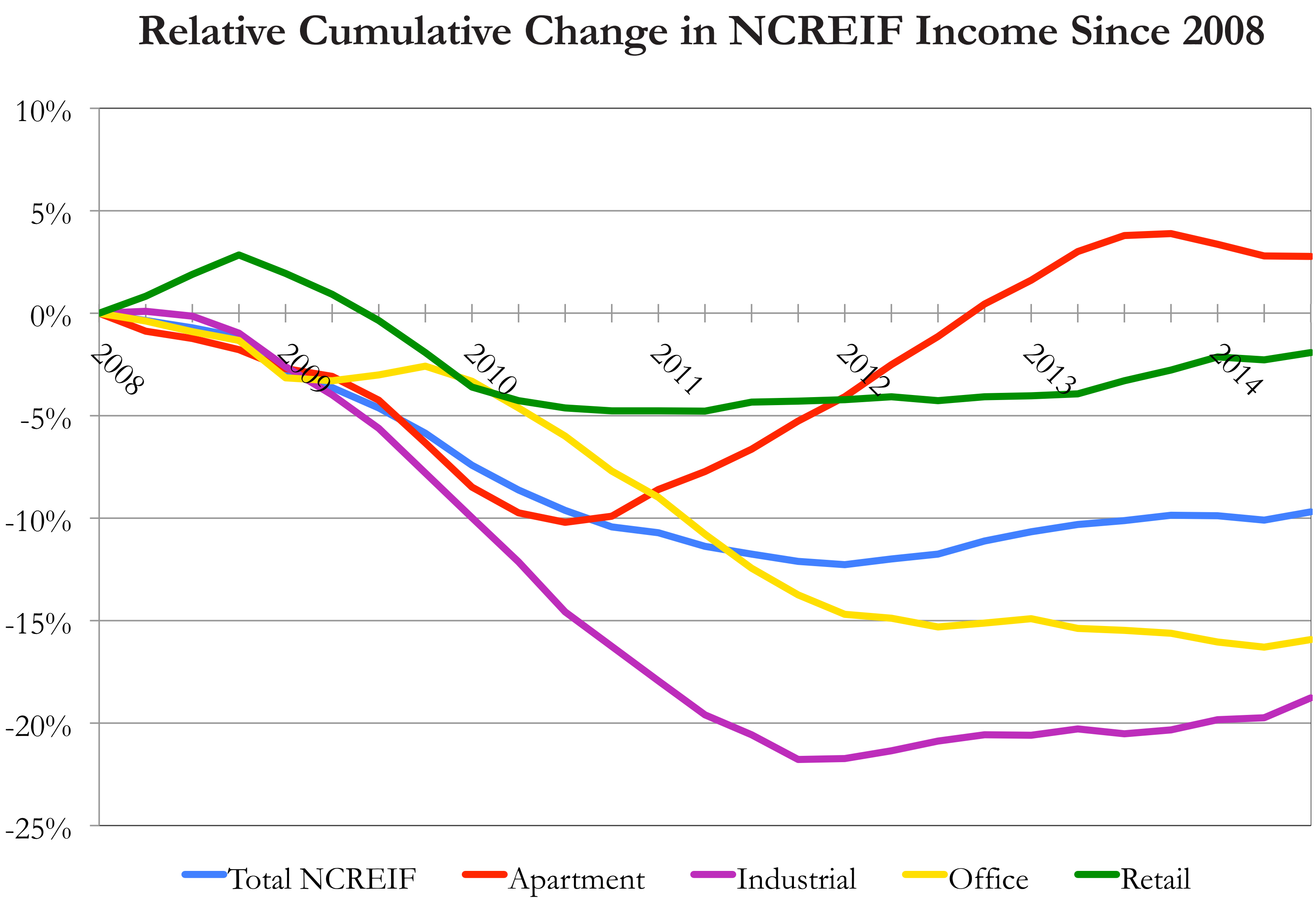
US APARTMENT MARKET OVERVIEW

- Employment growth is a significant driver of multifamily demand.
  - More than 8.7 million jobs were lost from the start of 2008 to early 2010. The economy has gained 9.3 million jobs since that time, surpassing pre-recession peak levels.
  - Jobs are now being created at a steady rate approximating 250,000 jobs per month.
  - More job growth is needed to fully recover from the recession due to growth in the labor force. Full recovery may take three to five more years at current growth rates.
- Job growth has unlocked pent-up apartment demand from the primary renter age cohort, allowing that sector to outperform the other three primary property types in terms of income growth.

Source: US Department of Labor

US APARTMENT MARKET OVERVIEW

Sentinel



Source: NCREIF (National Council of Real Estate Investment Fiduciaries)

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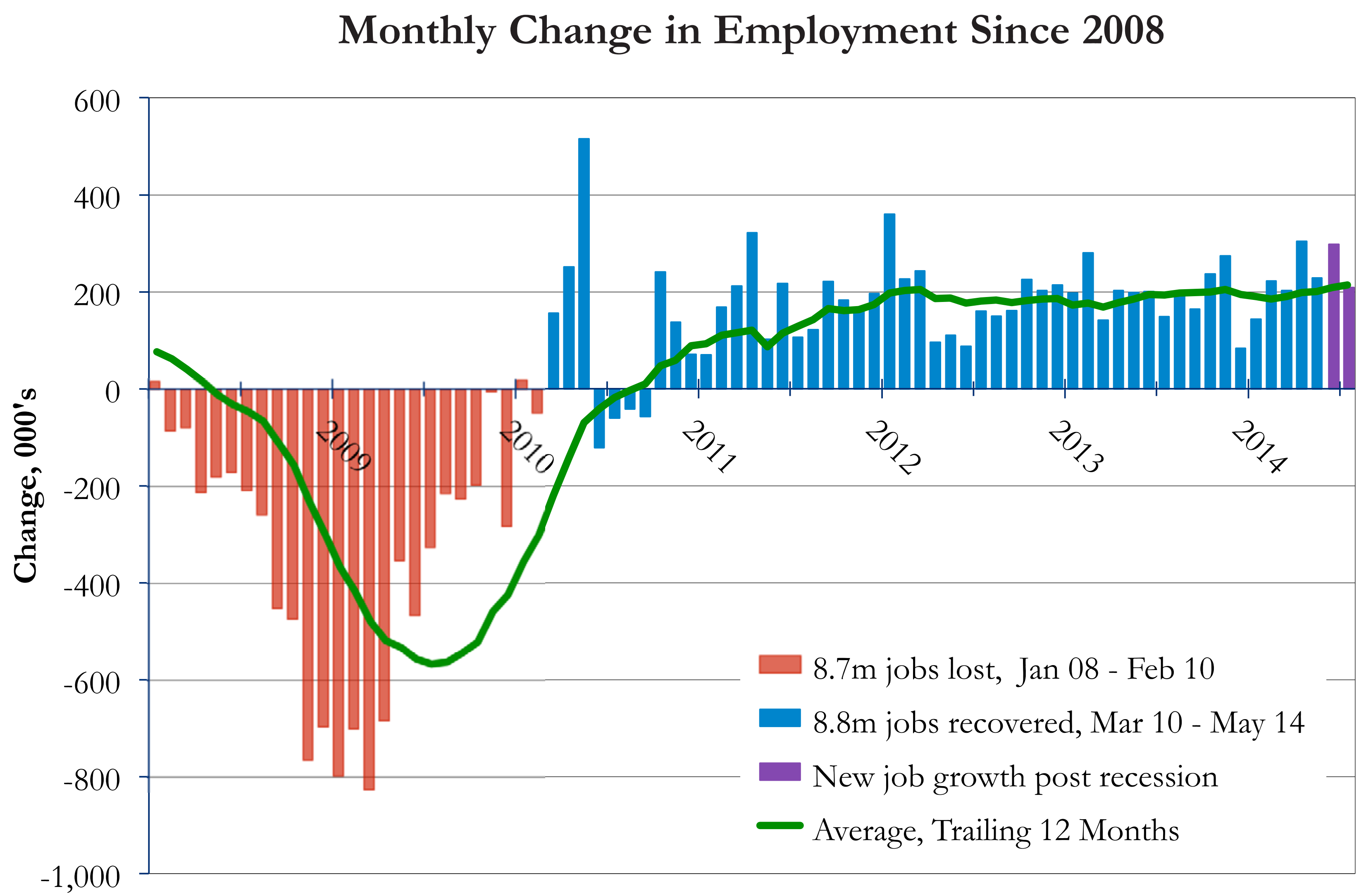
US APARTMENT MARKET OVERVIEW



Source: US Department of Labor

Seasonally Adjusted Data

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US APARTMENT MARKET OVERVIEW

- Value appreciation is a function of both operating income levels and cap rates (return expectations).
  - The apartment sector is the only major sector that has surpassed prerecession levels of income.
  - Other major real estate sectors have not experienced a full recovery in income, with value growth driven primarily by cap rate compression.
  - Apartment cap rate spreads to ten-year Treasuries exceeded over 300 bps as of late August.
  - Continued income growth for apartments will make the value gains more sustainable should cap rates stabilize or increase in response to rising interest rates.

Source: Real Capital Analytics, US Federal Reserve

US APARTMENT MARKET OVERVIEW

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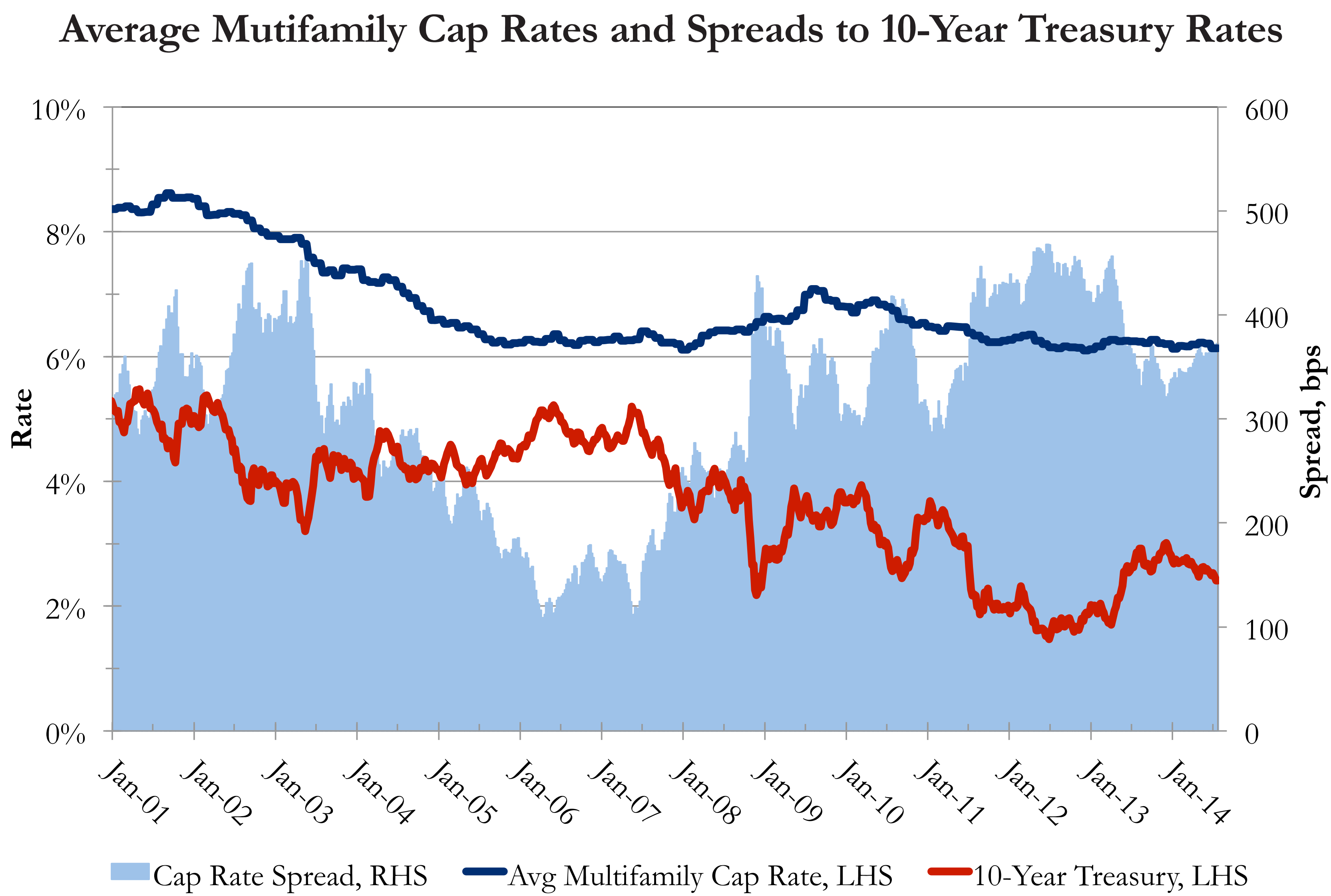

Source: Real Capital Analytics, US Federal Reserve

ARMB SEPARATE ACCOUNT REVIEW

- Three stabilized multifamily properties totaling 996 units.
  - Preserve at Blue Ravine Apartments, Folsom, CA (260 units).
  - Valleybrook at Chadds Ford Apartments, Chadds Ford, PA (352 units).
  - Versant Place Apartments, Brandon, FL (384 units).
- Total fair market value of $158.0 million as of 6/30/14.

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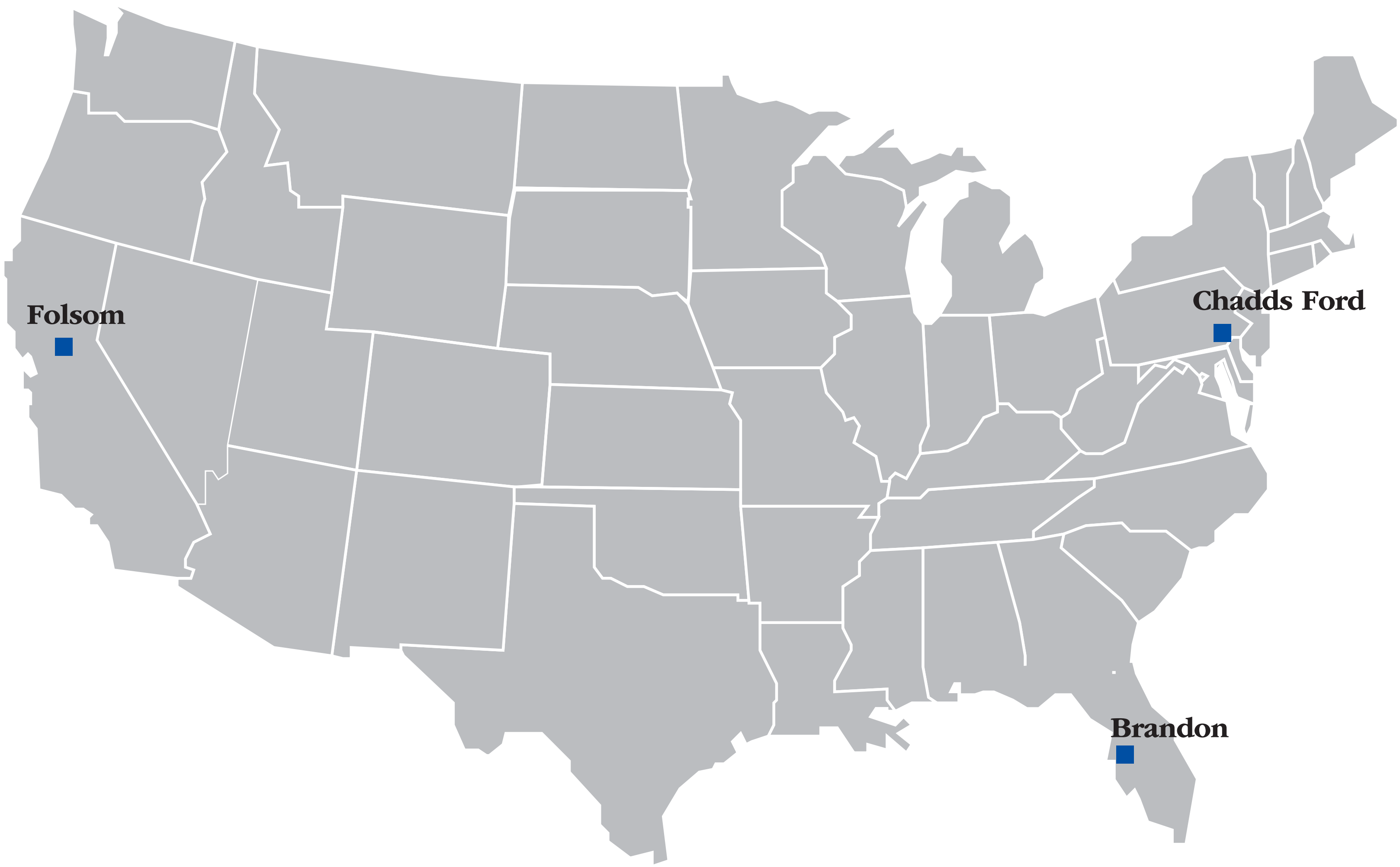
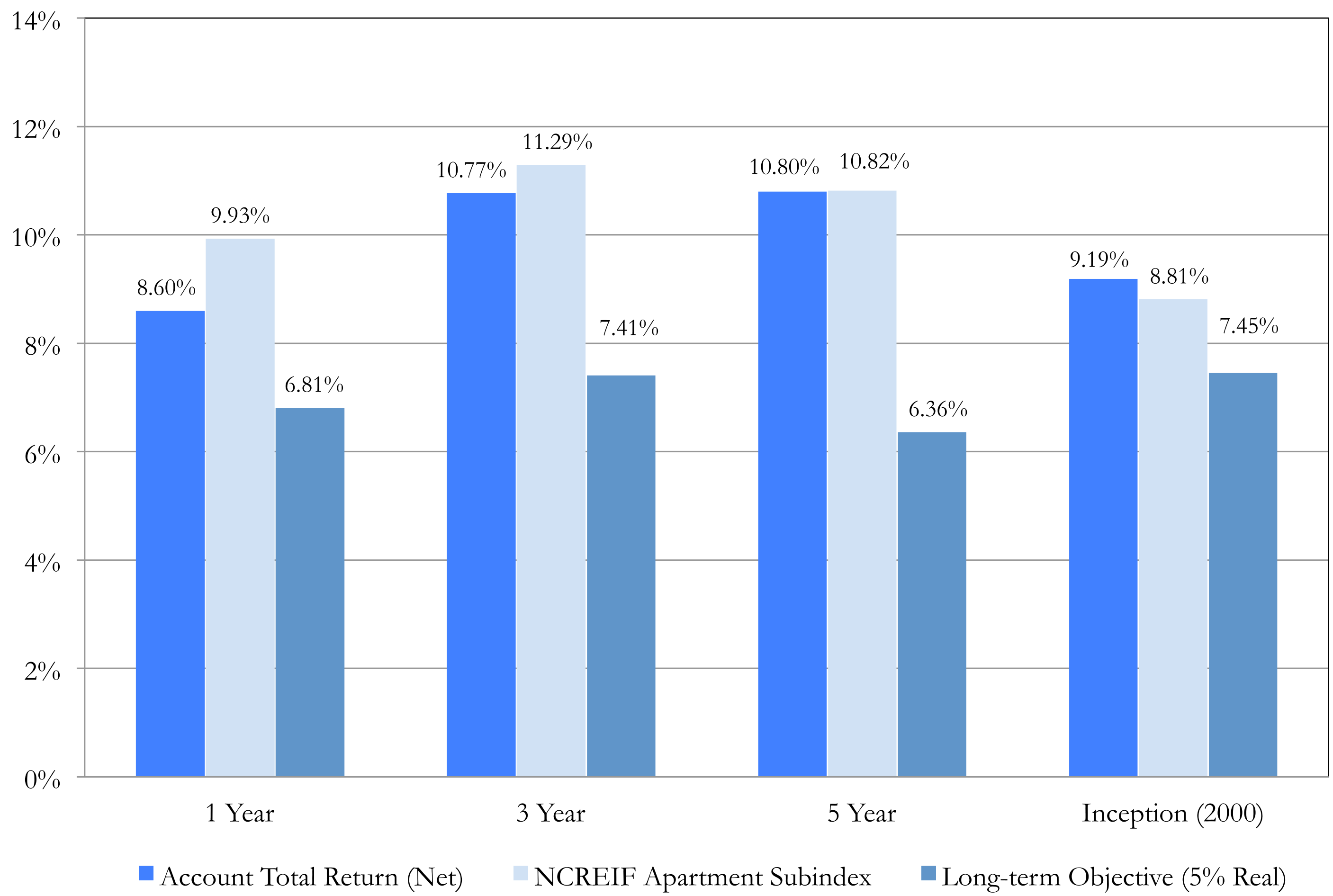
ARMB SEPARATE ACCOUNT REVIEW

Portfolio Diversification



ARMB SEPARATE ACCOUNT REVIEW

Portfolio Returns



Source: NCREIF (National Council of Real Estate Investment Fiduciaries)

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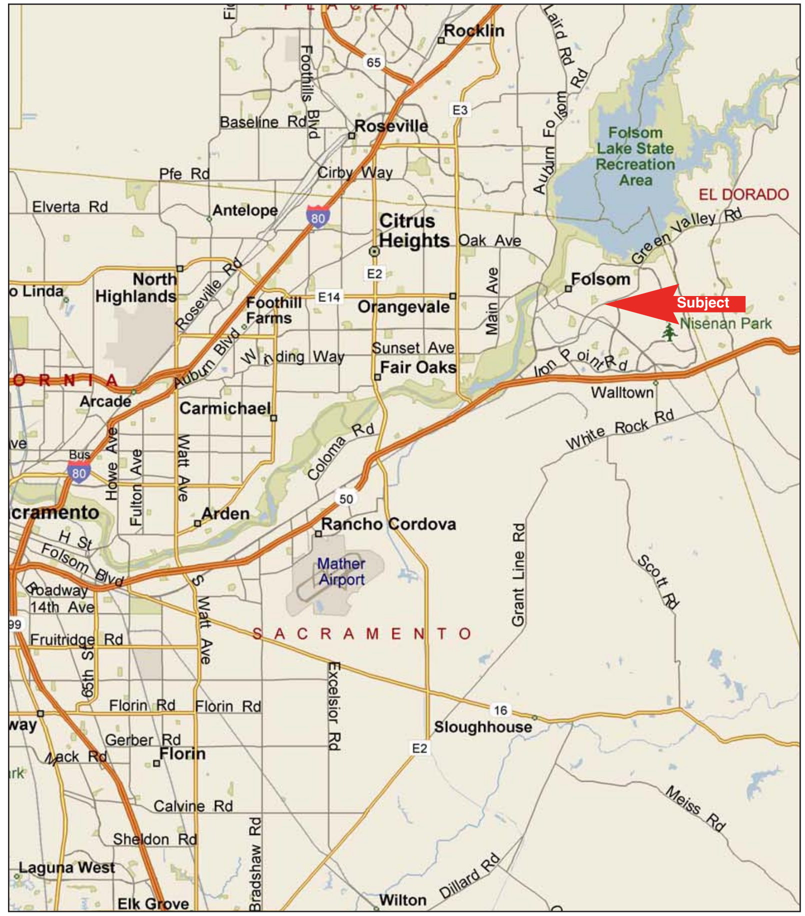
PRESERVE AT BLUE RAVINE
Folsom, California



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PRESERVE AT BLUE RAVINE
Folsom, California

Property Description

- Completed in 2000
- 260 Units
- One-, two- and three-bedroom apartments
- Percentage leased (8/31/14): 97.7%

Financial Information

- Date Acquired: 7/17/08
- Purchase Price: $40,570,000 ($156,038 per unit)
- Historical Cost (6/30/14): $43,077,447 ($165,682 per unit)
- Valuation (6/30/14): $47,200,000 ($181,538 per unit)

Sentinel

PRESERVE AT BLUE RAVINE
Folsom, California

Market Information

- Employment in the Sacramento MSA increased by 2.7% y-o-y.
- The area's population is expected to grow by 1.0% annually through 2018, exceeding the national average.
- Average rental rates in the market grew by 3.4% year-over-year amid rising occupancy rates.

Key Market Factors

- Constrained supply - very low level of new construction in the sub-market. Total new supply for 2014 is projected at only 35 units.
- Home affordability had been affecting leasing for larger units. However, as home prices have been rising and loan qualification has become more difficult, this challenge is diminishing.

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PRESERVE AT BLUE RAVINE
Folsom, California

Investment Thesis

- Preserve at Blue Ravine is a Class A property in a growing, upscale and supply-constrained market.
  - Proven ability of the Folsom submarket to attract middle- and upper income residents.
  - Projections for above-average job and population growth.
  - Constrained supply due to limited developable sites.
  - Property's excellent location within the Folsom submarket affords proximity to highly-rated schools and outdoor/ community recreational facilities.
- Preserve at Blue Ravine was acquired, in part, based upon its potential for accretive unit upgrades. To date, 249 units (96%

Sentinel

PRESERVE AT BLUE RAVINE
Folsom, California

Investment Thesis (continued)

of the community) have been upgraded with an average rent premium of approximately $100 per month.

- The property features competitive amenities and unit finishes that will continue to appeal to the upper end of the rental market.

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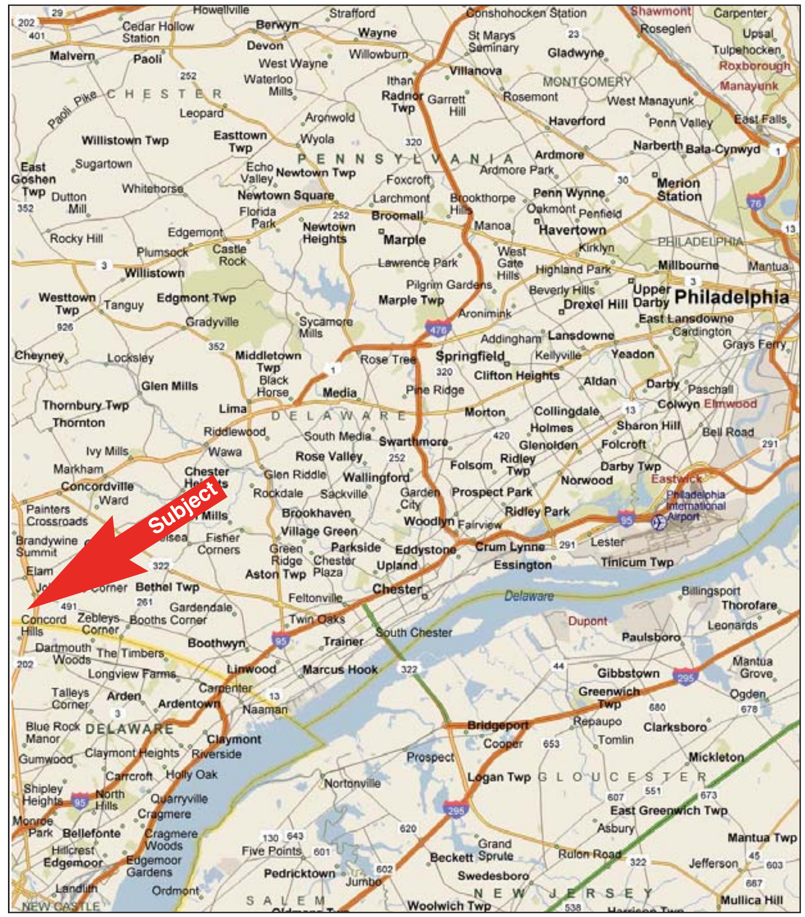
VALLEYBROOK AT CHADDS FORD

Chadds Ford, Pennsylvania



VALLEYBROOK AT CHADDS FORD
Chadds Ford, Pennsylvania

Property Description

- Completed in 2002
- 352 Units
- One-, two- and three-bedroom apartments
- Percentage leased (8/31/14): 100.0%

Financial Information

• Date Acquired:	11/30/12	
• Purchase Price:	$65,175,000	($185,156 per unit)
• Historical Cost (6/30/14):	$66,779,210	($189,714 per unit)
• Valuation (6/30/14):	$68,000,000	($193,182 per unit)

VALLEYBROOK AT CHADDS FORD
Chadds Ford, Pennsylvania

Market Information

- Employment in the Philadelphia area grew modestly, rising by 1.1% year-over-year.
- The area's population is expected to grow by 0.2% annually through 2018.
- Average rental rates in the market grew by 1.4% year-over-year amid tightening rental market conditions.

Key Market Factors

- High barriers to entry serve to limit new multifamily supply.
- Excellent schools and prime location drive rental demand.
- High single-family home prices.

Sentinel

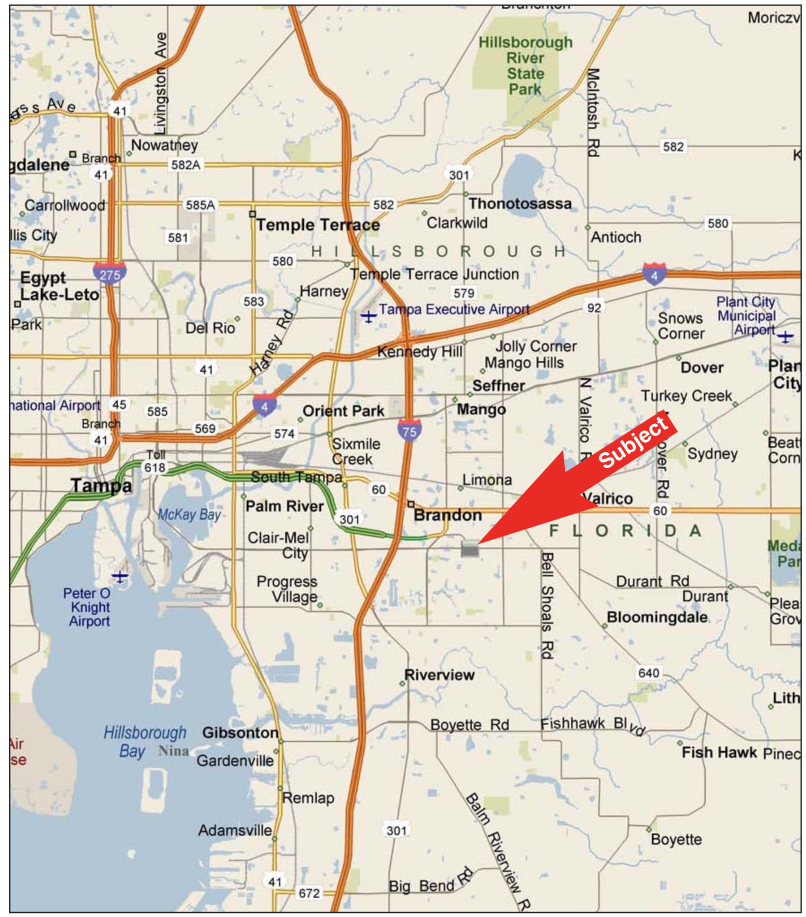
VALLEYBROOK AT CHADDS FORD
Chadds Ford, Pennsylvania

Investment Thesis

- Valleybrook is a Class A property in a supply-constrained area.
- Since acquisition, Sentinel has been successful at implementing rent increases. Fiscal 4Q14 total income and net operating income was 5.3% and 8.0% higher than the prior year, respectively.
- Numerous improvements were made to the community to enhance its appeal to prospective and current residents.
- The property's potential for a unit interior upgrade program was successfully tested in fiscal 2014 and will be expanded upon in the current fiscal year.
- No new supply is planned in the submarket in 2014.
- Valleybrook is highly visible along a major thoroughfare with signalized ingress and egress.

Sentinel

VERSANT PLACE
Brandon, Florida



VERSANT PLACE
Brandon, Florida

Property Description

- Completed in 2000
- 384 Units
- One-, two- and three-bedroom apartments
- Percentage leased (8/31/14): 96.6%

Financial Information

Date Acquired:	9/14/00	
Purchase Price:	$27,264,690	($71,000 per unit)
Historical Cost (6/30/14):	$31,029,444	($80,806 per unit)
Valuation (6/30/14):	$42,800,000	($111,458 per unit)

VERSANT PLACE
Brandon, Florida

Market Information

- Employment in the Tampa MSA grew strongly for the year, rising by 2.2% and surpassing the national average.
- The area's population is expected to grow by 1.1% annually through 2018.
- Average rental rates in the market grew by 2.6% year-over-year.

Key Market Factors

- Brandon is an established suburban Tampa submarket, with an easy commute to downtown Tampa and employment areas to the north and south via I-75.

VERSANT PLACE
Brandon, Florida

Key Market Factors (continued)

- While 275 new multifamily units are projected to be completed in the submarket in 2014, the new communities will have a higher price point, thereby allowing Versant Place to compete effectively.
- Single-family home affordability has been impacting leasing for larger units.

Sentinel

VERSANT PLACE
Brandon, Florida

Investment Thesis

- Strategy at acquisition was focused on making the property more competitive relative to its peers in order to capture higher rents.
  - All unit interiors have been upgraded over the past several years.
  - Clubhouse and fitness centers upgraded.
  - Addition of gated 24-hour access, screened-in patios.
  - Installation of washers and dryers in all units will be completed in fiscal 2015, accompanied by an increase in monthly rent.
- Versant Place is now experiencing significant year-over-year gains in total income and net operating income, which grew by 6.1% and 8.0%, respectively, in the last quarter of fiscal 2014 vs the prior year.



State of Alaska Retirement Systems

Review of Buck Consultants' 2013 Demographics Analysis Results

September 18, 2014

Leslie Thompson, FSA, FCA, EA, MAAA
Senior Consultant

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
www.gabrielroeder.com

Overview-demographic assumptions-all plans

- This review examines the data presented and the conclusions and recommendations made
  - Generally there is not enough data for us to make an opinion; some recommendations are placed in the report without data support
  - Thus, we reviewed the demographic portion of the experience study from the perspective of internal consistency
- We started by testing our expectations
  - As a starting point we look at the four year history of gains and losses in the plans
  - If the history for a given assumption is biased toward a loss (gain) then we expect the recommended assumption change will be to increase (decrease) liabilities

Four year historical gains and (losses) PERS ($ in millions)

Source	Total	2013	2012	2011	2010
Retirement	-21	-15	-2	-8	4
Termination	-117	-24	-20	-40	-34
Mortality	-18	-7	9	-2	-17
Disability	-1	0	0	0	-2
Rehires	-74	-23	-24	-26	0
Other	-80	-20	10	-42	-29
Salary	-44	-10	-25	-14	5
COLA and PRPA	177	43	9	39	86
Total	-178	-56	-43	-93	13

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Four year gains and (losses)
TRS

Source	Total	2013	2012	2011	2010
Retirement	22	3	7	4	8
Termination	-46	-11	-11	-14	-10
Mortality	-22	-4	4	-6	-17
Disability	-3	-1	-1	-1	-1
Rehires	-34	-11	-8	-14	0
Other	-56	-30	-13	8	-21
Salary	7	24	10	9	-35
COLA and PRPA	114	28	1	26	59
Total	-18	-1	-11	12	-17

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What we expect to see based on the historical pattern of gains and losses

Sources of Gains and Losses from Buck report	PERS (expectation of change on costs)	Buck	TRS (expectation)	Buck
Mortality	Increase	√	Increase	√
Retirement	Moderate Increase	**X**	Moderate Decrease	√
Withdrawal	Significant Increase	√	Significant Increase	√
Disability	Minimal	√	Slight Increase	√
Rehires	Increase	NA	Increase	NA
Salary Increases	Increase	√	Slight Increase	√
Alaska COLA	Decrease	√	Minimal	√
PRPA Experience	Decrease	**NA**	Minimal	**NA**
Medical Experience	Significant Decrease (perhaps not, if wishing to keep margin)	Could not locate	Significant Decrease (perhaps not, if wishing to keep margin)	Could not locate

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Items for further discussion

- The only "real" concern is Peace Officer mortality assumptions- the rest of these are more "comments"
  - Why is retirement for PERS a decrease when the gains/losses show an increase in costs is warranted.
    - Note: No changes recommended to the PRPA when the gains have been so substantial-this is because the PRPA is tied to the inflation assumption (which isn't changing)
  - The recommendation on health care participation matches the latest valuation, so although the presentation speaks of changing the participation rate, we do not see where a change is occurring. Was this assumption studied? We are unable to locate the results of a study.
  - On the mortality for PERS/Peace Officers, we would recommend setting the male rates such that they are closer to 110% (female rates could be decreased).
    - The peace officer/firefighter plan has a larger proportion of males thus we recommend lining up the probabilities more closely to the male population.
  - The disability rates of PERS/Peace Officers should be discussed
    - The proposed assumption change moves from a 38% AE to only a 56% AE, and we recommend this assumption have an AE closer to 100%.
  - The increase in the salary scale seems high; however, we have no data to tell us otherwise; setting it high is "conservative".
    - Since there is no change in the inflation assumption, this means there is an expectation for greater merit, productivity and promotional increases.

Comments on specific assumption recommendations

- We find the recommendations to be generally reasonable.
  - We recommend a consideration to revisit the Peace Officer assumptions
- We did expect to see some cost reduction for the medical side of the plans, and for the PRPA
  - See medical margin discussion
  - See PRPA/discussion in Economic Assumption power point
- We concur with JRS and NGNMRS recommendations

GRS

ASOP 27

- ASOP No. 27 provides guidance related to selecting economic assumptions for measuring pension obligations
- An assumption is considered reasonable if:
  1) it is appropriate for the purpose of the measurement;
  2) reflects the actuary's professional judgment;
  3) takes into account relevant historical and current economic data;
  4) reflects the actuary's estimate of future experience, the actuary's observation of estimates inherent in market data, or a combination thereof; and
  5) has no significant bias.
- In evaluating relevant data, the actuary should include appropriate recent and long-term historical data, but not give undue weight to recent experience.
- Actuaries are also allowed to adjust economic assumptions to take into account the possibility of adverse deviations or plan provisions that are difficult to measure.

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Other Items to Consider-from the GRS annual review

- In our last audit report, we recommended a thorough study on the rates of termination. While the rates of termination were studied, we had also recommended a review of the eligibility for termination versus retirement.
  - "As part of this examination, it may be prudent to consider the methodology used to determine eligibility service. For example, are TRS members with 19.8 years of service at time of valuation still only considered eligible for termination? Do these members retire a few months later with full retirement benefits and then show up as a termination loss? In addition to the raw experience data (exposures, actual terminations, etc.), the rates should be developed in a way that takes into account the inner workings of the valuation model." ***This remains to be done.***

- "The magnitude of the TRS rehire loss seems big in proportion to the number of rehires shown on page 57 of the TRS report. Page 57 shows 126 rehires and the loss is $11.1 million, or $88,000 per rehire. Given that there should have been some liability held for these members already, $88,000 per person seems high. Given that there is a recurring non-trivial loss due to rehires, Buck may wish to consider making a rehire assumption as part of the experience study." ***We did not see any comments in Buck's draft power point on this issue.***

Other Items to Consider-from the GRS annual review-Retiree Medical Claim Cost Development

- For FY2013 we did a special review of the retiree medical plan's claim cost development
- We made some recommendations; we do not see any of the areas of concern incorporated as part of the experience study
  - *Lack of external data for confirmation;*
    - *Recommend outlining method for split between Medicare and Non Medicare*
  - *Margin is built into the claim costs;*
    - *We had other technical concerns on the method for developing claim costs*
  - *Credibility does not give highest weight to recent year;*
  - *Board and Buck to discuss level of margin desired.*
- We did see a comment that "no changes recommended except possibly weighting recent experience more heavily in the "blend" stage"
  - This doesn't provide enough detail for GRS to audit
- We recommend that the details on the methods surrounding the retiree medical plan be put in writing. We believe that the methods and reasons for having the blending method and the claim costs margins should be documented.

Other Items to Consider- from the Segal Audit

Segal comment	Disposition	Comments
Study mortality by benefit payments and not head count	Buck used liability-weighting	Accomplished
Turnover to reflect the number of rehires	Did not find comments in the power point on rehires	To be discussed-this could be why there are such large losses on withdrawal
Increase salary scale	Completed	Accomplished
The maximum age for retirement is too high; creates losses	No change found	To be discussed
Segal could not match terminate vested and refund of contributions	Buck studied and recommended slight change	Accomplished
Age difference between spouses	Segal recommended study based on new retirees	To be discussed

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- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

State of Alaska Retirement Systems

Review of Buck Consultants' 2013 Economic Assumptions Analysis Results

September 18, 2014

Leslie Thompson, FSA, FCA, EA, MAAA
Senior Consultant

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
www.gabrielroeder.com

Overview

- Buck reviewed the following economic assumptions
  - Investment Return and Discount Rate (8.0%)
    - Inflation (3.12%)
    - Rate of return, net of expenses (4.88%)
  - Inflation of 3.12% used as underlying assumption for
    - Salary increases
    - Post-retirement Pension Adjustments (PRPAs)
  - Payroll growth assumption (3.62%) has impact on amortization
  - Buck recommended no changes to any of these assumptions
  - The payroll and salary increase recommendations are not unreasonable.
  - Inflation, at 3.12%, is on the "high" side of what we see.
  - The focus of today's presentation will be our review of the investment return assumption

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Buck's Investment Return Analysis

- Buck has presented their analysis using new method- an "econometric" model (GEMs)
  - Buck's Investment Consulting team runs the leased model in conjunction with the vendor that developed it
  - Differs from methodology used by Buck in 2010 experience study
  - Differs from methods used in the public pension industry

Buck's Investment Return Analysis

- Buck's results using their GEMS model

	Arithmetic Mean	Geometric Mean
20-Year Mean (p.21)	9.73%	9.04%
20-Year CPI (p. 16)	2.91%	2.89%
20-Year Real Return	6.82%	6.15%
40-Year Mean (p. 21)	10.21%	9.46%
40-Year CPI (p. 16)	3.10%	3.07%
40-Year Real Return	7.11%	6.39%

- Buck recommends the inflation rate at 3.12%
- This analysis provides another piece of information, but is not a common model used by retirement systems
- Even after discussions with Buck, we have a limited understanding of the approach and methodology
  - Inputs and outputs are somewhat of a "black box"
  - Therefore we cannot comment on the validity of this analysis or approach

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Another Approach using Capital Market Expectations

- The GRS analysis uses capital market expectations from eight investment managers
  - Pension Consulting Alliance, Towers Watson, Bank of New York, Mellon, JP Morgan, RV Kuhns, Mercer, Hewitt Ennis Knupp
- The horizon for these expected returns varies by investment manager and ranges from approximately 7-20 years
- We used as inputs the 3.12% inflation rate and the .275% expense assumption used by Buck in their analysis

GRS

Survey Approach -- Capital Market Expectations

- Arithmetic expected return of 8.04% from survey, with expected real return of 5.2%
- Callan, plan's investment consultant, projects arithmetic return of 8.09%
  - *Source http://treasury.dor.alaska.gov/armb/AssetAllocation.aspx*

Investment Consultant	Investment Consultant Expected Nominal Return	Investment Consultant Inflation Assumption	Expected Real Return (2)–(3)	Actuary Inflation Assumption	Expected Nominal Return (4)+(5)	Plan Incurred Expense Assumption	Expected Nominal Return Net of Expenses (6)-(7)	Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	7.42%	3.00%	4.42%	3.12%	7.54%	0.28%	7.26%	12.80%
2	7.44%	2.75%	4.69%	3.12%	7.81%	0.28%	7.54%	13.30%
3	7.32%	2.50%	4.82%	3.12%	7.94%	0.28%	7.66%	13.00%
4	7.23%	2.22%	5.01%	3.12%	8.13%	0.28%	7.85%	11.90%
5	7.76%	2.26%	5.50%	3.12%	8.62%	0.28%	8.34%	11.80%
6	7.75%	2.25%	5.50%	3.12%	8.62%	0.28%	8.35%	13.50%
7	7.78%	2.20%	5.58%	3.12%	8.70%	0.28%	8.43%	13.20%
8	8.57%	2.50%	6.07%	3.12%	9.19%	0.28%	8.91%	13.40%
Average	**7.66%**	**2.46%**	**5.20%**	**3.12%**	**8.32%**	**0.28%**	**8.04%**	**12.86%**

GRS

Survey Approach -- Capital Market Expectations

- Geometric expected return of 7.26% at the 50th percentile
- Probability of 40% of exceeding 8.00% investment return
- Callan, plan's investment consultant, projects expected 5-year geometric mean of 7.22%
  - http://treasury.dor.alaska.gov/armb/AssetAllocation.aspx

Investment Consultant	Distribution of 20-Year Average Geometric Net Nominal Return 25th	50th	75th	Probability of exceeding 8.00%*
(1)	(2)	(3)	(4)	(5)
1	4.58%	6.48%	8.41%	29.8%
2	4.73%	6.70%	8.70%	33.0%
3	4.93%	6.86%	8.82%	34.7%
4	5.41%	7.18%	8.98%	37.9%
5	5.95%	7.69%	9.47%	45.3%
6	5.50%	7.50%	9.53%	43.3%
7	5.66%	7.61%	9.60%	44.7%
8	6.09%	8.07%	10.09%	51.0%
Average	**5.36%**	**7.26%**	**9.20%**	**40.0%**

*Plan's current return assumption net of expenses.

GRS

ASOP 27

- ASOP No. 27 provides guidance related to selecting economic assumptions for measuring pension obligations
- An assumption is considered reasonable if:
  1) it is appropriate for the purpose of the measurement;
  2) reflects the actuary's professional judgment;
  3) takes into account relevant historical and current economic data;
  4) reflects the actuary's estimate of future experience, the actuary's observation of estimates inherent in market data, or a combination thereof; and
  5) has no significant bias.
- In evaluating relevant data, the actuary should include appropriate recent and long-term historical data, but not give undue weight to recent experience.
- Actuaries are also allowed to adjust economic assumptions to take into account the possibility of adverse deviations or plan provisions that are difficult to measure.

GRS

Other Items to Consider

- Results shown for Buck and GRS are based on current asset allocation
- A closed plan and changing liquidity requirements impact future asset allocation
  - Assets will become more liquid and invested in less risk
  - Expected returns will be lower
  - Buck indicated concerns regarding the impact of long-term asset allocation changes on investment return assumption
- Risk to system of overly optimistic scenario
- Recommend additional review of 8.0% assumption return
  - Review projections and impact of changing asset allocation as plan matures
  - Scenarios showing impact of adverse deviations from assumptions

Conclusions

- We cannot agree with Buck's conclusions based on their GEMS model
  - Not enough data for us to review; questions could not be answered
  - We are not sure that the measure should be so different from the actual practice Callan is using to develop asset allocations
- Using the more common method could get to a recommendation of 7.75%
  - The inflation recommendation could be lower than 3.0%
- Then the Board may set the rate at 8% to account for "alpha" and other positive events

Disclaimers

- Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this presentation concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

State of Alaska Retirement Systems

Presentation to the Alaska Retirement Management Board

2013 Actuarial Experience - Demographic Assumptions Analysis Results

September 18, 2014

buckconsultants

xerox

Agenda

- Purpose
- PERS and TRS Experience Analysis Results
  - About Actuarial Assumptions
  - Decremental Assumptions
  - Other Demographic Assumptions
  - Postemployment Healthcare Assumptions
  - Impact of Proposed Changes on Plan Costs
- Defined Contribution Retirement (DCR) Plans Experience Analysis Results
- JRS Experience Analysis Results
- NGNMRS Experience Analysis Results
- Questions

Purpose

- To compare actual plan experience with actuarial assumptions used in the valuation
- Changes in assumptions are recommended if:
  - Sufficient data is available which shows a material difference between expected and actual experience
  - Future experience is likely to be different given recent trends
- Provide a better measurement of a pension plan's actuarial position

About Actuarial Assumptions

- Used to forecast future events that impact amount and value of future benefit payments
- Should be a realistic "best guess" based on:
  - Past history
  - Future expectations
- Appropriately conservative given the Board's fiduciary responsibility
- Should be explicit - each assumption individually reasonable
- Setting of assumptions is a blend of art and science

Frequency

- PERS and TRS last performed an experience analysis of assumptions in September 2010 covering the experience during the period from July 1, 2005 through June 30, 2009
- Based on statute, the Alaska Retirement Management Board policy is to perform this analysis at least every four years
- Most systems perform this type of analysis every 3-6 years
- This experience analysis is performed on the experience during the period from July 1, 2009 through June 30, 2013

Decremental Assumptions

Decremental Adjustments

- Used to quantify the amount of expected future benefit payments
- Generally should follow experience with some conservatism (i.e. margin for adverse deviation)
- Consider previous experience analysis results
- Watch trends (e.g., improving mortality)
- There is no one right set of assumptions
- Factor in special events during investigation period (e.g., early retirement window, change in benefit eligibility, negotiated salary increases, abnormal economic period, etc.)
- Actuarial mathematics is a science, but its application in the real world is an art!

National Mortality Studies

- National mortality studies continue to show improvement in life expectancy
- Recent studies have shown mortality improvement has accelerated significantly since 2000 and the Society of Actuaries published exposure drafts in February, 2014 of a new base table, RP-2014 and a new mortality projection scale, MP-2014
  – Base table RP-2014 was developed excluding public plan data
  – Mortality improvement scale MP-2014 was developed using Social Security Administration data (including public employees)
  – Some actuaries have questioned the validity of the new tables since much of the data collected was rejected (not reliable). Although most recognize expected future mortality improvement, there is disagreement on the rate of improvement.
  – Scale AA is currently the most widely used projection scale, but recent data has shown significantly more mortality improvement then Scale AA reflects
  – Scale BB was issued as an interim measure, reflecting updated mortality improvement data, and is the projection scale used by some retirement systems
- The Actuarial Standards of Practice require “consideration of future mortality improvement”

Alaska's Mortality Assumption

- A mortality assumption can be static (not projected, or projected to a specific point in time) or generational (reflecting decreases in mortality rates throughout each member's lifetime)
  - Both projected static assumptions and generational assumptions use a base mortality table and a mortality projection scale (typically Scale AA or Scale BB).
- Alaska's current (static) mortality assumption was set after the 2009 Experience Study. It is a static table based on the 1994 Group Annuity Mortality table with a projection using Scale AA, and contained a margin for future mortality improvement.
  - Many systems use a static table, often based on RP-2000 with projection beyond the valuation date, with some moving to a generational projection. Projection Scale AA is most common projection used, with some systems recently adopting Scale BB.
- Current Alaska experience continues to show mortality improvement consistent with national observations. Therefore,
  - Buck recommends Alaska adopt mortality table which has mortality improvement built into the table. The table recommended is:
    - RP-2000 combined mortality table with a base year of 2000, with projection Scale BB to 2018, adjusted using set-forward or set-backs, and/or a flat percentage adjustment to best match the experience data.

A/E Ratios

- Actual experience to expected experience ratio. Can be based on number of members decrementing or the liability for those members decrementing. Liability weighting can better reflect experience on actuarial measures
- If actual greater than expected, ratio over 100%. If actual less than expected, ratio under 100%.

	Example	
Actual Retirements	$110k	$80k
Expected Retirements	$100k	$100k
A/E Ratio	110%	80%

- For some assumptions, A/E ratio over 100% is conservative.
  For others, A/E ratio under 100% is conservative.

Summary of Assumption Recommendations

Post-termination Healthy Mortality

	Current	Proposed
PERS Others	1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA, with a 1-year set-forward for females A/E Ratio: Male 96%, Female 92%	96% of all rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB A/E Ratio: Male 110%, Female 108%
PERS Peace Officer/ Firefighter	1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA, with a 1-year set-forward for females A/E Ratio: Male 71%, Female 102%	96% of all rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB A/E Ratio Male 82%, Female 119%
TRS	1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA, with a 4-year setback for males and a 3-year setback for females A/E Ratio: Male 103%, Female 94%	94% of the male and 97% of the female rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3 year set-back for males and 4 years for females A/E Ratio: Male 110%, Female 109%

A/E Ratio over 100% is conservative

Summary of Assumption Recommendations

Pre-termination Healthy Mortality

	Current	Proposed
PERS Others	75% of the male and 55% of the female rates of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA Male / Female A/E Ratio: 74% / 126%	60% of the male and 65% of the female rates of the proposed post-termination healthy mortality Male / Female A/E Ratio: 100% / 102%
PERS Peace Officer/ Firefighter	80% of the male and 60% of the female rates of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA Male / Female A/E Ratio: 21% / 89%	60% of the male and 65% of the female rates of the proposed post-termination healthy mortality Male / Female A/E Ratio: 29% / 75%
TRS	45% of the male and 55% of the female rates of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA Male / Female A/E Ratio: 121% / 63%	68% of the male and 60% of the female rates of the proposed post-termination healthy mortality Male / Female A/E Ratio: 125% / 87%

A/E Ratio over 100% is conservative

Summary of Assumption Recommendations

Post-retirement Disability Mortality

	Current	Proposed
PERS Others	RP-2000 Disabled Retiree Table Male / Female A/E Ratio: 46% / 123%	RP-2000 Disabled Retiree Table, 2000 Base Year projected to 2018 with Projection Scale BB Male / Female A/E Ratio: 54% / 145%
PERS Peace Officer/ Firefighter	RP-2000 Disabled Retiree Table Male / Female A/E Ratio: 32% / 114%	RP-2000 Disabled Retiree Table, 2000 Base Year projected to 2018 with Projection Scale BB Male / Female A/E Ratio: 38% / 131%
TRS	RP-2000 Disabled Retiree Table Male / Female A/E Ratio: 48% / 93%	RP-2000 Disabled Retiree Table, 2000 Base Year projected to 2018 with Projection Scale BB Male / Female A/E Ratio: 59% / 112%

A/E Ratio over 100% is conservative

Summary of Assumption Recommendations

Select Withdrawal

	Current	Proposed
PERS Others	Unisex select rates in first 5 years grading down with different scales pre / post age 35 A/E Ratio: Male / Female -Hire Age Under 35: 66% / 83% -Hire Age Over 35: 83% / 94%	Sex distinct select rates in first 5 years, generally lowered all rates A/E Ratio: Male / Female -Hire Age Under 35: 101% / 103% -Hire Age Over 35: 102% / 105%
PERS Peace Officer/Firefighter	Unisex select rates in first 5 years grading down from 15% to 6% A/E Ratio: Male 101% / Female 123%	Sex distinct select rates in first 5 years grading down from 15% to 6.5% A/E Ratio: Male 101% / Female 117%
TRS	Unisex select rates in first 8 years grading down from 17% to 6% A/E Ratio: Male 127% / Female 106%	Sex distinct select rates in first 8 years grading down from 20% to 6% for males, no change to female rates A/E Ratio: Male 106% / Female 106%

A/E Ratio over 100% is conservative

Summary of Assumption Recommendations

Ultimate Withdrawal

	Current	Proposed
PERS Others	Sex distinct age based rates after first 5 years of service Male / Female A/E Ratio: 76% / 72%	Decrease male and female rates for most ages Male / Female A/E Ratio: 100% / 100%
PERS Peace Officer/Firefighter	Sex distinct age based rates after first 5 years of service Male / Female A/E Ratio: 58% / 84%	Decrease male and female rates for most ages Male / Female A/E Ratio: 101% / 105%
TRS	Sex distinct age based rates after first 8 years of service Male / Female A/E Ratio: 74% / 86%	Decrease male and female rates for most ages Male / Female A/E Ratio: 103% / 95%

A/E Ratio over 100% is conservative

Summary of Assumption Recommendations

Reduced Retirement

	Current	Proposed
PERS Others	Unisex various rates, ages 50 to 59 A/E Ratio: 82%	Sex distinct, decrease most rates Male / Female A/E Ratio: 98% / 98%
PERS Peace Officer/Firefighter	Unisex various rates, ages 50 to 59 A/E Ratio: 81%	Unisex, decrease most rates A/E Ratio: 89%
TRS	Unisex various rates, ages 50 to 59 A/E Ratio: 108%	Unisex, increase rates at age 54 and 59 A/E Ratio: 99%

A/E Ratio less than 100% is conservative

Summary of Assumption Recommendations

Unreduced Retirement

	Current	Proposed
PERS Others	Unisex various rates, ages 50 to 90 A/E Ratio: 98%	Unisex, decrease most rates A/E Ratio: 98%
PERS Peace Officer/Firefighter	Unisex various rates, ages 40 to 75 A/E Ratio: 80%	Sex-distinct, decrease most rates Male / Female A/E Ratio: 92% / 85%
TRS	Sex-distinct various rates, ages 50 to 85 Male / Female A/E Ratio: 98% / 94%	Sex-distinct, decrease most rates Male / Female A/E Ratio: 98% / 99%

A/E Ratio less than 100% is conservative

Summary of Assumption Recommendations

Deferred Vested Commencement Age

	Current Expected	Actual	New Expected
PERS Others	Earliest unreduced age	Tier 1: 56 Tier 2: 60 Tier 3: 61	No change
PERS Peace Officer/Firefighter	Tier 1: 53 Tier 2: 57 Tier 3: 57	Tier 1: 56 Tier 2: 59 Tier 3: 58	Tier 1: 55 Tier 2: 60 Tier 3: 60
TRS	Earliest unreduced age	Tier 1: 56 Tier 2: 61	No change

The earlier the commencement age, the more conservative the assumption

Summary of Assumption Recommendations

Disability

	Current	Proposed
PERS Others	Age based, sex-distinct Rates stop at retirement eligibility Male / Female A/E Ratio: 76% / 113%	Decreased rates by 5% Male / Female A/E Ratio: 80% / 118%
PERS Peace Officer/Firefighter	Age based, unisex Rates stop at retirement eligibility A/E Ratio: 38%	Decreased rates by 30% A/E Ratio: 56%
TRS	Age based, sex-distinct Rates stop at retirement eligibility Male / Female A/E Ratio: 100% / 175%	Age based, unisex Generally increased rates A/E Ratio: 100%

A/E Ratio over 100% is conservative

Summary of Assumption Recommendations

Withdrawal of Contributions at Termination

	Current	Proposed
PERS Others	15%	10%
PERS Peace Officer/Firefighter	15%	15%
TRS	10%	5%

Lower expected refunds is a more conservative assumption

Summary of Assumption Recommendations

Salary Scale

	Current	Proposed
PERS Others	5-year select period and then age based rates grading down from 5.11% to 3.62%	5-year select period and then age based rates grading down from 8.0% to 4.3%
PERS Peace Officer/Firefighter	6.36% for the first 4 years of service grading down to 4.12% at 6 years of service and after	Service based rates grading down from 9.7% to 4.9%
TRS	6.11% for the first 6 years of service then grading down to 3.62% after 20 years	Service based rates grading down from 8.1% to 3.9%

A higher salary scale assumption is more conservative

Other Demographic Assumptions

Other Demographic Assumptions

		Current		Proposed	
		Male	Female	Male	Female
Percent Married	PERS Others	80%	70%	75%	70%
	PERS Peace Officer/Firefighter	80%	70%	85%	60%
	TRS	85%	75%	85%	75%
Age Difference	PERS Others	3 years older	3 years younger	3 years older	3 years younger
	PERS Peace Officer/Firefighter	3 years older	3 years younger	3 years older	3 years younger
	TRS	3 years older	3 years younger	3 years older	3 years younger

Higher percent married assumption is more conservative.

For males, the more years older, the more conservative the assumption. For females, the fewer years younger, the more conservative.

Other Demographic Assumptions (cont'd)

		Current	Proposed
Alaska Residency	PERS Others	70%	70%
	PERS Peace Officer/Firefighter	70%	65%
	TRS	60%	60%
Part-time Service Earned During the Year	PERS Others	0.65	0.65
	PERS Peace Officer/Firefighter	1.00	1.00
	TRS	0.60	0.75

The higher percent of Alaska residency expected, the more conservative the assumption.

The higher the part-time service expected to earn, the more conservative the assumption.

Other Demographic Assumptions (cont'd)

		Current		Proposed	
		Death	**Disability**	**Death**	**Disability**
Assumption for Occupational Death and Disability	PERS Others	55%	55%	50%	50%
	PERS Peace Officer/Firefighter	75%	75%	70%	70%
	TRS	15%	N/A	15%	N/A

The higher the expected occupational assumption, the more conservative the assumption

Other Demographic Assumptions (cont'd)

Number of Dependent Children

- Currently, we assume all married employees have 2 dependent children from age 25 through age 45. At 46, we assume members have no dependent children
- Due to a lack of available data, we do not recommend a change to this assumption

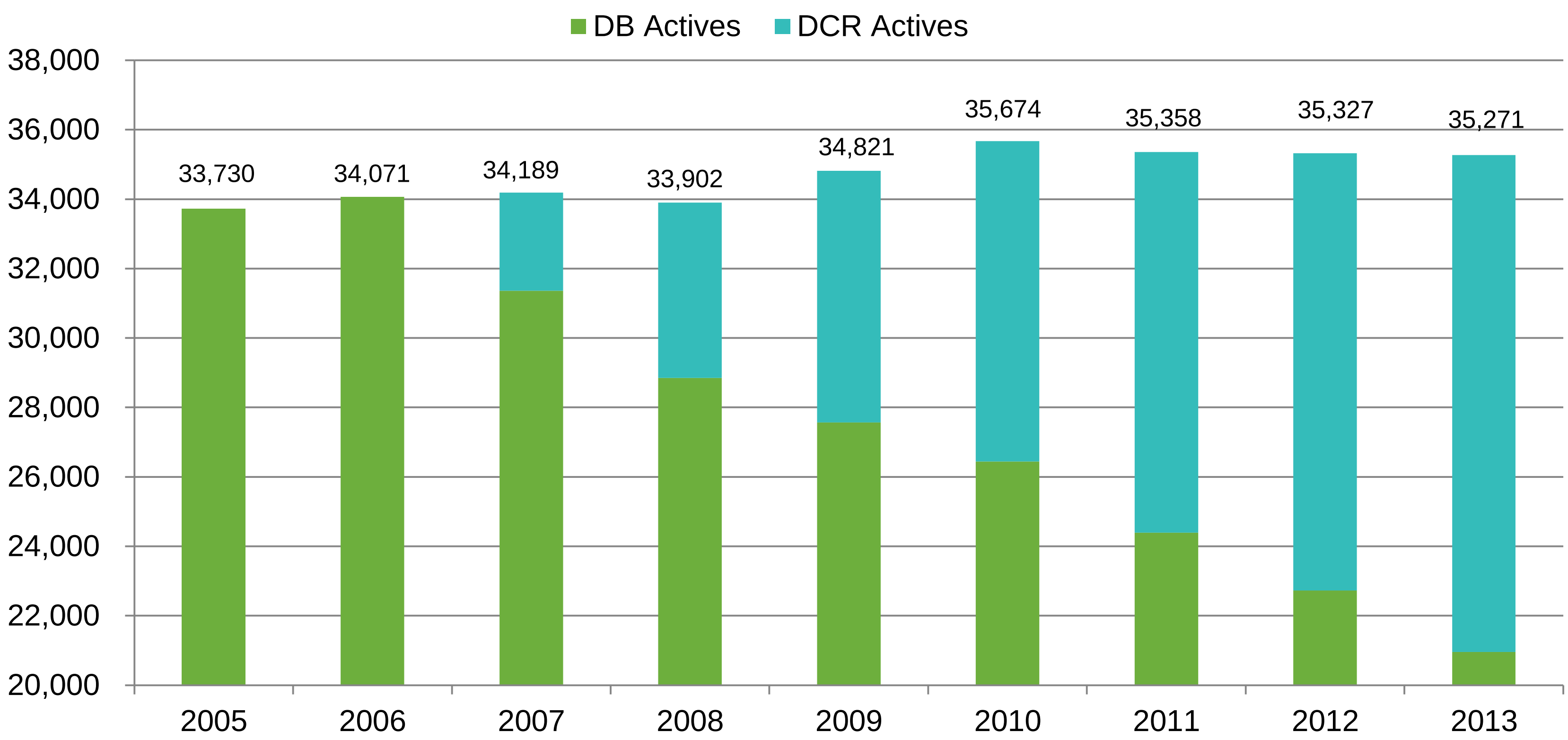
The more children assumed, the more conservative the assumption.

Number of Unused Sick Days (TRS only)

- Currently, we assume that a member will receive 4.7 days for each year of service. This effectively increases the liability by 2.73%
- We recommend lowering this assumption to 4.5 days, which will increase liability by 2.60%

The more days of unused sick time assumed, the more conservative the assumption.

PERS
Active Member Population Growth 2005-2013

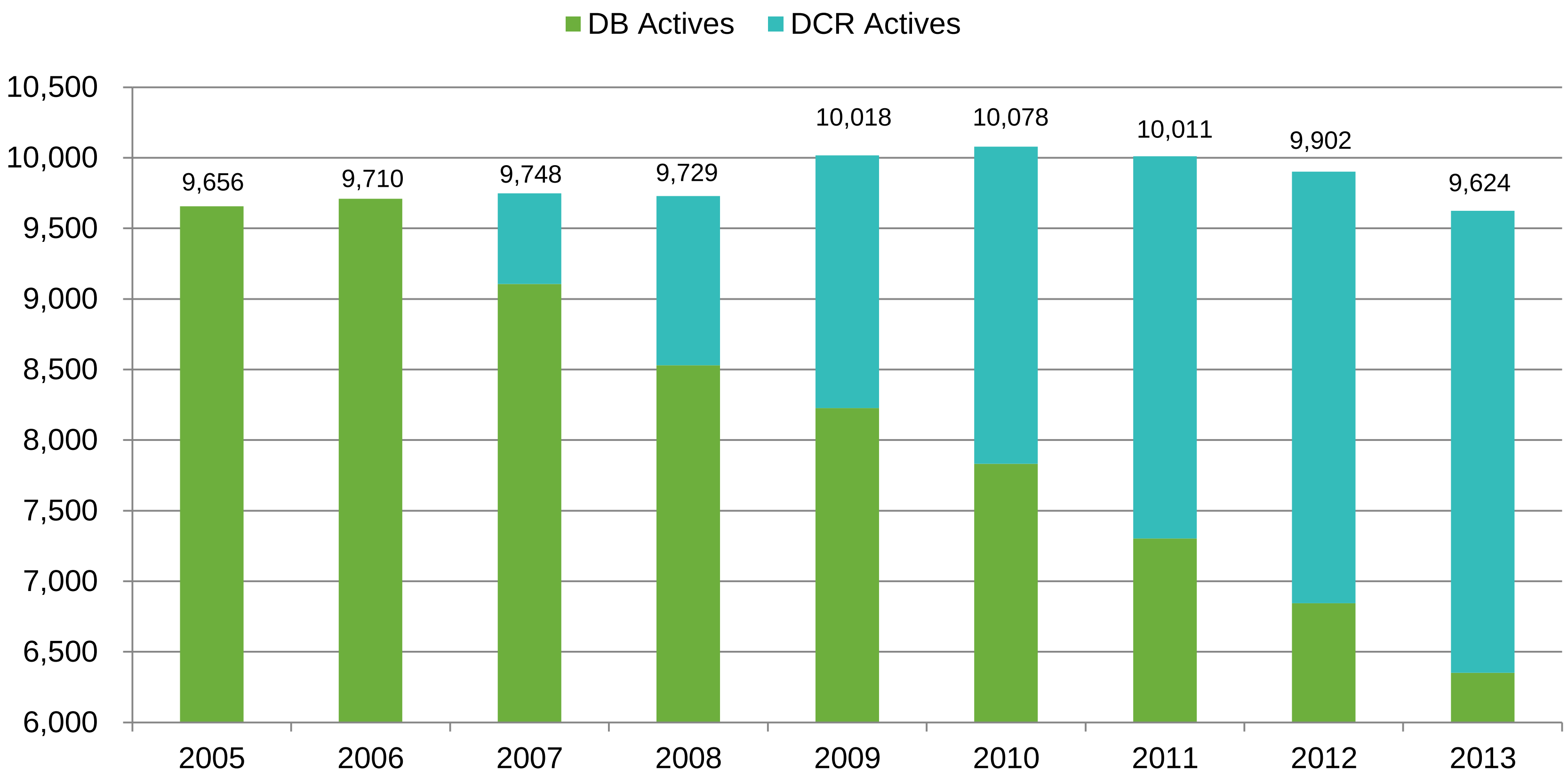


Percent Increase Each Year	1.01%	0.35%	(0.84)%	2.71%	2.45%	(0.89)%	(0.09)%	(0.16)%

8-Year Geometric Average: 0.56%

Buck recommends reducing active member population growth assumption from 1% per year to 0.5% per year for projections.

TRS
Active Member Population Growth 2005-2013



	2006	2007	2008	2009	2010	2011	2012	2013
Percent Increase Each Year	0.56%	0.39%	(0.19)%	2.97%	0.60%	(0.66)%	(1.09)%	(2.81)%

8-Year Geometric Average: (0.04)%

Buck recommends reducing active member population growth assumption from 1% per year to 0.5% per year for projections.

Actuarial Methods

- Current Cost Method – Entry Age Normal
  - Normal cost is determined as a level percentage of pay per participant over their entire career, resulting in a more stable normal cost
  - The unfunded liability is adjusted by actuarial gains/losses each year and each change is amortized over 25 years from date established as a level percentage of payroll based on the payroll growth assumption
- Current Asset Valuation Method
  - A five-year smoothing method of investment returns on Fair Value is used, constrained to a corridor of 80% - 120% of Fair Value
- We recommend some changes pursuant to HB 385 and SB 119
  - Reinitialize asset value to fair value at June 30, 2014 to reflect legislative intent under SB 119, then grow back into 5 year smoothing by recognizing 20% of investment gains and losses thereafter
  - Consider removing 80%-120% corridor on asset valuation method to reduce volatility and be consistent (though not required) with new GASB treatment
  - Change amortization method from level dollar to level percent of payroll and amortize unfunded over a closed 25 year period beginning June 30, 2014

Postemployment Healthcare

OPEB Healthcare Cost Adjustments

- Background as of June 30, 2013
  - Consistent gains in recent valuations, i.e., emerging claim costs per capita lower than expected
  - Extra conservatism added as of June 30, 2006 due to claims data concerns
  - Incurred claims data basis for recent valuation from HealthSmart administrators (TPAs), transitioned to Aetna as of January 1, 2014
  - DCR - assumptions designed to reflect anticipated future cost-sharing features and participation
- General Sources of Healthcare Gain/Loss
  - Lower Healthcare Cost Trend Rates (HCCTR) than projected – separated trend based on Medicare and Non-Medicare participation
  - Lower proportion of population in Medicare Part B only than anticipated
  - Base claim cost development smooths past gains compared to experience
  - Benefit administrator changes and conservative projection of improved network discounts

OPEB Healthcare Cost Adjustments (cont'd)

Healthcare Cost Trend Rates

- Near-term current assumptions updated to reflect Medicare status and future expectations

	Non-Medicare	Medicare	Prescription
FY14	8.7%	6.4%	9.6%
FY15	8.5%	6.3%	8.3%
FY16	8.0%	6.3%	7.1%

- Changed to Society of Actuaries model as of June 30, 2008; updated ultimate rate to 4.5% for June 30, 2012 valuation, re-assessed annually
- No changes recommended

Morbidity

- Current assumptions within reasonable range
- Compiling plan-specific data, claim variance by age requires significant history to be credible; reviewed annually
- No changes recommended at this time; under review for 2014 valuation

OPEB Healthcare Cost Adjustments (cont'd)

Retiree-Paid Premium Increases

- Current assumptions consistent with recent experience
- No changes recommended

Participation

- PERS, TRS Tier I - recommend continuing 100% participation rate for system paid coverage
- PERS Tiers II, III and TRS Tier II
  - For non-system paid coverage, recommend dropping from 100% assumed participation to 10%
  - For system paid coverage, recommend maintaining 100% participation assumption as retirees may opt back in for system paid coverage
- DCR – Participation assumption was updated for 2012 valuation to reflect member premium contribution requirement and availability of lower cost options

OPEB Healthcare Cost Adjustments (cont'd)

- PERS, TRS DCR - recommend switching from initial and temporary conservative assumptions

Eligibility	Assumed Participation Rate	Retiree Premium % of Plan Costs
Prior to Medicare eligibility	*	No Net Plan Liability prior to Medicare
Medicare and 10-14 years service	70.5%	Premium is 30% of plan cost
Medicare and 15-19 years service	75.2%	Premium is 25% of plan cost
Medicare and 20-24 years service	79.9%	Premium is 20% of plan cost
Medicare and 25-29 years service	89.3%	Premium is 15% of plan cost
Medicare and 30+ years service	94.0%	Premium is 10% of plan cost

*Pre-Medicare participation is also updated and varies by age and retirement vs. disability decrement

OPEB Healthcare Cost Adjustments (cont'd)

- Some retirees will decline coverage, even if system paid or limited to 10% of plan cost, but
  - Pre-DCR Tier declination rates for system paid coverage are expected to be very small
  - DCR Tier retirees with greater service will have greater HRA balances with which to pay premiums

OPEB Healthcare Cost Adjustments (cont'd)

Base Claim Cost Development

- Current approach is "trend and blend" by component:
  - Pre-Medicare medical
  - Medicare Part A Only medical
  - Medicare Parts A&B medical
  - Prescription
  - Admin is added but is projected to increase with inflation and is based on current TPA rates (not blended)
- Methodology reflects recent favorable experience over 4 years
- No changes recommended except possibly weighting recent experience more heavily in the "blend" stage

Impact of Proposed Changes on Plan Costs

Cost Impact of Proposed Changes in Actuarial Assumptions as of June 30, 2013

PERS
($ in thousands)

	Pension		Healthcare		Total	
	Current	**Proposed**	**Current**	**Proposed**	**Current**	**Proposed**
Actuarial Accrued Liability	$ 11,945,881	$ 12,477,057	$ 8,046,878	$ 8,306,459	$ 19,992,759	$ 20,783,516
Actuarial Value of Assets	6,510,749	6,510,749	5,651,877	5,651,877	12,162,626	12,162,626
Unfunded Liability	$ 5,435,132	$ 5,966,308	$ 2,395,001	$ 2,654,582	$ 7,830,133	$ 8,620,890
Funded Ratio	54.5%	52.2%	70.2%	68.0%	60.8%	58.5%
Employer Normal Cost Rate	2.38%	3.79%	3.73%	4.12%	6.11%	7.91%
Past Service Cost Rate	22.46%	24.32%	11.71%	12.62%	34.17%	36.94%
Employer Contribution Rate	24.84%	28.11%	15.44%	16.74%	40.28%	44.85%
Employer Contribution Rate HB385	16.64%	19.41%	9.75%	10.81%	26.39%	30.22%

Cost Impact of Proposed Changes in Actuarial Assumptions as of June 30, 2013

TRS
($ in thousands)

	Pension		Healthcare		Total	
	Current	**Proposed**	**Current**	**Proposed**	**Current**	**Proposed**
Actuarial Accrued Liability	$ 6,589,553	$ 6,748,125	$ 3,002,554	$ 3,091,681	$ 9,592,107	$ 9,839,806
Actuarial Value of Assets	3,170,313	3,170,313	1,803,763	1,803,763	4,974,076	4,974,076
Unfunded Liability	$ 3,419,240	$ 3,577,812	$ 1,198,791	$ 1,287,918	$ 4,618,031	$ 4,865,730
Funded Ratio	48.1%	47.0%	60.1%	58.3%	51.9%	50.6%
Employer Normal Cost Rate	2.50%	2.93%	3.20%	3.23%	5.70%	6.16%
Past Service Cost Rate	45.56%	47.20%	17.98%	18.94%	63.54%	66.14%
Employer Contribution Rate	48.06%	50.13%	21.18%	22.17%	69.24%	72.30%
Employer Contribution Rate HB 385	30.73%	32.38%	12.89%	13.63%	43.62%	46.01%

Cost Impact of Proposed Changes in Actuarial Assumptions as of June 30, 2013 – PERS

	Pension*		Healthcare*		Total*	
	Employer Contribution Rate	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**
Before Changes	16.64%	56.0%	9.75%	72.4%	26.39%	62.6%
Termination Rates	0.65%	(0.1)%	0.22%	0.3%	0.87%	0.1%
Retirement Rates	(0.10)%	0.2%	(0.11)%	0.2%	(0.21)%	0.2%
Disability Rates	(0.01)%	0.0%	0.00%	0.0%	(0.01)%	(0.1)%
Salary Scale	0.99%	(0.7)%	(0.05)%	0.0%	0.94%	(0.4)%
Part Time Service Accrual	0.02%	0.0%	0.01%	0.0%	0.03%	0.0%
Marriage Assumption	(0.01)%	0.0%	(0.16)%	0.4%	(0.17)%	0.1%
Vested Termination Refund	0.02%	(0.1)%	0.09%	(0.1)%	0.11%	(0.1)%
Occupational Assumption	(0.01)%	0.1%	(0.01)%	0.0%	(0.02)%	0.0%
DV Commencement Age	(0.02)%	0.0%	(0.01)%	0.0%	(0.03)%	0.0%
Alaska Residency Assumption	0.00%	0.0%	0.00%	0.0%	(0.00)%	0.1%
Disabled Mortality	0.03%	(0.1)%	0.03%	(0.1)%	0.06%	(0.1)%
Active Mortality	0.01%	0.0%	0.01%	0.0%	0.02%	0.0%
Retired/Inactive Mortality	1.20%	(1.6)%	1.04%	(2.9)%	2.24%	(2.1)%
Total Changes	2.77%	(2.3)%	1.06%	(2.2)%	3.83%	(2.3)%
After Changes	19.41%	53.7%	10.81%	70.2%	30.22%	60.3%

*Includes changes due to HB 385

Cost Impact of Proposed Changes in Actuarial Assumptions as of June 30, 2013 – TRS

	Pension*		Healthcare*		Total*	
	Employer Contribution Rate	Funded Ratio	Employer Contribution Rate	Funded Ratio	Employer Contribution Rate	Funded Ratio
Before Changes	30.73%	49.8%	12.89%	62.2%	43.62%	53.6%
Termination Rates	0.20%	(0.1)%	(0.07)%	(0.1)%	0.13%	(0.1)%
Retirement Rates	(0.10)%	0.0%	0.08%	(0.2)%	(0.02)%	0.0%
Disability Rates	0.03%	0.0%	0.02%	0.0%	0.05%	0.0%
Salary Scale	0.27%	(0.1)%	(0.03)%	0.0%	0.24%	(0.1)%
Part-Time Service Accrual	0.07%	0.0%	0.02%	0.0%	0.09%	0.0%
Sick Time	(0.05)%	(0.1)%	(0.03)%	0.0%	(0.08)%	0.0%
Vested Termination Refund	0.00%	0.0%	0.07%	(0.1)%	0.07%	0.0%
Disabled Mortality	0.04%	0.0%	0.02%	0.0%	0.06%	0.0%
Active Mortality	0.03%	0.0%	0.01%	0.0%	0.04%	(0.1)%
Retired/Inactive Mortality	1.16%	(0.9)%	0.65%	(1.4)%	1.81%	(1.0)%
Total Changes	1.65%	(1.2%)	0.74%	(1.8)%	2.39%	(1.3)%
After Changes	32.38%	48.6%	13.63%	60.4%	46.01%	52.3%

*Includes changes due to HB385

Historical Gains/(Losses) by Source Public Employees' Retirement System

($ in thousands)	2010	2011	2012	2013	Total	Annual Average
Retirement Experience	$ 3,730	$ (8,116)	$ (2,103)	$(14,528)	$ (21,017)	$ (5,254)
Termination Experience	(33,532)	(39,980)	(19,932)	(23,716)	(117,160)	(29,290)
Mortality Experience	(17,350)	(2,020)	8,809	(7,403)	(17,964)	(4,491)
Disability Experience	(1,837)	177	224	15	(1,421)	(355)
Rehires	N/A	(25,953)	(24,172)	(23,427)	(73,552)	(24,517)
Other Demographic Experience	(28,765)	(42,015)	10,356	(19,679)	(80,103)	(20,026)
Salary Increases	4,617	(13,845)	(25,024)	(10,070)	(44,322)	(11,081)
Alaska COLA	7,169	4,482	5,260	5,865	22,776	5,694
PRPA Experience	(79,310)	34,737	3,735	36,714	154,496	38,624
Medical Experience	(130,760)	389,047	582,366	163,909	1,004,562	251,141
Total	$ (117,418)	$ 296,514	$ 539,519	$107,680	$ 826,295	$ 200,445
					Average AAL	$19,039,541
					Gain/(Loss) as a % of AAL	1.05%

Historical Gains/(Losses) by Source Teachers' Retirement System

($ in thousands)	2010	2011	2012	2013	Total	Annual Average
Retirement Experience	$ 7,922	$ 3,809	$ 6,990	$ 3,268	$ 21,989	$ 5,497
Termination Experience	(9,763)	(14,197)	(11,029)	(11,010)	(45,999)	(11,500)
Mortality Experience	(17,413)	(5,625)	4,375	(3,833)	(22,496)	(5,624)
Disability Experience	(556)	(974)	(850)	(696)	(3,076)	(769)
Rehires	N/A	(14,236)	(8,174)	(11,100)	(33,510)	(11,170)
Other Demographic Experience	(20,959)	8,225	(12,877)	(29,965)	(55,576)	(13,894)
Salary Increases	(35,479)	8,514	9,947	23,829	6,811	1,703
Alaska COLA	3,185	(85)	(2,195)	666	1,571	393
PRPA Experience	55,638	26,432	2,827	(27,733)	112,630	28,158
Medical Experience	(72,767)	61,458	203,099	83,127	274,917	68,729
Total	$ (90,192)	$ 73,321	$ 192,113	$ 82,019	$ 257,261	$ 61,523
					Average AAL	$ 9,228,784
					Gain/(Loss) as a % of AAL	0.67%

Defined Contribution Retirement (DCR) Plan Experience Analysis Results

Summary of DCR Assumption Recommendations

- Mortality
  - Recommend respective tables that are adopted for the DB Plans for all mortality assumptions
    - Healthy mortality
    - Disabled mortality
- Retirement
  - No retirees in the DCR Plans
  - Recommend no change to the current retirement rates
- Disability
  - No disabled retirees in the DCR Plans
  - Recommend changing to their respective DB Plan’s disability rates

Summary of DCR Assumption Recommendations

Withdrawal

	Current	Proposed
PERS Others	• Unisex select rates • 5-year select period • Sex-distinct age based ultimate rates • Ultimate rates are DB Plan's rates loaded by 10%	• Sex-distinct select rates • Decrease all select rates • Ultimate rates are sex-distinct and all rates were slightly increased
PERS Peace Officer/Firefighter	• Unisex select rates • 5-year select period • Sex-distinct age based ultimate rates • Ultimate rates are DB Plan's rates loaded by 10%	• Sex-distinct select rates • Increase first two select rates for males • Increase all select rates for females • Ultimate rates are sex-distinct and all rates were slightly increased
TRS	• Unisex select rates • 5-year select period • Sex-distinct age based ultimate rates • Ultimate rates are DB Plan's rates loaded by 10%	• Unisex select rates • Increase most select rates

Other DCR Demographic Assumptions

- Percent Married
  - Recommend respective percent married assumptions that are adopted for the DB Plans.
- Age Difference
  - Recommend respective age difference assumptions that are adopted for the DB Plans.
- Part-time service earned during the year
  - Recommend respective part-time service assumptions that are adopted for the DB Plans.
- Occupational Death and Disability
  - Recommend respective occupational death and disability assumptions that are adopted for the DB Plans.

DCR Salary, Payroll Growth and Healthcare Assumptions

- Recommend keeping the salary scale consistent with the PERS and TRS DB Plans
- Recommend no change to current payroll growth assumption of 3.62%
- Healthcare assumptions will be updated to those used for the DB Plans

Cost Impact of Proposed Changes in Actuarial Assumptions – PERS DCR

	Occupational Death & Disability		Healthcare		Total	
	Employer Contribution Rate	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**
Before Changes	0.30%	315.7%	1.68%	33.7%	1.98%	49.6%
Termination Rates	(0.01)%	48.7%	(0.28)%	9.7%	(0.29)%	13.8%
Disability Rates	(0.04)%	103.4%	0.00%	(0.1)%	(0.04)%	0.8%
Salary Scale	0.00%	(25.3)%	0.00%	0.0%	0.00%	(0.2)%
Part-Time Service Accrual	0.00%	0.0%	0.00%	0.0%	0.00%	0.0%
Marriage Assumption	0.00%	2.3%	(0.01)%	0.5%	(0.01)%	0.8%
Occupational Assumption	(0.03)%	26.9%	(0.01)%	0.2%	(0.04)%	0.4%
Vested Termination Refund	0.00%	0.0%	0.00%	0.0%	0.00%	0.0%
Disabled Mortality	0.01%	(13.5)%	0.01%	(0.2)%	0.02%	(0.3)%
Active Mortality	(0.02)%	(18.1)%	0.00%	(0.2)%	(0.02)%	(0.5)%
Inactive Mortality	0.00%	0.0%	0.08%	(2.2)%	0.08%	(3.0)%
Total Changes	(0.09)%	124.4%	(0.21)%	7.7%	(0.30)%	11.8%
After Changes	0.21%	440.1%	1.47%	41.4%	1.68%	61.4%

Cost Impact of Proposed Changes in Actuarial Assumptions – TRS DCR

	Occupational Death & Disability		Healthcare		Total	
	Employer Contribution Rate	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**
Before Changes	0.00%	3,165.0%	2.04%	39.1%	2.04%	50.3%
Termination Rates	0.00%	123.3%	(0.66)%	12.5%	(0.66)%	16.2%
Disability Rates	0.00%	2,600.1%	0.00%	0.2%	0.00%	0.4%
Salary Scale	0.00%	441.6%	(0.01)%	0.0%	(0.01)%	0.0%
Part-Time Service Accrual	0.00%	162.3%	0.01%	0.0%	0.01%	0.0%
Disabled Mortality	0.00%	170.9%	0.01%	(0.1)%	0.01%	(0.1)%
Active Mortality	0.00%	0.0%	0.01%	(0.4)%	0.01%	(0.5)%
Inactive Mortality	0.00%	0.0%	0.05%	(1.4)%	0.05%	(1.9)%
Total Changes	0.00%	3,498.2%	(0.59)%	10.8%	(0.59)%	14.1%
After Changes	0.00%	6,663.2%	1.45%	49.9%	1.45%	64.4%

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JRS Experience Analysis Results

Summary of JRS Assumption Recommendations

	Current	Proposed
Pre-termination Healthy Mortality	45% of the male and 55% of the female rates of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA	68% of the male rates and 60% of the female rates of the proposed post-termination healthy mortality
Post-termination Healthy Mortality	1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA, with a 3-year setback for males and a 1-year setback for females	94% of the male rates and 97% of the female rates of the RP-2000 Combined Mortality Table, 2000 Base Year projected to 2018 with Projection Scale BB, with a 3 year set-back for males and 4 years for females
Disabled Mortality	RP-2000 Disabled Retiree Mortality Table	RP-2000 Disabled Retiree Mortality Table projected generationally with Projection Scale BB

Summary of JRS Assumption Recommendations

	Current	Proposed
Termination	<u>Years of Service</u> / <u>Rate</u> <10 3% 10-15 1% >15 1%	<u>Years of Service</u> / <u>Rate</u> <10 3% 10-15 1% >15 1%
Retirement	<u>Age</u> / <u>Rate</u> <59 3.0% 59-64 10.0% 65-69 10.0% 70 100.0%	<u>Age</u> / <u>Rate</u> <59 3.0% 59 10.0% 60-61 20.0% 62-64 10.0% 65-66 20.0% 67-69 10.0% 70 100.0%
Deferred Vested Age at Retirement	Age 60	Age 60
Disability	Unisex rates ranging from 0.017% at age 20 to 0.180% at age 59	Unisex rates ranging from 0.017% at age 20 to 0.180% at age 59
Withdrawal of Contributions at Termination	0%	0%

Other JRS Demographic and Healthcare Assumptions

	Current		Proposed	
	Male	**Female**	**Male**	**Female**
Percent Married	90%	70%	90%	70%
Age Difference	4 years older	4 years younger	4 years older	4 years younger
Percent of Retirees Participating in the Healthcare Plan	100%	100%	100%	100%

All other healthcare assumptions will be updated to match those used for PERS and TRS

JRS Salary and Payroll Growth Assumption

	Salary Experience
Salary Increase from June 30, 2008 to June 30, 2010	5.06%
Salary Increase from June 30, 2010 to June 30, 2012	4.04%
Average annual increase over 4-year period	2.25%

	Current	Proposed
Inflation	3.12%	3.12%
Productivity	0.50%	0.50%
Payroll Growth	3.62%	3.62%
Merit	0.50%	0.00%
Salary Increase	4.12%	3.62%

Cost Impact of Proposed Changes in JRS Actuarial Assumptions

	Pension		Healthcare		Total	
	Employer Contribution Rate	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**	**Employer Contribution Rate**	**Funded Ratio**
Before Changes	76.47%	61.9%	2.59%	125.1%	79.06%	67.2%
Retirement Rates	3.77%	(0.8)%	0.64%	(2.8)%	4.41%	(1.0)%
Salary Scale and COLA	(8.62)%	3.2%	0.00%	0.0%	(8.62)%	3.2%
Disabled Mortally	0.00%	0.0%	0.00%	0.0%	0.00%	0.0%
Pre-Termination Mortality	0.09%	0.0%	0.00%	0.0%	0.09%	0.0%
Post-Termination Mortality	6.85%	(3.4)%	0.93%	(8.5)%	7.78%	(3.7)%
Total Changes	2.09%	(1.0)%	1.57%	(11.3)%	3.66%	(1.5)%
After Changes	78.56%	60.9%	4.16%	113.8%	82.72%	65.7%

NGNMRS Experience Analysis Results

Summary of NGNMRS Assumption Recommendations

- Recommend same mortality assumptions as recommended for PERS Peace Officer/Firefighter

	Current	**Proposed**
Pre-termination Healthy Mortality	80% of the male and 60% of the female rates of the 1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA	60% of the male and 65% of the female rates of proposed post-termination healthy mortality
Post-termination Healthy Mortality	1994 GAM Table, 1994 Base Year without margin projected to 2013 with Projection Scale AA, with a 1-year set-forward for females	96% of all rates of RP-2000, 2000 Base Year projected to 2018 with Projection Scale BB
Disabled Mortality	RP-2000 Disabled Retiree Mortality Table	RP-2000 Disabled Retiree Mortality Table 2000 Base Year projected to 2018 with Projection Scale BB

Summary of NGNMRS Assumption Recommendations

	Current	Proposed
Termination	Select Rates of Turnover During the First 5 Years of Employment Year of Employment / Unisex Rate 1: 20.00% 2: 10.00% 3: 10.00% 4: 10.00% 5: 10.00% Ultimate Rates of Turnover After the First 5 Years of Employment Age / Unisex Rate 30: 7.40% 40: 6.06% 50: 3.26%	No Changes Proposed

Retirement

Current:

Age	Rate	Age	Rate
<51	5%	58	56%
51	11%	59	62%
52	18%	60	68%
53	24%	61	75%
54	30%	62	81%
55	37%	63	87%
56	43%	64	94%
57	49%	65+	100%

Proposed:

Age	Rate	Age	Rate
<51	10%	58	35%
51	10%	59	40%
52	10%	60	45%
53	12%	61	50%
54	15%	62	50%
55	20%	63	50%
56	25%	64	50%
57	30%	65+	100%

Summary of NGNMRS Assumption Recommendations

Deferred Vested Age at Retirement	Age 50				Age 50			
Disability	Age	Unisex Rate	Age	Unisex Rate	Age	Unisex Rate	Age	Unisex Rate
	20	.088%	45	.203%	20	.0616%	45	.1421%
	25	.094%	50	.300%	25	.0658%	50	.2100%
	30	.105%	55	.500%	30	.0735%	55	.3500%
	35	.120%	60	1.054%	35	.0840%	60	.7378%
	40	.144%			40	.1008%		

Cost Impact of Proposed Changes in NGNMRS Actuarial Assumptions

	Employer Contribution	Funded Ratio
Before Changes	$ 627,327	102.8%
Retirement Rates	$ 101,544	(1.3)%
Disability Rates	(2,138)	0.1%
Disabled Mortality	(511)	0.0%
Pre-Termination Mortality	(9,447)	0.1%
Post-Termination Mortality	20,439	(0.4)%
Total Changes	$ 109,887	(1.5)%
After Changes	$ 737,214	101.3%

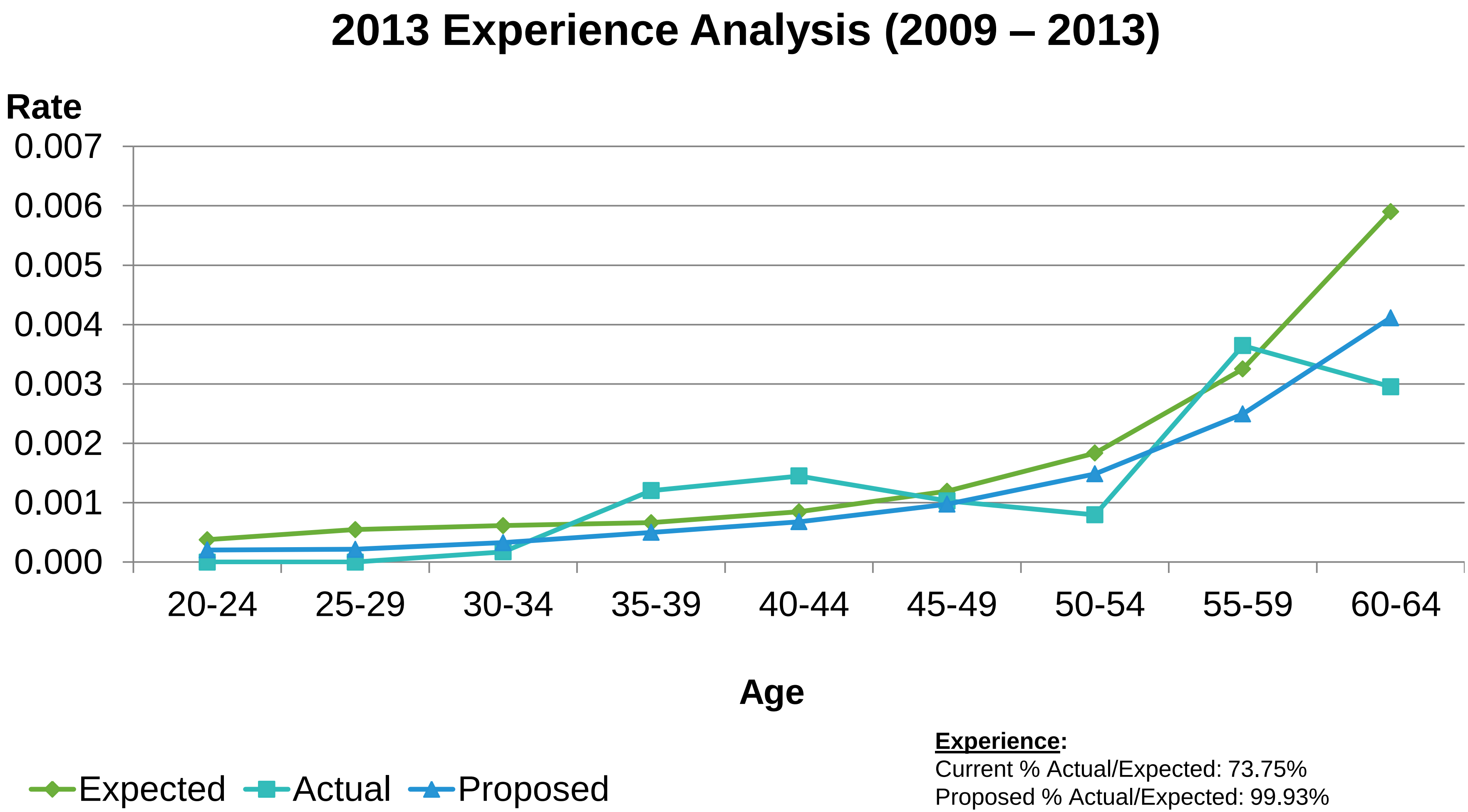
Questions?

Disclosures

- The analyses in this presentation were developed for the Alaska Retirement Management Board and State of Alaska Staff by Buck Consultants, LLC using generally accepted actuarial principles and techniques in accordance with all applicable Actuarial Standards of Practice (ASOPs).
- The calculations and projections are based on member and financial data, current Board policies, actuarial assumptions and methods, and plan provisions summarized in the 2013 actuarial valuation reports of the Alaska Retirement Systems. Measurements assume actuarial assumptions are exactly realized by future experience, including an investment rate of return of 8.0%.
- No third party recipient of Buck's work product should rely upon Buck's work product absent involvement of Buck or without our approval.
- Future actuarial measurements may differ significantly from the current and projected measurements presented in this report due to such factors as: plan experience different from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.
- David Slishinsky is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. He is an Associate of the Society of Actuaries, an Enrolled Actuary, and a Fellow of the Conference of Consulting Actuaries. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

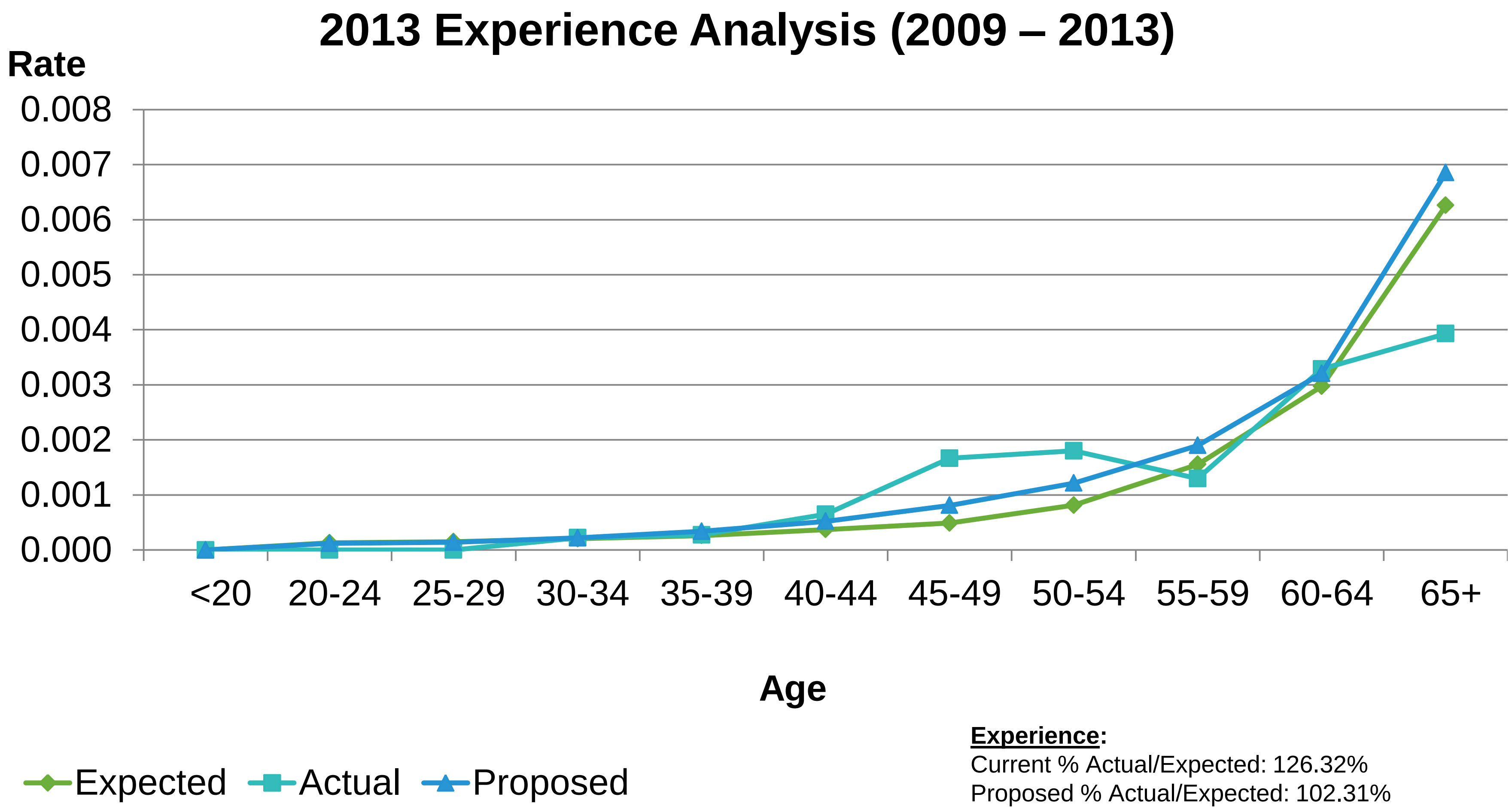
Appendices

PERS Others
Healthy Pre-termination Mortality – Male



Experience:
Current % Actual/Expected: 73.75%
Proposed % Actual/Expected: 99.93%

PERS Others
Healthy Pre-termination Mortality – Female



<u>Experience</u>:
Current % Actual/Expected: 126.32%
Proposed % Actual/Expected: 102.31%

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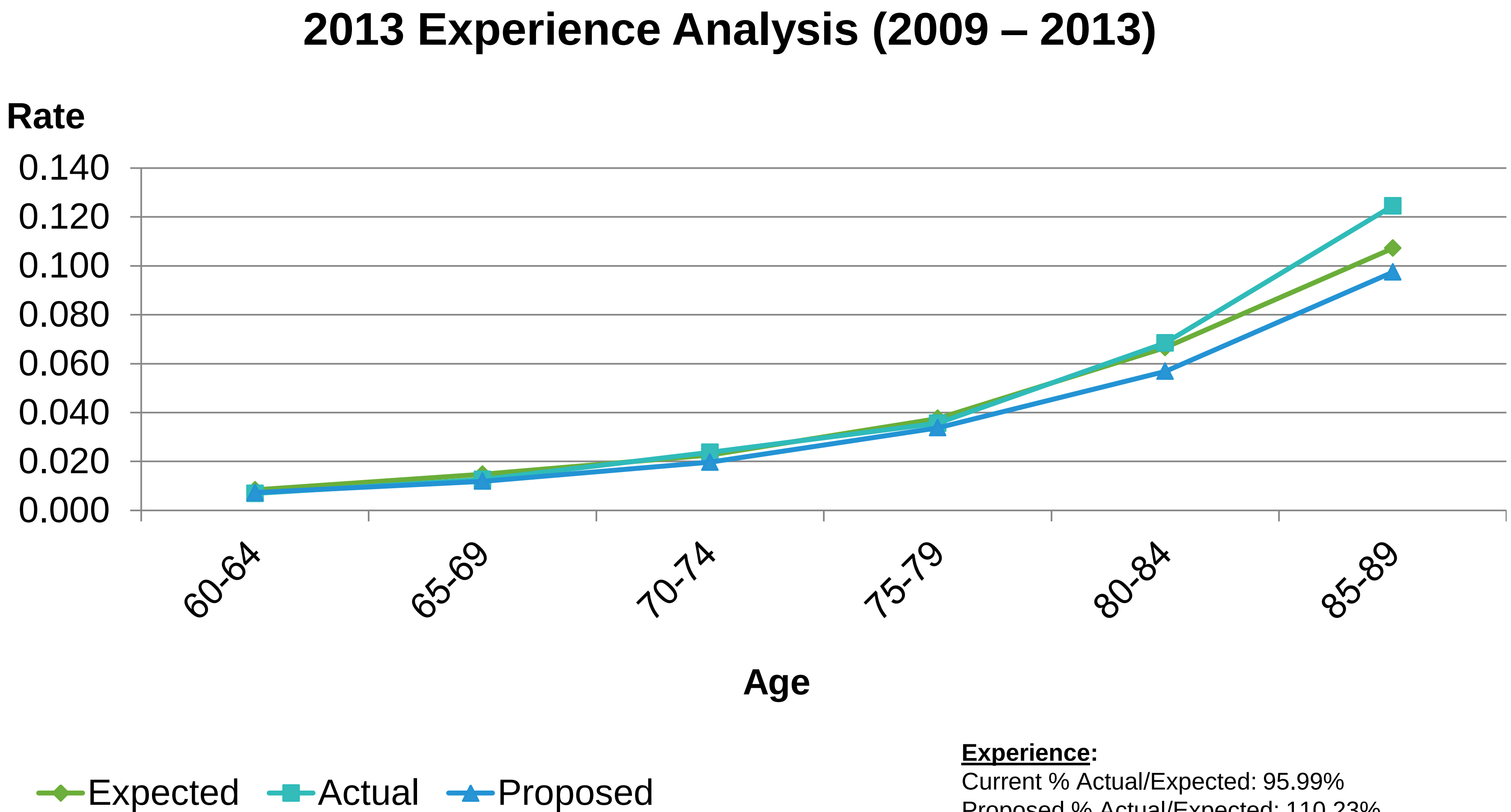
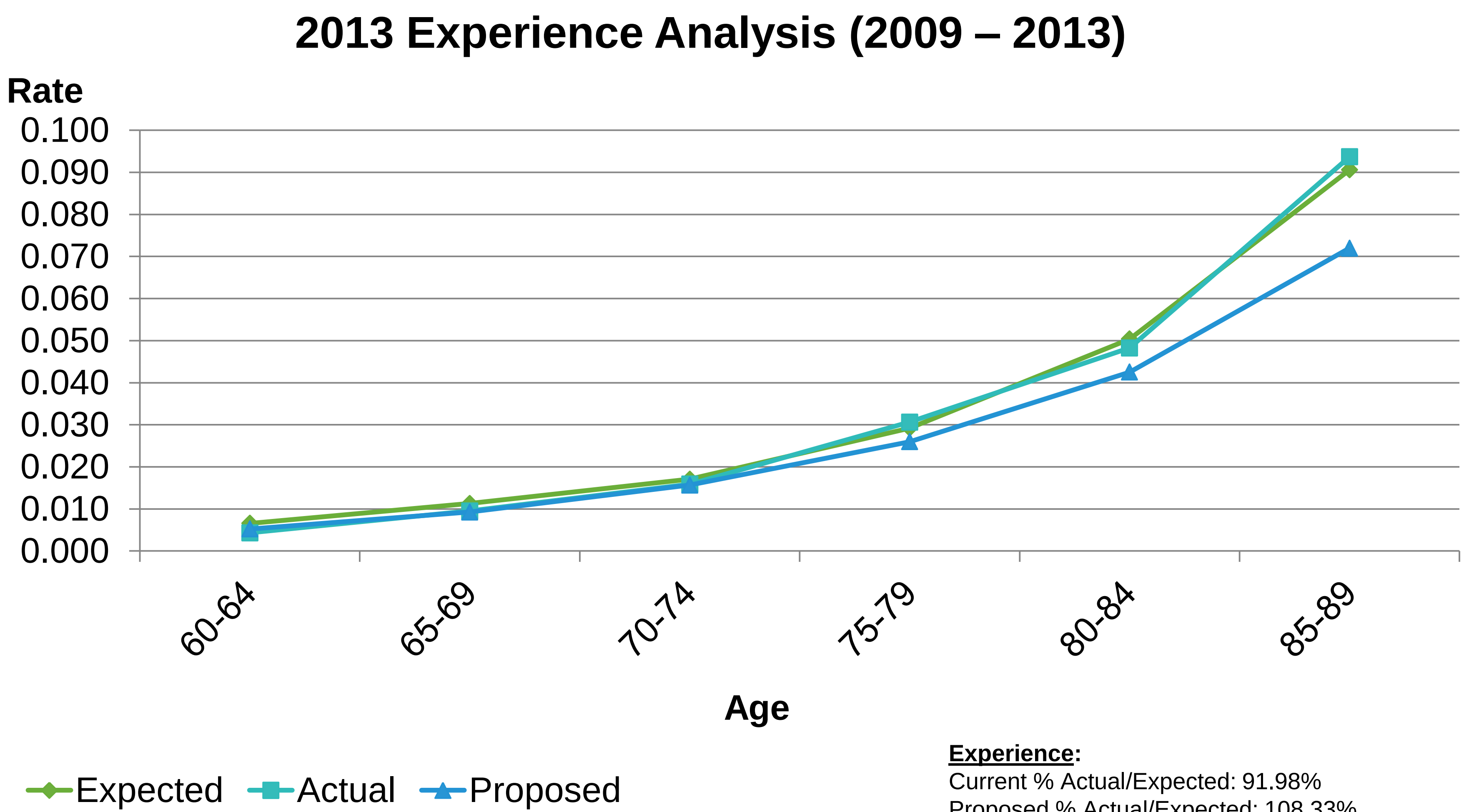
PERS Others
Healthy Post-termination Mortality – Male



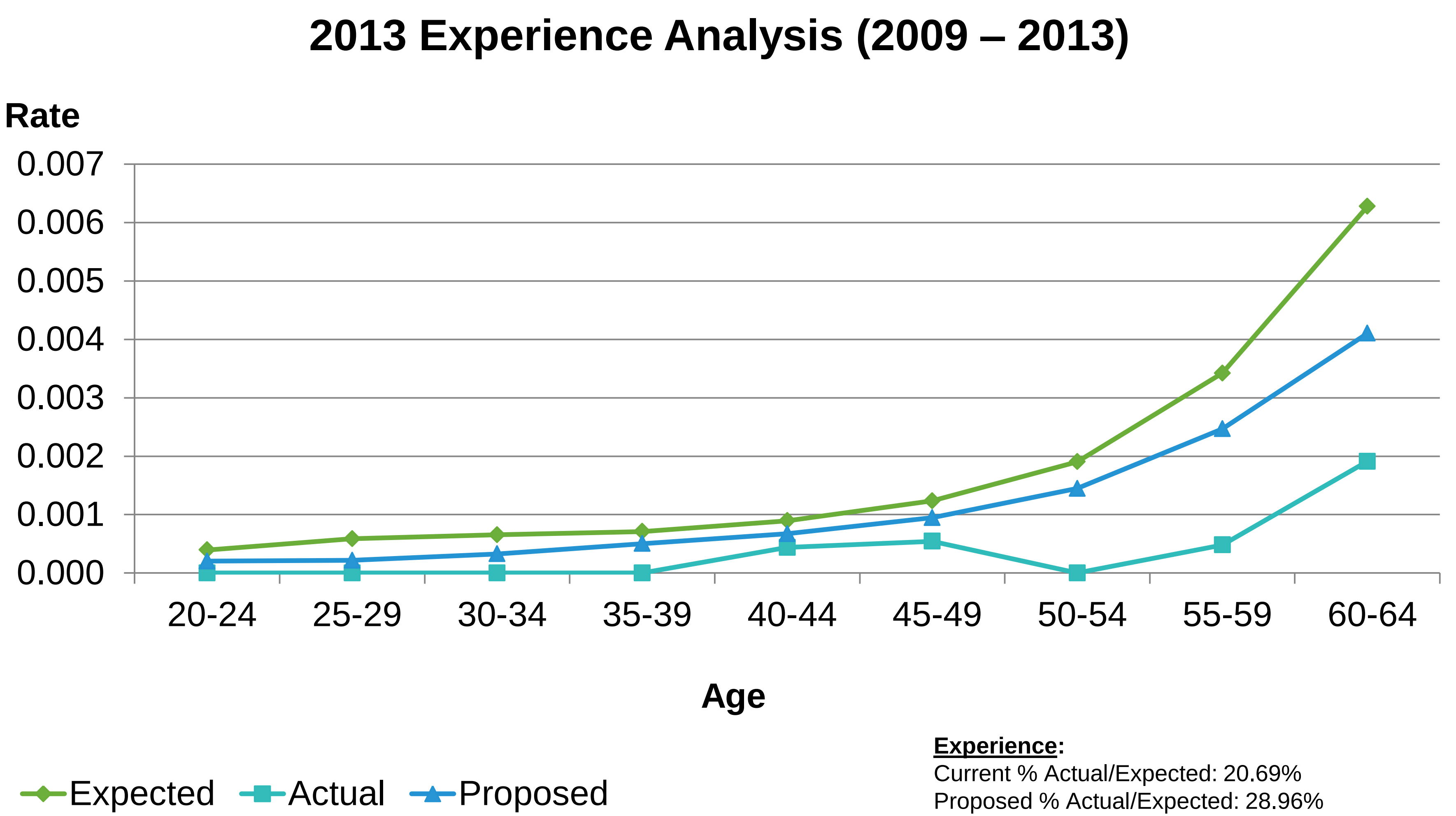
Experience:
Current % Actual/Expected: 95.99%
Proposed % Actual/Expected: 110.23%

PERS Others
Healthy Post-termination Mortality – Female



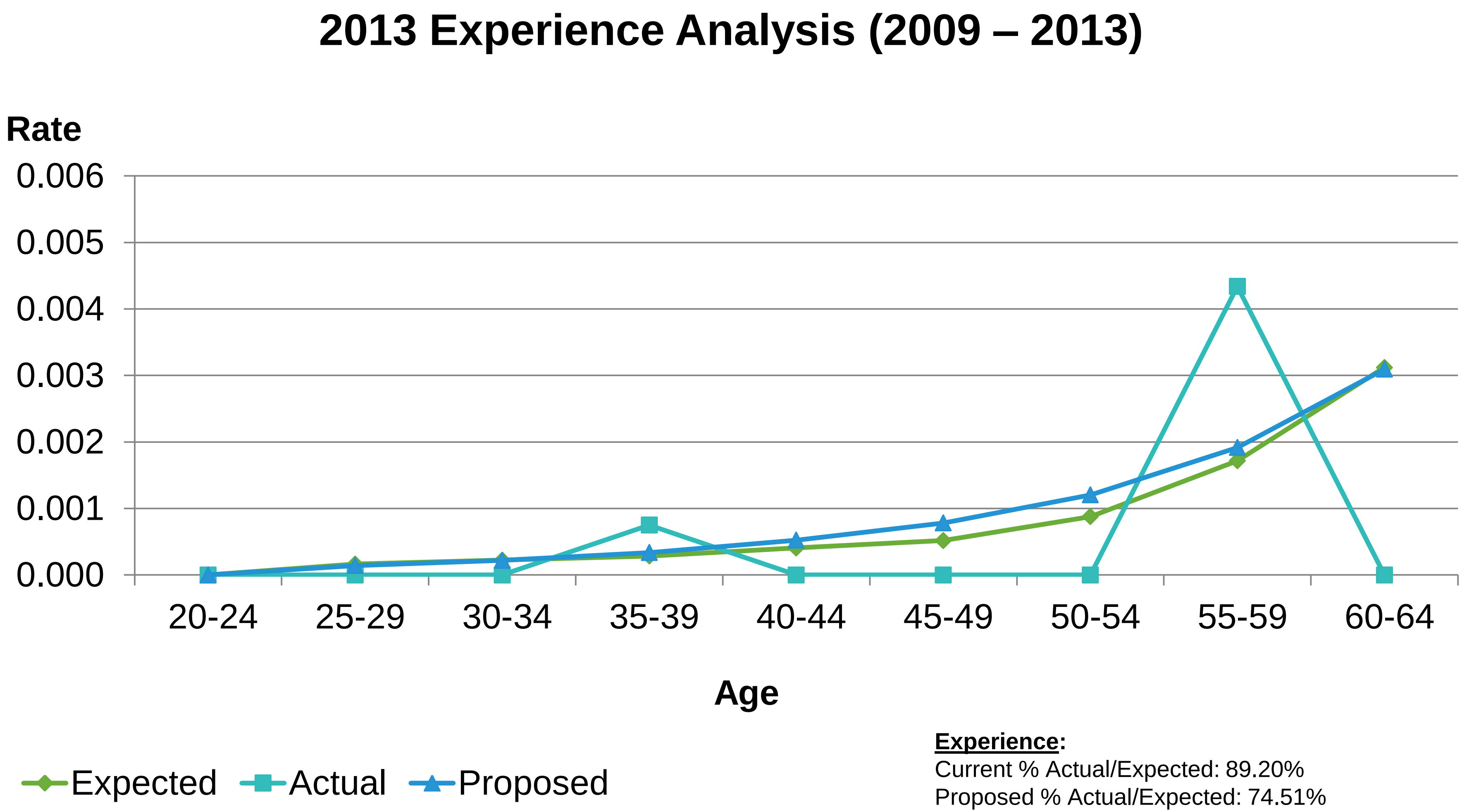
Experience:
Current % Actual/Expected: 91.98%
Proposed % Actual/Expected: 108.33%

PERS Peace Officer / Firefighter Healthy Pre-termination Mortality – Male



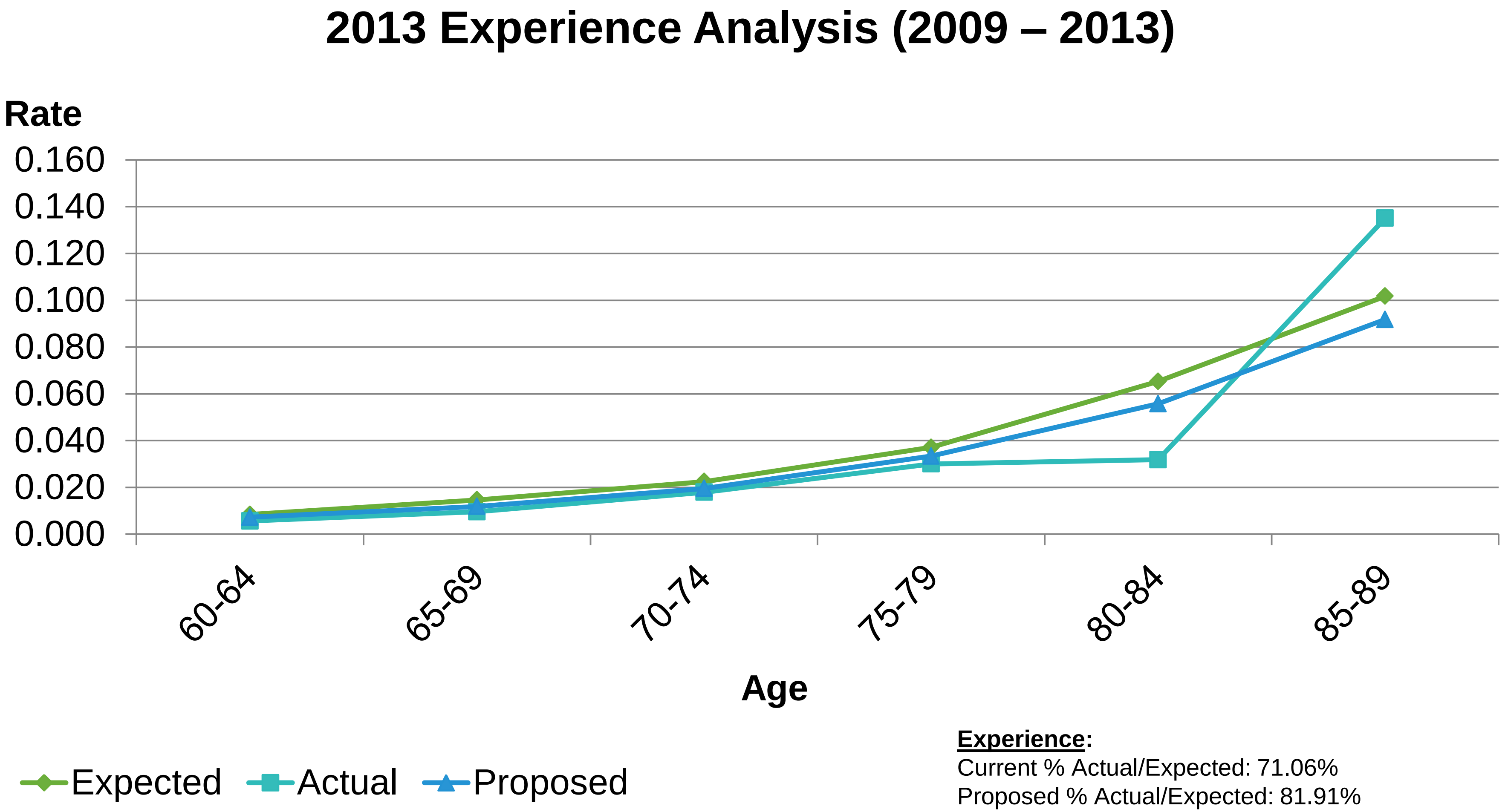
Experience:
Current % Actual/Expected: 20.69%
Proposed % Actual/Expected: 28.96%

PERS Peace Officer / Firefighter
Healthy Pre-termination Mortality – Female



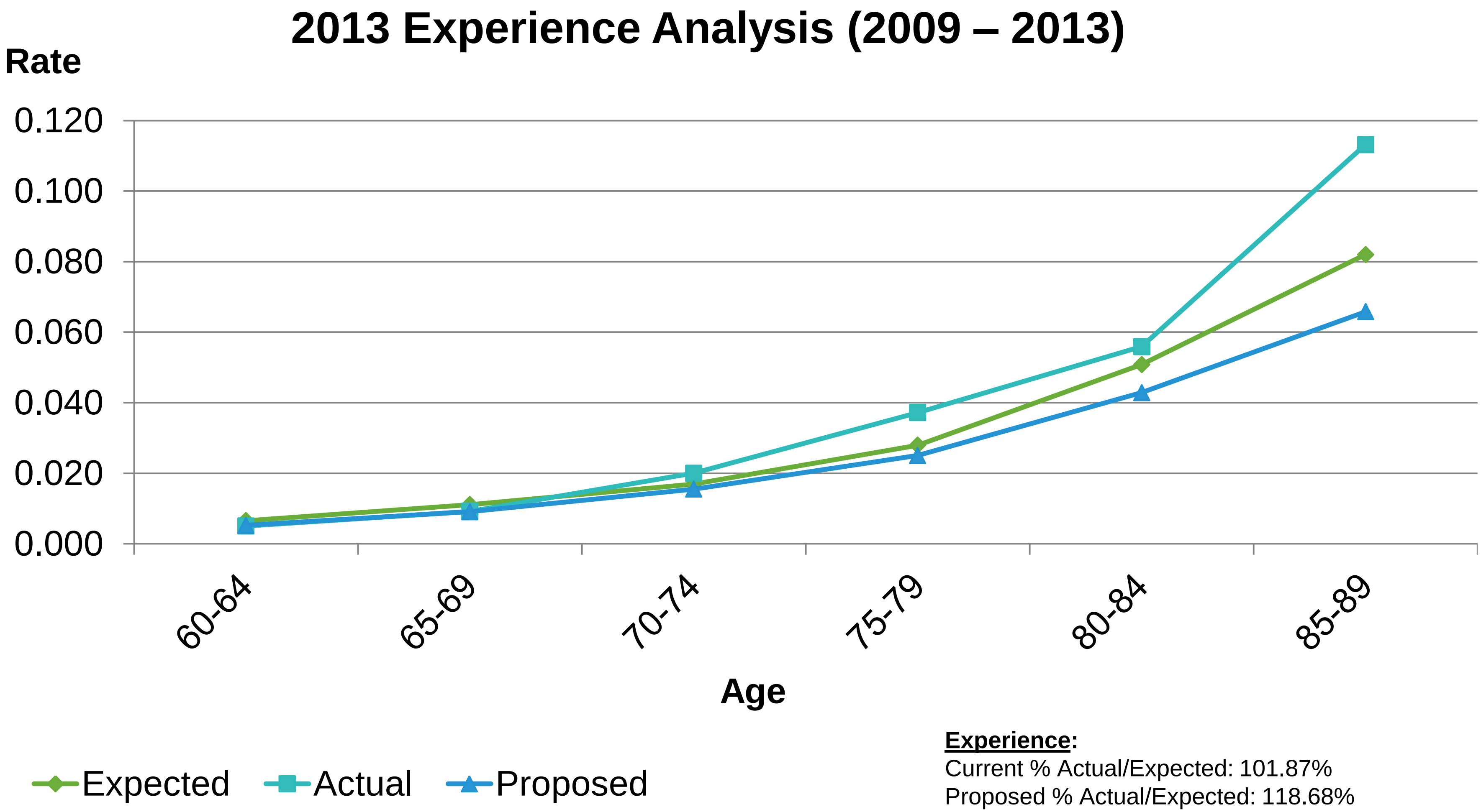
Experience:
Current % Actual/Expected: 89.20%
Proposed % Actual/Expected: 74.51%

PERS Peace Officer / Firefighter Healthy Post-termination Mortality – Male



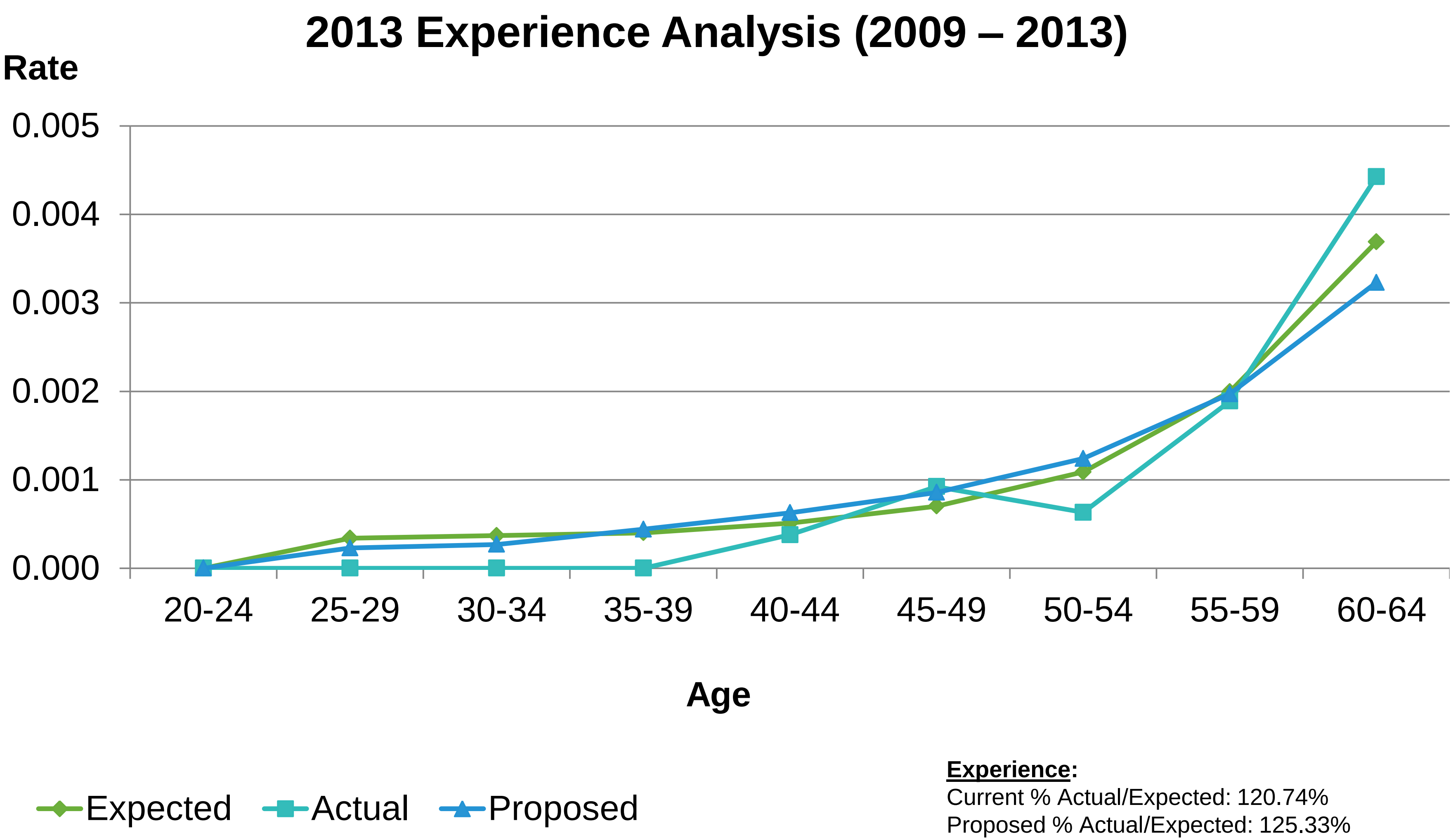
Experience:
Current % Actual/Expected: 71.06%
Proposed % Actual/Expected: 81.91%

PERS Peace Officer / Firefighter
Healthy Post-termination Mortality – Female



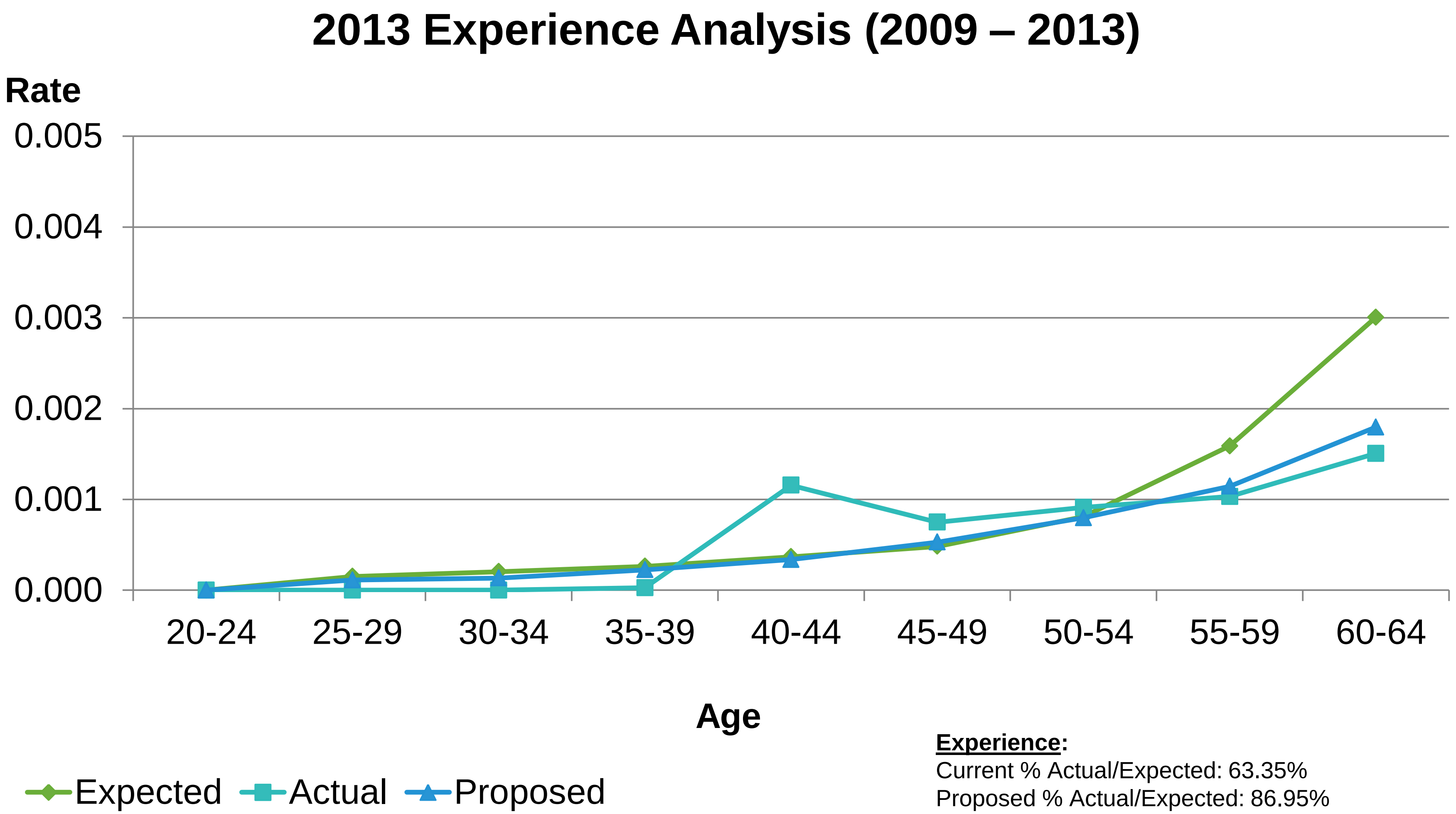
Experience:
Current % Actual/Expected: 101.87%
Proposed % Actual/Expected: 118.68%

TRS
Healthy Pre-termination Mortality – Male



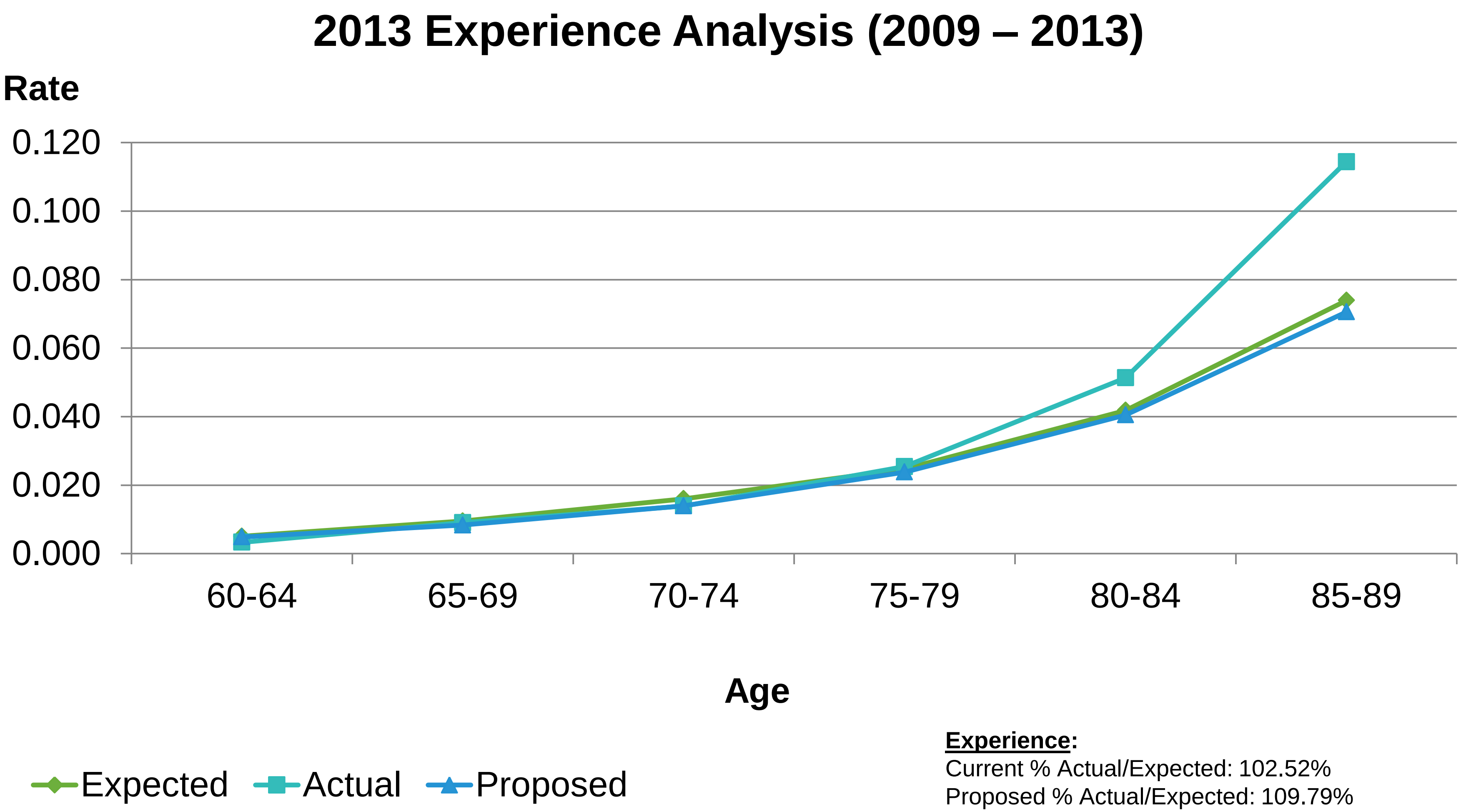
Experience:
Current % Actual/Expected: 120.74%
Proposed % Actual/Expected: 125.33%

TRS
Healthy Pre-termination Mortality – Female



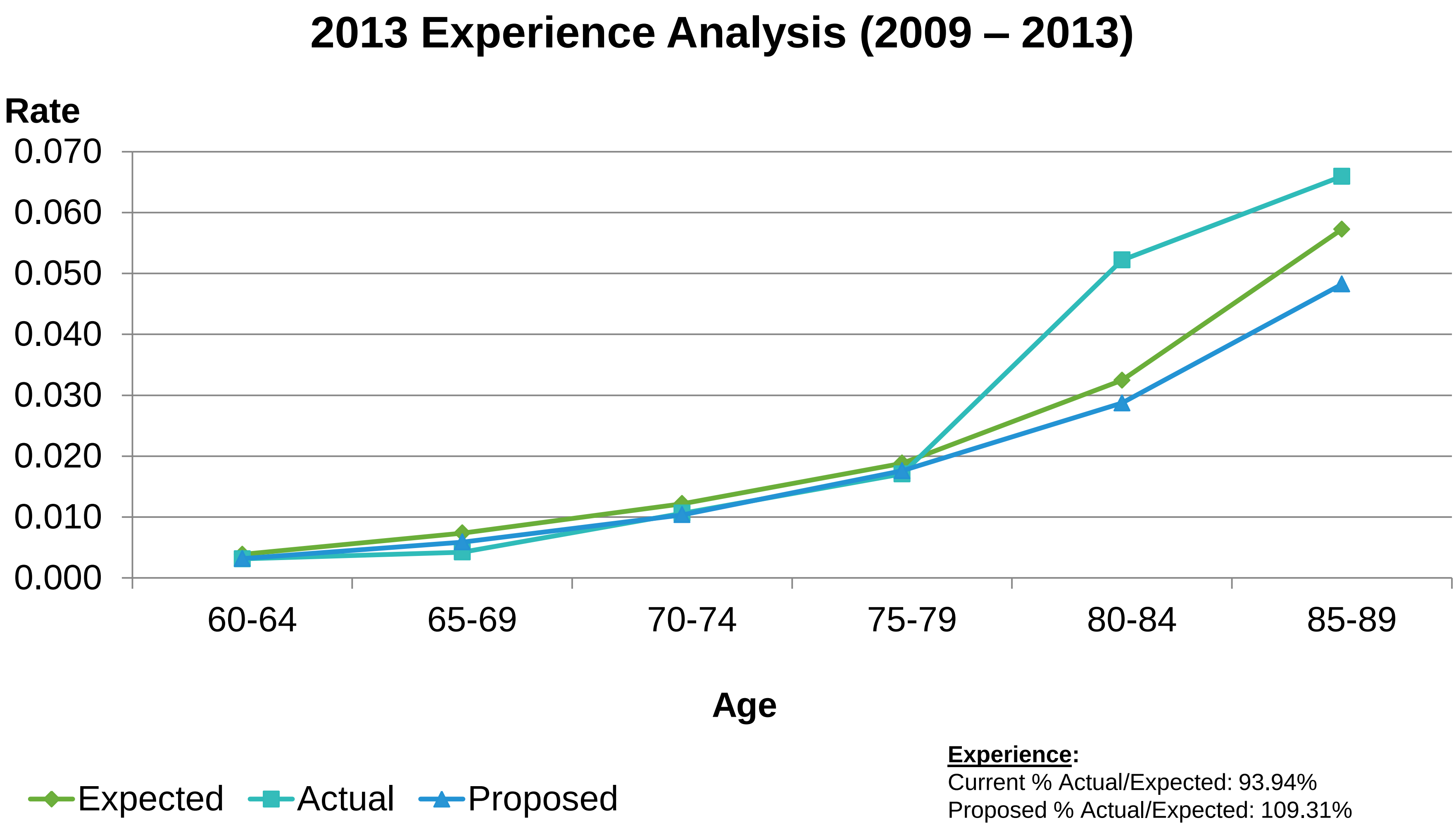
Experience:
Current % Actual/Expected: 63.35%
Proposed % Actual/Expected: 86.95%

TRS
Healthy Post-termination Mortality – Male



Experience:
Current % Actual/Expected: 102.52%
Proposed % Actual/Expected: 109.79%

TRS
Healthy Post-termination Mortality – Female



Experience:
Current % Actual/Expected: 93.94%
Proposed % Actual/Expected: 109.31%

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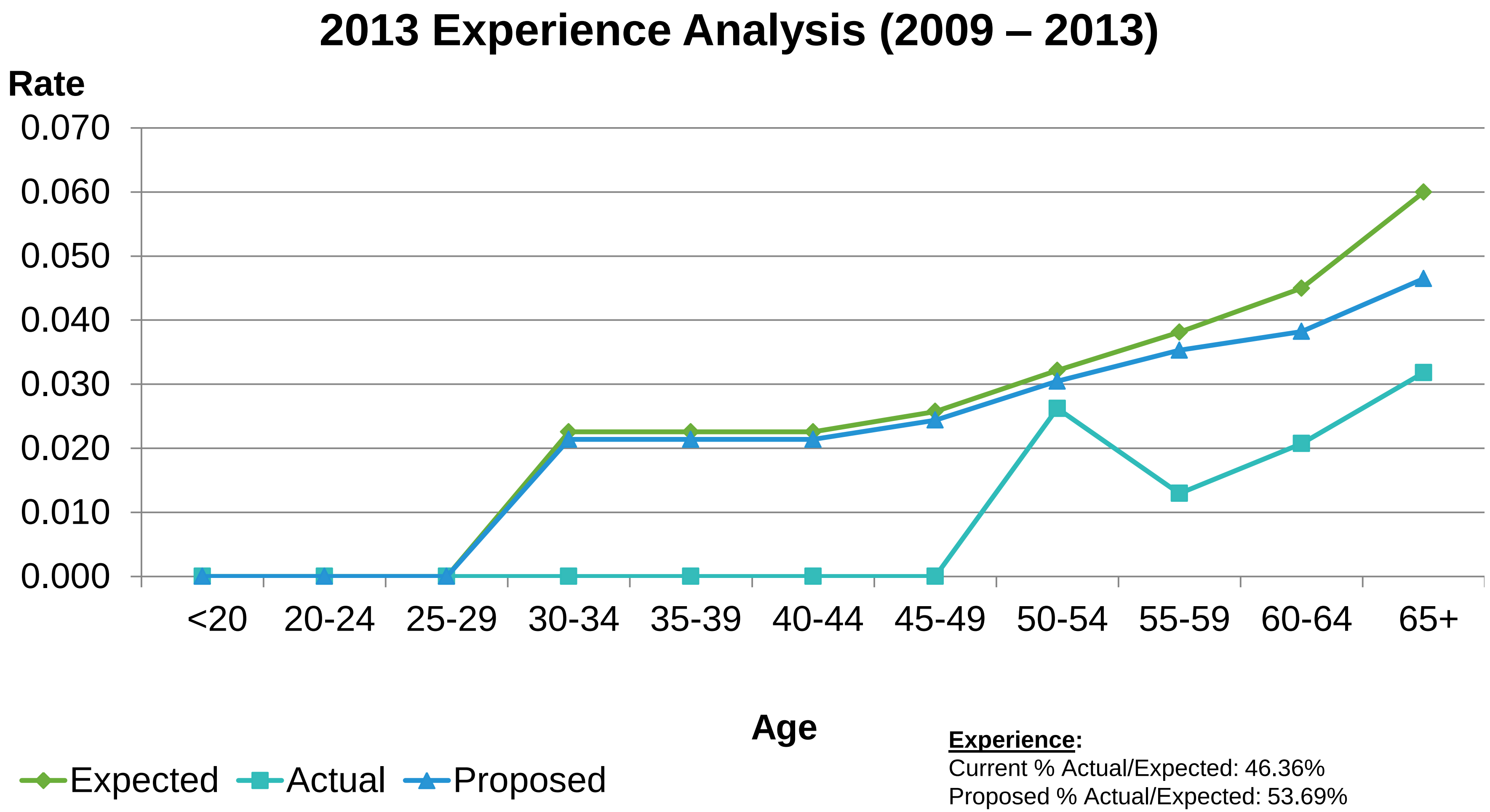
PERS Others
Disabled Mortality – Male



<u>Experience</u>:
Current % Actual/Expected: 46.36%
Proposed % Actual/Expected: 53.69%

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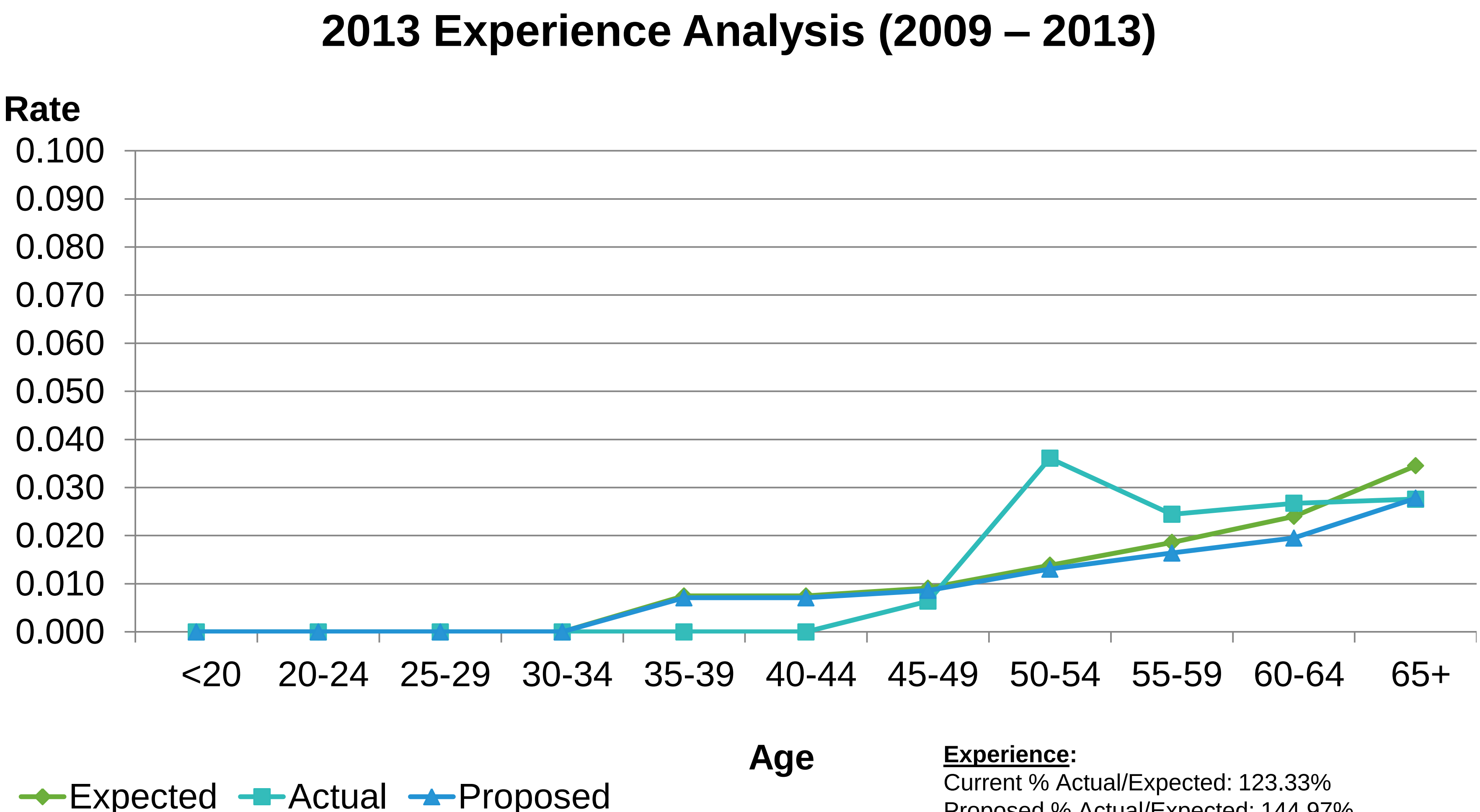
PERS Others
Disabled Mortality – Female



Experience:
Current % Actual/Expected: 123.33%
Proposed % Actual/Expected: 144.97%

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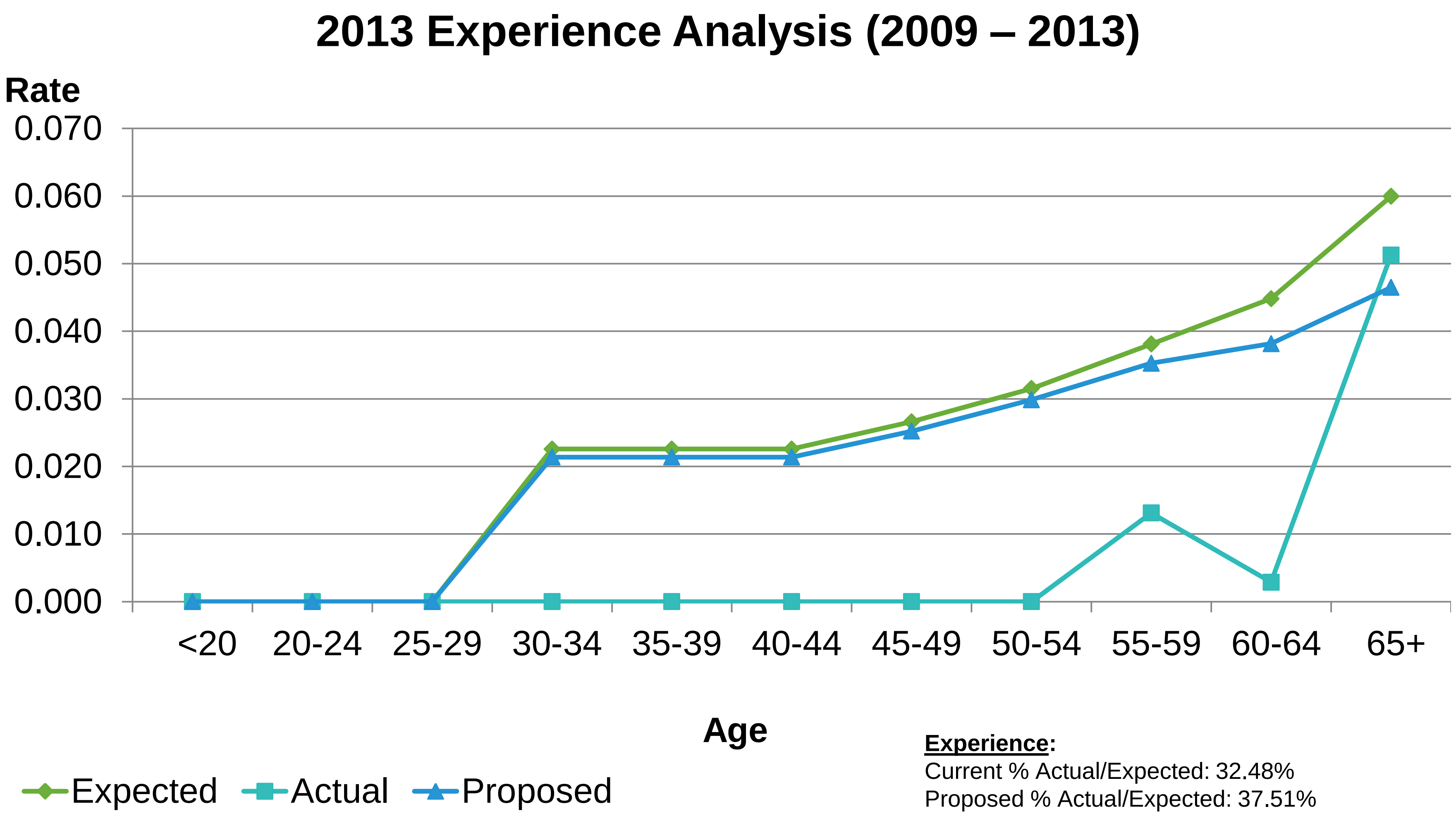
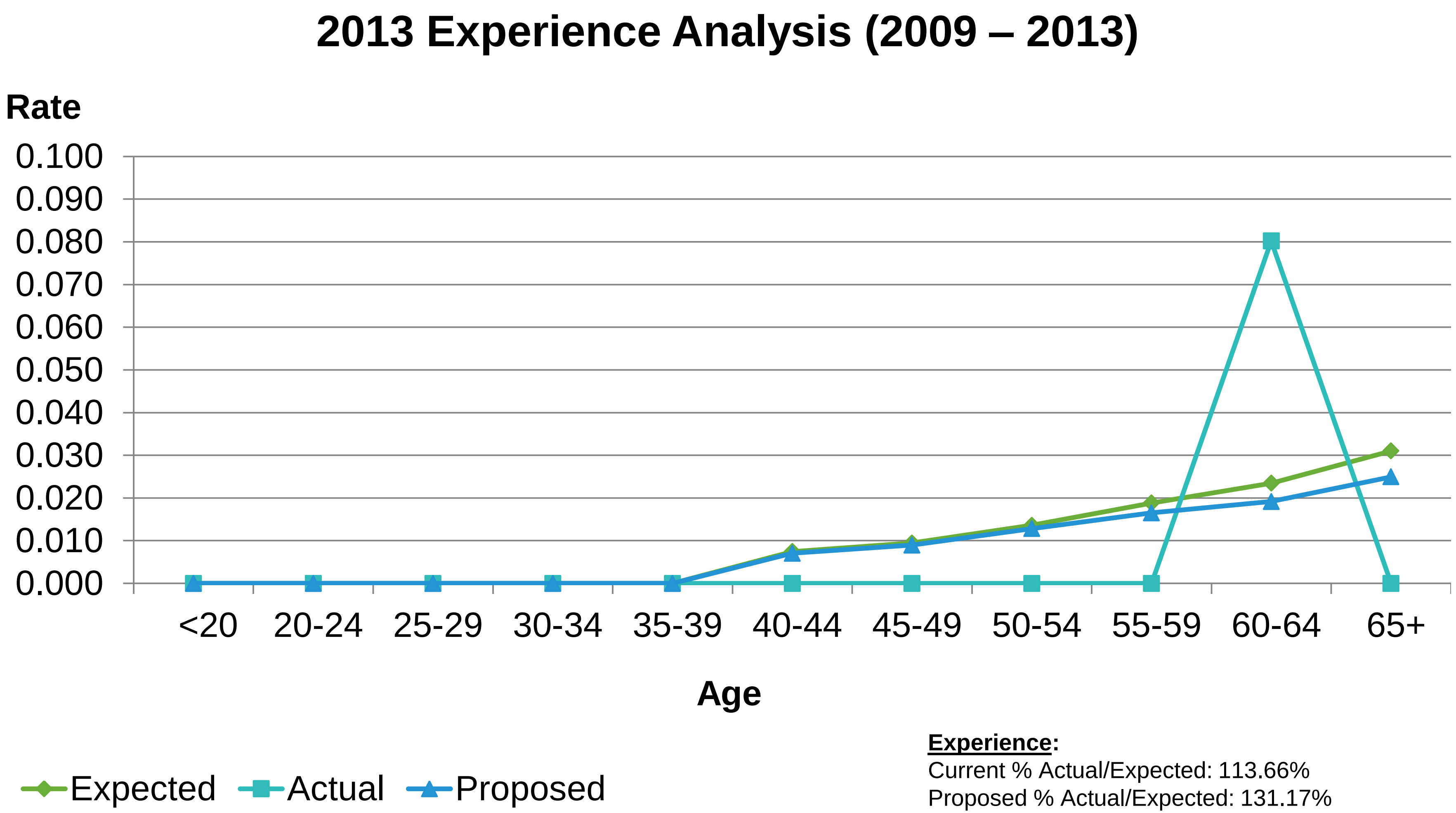
PERS Peace Officer / Firefighter Disabled Mortality – Male



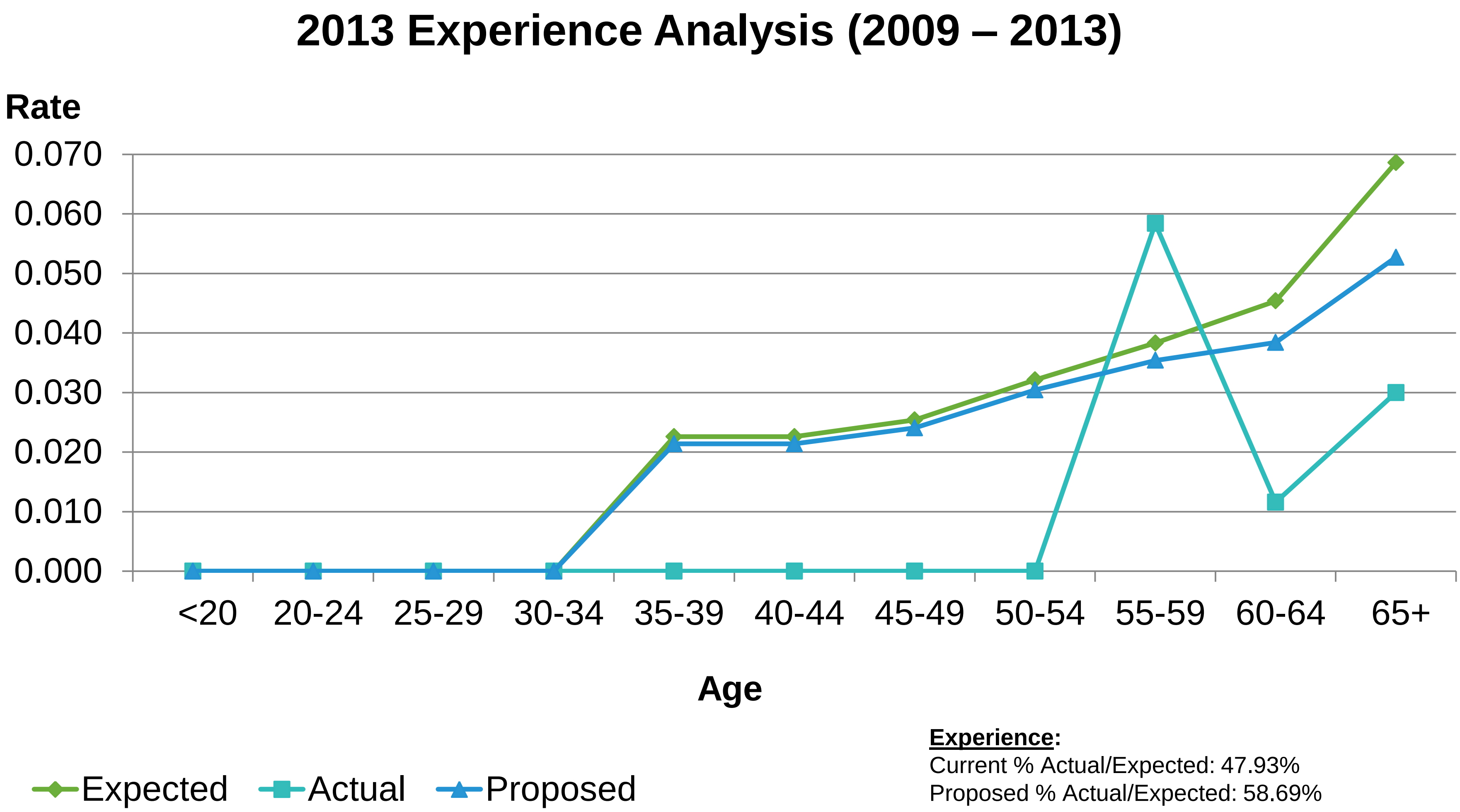
Experience:
Current % Actual/Expected: 32.48%
Proposed % Actual/Expected: 37.51%

PERS Peace Officer / Firefighter Disabled Mortality – Female



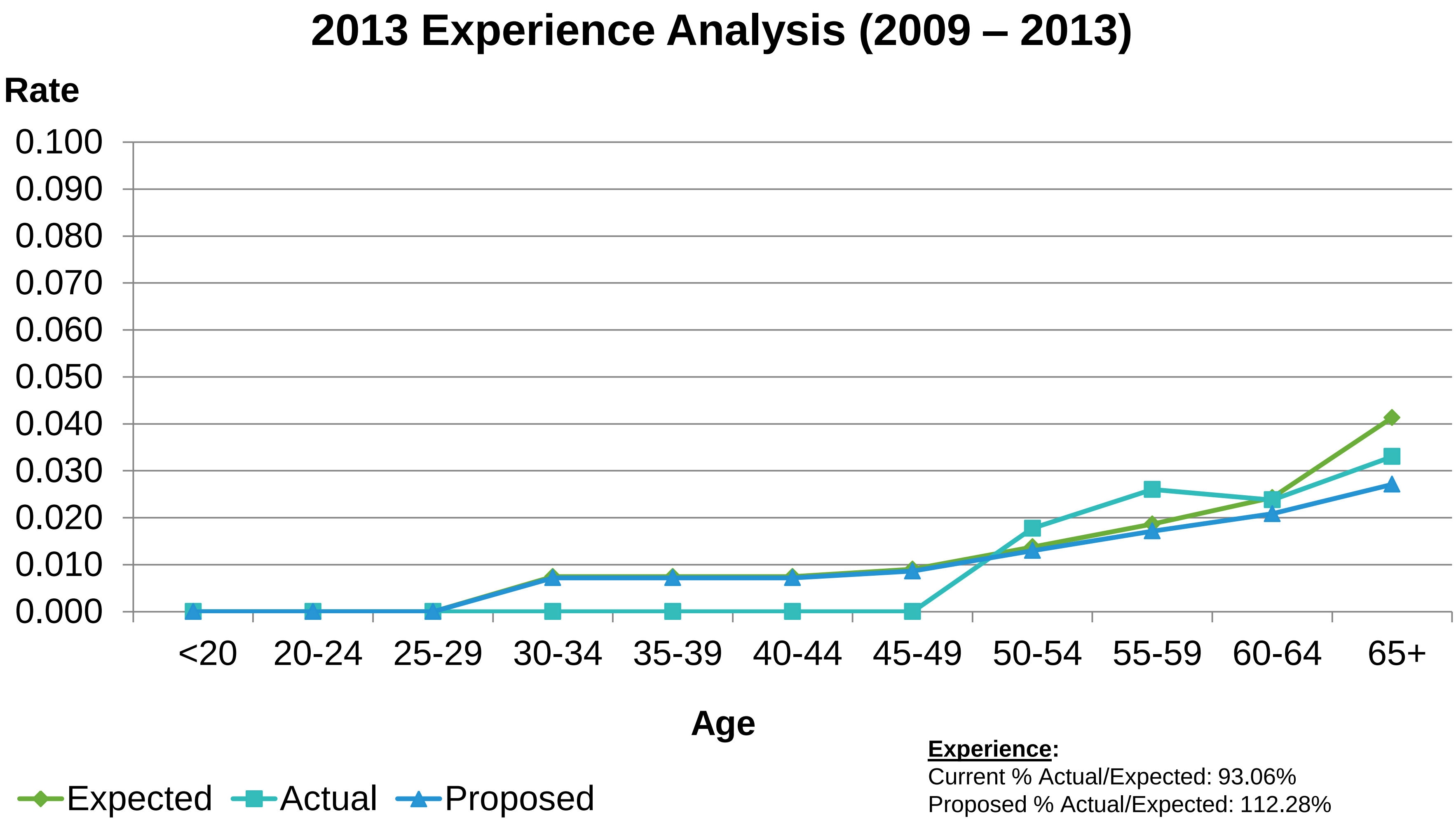
<u>Experience</u>:
Current % Actual/Expected: 113.66%
Proposed % Actual/Expected: 131.17%

TRS
Disabled Mortality – Male



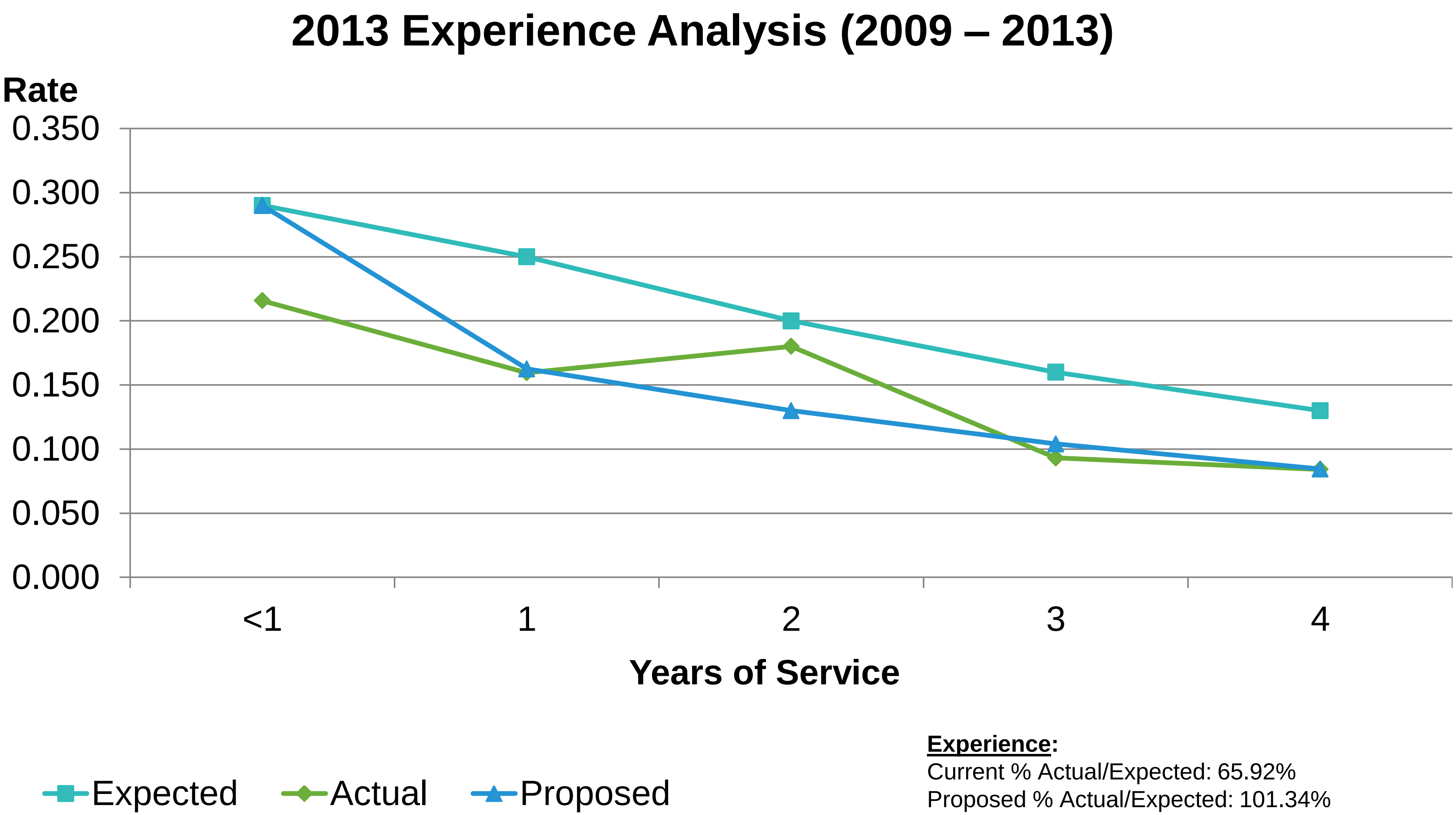
Experience:
Current % Actual/Expected: 47.93%
Proposed % Actual/Expected: 58.69%

TRS
Disabled Mortality – Female



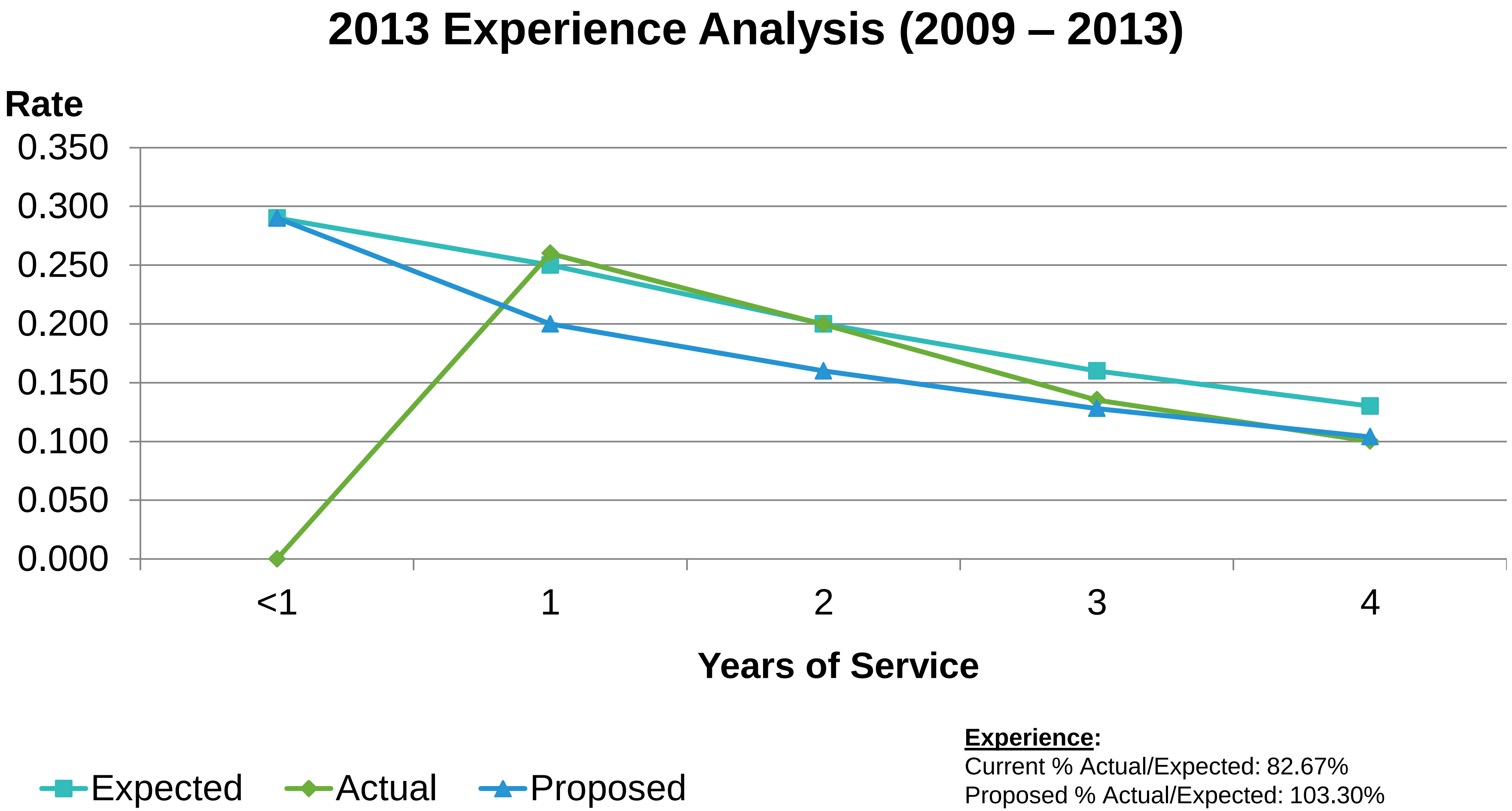
Experience:
Current % Actual/Expected: 93.06%
Proposed % Actual/Expected: 112.28%

PERS Others Withdrawal Rates (Select)
Hire Age Under 35 - Male



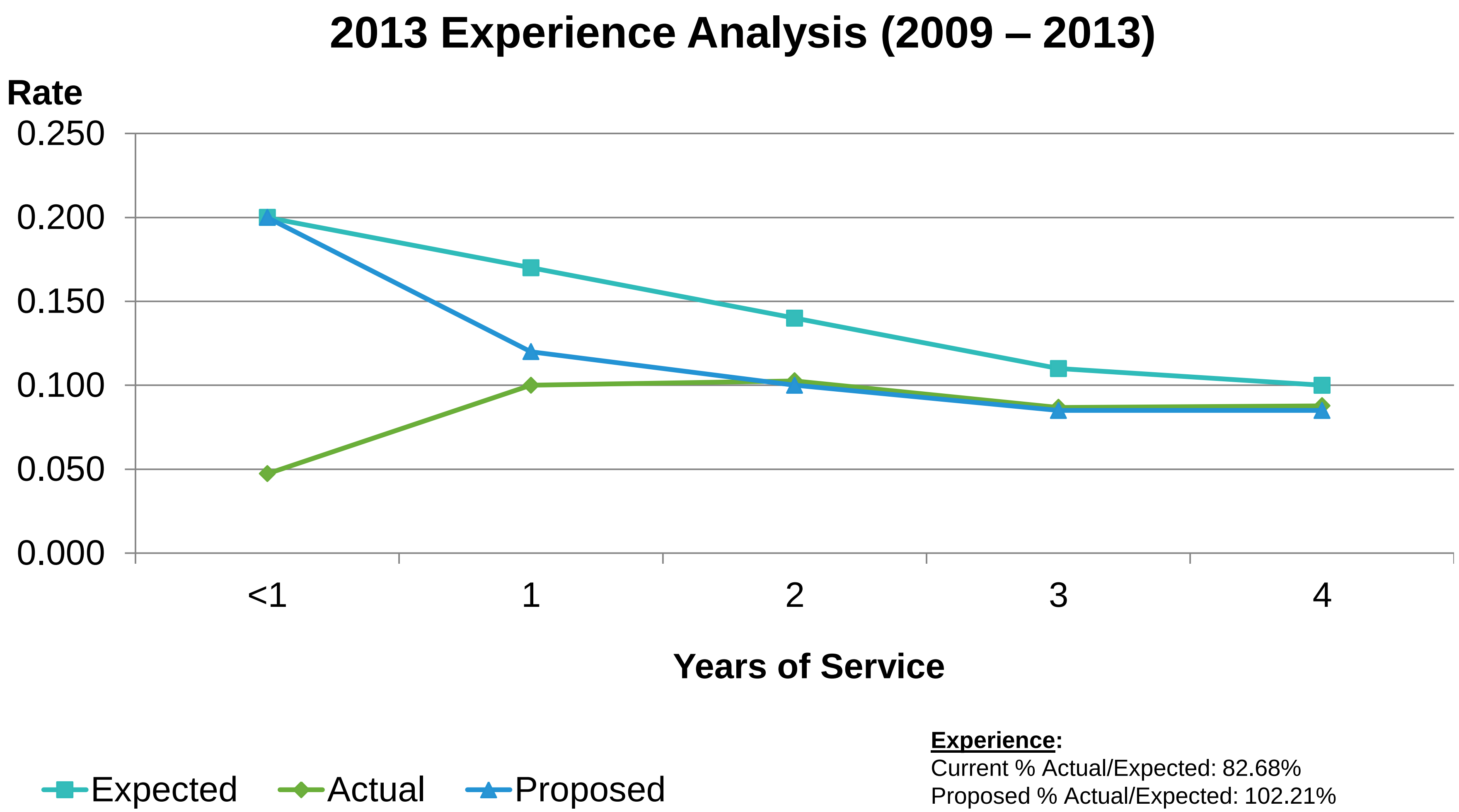
Experience:
Current % Actual/Expected: 65.92%
Proposed % Actual/Expected: 101.34%

PERS Others Withdrawal Rates (Select) Hire Age Under 35 - Female



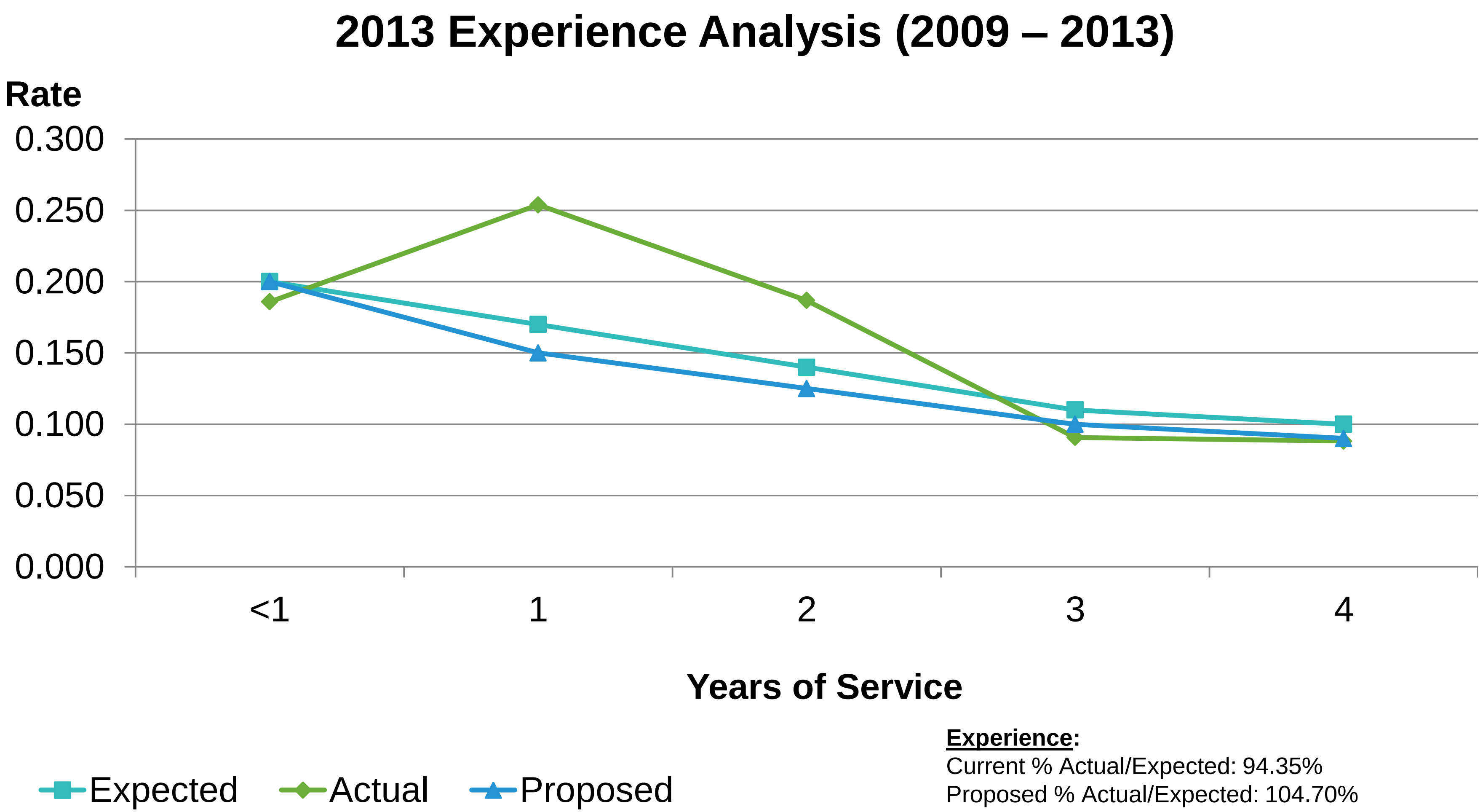
Experience:
Current % Actual/Expected: 82.67%
Proposed % Actual/Expected: 103.30%

PERS Others Withdrawal Rates (Select)
Hire Age Over 35 - Male



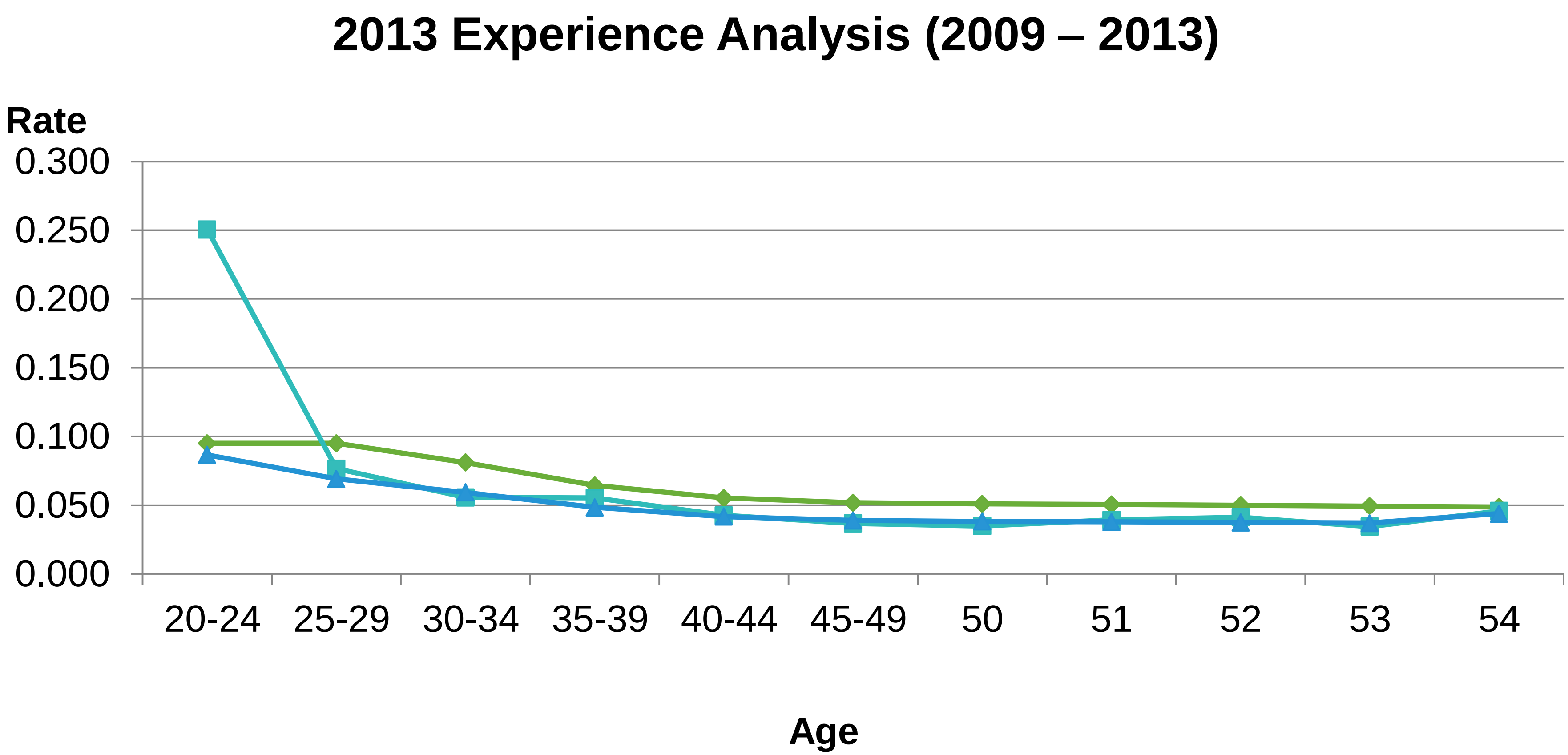
<u>Experience</u>:
Current % Actual/Expected: 82.68%
Proposed % Actual/Expected: 102.21%

PERS Others Withdrawal Rates (Select) Hire Age Over 35 - Female



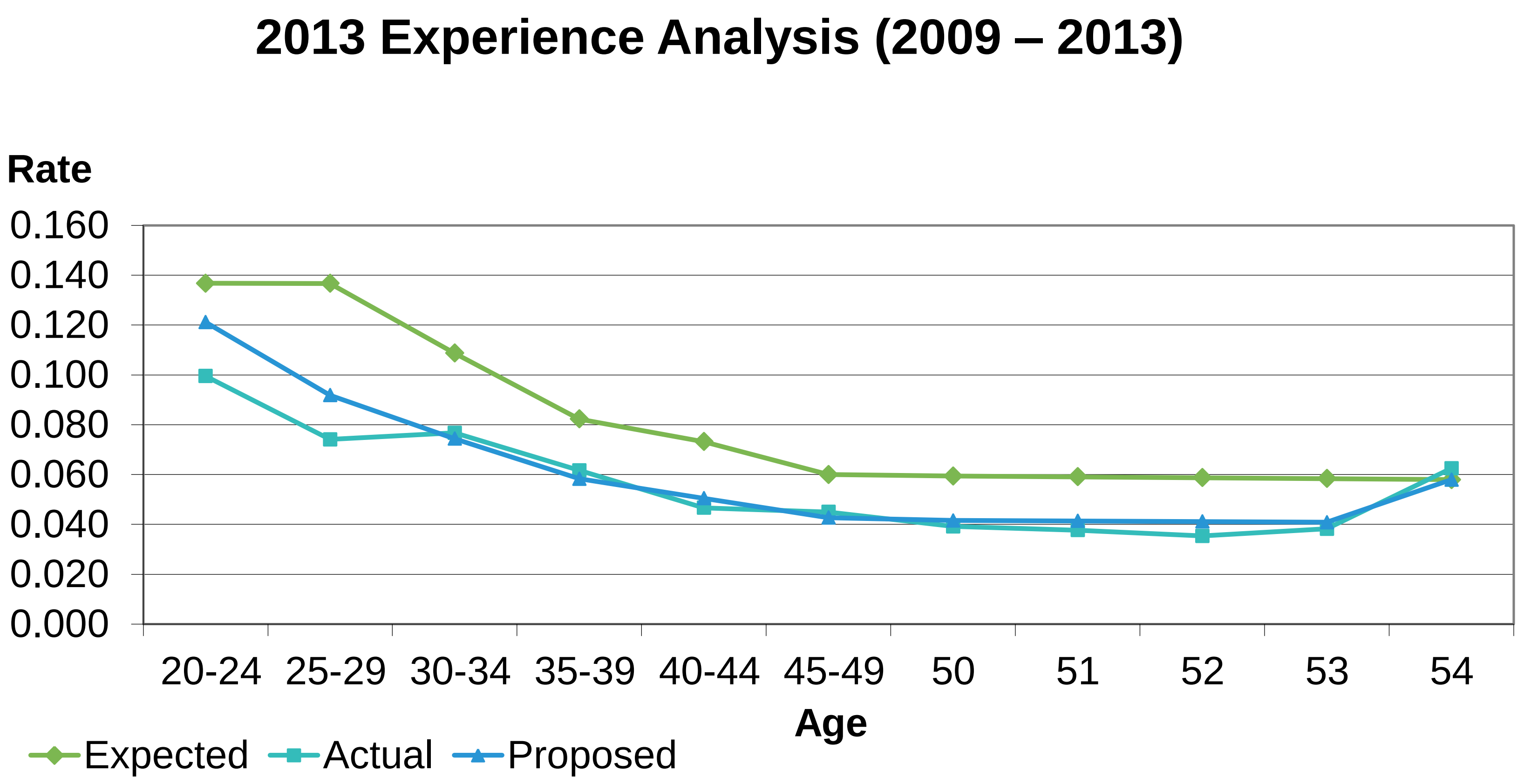
Experience:
Current % Actual/Expected: 94.35%
Proposed % Actual/Expected: 104.70%

PERS Others
Withdrawal Rates (Ultimate) – Male



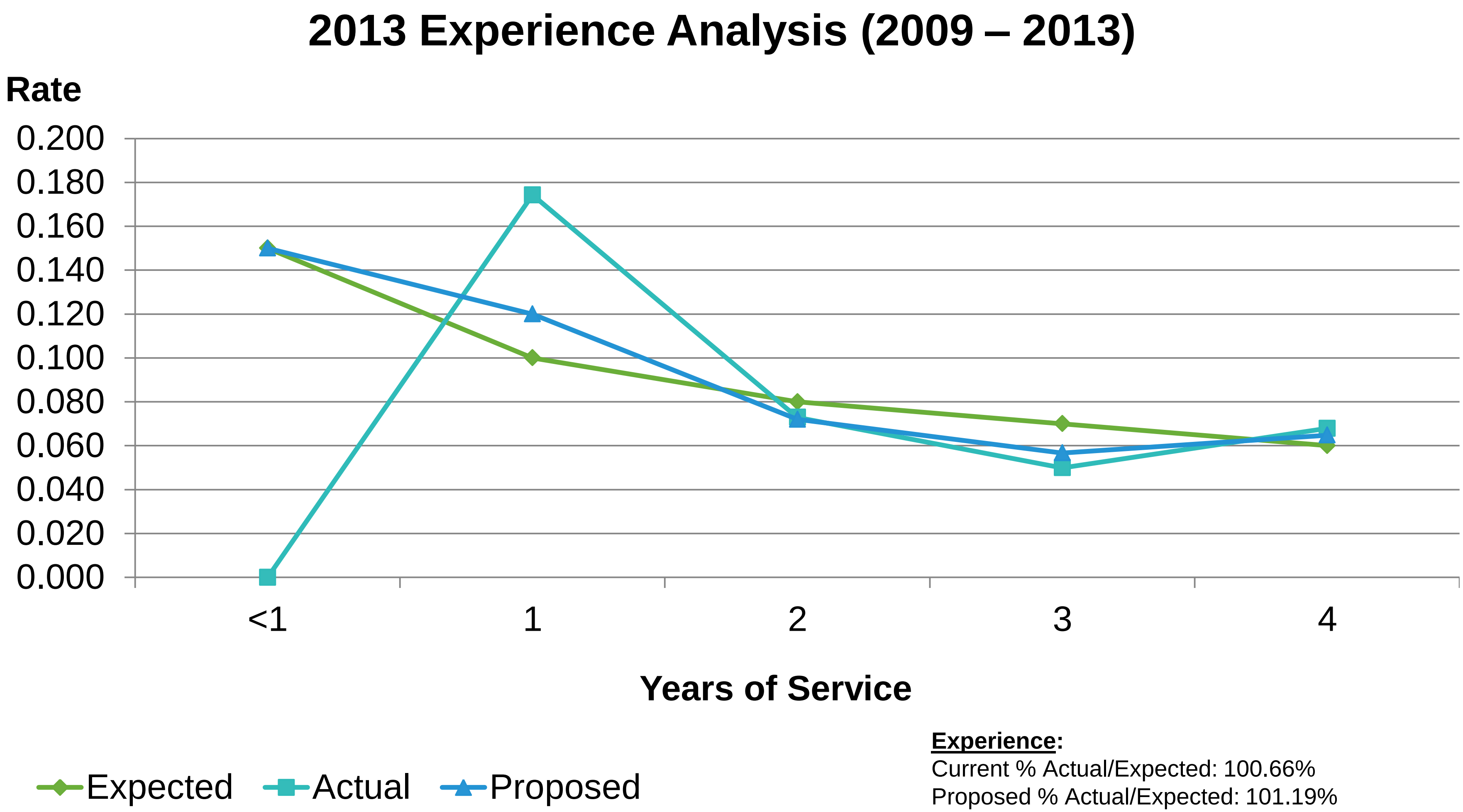
Experience:
Current % Actual/Expected: 75.98%
Proposed % Actual/Expected: 99.81%

PERS Others
Withdrawal Rates (Ultimate) – Female



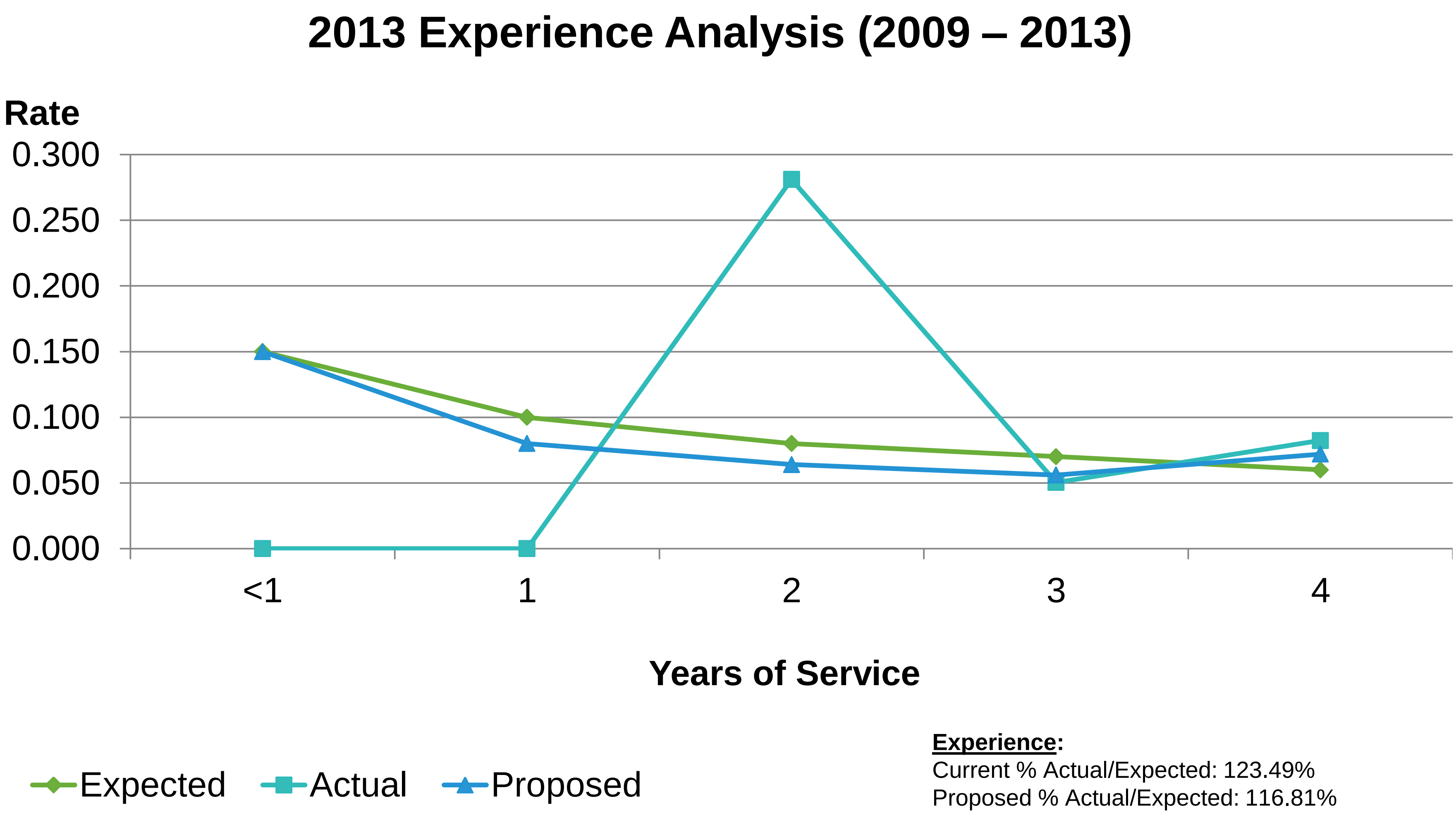
Experience:
Current % Actual/Expected: 71.99%
Proposed % Actual/Expected: 99.63%

PERS Peace Officer / Firefighter Withdrawal Rates (Select) – Male



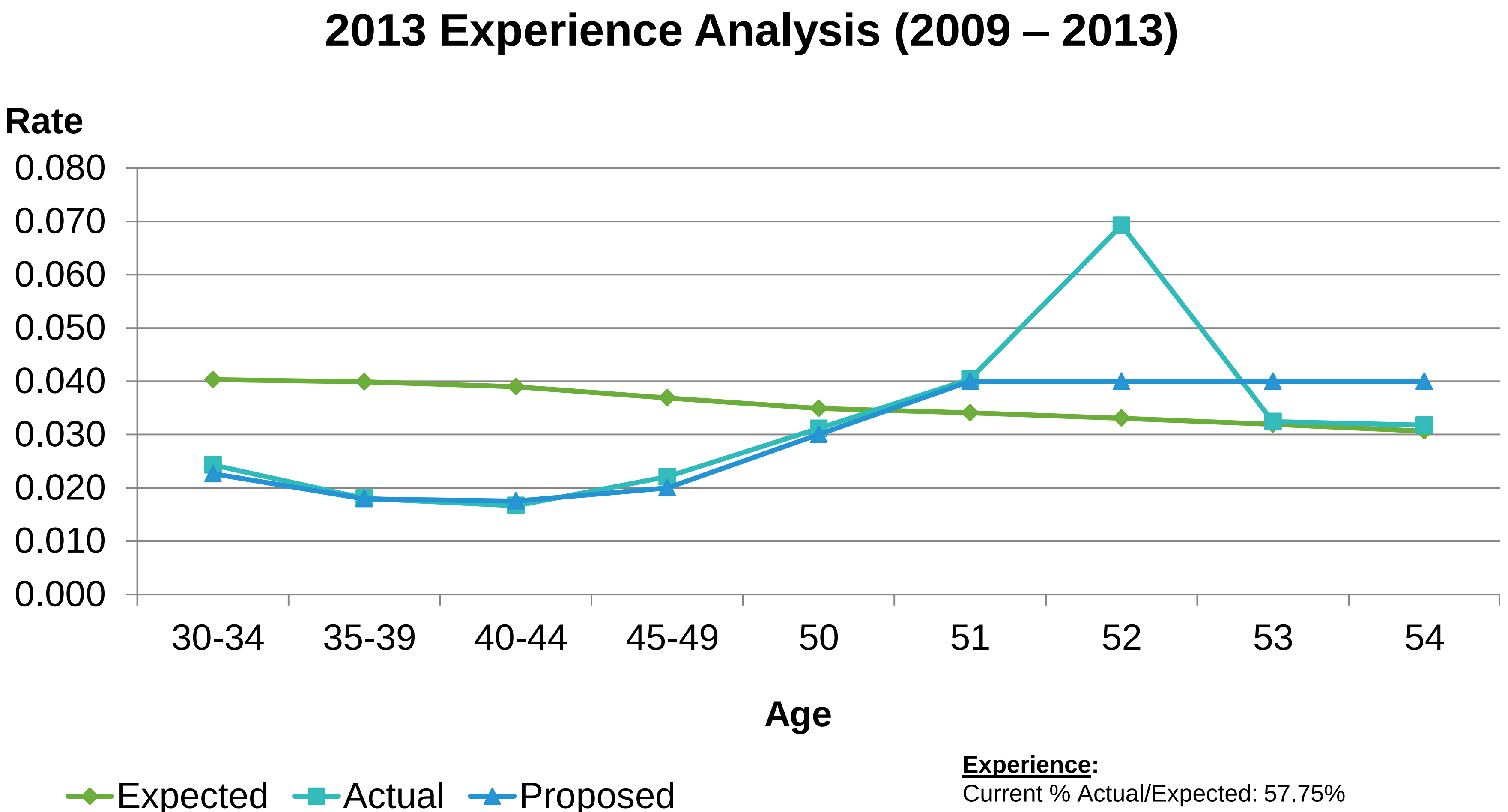
<u>Experience</u>:
Current % Actual/Expected: 100.66%
Proposed % Actual/Expected: 101.19%

PERS Peace Officer / Firefighter Withdrawal Rates (Select) – Female



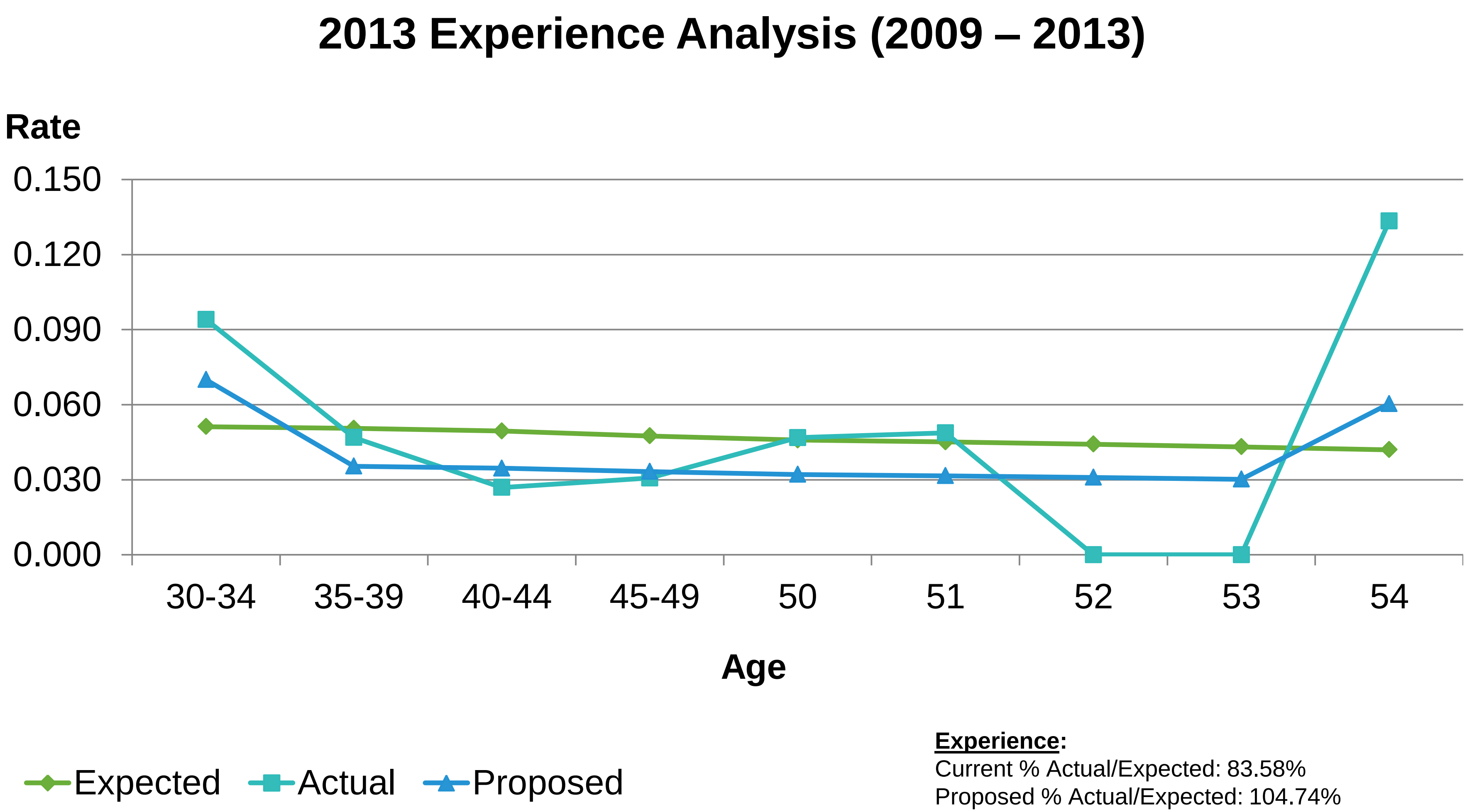
Experience:
Current % Actual/Expected: 123.49%
Proposed % Actual/Expected: 116.81%

PERS Peace Officer / Firefighter Withdrawal Rates (Ultimate) – Male



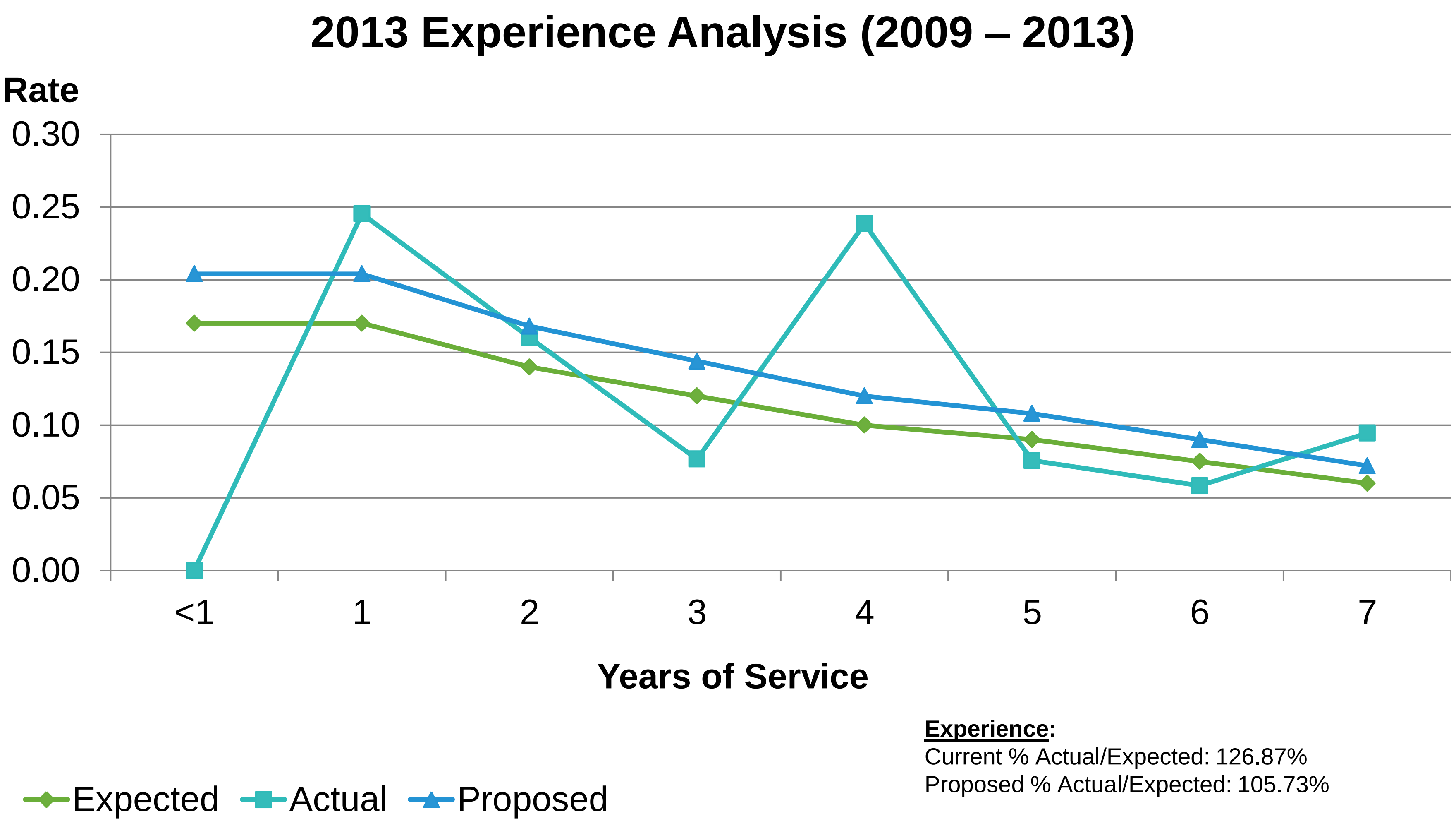
<u>Experience</u>:
Current % Actual/Expected: 57.75%
Proposed % Actual/Expected: 101.48%

PERS Peace Officer / Firefighter Withdrawal Rates (Ultimate) – Female



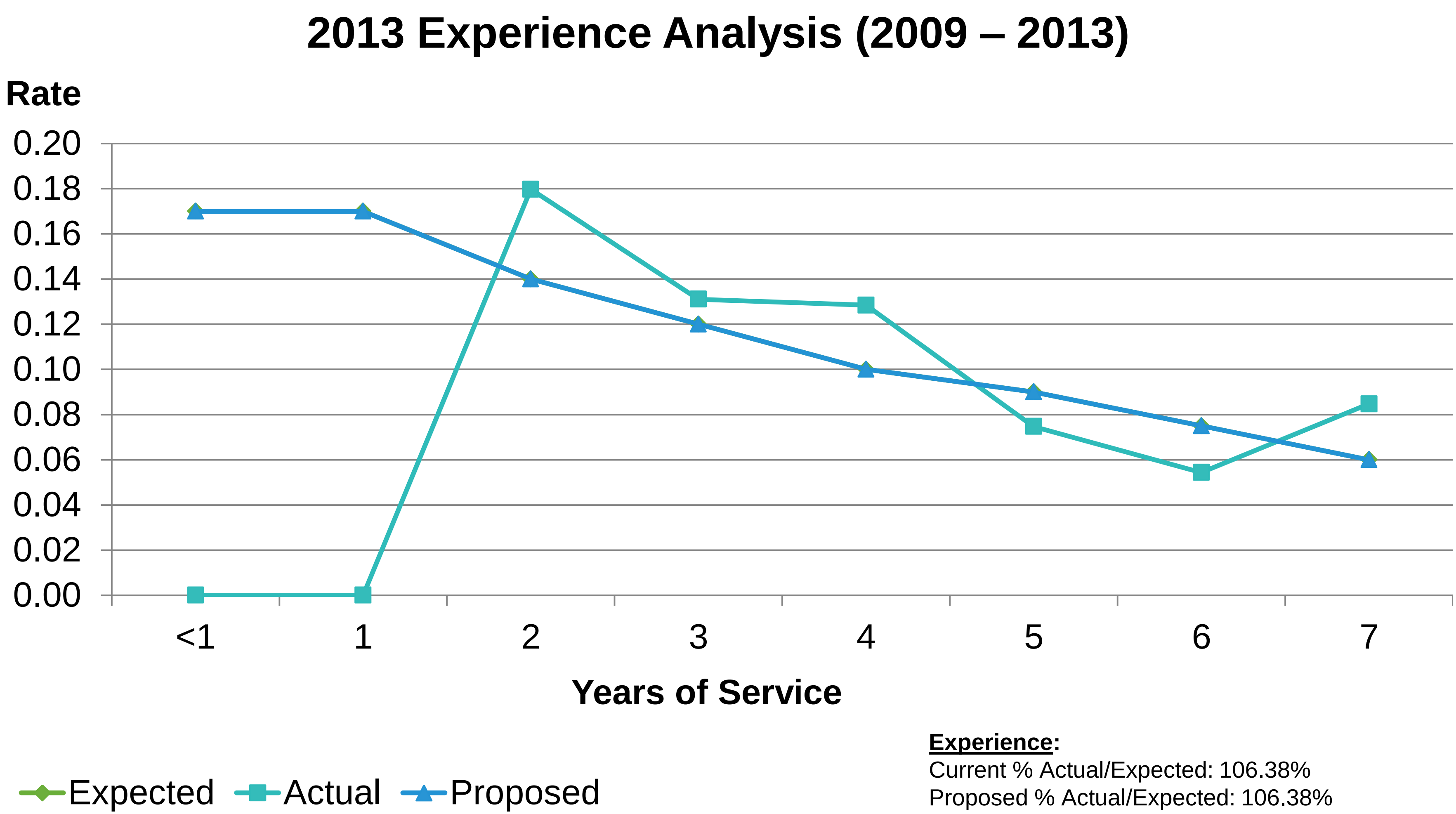
<u>Experience</u>:
Current % Actual/Expected: 83.58%
Proposed % Actual/Expected: 104.74%

TRS
Withdrawal Rates (Select) – Male



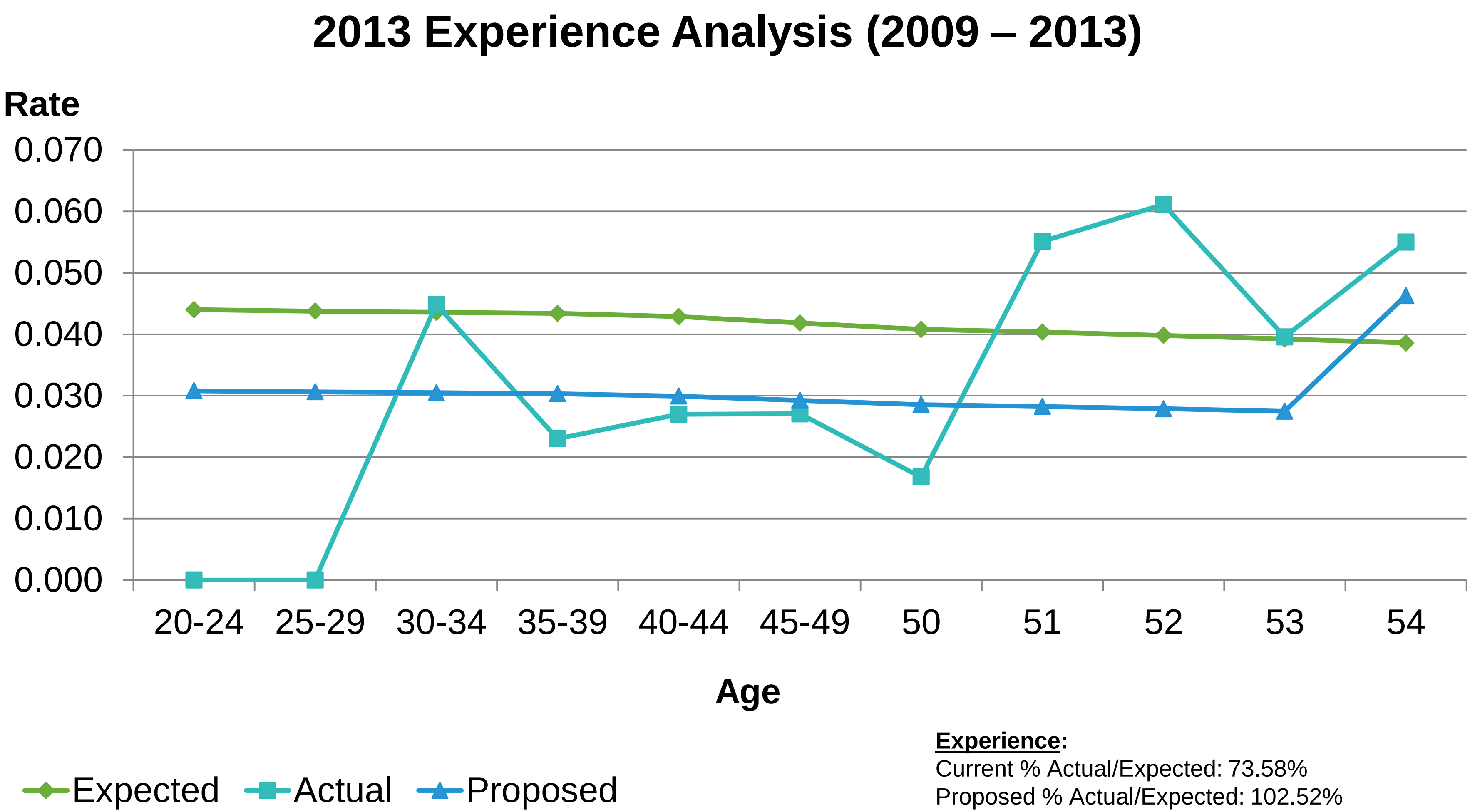
Experience:
Current % Actual/Expected: 126.87%
Proposed % Actual/Expected: 105.73%

TRS
Withdrawal Rates (Select) – Female



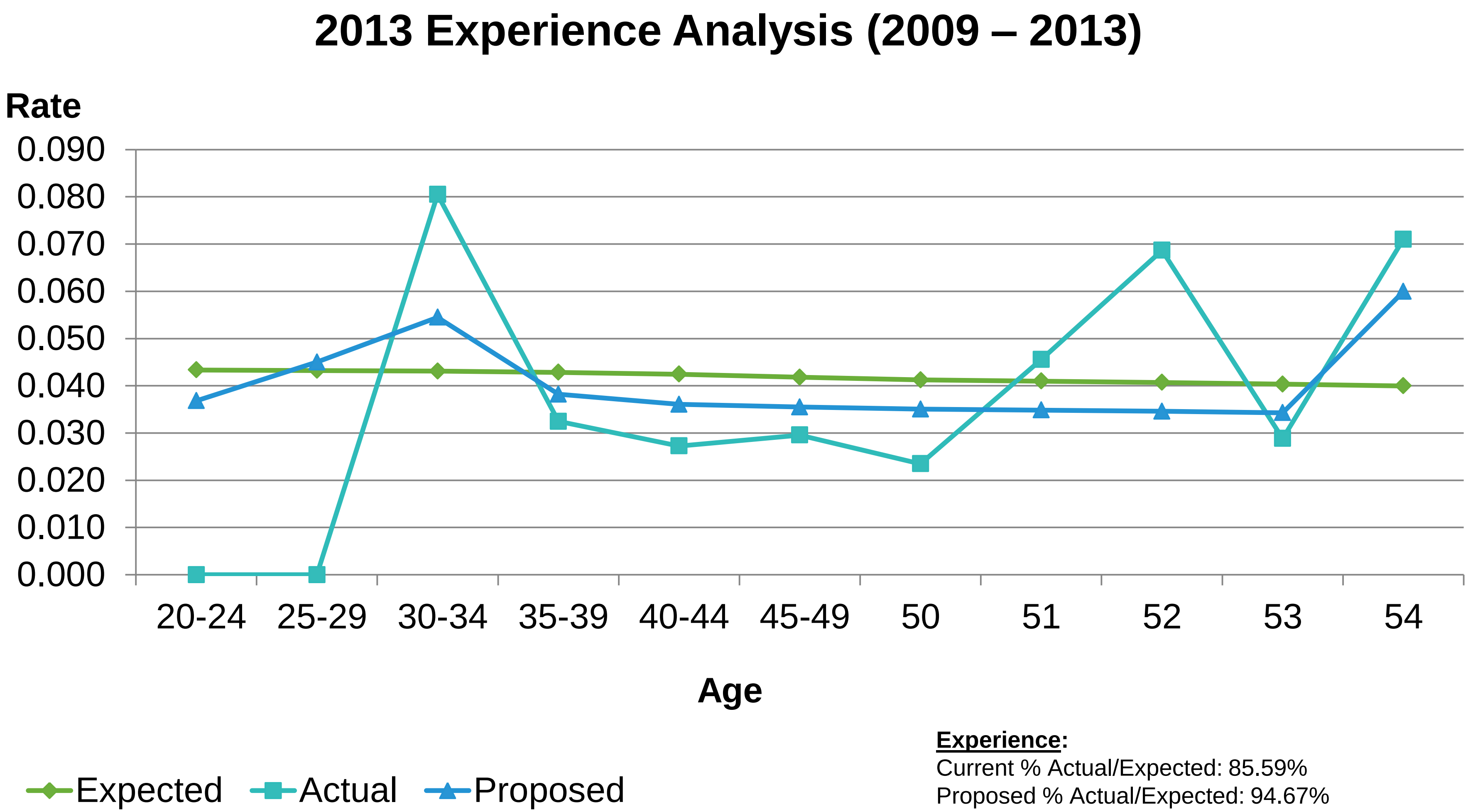
Experience:
Current % Actual/Expected: 106.38%
Proposed % Actual/Expected: 106.38%

TRS
Withdrawal Rates (Ultimate) – Male



Experience:
Current % Actual/Expected: 73.58%
Proposed % Actual/Expected: 102.52%

TRS
Withdrawal Rates (Ultimate) – Female



Experience:
Current % Actual/Expected: 85.59%
Proposed % Actual/Expected: 94.67%

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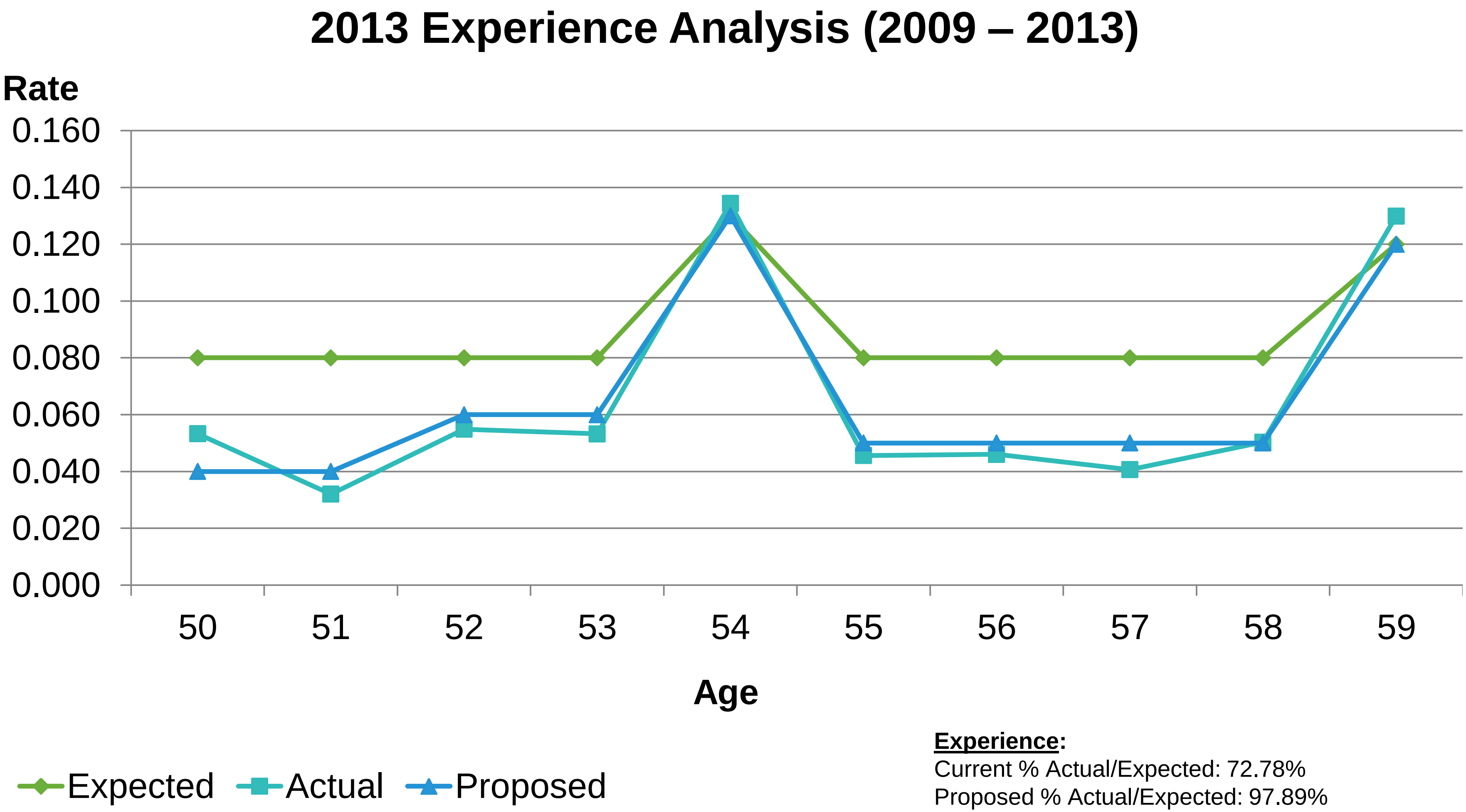
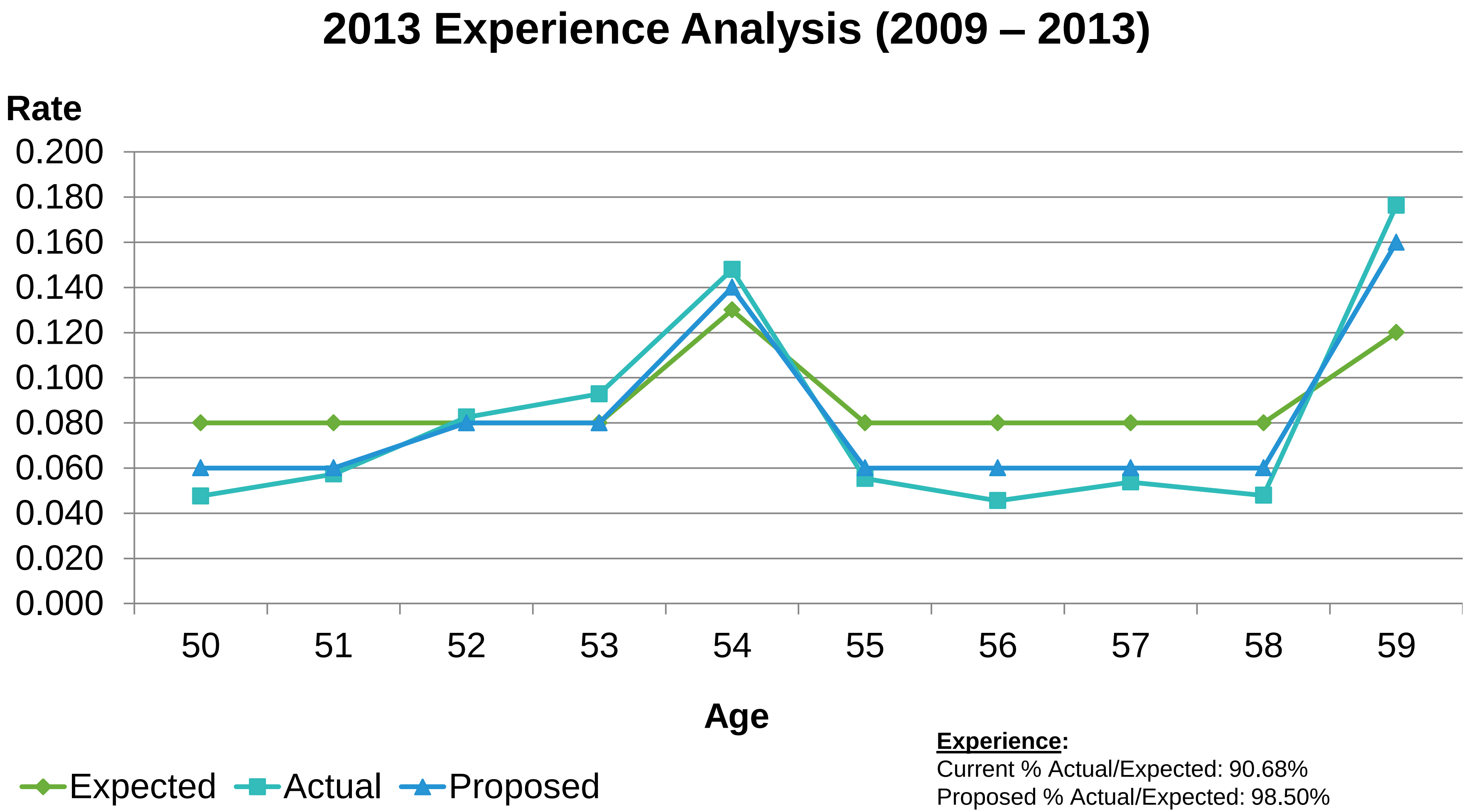
PERS Others
Reduced Retirement Rates – Male



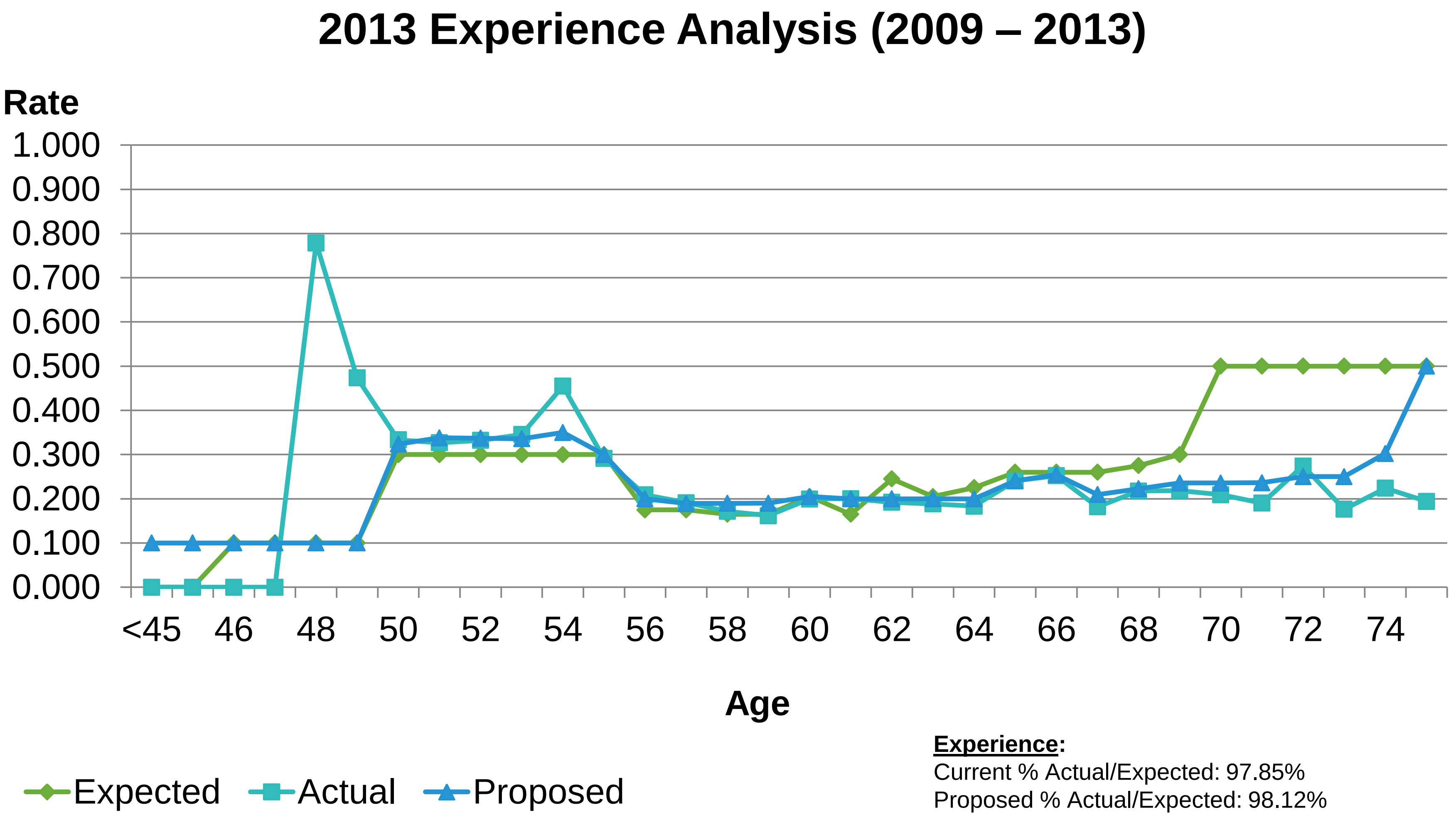
Experience:
Current % Actual/Expected: 72.78%
Proposed % Actual/Expected: 97.89%

PERS Others
Reduced Retirement Rates – Female



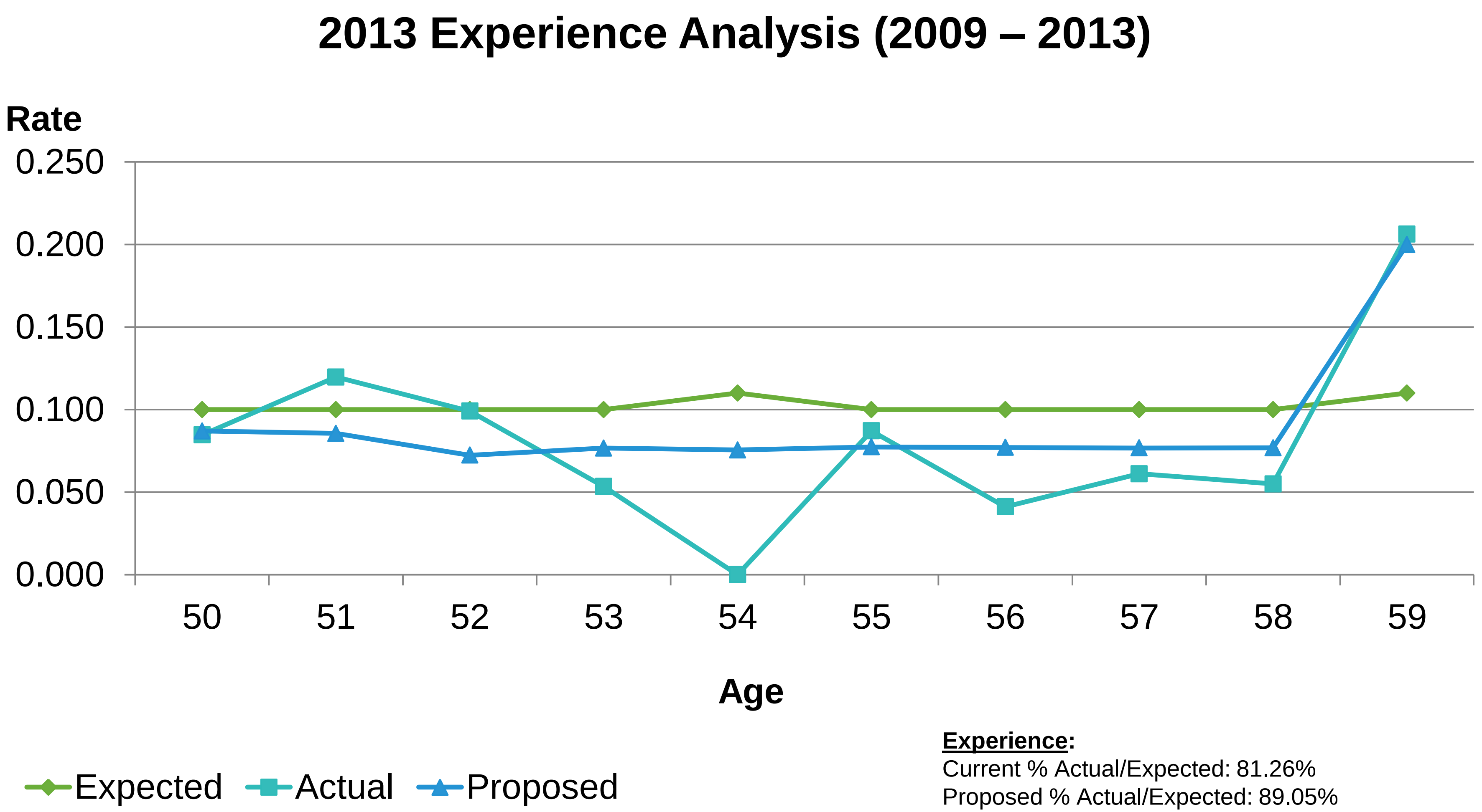
Experience:
Current % Actual/Expected: 90.68%
Proposed % Actual/Expected: 98.50%

PERS Others
Unreduced Retirement Rates – Unisex



Experience:
Current % Actual/Expected: 97.85%
Proposed % Actual/Expected: 98.12%

PERS Peace Officer / Firefighter Reduced Retirement Rates – Unisex



Experience:
Current % Actual/Expected: 81.26%
Proposed % Actual/Expected: 89.05%

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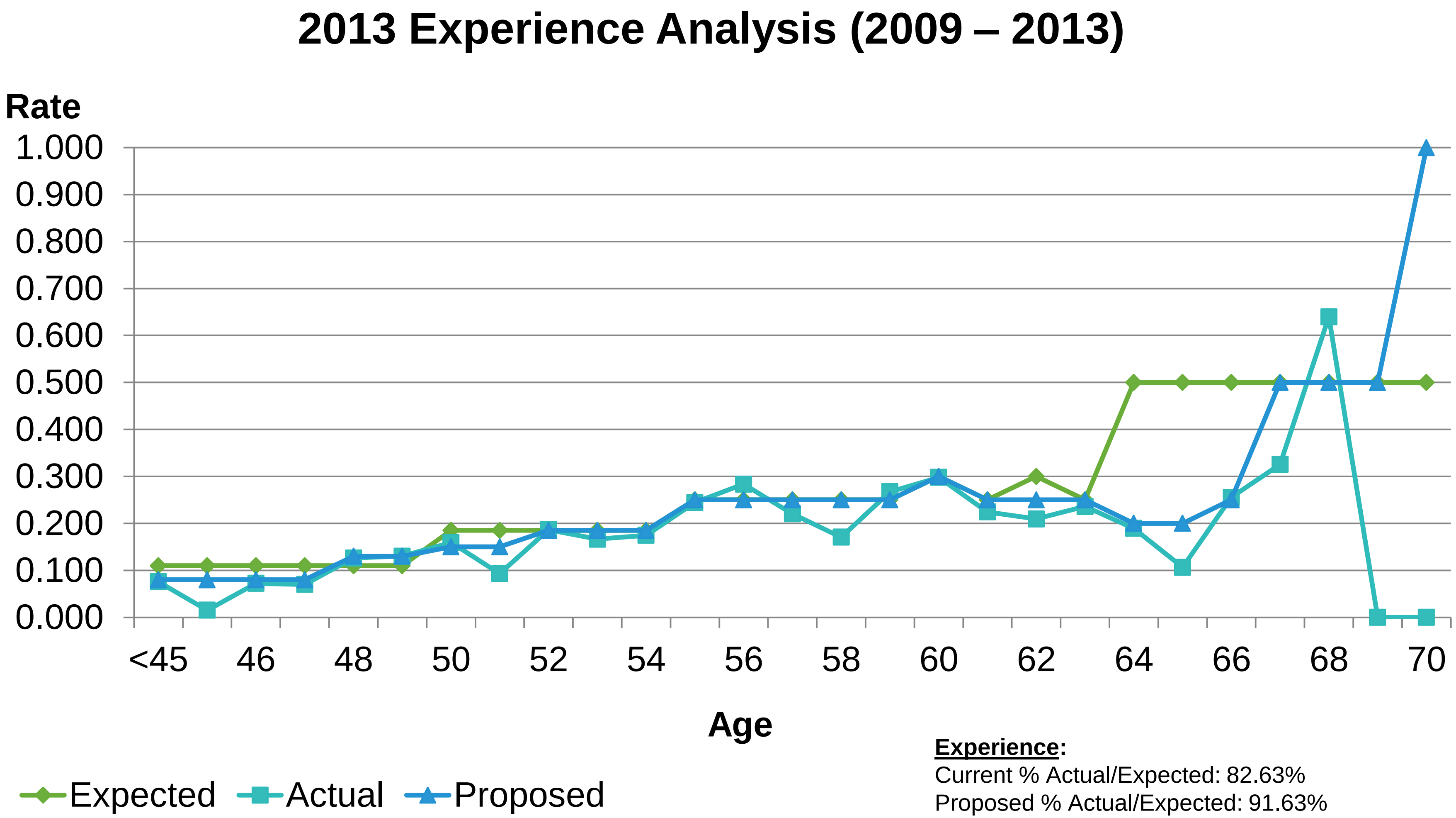
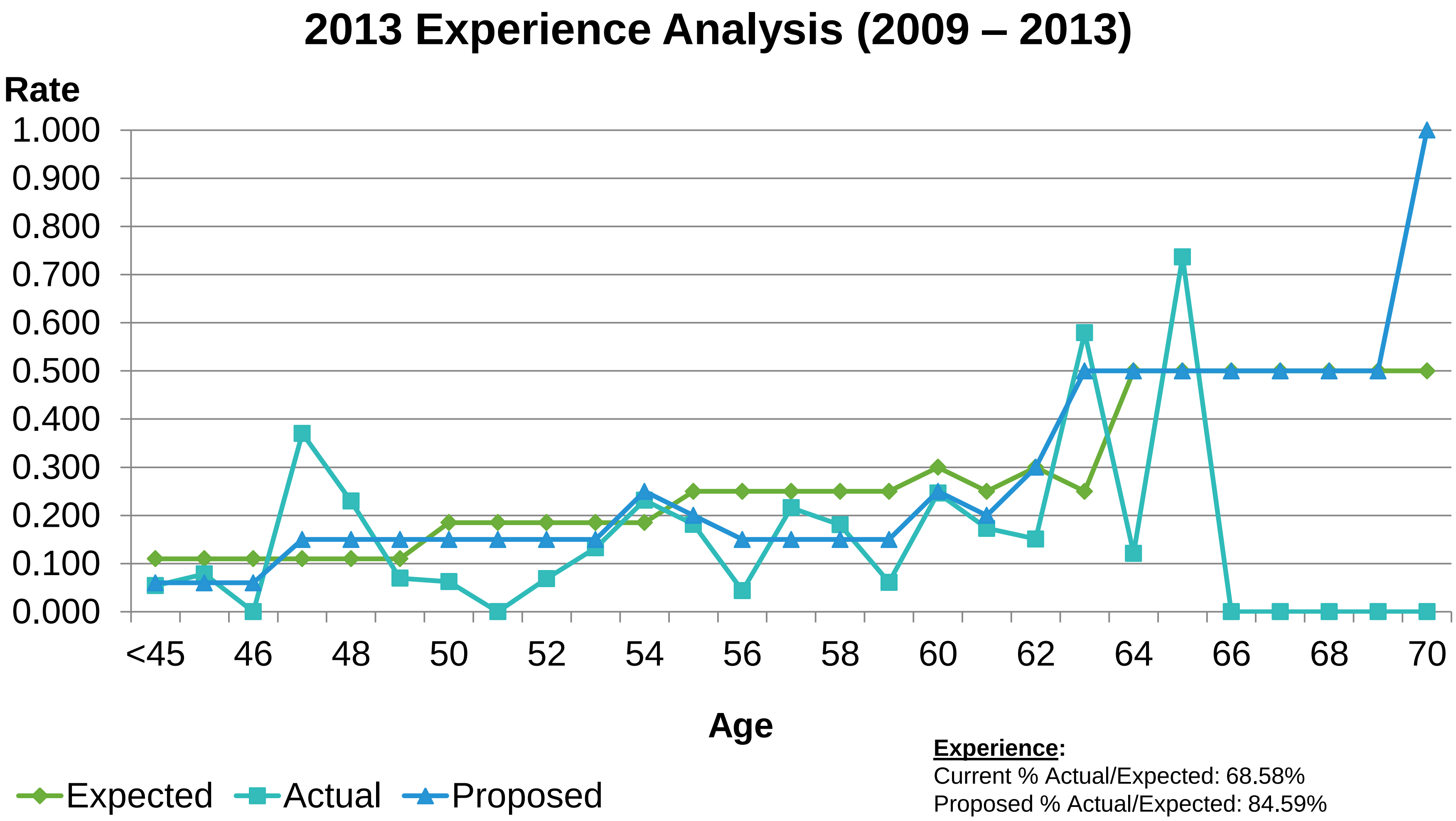
PERS Peace Officer / Firefighter Unreduced Retirement Rates – Male



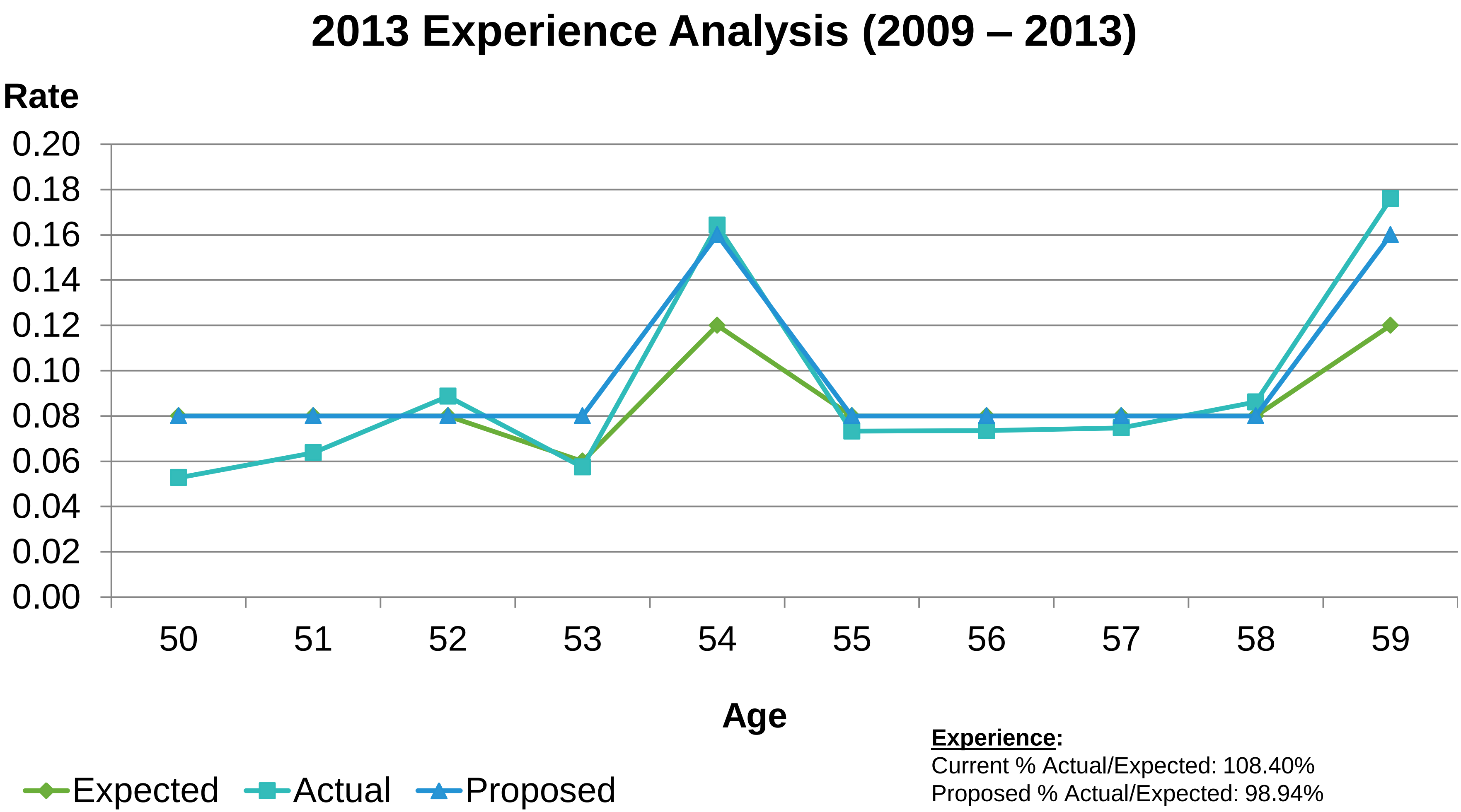
<u>Experience</u>:
Current % Actual/Expected: 82.63%
Proposed % Actual/Expected: 91.63%

PERS Peace Officer / Firefighter Unreduced Retirement Rates – Female



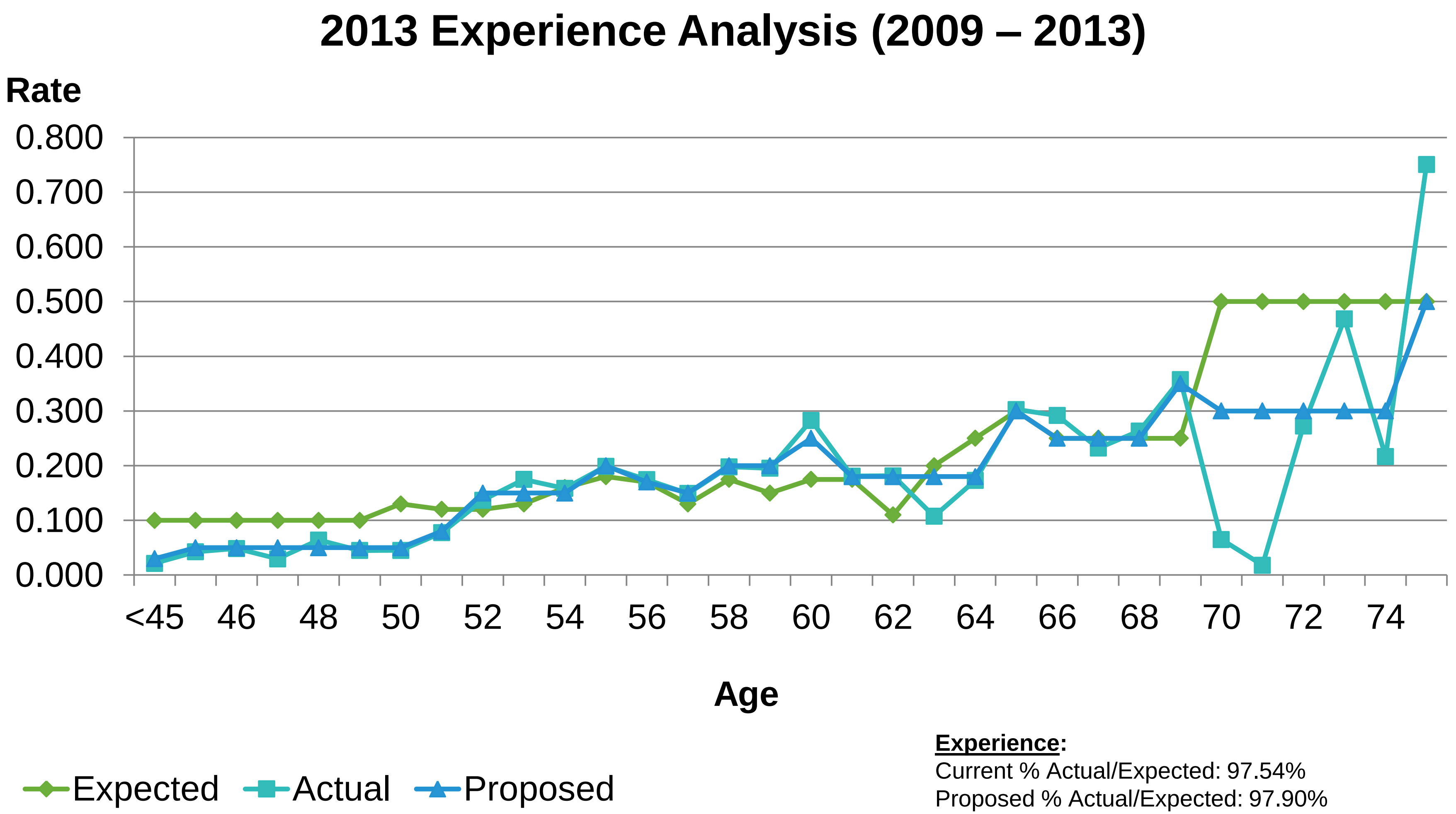
<u>Experience</u>:
Current % Actual/Expected: 68.58%
Proposed % Actual/Expected: 84.59%

TRS
Reduced Retirement Rates – Unisex



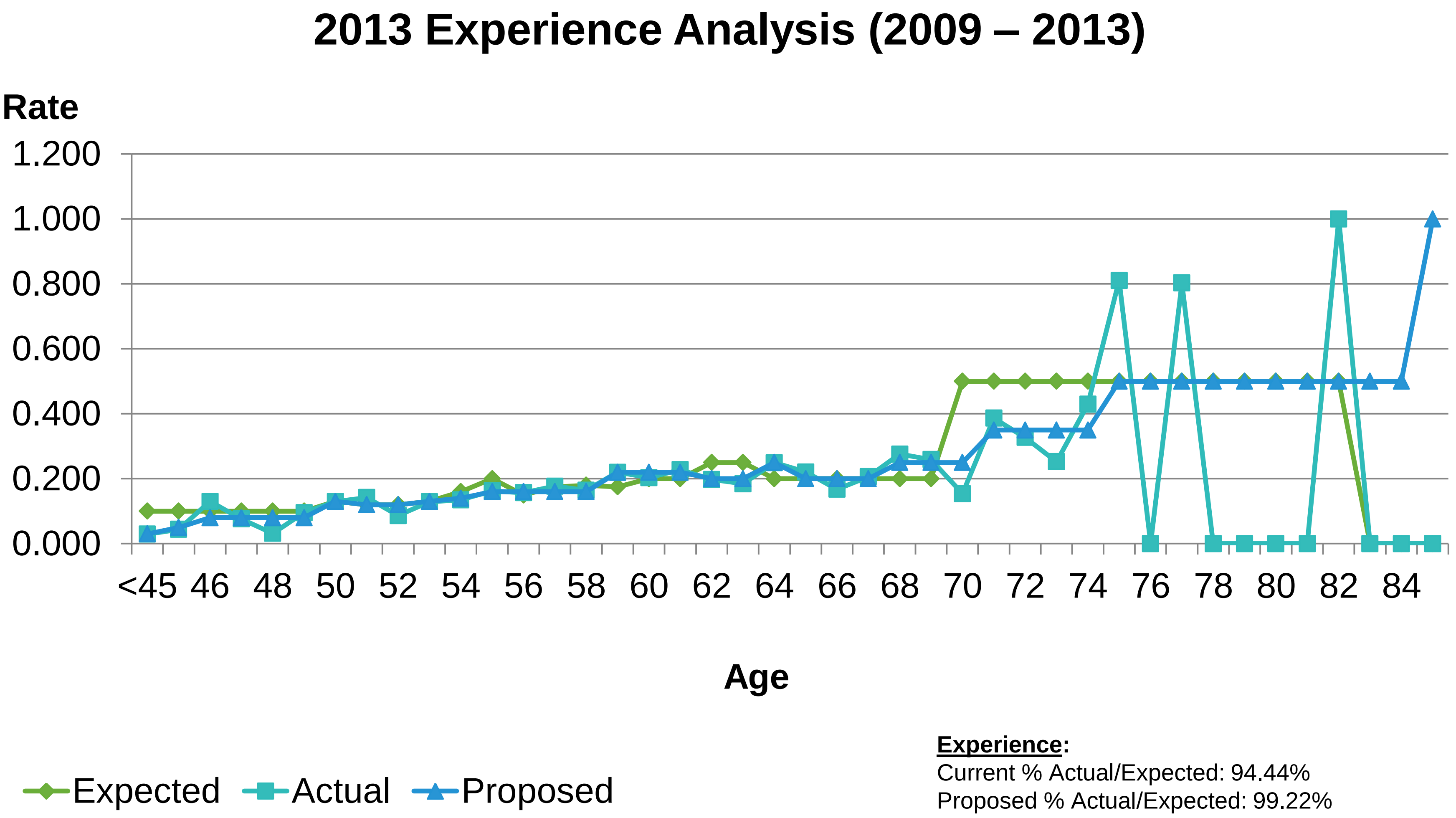
Experience:
Current % Actual/Expected: 108.40%
Proposed % Actual/Expected: 98.94%

TRS
Unreduced Retirement Rates – Male



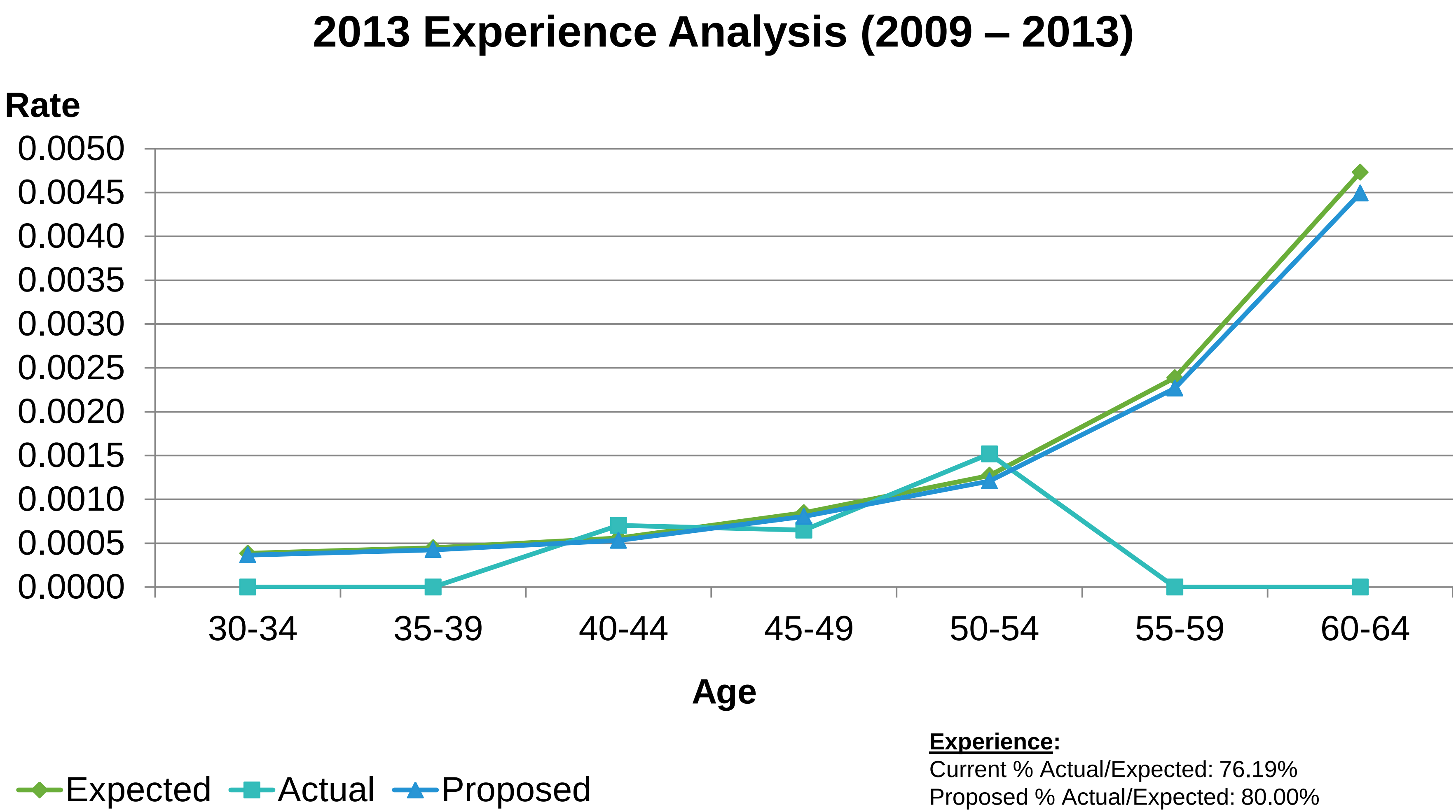
Experience:
Current % Actual/Expected: 97.54%
Proposed % Actual/Expected: 97.90%

TRS
Unreduced Retirement Rates – Female



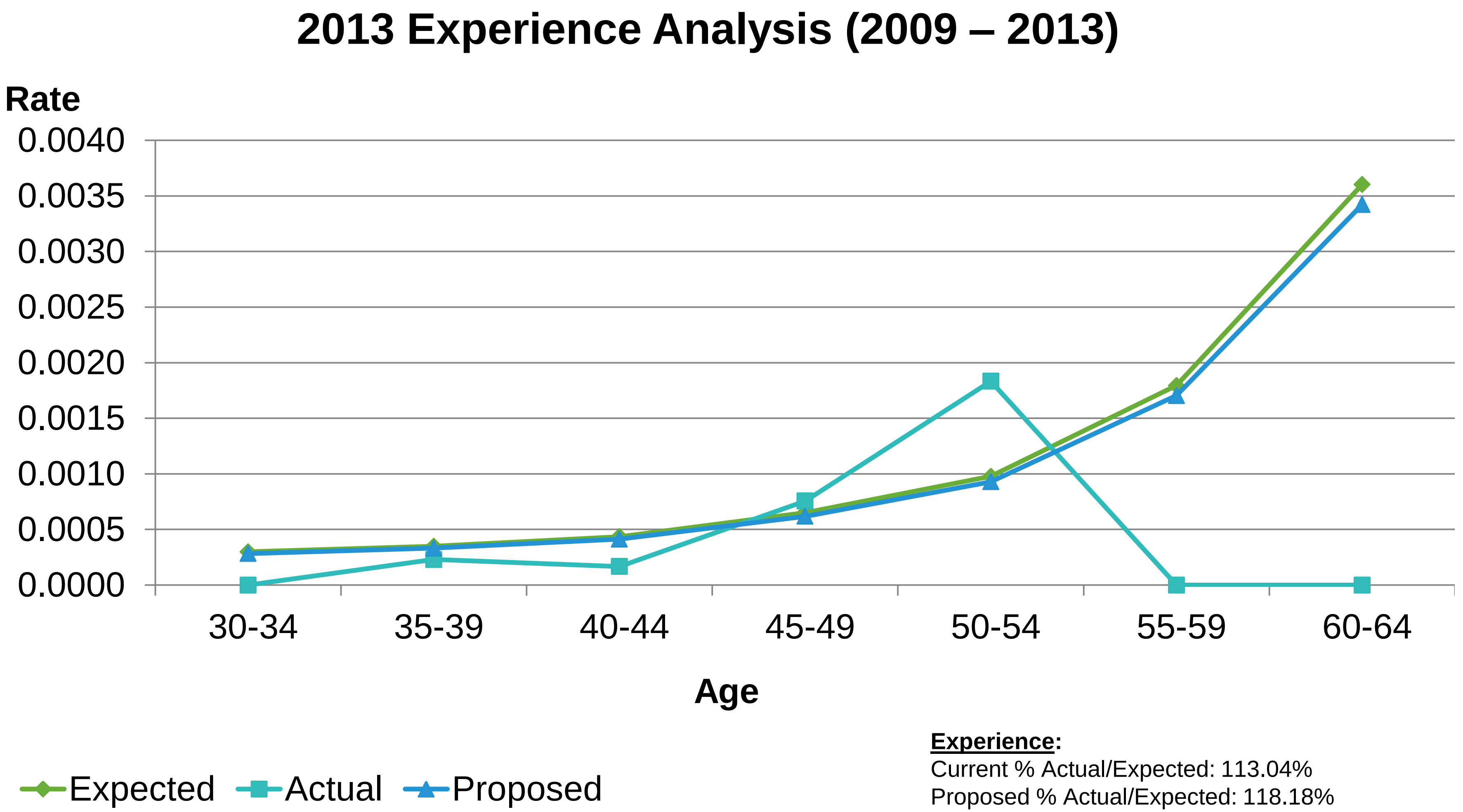
<u>Experience</u>:
Current % Actual/Expected: 94.44%
Proposed % Actual/Expected: 99.22%

PERS Others
Disability Rates – Male



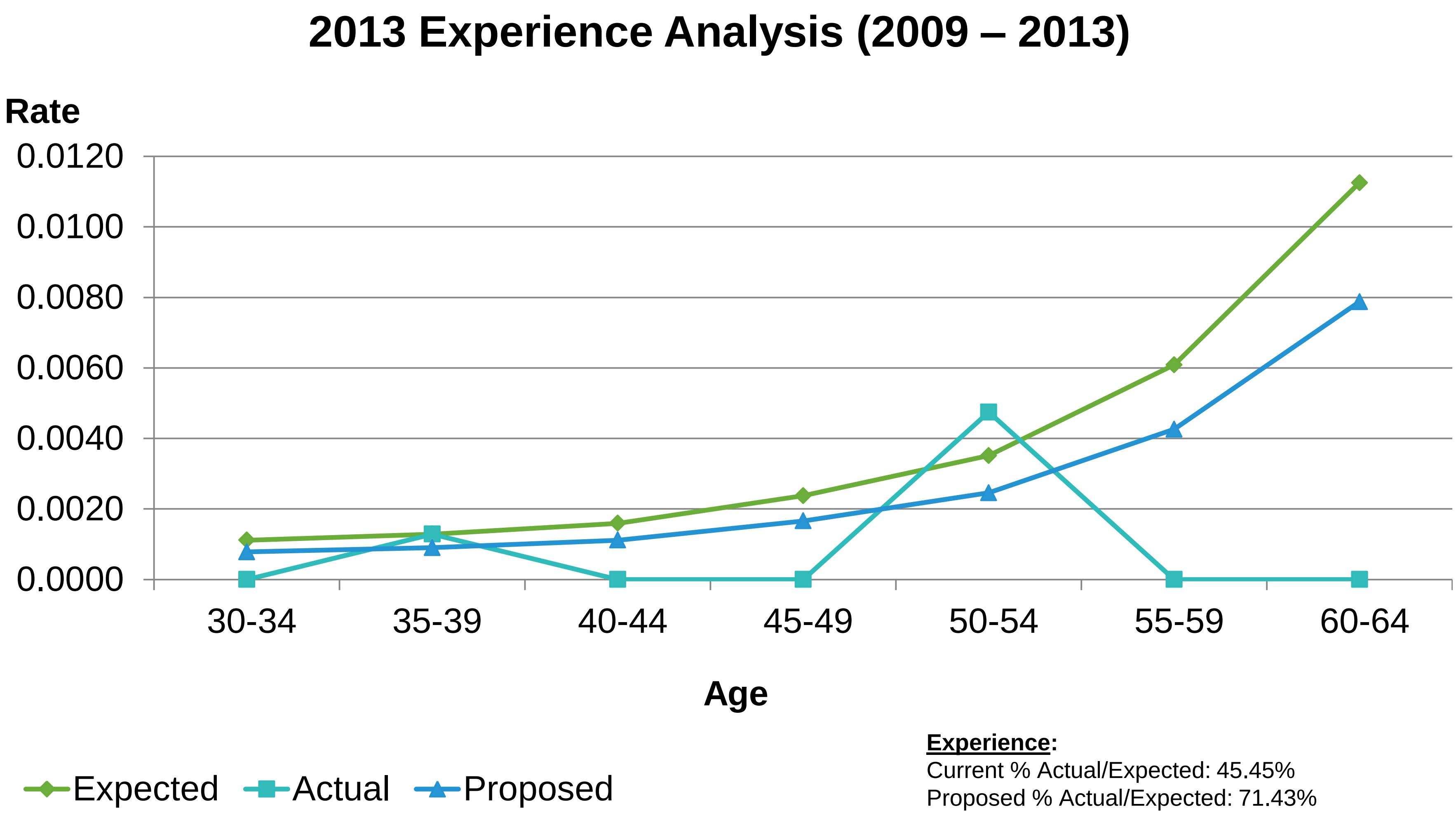
Experience:
Current % Actual/Expected: 76.19%
Proposed % Actual/Expected: 80.00%

PERS Others
Disability Rates – Female



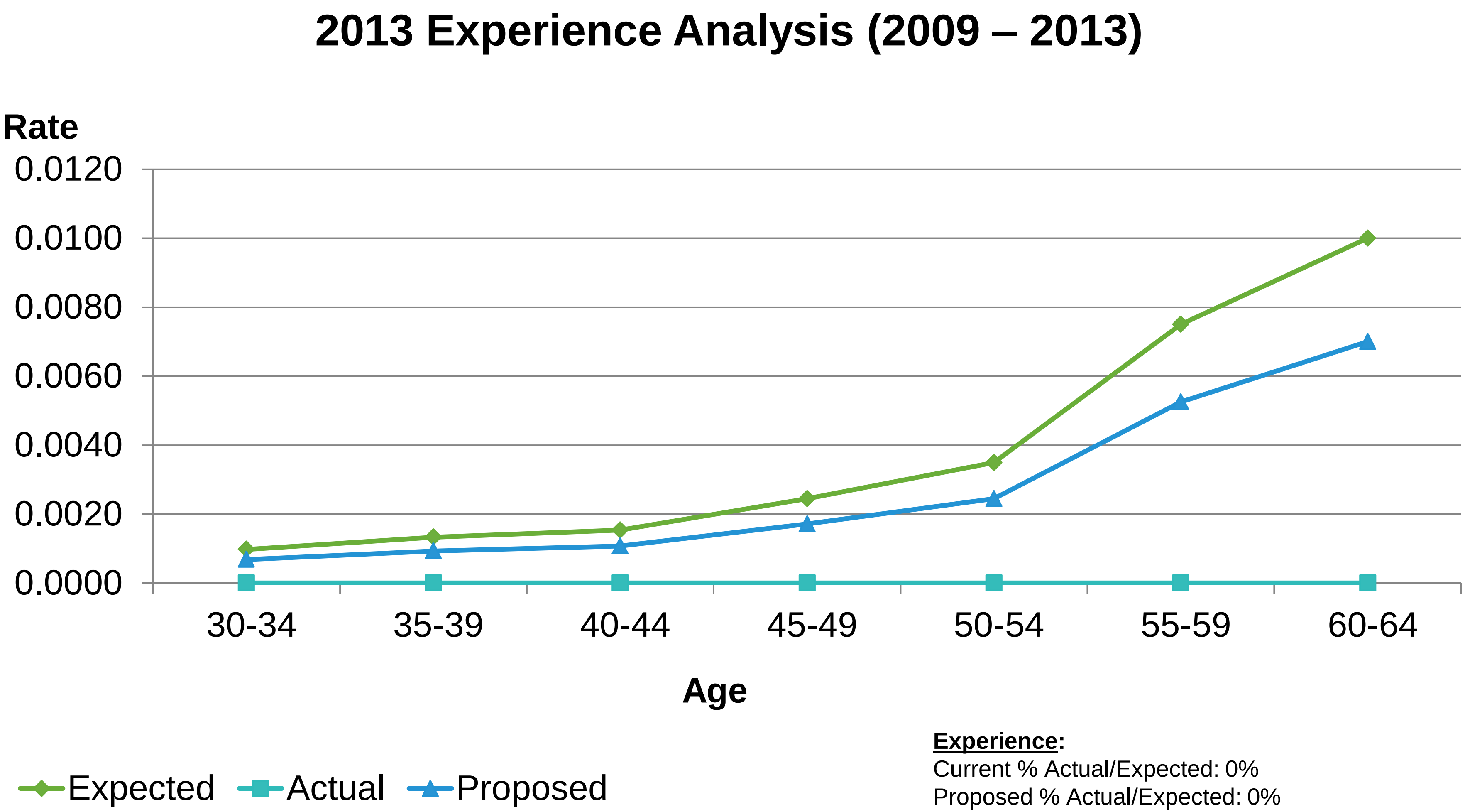
Experience:
Current % Actual/Expected: 113.04%
Proposed % Actual/Expected: 118.18%

PERS Peace Officer / Firefighter Disability Rates – Male



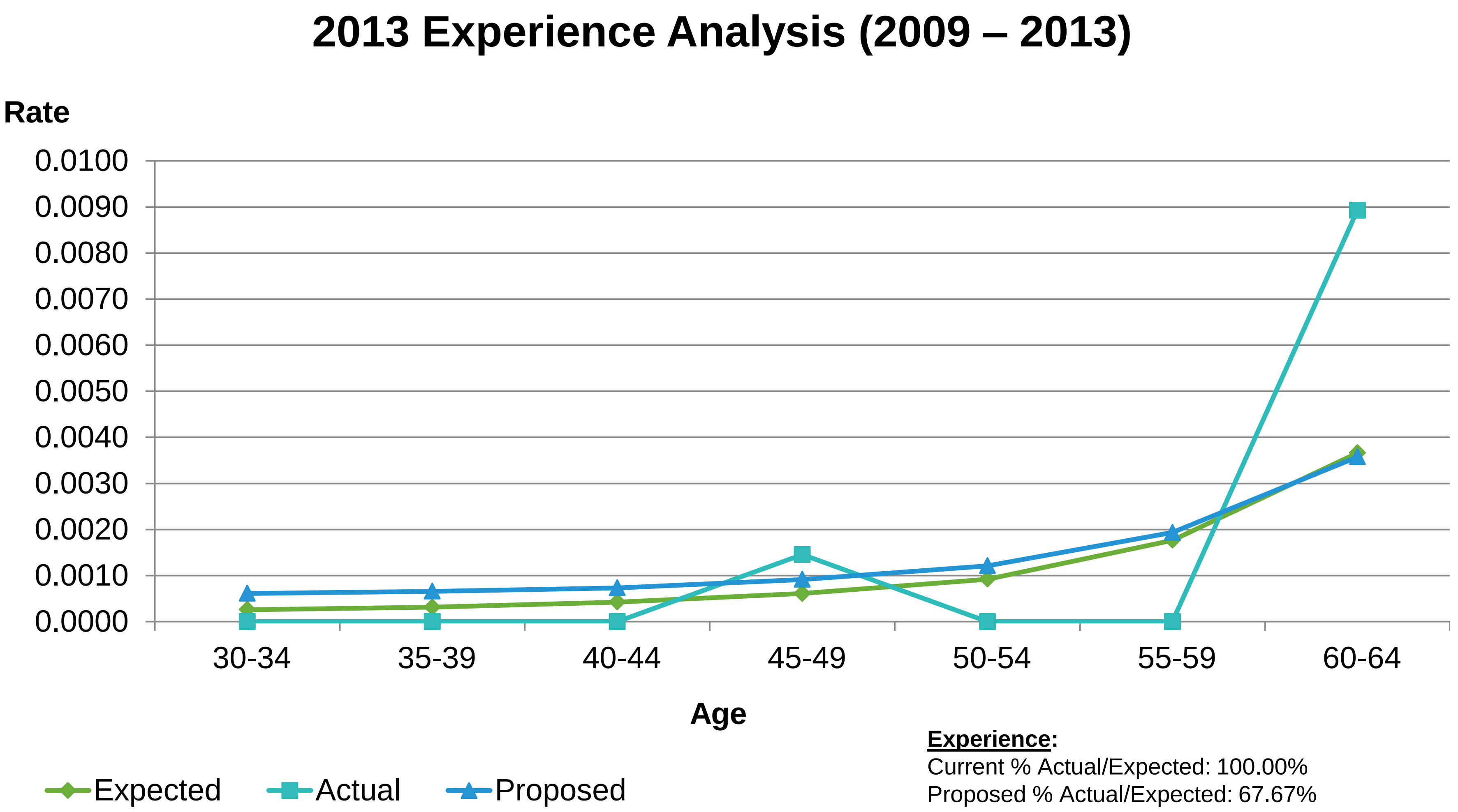
Experience:
Current % Actual/Expected: 45.45%
Proposed % Actual/Expected: 71.43%

PERS Peace Officer / Firefighter Disability Rates – Female



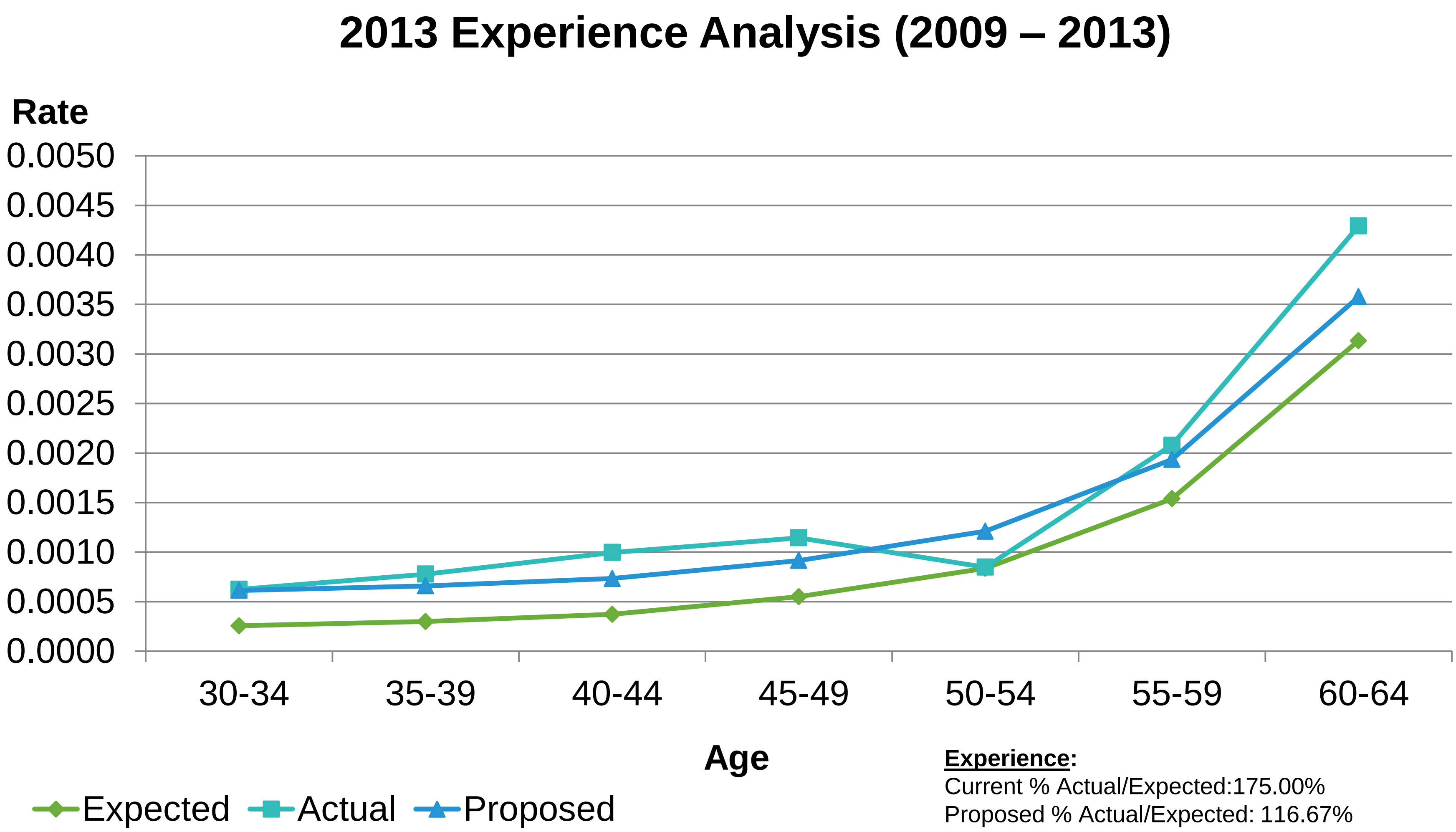
Experience:
Current % Actual/Expected: 0%
Proposed % Actual/Expected: 0%

TRS
Disability Rates – Male



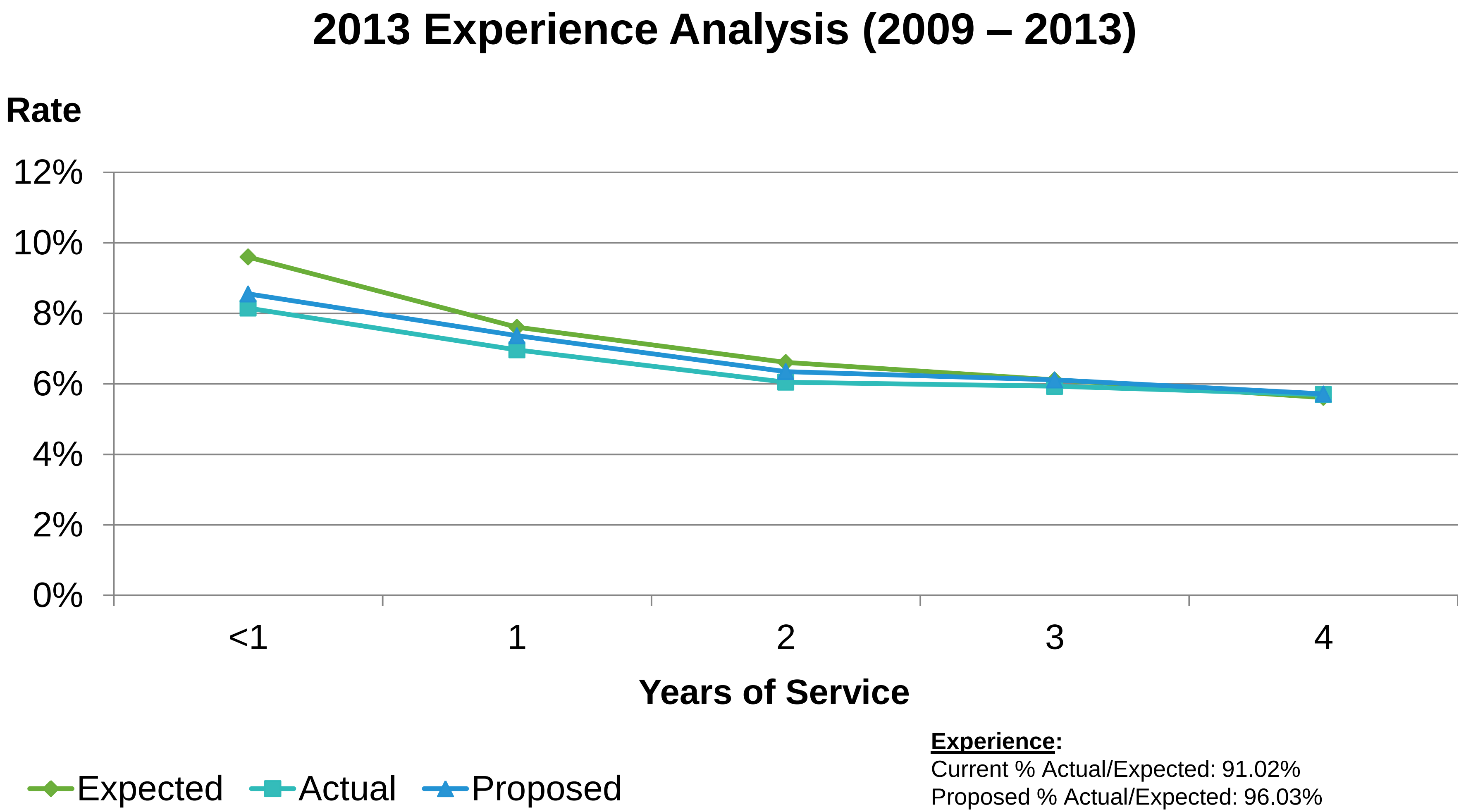
Experience:
Current % Actual/Expected: 100.00%
Proposed % Actual/Expected: 67.67%

TRS
Disability Rates – Female



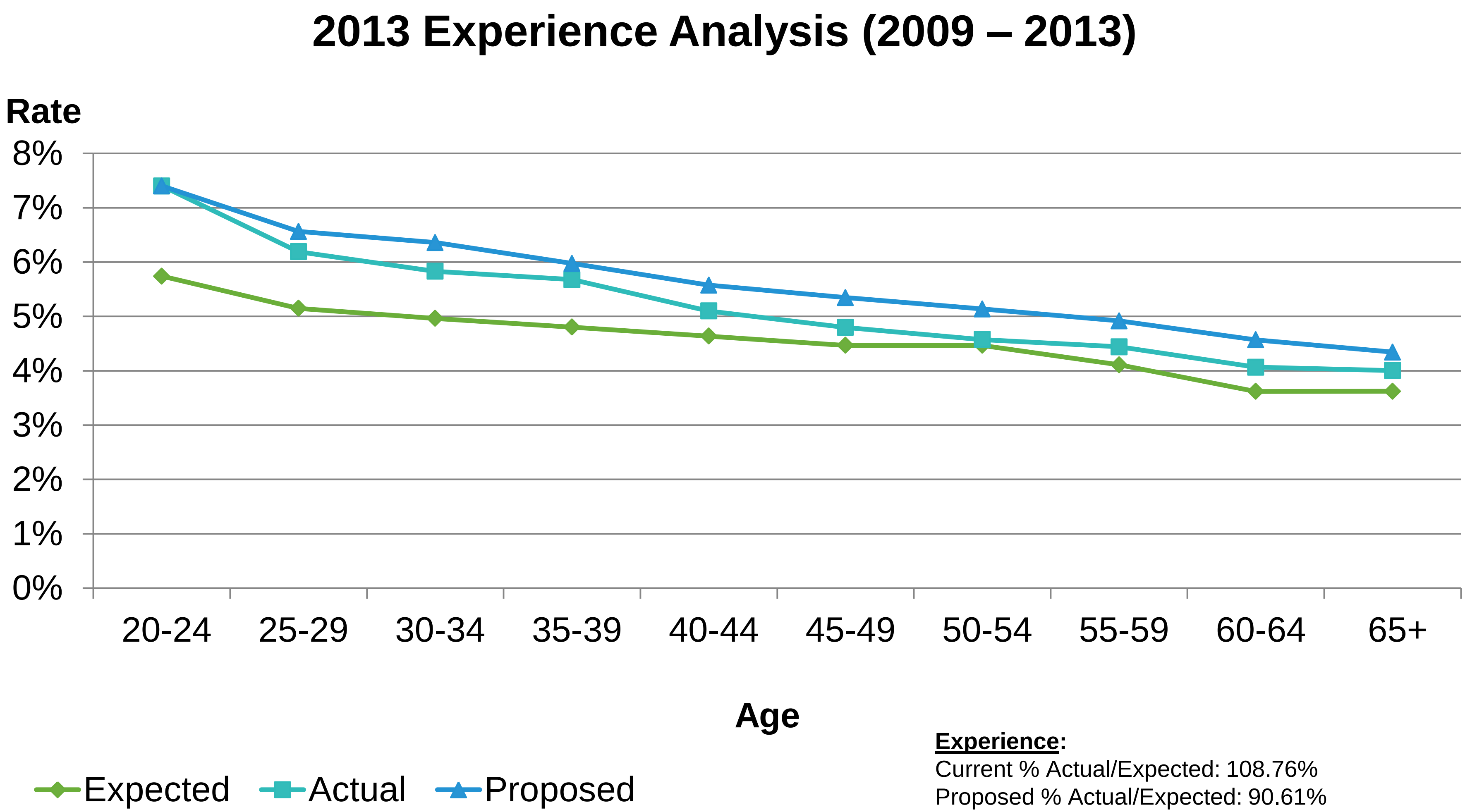
Experience:
Current % Actual/Expected:175.00%
Proposed % Actual/Expected: 116.67%

PERS Others
Salary Scale (Select) Service Less Than 5 Years



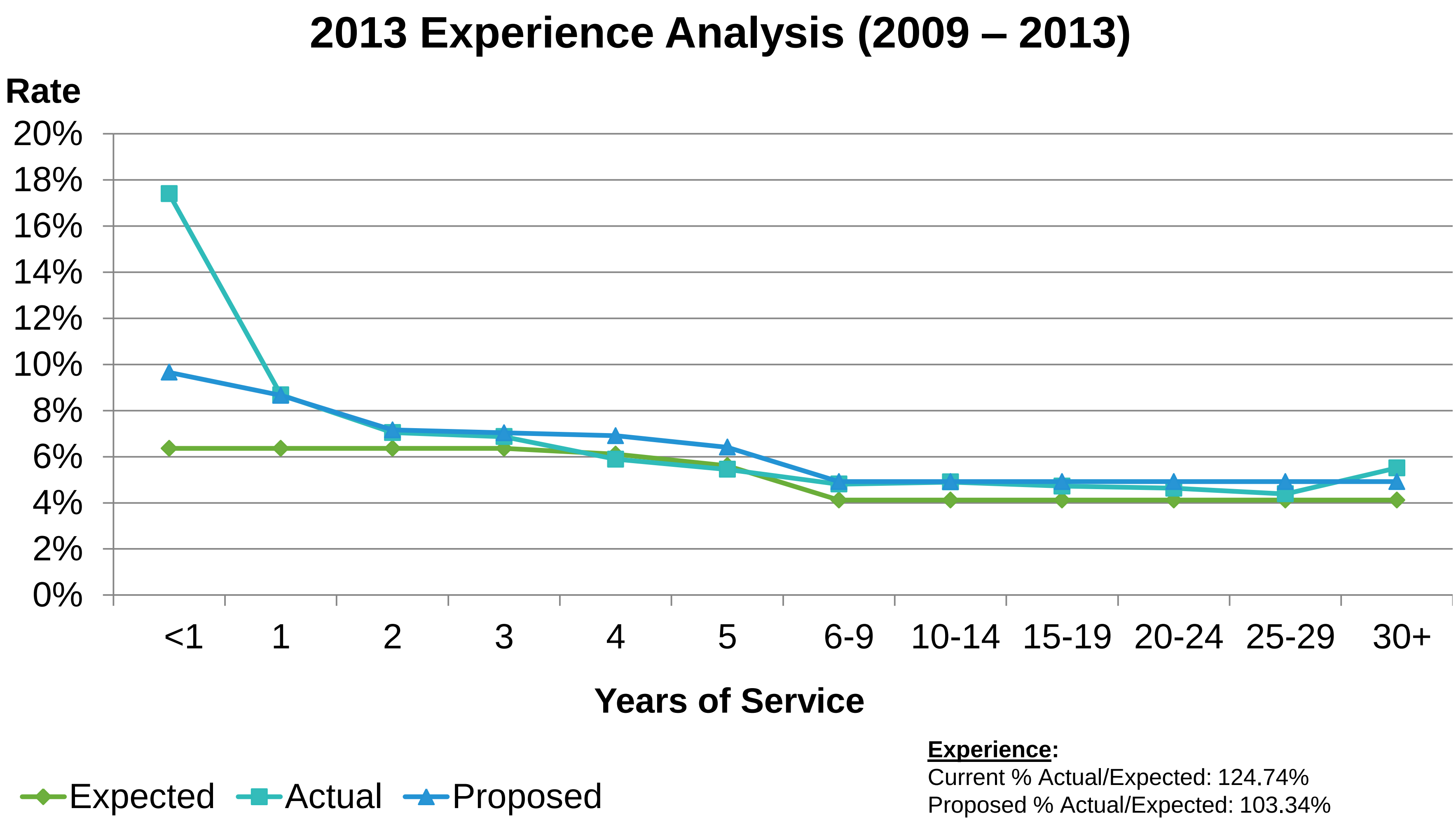
<u>Experience</u>:
Current % Actual/Expected: 91.02%
Proposed % Actual/Expected: 96.03%

PERS Others
Salary Scale (Ultimate) Service Over 5 Years



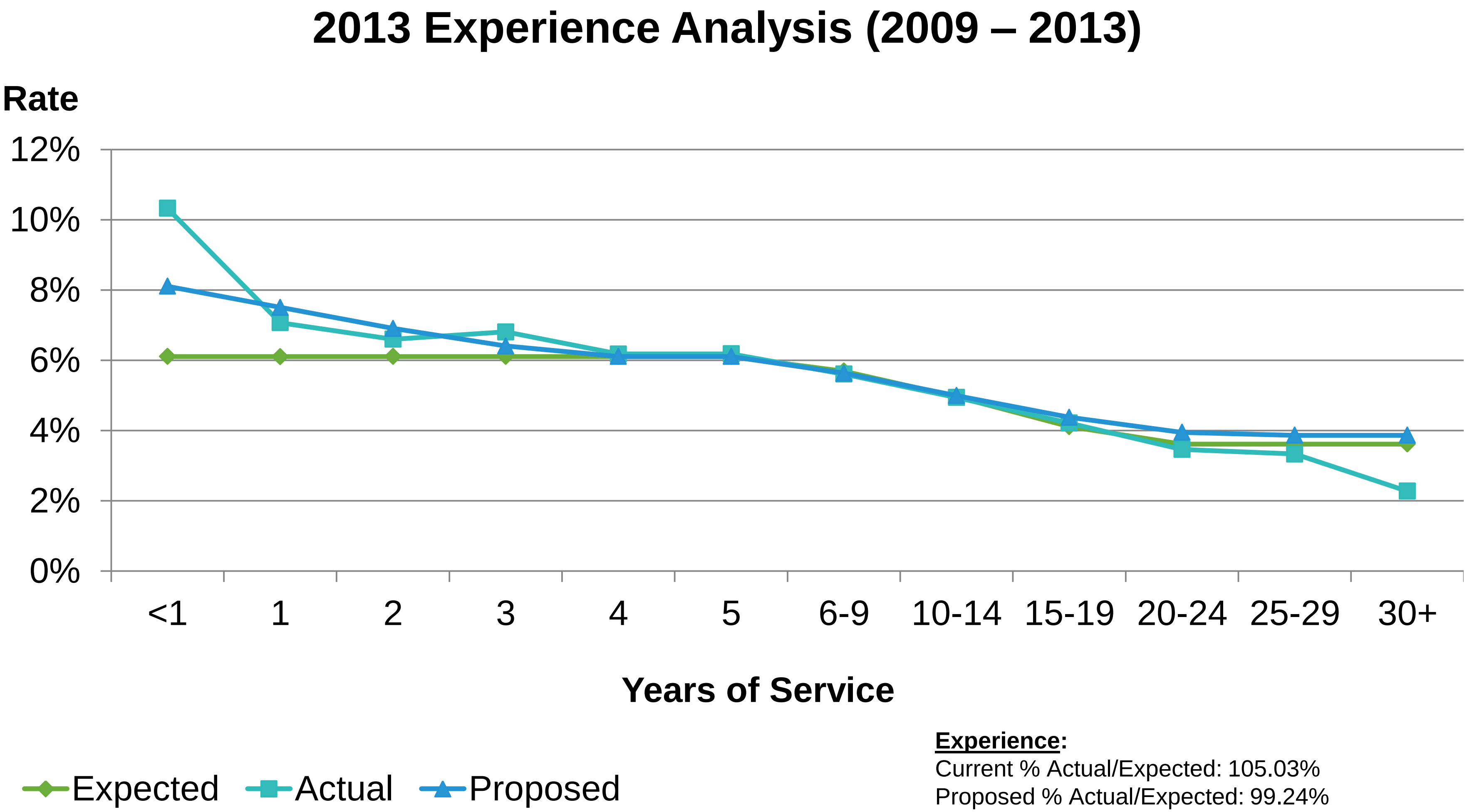
Experience:
Current % Actual/Expected: 108.76%
Proposed % Actual/Expected: 90.61%

PERS Peace Officer / Firefighter Salary Scale



Experience:
Current % Actual/Expected: 124.74%
Proposed % Actual/Expected: 103.34%

TRS
Salary Scale



<u>Experience</u>:
Current % Actual/Expected: 105.03%
Proposed % Actual/Expected: 99.24%

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Ready For Real Business

State of Alaska Retirement Systems

Presentation to the Alaska Retirement Management Board
2013 Actuarial Experience - Economic Assumptions Analysis Results
September 19, 2014

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Agenda

About Economic Assumptions

Historical View of Economic Experience

- Inflation
  - On Prices
  - On Wages
- Past Investment Performance
- Expenses

Economic Simulation Forecasts

  - Simulation Process
  - Inflation
  - Investment Rates of Return
  - Development of the Discount Rate
  - Conclusions and Recommendations

Questions?

About Economic Assumptions

Used to quantify amount of expected future benefit payments

- Wage inflation effects future levels of salaries used to determine the Average Monthly Compensation for calculating benefit amounts.
- Price inflation, or Consumer Price Index (CPI), is used to determine the Post-Retirement Pension Adjustments (PRPAs).

Used to determine the present value of future benefit payments to determine the level of future contributions needed to meet the benefit obligation

- Standard actuarial practice for public plans is to set a Discount Rate that reflects the expected long-term investment rate of return.
- Future benefit payments are discounted back to the valuation date to determine the value, or liability, of future payments.
- By using the expected investment rate of return as the Discount Rate, assets and liabilities are expected to accumulate at the same rate, considering contributions and benefit payments, resulting in a balanced funding approach.

About Economic Assumptions

Inflation should be consistently applied to:

- Investment return
- Salary increases
- PRPAs

Real returns should reflect asset mix

- The majority of the return is the result of asset allocation
- Consider likely future changes to asset mix given liquidity needs and changing benefit duration for closed plans

Assumptions should

- Reflect benefit payment period (i.e., long-term over 20-40 years)
- Consider recent trends
- Consider future expectations
- Consider impact of expenses
- Can include margin for adverse deviation

Historical View of Economic Experience

Summary of Current Economic Assumptions

	PERS, TRS, & JRS Assumptions	NGNMRS Assumptions
Investment Return	8.00%	7.00%
Price Inflation	3.12%	3.12%
Real Rate of Return	4.88%	3.88%
Interest on Contributions	4.50%	n/a
Salary Increases		
- Price Inflation	3.12%	n/a
- Productivity	0.50%	n/a
- Economic Portion*	3.62%	n/a

* Also known as Wage Inflation.

Historical National Inflation Experience

Ten-Year Period Ending	National Mean Inflation Rate (CPI)*	Anchorage Mean Inflation Rate (CPI)*	Increase in Average SocSec Wages
1974	5.09%	n/a	5.21%
1984	7.63%	n/a	7.37%
1994	3.53%	n/a	4.67%
2004	2.45%	2.24%	3.78%
2014	2.39%	2.60%	2.92%
20 Year Mean	2.42%	2.42%	3.33%
50 Year Mean	4.20%	n/a	4.78%
Assumed Rate	3.12%	3.12%	3.62%

*Consumer Price Index reflective of price inflation (CPI-W).

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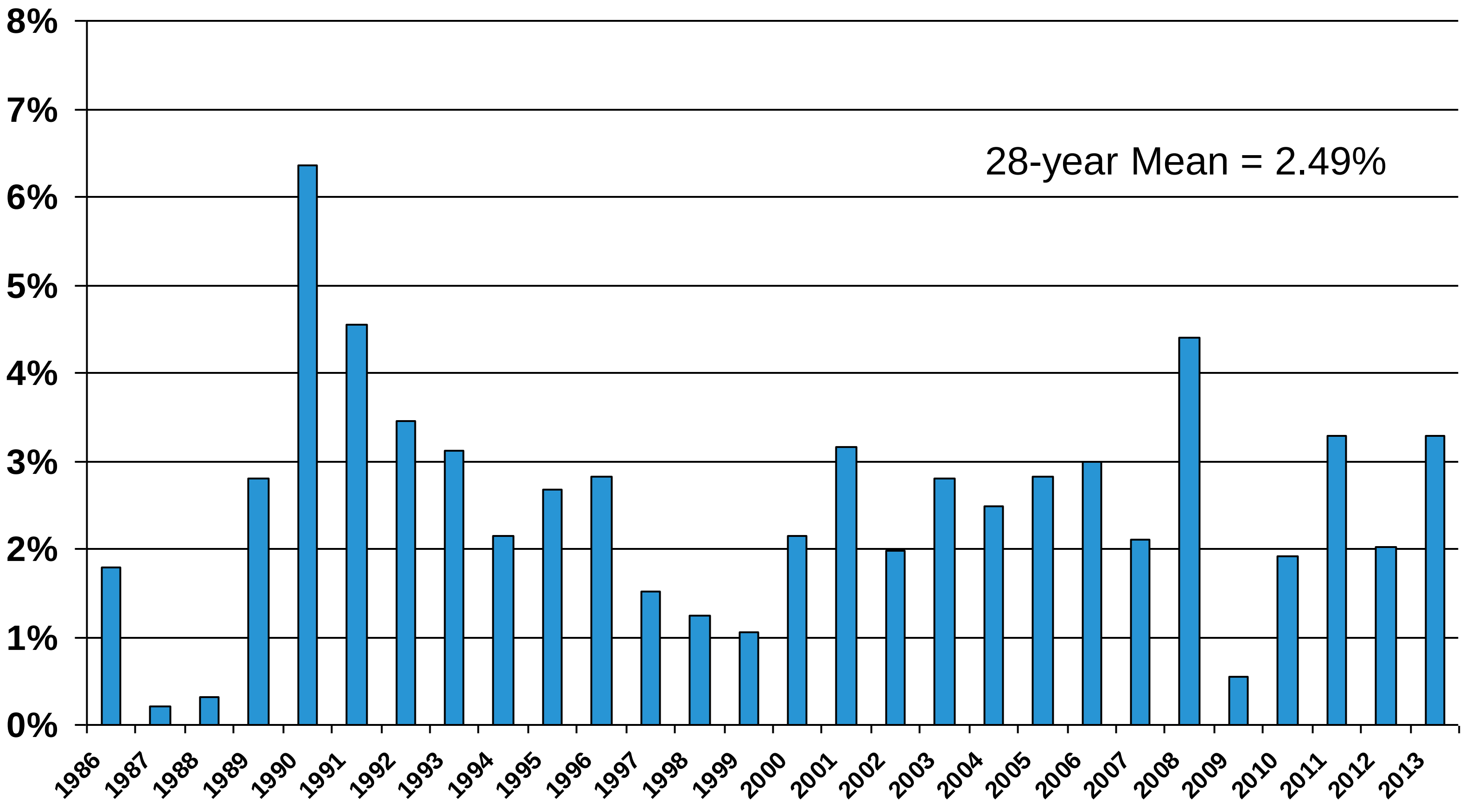
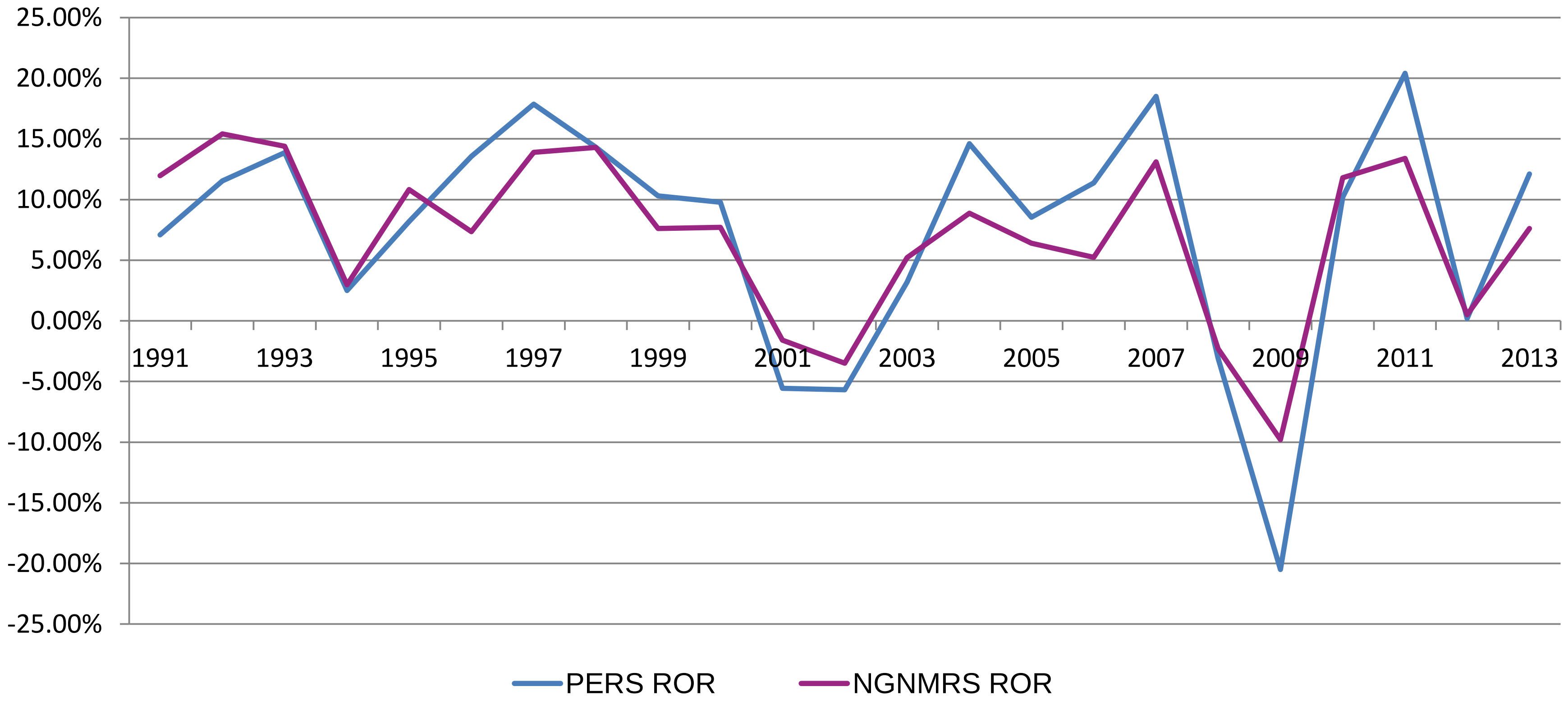
CPI for Anchorage
Urban Wage Earners and Clerical Workers



Historical Investment Rate of Return for PERS & NGNMRS 1991 - 2013



Arithmetic Mean:	7.53%	7.01%
Geometric Mean:	7.09%	6.81%
Assumed ROR:	8.00%	7.00%

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Expenses PERS and TRS Combined

	Fiscal Year ending				
	2010	2011	2012	2013	Average
Expenses (000's)					
- Administrative	$ 9,063	$ 9,550	$ 9,590	$ 10,109	$ 9,578
- Investment	25,272	32,569	33,260	37,282	32,096
- Total	$ 34,355	$ 42,119	$ 42,850	$ 47,391	$ 41,674
Average Annual Fair Value of Assets (000's)	$ 12,930,041	$ 14,859,141	$ 16,025,639	$ 16,799,701	$ 15,153,630
Expense Ratio*					
- Administrative (pension)	0.07%	0.06%	0.06%	0.06%	0.063%
- Investment	0.20%	0.22%	0.21%	0.22%	0.212%
- Total	0.27%	0.28%	0.27%	0.28%	0.275%

- Administrative expenses for healthcare plan are excluded since liabilities are specifically loaded for administrative expenses

Simulation Results of Inflation and Alaska's Expected Future Investment Returns using GEMS

GEMS®- Economic Scenario Generator (ESG)

- Buck's Capital Market assumptions are based on a model developed by Conning (portfolio company of Aquiline) called the General Economy and Market Simulator (a.k.a. "GEMS").
- Model incorporates historical data (back to inception of various indices), and uses a factor model to forecast future values for all relevant asset classes.
- GEMS captures the real-life fact that means, volatilities and correlations are determined dynamically and can change over time.
  - This means that expected returns over, say, a 10-year horizon may not equal those over a 20-year horizon.
  - Based on Monte Carlo analysis, we derive sample means, standard deviations and correlations for reporting purposes.

GEMS Inflation Forecast Model

- Over the last 20 years, inflation-linked bonds and derivatives have been introduced into several economies.
- The spreads between Treasuries and inflation-linked bonds have been used as a predictor of inflation.
- GEMS uses a new inflation model with more robust properties than standard approaches to inflation modeling
  - Produces realistic inflation dynamics.
  - Produces realistic inflation term structures and relationships between nominal and real yields.
  - Produces realistic non-zero correlated relationships between inflation and interest rates.

Alaska Retirement Systems

Use of GEMS to Set the Inflation and Discount Rate Assumption

- Recently adopted Actuarial Standards of Practice No. 27 requires actuaries to use a discount rate assumption that is not greater than the expected long-term investment rate of return. A margin for adverse deviation (conservatism) is allowed by using a lower rate to the extent reasonable. The new standard is effective on or after September 30, 2014.

- Inflation expectations have increased recently, but are still lower than long-term expectations. However, we would expect higher inflationary pressures as the economy continues to improve and return to normalcy.

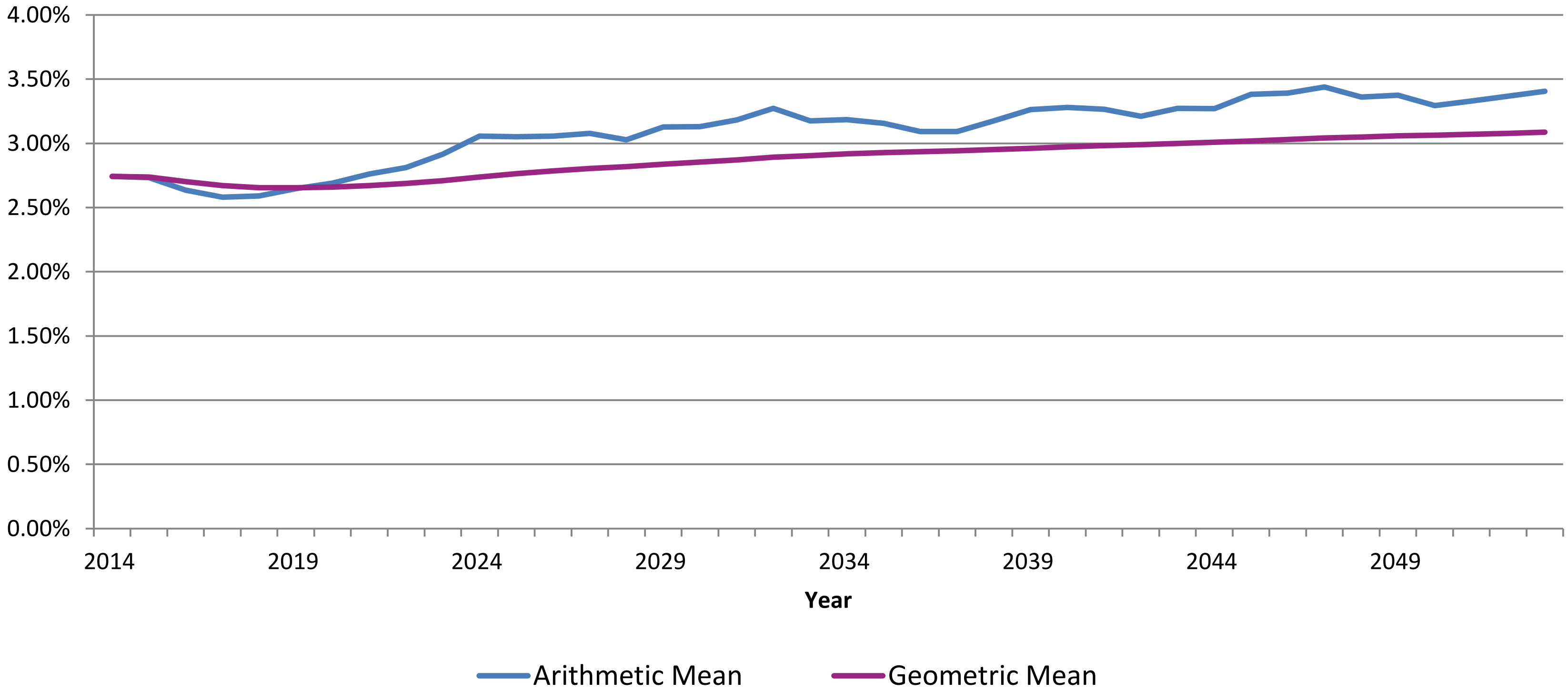
- Nominal investment returns remain lower than assumed in the short-term as the economy continues to recover from the “Great Recession”, and are expected to increase over time to a level greater than the assumed rate long-term.

Alaska Retirement Systems

Use of GEMS to Set the Inflation and Discount Rate Assumption (continued)

- Expected future investment rates of return (real and nominal) and inflation were forecasted using GEMS modeling system
  - Expected inflation and returns are outputs of the econometric model.
  - Arithmetic mean results for each year and cumulative geometric mean results were determined.
  - Returns and inflation were forecasted over the next 40 years.
  - Returns beyond 40 years are assumed to be at the same mean as year 40.

Inflation Forecast using GEMS



	Arithmetic Mean	Geometric Mean
20-year Mean:	2.91%	2.89%
40-year Mean:	3.10%	3.07%
Assumed Inflation:	3.12%	3.12%

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Total Payroll Growth Assumption PERS

	Number of Actives	Annual Earnings (000's)	Annual Average Earnings	% Increase / (Decrease) in Average Earnings
2013	35,271	$2,198,978	$62,345	3.3%
2012	35,327	$2,132,009	$60,351	3.3%
2011	35,358	$2,065,747	$58,424	3.8%
2010	35,674	$2,007,885	$56,284	3.2%
2009	34,821	$1,899,608	$54,554	

- Total percent increase of 3.4% for the 4 year period
- Recommend no change to the payroll growth assumption of 3.62%

A lower payroll growth assumption is more conservative

Total Payroll Growth Assumption TRS

	Number of Actives	Annual Earnings (000's)	Annual Average Earnings	% Increase / (Decrease) in Average Earnings
2013	9,624	$702,204	$72,964	2.0%
2012	9,902	$708,229	$71,524	2.8%
2011	10,011	$696,424	$69,566	2.5%
2010	10,078	$683,700	$67,840	5.1%
2009	10,018	$646,734	$64,557	

- Total percent increase of 3.1% for the 4 year period
- Recommend no change to the payroll growth assumption of 3.62%

A lower payroll growth assumption is more conservative

Criteria for Investment Return Forecasts

Based on current Alaska Asset Allocation Policy

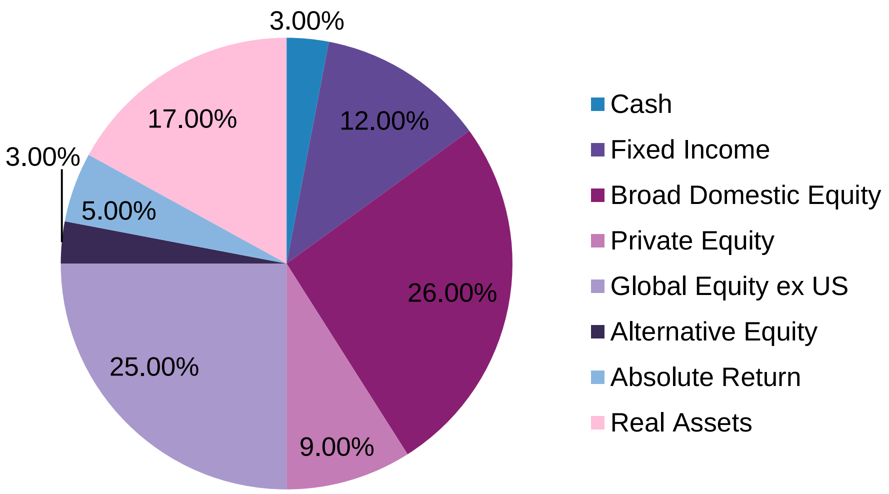
- Consideration should be given to potential future investment policy changes for PERS and TRS due to plans closed to new entrants. Future liquidity needs and increased risk due to shortening benefit duration may require a more conservative investment policy and lower discount rate.

Fund investment expenses are netted out of the expected rate of return assumption

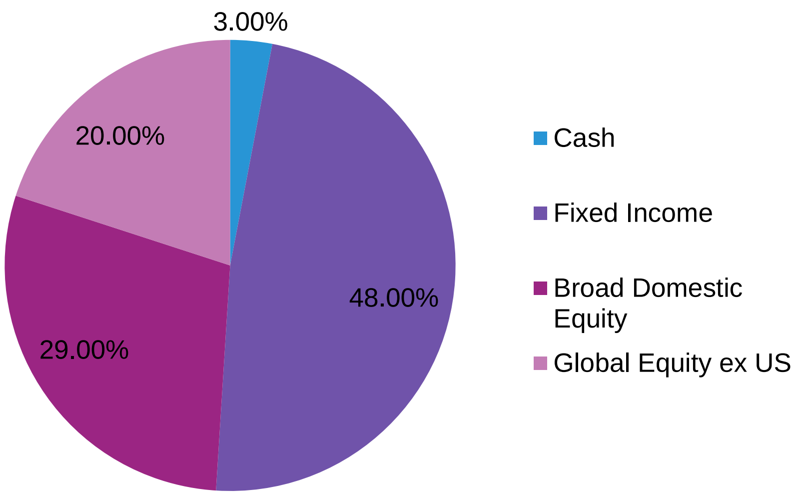
- Pension administrative expenses are assumed to be net of investment return. These expenses have averaged .063%, or 6.3 basis points, over the last 4 years.
- Healthcare administrative expenses are loaded to the liabilities, so are not used as a net to investment return.
- Fees for active investment management have averaged 0.212%, or 21.2 basis points, over the last 4 years.
- Expenses are assumed to be net of investment return. When forecasting future returns, gross rate of return is reduced by .275% for expenses.

Current Asset Allocation Policy for FY2015

PERS, TRS, and JRS



NGNMRS



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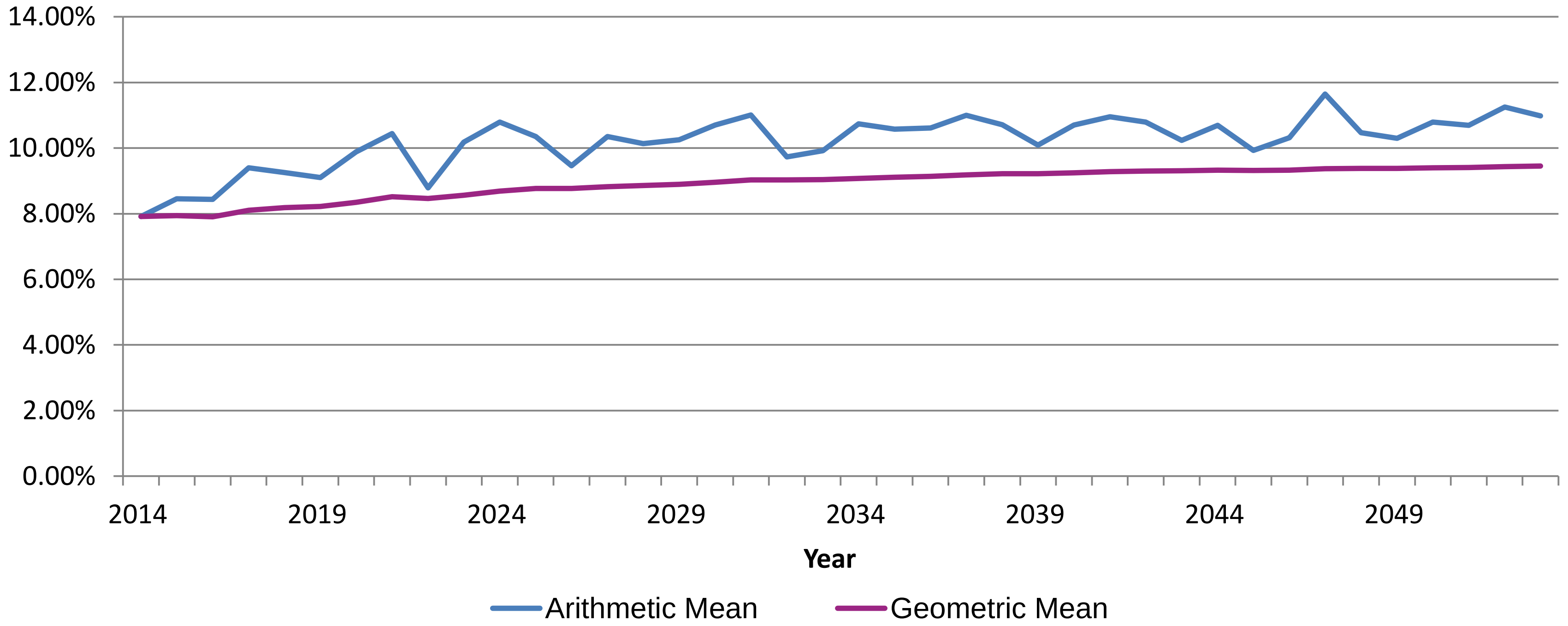
PERS, TRS, and JRS Investment Rate of Return Forecast using GEMS Net of Expenses (2014 – 2053)



	Arithmetic Mean	Geometric Mean
20-year Mean:	9.73%	9.04%
40-year Mean:	10.20%	9.45%
Assumed ROR:	8.00%	8.00%

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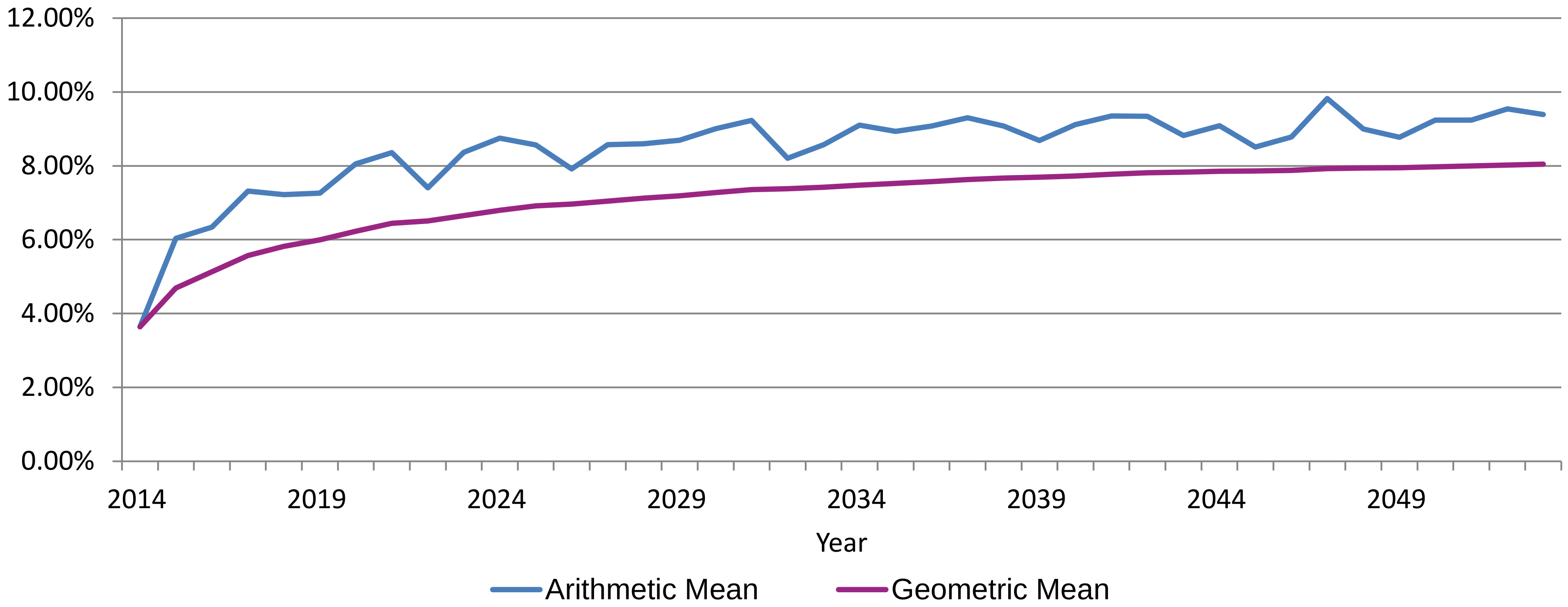
NGNMRS Investment Rate of Return Forecast using GEMS
Net of Expenses (2014 – 2053)



	Arithmetic Mean	Geometric Mean
20-year Mean:	7.81%	7.42%
40-year Mean:	8.46%	8.05%
Assumed ROR:	7.00%	7.00%

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Development of Expected Long-term Investment Return and Discount Rate Assumption

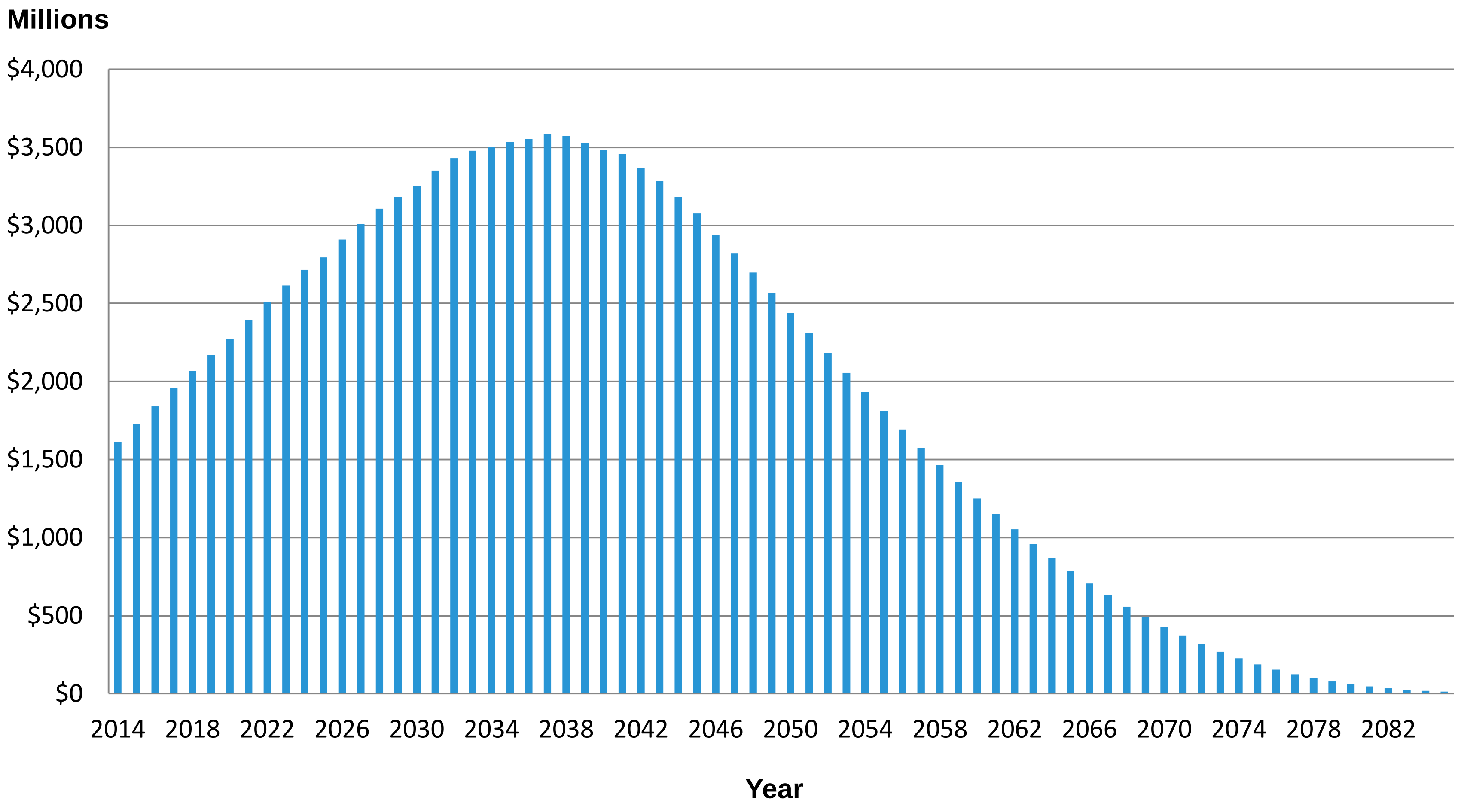
- Projected benefit payments for each system were discounted at the forecasted geometric mean investment returns expected and compared with the total actuarially liabilities measured as of June 30, 2013
  - Using the assumed rate should produce a liability that is at least as much as the liability determined using forecasted returns.
  - Lower rate used for Discount Rate will provide a “margin for adverse deviation” and increase likelihood of meeting funding objectives.
- Investment return expectations are lower than assumed in the short-term as the economy continues to recover from the “Great Recession”, and are expected to increase in the near term as the economy returns to normalcy.

Development of Expected Long-term Investment Return and Discount Rate Assumption (continued)

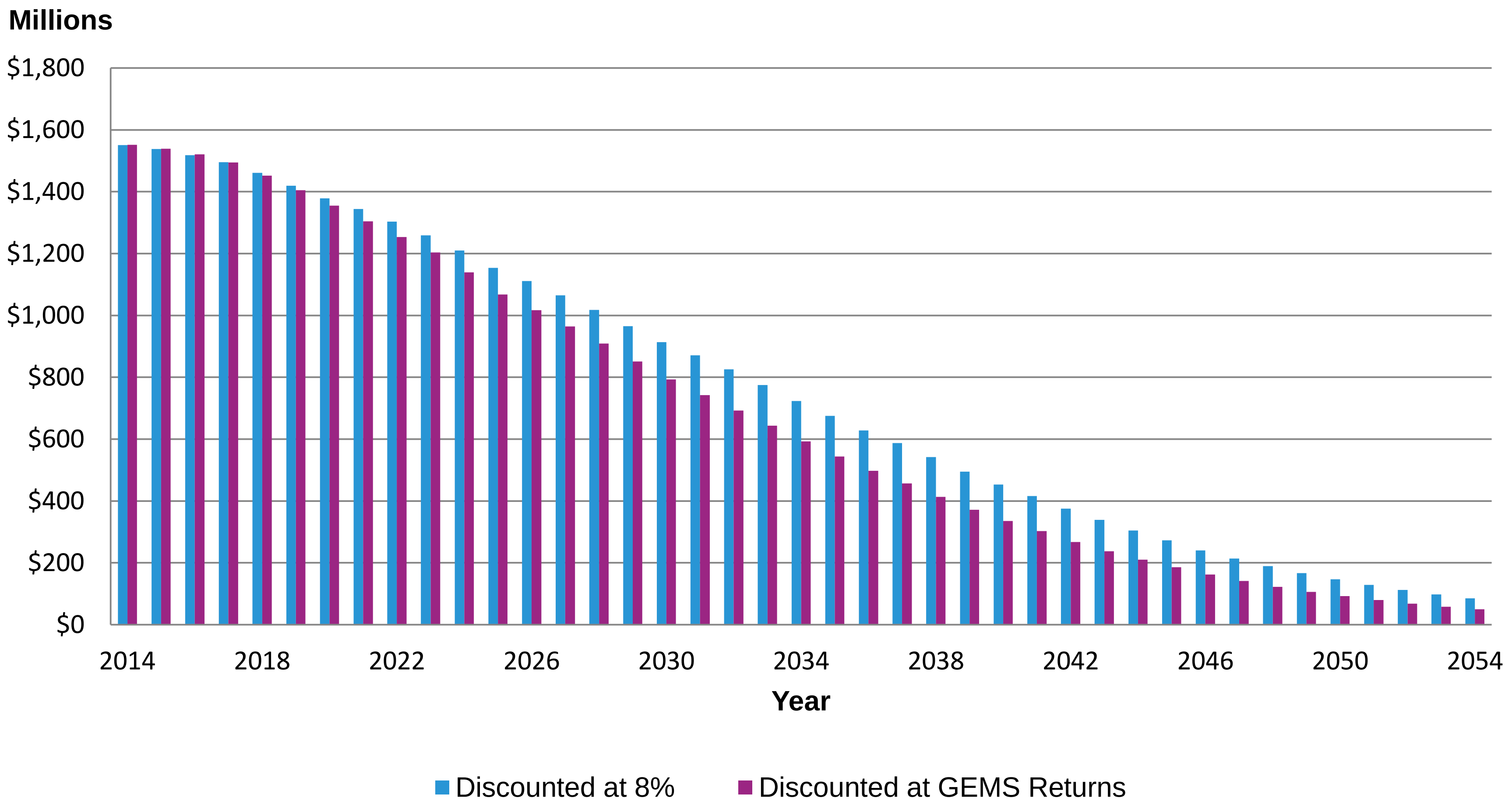
- Based on Buck's Modeling of expected investment returns, the current assumption was shown to meet the proposed actuarial standards requirement, although the low returns expected in the short-term would create investment losses. This was verified by discounting the expected benefit payments by the GEMS expected returns and comparing the present value of future benefits (PVFB) to the current plan liability.

	PERS	TRS	JRS	NGNMRS
Total Plan Liability	$21.5B	$10.2B	$243M	$37M
Current Discount Rate	8.0%	8.0%	8.0%	7.0%
GEMS Liability	$19.2B	$9.1B	$219M	$36M
Blended GEMS Rate	8.9%	8.9%	8.9%	7.2%

Projection of Future Annual Benefit Payments for PERS, TRS, and JRS (2014 – 2082)



Discounted Value of Projected Annual Benefit Payments for PERS, TRS, and JRS (2014 – 2054)



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Conclusions and Recommendations

Inflation (Price)

- Recent inflation rates have been lower than long-term rates.
- Inflation forecasts show gradual increase in inflation from currently low inflationary environment. Inflation forecasts range from 2.7% to 3.4%.
- Buck recommends **no change** to the current inflation assumption of 3.12%.

Payroll Growth (Wage Inflation)

- Used as the economic portion of the salary scale, payroll growth assumption in projections, and payroll assumption for level percent of payroll amortization method.
- Over the past 4 years, average annual pay increased 3.4% for PERS and 3.1% for TRS.
- Nationally, wages have ranged from .53% over the last 10 years to .58% over the last 50 years above inflation (price).
- Buck recommends **no change** to the current payroll growth/wage inflation assumption of 3.62%.

Conclusions and Recommendations (continued)

Expected long-term rate of investment return used to set the Discount Rate assumption

- Rates of return since 1991 have varied between 20% and -20%, but only in 4 years out of the last 23 years have returns been negative. Mean returns during this period are below the current assumed rates, but largely due to 2008-9 financial crisis return of -20% (-10% for NGNMRS).

- Future forecasts show expected returns are currently below the assumed rates, but continued economic improvement are expected to increase expected returns to levels above the current assumed rates. Mean returns over the next 20 years are expected to be around 9.0% for PERS and 7.4% for NGNMRS.

- Discounting future expected annual benefit payments by the forecasted returns, net of expenses, showed the current assumed discount rate of 8.0% (7.0% for NGNMRS) is supportable by the expected long-term investment returns given the current asset allocation policies.

Conclusions and Recommendations (continued)

- Buck is not recommending a change in the Discount Rate assumption at this time, but consideration should be given to the likelihood of future investment policy changes due to liquidity needs and shortening benefit duration for the closed plans (PERS and TRS).
- Need for long-term investment and funding policy analysis for PERS and TRS
  - The future impact of increased liquidity needs and shortened benefit duration should be analyzed to better understand the impact this has on the investment and funding risk of the systems.

Questions?

Disclosures

- The analysis in this presentation were developed for the Alaska Retirement Management Board and State of Alaska Staff by Buck Consultants, LLC using generally accepted actuarial principles and techniques in accordance with all applicable Actuarial Standards of Practice (ASOPs).
- The calculations and projections are based on member and financial data, current Board policies, actuarial assumptions and methods, and plan provisions summarized in the 2013 actuarial valuation reports of the Alaska Retirement Systems. Measurements assume actuarial assumptions are exactly realized by future experience, including an investment rate of return of 8.0%.
- No third party recipient of Buck's work product should rely upon Buck's work product absent involvement of Buck or without our approval.
- Future actuarial measurements may differ significantly from the current and projected measurements presented in this report due to such factors as: plan experience different from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.
- David Slishinsky is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. He is an Associate of the Society of Actuaries, an Enrolled Actuary, and a Fellow of the Conference of Consulting Actuaries. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

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ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Gabriel Roeder Smith Review
Experience Analysis

ACTION: X

DATE: September 18, 2014

INFORMATION: ____

BACKGROUND:

AS 37.10.220(a)(9) prescribes that the Alaska Retirement Management Board (Board) "review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years". The current actuarial consultant is Buck Consultants.

In addition, under AS 37.10.220(a)(9), "the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board". Gabriel Roeder Smith (GRS) is the Board's reviewing actuary.

STATUS:

GRS has completed its review of the following reports prepared by Buck Consultants:

(1) an experience analysis of the Public Employees' Retirement System and Teachers' Retirement System for the period July 1, 2009 to June 30, 2013
(2) an experience analysis of the Public Employees' Retirement System and Teachers' Retirement System Defined Contribution Retirement Plans as of June 30, 2013
(3) an experience analysis of the Judicial Retirement System as of June 30, 2012
(4) an experience analysis of the National Guard and Naval Militia Retirement System as of June 30, 2012

The Board has been provided with a draft report describing a review of the experience reports set out above.

RECOMMENDATION:

That the Alaska Retirement Management Board accept the GRS review as prepared and presented.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Acceptance of Experience Analysis	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND:

AS 37.10.220(a)(9) prescribes that the Alaska Retirement Management Board (Board) "review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years".

In addition, under AS 37.10.220(a)(9), "the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board".

STATUS:

Buck Consultants has completed the following experience analyses and the reports have been presented to the Board:

(1) an experience analysis of the Public Employees' Retirement System and Teachers' Retirement System Defined Benefit Retirement Plans for the period July 1, 2009 to June 30, 2013;
(2) an experience analysis of the Public Employees' Retirement System and Teachers' Retirement System Defined Contribution Retirement Plans for the period July 1, 2009 to June 30, 2013;
(3) an experience analysis of the Judicial Retirement System for the period July 1, 2008 to June 30, 2012; and
(4) an experience analysis of the National Guard and Naval Militia Retirement System for the period July 1, 2008 to June 30, 2012.

Gabriel Roeder Smith & Company (GRS), the Board's actuary, has reviewed these experience analyses and has provided their report to the Board.

RECOMMENDATION:

That the Alaska Retirement Management Board approves Resolution 2014-16, accepting the experience analyses prepared by Buck Consultants, as well as the assumption changes recommended therein.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the actuarial experience analysis for the Public Employees' Retirement System, Teachers' Retirement System, Judicial Retirement System, and Alaska National Guard and Naval Militia Retirement System

Resolution 2014-16

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for the funds of the Public Employees' Retirement System, Teachers' Retirement System, Judicial Retirement System, and Alaska National Guard and Naval Militia Retirement System; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability;

WHEREAS, AS 37.10.220(a)(9) requires the Board to conduct an experience analyses of the retirement systems not less than once every four years, except for health cost assumptions which shall be reviewed annually, and that the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second actuary before presentation to the board;

NOW THEREFORE BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Public Employees' Retirement System’s, Teachers' Retirement System’s, Judicial Retirement System’s, and Alaska National Guard and Naval Militia Retirement System’s Actuarial Experience Analysis as of June 30, 2013, as well as the assumption changes recommended therein, prepared by Buck Consultants be approved.

DATED at Fairbanks, Alaska this ____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: History of PERS / TRS Employer Contribution Rates

ACTION: ________

DATE: September 18, 2014

INFORMATION: X

Attached is a history of employer contribution rates adopted by the Alaska Retirement Management Board for Fiscal Years 2010 through 2015, as well as the proposed FY 2016 contribution rates.

ARMB ADOPTED RATES									
									PROPOSED
		FY10	FY11	FY12 (a)	FY13	FY14 (b)	FY15 (b)	FY15 (c)	FY16 (d)
Public Employees' Retirement System (PERS)									
	DB Employer Contribution Rate	27.65%	27.96%	33.49%	35.84%	35.68%	44.03%	31.90%	27.19%
	DCR - Retiree Medical Plan	0.83%	0.55%	0.51%	0.48%	0.48%	1.66%	1.66%	1.68%
	DCR - Occupational Death & Disability - All Others	0.30%	0.31%	0.20%	0.14%	0.20%	0.22%	0.22%	0.22%
	DCR - Occupational Death & Disability - Peace Officer/Fire Fighter	1.33%	1.18%	0.97%	0.99%	1.14%	1.06%	1.06%	1.05%
Teachers' Retirement System (TRS)									
	DB Employer Contribution Rate	39.53%	38.56%	45.55%	52.67%	53.62%	70.75%	48.69%	29.27%
	DCR - Retiree Medical Plan	1.03%	0.68%	0.58%	0.49%	0.47%	2.04%	2.04%	2.04%
	DCR - Occupational Death & Disability	0.32%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(a) Beginning in Fiscal Year 2012, the defined benefit employer contribution rates for both PERS and TRS incorporated the normal cost of the Defined Contribution Retirement Plan.

(b) As noted in the June 30, 2012 actuarial valuation reports, "The Board changed the amortization method used for funding from the level percentage of payroll method to the level dollar method in June 2012, effective June 30, 2012."

(c) During the FY 2014 legislative session, HB 385 enacted certain changes into law. In AS 37.10.220(a), item (a)(8)(B) was amended to define that "the appropriate contribution rate for liquidating the past service liability of the defined benefit retirement plan under AS 14.25.009 - 14.25.220 or the past service liability of the defined benefit retirement plan under AS 39.35.095 - 39.35.680 must be determined by a level percent of pay method based on amortization of the past service liability for a closed term of 25 years;"
The PERS DB and TRS DB Employer Contribution Rates for FY 2015 were updated to the level percentage of pay methodology from the previously determined rates that were prepared using the level dollar methodology.

(d) Chapter 52, SLA 14, amended AS 37.10220(a)(8)(B) in determining the methodology in determining "an appropriate contribution rate for liquidating any past service liability" by establishing in statute that for PERS and TRS DB plans, that rate must be determined by a level percent of pay method based on amortization of the past service liability for a closed term 25 years. This change took effect immediately.

FY 2016 PERS/TRS DB Employer Contribution Rate Methodology

During the 2014 legislative session, the legislature enacted certain changes into law which change the manner in which PERS/TRS employer contribution rates and corresponding state assistance amounts are computed. The changes made and the steps we have taken to implement such changes are set out here.

(1) Amortization Period – closed 25 years. SCS HB 385(FIN) amended the ARMB's authorities statute, AS 37.10.220, to provide that PERS and TRS past service liability be amortized over a new closed period of 25 years, beginning in FY 2015. Secs. 2, 4.

Buck Consultants implemented this change by reinitializing the amortization with a closed 25 year period running from FY2015 through FY 2039.

(2) Eliminate 2 year rate setting lag. The capital budget (HCS CSSB 119(FIN) AM H), contained intent language requesting the ARMB and the Department of Administration direct the actuary to eliminate the 2 year rate-setting lag from the PERS and TRS actuarial valuations. Sec. 48(d).

In the process used to date, the pending valuation is used to set contribution rates for the fiscal year two years later. So for instance, the FY2013 valuations would normally be considered and adopted in 2014, and used to set employer contribution rates for FY2016.

To implement this change, Buck recommended use of (i) data from the FY2013 valuation, (ii) a roll-forward projection assuming expected FY2014 and FY2015 demographic experience, but use actual benefit payments for FY2014, and a best estimate of actual net investment rate of return for FY2014 of 17.7% and assumed 8.0% for FY 2015 to develop assets, and (iii) use of the results of the 2014 experience analysis , to set rates for FY2016. In other words, by using a projection of experience through FY2015, with updated actuarial assumptions, to set rates for FY2016, the rate-setting lag is eliminated.

We concurred with Buck's recommendation, and Buck proceeded accordingly.

(3) Eliminate actuarial smoothing. The capital budget (HCS CSSB 119(FIN) AM H), contained intent language requesting the ARMB and the Department of Administration direct the actuary to eliminate the actuarial smoothing from the PERS and TRS actuarial valuations. Sec. 48(e).

To implement this change, Buck recommended that actuarial asset values be reset to market values on 6/30/2014. Buck further recommended that the standard 5 year smoothing method that smooth's the asset values by recognizing 20% of gains and losses each year for 5 years be restarted in FY2015.

We concurred with Buck's recommendation, and Buck proceeded accordingly. To the extent that stakeholders would in the future like to see actuarial projections computed with unsmoothed asset values, it can be provided on request.

***

While the ARMB has considered and adopted the FY2013 PERS and TRS valuations at its June meeting, it deferred adoption of the FY2016 employer contribution rates until this meeting.

As suggested above, in lieu of using the FY2013 valuations to set employer contribution rates for FY2016, Buck has used an adjusted process to reflect the amendments enacted by the legislature. In so doing, Buck has used the most current data from the FY2013 valuations, the FY2014 experience analysis, and a projection of expected FY2014 and FY2015 experience.

State of Alaska
Allocation of Projected FY16 Employer and State Assistance Contributions
Based on June 30, 2013 Valuation Considering Amortization Method Changes under HB 385, Asset and Roll-Forward Methodology Proposed to Comply with Elimination of the Two-Year Lag under SB 119, and Actuarial Assumptions Based on Recommendations from the 2014 Experience Analysis

	PERS	TRS
Projected FY16 DB Payroll *	$1,310,919,000	$468,515,000
Projected FY16 DCR Payroll *	$1,125,437,000	$310,061,000
Projected Total FY16 Payroll *	$2,436,356,000	$778,576,000

	PERS Percent of Total Payroll	PERS Dollar Amount	TRS Percent of Total Payroll	TRS Dollar Amount
Employer Contributions				
DB Plan	10.80%	$263,050,340	4.22%	$32,824,335
Employer Normal Cost	*2.86%*	*$69,679,782*	*2.04%*	*$15,882,951*
Past Sevice Cost Payment	*7.94%*	*$193,370,558*	*2.18%*	*$16,941,384*
DB Healthcare Plan	6.59%	$160,628,735	3.55%	$27,633,467
Employer Normal Cost	*3.19%*	*$77,719,756*	*2.60%*	*$20,242,976*
Past Sevice Cost Payment	*3.40%*	*$82,908,979*	*0.95%*	*$7,390,491*
DCR Plan	4.61% ***	$112,319,245	4.79% ***	$37,331,344
Total	22.00%	$535,998,320	12.56%	$97,789,146
State Assistance Contributions to DB				
DB Plan	3.63% **	$88,586,485	11.63% **	$90,589,614
DB Healthcare Plan	1.56% **	37,934,279	5.08% **	39,518,713
Total	5.19%	$126,520,764	16.71%	$130,108,327
Total DB				
DB Plan	14.43%	$351,636,825	15.85%	$123,413,949
DB Healthcare Plan	8.15%	198,563,014	8.63%	67,152,180
Total	22.58% *	$550,199,839	24.48% *	$190,566,129
Total DB and DCR	27.19%	$662,519,084	29.27%	$227,897,473

* Based on projections from June 30, 2013 valuation updated with assumption changes made as a result of the 2014 experience analysis.
** Contribution was allocated based on the past service portion of the contribution rate as of June 30, 2013 for pension and healthcare.
***Based on total payroll.

Data, plan provisions and methods used for the DB plan costs are described in the final actuarial valuation reports as of June 30, 2013. These rates and amounts include method changes due to HB 385 and SB 119 and assumption changes recommended in the 2014 experience analysis.

Data, assumptions, plan provisions and methods used for the DCR plan costs are described in the final actuarial valuation reports as of June 30, 2013.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	FY 16 PERS Employer Contribution Rate Tier I - III	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND:

AS 39.35.270 requires that the amount of each Public Employees' Retirement System (PERS) employer's contribution to the system shall be determined by applying the employer's contribution rate, as certified by the Alaska Retirement Management Board (Board), to the total compensation paid to the active employee. Statutory employer contribution and additional state contribution are established under the following two sections of Alaska Statute:

Sec. 39.35.255. Contributions by employers. (a) Each employer shall contribute to the system every payroll period an amount calculated by applying a rate of 22 percent of the greater of the total of all base salaries

(1) paid by the employer to employees who are active members of the system, including any adjustments to contributions required by AS 39.35.520; or

(2) paid by the employer to employees who were active members of the system during the corresponding payroll period for the fiscal year ending June 30, 2007."

and:

Sec. 39.35.280. Additional state contributions. In addition to the contributions that the state is required to make under AS 39.35.255 as an employer, the state shall contribute to the plan each July 1 or, if funds are not available on July 1, as soon after July 1 as funds become available, an amount for the ensuing fiscal year that, when combined with the total employer contributions that the administrator estimates will be allocated under AS 39.35.255(c), is sufficient to pay the plan's past service liability at the contribution rate adopted by the board under AS 37.10.220 for that fiscal year.

STATUS:

The Division of Retirement & Benefits' actuary, Buck Consultants, has completed the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014. This roll-forward valuation has been reviewed by the Board's actuary, Gabriel, Roeder, Smith & Co. (GRS).

RECOMMENDATION:

That the Alaska Retirement Management Board set Fiscal Year 2016 PERS actuarially determined contribution rates attributable to employers consistent with its fiduciary duty, as set out in the attached form of Resolution 2014-17.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Employer Contribution Rate
For the Public Employees' Retirement System

Resolution 2014-17

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability; and

WHEREAS, AS 39.35.255 establishes a statutory employer contribution rate of 22.00 percent and AS 39.35.280 requires additional state contribution to make up the difference between 22.00 percent and the actuarially determined contribution rate;

WHEREAS, the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014 determines that the actuarially determined contribution rate for pension benefits is 14.43 percent composed of the normal cost rate of 2.86 percent and past service rate of 11.57 percent;

WHEREAS, the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014 determines that the actuarially determined contribution rate for postemployment healthcare benefits is 8.15 percent composed of the normal cost rate of 3.19 percent and past service rate of 4.96 percent;

WHEREAS, the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014 presents the employer rate incorporating the normal cost of the Defined Contribution Retirement Plan of 4.61 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Fiscal Year 2016 actuarially determined contribution rate attributable to employers participating in the Public Employees' Retirement System is set at 27.19 percent, composed of the contribution rate for defined benefit pension of 14.43 percent, the contribution rate for postemployment healthcare of 8.15 percent, and the contribution rate for defined contribution pension of 4.61 percent.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	FY 2016 PERS Retiree Major Medical Insurance and Occupational Death & Disability Benefit Rates	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND:

The Alaska Retirement Management Board (Board) establishes rates for the Public Employees' Retirement System (PERS) Tier IV Defined Contribution Retirement Plan (DCR) for the following plans: 1) Retiree Major Medical Insurance (RMMI) and 2) Occupational Death & Disability (OD&D) under the following two sections in Alaska Statute:

Retiree Major Medical Insurance
AS 39.35.750 (b) requires that "An employer shall also contribute an amount equal to a percentage, as adopted by the board, of each member's compensation from July 1 to the following June 30 to pay for retiree major medical insurance."

and:

Occupational Death & Disability
AS 39.35.750 (e) requires that "An employer shall make annual contributions to the plan in an amount determined by the board to be actuarially required to fully fund the cost of providing occupational disability and occupational death benefits under AS 39.35.890 and 39.35.892. The contribution required under this subsection for peace officers and fire fighters and the contribution required under this subsection for other employees shall be separately calculated based on the actuarially calculated costs for each group of employees."

STATUS:

The Division of Retirement & Benefits' actuary, Buck Consultants, has completed the actuarial valuation of the PERS DCR Plan as of June 30, 2013. The valuation has been reviewed by the Board's actuary, Gabriel, Roeder, Smith & Co. (GRS).

According to the PERS DCR Plan actuarial valuation report, and confirmed by GRS, the Fiscal Year 2016 actuarially determined contribution rate attributable to employers for the Retiree Major Medical Insurance (RMMI) should be 1.68 percent; for the peace officer/firefighter

Occupational Death & Disability (OD&D) Benefit should be 1.05 percent; and for “all other” OD&D Benefit should be 0.22 percent.

RECOMMENDATION:

That the Alaska Retirement Management Board set Fiscal Year 2015 Retiree Major Medical Insurance and Occupational Death & Disability Benefit rates as set out in the following resolutions:

1) Resolution 2014-18: Public Employees’ Defined Contribution Retirement Plans Retiree Major Medical Insurance Rate
2) Resolution 2014-19: Public Employees’ Defined Contribution Retirement Plan Occupational Death & Disability Benefit Rates

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Employer Contribution Rate
For Public Employees' Defined Contribution Retirement Plan
Retiree Major Medical Insurance

Resolution 2014-18

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220 requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios; and

WHEREAS, AS 39.35.750(b) requires the Board to approve an amount equal to a percentage of each member's compensation from July 1 to the following June 30 to pay for retiree major medical insurance;

WHEREAS, the June 30, 2013 PERS Defined Contribution actuarial valuation report determines that the actuarially determined contribution rate for retiree major medical insurance is 1.68 percent composed of the normal cost rate of 1.36 percent and past service rate of 0.32 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, the Fiscal Year 2016 employer contribution rate for the retiree major medical insurance for the public employees' defined contribution plan is set at 1.68 percent.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Employer Contribution Rate
For Public Employees' Defined Contribution Retirement Plan
Occupational Death & Disability Benefit Rates

Resolution 2014-19

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220 requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios; and

WHEREAS, AS 39.35.750(e) requires the Board to determine an actuarially sound amount required to fully fund the cost of providing occupational disability and occupational death benefits under AS 39.35.890 and 39.35.892, and that such contribution for peace officers and fire fighters, and the contribution for other employees shall be calculated separately;

WHEREAS, the June 30, 2013 PERS Defined Contribution actuarial valuation report determines that the actuarially determined contribution rate for peace officer / firefighter occupational death & disability is 1.05 percent composed of the normal cost rate of 1.14 percent and past service rate of -0.09 percent and the "all other" is 0.22 percent composed of the normal cost rate of 0.28 percent and past service rate is -0.06 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, the Fiscal Year 2015 employer contribution rate for public employees' occupational death and disability benefit rate is set at 1.05 percent for peace officers and fire fighters, and at 0.22 percent for all other Public Employees' Retirement System employees.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	FY 16 TRS Employer Contribution Rate	ACTION:	X
	Tier I - II		
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND:

AS 14.25.070 requires that the amount of each Teachers' Retirement System (TRS) employer's contribution to the system shall be determined by applying the employer's contribution rate, as certified by the Alaska Retirement Management Board (ARMB), to the total compensation paid to the active employee. Statutory employer contribution and additional state contribution are established under the following two sections of Alaska Statute:

Sec. 14.25.070. Contributions by employers. (a) Each employer shall contribute to the system every payroll period an amount calculated by applying a rate of 12.56 percent to the total of all base salaries paid by the employer to active members of the system, including any adjustments to contributions required by AS 14.25.173(a).

and:

Sec. 14.25.085. Additional state contributions. In addition to the contributions that the state is required to make under AS 14.25.070 as an employer, the state shall contribute to the plan each July 1 or, if funds are not available on July 1, as soon after July 1 as funds become available, an amount for the ensuing fiscal year that, when combined with the total employer contributions that the administrator estimates will be allocated under AS 14.25.070(c), is sufficient to pay the plan's past service liability at the contribution rate adopted by the board under AS 37.10.220 for that fiscal year.

STATUS:

The Division of Retirement & Benefits' actuary, Buck Consultants, has completed the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014. This roll-forward valuation has been reviewed by the Board's actuary, Gabriel, Roeder, Smith & Co. (GRS).

RECOMMENDATION:

That the Alaska Retirement Management Board set Fiscal Year 2016 TRS actuarially determined contribution rates attributable to employers consistent with its fiduciary duty, as set out in the attached form of Resolution 2014-20.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Employer Contribution Rate
For the Teachers' Retirement System

Resolution 2014-20

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability; and

WHEREAS, AS 14.25.070 establishes a statutory employer contribution rate of 12.56 percent and AS 14.25.085 requires additional state contribution to make up the difference between 12.56 percent and the actuarially determined contribution rate;

WHEREAS, the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014 determines that the actuarially determined contribution rate for pension benefits is 15.85 percent composed of the normal cost rate of 2.04 percent and past service rate of 13.81 percent;

WHEREAS, the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014 determines that the actuarially determined contribution rate for postemployment healthcare benefits is 8.63 percent composed of the normal cost rate of 2.60 percent and past service rate of 6.03 percent;

WHEREAS, the Allocation of Projected FY 16 Employer and State Assistance Contributions Based on June 30, 2013 Roll Forward Valuation report dated 09/08/2014 presents the employer rate incorporating the normal cost of the Defined Contribution Retirement Plan of 4.79 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Fiscal Year 2016 actuarially determined contribution rate attributable for employers participating in the Teachers' Retirement System is set at 29.27 percent, composed of the contribution rate for defined benefit pension of 15.85 percent, the contribution rate for postemployment healthcare of 8.63 percent, and the contribution rate for defined contribution pension of 4.79 percent.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

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Chair

ATTEST:

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Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	FY 2016 TRS Retiree Major Medical Insurance and Occupational Death & Disability Benefit Rates	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND:

The Alaska Retirement Management Board (Board) establishes rates for the Teachers' Retirement System (TRS) Tier III Defined Contribution Retirement Plans for the following plans: 1) Retiree Major Medical Insurance (RMMI) and 2) Occupational Death & Disability (OD&D) under the following two sections in Alaska Statute:

Retiree Major Medical Insurance
AS 14.25.350 (b) requires that "An employer shall also contribute an amount equal to a percentage, as approved by the board, of each member's compensation from July 1 to the following June 30 to pay for retiree major medical insurance."

and:

Occupational Death & Disability
AS 14.25.350 (e) requires that "An employer shall make annual contributions to a trust account in the plan, applied as a percentage of each member's compensation from July 1 to the following June 30, in an amount determined by the board to be actuarially required to fully fund the cost of providing occupational disability and occupational death benefits under AS 14.25.310 - 14.25.590. The contribution required under this subsection for peace officers and fire fighters and the contribution required under this subsection for other employees shall be separately calculated based on the actuarially calculated costs for each group of employees."

STATUS:

The Division of Retirement & Benefits' actuary, Buck Consultants, has completed the actuarial valuation of the TRS DCR Plan as of June 30, 2013. The valuation has been reviewed by the Board's actuary, Gabriel, Roeder, Smith & Co. (GRS).

According to the TRS DCR Plan actuarial valuation report, and confirmed by GRS, the Fiscal Year 2016 actuarially determined contribution rate attributable to employers for the Retiree

Major Medical Insurance (RMMI) should be 2.04 percent and for the Occupational Death & Disability (OD&D) Benefit should be 0.00 percent.

RECOMMENDATION:

That the Alaska Retirement Management Board set Fiscal Year 2016 TRS Retiree Major Medical Insurance and Occupational Death & Disability Benefit rates as set out in the following resolutions:

1) Resolution 2014-21: Teachers' Defined Contribution Retirement Plans Retiree Major Medical Insurance Rate
2) Resolution 2014-22: Teachers' Defined Contribution Retirement Plan Occupational Death & Disability Benefit Rate

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Employer Contribution Rate
For Teachers' Defined Contribution Retirement Plan
Retiree Major Medical Insurance

Resolution 2014-21

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220 requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios; and

WHEREAS, AS 14.25.350(b) requires the Board to approve an amount equal to a percentage of each member's compensation from July 1 to the following June 30 to pay for retiree major medical insurance;

WHEREAS, the June 30, 2013 TRS Defined Contribution actuarial valuation report determines that the actuarially determined contribution rate for retiree major medical insurance is 2.04 percent composed of the normal cost rate of 1.63 percent and past service rate of 0.41 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, the Fiscal Year 2016 employer contribution rate for the retiree major medical insurance for the teachers' defined contribution plan is set at 2.04 percent.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

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Secretary

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Employer Contribution Rate
For Teachers' Defined Contribution Retirement Plan
Occupational Death & Disability Benefit Rate

Resolution 2014-22

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220 requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios; and

WHEREAS, AS 14.25.350 (e) requires the Board to determine an actuarially sound amount required to fully fund the cost of providing occupational disability and occupational death benefits under AS 14.25.310 – 14.25.590;

WHEREAS, the June 30, 2013 TRS Defined Contribution actuarial valuation report determines that the actuarially determined contribution rate for occupational death & disability is 0.00 percent composed of the normal cost rate of 0.05 percent and past service rate of -0.05 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, the Fiscal Year 2016 employer contribution rate for teachers' occupational death and disability benefit rate is set at 0.00 percent for all Teachers' Defined Contribution Retirement Plan employees.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	FY 15 Alaska National Guard and Naval Militia Contribution Amount	ACTION:	X
DATE:	September 18, 2014	INFORMATION:	

BACKGROUND:

AS 26.05.226 requires that "(a) The Department of Military and Veterans' Affairs (DMVA) shall contribute to the Alaska National Guard and Alaska Naval Militia retirement system the amounts determined by the Alaska Retirement Management Board as necessary to (1) fund the system based on the actuarial requirements of the system as established by the Alaska Retirement Management Board; and (2) administer the system. (b) The amount required for contributions from the Department of Military and Veterans' Affairs under (a) of this section shall be included in the annual appropriations made to the Department of Military and Veterans' Affairs."

STATUS:

The Division of Retirement & Benefits' (Division's) actuary, Buck Consultants, has completed the roll-forward actuarial valuation of the Alaska National Guard and Naval Militia Retirement System (NGNMRS) as of June 30, 2013. The valuation has been reviewed by the Alaska Retirement Management Board's (Board) actuary, Gabriel, Roeder, Smith & Co. (GRS) and then certified and accepted by the Board.

According to the NGNMRS June 30, 2013 roll-forward actuarial valuation report, and confirmed by GRS, the Fiscal Year 2016 actuarially determined contribution amount should be $734,560.

For FY 2015, the Alaska Legislature appropriated the normal cost in House Bill (HB) 266, Section 1, page 28, line 15 in DMVA's operating budget. The NGNMRS was fully funded as of the June 30, 2012 valuation, therefore, no separate appropriation was made for past service cost. The Division anticipates a similar approach for FY 2016.

RECOMMENDATION:

That the Alaska Retirement Management Board set the Fiscal Year 2016 NGNMRS annual actuarially determined contribution amount consistent with its fiduciary duty, as set out in the attached form of Resolution 2014-23.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2016 Actuarially Determined Contribution Amount
For the Alaska National Guard and Naval Militia Retirement System

Resolution 2014-23

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, AS 37.10.220(a)(8) requires the Board to coordinate with the retirement system administrator to conduct an annual actuarial valuation of each retirement system to determine system assets, accrued liabilities and funding ratios, and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Fiscal Year 2016 actuarially determined contribution amount for the State of Alaska, Department of Military and Veterans' Affairs to the Alaska National Guard and Naval Militia Retirement System is set at $734,560, composed of the contribution amount for the normal cost of $631,921, past service cost of ($42,361), and expense load cost of $145,000.

DATED at Fairbanks, Alaska this _____ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	FY 2016 JRS Employer Contribution Rate	ACTION:	
DATE:	September 18, 2014	INFORMATION:	X

BACKGROUND:

AS 22.25.046 states in part that:

(a) The state court system shall contribute to the judicial retirement system at the rate established by the commissioner of administration. The contribution rate shall be based on the results of an actuarial valuation of the judicial retirement system. The results of the actuarial valuation shall be based on actuarial methods and assumptions adopted by the commissioner of administration.

(b) The contribution rate shall be a percentage which, when applied to the covered compensation of all active members of the judicial retirement system, will generate sufficient money to support, along with contributions from members, the benefits of the judicial retirement system.

(c) Employer contributions shall be separately computed for benefits provided by AS 22.25.090 and shall be deposited in the Alaska retiree health care trust established under AS 39.30.097(a)."

STATUS:

The Division of Retirement & Benefits' consulting actuary, Buck Consultants, has completed the roll-forward actuarial valuation of the Alaska Judicial Retirement System (JRS) from the last valuation date of June 30, 2012, to June 30, 2013.

According to the JRS roll-forward actuarial valuation report as of June 30, 2013, the Fiscal Year 2016 employer contribution rate should be 82.48 percent based on the following table:

	Pension	**Post-Employment Health Care**	**Total**
Normal Cost Rate	35.92%	3.74%	39.66%
Past Service Cost Rate	43.98%	-1.16%	42.82%
Total Employer Contribution Rate	79.90%	2.58%	82.48%

The Alaska Legislature has established operating budget language that explicitly addresses JRS past service costs separate from the normal costs. Normal costs as a percentage are charged to the Alaska Court System's operating budget and past service cost in dollars is funded separately in retirement section language similar to that of PERS and TRS. An amount for the System's past service cost will be computed and reflected in the operating budget and will be deposited in the JRS pension benefit and/or the JRS retiree healthcare benefit trusts during FY 2016.

Structured Alpha 1000 Plus

August 2014

Greg Tournant
Managing Director, Portfolio Manager
(212) 739-3808

Jeff Sheran, CFA
Managing Director, Product Specialist
(212) 739-3034

Melody McDonald, CIMA
Managing Director, Relationship Manager
(415) 954-5477

Allianz Global Investors

Structured Alpha 1000 Plus

Backtested Performance Disclosure

The back-tested performance information contained in this presentation is being provided for use in a one-on-one presentation and cannot be shared, reproduced or distributed to third parties or the public without the express written consent of AllianzGI US Back-tested performance is being presented for illustrative purposes only and does not represent actual performance of any client account.

Cash is included in the results and is transactional in nature. Where gross returns are indicated, returns are illustrated gross of investment management fees and do not reflect the cost of brokerage, custody, or other fees that a client would have paid. Where net returns are indicated, net returns reflect the deduction of standard advisory fees, commissions and any other expenses that would be applicable. Actual fees may vary depending on, among other things, the applicable fee schedule and portfolio size. The fee schedule and anticipated expenses are included in the client agreement. Please see AllianzGI US's Form ADV Part 2A Brochure for all standard applicable fee schedules.

The backtested performance presented from September 2005 through July 2012 is derived from the application of a model designed to approximate the expected value of VIX futures had they been available for this period. The model, which derives theoretical forward variance swaps interpolated from the S&P 500 volatility surfaces, does not reflect variations that may occur between the price of actual VIX futures and their imputed value based on other market inputs. Such data is not available for periods prior to September 2005. While some VIX futures contracts existed in 2004 and 2005, contracts across the entire curve were incomplete and liquidity was insufficient for accurate analysis. By January 2006, all necessary contracts existed and traded, so actual VIX futures data and indices/ETN's tied these futures were used from this point forward. Cash is included in the results and is transactional in nature. Where gross returns are indicated, the returns do not give effect to investment advisory fees, the cost of custody or other fees that a client would have paid. Where net returns are indicated, net returns reflect the deduction of (a) a performance fee equal to 20% of the portfolio's total return, including the application of a high watermark as well as the fixed management fee of 1%, commissions and any other expenses that would be applicable. Performance based fees are typically calculated on a quarterly basis rather than on a monthly basis as shown above; therefore, the actual performance fee for a particular quarter may be higher than the aggregate of the relevant monthly performance fees shown. Net performance for an investor may differ from the performance shown above due to application of the cumulative high watermark, frequency of performance fee calculation, expenses, choice of an underlying portfolio different than the 90-Day T-Bill and other considerations, including those related to the timing of an investor's initial investment and any subsequent cash flows.

Investors should not assume they will have investment results that are similar to the back-tested performance shown. There are frequently material differences between back-tested performance results and actual results subsequently achieved by a particular investment strategy.

Additional information regarding policies for calculating and reporting returns is available upon request. **Back-tested returns have many inherent limitations, only some of which are described here.** The returns were developed with the benefit of hindsight and do not reflect the impact that material economic and market factors might have had on investment decisions if client funds were actually managed in the manner shown. Furthermore, back-tested returns do not represent actual trading. The back-tested returns have been generated based on certain assumptions that may not be reasonable or applicable for particular clients. Changes in the assumptions may have a material impact on back-tested returns presented. Performance is shown for a limited period of time. Performance over a different market cycle may not be as favorable as the performance shown and may result in losses. There can be no assurance that any client account will achieve profits similar to those shown or avoid incurring substantial losses.

Please see the backtest methodology in this presentation and the additional disclosures at the end of this presentation.

Introducing Structured Alpha 1000 Plus

- Absolute-return strategy that pursues risk-controlled returns using options and other volatility instruments
- Ability to perform whether equity markets are up or down, smooth or volatile
- Simple, liquid, listed holdings

See additional disclosure at the end of this presentation.

Organization

Allianz Global Investors

Structured Alpha Investment Team

Investment Team

Greg Tournant (18/11) *Chief Investment Officer U.S. Structured Products, Lead Portfolio Manager*	**Trevor Taylor (15/5)** *Co-Lead Portfolio Manager*	**Stephen Bond-Nelson (21/14)** *Portfolio Manager*	**Jeff Sheran, CFA (22/14)** *Product Specialist*
Valentin Ivanov, CAIA (15/13) *Research Analyst*	**Scott Powell, CFA (16/5)** *Research Analyst*	**Michael Purcell, CFA (10/7)** *Research Analyst*	**John Donnelly (7/4)** *Research Associate*
Megan Silva (6/3) *Product Specialist Associate*			

Trading

Gary McAnly, CFA (21/15) *Head of Derivatives Trading US*	**Terence Duggan (18/15)** *Trader*		

Risk Management

Christian Franzen (14/7) *Global Head of Performance & Portfolio Risk*	**Fox Ling, Ph.D., CFA (20/20)** *Analyst*	**IDS GmbH** *Independent subsidiary of our parent, Allianz SE, that provides VaR related risk analytics*	

Numbers in parentheses reflect years of industry experience/years of tenure at AllianzGI US and affiliates and are updated twice a year, first quarter and third quarter.

Investment Approach

Allianz Global Investors

Summary Profile

Category	Structured Alpha 1000 Plus
Alpha target (net, annualized)	10%
Standard deviation target (annualized)	8% to 10%
Instruments	Listed options on US equity and volatility indexes; VIX futures
Underlying beta exposure	90 Day T-Bill
Expected correlation, equities	0.0
Expected correlation, fixed income	0.0
Leverage	No borrowing
Management Fee	0%
Performance Fee	30%

See additional disclosure at the end of this presentation.

Investor Behavior Creates Inefficiencies in the Volatility Market

- Market biases are driven by the following dynamics:

  1. The investment world is long equity, due to the strong long-term returns of the asset class
  2. This leads investors to buy ‘put’ options to protect their equity exposure, resulting in systematic overpricing of equity put options
  3. Other equity investors seek to enhance yield by selling ‘call’ options, resulting in systematic underpricing of equity call options

- These mispricings affect instruments across the volatility term structure (e.g. VIX futures, VXX options)

- Structured Alpha Plus seeks to capitalize upon these biases

Investment Philosophy

- Long and short volatility at the same time, at all times
  - Pursue gains, but do not presume that the market will behave normally or that history will repeat itself

- Ability to perform irrespective of the market environment
  - Never make a call on the direction of equities or of volatility

- Three-pronged investment objective:
  - Profit during normal market conditions (up / down / flat)
  - Protect against a market crash
  - Navigate as wide a range of equity-market outcomes as possible

Investment Process – Index Options

Proprietary Statistical Analysis

Identify areas of systematic disagreement with option prices about the probability distribution of future index moves

Optimization: Strike, Duration

Position Construction

Range-Bound Spreads	Directional Spreads	Hedging Positions
Short Volatility	Long-Short Volatility	Long Volatility
Designed to generate returns in normal up, down or flat markets	Designed to generate returns when equity indexes rise or fall more than normal over a multi-week period	Designed to protect the portfolio in the event of a market crash

Optimization: Quantity, Portfolio Effect, Diversification Across Expirations

Structured Alpha Portfolio

See additional disclosure at the end of this presentation.

Allianz Global Investors

Range-Bound Spread Positions

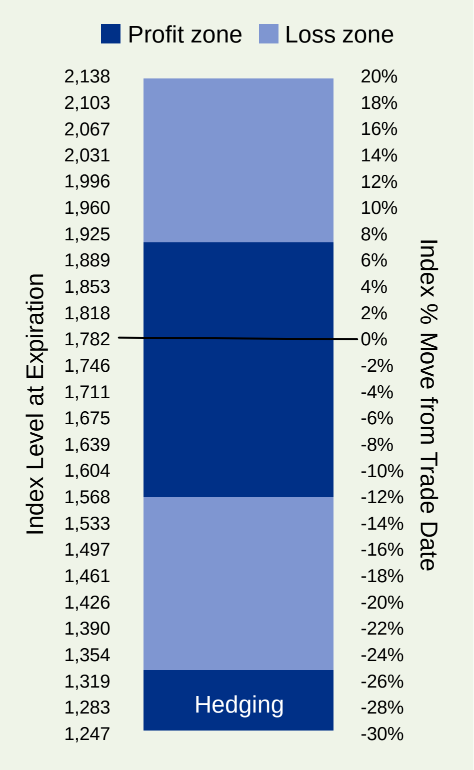
- Sell options that have the greatest probability of expiring worthless, to maximize the premium per unit of risk
- Proprietary statistical model, which analyzes more than 85 years of index price movements, helps optimize the portfolio's profit zones
- These positions have contributed two-thirds of the portfolio's alpha since inception

Example: Range-Bound Spread

Assumed data inputs

Days to Expiration	S&P 500 Level at Initiation	VIX Level at Initiation
49	$1,783	18.41%

Position	Strike	Contracts	Price
Short Call	$1,900	50	$2.05
Short Put	$1,575	50	$6.10
Long Put	$1,450	90	$2.35
Net Credit			$19,600



The portfolio benefits from any index move of +7% to -12%

Diagram above is not intended to show a certain rate of return or even imply that an investor should expect a positive return. Note that in order to manage any of the Structured Alpha strategies, AllianzGI US will need collateral for the options contracts. In the event that, over a continued period of time, there is a sustained loss in closeout of the options contracts, there is a risk that assets used as collateral for the options would need to be utilized to cover the loss incurred from the closeout of the options contracts. The strategies may utilize various indexes. See additional disclosure at the end of this presentation.

Allianz Global Investors

Directional Spread Positions

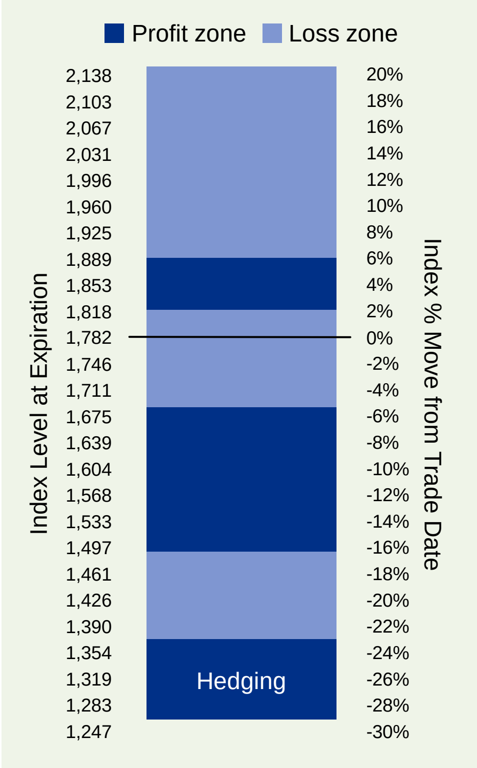
- Construct long-short option positions that benefit from a large index move to the upside and/or downside
- These positions act as portfolio diversifiers, with the ability to add incremental gains when markets behave less typically
- These positions have contributed one-third of the portfolio's alpha since inception

Example: Directional Spread

Assumed data inputs

Days to Expiration	S&P 500 Level at Initiation	VIX Level at Initiation
49	$1,783	18.41%

Position	Strike	Contracts	Price
Long Call	$1,800	20	$27.70
Short Call	$1,860	80	$7.00
Long Put	$1,700	25	$18.40
Short Put	$1,600	50	$7.50
Long Put	$1,400	100	$1.65
Net Debit			-$24,400



The portfolio benefits from index moves of -5 to -16%, or +2 to +6%

Diagram above is not intended to show a certain rate of return or even imply that an investor should expect a positive return. Note that in order to manage any of the Structured Alpha strategies, AllianzGI US will need collateral for the options contracts. In the event that, over a continued period of time, there is a sustained loss in closeout of the options contracts, there is a risk that assets used as collateral for the options would need to be utilized to cover the loss incurred from the closeout of the options contracts. The strategies may utilize various indexes. See additional disclosure at the end of this presentation.

Hedging Positions

- Buy put options – in a greater quantity than sold – to protect the portfolio in the event of a market crash/closure
  - Crash defined as a short-term equity-market decline of 15% or more
- The puts are laddered for various market outcomes to the downside
- These positions are designed for tail risk protection, not for outperformance potential, but are a key feature of the strategy's risk management

See additional disclosure at the end of this presentation.

Portfolio Characteristics

Category	Structured Alpha 1000
Instruments	Listed (standard and flex) options on US equity and volatility indexes (S&P 500, Russell 2000, NASDAQ 100, VXX, VIX)
Option duration	20 to 75 days
Option expiration	15 to 30 different expiration dates
Total put exposure	1.1 to 1.4 times more long puts than short puts
Collateral utilization (approx.)	40%
Number of options	175 to 300 individual option positions
Number of option spreads	80 to 100 spreads

The characteristics above are typical for a portfolio managed in the Structured Alpha strategies. During any particular period the portfolio characteristics may vary from that shown above. Note that in order to manage any of the Structured Alpha strategies, AllianzGI US will need collateral for the options contracts. In the event that, over a continued period of time, there is a sustained loss in closeout of the options contracts, there is a risk that assets used as collateral for the options would need to be utilized to cover the loss incurred from the closeout of the options contracts. Portfolio characteristics are Supplemental Information, and supplement the GIPS compliant presentation in the Appendix. The strategies may utilize indexes other than those listed above. See additional disclosure at the end of this presentation.

Investment Process – Volatility Term Structure

- Net long volatility exposure via VIX futures
  – Seek to perform in rising-volatility environments, i.e. inverse correlation in declining equity markets
- Avoid erosion of capital during normal market conditions
  – Pursue asymmetric return potential by harnessing the volatility term structure's front-end 'melt'
- Adapt nimbly to changing market conditions
  – Adjust long-short balance based on proprietary quantitative signals about the shape of the volatility curve

During any given stage of the investment process the selection criteria may vary from those shown above. The statements above reflect the typical investment process applied to this strategy. At any given time other criteria may affect the investment process. See additional disclosure at the end of the presentation.

Risk Management

Tail-risk hedging positions are embedded in the portfolio at all times

Multiple layers of risk control

Real-time risk monitoring, as well as analysis of statistically significant equity-market scenarios

Independent risk-oversight professionals monitor trade activity and risk profiles daily

See additional disclosure at the end of this presentation.

Expected Behavior

Market Conditions	Typical Outcome
Normal	▪ Portfolio expected to perform in line with its stated return target
Volatile	▪ Potential for higher returns, lower risk
Rapid change from low to high volatility	▪ Performance could be more volatile than usual for a few weeks ▪ Higher volatility levels would enable higher returns in subsequent months
Rapid change from high to low volatility	▪ Higher return potential over a few weeks ▪ Lower volatility levels would bring performance potential back to normal levels of expected return

Measurement Methodology

- Critical to match the measurement period with 1 to 2 portfolio rotations (2 to 4 months)
- Over shorter measurement periods, results could be distorted by mark-to-market, volatility of volatility, and unrealized gains/losses

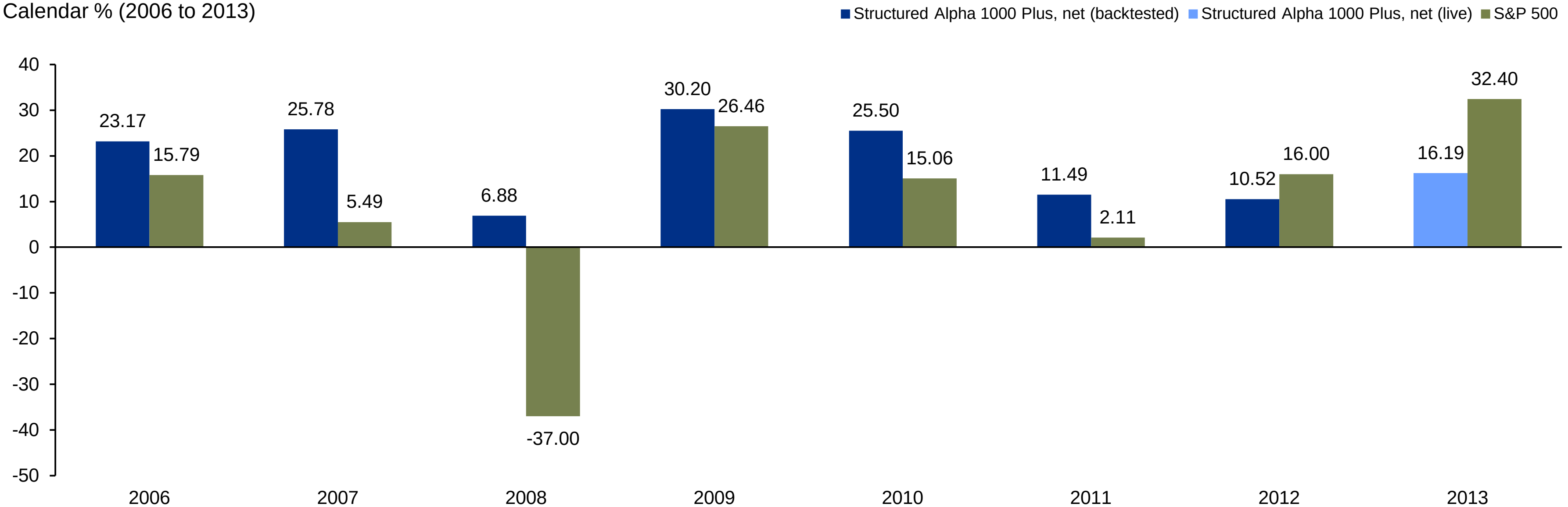
See additional disclosure at the end of this presentation.

Performance

Performance – Structured Alpha 1000 Plus

	September 2005 – July 2012 (Backtested)		August 2012 – July 2014 (Live)	
	Structured Alpha 1000 Plus	**S&P 500**	**Structured Alpha 1000 Plus**	**S&P 500**
Cumulative Return, net	248.95	30.64	13.87	46.17
Annualized Return, net	**19.80**	3.94	**6.71**	20.90
Annualized Std. Deviation	**10.91**	16.61	**4.65**	8.18

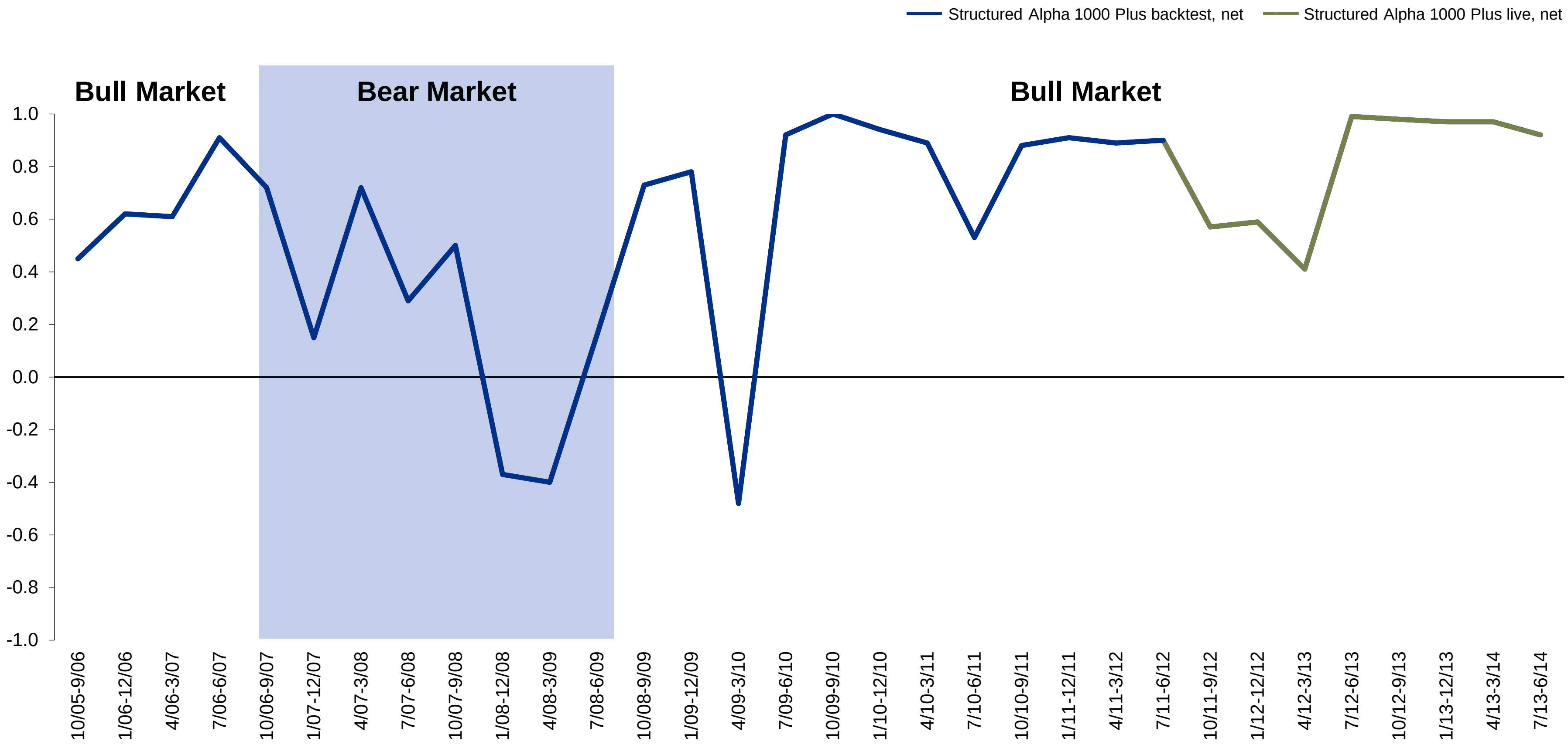
Calendar % (2006 to 2013)



Structured Alpha 1000 Plus returns from September 2005 to July 2012 are backtested returns and provided for informational purposes only to indicate historical performance had the portfolio been available over the relevant time period. Structured Alpha 1000 Plus returns from July 2012 to August 2012 represent linking of the backtested returns and live (or actual) returns. Structured Alpha 1000 Plus returns from August 2012 to December 2013 are live (or actual) returns. Structured Alpha 1000 Plus Portfolio components: 100% of a Structured Alpha 1000 portfolio and 50% VIX futures. VIX futures returns from September 2005 to April 30, 2012 are backtested returns and not necessarily indicative of the returns that an actual client account would have achieved (see backtested performance disclosure herein). These results are based on simulated or hypothetical performance results that have certain inherent limitations. Unlike the results shown in an actual performance record, these results do not represent actual trading. Also, because these trades have not actually been executed, these results may have under-or overcompensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated or hypothetical trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to these being shown. Structured Alpha 1000 Plus Portfolio net returns reflect the deduction of a performance fee equal to 30% of the outperformance or underperformance over the 90 Day T-Bill, including the application of a high watermark and any other expenses that would be applicable. Backtested performance is not indicative of future actual results and performance. This performance presentation is Supplemental Information and supplements the Structured Alpha 1000 Plus and Structured 1000 GIPS compliance composite presentation in the Appendix. See additional disclosure at the beginning and at the end of this presentation. The backtested performance information is being provided pursuant to a request by Alaska Retirement Management Board for a one-on-one presentation with Alaska Retirement Management Board, is for the use of Alaska Retirement Management Boar only and cannot be shared, reproduced or distributed without the express written consent of AllianzGI US.

Backtested Correlation Analysis

Structured Alpha 1000 Plus vs. S&P 500 Index, Rolling 1-Year Correlation



Structured Alpha 1000 Plus returns from September 2005 to July 2012 are backtested returns and provided for informational purposes only to indicate historical performance had the portfolio been available over the relevant time period. Structured Alpha 1000 Plus returns from July 2012 to August 2012 represent linking of the backtested returns and live (or actual) returns. Structured Alpha 1000 Plus returns from August 2012 to December 2013 are live (or actual) returns. Structured Alpha 1000 Plus Portfolio components: 100% of a Structured Alpha 1000 portfolio and 50% VIX futures. VIX futures returns from September 2005 to April 30, 2012 are backtested returns and not necessarily indicative of the returns that an actual client account would have achieved (see backtested performance disclosure herein). These results are based on simulated or hypothetical performance results that have certain inherent limitations. Unlike the results shown in an actual performance record, these results do not represent actual trading. Also, because these trades have not actually been executed, these results may have under-or overcompensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated or hypothetical trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to these being shown. Structured Alpha 1000 Plus Portfolio net returns reflect the deduction of a performance fee equal to 30% of the outperformance or underperformance over the 90 Day T-Bill, including the application of a high watermark and any other expenses that would be applicable. Backtested performance is not indicative of future actual results and performance. This performance presentation is Supplemental Information and supplements the Structured Alpha 1000 Plus and Structured 1000 GIPS compliance composite presentation in the Appendix. See additional disclosure at the beginning and at the end of this presentation. The backtested performance information is being provided pursuant to a request by Alaska Retirement Management Board for a one-on-one presentation with Alaska Retirement Management Board, is for the use of Alaska Retirement Management Boar only and cannot be shared, reproduced or distributed without the express written consent of AllianzGI US.

Appendix

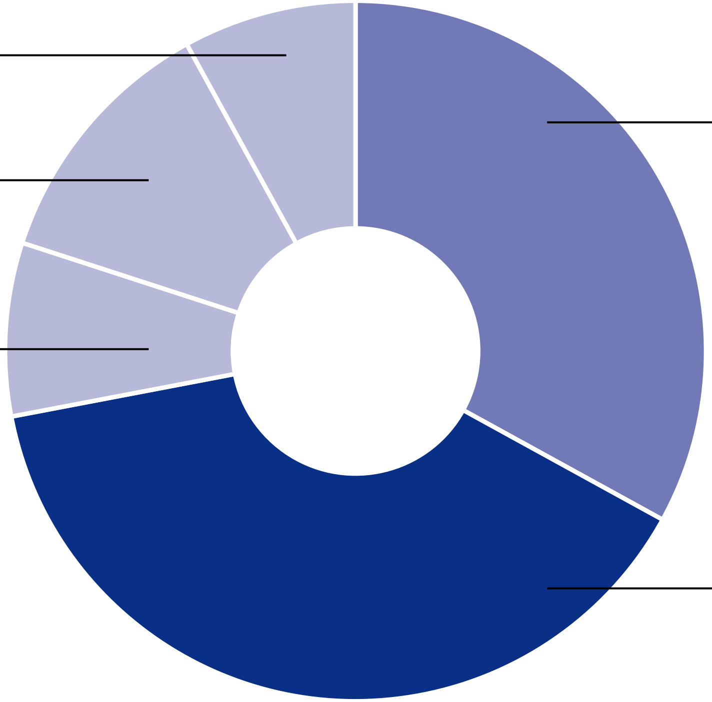
Current Offerings

As of June 30, 2014

Strategy	Inception Date	Return Target	Assets Under Management*
Structured Alpha 500	September 1, 2005	90-Day T-Bills + 5% net	$475 M
Structured Alpha 1000	August 1, 2011	90-Day T-Bills + 10% net	$336 M
Structured Alpha 10 Year Treasury 500	October 1, 2011	10-Year U.S. Treasury + 5% net	$101 M
Structured Alpha U.S. Equity 250	September 1, 2005	S&P 500 Index + 2.5% net	$475 M
Structured Alpha U.S. Equity 500	August 1, 2008	S&P 500 Index + 5% net	$294 M
Structured Alpha 1000 Plus	August 1, 2012	90-Day T-Bills + 10-14% net	$135 M
Custom Structured Alpha Fund	May 1, 2014	Various betas + 7.5% net	$435 M
TOTAL			**$2,251 M**

* Assets Under Management ("AUM") shown is in U.S. dollars. See additional disclosure at the end of this presentation.

Versatile Applications



Fixed Income Substitute
- Midwest Pension Fund

Active Fixed Income Substitute
- New England Public Fund
- Midwest Pension Fund

High Yield Substitute
- Midwest Taft Hartley Plan

Absolute Return / Opportunistic / Liquid Alternatives
- Midwest Taft Hartley Plan
- New England Health System
- German Pension Fund
- New England Taft Hartley Plan
- Northwest Pension Plan
- Canadian Pension Plan
- Midwest Health System
- Southwest Endowment
- Midwest Pension Fund

Active Equity
- Southern Pension Fund
- National Taft Hartley Plan
- Western Taft Hartley Plan
- Midwest Pension Fund
- Eastern University Endowment

The data is presented solely to demonstrate the versatile application of the Structured Alpha strategies and the diverse client universe invested in them. The information provided is for informational purposes only, it does not constitute investment advice and is not a recommendation or offer of any particular security, strategy or investment product. See additional disclosure at the end of this presentation.

Investment Platform

	Return Enhancement / Absolute Return **Structured Alpha**[1]	Tail Risk Hedging **U.S. Equity Hedged**	Market Neutral **Structured Return**
Objective	Absolute return in any environment; ability to benefit from high volatility	Equity portfolio downside protection while preserving upside participation	Absolute return across a wide range of market environments
Ann. Return Target	2.5%, 5% or 10% net alpha	N/A	7% to 10% gross of fees
Annual Risk Target	1-3%, 3-5% or 6-10%	Reduce volatility 50%; protect vs. market declines	4% to 7%
Underlying Exposure	Cash, Equity or Bonds[2]	Equity (bundled or overlay)	Passive Equity
Instruments	▪ Long and short puts and calls on equity indexes ▪ Long and short VIX futures (Structured Alpha 1000 Plus)	Long puts, short calls on S&P 500	Short covered calls, in-the-money
Tail-Risk Protection	▪ Long deep-OTM puts ▪ Net long VIX futures (Structured Alpha 1000 Plus)	Long Puts 4% to 12% OTM at all times	ITM call writing cushions against equity declines
Management Fee[3]	0%	60 bps	50 bps
Performance Fee[3]	30%	None	None
Portfolio Manager	Greg Tournant, Trevor Taylor and team	Greg Tournant and team	Greg Tournant and team
Inception	2005[2]	2012	2008
Liquidity[4]	Monthly	Daily	Daily
AUM (as of 6/30/14)*	$2,251 M	$8 M	$3 M

[1] Structured Alpha refers to the following AllianzGI US strategies: Structured Alpha U.S. Equity 250, Structured Alpha 500, Structured Alpha 1000, Structured Alpha 1000 Plus, Structured Alpha U.S. Equity 500 and Structured Alpha 10 Year Treasury 500.
[2] Structured Alpha 1000 Plus has underlying exposure of cash. The strategy incepted in 2012.
[3] Please see AllianzGI US Form ADV Part 2A Brochure for the standard fee schedules for these strategies.
[4] The liquidity information presented reflects the expected liquidity for each strategy. Client exercise of minimum liquidity provisions during market disruptions and other adverse market conditions could have a detrimental effect on account performance.
* Assets Under Management ("AUM") shown is in U.S. dollars. See additional disclosure at the end of this presentation.

Structured Alpha Investment Team

Greg P. Tournant
Managing Director, CIO US Structured Products, Lead Portfolio Manager
Mr. Tournant is a portfolio manager, a managing director and CIO US Structured Products with Allianz Global Investors, which he joined in 2002. He is also Head of the Structured Products team, which he created in 2005, and is the lead portfolio manager for all strategies managed on this platform. Mr. Tournant has 18 years of investment-industry experience. He was previously co-CIO at Innovative Options Management and managed an equity-index option-based hedge fund, option programs on several open-end mutual funds and an open-end large-cap growth equity mutual fund. Before that, he was a senior research analyst at Eagle Asset Management, a strategy consultant for McKinsey & Co. and a sell-side research analyst for Raymond James. Mr. Tournant has a B.S. from Trinity University and an M.B.A. from the Kellogg School of Business at Northwestern University.

Jeff Sheran, CFA
Managing Director, Product Specialist
Mr. Sheran is a product specialist and managing director with Allianz Global Investors, which he joined in 2000. He is responsible for articulating to investors the option- and volatility-based investment solutions managed by the Structured Products team, and helped bring these strategies to the marketplace after the inception of the investment platform in 2005. Mr. Sheran was previously the director of the Institutional Business Development team, the head of the Consultant Relations team and a director of marketing and product management. He has 22 years of investment-industry experience and was previously a financial journalist. Mr. Sheran has a B.A. from the University of Michigan and an M.B.A. from New York University's Leonard N. Stern School of Business. He is a CFA charterholder and a member of the New York Society of Security Analysts.

Trevor L. Taylor
Director, Co-Lead Portfolio Manager
Mr. Taylor is a portfolio manager and director with Allianz Global Investors, which he joined in 2008. He has portfolio-management and research responsibilities for the Structured Products team. Mr. Taylor has 15 years of investment-industry experience. He was previously co-CIO at Innovative Options Management, where he managed an equity-index option-based hedge fund and option programs on several open-end mutual funds. Before that, he was CIO at TLT Atlantic Asset Management and TLT Capital Corp. Mr. Taylor has a B.A. from the University of Florida.

Stephen G. Bond-Nelson
Director, Portfolio Manager
Mr. Bond-Nelson is a portfolio manager and director with Allianz Global Investors, which he joined in 1999. He has portfolio-management and research responsibilities for the Structured Products team, and has been with the team since its inception in 2005. Mr. Bond-Nelson has 21 years of investment-industry experience and was previously a research analyst and associate with Prudential Mutual Funds. He has a B.S. from Lehigh University and an M.B.A. from Rutgers University.

Valentin L. Ivanov, CAIA
Vice President, Research Analyst
Mr. Ivanov is a research analyst and a vice president with Allianz Global investors, which he joined in 2000. He has quantitative-research responsibilities for the Structured Products team and has been with the team since its inception in 2005. Mr. Ivanov was previously a portfolio administrator and trader in the firm's managed-accounts group. He has 15 years of investment-industry experience. Mr. Ivanov has a B.A. in business administration from the University of San Diego and is a CAIA charterholder.

Scott J. Powell, CFA
Vice President, Research Analyst
Mr. Powell is a research analyst and vice president with Allianz Global Investors, which he joined in 2008. He has research responsibilities for the Structured Products team. Mr. Powell has 16 years of investment-industry experience. He was previously an analyst at Innovative Options Management, assisting with trading; before that, he was an analyst in the private-banking group at Merrill Lynch. Mr. Powell has a B.A. from Florida State University and an M.S. from Florida International University. He is a CFA charterholder.

Allianz Global Investors

Structured Alpha Investment Team

Michael J. Purcell, CFA
Vice President, Research Analyst
Mr. Purcell is a research analyst and vice president with Allianz Global Investors, which he joined in 2006. He has research responsibilities for the Structured Products team and was previously a portfolio specialist. Mr. Purcell has 10 years of investment-industry experience and has a B.S. from the Charles F. Dolan School of Business at Fairfield University. He is a CFA charterholder.

John F. Donnelly
Assistant Vice President, Research Associate
Mr. Donnelly is a research associate and assistant vice president with Allianz Global Investors, which he joined in 2010. He has research responsibilities for the Structured Products team. Mr. Donnelly has seven years of investment-industry experience and previously worked for Lazard Asset Management. Mr. Donnelly has a B.A. in economics and a B.S. in business management from the State University of New York at Stony Brook.

Megan L. Silva
Assistant Vice President, Product Specialist Associate
Ms. Silva is an assistant vice president and product specialist associate with Allianz Global Investors, which she joined in 2011. She was previously an institutional business development associate with the firm. Ms. Silva has 6 years of investment-industry experience. Before joining the firm, she was an investor services associate with Bridgewater Associates, an analyst with Shumway Capital Partners and a financial management and strategy & change consultant with IBM Global Business Services. Ms. Silva has a B.S. in applied economics and management from Cornell University and holds the FINRA series 7 license.

Client Service

Melody L. McDonald, CIMA
Managing Director, Relationship Manager
Ms. McDonald is a relationship manager and a managing director with Allianz Global Investors, which she joined in 1986. She is responsible for a number of the firm's corporate, public, endowment and foundation clients. Ms. McDonald has 28 years of investment-industry experience. She previously worked at Wells Fargo Bank as a credit analyst and corporate lending officer. In 2002, Ms. McDonald was appointed by the president of the United States to serve on the Pension Benefit Guaranty Corporation Advisory Committee; in 2005, she served as chairman of the committee. Ms. McDonald currently serves on the investment committee for the IEEE, an international engineering organization that sets standards for engineering worldwide; and serves on The Juilliard National Council. Ms. McDonald has an M.A. from the New England Conservatory of Music and a doctorate in music from Stanford University; she also graduated as class marshal from Harvard Business School. She is a CIMA charterholder.

Performance Since Inception – Structured Alpha 1000 Plus

Structured Alpha 1000 Plus Composite vs. 90 Day T-Bill

Preliminary Net of Fees, from inception (August 1, 2012 through July 31, 2014)

Performance (since inception, %)	Quarter-to-Date	Year-to-Date	1 Year	Since Inception
Structured Alpha 1000 Plus, net	-1.34	2.53	7.75	6.71
90 Day T-Bill	0.00	0.02	0.05	0.08

Structured Alpha 1000 Plus net returns reflect the deduction of a performance fee equal to 30% of the outperformance or underperformance over the 90 Day T-Bill, including the application of a high watermark, as well as transactional expenses of a representative account in the related Structured Alpha strategy. Performance based fees are typically calculated on a quarterly basis rather than on a monthly basis as shown above; therefore, the actual performance fee for a particular quarter may be higher than the aggregate of the relevant monthly performance fees shown. Net performance for an investor may differ from the performance shown above due to application of the cumulative high watermark, frequency of performance fee calculation, expenses, choice of an underlying portfolio different than the 90-Day T-Bill and other considerations, including those related to the timing of an investor's initial investment and any subsequent cash flows. Past performance is not indicative of future results. This performance presentation is Supplemental Information and supplements the Structured Alpha 1000 Plus GIPS compliant presentation in the Appendix. See additional disclosures at the end of this presentation. Source: Bloomberg, CBOE, Options View

Monthly Performance – Structured Alpha 1000 Plus

Structured Alpha 1000 Plus Composite

Net of fees, from inception (August 1, 2012 through July 31, 2014)

Year	Composite / Benchmarks	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2014	Structured Alpha 1000 Plus , net	-2.65	0.77	2.97	0.46	1.38	1.01	-1.34						2.53
	Alpha, net	**-2.66**	**0.77**	**2.97**	**0.46**	**1.38**	**1.00**	**-1.34**						**2.51**
	90 Day T-Bill	0.01	0.00	0.00	0.00	0.00	0.01	0.00						0.02
	S&P 500 Index	-3.46	4.57	0.84	0.74	2.35	5.23	-1.38						5.66
2013	Structured Alpha 1000 Plus , net	1.08	0.89	2.15	-0.04	-0.74	1.63	0.70	-0.19	1.69	2.07	1.47	-0.04	11.15
	Alpha, net	**1.08**	**0.89**	**2.13**	**-0.05**	**-0.75**	**1.62**	**0.69**	**-0.19**	**1.69**	**2.07**	**1.46**	**-0.05**	**11.08**
	90 Day T-Bill	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.07
	S&P 500 Index	5.18	1.36	3.75	1.93	2.34	-1.34	5.09	-2.90	3.14	4.60	3.05	2.53	32.39
2012	Structured Alpha 1000 Plus , net	–	–	–	–	–	–	–	1.91	-0.45	-2.08	1.07	-0.48	-0.08
	Alpha, net	–	–	–	–	–	–	–	**1.90**	**-0.46**	**-2.09**	**1.05**	**-0.50**	**-0.15**
	90 Day T-Bill	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.11
	S&P 500 Index	4.48	4.32	3.29	-0.63	-6.01	4.12	1.39	2.25	2.58	-1.85	0.58	0.91	16.00

Structured Alpha 1000 Plus net returns reflect the deduction of a performance fee equal to 30% of the outperformance or underperformance over the 90 Day T-Bill, including the application of a high watermark, as well as transactional expenses of a representative account in the related Structured Alpha strategy. Performance based fees are typically calculated on a quarterly basis rather than on a monthly basis as shown above; therefore, the actual performance fee for a particular quarter may be higher than the aggregate of the relevant monthly performance fees shown. Net performance for an investor may differ from the performance shown above due to application of the cumulative high watermark, frequency of performance fee calculation, expenses, choice of an underlying portfolio different than the 90-Day T-Bill and other considerations, including those related to the timing of an investor's initial investment and any subsequent cash flows. Past performance is not indicative of future results. This performance presentation is Supplemental Information and supplements the Structured Alpha 1000 Plus GIPS compliant presentation in the Appendix. See additional disclosures at the end of this presentation. Source: Bloomberg, CBOE, Options View

Monthly Backtested Performance – Structured Alpha 1000 Plus

Structured Alpha 1000 Plus, Model Portfolio

Net of fees, September 1, 2005 to July 31, 2012

Year	Model / Benchmarks	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2012	Structured Alpha 1000 Plus	1.60	1.25	2.88	1.10	-0.82	3.40	0.81						10.62
	90 Day T-Bill	-0.00	0.00	0.01	0.00	0.01	0.01	0.01						0.05
	S&P 500 Index	4.48	4.32	3.29	-0.63	-6.01	4.12	1.39						11.01
2011	Structured Alpha 1000 Plus	0.28	1.18	0.29	3.36	1.35	1.47	-3.77	-9.30	4.06	6.61	3.90	2.46	11.49
	90 Day T-Bill	0.01	0.02	0.03	0.02	0.01	0.01	-0.01	0.02	0.00	0.00	-0.00	-0.00	0.10
	S&P 500 Index	2.37	3.43	0.04	2.96	-1.13	-1.67	-2.03	-5.43	-7.03	10.93	-0.22	1.02	2.11
2010	Structured Alpha 1000 Plus	-0.47	5.10	3.42	-1.44	-9.67	6.70	8.04	3.07	2.18	3.25	0.02	3.93	25.50
	90 Day T-Bill	0.01	0.00	0.00	0.01	0.02	0.01	0.02	0.01	0.00	0.02	0.01	0.02	0.13
	S&P 500 Index	-3.60	3.10	6.03	1.58	-7.99	-5.23	7.01	-4.51	8.92	3.80	0.01	6.68	15.06
2009	Structured Alpha 1000 Plus	-0.67	3.10	2.21	3.03	0.91	2.50	2.24	2.46	3.32	-1.20	6.69	2.31	30.20
	90 Day T-Bill	-0.01	0.02	0.04	0.03	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.21
	S&P 500 Index	-8.43	-10.65	8.76	9.57	5.59	0.20	7.56	3.61	3.73	-1.86	6.00	1.93	26.46
2008	Structured Alpha 1000 Plus	-0.68	4.58	0.67	1.97	3.81	-2.54	1.94	2.46	-10.37	-2.14	1.95	6.08	6.88
	90 Day T-Bill	0.50	0.15	0.23	0.11	0.03	0.18	0.18	0.15	0.30	0.11	0.10	0.00	2.06
	S&P 500 Index	-6.00	-3.25	-0.43	4.87	1.30	-8.43	-0.84	1.45	-8.91	-16.79	-7.18	1.06	-37.00
2007	Structured Alpha 1000 Plus	1.87	-5.88	3.55	3.85	2.74	2.43	2.34	3.39	0.72	3.39	2.57	2.57	25.78
	90 Day T-Bill	0.41	0.38	0.45	0.44	0.44	0.39	0.39	0.56	0.38	0.30	0.47	0.28	5.00
	S&P 500 Index	1.51	-1.96	1.12	4.43	3.49	-1.66	-3.10	1.50	3.74	1.59	-4.18	-0.69	5.49
2006	Structured Alpha 1000 Plus	2.42	1.18	0.60	1.21	-1.31	4.47	0.24	3.77	2.96	2.60	0.81	2.21	23.17
	90 Day T-Bill	0.31	0.33	0.39	0.37	0.40	0.38	0.42	0.44	0.46	0.38	0.43	0.44	4.85
	S&P 500 Index	2.65	0.27	1.24	1.34	-2.88	0.14	0.62	2.38	2.58	3.26	1.90	1.40	15.79
2005	Structured Alpha 1000 Plus	--	--	--	--	--	--	--	--	3.16	-1.71	1.72	1.39	--
	90 Day T-Bill	0.18	0.18	0.21	0.22	0.24	0.24	0.25	0.09	0.81	-1.67	3.78	0.03	3.07
	S&P 500 Index	-2.44	2.10	-1.77	-1.90	3.18	0.14	3.72	-0.05	0.30	0.26	0.33	0.32	4.91

Structured Alpha 1000 Plus Model Portfolio components: 100% of a Structured Alpha 1000 portfolio and 50% VIX Futures. VIX Futures returns from September 1, 2005 to July 31, 2012 are backtested returns and not necessarily indicative of the returns that an actual client account would have achieved (see backtested performance disclosure herein). These results are based on simulated or hypothetical performance results that have certain inherent limitations. Unlike the results shown in an actual performance record, these results do not represent actual trading. Also, because these trades have not actually been executed, these results may have under-or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated or hypothetical trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to these being shown. Structured Alpha 1000 Plus Model Portfolio net returns reflect the deduction of a performance fee equal to 30% of the outperformance or underperformance over the 90 Day T-Bill, including the application of a high watermark and any other expenses that would be applicable. This performance presentation is Supplemental Information and supplements the Structured Alpha 1000 Plus, Structured Alpha 1000 in the Appendix. Backtested performance is not indicative of future actual results and performance See additional disclosures at the beginning at the end of this presentation.

Important Risk Considerations

This presentation describes certain structured product capabilities of Allianz Global Investors U.S. LLC ("AllianzGI US"). These strategies involve selling and buying put and / or call options and may not be suitable for every investor. No assurance can be given that any particular investment objective will be achieved. Among the risks specific to these strategies that AllianzGI US wishes to call to the attention of prospective investors are the following:

The use of derivatives involves risks different from, and possibly greater than, the risks associated with investing directly in the investments underlying the derivatives. Derivatives can be more volatile and involve significant risk and can disproportionately increase losses and reduce opportunities for gains.

Derivative transactions may produce effects similar to leverage and expose an account to related risks. Consequently, an adverse change in the relative price level can result in a loss of capital that is more exaggerated than would have resulted from an investment that did not involve the use of leverage inherent in the derivative contract.

For each strategy, the collateral requirement may vary depending on the use of an active or passive underlying portfolio, and on the extent to which the strategy uses call and put options. For each strategy, securities from the passive or active underlying portfolio may be pledged as collateral in order to implement the option positions. The collateral rules are based on the greater of Reg T rules (standard collateral rules defined by the CBOE and the SEC) and requirements of counterparties. When collateral is used to implement option positions, it is possible that a decline in market value of the option positions could force the portfolio to cover any shortfall by liquidating non-cash assets. The timing of such liquidation may be adverse.

When writing put and call options, the premium received may not be sufficient to offset any losses sustained from the volatility of the underlying investments.

Call options purchased for an account and not sold prior to expiration will expire worthless if the value of the underlying security or index at expiration is less than the exercise price of the option, causing the account to lose its entire investment in the option.

Put options purchased for an account and not sold prior to expiration will expire worthless if the value of the underlying security or index at expiration exceeds the exercise price of the option, causing the account to lose its entire investment in the option.

The account may be required to sell investments at times it would not otherwise choose to do so in order to settle written options. Such sales may result in losses on such investments and will, in addition, involve transaction costs.

Options on indices may not correlate perfectly with the underlying investments and may not act as expected. Such transactions may not achieve their objectives and may result in (or add to) losses to the account.

The strategies described herein are based on a proprietary model that is designed to take into account the historical behavior of options. The proprietary model may not correctly forecast future investment results. In addition, to the extent that the market behavior of options changes, the proprietary model may not be able to effectively optimize option selection and the investment objective of given transactions may not be achieved and may result in losses.

Strategies described herein are dependent on the smooth functioning of the markets for the particular instruments being purchased or sold. If such markets do not operate as expected, the option strategies described herein could be adversely affected.

Past results are not necessarily indicative of future performance and performance may be volatile.

Structured Alpha 1000 GIPS Disclosure

Structured Alpha 1000
Minimum Separate Account $50 M
30% Quarterly Performance-based Fee over 90 Day T-Bill

The Firm: Allianz Global Investors U.S. LLC (AllianzGI US) is an SEC registered investment adviser that provides investment management and advisory services primarily to separate accounts of institutional clients, and registered and unregistered investment funds. For GIPS purposes, the Firm is defined and held out to the public as the investment management and advisory services provided by AllianzGI US and its SEC registered investment adviser subsidiary NFJ Investment Group LLC; excluding (1) administrative and/or sub adviser oversight services, and (2) separately managed account (wrap) services. On January 1, 2013, Allianz Global Investors Solutions LLC ("AGIS") merged into AllianzGI US, and therefore the scope of AllianzGI US's investment advisory business now includes the investment advisory services provided by the teams previously associated with AGIS. Effective April 1, 2013, the scope of AllianzGI US's investment advisory business now includes assets previously managed by RCM Capital Management LLC ("RCM") and Caywood-Scholl Capital Management LLC ("Caywood-Scholl"), each of which merged into AllianzGI US on April 1, 2013 (the "Merger"). The Firm's list of composite descriptions, as well as information regarding the Firm's policies for valuing portfolios, calculating performance, and preparing compliant presentations, are available upon request.

Compliance Statement: The Firm claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS Standards. AllianzGI US and/or, as applicable, its predecessor firm has been independently verified for the periods from January 1, 1995 through December 31, 2013.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Structured Alpha 1000 composite has been examined for the periods August 1, 2011 through December 31, 2013. The verification and performance examination reports are available upon request.

The Composite: Structured Alpha 1000 is an absolute-return strategy which, using our proprietary approach to investing in equity index options, seeks to achieve a consistent return stream that has low correlation with the movement of equity or fixed income markets.

Structured Alpha 1000 seeks to deliver 10% annually, net of fees, on top of the return of the 90 Day T-Bill with an expected annualized tracking error of 6% to 10%. The strategy uses equity index options – puts and calls, long and short, which may or may not have "implied leverage", depending on the configuration and combination of positions. The composite was created on August 1, 2011. The accounts that make up the Composite frequently use calls, puts and futures, which may increase or decrease exposure to fluctuations in market prices.

Prior to January 1, 2013, the composite was known as Structured Alpha – Absolute Yield 10.

Portfolio Returns: Returns are calculated on a total return basis, including all dividends and interest, accrued income, realized and unrealized gains or losses, and are net of all brokerage commissions, execution costs and without provision for federal or state income taxes. Performance results are expressed in U.S. dollars.

Fees: Performance results stated to be "gross" do not reflect the deduction of investment advisory fees. Gross performance results earned on behalf of AllianzGI US's clients will be reduced by AllianzGI US's advisory fees. Net performance results, which reflect the deduction of investment advisory fees, are also displayed.

In order to calculate the net performance, the gross performance is reduced by the highest annual advisory fee charged to any account within the Composite. Actual account performance will vary depending on the size of a portfolio and the applicable fee schedule. AllianzGI US's standard advisory fees, as reported in Form ADV Part 2A Brochure for the investment style described herein, is 30% of quarterly performance over the 90-Day T-Bill.

Index: The Merrill Lynch US 3-Month Treasury Bill Index ("90 Day T-Bill") is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the re-balancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date. While the index will often hold the Treasury Bill issued at the most recent 3-month auction, it is also possible for a seasoned 6-month Bill to be selected.

The 90-Day T-Bill benchmark is referred to for reference purposes only and is not intended to parallel the risk or investment style of any particular investment style. The returns for this unmanaged index do not include any transaction costs, management fees or other costs. All returns presented are calculated using U.S. dollars.

Internal Dispersion: Internal Dispersion is an asset weighted dispersion measure that explains the deviation of gross annual account returns from the Composite annual account return. Assuming "normal" distribution of returns, plus or minus one standard deviation from the mean return encompasses 68% of all possible outcomes. Internal Dispersion may not be meaningful for composites consisting of five or fewer portfolios or for periods of less than one full year.

Past performance is not indicative of future results. Gross returns do not give effect to investment advisory fees, which would reduce such returns. Investment advisory fees are described further in Form ADV Part 2A Brochure of the investment adviser. Advisory fees deducted periodically from accounts can have an impact on performance. As an example, the effect of investment advisory fees on the total value of a portfolio assuming (a) $1,000,000 investment, (b) portfolio return of 5% per year, and (c) 1.00% annual investment advisory fee would be $10,268.81 in the first year, $56,741.68 over five years, and $129,160.05 over ten years. Actual fees charged may vary by portfolio due to various conditions, including account size. The net-of fee results for individual accounts and for different time periods may vary. Unless otherwise noted, equity index performance is calculated with gross dividends reinvested and estimated tax withheld, and bond index performance includes all payments to bondholders, if any. The benchmark may not accurately represent the investment style of the given composite. Index calculations do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index.

Structured Alpha 1000 Composite

Schedule of Composite Performance Results as of December 31, 2013

Structured Alpha 1000 Composite

Year	Composite Return Gross (%)	Composite Return Net (%)	Merrill Lynch 90 Day T-Bill Index (1)	Composite 3-Yr St. Dev. (%)(3)	Benchmark 3-Yr St. Dev. (%)(3)	Internal Dispersion (5)	Number of Portfolios in the Composite at Year End	Composite Total Assets at Year End (USD $ M)	Total Firm Assets (USD $ M)
2013 (4)	16.4	11.3	0.1	-	-	-	1	254.1	84,507
2012 (4)	15.3	10.6	0.1	-	-	-	1	201.1	44,058
2011 (2,4)	-3.4	-1.5	0.0	-	-	-	1	194.8	37,395

(1) The 90 Day T-Bill Index returns, which do not reflect the deduction of investment fees, have been provided for comparison purposes and have not been examined by independent accountants
(2) Partial years, August 1, 2011 through December 31, 2011.
(3) The three -year annualized standard deviation measures the variability of the composite and the index returns over the preceding 36-month period.
(4) The three-year annualized standard deviation is not presented because there are less than 36 monthly returns for the composite and benchmark.
(5) Standard deviation is not considered statistically meaningful when there are five or fewer portfolios in the composite during the period.

The use of derivatives involves risks different from, and possibly greater than, the risks associated with investing directly in the investments underlying the derivatives. Derivatives can be more volatile and involve significant risk and can disproportionately increase losses and reduce opportunities for gains.

Allianz Global Investors

Structured Alpha 1000 Plus GIPS Disclosure

Structured Alpha 1000 Plus

Minimum Separate Account $50 M
30% Quarterly Performance-based Fee over 90 Day T-Bill

The Firm: Allianz Global Investors U.S. LLC (AllianzGI US) is an SEC registered investment adviser that provides investment management and advisory services primarily to separate accounts of institutional clients, and registered and unregistered investment funds. For GIPS purposes, the Firm is defined and held out to the public as the investment management and advisory services provided by AllianzGI US and its SEC registered investment adviser subsidiary NFJ Investment Group LLC; excluding (1) administrative and/or sub adviser oversight services, and (2) separately managed account (wrap) services. On January 1, 2013, Allianz Global Investors Solutions LLC ("AGIS") merged into AllianzGI US, and therefore the scope of AllianzGI US's investment advisory business now includes the investment advisory services provided by the teams previously associated with AGIS. Effective April 1, 2013, the scope of AllianzGI US's investment advisory business now includes assets previously managed by RCM Capital Management LLC ("RCM") and Caywood-Scholl Capital Management LLC ("Caywood-Scholl"), each of which merged into AllianzGI US on April 1, 2013 (the "Merger"). The Firm's list of composite descriptions, as well as information regarding the Firm's policies for valuing portfolios, calculating performance, and preparing compliant presentations, are available upon request.

Compliance Statement: The Firm claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS Standards. AllianzGI US and/or, as applicable, its predecessor firm has been independently verified for the periods from January 1, 1995 through December 31, 2013.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Structured Alpha 1000 Plus composite has been examined for the periods August 1, 2012 through December 31, 2013. The verification and performance examination reports are available upon request.

The Composite: Structured Alpha 1000 Plus is an absolute return strategy that consists of a 100% allocation to the Structured Alpha 1000 investment strategy and a 50% allocation to the Long Volatility investment strategy. Structured Alpha 1000 is an absolute-return strategy which, using our proprietary approach to investing in equity index options, seeks to achieve a consistent return stream that has low correlation with the movement of equity or fixed income markets. Long Volatility is an absolute-return investment strategy that seeks to provide protection against downside equity-market moves, while maintaining the potential for positive performance when equity markets are flat or rising. Structured Alpha 1000 Plus seeks to deliver 10-14% annually, net of fees, on top of the return of the 90 Day T-Bill with an expected annualized tracking error of 8% to 12%. The strategy uses VIX futures (long and short) and equity index options – puts and calls, long and short, which may or may not have "implied leverage", depending on the configuration and combination of positions. The composite was created on August 1, 2012. The accounts that make up the Composite frequently use calls, puts and futures, which may increase or decrease exposure to fluctuations in market prices.

Prior to January 1, 2013, the composite was known as Structured Alpha-Absolute Yield 10 Plus.

Portfolio Returns: Returns are calculated on a total return basis, including all dividends and interest, accrued income, realized and unrealized gains or losses, and are net of all brokerage commissions, execution costs and without provision for federal or state income taxes. Performance results are expressed in U.S. dollars.

Fees: Performance results stated to be "gross" do not reflect the deduction of investment advisory fees. Gross performance results earned on behalf of AllianzGI US's clients will be reduced by AllianzGI US's advisory fees. Net performance results, which reflect the deduction of investment advisory fees, are also displayed.

In order to calculate the net performance, the gross performance is reduced by the highest annual advisory fee charged to any account within the Composite. Actual account performance will vary depending on the size of a portfolio and the applicable fee schedule. AllianzGI US's standard advisory fees, as reported in Form ADV Part 2A Brochure for the investment style described herein, is 30% of quarterly performance over the 90-Day T-Bill.

Index: The Merrill Lynch US 3-Month Treasury Bill Index ("90 Day T-Bill") is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the re-balancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date. While the index will often hold the Treasury Bill issued at the most recent 3-month auction, it is also possible for a seasoned 6-month Bill to be selected. The 90-Day T-Bill benchmark is referred to for reference purposes only and is not intended to parallel the risk or investment style of any particular investment style. The returns for this unmanaged index do not include any transaction costs, management fees or other costs. All returns presented are calculated using U.S. dollars.

Internal Dispersion: Internal Dispersion is an asset weighted dispersion measure that explains the deviation of gross annual account returns from the Composite annual account return. Assuming "normal" distribution of returns, plus or minus one standard deviation from the mean return encompasses 68% of all possible outcomes. Internal Dispersion may not be meaningful for composites consisting of five or fewer portfolios or for periods of less than one full year.

Past performance is not indicative of future results. Gross returns do not give effect to investment advisory fees, which would reduce such returns. Investment advisory fees are described further in Form ADV Part 2A Brochure of the investment adviser. Advisory fees deducted periodically from accounts can have an impact on performance. As an example, the effect of investment advisory fees on the total value of a portfolio assuming (a) $1,000,000 investment, (b) portfolio return of 5% per year, and (c) 1.00% annual investment advisory fee would be $10,268.81 in the first year, $56,741.68 over five years, and $129,160.05 over ten years. Actual fees charged may vary by portfolio due to various conditions, including account size. The net-of fee results for individual accounts and for different time periods may vary. Unless otherwise noted, equity index performance is calculated with gross dividends reinvested and estimated tax withheld, and bond index performance includes all payments to bondholders, if any. The benchmark may not accurately represent the investment style of the given composite. Index calculations do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index.

Structured Alpha 1000 Plus Composite

Schedule of Composite Performance Results as of December 31, 2013

Structured Alpha 1000 Plus Composite

Year	Composite Return Gross (%)	Composite Return Net (%)	Merrill Lynch 90 Day T-Bill Index (1)	Composite 3-Yr St. Dev. (%)(3)	Benchmark 3-Yr St. Dev. (%)(3)	Internal Dispersion (5)	Number of Portfolios in the Composite at Year End	Composite Total Assets at Year End (USD $ M)	Total Firm Assets (USD $ M)
2013 (4)	16.2	11.1	0.1	-	-	-	1	84.6	84,507
2012 (2,4)	-0.2	-0.1	0.1	-	-	-	1	73.3	44,058

(1) The 90 Day T-Bill Index returns, which do not reflect the deduction of investment fees, have been provided for comparison purposes and have not been examined by independent accountants
(2) Partial years, August 1, 2012 through December 31, 2012.
(3) The three -year annualized standard deviation measures the variability of the composite and the index returns over the preceding 36-month period.
(4) The three-year annualized standard deviation is not presented because there are less than 36 monthly returns for the composite and benchmark.
(5) Standard deviation is not considered statistically meaningful when there are five or fewer portfolios in the composite during the period.

The use of derivatives involves risks different from, and possibly greater than, the risks associated with investing directly in the investments underlying the derivatives. Derivatives can be more volatile and involve significant risk and can disproportionately increase losses and reduce opportunities for gains.

Additional Disclosure

All materials are presented for Institutional Client use only and are not intended for distribution to the public. The strategy may not achieve its desired results. Past performance is not indicative of future results.

All returns are gross unless otherwise noted. Gross returns do not give effect to investment advisory fees, which would reduce such returns. Investment advisory fees are described further in Form ADV Part 2A Brochure of the investment adviser named in the performance presentation of the relevant strategy (the "Adviser"). Advisory fees deducted periodically from accounts can have an impact on performance. As an example, the effect of investment advisory fees on the total value of a portfolio assuming (a) $1,000,000 investment, (b) portfolio return of 5% per year, and (c) 1.00% annual investment advisory fee would be $10,268.81 in the first year, $56,741.68 over five years, and $129,160.05 over ten years. Actual fees charged may vary by portfolio due to various conditions, including account size. The presentation may also contain net performance information. Notes to the performance presentation contained herein describe the methodology used to calculate "net of fee" performance.

The results for individual accounts and for different time periods may vary. Descriptions of a strategy's investment process, and "targeted", "expected" and similar forward-looking portfolio information are based on the Adviser's future expectations regarding the strategy. Although the Adviser manages the strategy with the goal of achieving these expectations, actual results may vary, and the publication of these expectations should not be construed as a guarantee. Representative account characteristics do not reflect composite performance, which may be different. On any given date, any portfolio managed in the indicated strategy may include securities not held by the representative account, and may not hold each security held in the representative account. Consequently, any particular account may have portfolio characteristics and performance that differ from those of the representative account. Portfolio characteristics and other information contained in this presentation have been obtained from independent research providers and other sources the Adviser believes to be reliable, but the Adviser cannot guarantee that the information is accurate, current or complete. Certain projected characteristics (such as the forward P/E ratio) of the Representative Account and indices shown may have been estimated. Estimates (est.) are preliminary and unaudited. Estimated data reflect subjective judgments and assumptions and unexpected events may occur. Therefore, there can be no assurance that developments will transpire as forecasted in this brochure. For more information regarding account characteristics, please contact Allianz Global Investors U.S. LLC. ("AllianzGI US")

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The asset and industry reports contained herein are unaudited. The summation of dollar values and percentages reported may not equal the total values, due to rounding discrepancies. Where applicable, currency conversions are provided by Russell Performance Universe and are based on monthly linked performance converted from U.S. dollar, and exchange rates are provided by the Federal Reserve Statistical Release as of month end.

Unless otherwise noted, equity index performance is calculated with gross dividends reinvested and estimated tax withheld, and bond index performance includes all payments to bondholders, if any. Indexes are referred to for comparative purposes only and are not intended to parallel the risk or investment style of the portfolios managed by the Adviser. Indexes do not utilize leverage. Index calculations do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index. Index data contained herein (and all trademarks related thereto) are owned by the indicated index provider, and may not be redistributed. MSCI or other index providers have not approved, reviewed or produced this report, make no express or implied warranties or representations and are not liable whatsoever for any data in the report. You may not redistribute the MSCI or other index data or use it as a basis for other indices or investment products. No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission.

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Allianz Global Investors U.S. LLC ("AllianzGI US") is an SEC registered investment adviser that provides investment management and advisory services primarily to separate accounts of institutional clients and registered and unregistered investment funds. AllianzGI US manages client portfolios (either directly or through model delivery and wrap fee programs) applying traditional and systematic processes across a variety of investment strategies. AllianzGI US may also provide consulting and research services in connection with asset allocation and portfolio structure analytics. NFJ Investment Group LLC is an SEC registered investment adviser and wholly-owned subsidiary of AllianzGI US.

Additional Disclosure

The **CBOE Volatility Index (VIX)** is an up-to-the-minute market estimate of expected volatility that is calculated by using real-time S&P 500 Index (SPX) option bid/ask quotes. VIX uses near-term and next-term out-of-the money SPX options with at least 8 days left to expiration and then weights them to yield a constant, 30-day measure of the expected volatility of the S&P 500 Index.

The **Barclays Capital US Aggregate Index** covers the US investment grade fixed rate bond market, including government and credit securities, agency mortgage pass-through securities, asset backed securities, and commercial mortgage based securities.

The **Dow Jones-UBS Gold Subindex**SM is a sub-index of the Dow Jones-UBS Commodity Index Total ReturnSM and is intended to reflect the returns that are potentially available through an unleveraged investment in the futures contracts on physical commodities comprising the index as well as the rate of interest that could be earned on cash collateral invested in specified Treasury Bills. The Dow Jones-UBS Precious Metals Subindex Total ReturnSM is a multiple-commodity sub-index consisting of the contracts included in the Dow Jones-UBS Commodity Index Total ReturnSM related to precious metals. Contracts for two commodities are currently included in the Dow Jones-UBS Precious Metals Subindex Total ReturnSM: gold and silver.

The **FTSE NAREIT Real Estate 50 Index** is a headline index that consists of the largest 50 eligible REITs from the FTSE NAREIT Composite Index, ranked by market capitalization. Constituents of the FTSE NAREIT Composite Index are segregated into 3 additional headline Investment Sector Indexes – FTSE NAREIT All Equity REITs Index, FTSE NAREIT Equity REITs Index, and FTSE NAREIT Mortgage REITs Index. Indexes also are calculated for separate property sectors and property sub-sectors. The FTSE NAREIT US Real Estate Index Series is calculated on an end-of-day basis in US dollars, Euro, UK Sterling and Japanese Yen. Selected indexes are calculated and disseminated on a real time basis in US dollars. Both price and total return indexes are calculated. Dividends are included in the total return indexes based on their ex-dividend dates.

The **HFRX Global Hedge Fund Index** is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies falling within four principal strategies: equity hedge, event driven, macro/CTA, and relative value arbitrage. The underlying constituents and indices are asset weighted based on the distribution of assets in the hedge fund industry. All HFRX Indices are rebalanced quarterly, and information of selected constituents is available to HFR database subscribers.

The **MSCI ACWI Growth Index** measures the performance of those MSCI ACWI companies with higher price-to-book ratios and higher forecasted growth values. The index captures large and midcap representation across 24 Developed and 21 Emerging Markets countries. With 2,433 constituents, the index covers approximately 84% of the global investable equity opportunity set.

The **Russell Microcap Index** measures the performance of the microcap segment of the U.S. equity market. Microcap stocks make up less than 3% of the U.S. equity market (by market cap) and consist of the smallest 1,000 securities in the small-cap Russell 2000® Index, plus the next smallest eligible securities by market cap.

The **S&P GSCI Gold Index** is part of a series of sub-indices calculated by S&P Indices that represent components of the S&P GSCI from across a number of commodity sectors: Energy, Industrial Metals, Precious Metals, Agriculture, Softs, and Livestock. The S&P GSCI is calculated primarily on a world production weighted basis, and is comprised of the principal physical commodities that are the subject of active, liquid futures markets. The weight of each commodity in the index is determined by the average quantity of production as per the last five years of available data. The production weights are designed to reflect the relative significance of each of the constituent commodities in the world economy while preserving the tradability of the index.

Index Returns measure returns over the relevant period using the change in the index level expressed as a percentage from the beginning of the relevant period to the end of the relevant period. Index Returns are for illustrative purposes only. Index Returns do not reflect any management fees, transaction costs, or expenses which would reduce your actual return. Indexes are unmanaged and one cannot invest directly in an index.

Strategy Overview

Structured Alpha: In Pursuit of Risk-Controlled Returns

Structured Alpha is an investment strategy that aims to deliver returns regardless of market conditions. Whether equity markets are rising or declining, whether smooth or volatile, Structured Alpha is designed to achieve its return target.

The strategy entails buying and selling both put and call options on US equity and volatility indexes. All options used in Structured Alpha are exchange-traded, and are the most liquid and transparent contracts in the options market. The strategy deliberately uses a very simple set of ingredients, but does so in a unique way in pursuit of its risk-controlled return profile.

The three-pronged objective of Structured Alpha is:

1. To profit during normal market conditions
2. To protect against a market crash
3. To navigate as wide a range of equity-market outcomes as possible

Investment Approach

One of the most unique characteristics of Structured Alpha is the combination of both long- and short-volatility positions at all times. The portfolio seeks to capitalize on the return-generating features of selling options (short volatility) while simultaneously benefiting from the risk-control attributes associated with buying options (long volatility), and to continually optimize the balance between these two types of exposures.

Three types of positions constitute the building blocks of Structured Alpha's portfolio construction:

1. Range-Bound
   - Short-volatility positions, designed to collect option premium and to generate excess returns in normal market conditions.
   - Based on detailed, proprietary statistical analysis, put and call options are sold to create "profit zones" that have a high probability of success upon expiration of the options. Like a net, these profit zones aim to catch the underlying equity index inside their upper and lower bands at expiration. As long as the equity index finishes inside the profit zone at expiration, the strategy will profit.
   - Approximately two-thirds of the excess return Structured Alpha has generated since inception comes from range-bound positions.

2. Directional
   - Combination long-short volatility positions designed to generate excess returns when equity indexes are rising or declining more than usual over a multi-week period.
   - Positions are built by buying and selling options to both the upside and downside to create profit zones several percentage points away from current equity index levels. They are set up to capture larger equity-market movements, for example +/- 4% to 8%.
   - Approximately one-third of the excess return Structured Alpha has generated since inception comes from directional positions.

3. Hedging
   - Long-volatility positions, designed to protect the portfolio in the event of a market crash.
   - Put options are purchased out of the money at various levels to the downside, and always in a greater quantity than the amount of puts sold for the range-bound positions.
   - These long puts are in place at all times, exclusively for risk-management purposes. Unless a tail event occurs they will have a negative expected value, but they are a cornerstone of Structured Alpha's investment process.

These three types of positions are continually balanced in pursuit of the portfolio's objectives. The daily optimization process includes decisions such as:

- At what forecasted index levels should the profit zones be constructed?
- How much time until option expiration is best?
- What mix of individual options makes the portfolio as diversified as possible?
- What strike distances are optimal for a given volatility and statistical environment?

Expected Behavior

Structured Alpha is constructed in anticipation of any type of market environment. Its expected behavior would be as follows:

continued

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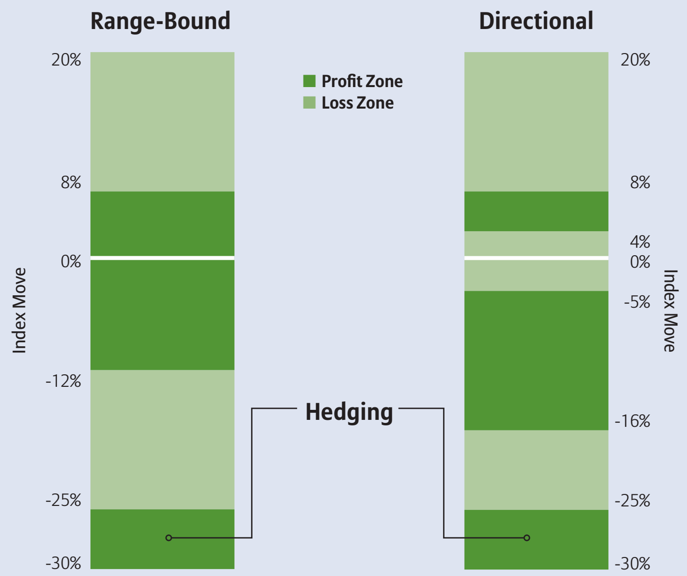
- **Normal markets.** When equity markets are rising or falling in typical fashion over time, Structured Alpha can be expected to outperform in line with its return target.
- **Volatile markets.** If markets are choppy at the time new positions are established, the higher volatility level would enable increased outperformance potential and better risk control. In this regard, a protracted bear market is a highly favorable environment for Structured Alpha.
- **Rapid change from low to high volatility.** Performance may be more volatile and the portfolio may underperform for a few weeks. However, higher volatility levels would enable greater excess-returns potential in subsequent months.
- **Rapid change from high to low volatility.** Outperformance potential would be enhanced for a few weeks. The transition to a lower-volatility environment would bring performance potential back to normal levels of expected return.

Flexible Applications

Structured Alpha has multiple applications and return/risk targets:

1. **Return targets.** Structured Alpha's excess return target can be selected from the following choices:
   - 250 bps annually, net of fees, with an expected standard deviation of 1.5% to 2.5%
   - 500 bps annually, net of fees, with an expected standard deviation of 3% to 5%
   - 1000 bps annually, net of fees, with an expected standard deviation of 6% to 10%
2. **Applications.** Structured Alpha is also readily used as a return enhancement strategy, because (a) options are a natural overlay instrument that can be seamlessly integrated with any type of beta exposure and (b) the excess returns are designed to be uncorrelated to other asset classes, with a risk profile similar to tracking error levels associated with traditional active management. The alpha potential



The charts are not intended to show a certain rate of return or even imply that an investor should expect a positive return. Note that in order to manage any of the Structured Alpha strategies, AllianzGI US will need collateral for the options contracts. In the event that, over a continued period of time, there is a sustained loss in closeout of the options contracts, there is a risk that assets used as collateral for the options would need to be utilized to cover the loss incurred from the closeout of the options contracts. The strategies may utilize various indexes.

has therefore been combined with passive beta to create solutions in the following asset classes:

- Absolute return
- Equity
- Fixed Income

Conclusion

Structured Alpha is a carefully researched, consistently implemented option strategy that aims to provide consistent and uncorrelated returns. Using versatile, plain vanilla option positions, the strategy has the ability to consistently benefit from the fear- and greed-driven behavior of option-market participants. The goal is to deliver a steady, resilient return stream with a fundamental emphasis on risk management.

Important Risk Considerations

This material describes certain structured product capabilities of Allianz Global Investors U.S. LLC ("AllianzGI US"). These strategies involve selling and buying put and/or call options and may not be suitable for every investor. No assurance can be given that any particular investment objective will be achieved. Among the risks specific to these strategies that AllianzGI US wishes to call to the attention of prospective investors are the following: 1. The use of derivatives involves risks different from, and possibly greater than, the risks associated with investing directly in the investments underlying the derivatives. Derivatives can be more volatile and involve significant risk and can disproportionately increase losses and reduce opportunities for gains. 2. Derivative transactions may produce effects similar to leverage and expose an account to related risks. Consequently, an adverse change in the relative price level can result in a loss of capital that is more exaggerated than would have resulted from an investment that did not involve the use of leverage inherent in the derivative contract. 3. For each strategy, the collateral requirement may vary depending on the use of an active or passive underlying portfolio, and on the extent to which the strategy uses call and put options. For each strategy, securities from the passive or active underlying portfolio may be pledged as collateral in order to implement the option positions. The collateral rules are based on the greater of Reg T rules (standard collateral rules defined by the CBOE and the SEC) and requirements of counterparties. When collateral is used to implement option positions, it is possible that a decline in market value of the option positions could force the portfolio to cover any shortfall by liquidating non-cash assets. The timing of such liquidation may be adverse. 4. When writing put and call options, the premium received may not be sufficient to offset any losses sustained from the volatility of the underlying investments. 5. Call options purchased for an account and not sold prior to expiration will expire worthless if the value of the underlying security or index at expiration is less than the exercise price of the option, causing the account to lose its entire investment in the option. 6. Put options purchased for an account and not sold prior to expiration will expire worthless if the value of the underlying security or index at expiration exceeds the exercise price of the option, causing the account to lose its entire investment in the option. 7. The account may be required to sell investments at times it would not otherwise choose to do so in order to settle written options. Such sales may result in losses on such investments and will, in addition, involve transaction costs. 8. Options on indices may not correlate perfectly with the underlying investments and may not act as expected. Such transactions may not achieve their objectives and may result in (or add to) losses to the account. 9. The strategies described herein are based on a proprietary model that is designed to take into account the historical behavior of options. The proprietary model may not correctly forecast future investment results. In addition, to the extent that the market behavior of options changes, the proprietary model may not be able to effectively optimize option selection and the investment objective of given transactions may not be achieved and may result in losses. 10. Strategies described herein are dependent on the smooth functioning of the markets for the particular instruments being purchased or sold. If such markets do not operate as expected, the option strategies described herein could be adversely affected.

Allianz Global Investors U.S. LLC ("AllianzGI US") is an SEC registered investment adviser that provides investment management and advisory services primarily to separate accounts of institutional clients and registered and unregistered investment funds. AllianzGI US manages client portfolios (either directly or through model delivery and wrap fee programs) applying traditional and systematic processes across a variety of investment strategies. AllianzGI US may also provide consulting and research services in connection with asset allocation and portfolio structure analytics. Effective April 1, 2013, AllianzGI US's total firm assets under management include assets previously managed by RCM Capital Management LLC and Caywood-Scholl Capital Management LLC, each of which merged into AllianzGI US on April 1, 2013. NFJ Investment Group LLC is an SEC registered investment adviser and wholly-owned subsidiary of AllianzGI US.

AllianzGI US claims compliance with the Global Investment Performance Standards (GIPS®). The Firm's list of Composite descriptions, as well as information regarding the Firm's policies for valuing investments, calculating performance, and preparing compliant presentations, are available upon request by contacting (212) 739-3300.

AllianzGI US may utilize this strategy as the investment manner of one or more privately offered investment funds. This communication is not an offer to invest in such funds. Such an offer may only be made through the private offering memorandum of such funds.

Callan
FORTY YEARS

ARMB Board Meeting
September 19, 2014

Investment Performance
Periods Ended 6/30/14
(with final real estate returns)

Paul Erlendson
Senior Vice President

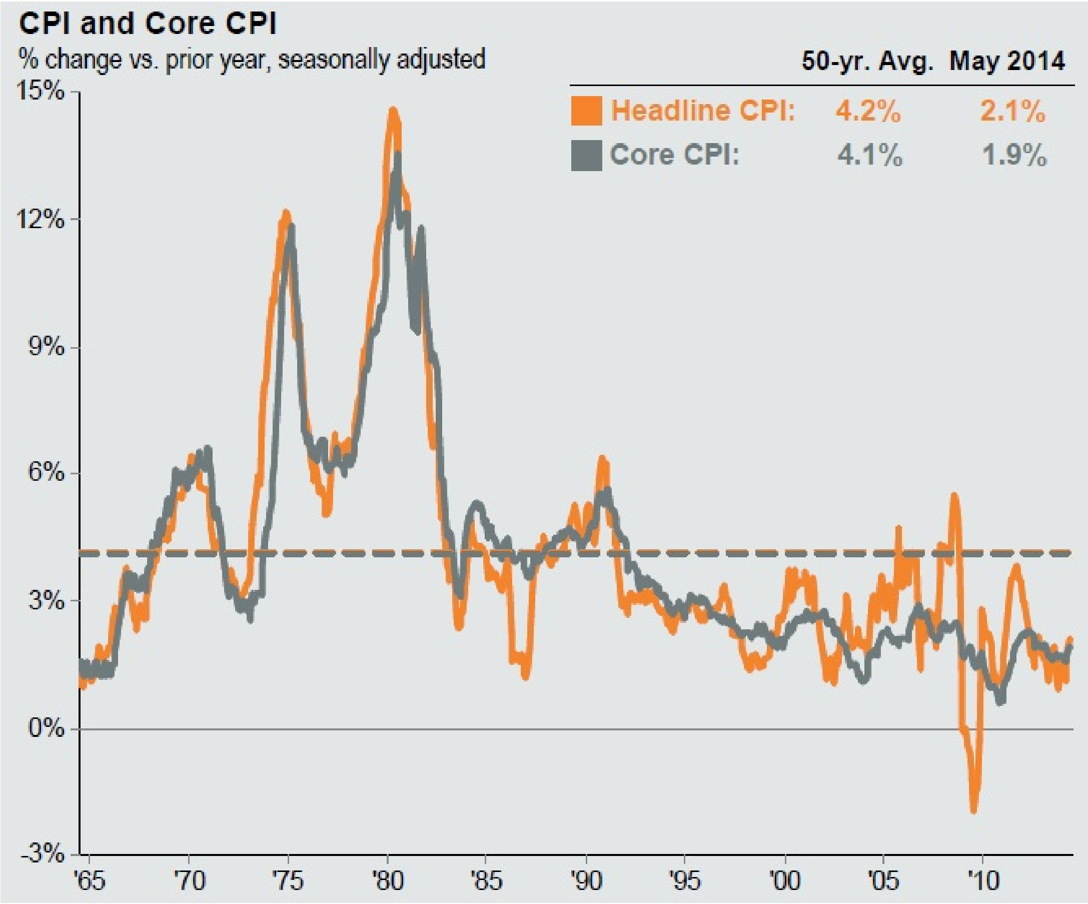
Dana Brown
Senior Vice President

Agenda

- Market and Economic Environment
- Total Fund Performance
  - Major Asset Classes
- Review of Major Activities

U.S. Economy: Inflation

Quarter Ending June 30, 2014



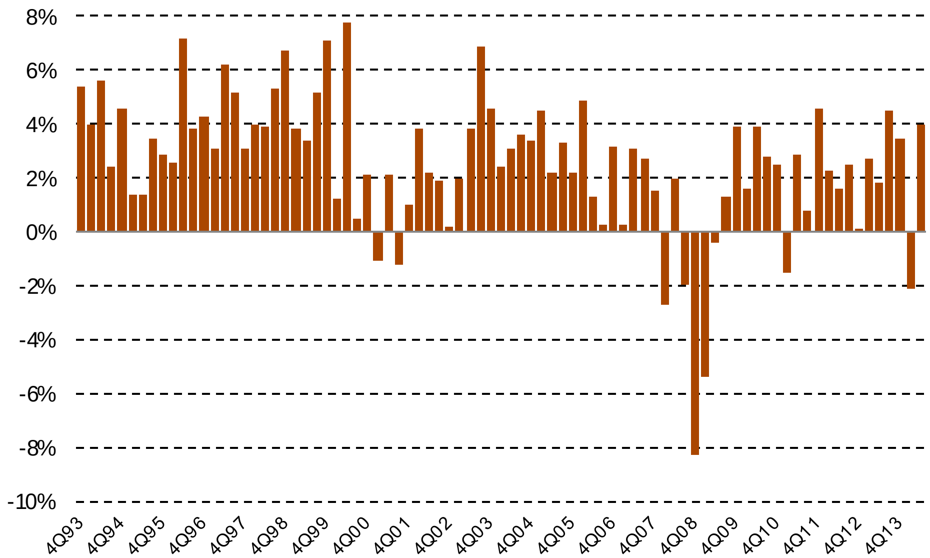
Sources: Bureau of Labor Statistics; FactSet; JPMorgan

- Inflation remains subdued: For the 12-months ending June, headline and core CPI (which excludes food and energy) increased over the trailing year by 2.1% and 1.9%, respectively.
- The current annual rate of Core Inflation rate is well below the long-term average of 4.1%.

U.S. Economy

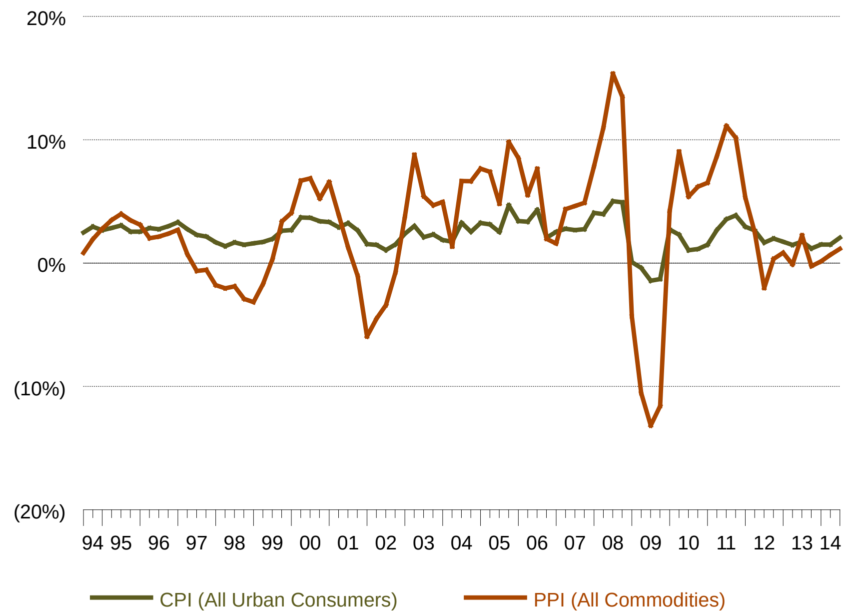
Periods Ending June 30, 2014

Quarterly Real GDP Growth (20 Years)*



Source: Bureau of Economic Analysis

Inflation Year-Over-Year

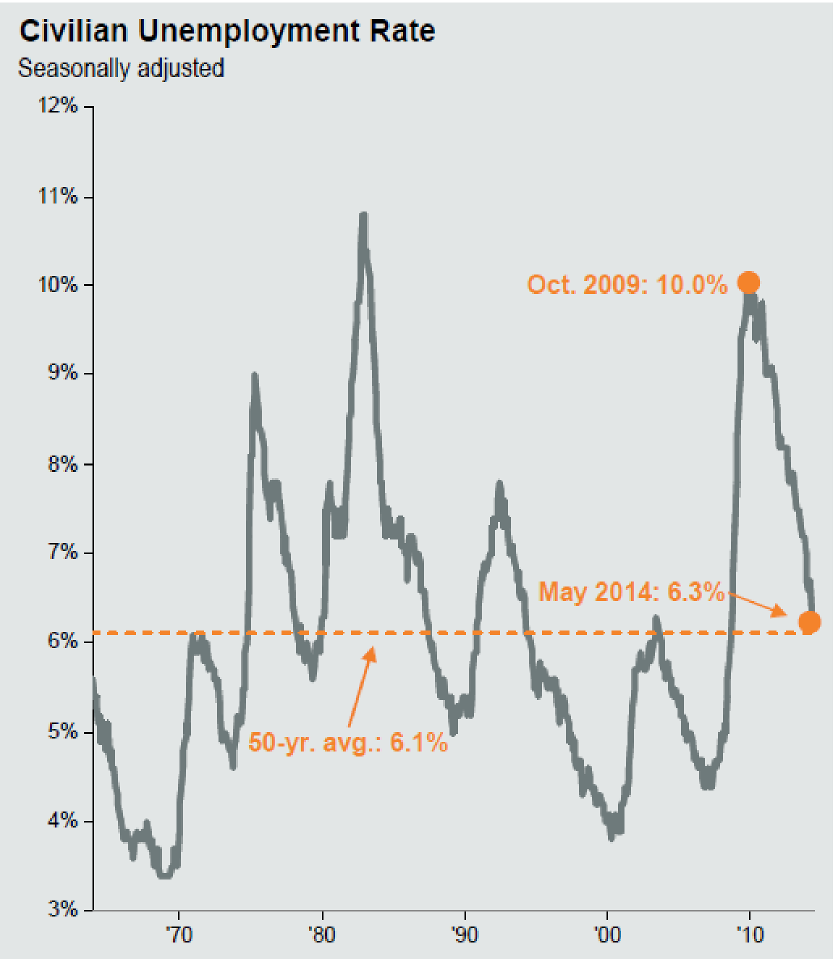


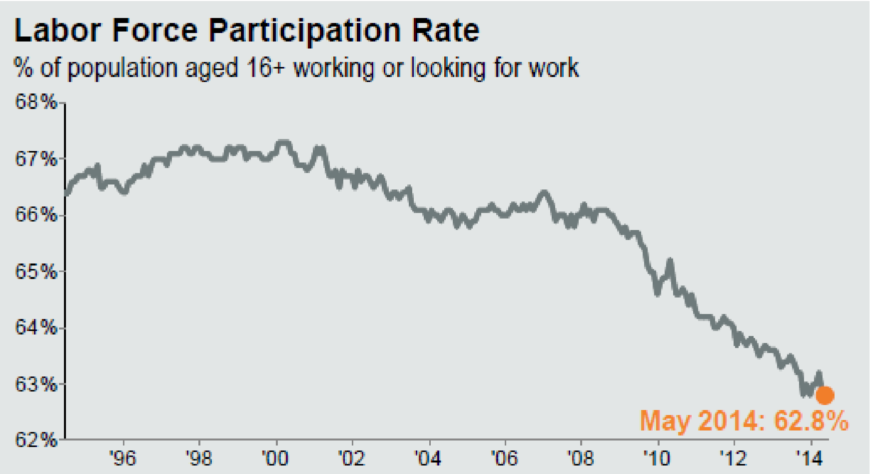
Source: Bureau of Labor Statistics

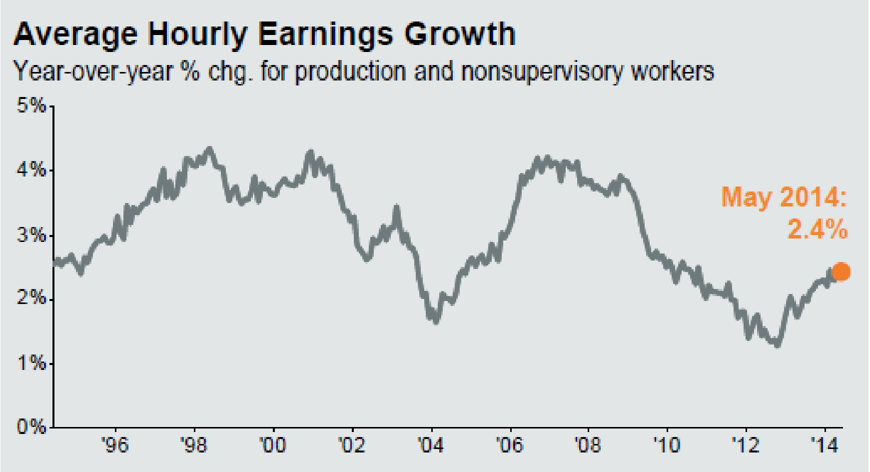
- Fed continued to taper bond purchases by an additional $10B to $35B/month in July.
- 2nd quarter GDP was up 4.0%, a dramatic improvement from -2.1% in the first quarter.
- June headline & core CPI increased over the trailing year by 2.1% and 1.9%, respectively.
- The unemployment rate declined from last quarter to 6.1%.
- Labor market shows strength with addition of 298,000 jobs in June, well above consensus.

Employment Picture

Periods Ending June 30, 2014







Source: BLS, FactSet, J.P. Morgan Asset Management.

Guide to the Markets – U.S.

Data are as of 6/30/14.

Source: JPM Guide to the Markets, June 30, 2014

Asset Class Performance

Periods Ending June 30, 2014

- Emerging markets best for quarter, up 6.7%
- S&P 500 gained 5.2% for quarter and 24.6% for the trailing year
- Aggregate rose 2.0% for quarter and 4.4% for the trailing year
- International equities lag domestic equities over every time period shown

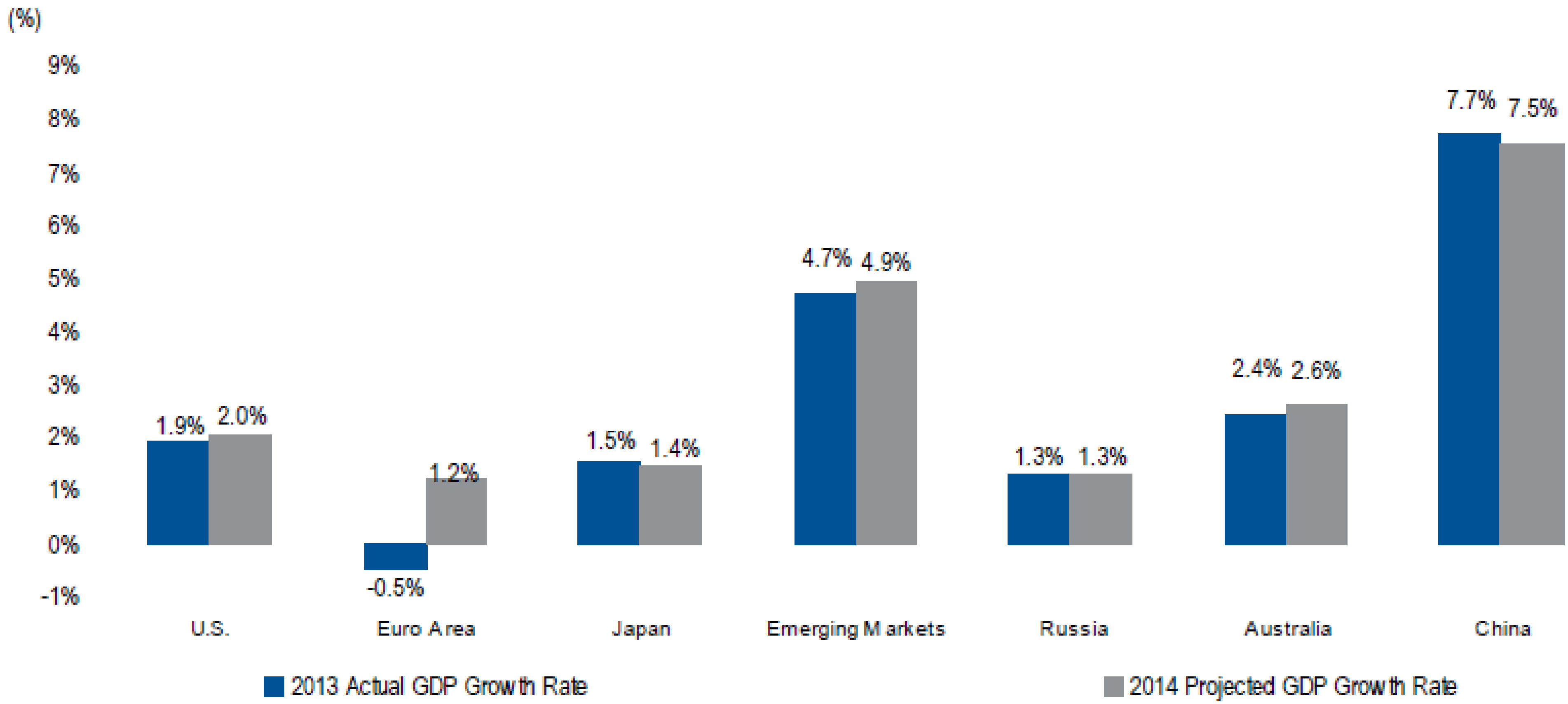
8/31/14	Month	YTD
S&P 500	4.0%	9.9%
Russell 2000	5.0%	1.8%
EAFE	-0.2%	2.6%
EM	2.3%	11.0%
BC Agg	1.1%	4.8%
BC TIPS	0.4%	6.3%

Periodic Table of Investment Returns
for Periods Ended June 30, 2014

Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:Emer Markets 6.7%	S&P:400 Mid Cap 25.2%	S&P:500 16.6%	S&P:400 Mid Cap 21.7%	MSCI:Emer Markets 12.3%
S&P:500 5.2%	S&P:500 24.6%	S&P:400 Mid Cap 15.3%	Russell:2000 Index 20.2%	S&P:400 Mid Cap 10.5%
S&P:400 Mid Cap 4.3%	Russell:2000 Index 23.6%	Russell:2000 Index 14.6%	S&P:500 18.8%	Russell:2000 Index 8.7%
MSCI:EAFE US$ 4.1%	MSCI:EAFE US$ 23.6%	MSCI:EAFE US$ 8.1%	MSCI:EAFE US$ 11.8%	S&P:500 7.8%
Russell:2000 Index 2.0%	MSCI:Emer Markets 14.7%	Barclays:Aggregate Index 3.7%	MSCI:Emer Markets 9.6%	MSCI:EAFE US$ 6.9%
Barclays:Aggregate Index 2.0%	Barclays:Aggregate Index 4.4%	3 Month T-Bill 0.1%	Barclays:Aggregate Index 4.9%	Barclays:Aggregate Index 4.9%
3 Month T-Bill 0.0%	3 Month T-Bill 0.1%	MSCI:Emer Markets (0.1%)	3 Month T-Bill 0.1%	3 Month T-Bill 1.6%

Global GDP

Projected GDP Growth Rates

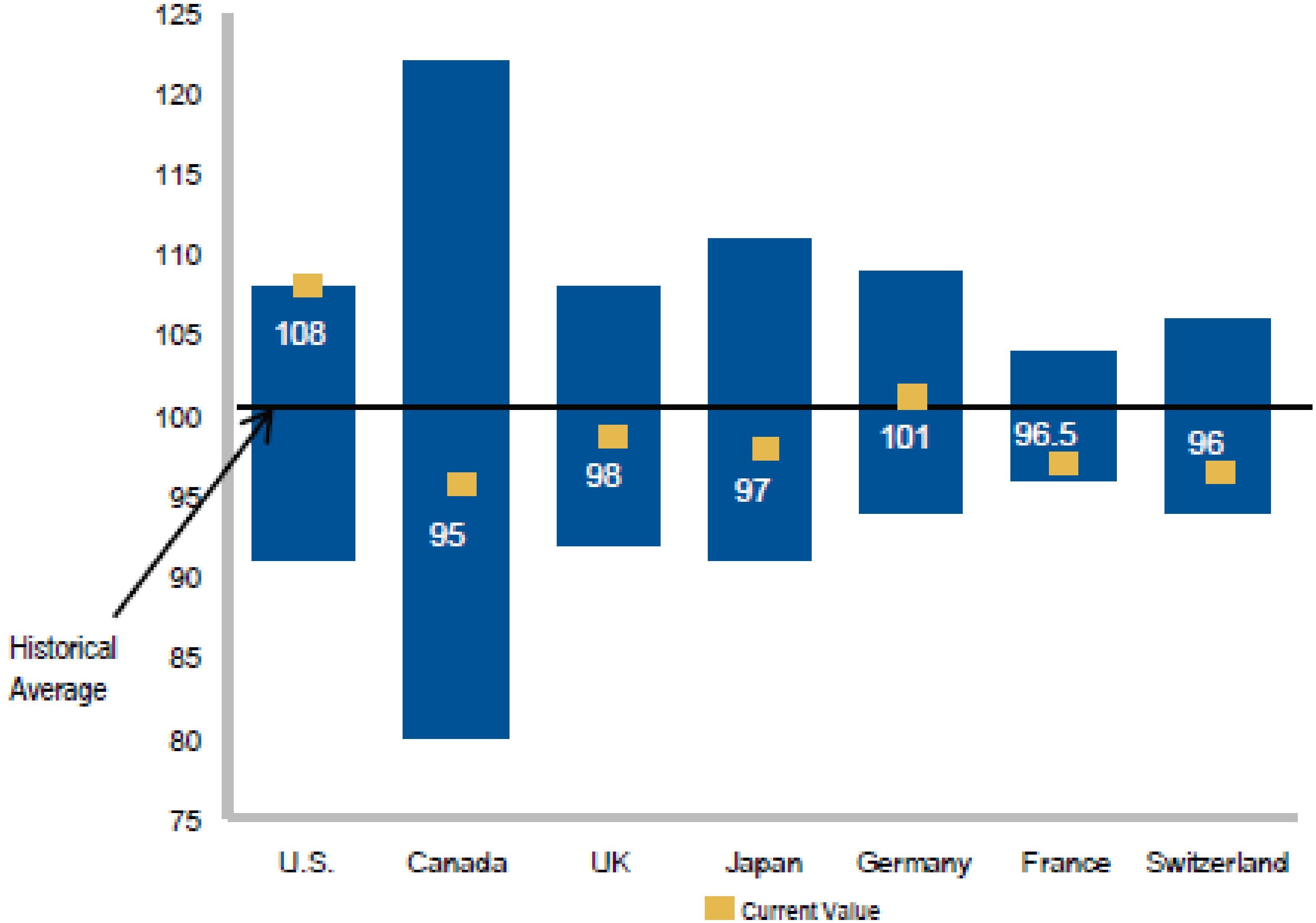


Source: International Monetary Fund World Economic Outlook April 2014, Neuberger Berman.

- GDP growth rates for the rest of calendar-year 2014 are generally projected to rise.
- Developing markets expected to have more robust economic growth than developed countries.

Relative Global Equity Valuations

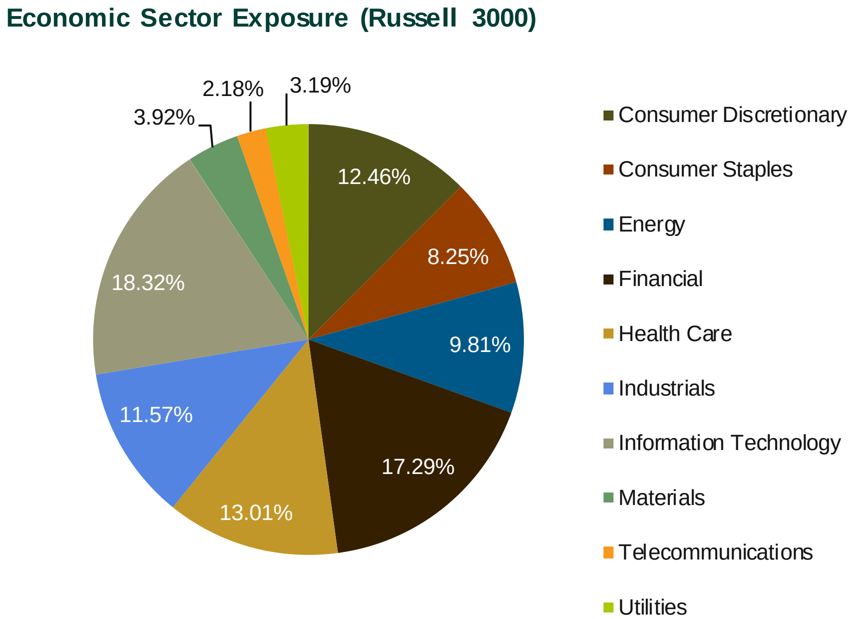
Profits as a percent of GDP, historically

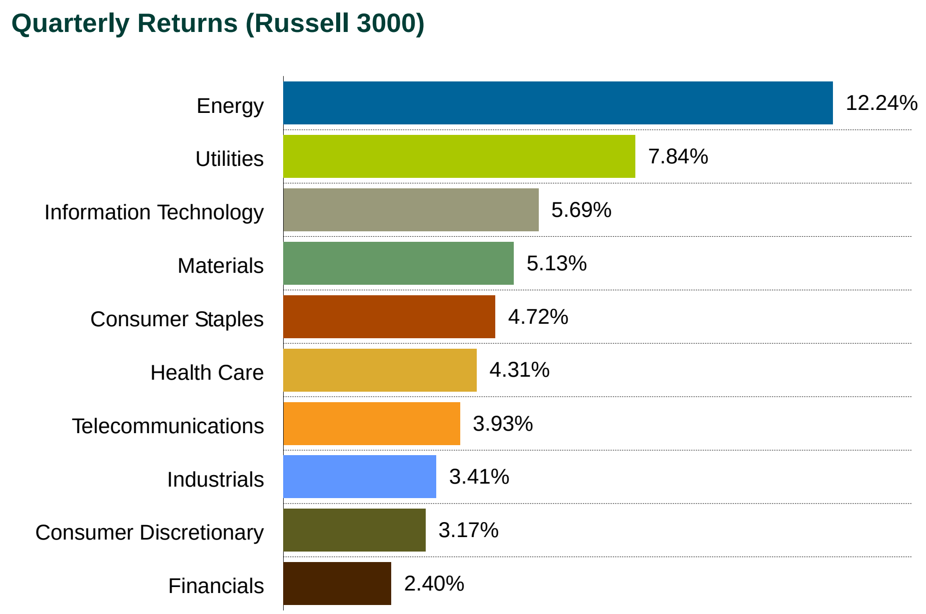


Source: Neuberger Berman, Haver Analytics

U.S. Equity Sector Performance

Quarter Ending June 30, 2014



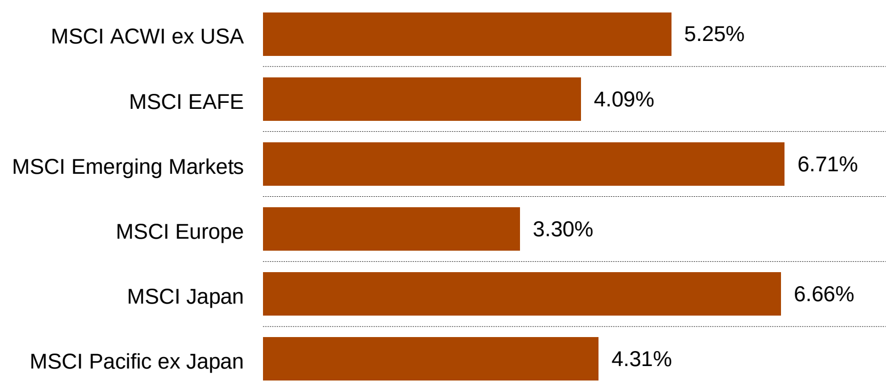


Pie chart may not sum to 100% due to rounding
Source: Russell Investment Group

Non-U.S. Equity Returns

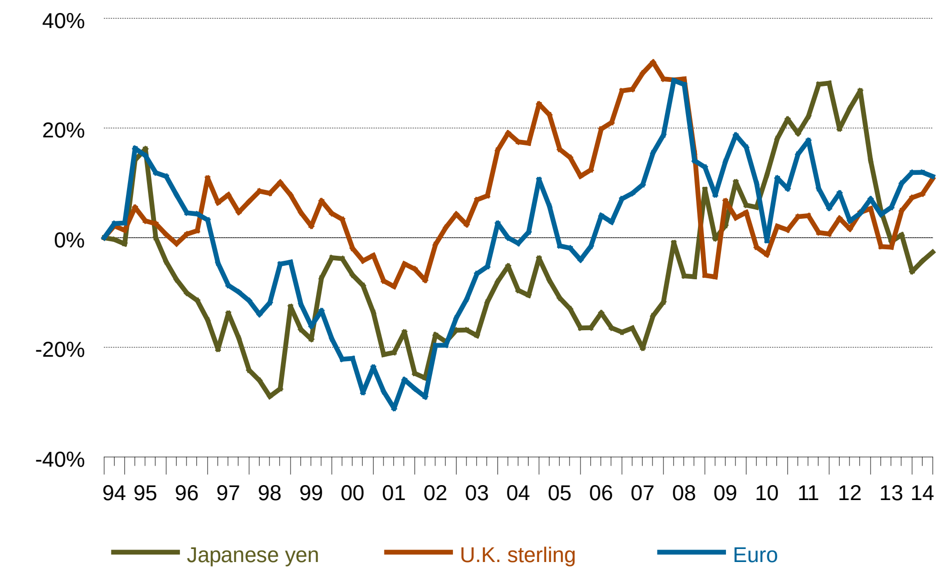
Periods Ending June 30, 2014

Regional Quarterly Performance (U.S. Dollar)



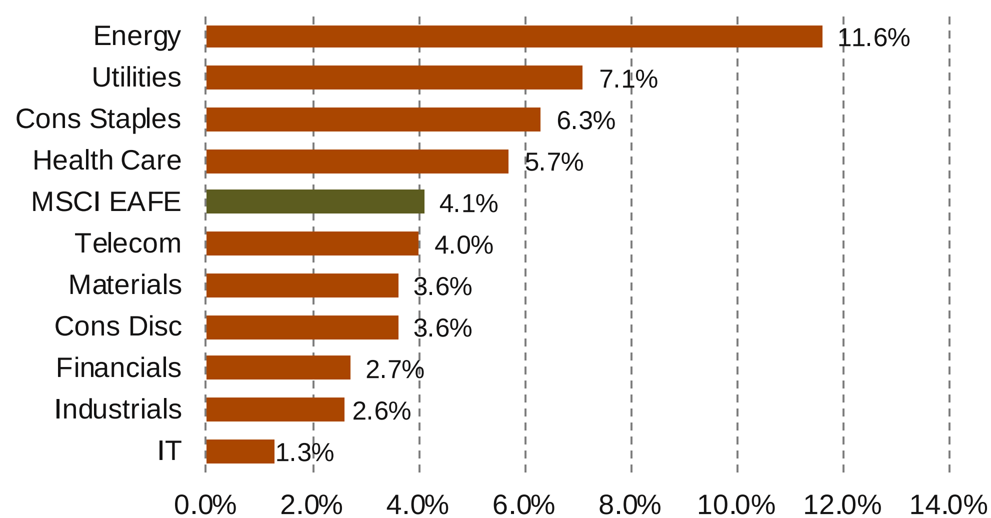
Source: MSCI

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



*Euro returns from 1Q99. German mark prior to 1Q99.
Source: MSCI

MSCI EAFE Sector Returns

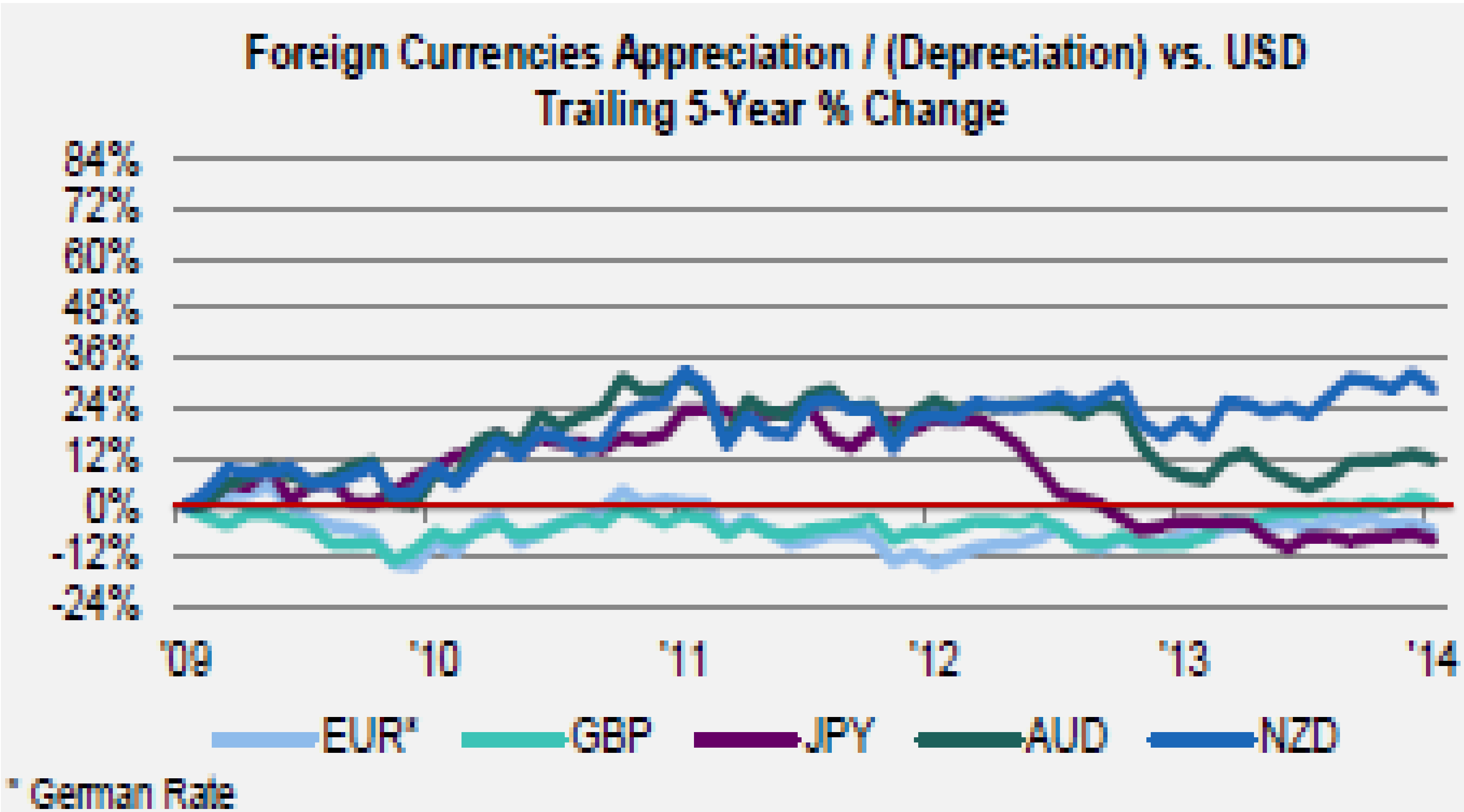


Source: Barrow Hanley Quarterly Benchmark Review

- ACWI ex-U.S. rose in the quarter and led the U.S.; Europe lagged (3.3%).
- The euro depreciated while the yen and pound appreciated versus the U.S. dollar.
- Emerging markets surged on improving investor sentiment, gaining 6.7%

U.S. Dollar vs. Foreign Currencies

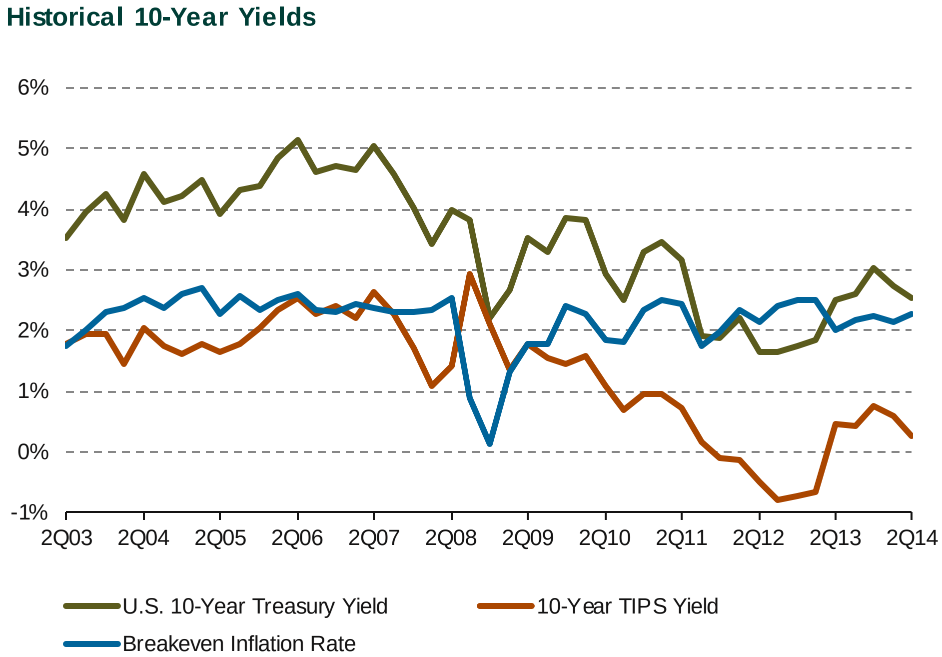
As of 7/31/14



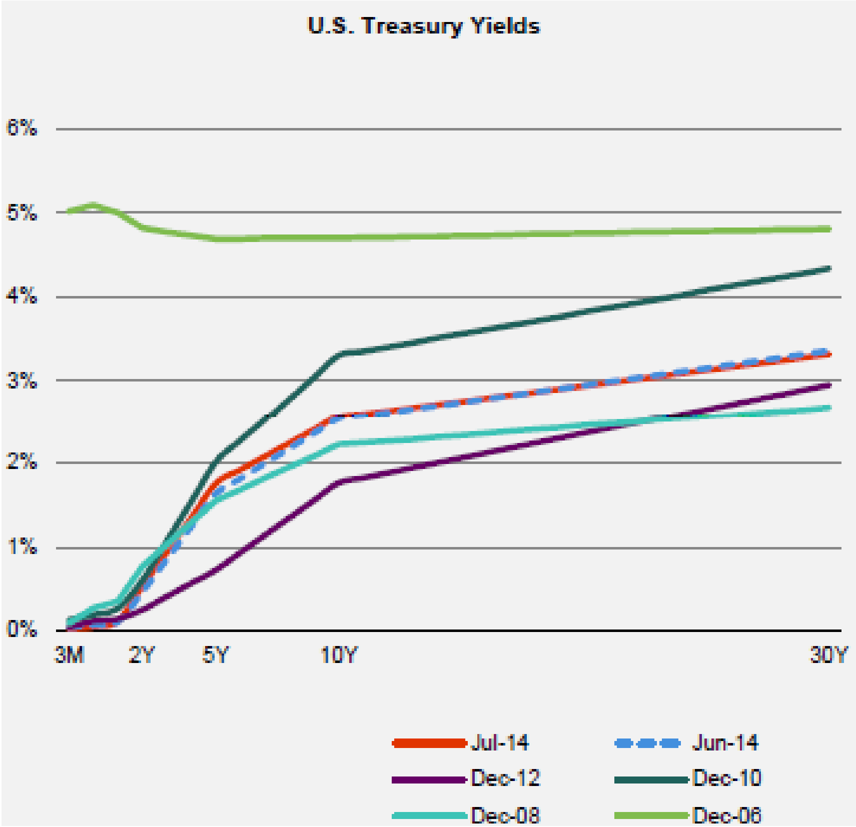
- Yen and the Euro have both declined more than 1% annually vs the Dollar over last five years.
- The New Zealand Dollar has risen by over 5% and the Australian Dollar by over 2% annually.

Yield Curve Changes

Periods Ending June 30, 2014



Source: Bloomberg

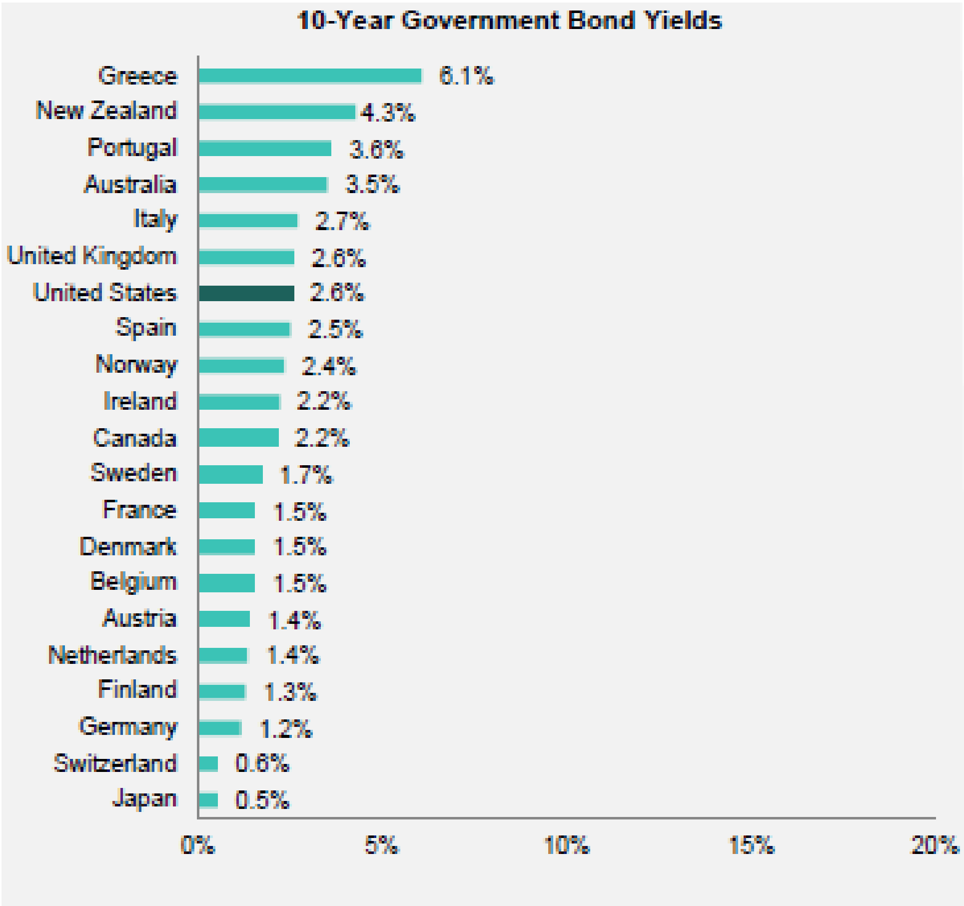


Sources: Eaton Vance, Bloomberg

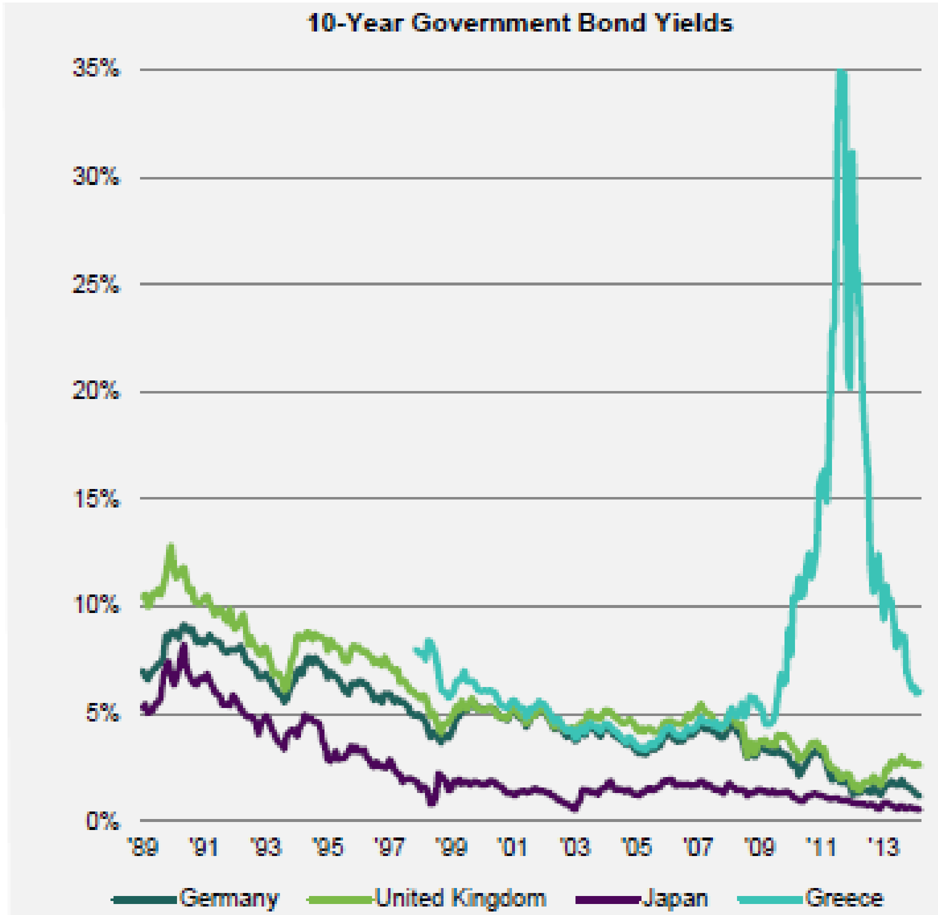
- A flattening of the yield curve helped long-term Treasury returns.
- The ten-year treasury yield declined 19 basis points from last quarter ending at 2.53%.
- TIPS returned 3.8% in the quarter, exceeding the Aggregate (+2.0%).

Global Bond Yields

Yields fell around the world in 2014 Q2



Sources: Neuberger Berman, Thompson, Reuters 7/31/14



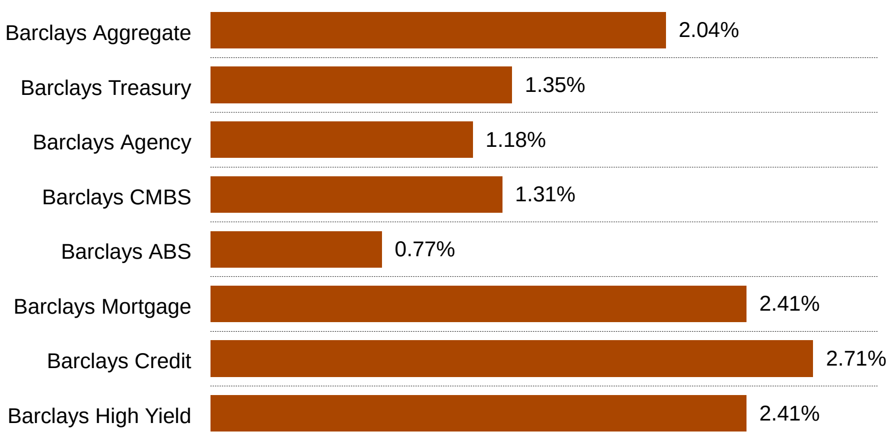
Sources: Neuberger Berman, Bloomberg 7/31/14

- As low as US Government bond yields are presently, many other developed countries are issuing government debt at even lower interest rates.
- The US / foreign interest rate differential makes the US a more desirable investment opportunity.

Total Rates of Return by Bond Sector

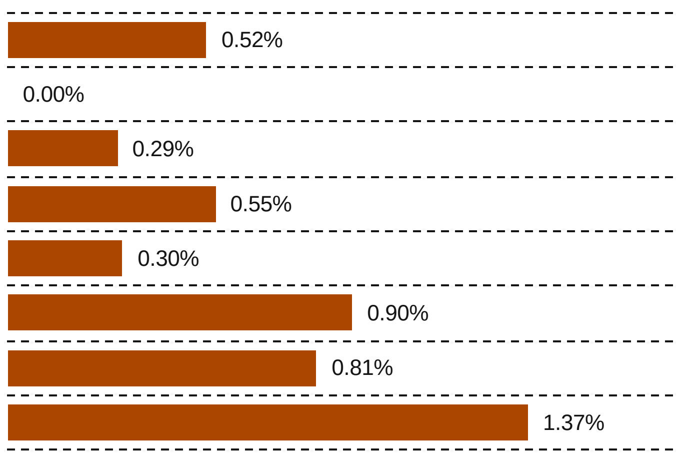
Periods Ending June 30, 2014

Absolute Returns

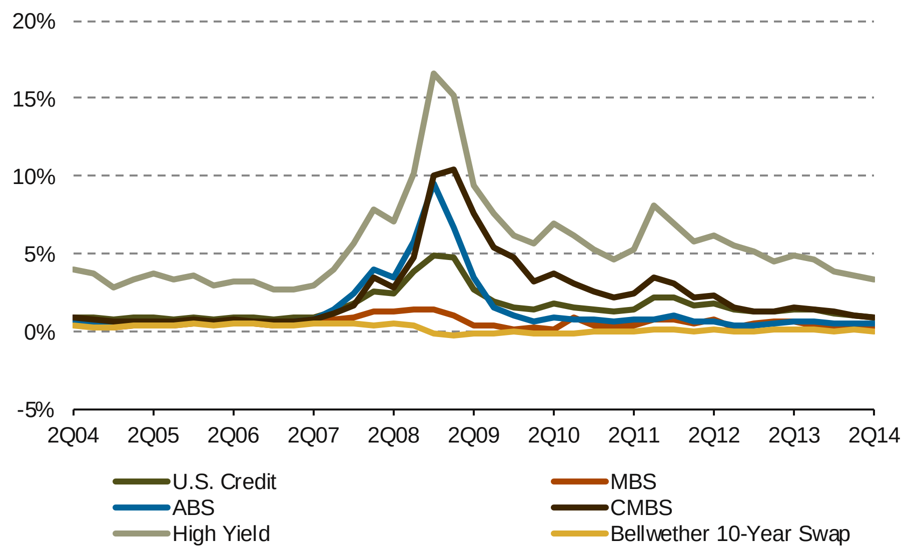


Source: Barclays

Excess Return versus Like-Duration Treasuries



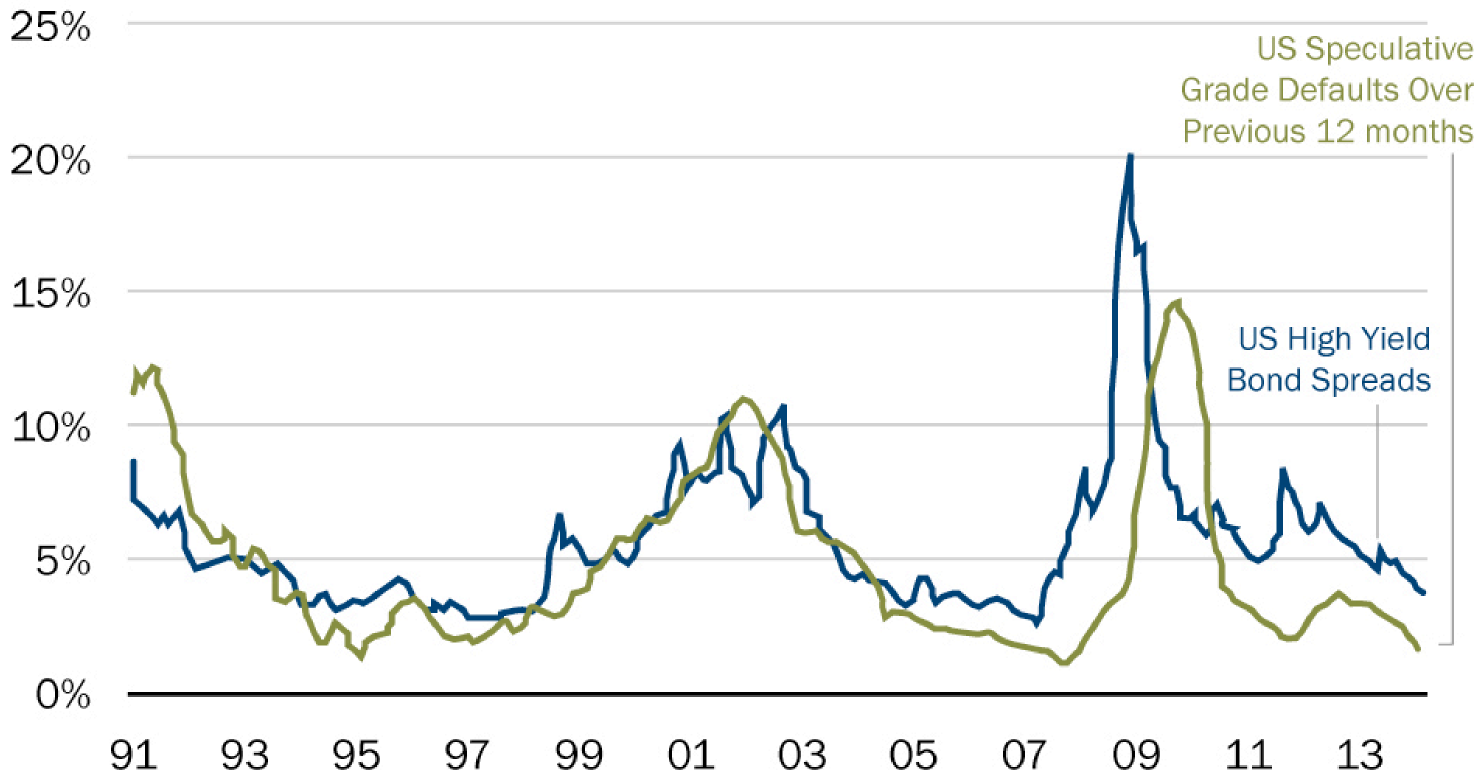
Effective Yield Over Treasuries



Source: Barclays

Compensation for High Yield Risk

High Yield Spreads Are Well Above Default Rates



Through March 31, 2014
Source: BofA Merrill Lynch, Credit Suisse, Moody's Investors Service

- The yield premium paid by below investment grade bonds to investors currently is higher than the increased credit (default) risk of the high yield sector.

Real Estate

Style medians and index returns as of 6/30/14

Private Real Estate	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years
Real Estate Database (net of fees)	2.05	4.53	11.12	11.20	7.45	5.71	7.23
NCREIF Property**	2.91	5.73	11.21	11.32	9.67	8.63	8.89
Public Real Estate							
REIT U.S. Database	7.25	17.91	14.80	12.30	24.20	10.72	12.48
NAREIT Equity	6.98	17.66	13.21	11.84	23.52	9.61	11.22
Global Real Estate							
Global REIT Database	7.94	12.03	15.26	10.50	17.91	10.06	11.76
EPRA/NAREIT Global Developed	7.88	12.21	14.43	10.21	17.42	9.12	9.87

Sources: Callan, Citigroup, JPMorgan Chase & Co.

- The NCREIF Property index's 2.91% return in the second calendar quarter of 2014 was nearly evenly split between income (+1.35%) and capital appreciation (+1.55%).
- A preliminary query of NCREIF tracked 164 institutional asset trades and $5.9 billion in volume.
  - Trades during the second calendar-year quarter since 2004 have averaged about $4.84 billion.
- Domestic REITs raised ~$24.0 billion during the Q2 of 2014 via 78 offerings.

Commodities

As of July 31, 2014

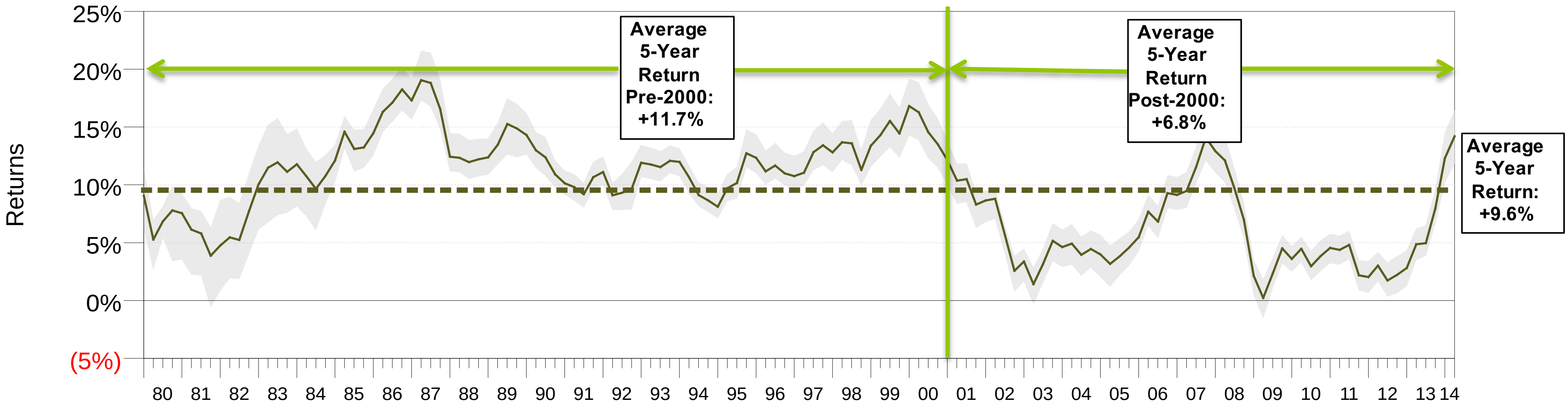
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	YTD 7/14
Higher	Livestock 27.10	Energy 42.16	Industrial Metals 72.35	Grains 42.07	Precious Metals -4.06	Industrial Metals 79.98	Softs 59.90	Precious Metals 4.56	Grains 18.25	Energy 5.20	Livestock 16.30
	Industrial Metals 25.27	Industrial Metals 33.47	Precious Metals 27.11	Agriculture 29.89	Grains -26.32	Softs 44.24	Precious Metals 42.66	Livestock -2.30	Precious Metals 6.29	Livestock -3.54	Softs 10.71
	Energy 19.12	Commodity 21.36	Grains 23.61	Precious Metals 25.96	Agriculture -27.47	Precious Metals 29.20	Agriculture 38.49	Commodity -13.32	Agriculture 3.98	Commodity -9.52	Precious Metals 6.06
	Commodity 9.15	Precious Metals 20.44	Agriculture 14.25	Energy 20.69	Livestock -28.41	Commodity 18.91	Grains 30.28	Softs -13.97	Industrial Metals 0.67	Industrial Metals -13.63	Industrial Metals 5.87
	Precious Metals 7.40	Softs 9.31	Commodity 2.07	Commodity 16.23	Softs -28.43	Agriculture 13.72	Commodity 16.83	Agriculture -14.35	Commodity -1.06	Agriculture -14.28	Commodity 1.74
	Softs 3.67	Agriculture 1.08	Livestock -6.12	Softs -3.45	Commodity -35.65	Grains -1.65	Industrial Metals 16.24	Grains -14.41	Livestock -3.54	Softs -16.86	Energy 0.26
	Agriculture -12.85	Livestock -0.26	Softs -11.97	Industrial Metals -9.86	Energy -47.33	Energy -5.30	Livestock 9.27	Energy -15.97	Energy -9.36	Grains -16.90	Agriculture -2.78
Lower	Grains -23.68	Grains -3.32	Energy -41.41	Livestock -10.67	Industrial Metals -48.27	Livestock -15.07	Energy -10.55	Industrial Metals -24.23	Softs -22.39	Precious Metals -30.80	Grains -9.99

Sources: Neuberger Berman, Morningstar

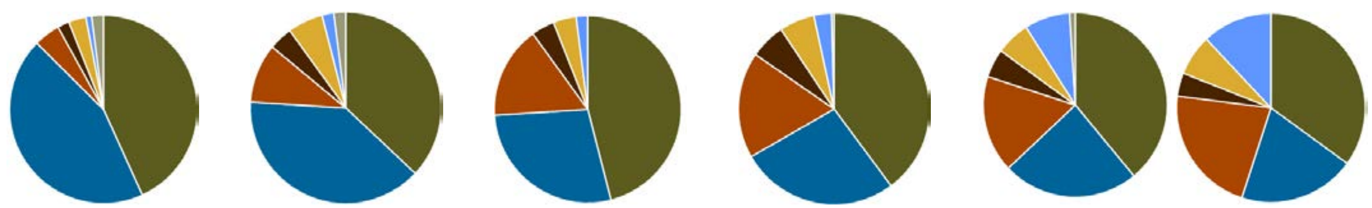
- Wide variations across commodity classes during the first seven months of 2014.
- Over the last 10 years, the average annual range between highest and lowest return is +53%.

Historical Large Public Fund Asset Allocation and Returns

CAI Large Public Fund Database: Rolling 5 Year Returns



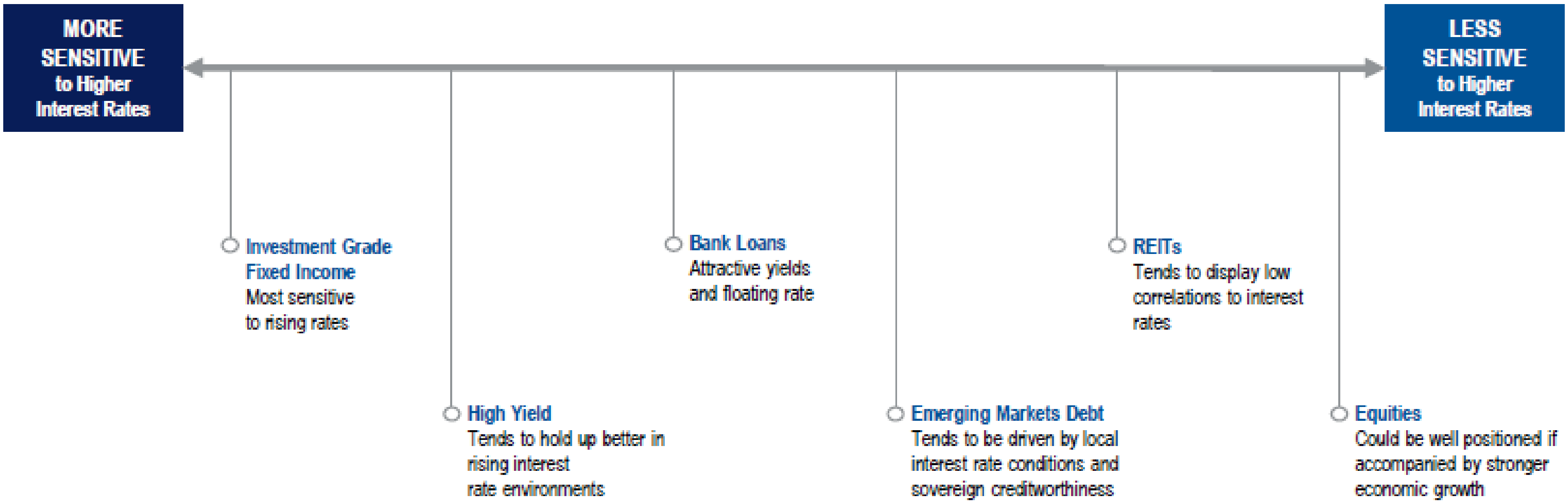
5 Year Return	12.1%	14.4%	8.1%	17.7%	3.7%	3.6%	14.5%



ASSET CLASS	1985	1990	1995	2000	2005	2010	2014
Domestic Equity	N/A	43%	37%	46%	40%	39%	35%
Domestic Fixed Income		44%	39%	28%	27%	24%	20%
Non-U.S. Equity		5%	10%	16%	18%	17%	22%
Non-U.S. Fixed Income		2%	4%	4%	6%	5%	4%
Real Estate		3%	6%	4%	6%	6%	7%
Other Alternatives		1%	2%	2%	3%	8%	12%
Cash Equivalents		2%	2%			1%	

A Rising Rate Environment: degrees of pain

Impact varies by asset class

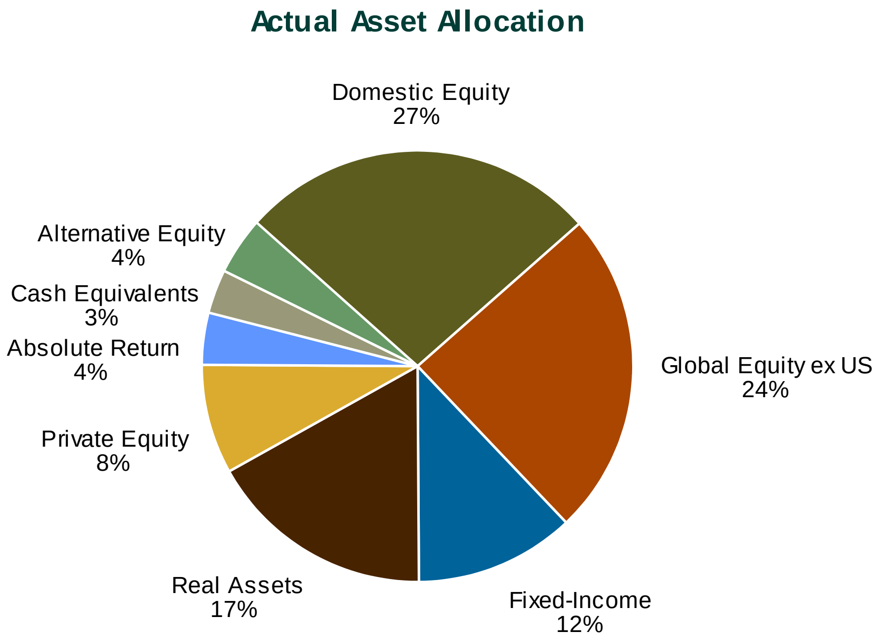


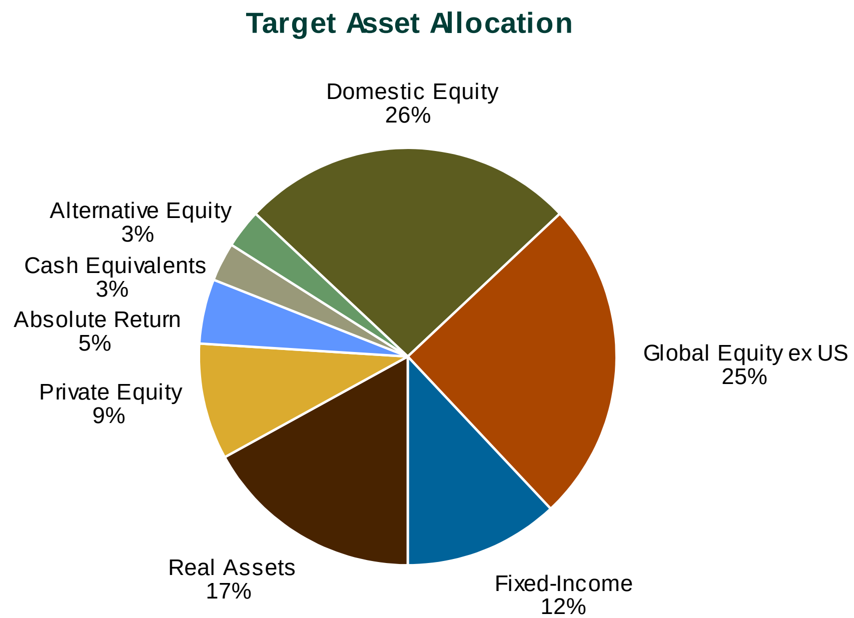
Source: Neuberger Berman

- Assets that pay a fixed coupon likely will be hurt most.
- Diversification will be a key defense against potential negative price impact of higher yields.
- ARMB’s asset portfolio is positioned to mitigate adverse consequences of rising interest rates.

Asset Allocation – Employees' Retirement Plan

Quarter Ending June 30, 2014





Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	2,094,214	27.1%	26.0%	1.1%	83,406
Global Equity ex US	1,884,542	24.4%	25.0%	(0.6%)	(48,927)
Fixed-Income	930,193	12.0%	12.0%	0.0%	2,127
Real Assets	1,313,158	17.0%	17.0%	0.0%	(1,601)
Private Equity	630,826	8.2%	9.0%	(0.8%)	(65,223)
Absolute Return	299,756	3.9%	5.0%	(1.1%)	(86,938)
Cash Equivalents	252,124	3.3%	3.0%	0.3%	20,108
Alternative Equity	329,065	4.3%	3.0%	1.3%	97,049
Total	7,733,877	100.0%	100.0%		

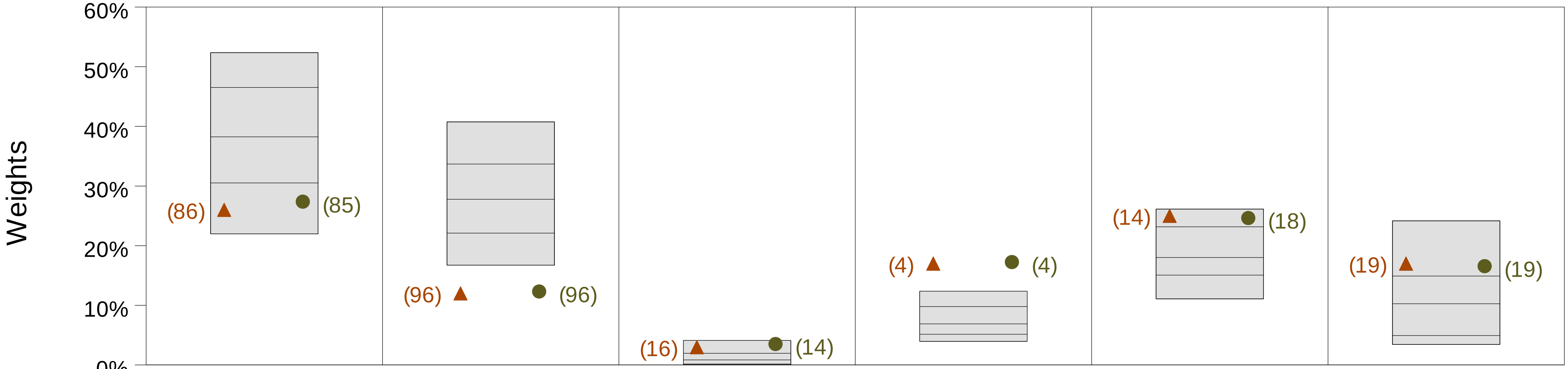
ERP is used as illustrative throughout the presentation.

The other plans exhibit similar modest and understandable variations from strategic target allocations.

Asset Allocation vs. Public Funds (ERP)

Callan Public Fund Database

Asset Class Weights vs Public Fund Sponsor Database



	Domestic Equity	Fixed-Income	Cash Equivalents	Real Assets	Global Equity ex US	Alternative
10th Percentile	52.34	40.74	4.11	12.38	26.13	24.15
25th Percentile	46.52	33.68	1.97	9.80	23.15	14.90
Median	38.25	27.78	0.84	6.90	18.02	10.26
75th Percentile	30.51	22.12	0.18	5.14	15.07	4.93
90th Percentile	21.98	16.73	0.03	3.95	11.09	3.44
Fund ●	27.08	12.03	3.26	16.98	24.37	16.29
Target ▲	26.00	12.00	3.00	17.00	25.00	17.00
% Group Invested	98.79%	97.58%	63.64%	58.79%	96.36%	49.09%

- Total domestic equity is above target while international equity is marginally below target. Real assets and alternatives are high when compared to other public funds. Policy is “growth” oriented as opposed to “income” oriented.

*Note that “Alternative” includes private equity and absolute return

PERS Performance – 2nd Quarter 2014 & Fiscal Year

Relative Attribution Effects for Quarter ended June 30, 2014

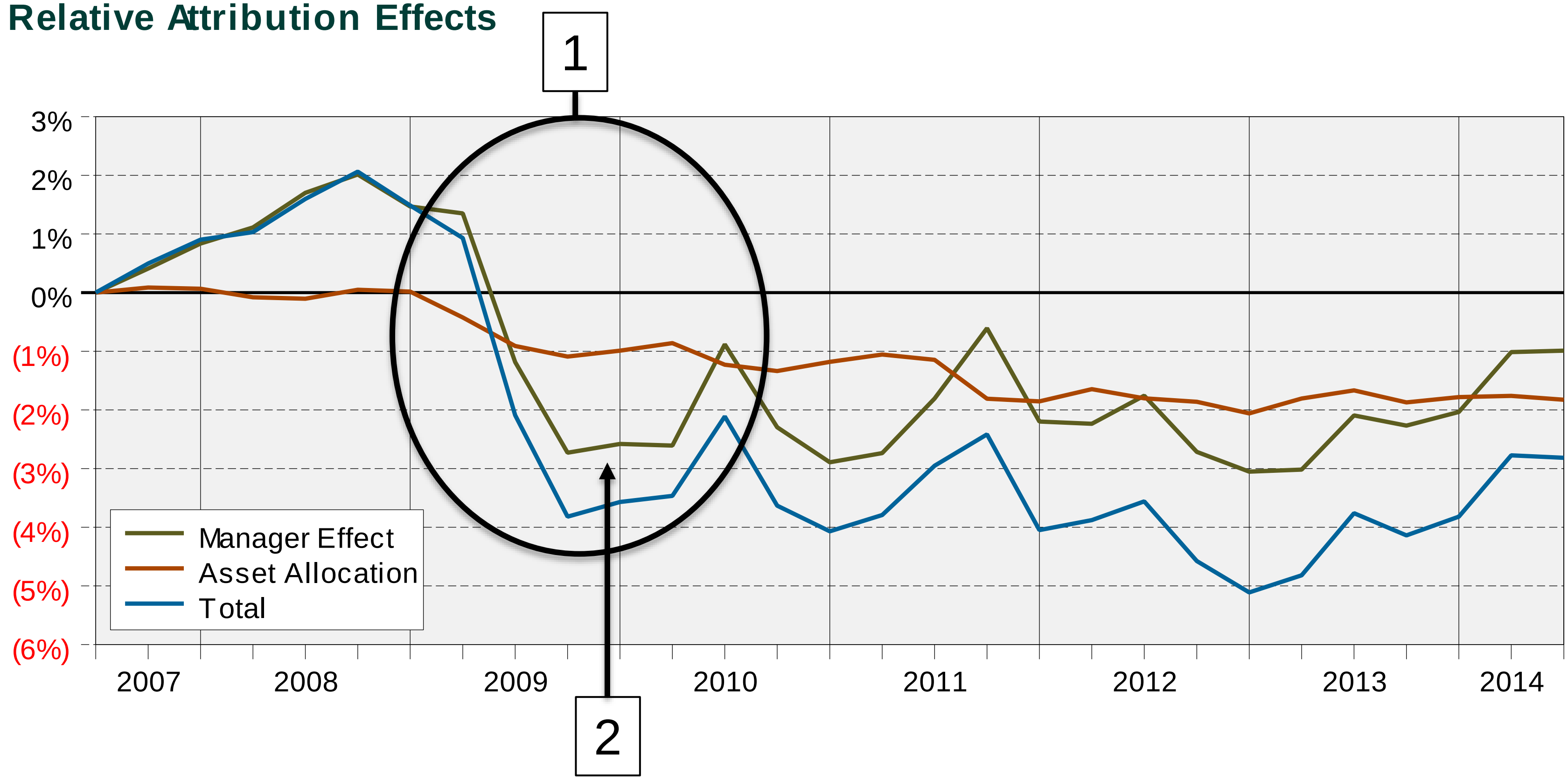
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	28%	26%	4.22%	4.87%	(0.18%)	0.01%	(0.17%)
Fixed-Income	12%	12%	2.06%	1.32%	0.09%	(0.00%)	0.08%
Real Assets	17%	17%	4.45%	3.50%	0.16%	0.00%	0.16%
Global Equity ex US	24%	25%	4.57%	5.25%	(0.16%)	(0.02%)	(0.18%)
Private Equity	8%	9%	5.16%	3.79%	0.11%	0.00%	0.11%
Absolute Return	4%	5%	(0.16%)	1.24%	(0.06%)	0.01%	(0.05%)
Alternative Equity	4%	3%	6.32%	3.96%	0.09%	0.00%	0.09%
Cash Equivalents	3%	3%	0.05%	0.01%	0.00%	0.01%	0.01%
Total			**3.90% =**	**3.85% +**	**0.05% +**	**0.00%**	**0.05%**

One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	29%	26%	25.81%	25.22%	0.17%	0.20%	0.37%
Fixed-Income	12%	12%	5.14%	3.31%	0.24%	(0.09%)	0.16%
Real Assets	17%	17%	13.28%	10.98%	0.40%	(0.00%)	0.39%
Global Equity ex US	24%	25%	23.43%	22.27%	0.26%	(0.13%)	0.13%
Private Equity	8%	9%	24.19%	24.01%	(0.02%)	(0.04%)	(0.06%)
Absolute Return	4%	5%	6.51%	5.05%	0.06%	0.10%	0.15%
Other Alternatives	4%	3%	22.36%	18.70%	0.13%	0.02%	0.15%
Cash Equiv	3%	3%	0.27%	0.05%	0.01%	0.06%	0.06%
Total			**18.56% =**	**17.20% +**	**1.25% +**	**0.11%**	**1.36%**

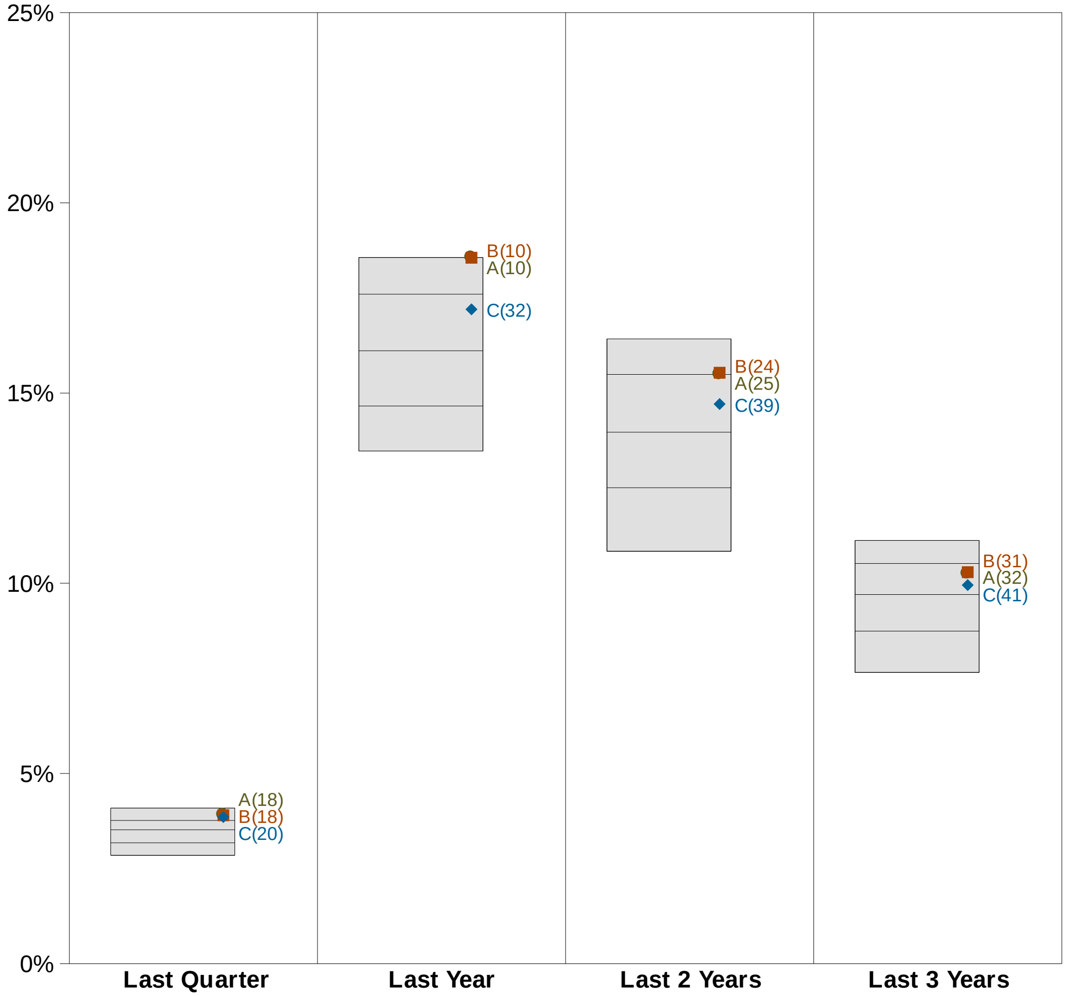
PERS Intermediate-Term Performance as of 6/30/14

Cumulative Relative Attribution Effects



1. The credit crisis caused caught all long-term investors in a short-term dilemma:
   – Should the investment focus remain with long-term asset allocation perspective?
2. Manager Effect – the ability of managers on a collective basis to produce returns above their benchmarks – has been maintained through the economic recovery.

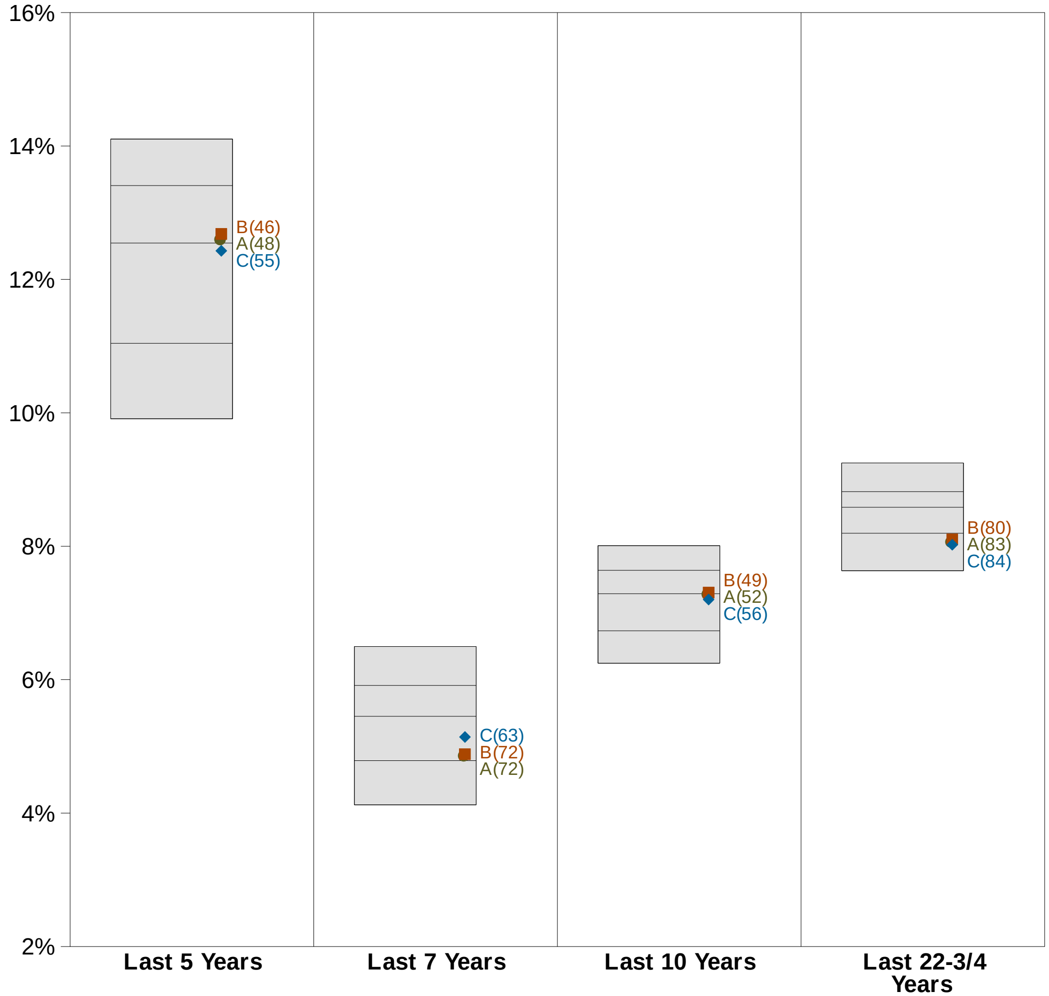
Cumulative Total Fund Returns as of 6/30/14



	Last Quarter	Last Year	Last 2 Years	Last 3 Years
10th Percentile	4.09	18.56	16.42	11.12
25th Percentile	3.76	17.60	15.49	10.52
Median	3.52	16.11	13.97	9.70
75th Percentile	3.18	14.66	12.51	8.74
90th Percentile	2.85	13.48	10.84	7.66
PERS Total Plan ● A	3.90	18.56	15.49	10.25
TRS Total Plan ■ B	3.90	18.56	15.54	10.29
Target Index ◆ C	3.85	17.20	14.71	9.95

PERS and TRS have outperformed their peer group median for all cumulative periods over the last three (3) years ended June 30, 2014.

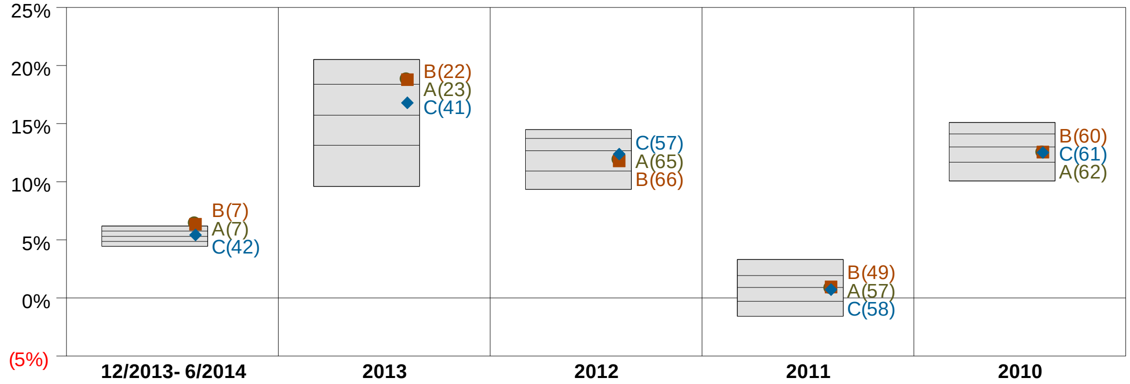
Longer-Term Returns as of 6/30/14



	Last 5 Years	Last 7 Years	Last 10 Years	Last 22-3/4 Years
10th Percentile	14.10	6.50	8.01	9.25
25th Percentile	13.41	5.91	7.64	8.82
Median	12.54	5.45	7.29	8.58
75th Percentile	11.04	4.79	6.73	8.20
90th Percentile	9.91	4.12	6.25	7.63
PERS Total Plan ● A	12.58	4.84	7.26	8.05
TRS Total Plan ■ B	12.68	4.88	7.31	8.10
Target Index ◆ C	12.43	5.14	7.20	8.02

- 5-year and 10-year results rank at or near top half of Public Fund database.
- 5-, 10- and 22-3/4 year results in line with Target
- 7-year return includes the impact of 2008's equity market decline.

Calendar Period Performance



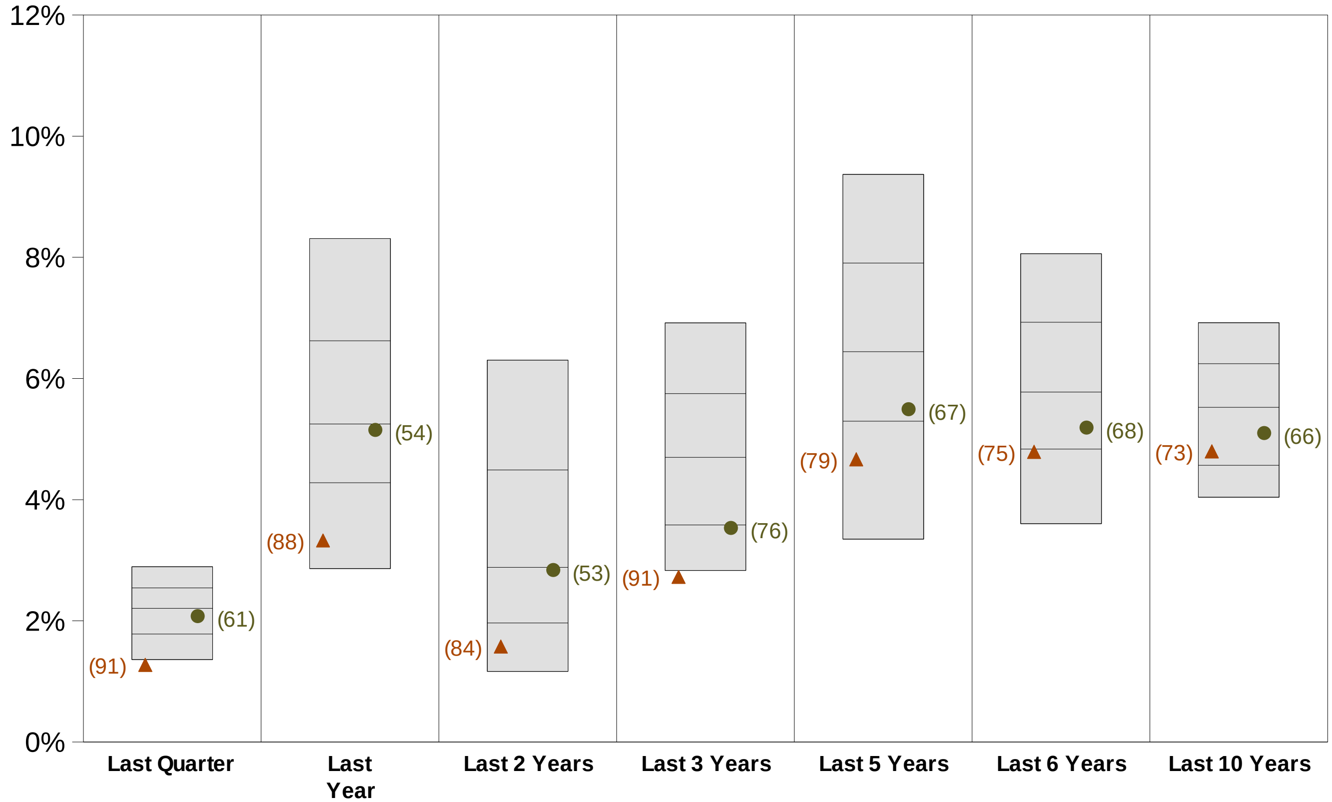
		12/2013- 6/2014	2013	2012	2011	2010
10th Percentile		6.19	20.51	14.49	3.31	15.10
25th Percentile		5.76	18.39	13.73	1.92	14.11
Median		5.30	15.73	12.67	0.91	13.00
75th Percentile		4.87	13.14	10.92	(0.29)	11.68
90th Percentile		4.44	9.59	9.34	(1.58)	10.06
PERS Total Plan	● A	6.35	18.74	11.81	0.77	12.45
TRS Total Plan	■ B	6.35	18.79	11.79	0.95	12.55
Target Index	◆ C	5.42	16.79	12.38	0.72	12.51

		2009	2008	2007	2006	2005
10th Percentile		25.93	(12.58)	10.77	15.73	9.55
25th Percentile		22.73	(20.71)	9.53	14.67	8.60
Median		20.23	(25.43)	7.97	13.54	7.40
75th Percentile		16.02	(27.97)	6.84	11.42	5.86
90th Percentile		12.57	(30.14)	5.75	9.41	4.59
PERS Total Plan	● A	13.31	(24.91)	10.17	15.24	8.31
TRS Total Plan	■ B	13.40	(24.98)	10.20	15.26	8.38
Target Index	◆ C	20.28	(25.71)	7.64	14.91	6.89

- Very tight range of returns during the first half of 2014.
- Wide range of returns during calendar 2013 due to varying fixed-income allocations within the Public Fund universe.
- PERS and TRS have ranked above median in six of the ten periods shown.

Total Bond as of 6/30/14

Performance vs Pub Pln- Domestic Fixed (Gross)



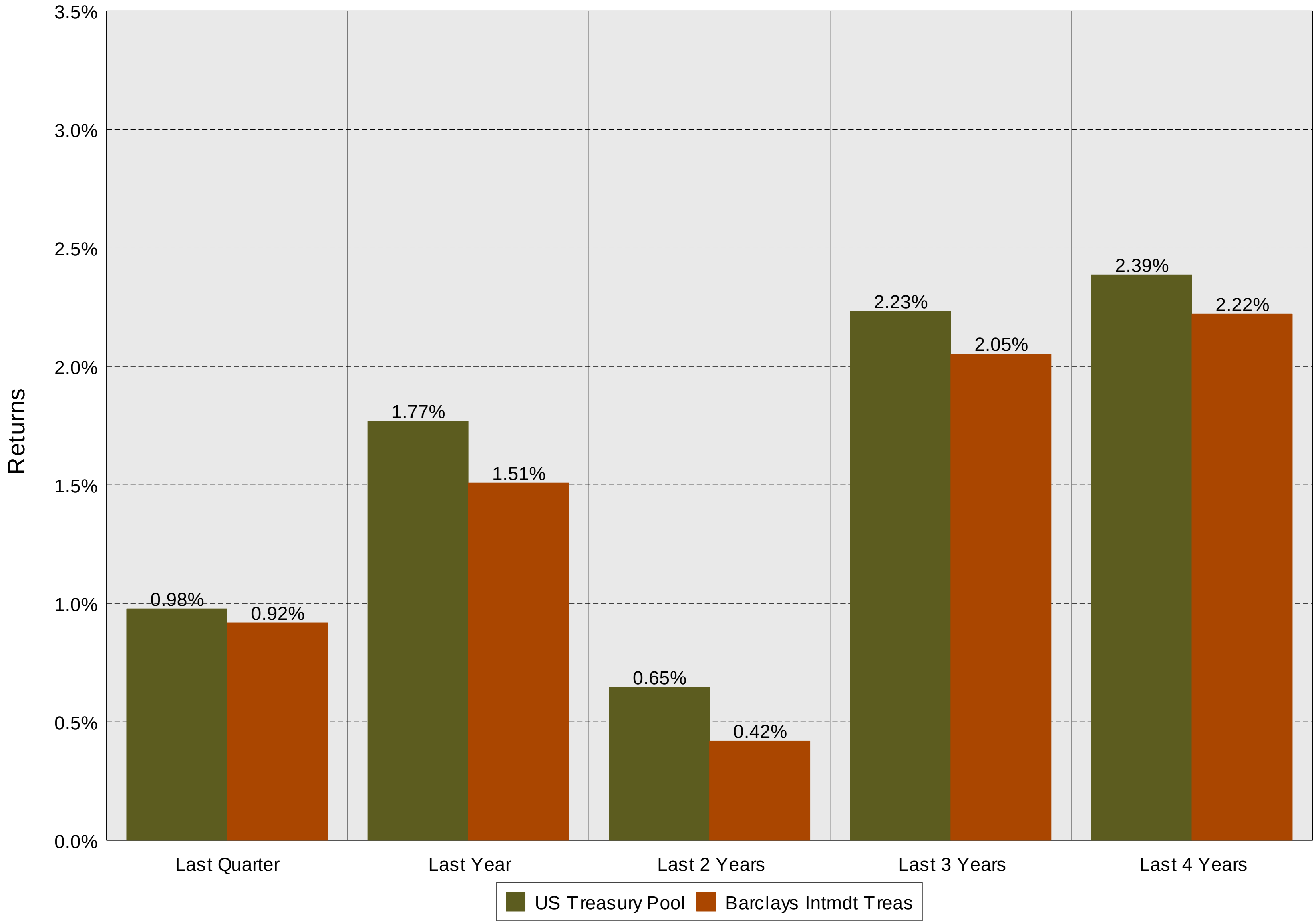
	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	2.89	8.31	6.30	6.92	9.37	8.06	6.92
25th Percentile	2.54	6.62	4.49	5.75	7.91	6.93	6.24
Median	2.21	5.25	2.88	4.70	6.44	5.78	5.52
75th Percentile	1.78	4.28	1.97	3.58	5.30	4.83	4.57
90th Percentile	1.36	2.86	1.16	2.83	3.35	3.60	4.04
Total Fixed-Income Pool ●	2.05	5.12	2.81	3.51	5.47	5.16	5.07
Fixed-Income Target ▲	1.27	3.33	1.58	2.73	4.67	4.79	4.80

Includes In-House and External Portfolios

- The Total Bond portfolio has a custom target, intermediate in nature, that reflects a cautious view on the risk of rising rates.
- Results near median of Public Fund universe over last 2 years.
- The strategy's returns have exceeded its benchmark over all periods.

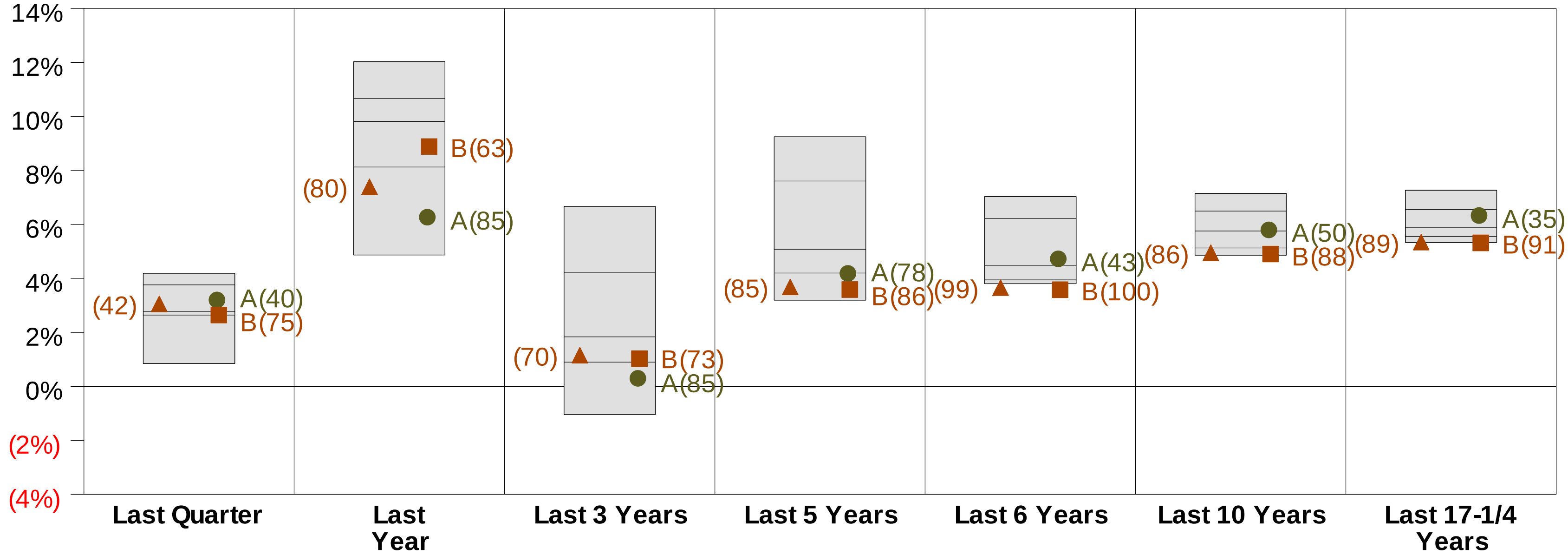
In-House Portfolio as of 6/30/14

Compared to BC Intermediate Treasury Index



Non-U.S. Fixed Income through 6/30/14 – Mondrian

Performance vs CAI Non-U.S. Fixed-Inc Style (Gross)



		Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years	Last 17-1/4 Years
10th Percentile		4.19	12.03	6.67	9.25	7.03	7.15	7.26
25th Percentile		3.76	10.67	4.22	7.61	6.22	6.50	6.55
Median		2.78	9.81	1.84	5.08	4.48	5.76	5.89
75th Percentile		2.64	8.13	0.90	4.20	3.95	5.13	5.56
90th Percentile		0.84	4.87	(1.05)	3.20	3.80	4.86	5.33
Mondrian Investment Partners	● A	3.14	6.20	0.23	4.11	4.66	5.74	6.26
Citi WGBI Non-US Idx	■ B	2.64	8.88	1.03	3.59	3.58	4.90	5.32
Mondrian Benchmark	▲	3.06	7.40	1.16	3.69	3.66	4.95	5.35

- Returns have lagged the custom benchmark in 9 of 14 quarters since 2011.
  - Q2 of 2014 was the second time in two years that Mondrian's return was higher than benchmark.
- Results are better than benchmark for cumulative periods five years and longer.

High Yield Bonds through 6/30/14 – MacKay Shields

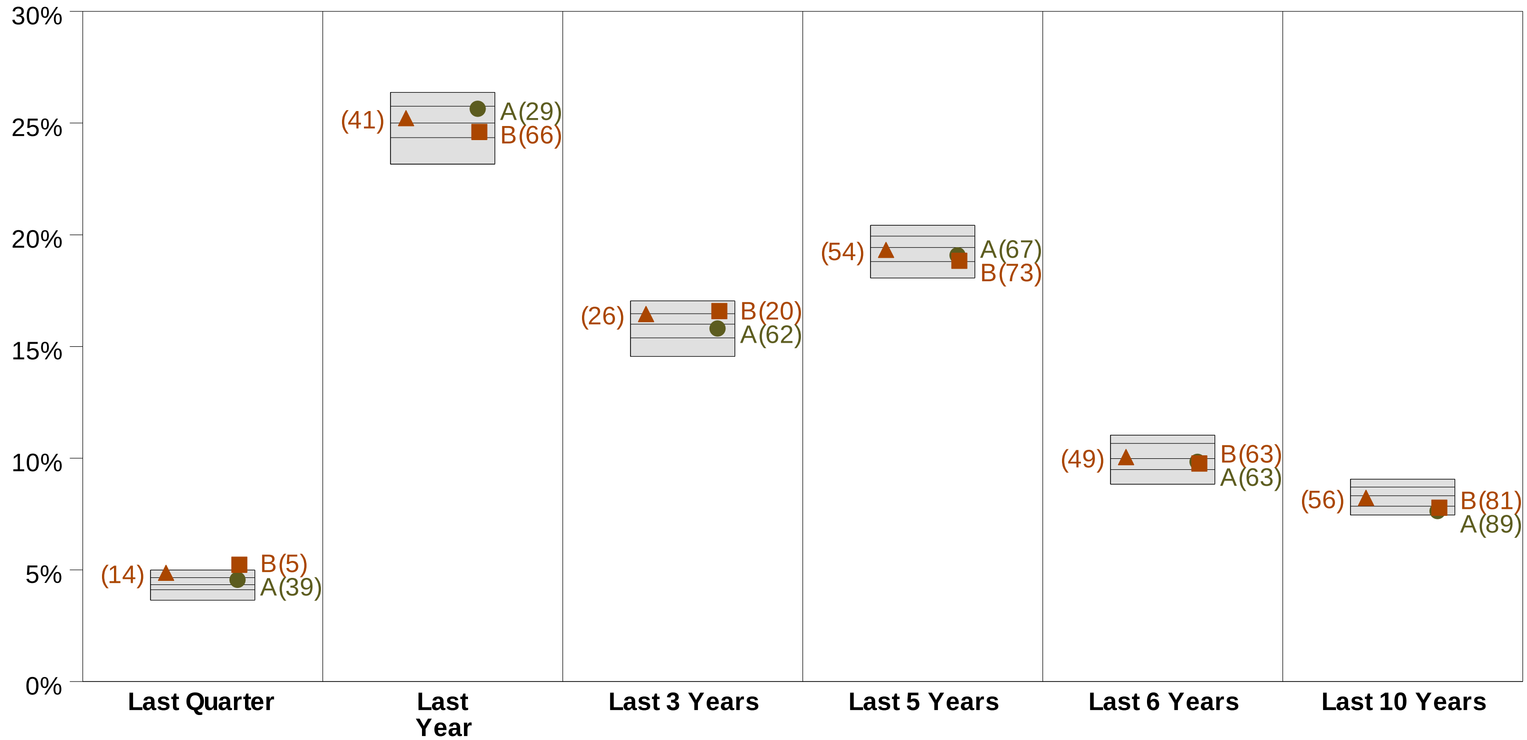
Performance vs CAI High Yield Fixed-Inc Style (Gross)

	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 9 Years
10th Percentile	2.98	13.36	12.54	10.28	15.39	12.18	9.97
25th Percentile	2.67	12.47	11.43	9.98	14.15	11.20	9.37
Median	2.53	11.70	10.72	9.58	13.65	10.55	8.73
75th Percentile	2.22	11.14	9.88	8.99	12.57	9.90	8.14
90th Percentile	2.08	10.50	9.03	8.63	11.99	9.22	7.88
MacKay Shields ● A	2.15	10.89	10.08	9.77	12.56	10.05	8.49
BC Aggregate Index ■ B	2.04	4.37	1.81	3.66	4.85	5.05	4.73
High Yield Target ▲	2.57	11.80	10.68	9.27	13.94	10.82	8.70

- Returns are below benchmark for all cumulative periods except three-years ended 6/30/14.
- Higher yielding strategies have produced better returns than the Barclays Aggregate Index.

Total Domestic Equity through 6/30/14

Performance vs Pub Pln- Domestic Equity (Gross)



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	5.00	26.38	17.04	20.43	11.04	9.07
25th Percentile	4.65	25.75	16.47	19.94	10.67	8.71
Median	4.34	25.01	16.00	19.43	9.99	8.32
75th Percentile	4.11	24.35	15.39	18.80	9.49	7.86
90th Percentile	3.65	23.16	14.56	18.06	8.84	7.46
Domestic Equity Pool ● A	4.48	25.57	15.73	19.00	9.76	7.56
Standard & Poor's 500 ■ B	5.23	24.61	16.58	18.83	9.76	7.78
Russell 3000 Index ▲	4.87	25.22	16.46	19.33	10.05	8.23

- Performance relative to peers has improved over the last five (5) years and the portfolio beat median peer returns for the last quarter and year.

Domestic Equity Component Returns

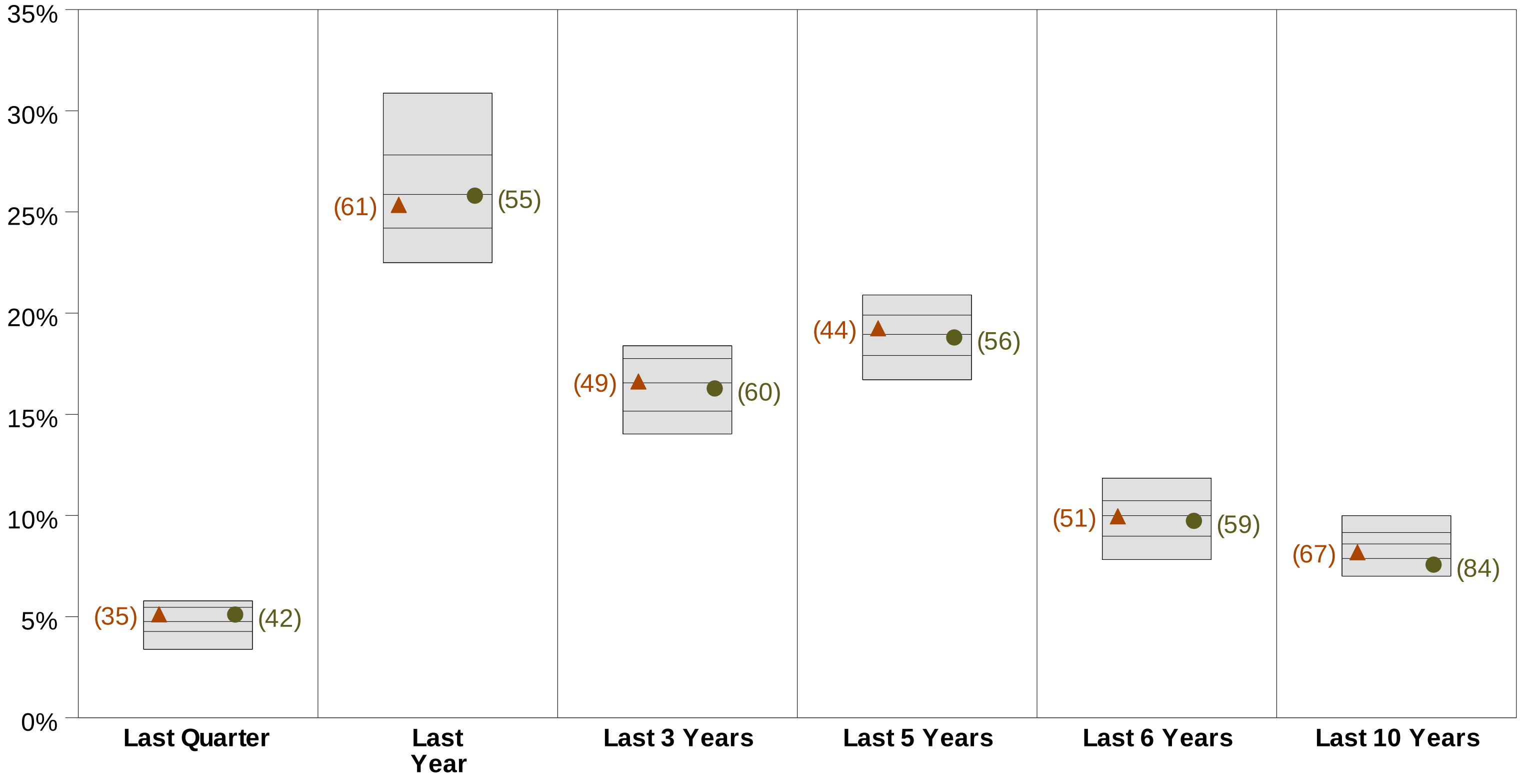
Periods ended June 30, 2014

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
Total Dom Equity Pool	4.48%	25.57%	15.73%	19.00%	9.76%
Russell 3000 Index	4.87%	25.22%	16.46%	19.33%	10.05%
Large Cap Managers	5.01%	25.71%	16.19%	18.71%	9.64%
Large Cap Active	4.88%	26.74%	15.61%	18.62%	9.82%
Large Cap Passive	5.08%	25.15%	16.66%	18.77%	9.50%
Russell 1000 Index	5.12%	25.35%	16.63%	19.25%	9.96%
Small Cap Managers	0.51%	24.88%	15.09%	20.64%	10.44%
Small Cap Active	0.37%	24.96%	15.16%	21.22%	10.89%
Small Cap Passive	2.24%	23.10%	14.39%	19.45%	10.00%
Russell 2000 Index	2.05%	23.64%	14.57%	20.21%	11.12%
Alternative Equity	6.27%	23.49%	11.18%	-	-

- Newly adopted policy (effective 7-1-13) alters cosmetics of “true” traditional active & passive returns.
  - *Alternative Equity* category includes defensive equity oriented portfolios
- Fiscal year results above benchmark.
- Active small cap managers beat benchmark and have propelled overall equity results.

Large Cap Domestic Equity Pool through 6/30/14

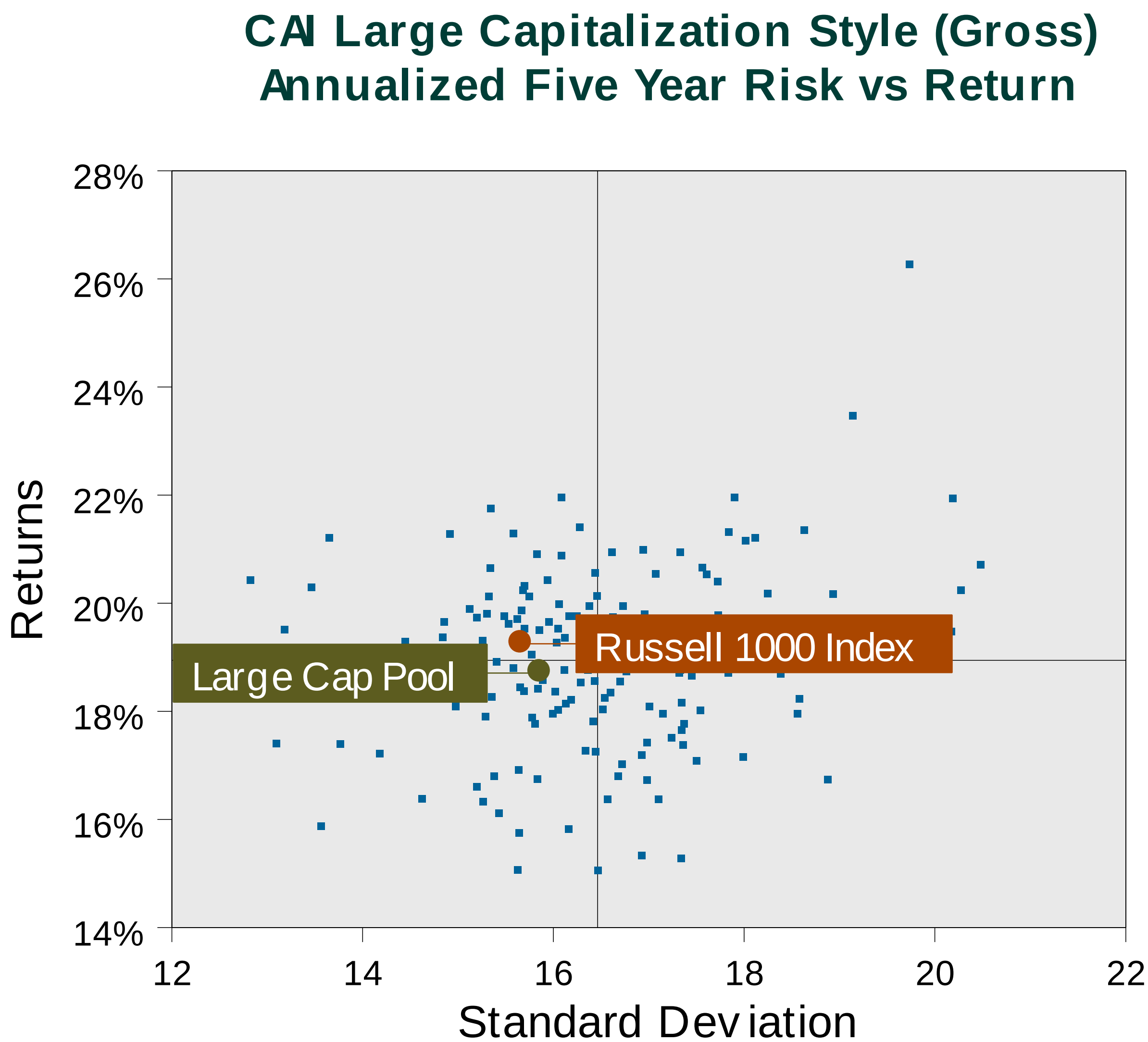
Performance vs CAI Large Capitalization Style (Gross)



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	5.79	30.87	18.39	20.90	11.84	9.99
25th Percentile	5.46	27.81	17.75	19.90	10.73	9.16
Median	4.76	25.86	16.56	18.95	10.00	8.60
75th Percentile	4.26	24.20	15.16	17.91	8.97	7.87
90th Percentile	3.39	22.49	14.03	16.71	7.82	7.00
Large Cap Pool ●	5.01	25.71	16.19	18.71	9.64	7.48
Russell 1000 Index ▲	5.12	25.35	16.63	19.25	9.96	8.19

- Performance relative to peers has improved over the last five (5) years and the portfolio beat median peer returns for the last quarter.

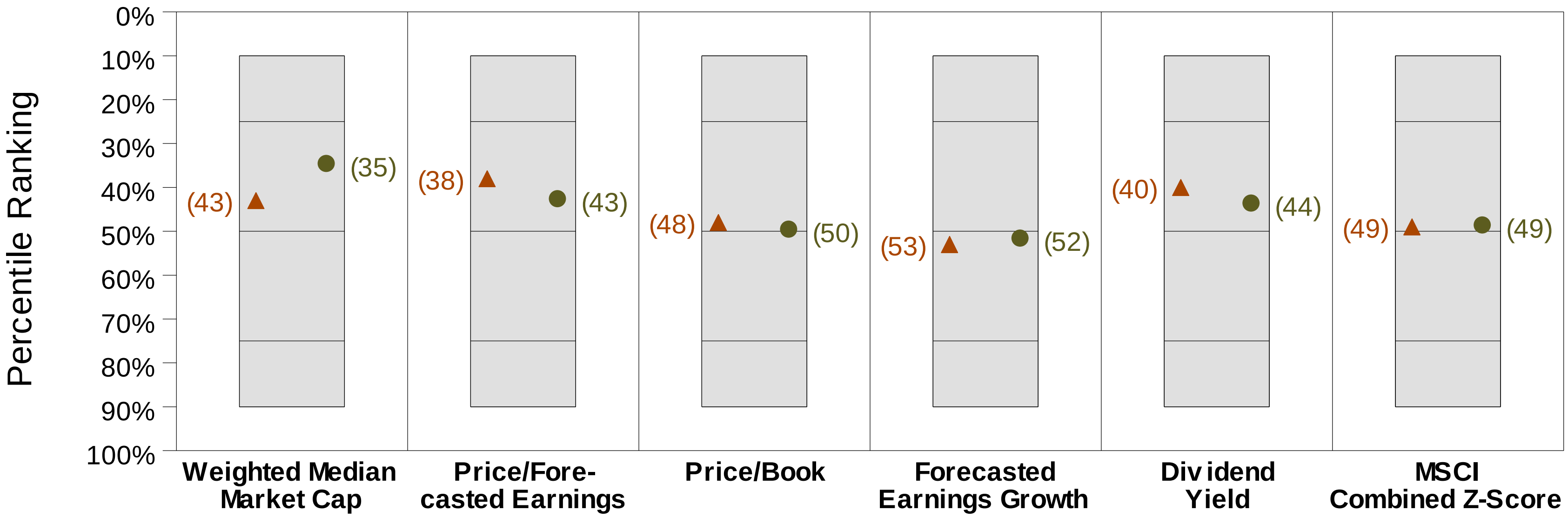
Large Cap Domestic Equity Pool as of 6/30/14



- Nearly 2/3 of ARMB's large cap allocation is passive, yet market-like returns achieved with less risk than the median manager in the large cap equity universe.

Large Cap Total Equity Characteristics as of 6/30/14

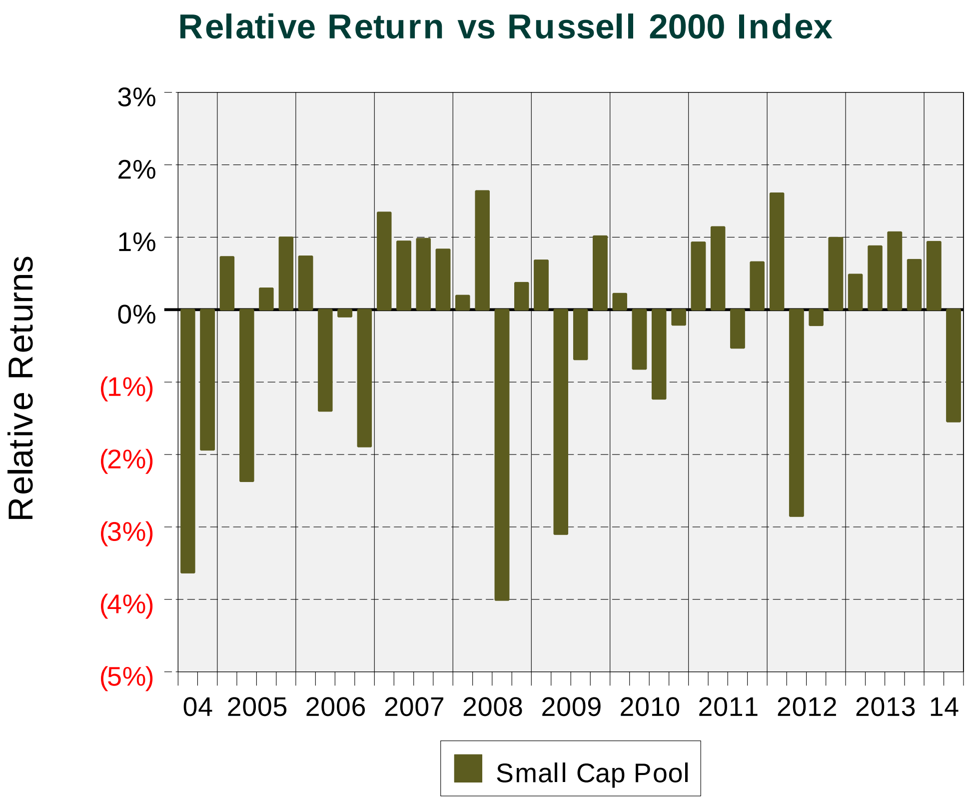
Portfolio Characteristics Percentile Rankings
Rankings Against CAI Large Capitalization Style
as of June 30, 2014

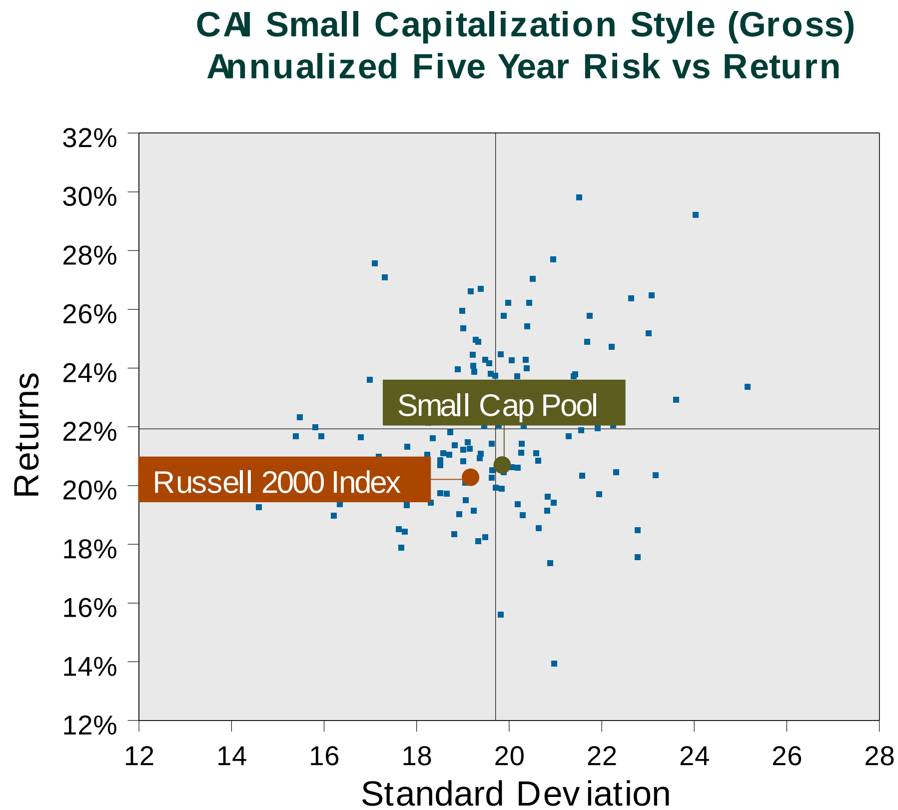


	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	73.55	21.00	4.86	19.01	2.38	1.47
25th Percentile	63.03	17.81	4.11	15.02	2.09	0.89
Median	52.19	15.16	2.58	12.03	1.74	(0.06)
75th Percentile	38.43	13.92	1.98	9.67	1.22	(0.59)
90th Percentile	29.55	13.41	1.81	8.38	0.76	(0.75)
Large Cap Pool ●	59.97	15.82	2.58	11.81	1.84	(0.02)
Russell 1000 Index ▲	54.62	16.28	2.65	11.58	1.90	(0.02)

- Characteristics are very similar to the large cap benchmark, the Russell 1000 Index.
- No style bias in the large cap portfolio, as reflected by the Combined Z-Score.

Small Cap Pool through 6/30/14

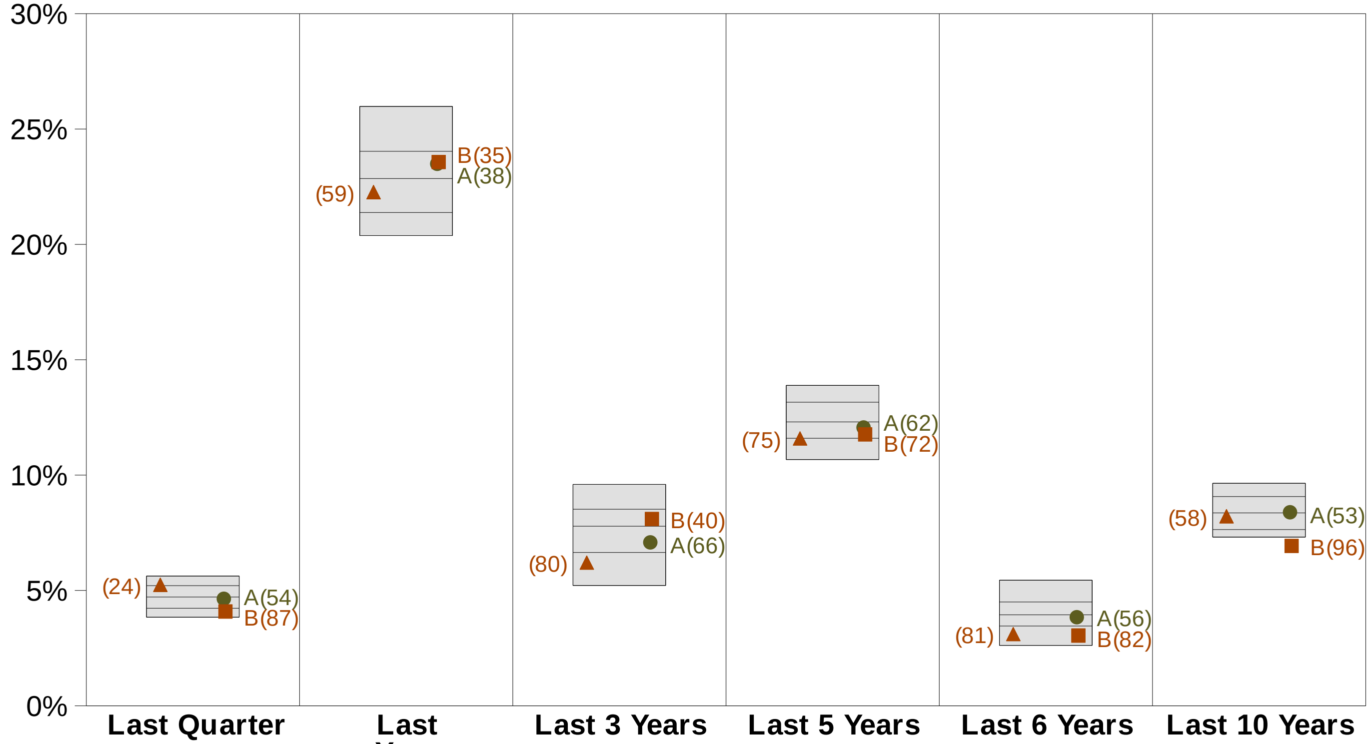




- Cumulative returns are above benchmark for 1-, 2-, 3- and 5-year periods.
- Quarterly returns have been above benchmark in seven of the last ten quarters.
- Five-year cumulative return volatility is in line with the peer group of small cap managers.

International Equity through 6/30/14

Performance vs Pub Pln- International Equity (Gross)

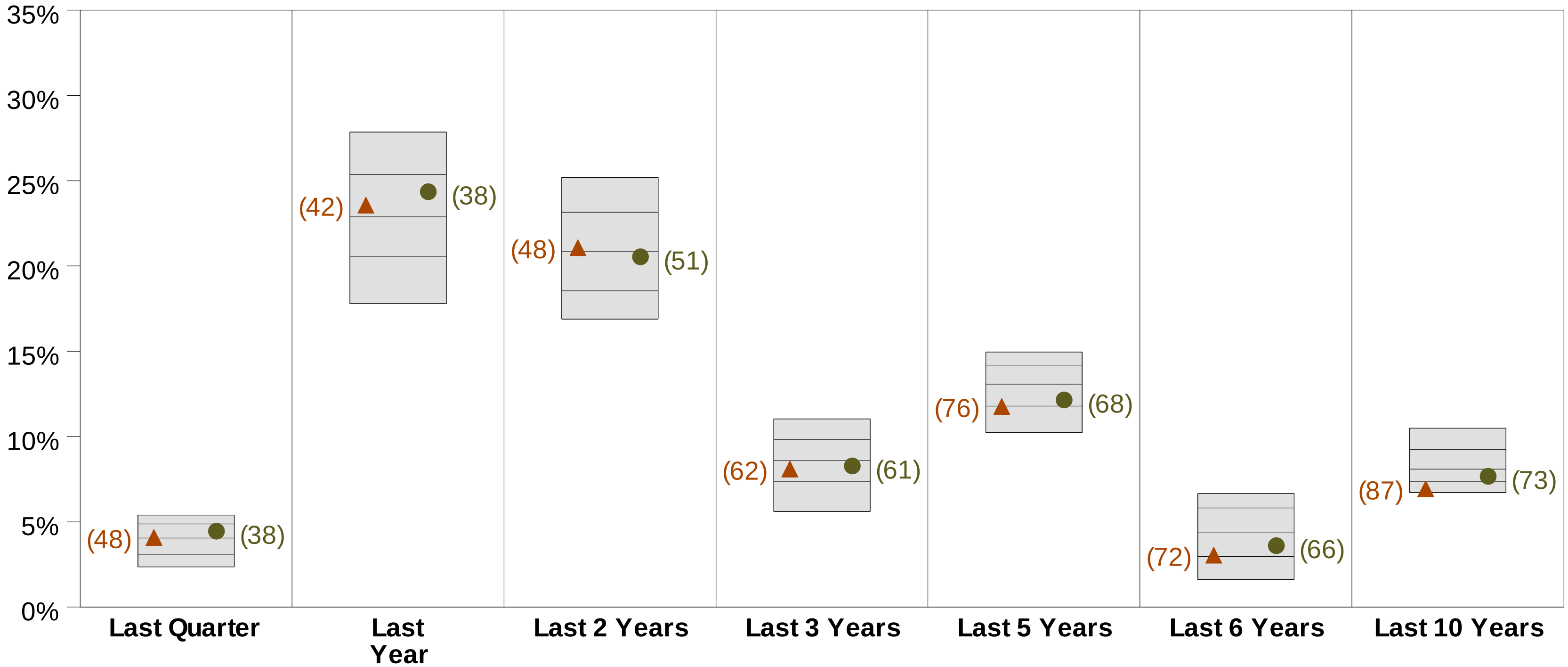


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	5.63	25.98	9.60	13.89	5.44	9.65
25th Percentile	5.21	24.03	8.52	13.16	4.50	9.07
Median	4.72	22.85	7.79	12.31	3.95	8.36
75th Percentile	4.23	21.38	6.64	11.60	3.46	7.64
90th Percentile	3.85	20.38	5.22	10.67	2.62	7.32
Employees' Total Int'l Equity ● A	4.57	23.43	7.01	11.99	3.77	8.32
MSCI EAFE Index ■ B	4.09	23.57	8.10	11.77	3.05	6.93
MSCI ACWI ex US Index ▲	5.25	22.27	6.21	11.59	3.11	8.22

- Relative returns are improving.
- Risk-adjusted returns are in line with median.

International Equity ex Emerging Markets through 6/30/14

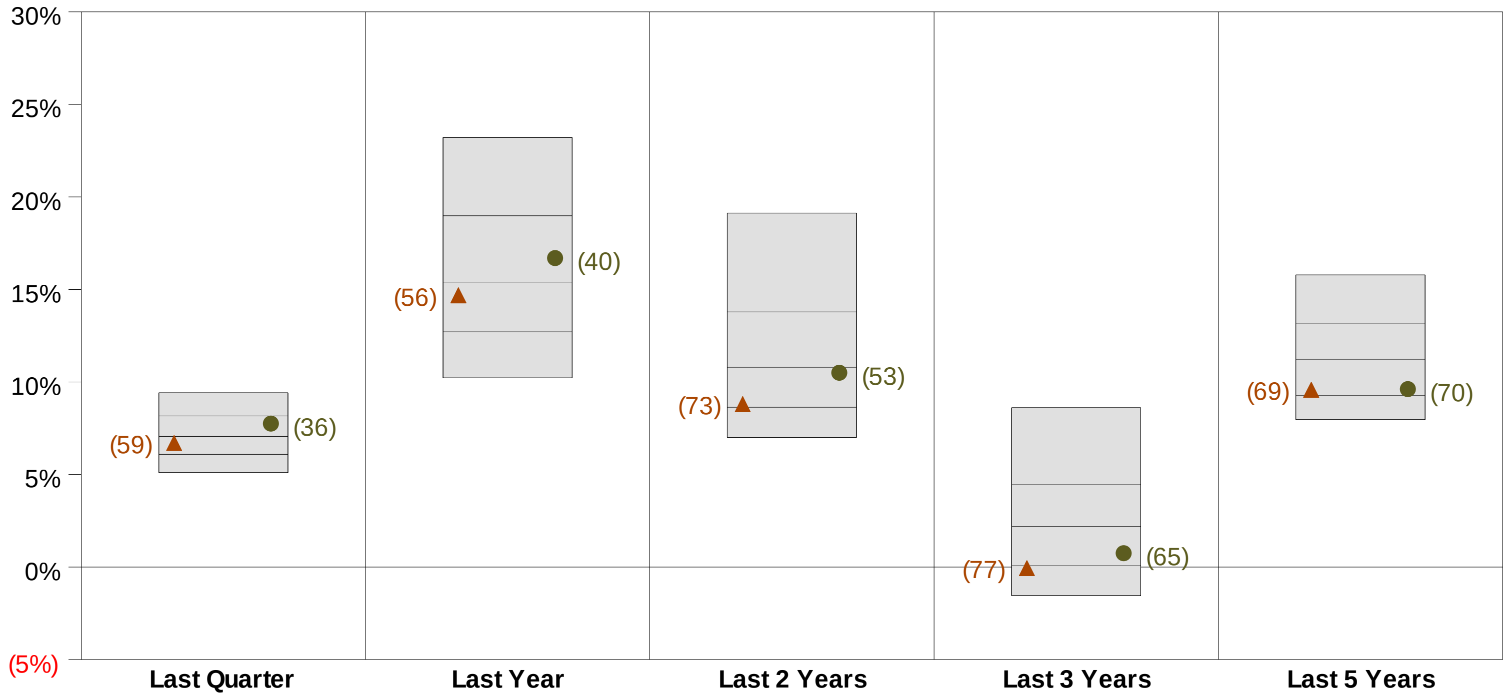
Performance vs CAI Non-U.S. Equity Style (Gross)



	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	5.40	27.85	25.19	11.03	14.96	6.66	10.48
25th Percentile	4.88	25.37	23.15	9.84	14.15	5.82	9.24
Median	4.05	22.88	20.87	8.58	13.07	4.35	8.09
75th Percentile	3.10	20.57	18.54	7.35	11.78	2.97	7.35
90th Percentile	2.36	17.79	16.88	5.61	10.22	1.61	6.71
Int'l Equity Pool (ex Emerging. Mkt) ●	4.33	24.23	20.42	8.16	12.03	3.49	7.55
MSCI EAFE Index ▲	4.09	23.57	21.07	8.10	11.77	3.05	6.93

Emerging Markets Pool through 6/30/14

Performance vs CAI Emerging Markets Equity DB (Gross)

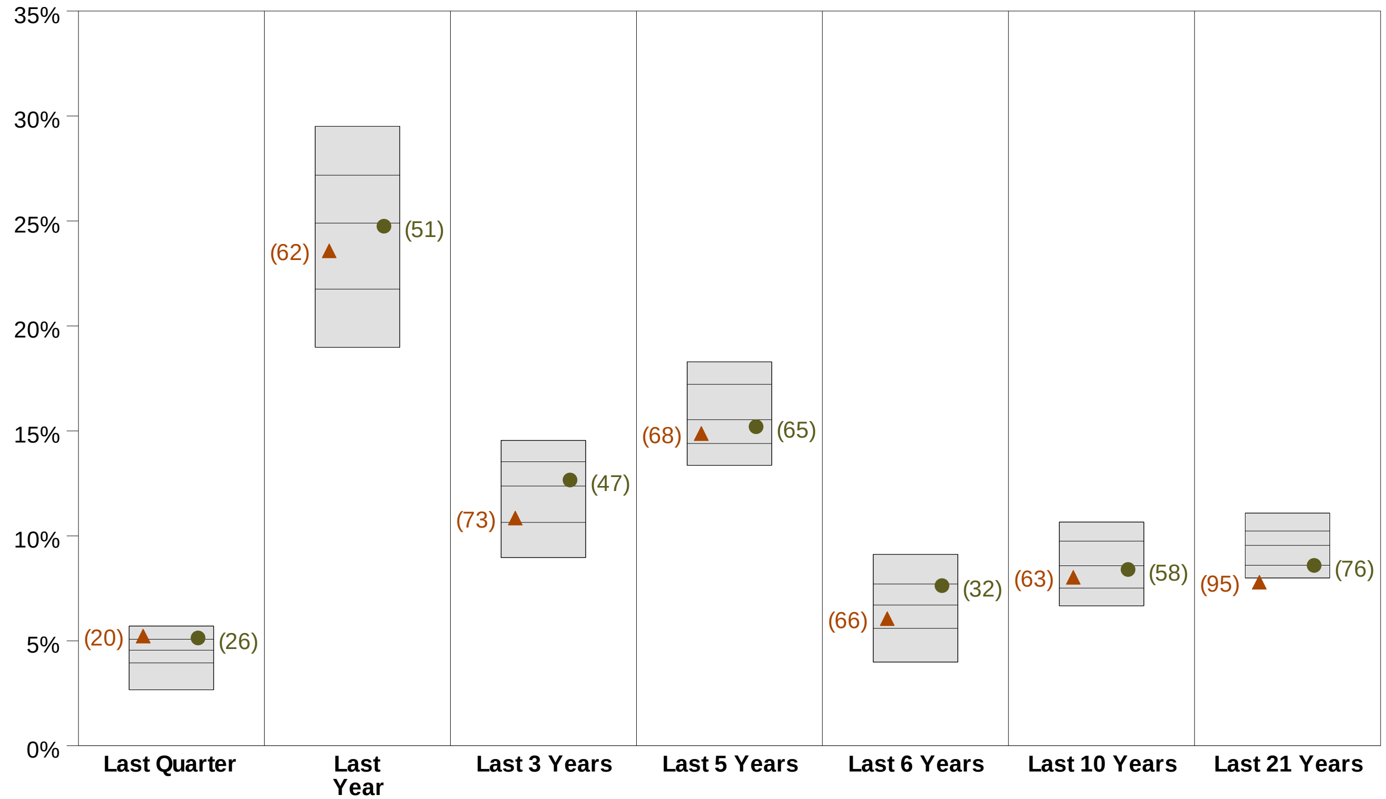


	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years
10th Percentile	9.41	23.21	19.12	8.61	15.78
25th Percentile	8.17	18.99	13.79	4.44	13.18
Median	7.06	15.40	10.80	2.19	11.23
75th Percentile	6.09	12.71	8.63	0.07	9.26
90th Percentile	5.11	10.22	7.01	(1.55)	7.96
Emerging Markets Pool ●	7.66	16.61	10.41	0.66	9.52
MSCI Emerging Mkts Idx ▲	6.71	14.68	8.81	(0.06)	9.58

- The Emerging Markets Pool has exceeded benchmark in each of last six quarters.
- Returns in 2011 and 2012 were below median but have improved strongly since then.

Global Equity through 6/30/14 - Lazard

Performance vs CAI Global Equity Broad Style (Gross)



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years	Last 21 Years
10th Percentile	5.70	29.51	14.54	18.29	9.12	10.65	11.09
25th Percentile	5.07	27.18	13.53	17.22	7.70	9.75	10.23
Median	4.55	24.90	12.37	15.53	6.71	8.58	9.54
75th Percentile	3.95	21.75	10.64	14.40	5.59	7.52	8.60
90th Percentile	2.67	18.98	8.97	13.36	3.99	6.66	7.99
Lazard Global ●	5.06	24.68	12.58	15.13	7.56	8.32	8.52
MSCI ACWI Idx ▲	5.23	23.58	10.85	14.88	6.06	8.02	7.79

- Returns have exceeded benchmark in 10 of the last 13 quarters.

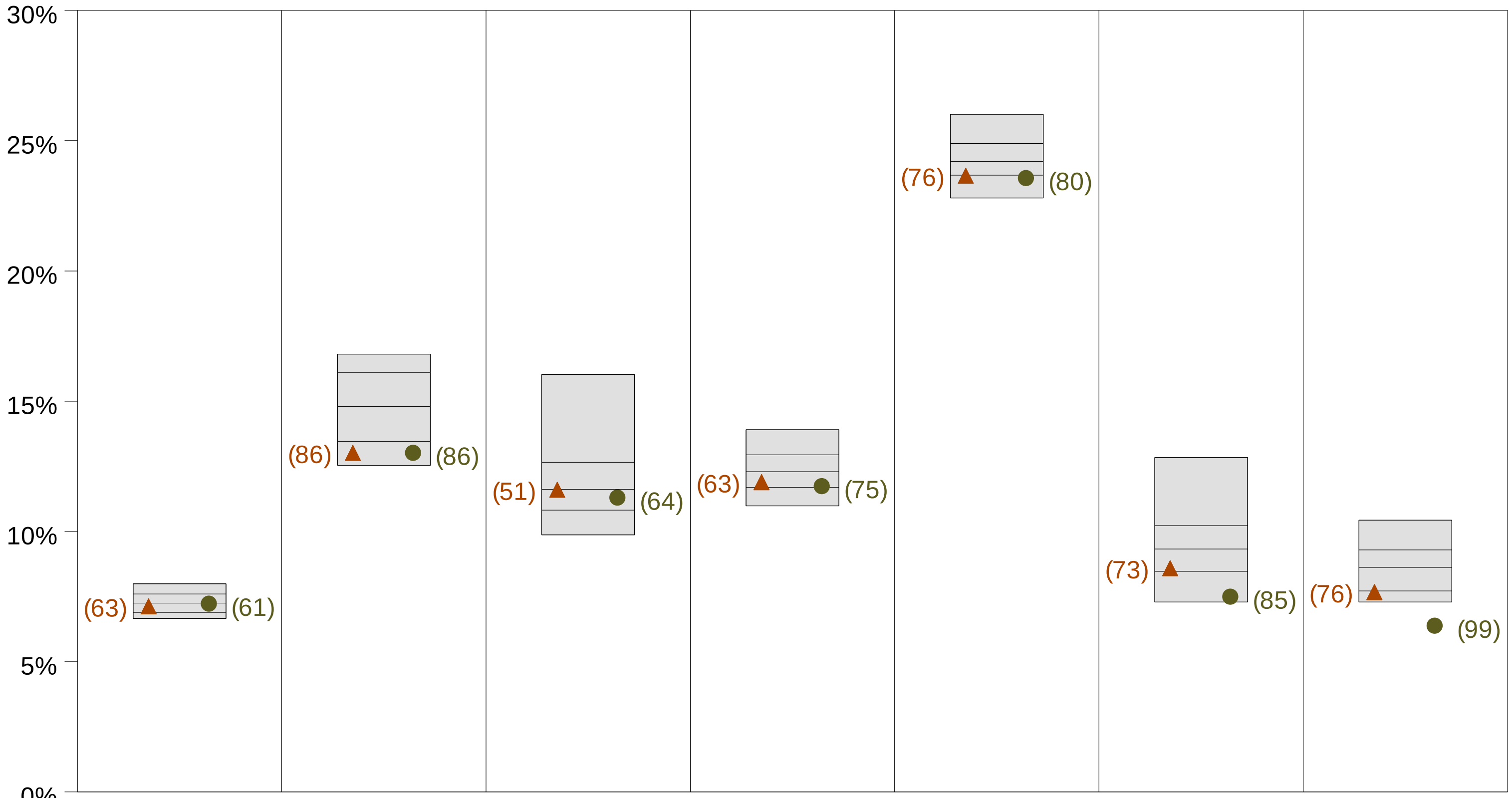
Real Assets through 6/30/14

	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years
Real Assets(Prelim)	**4.41%**	**13.15%**	**11.23%**	**9.59%**
Real Assets Target (1)	3.50%	10.98%	10.24%	8.84%
Real Estate Pool(Prelim)	3.22%	12.35%	10.07%	9.15%
Real Estate Target (2)	3.33%	11.43%	11.49%	11.21%
Private Real Estate	2.24%	11.88%	9.68%	8.41%
NCREIF Total Index	2.91%	11.21%	11.32%	9.67%
REIT Internal Portfolio	7.16%	12.95%	11.67%	23.50%
NAREIT Equity Index	7.13%	13.02%	11.89%	23.65%
Total Farmland	1.30%	8.50%	13.05%	10.88%
UBS Agrivest	1.53%	9.57%	14.77%	11.78%
Hancock Agricultural(Prelim)	0.81%	6.54%	10.17%	9.45%
ARMB Farmland Target (3)	2.42%	12.05%	15.87%	12.58%
Total Timber	2.37%	10.49%	7.57%	4.83%
Timberland Investment Resources	3.45%	8.39%	5.63%	3.37%
Hancock Timber	0.00%	14.61%	11.17%	7.40%
NCREIF Timberland Index	1.08%	9.92%	6.73%	3.33%
TIPS Internal Portfolio	3.66%	4.19%	3.73%	5.27%
BC US TIPS Index	3.81%	4.44%	3.55%	5.55%
Total Energy Funds *	(1.01%)	(5.73%)	1.54%	4.98%
CPI + 5%	2.12%	7.05%	6.80%	7.16%
MLP Composite	16.99%	34.52%	-	-
Alerian MLP Index	14.18%	21.57%	18.96%	26.19%
Infrastructure	8.57%	-	-	-
Brookfield	10.21%	-	-	-
Lazard	6.94%	-	-	-
Global Infrastructure Idx	8.42%	30.42%	11.08%	14.03%

Real estate returns are provided to Callan by ARMB's real estate consultant.

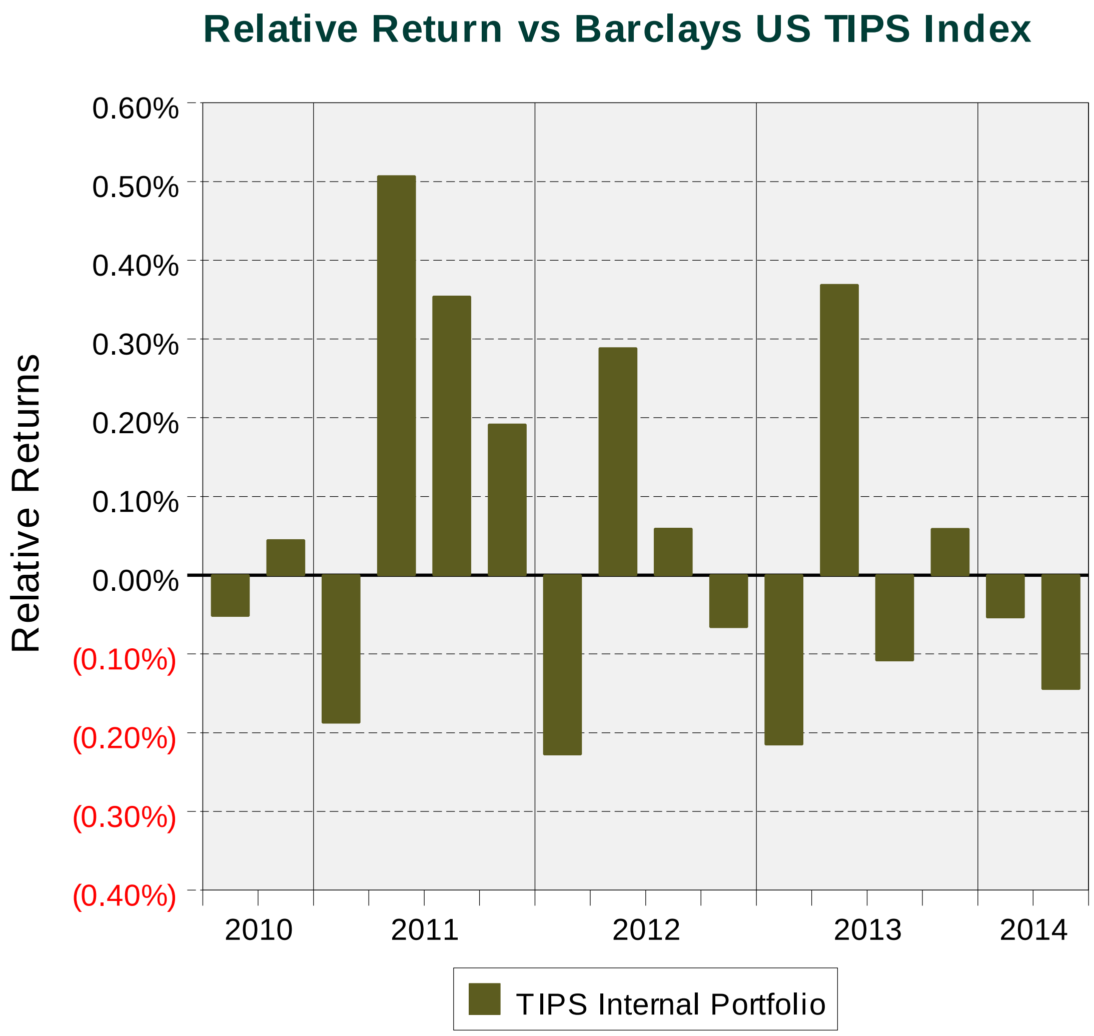
REIT Portfolio through 6/30/14

Performance vs CAI Real Estate-REIT DB (Gross)



	Last Quarter	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 9-1/2 Years
10th Percentile	7.99	16.81	16.02	13.90	26.02	12.84	10.43
25th Percentile	7.60	16.11	12.65	12.95	24.89	10.23	9.29
Median	7.25	14.80	11.61	12.30	24.20	9.33	8.62
75th Percentile	6.89	13.46	10.82	11.69	23.68	8.47	7.72
90th Percentile	6.66	12.53	9.87	10.98	22.81	7.29	7.29
REIT Holdings ●	7.16	12.95	11.23	11.67	23.50	7.43	6.31
NAREIT All Equity Index ▲	7.13	13.02	11.60	11.89	23.65	8.59	7.67

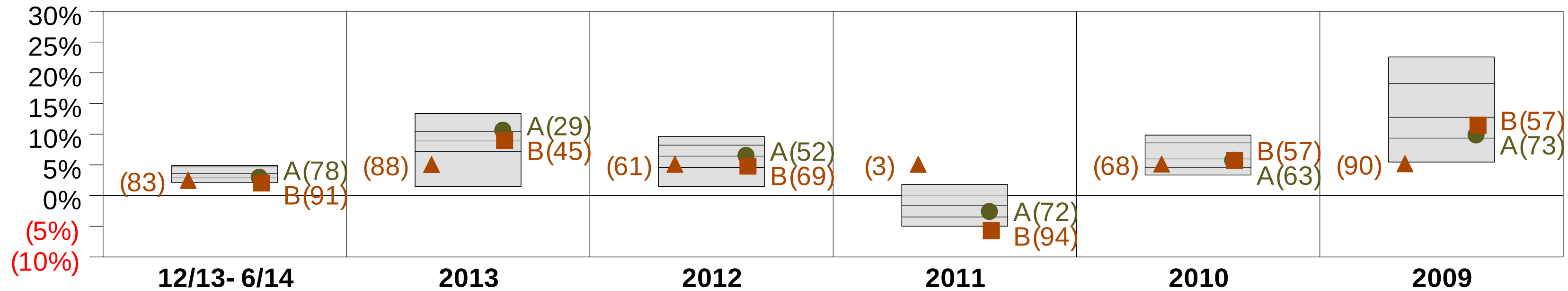
Internally Managed TIPS Portfolio through 6/30/14



- Long-term results of the TIPS portfolio produced value-added over the Barclays US TIPS index.
  – Over 6-3/4 years: 5.5% vs 5.4%.
- Results have trailed benchmark in three of last four quarters.

Absolute Return Composite through 6/30/14

Performance vs Absolute Return Hedge FoFs Style (Net)



	12/13- 6/14	2013	2012	2011	2010	2009
10th Percentile	4.91	13.38	9.63	1.82	9.85	22.57
25th Percentile	4.66	10.47	8.23	(0.04)	8.57	18.25
Median	3.58	8.89	6.42	(1.57)	5.98	12.75
75th Percentile	2.87	7.20	4.59	(3.49)	4.53	9.36
90th Percentile	2.10	1.47	1.46	(4.99)	3.33	5.48
Absolute Return Composite ● A	2.69	10.31	6.23	(2.93)	5.43	9.55
HFRI Fund of Funds Compos ■ B	2.04	8.96	4.79	(5.72)	5.70	11.47
T-Bills + 5% ▲	2.49	5.07	5.11	5.10	5.13	5.21

- ARMB's absolute return program has successfully met its benchmark of T-bills + 5% over the five year period ended June 30, 2014: 5.36% vs 5.11%.
  - Returns have exceeded benchmark in four of the last five complete calendar years.
  - Returns are ahead of benchmark in the first six months of 2014.

Individual Account Option Performance: 6/30/14

Balanced & Target Date Funds

Peer groups revised 6/30/14 to better match the stock/bond mix of ARMB's balanced funds.

Investment Manager	Market Value ($mm)	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	5 Year Risk	5 Year Risk Quadrant	5 Year Excess Rtn Ratio	3 Year Tracking Error	5 Year Sharpe Ratio
Balanced & Target Date Funds											
Alaska Balanced Fund	$1,212	**2.8** 40	**11.3** 33	**7.8** 19	**9.7** 37	**5.9** 15	**5.6** 79		**0.4** 18	**0.4** 100	**1.7** 7
Lipper: Mixed-Asset Target Alloc Cons Passive Target		3.0 32	11.3 34	7.6 23	9.5 40	5.8 19	5.3 85				1.8 6
Long Term Balanced Fund	$615	**3.6** 35	**16.4** 23	**10.7** 17	**12.9** 21	**6.0** 12	**9.5** 55		**0.3** 12	**0.4** 100	**1.3** 20
Lipper: Mixed-Asset Target Alloc Mod Passive Target		3.7 25	16.5 23	10.5 19	12.8 23	5.9 13	9.3 65				1.4 18
Target 2010 Trust	$14	**3.0** 62	**13.4** 24	**8.9** 14	**11.3** 34		**8.3** 36		**-0.2** 51	**0.1** 99	**1.3** 65
CAI Tgt Date 2010 Custom Index		3.1 45	13.6 20	8.8 17	11.3 33		8.4 35				1.3 68
Target 2015 Trust	$122	**3.4** 28	**15.8** 14	**10.2** 6	**12.0** 26	**7.0** 1	**9.4** 33		**0.1** 28	**0.1** 99	**1.3** 44
CAI Tgt Date 2015 Custom Index		3.5 18	15.9 14	10.1 6	12.0 27	6.8 1	9.5 32				1.3 51
Target 2020 Trust	$95	**3.7** 26	**17.6** 11	**11.2** 4	**13.8** 11	**5.3** 5	**11.0** 26		**-0.3** 31	**0.2** 99	**1.2** 34
CAI Tgt Date 2020 Custom Index		3.8 18	17.9 11	11.2 4	13.8 10	5.2 8	11.1 25				1.2 35
Target 2025 Trust	$70	**3.9** 27	**19.3** 18	**12.2** 9	**15.1** 9	**4.8** 35	**12.4** 38		**-0.4** 33	**0.3** 99	**1.2** 15
CAI Tgt Date 2025 Custom Index		4.1 9	19.6 17	12.2 8	15.2 8	4.8 35	12.5 27				1.2 16
Target 2030 Trust	$57	**4.1** 26	**20.9** 17	**12.9** 5	**15.8** 9		**13.3** 35		**-0.2** 28	**0.3** 100	**1.2** 22
CAI Tgt Date 2030 Custom Index		4.3 17	21.2 14	12.9 5	15.9 8		13.4 31				1.2 23
Target 2035 Trust	$59	**4.3** 19	**22.0** 14	**13.5** 1	**16.4** 8		**14.1** 41		**-0.1** 16	**0.3** 100	**1.2** 13
CAI Tgt Date 2035 Custom Index		4.5 13	22.3 12	13.5 1	16.5 7		14.2 40				1.2 13
Target 2040 Trust	$66	**4.4** 25	**22.6** 16	**13.8** 2	**16.6** 6		**14.2** 72		**-0.3** 32	**0.3** 99	**1.2** 12
CAI Tgt Date 2040 Custom Index		4.6 21	22.9 10	13.9 2	16.7 5		14.3 69				1.2 12
Target 2045 Trust	$80	**4.4** 25	**22.6** 17	**13.8** 1						**0.3** 99	
CAI Tgt Date 2045 Custom Index		4.6 16	22.9 14	13.9 1							

Investment Manager	Market Value ($mm)	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	5 Year Risk	5 Year Risk Quadrant	5 Year Excess Rtn Ratio	3 Year Tracking Error	5 Year Sharpe Ratio
Target 2050 Trust	$94	**4.4** 33	**22.6** 16	**13.8** 1						**0.3** 99	
CAI Tgt Date 2050 Custom Index		4.6 21	22.9 15	13.9 1							
Target 2055 Trust	$43	**4.4** 46	**22.6** 35	**13.8** 3						**0.2** 91	
CAI Tgt Date 2055 Custom Index		4.6 29	22.9 32	13.9 3							

Returns:
- above median
- third quartile
- fourth quartile

Risk:
- below median
- second quartile
- first quartile

Risk Quadrant:

Excess Return Ratio:
- above median
- third quartile
- fourth quartile

Tracking Error:
- below median
- second quartile
- first quartile

Sharpe Ratio:
- above median
- third quartile
- fourth quartile

Other Options: 6/30/14

Active Equity, Stable Value, and Interest Income

Investment Manager	Market Value ($mm)	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	5 Year Risk	5 Year Risk Quadrant	5 Year Excess Rtn Ratio	3 Year Tracking Error	5 Year Sharpe Ratio
Active and Other Funds											
Brandes Int'l Fund	$86	**4.1** 34	**27.1** 7	**9.0** 22						**3.2** 72	
CAI Mut Fd: Non-U.S. Equity Style											
MSCI EAFE Index		4.1 34	23.6 36	8.1 38	11.8 56	1.0 63	18.0 74				0.6 43
RCM Soc Resp	$39	**4.9** 46	**21.8** 81	**12.7** 84	**16.4** 69		**17.2** 28		**-0.5** 73	**3.5** 55	**0.9** 79
CAI Mut Fd: Core Equity Style											
KLD 400 Social Idx		4.6 52	23.3 72	16.7 17	18.5 21	6.7 20	15.2 74				1.2 11
T. Rowe Price Small Cap	$139	**2.3** 39	**25.1** 36	**16.7** 8	**23.7** 8	**10.1** 5	**19.6** 47		**2.5** 1	**1.1** 99	**1.2** 9
CAI Mut Fd: Sm Cap Broad Style											
Russell 2000 Index		2.0 42	23.6 54	14.6 37	20.2 41	6.7 49	19.2 56				1.0 43
T. Rowe Price Stable Value Fd	$344	**0.6** 3	**2.4** 2	**2.8** 4	**3.2** 11	**3.5** 17	**0.3** 55		**5.7** 12	**0.1** 59	**10.3** 31
CAI Stable Value Database											
5 Yr U.S. Treas Rolling		0.4 63	1.5 53	1.9 50	2.5 42	2.9 49	0.4 32				5.9 71
Def Comp Interest Income Fund	$183	**0.7** 1	**2.9** 1	**3.3** 1	**3.7** 1	**4.0** 1	**0.3** 58		**8.5** 6	**0.1** 61	**12.6** 22
CAI Stable Value Database											
5 Yr U.S. Treas Rolling		0.4 63	1.5 53	1.9 50	2.5 42	2.9 49	0.4 32				5.9 71

Returns:
- above median
- third quartile
- fourth quartile

Risk:
- below median
- second quartile
- first quartile

Risk Quadrant:

Excess Return Ratio:
- above median
- third quartile
- fourth quartile

Tracking Error:
- below median
- second quartile
- first quartile

Sharpe Ratio:
- above median
- third quartile
- fourth quartile

Passive Options: 6/30/14

Investment Manager	Market Value ($mm)	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	5 Year Risk	5 Year Risk Quadrant	5 Year Excess Rtn Ratio	3 Year Tracking Error	5 Year Sharpe Ratio
Index Funds											
State Street S&P Index Fund (i) CAI Large Cap Core Style	$326	**5.2** 41	**24.6** 84	**16.6** 54	**18.8** 54	**6.2** 68	**15.3** 81		**0.0** 52	**0.0** 100	**1.2** 42
S&P 500 Index		5.2 41	24.6 84	16.6 54	18.8 54	6.2 69	15.3 80				1.2 42
BlackRock S&P 500 Index Fund (i) CAI Mut Fd: Core Equity Style (Gross)	$173	**5.2** 44	**24.6** 71	**16.6** 41	**18.9** 41	**6.3** 50	**15.3** 72		**1.1** 1	**0.0** 98	**1.2** 26
S&P 500 Index		5.2 44	24.6 71	16.6 41	18.8 43	6.2 53	15.3 72				1.2 26
SSgA Russell 3000 Index (i) CAI Mut Fd: Large Cap Broad Style (Net)	$54	**4.9** 36	**25.2** 49	**16.5** 26	**19.3** 20		**15.9** 67		**0.1** 9	**0.1** 100	**1.2** 9
Russell 3000 Index		4.9 36	25.2 48	16.5 26	19.3 20	6.5 40	15.9 66				1.2 10
SSgA World Equity ex-U.S. Index (i) CAI MF: Non-U.S. Equity Style (Net)	$27	**5.1** 6	**21.9** 51	**5.8** 79	**11.0** 71		**18.2** 68		**-0.1** 76	**1.2** 99	**0.6** 60
MSCI ACWI x U.S. Index (Net)		5.0 11	21.8 51	5.7 81	11.1 71	1.3 56	18.1 69				0.6 56
SSgA Global Balanced Index (i) CAI Int'l/Global Balanced Database	$57	**4.0** 46	**16.1** 34	**8.0** 44						**0.4** 99	
Global Balanced Custom Benchmark		3.9 47	15.8 36	7.7 46							
SSgA Long U.S. Treasury Index (i) CAI Mut Fd: Extended Mat Fixed Income	$10	**4.7** 16	**6.2** 29	**8.8** 27	**7.3** 38		**15.2** 14		**-0.1** 38	**0.1** 97	**0.5** 58
Barclays Long Treasury Index		4.7 17	6.3 29	8.8 27	7.4 38	8.1 37	15.2 14				0.5 57
SSgA U.S. TIPS Index (i) Lipper: TIPS Funds	$17	**3.8** 21	**4.3** 36	**3.4** 19	**5.4** 25		**5.2** 58		**-3.8** 93	**0.0** 100	**1.0** 24
Barclays U.S. TIPS Index		3.8 16	4.4 30	3.6 12	5.6 15	5.9 13	5.2 59				1.0 15
SSgA World Gov't Bond Ex-U.S. Index (i) CAI Mut Fd: Global Fixed Income Style	$10	**2.6** 32	**8.8** 4	**1.0** 78	**3.5** 95		**7.3** 31		**-0.5** 100	**0.1** 99	**0.5** 87
Citi WGBI Non-U.S. Index		2.6 30	8.9 4	1.0 77	3.6 91	5.6 35	7.3 30				0.5 86
U.S. Real Estate Invesment Trust (i) CAI Mut Fd: Real Estate Database	$28	**7.1** 30	**13.0** 48	**11.1** 34	**23.0** 37		**19.6** 21		**-0.8** 74	**0.1** 99	**1.2** 62
U.S. Select REIT Index		7.2 29	13.3 41	11.4 24	23.8 16	4.3 52	19.7 20				1.2 40

Investment Manager	Market Value ($mm)	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	5 Year Risk	5 Year Risk Quadrant	5 Year Excess Rtn Ratio	3 Year Tracking Error	5 Year Sharpe Ratio
BlackRock Govt/Credit Bond Fund (i) CAI Mut Fd: Core Bond Style	$45	**1.9** 67	**4.2** 71	**4.0** 62	**4.9** 77	**5.2** 60	**3.9** 31		**-2.6** 98	**0.0** 99	**1.2** 90
Barclays Govt/Credit Bd		1.9 68	4.3 70	4.1 55	5.1 74	5.4 56	3.9 31				1.3 90
BlackRock Int. Govt Bond Fund (i) CAI MF: Intermediate Fixed Income Style	$15	**0.9** 55	**1.4** 75	**1.8** 59	**2.7** 71	**4.1** 60	**2.6** 36		**-4.5** 100	**0.0** 99	**1.0** 90
Barclays Gov Inter		0.9 51	1.5 70	2.0 57	2.8 69	4.2 59	2.6 36				1.0 84
State Street Inst Trsry MM (i) Money Market Funds	$37	**0.0** 100	**0.0** 100	**0.0** 100	**0.0** 77		**0.0** 51		**-3.9** 98	**0.0** 36	**-12.2** 55
3-Month T-Bills		0.0 12	0.0 13	0.1 12	0.1 11	0.6 81	0.0 22				-1.1 15

Returns:
- above median
- third quartile
- fourth quartile

Risk:
- below median
- second quartile
- first quartile

Risk Quadrant:

Excess Return Ratio:
- above median
- third quartile
- fourth quartile

Tracking Error:
- below median
- second quartile
- first quartile

Sharpe Ratio:
- above median
- third quartile
- fourth quartile

(i) – Indexed scoring method used. Green: manager & index differ by less than +/- 10 percentiles; Yellow: manager and index differ by +/- 20 percentiles; Red: manager & index differ by more than 20 percentiles.

Major Activities 2014 YTD

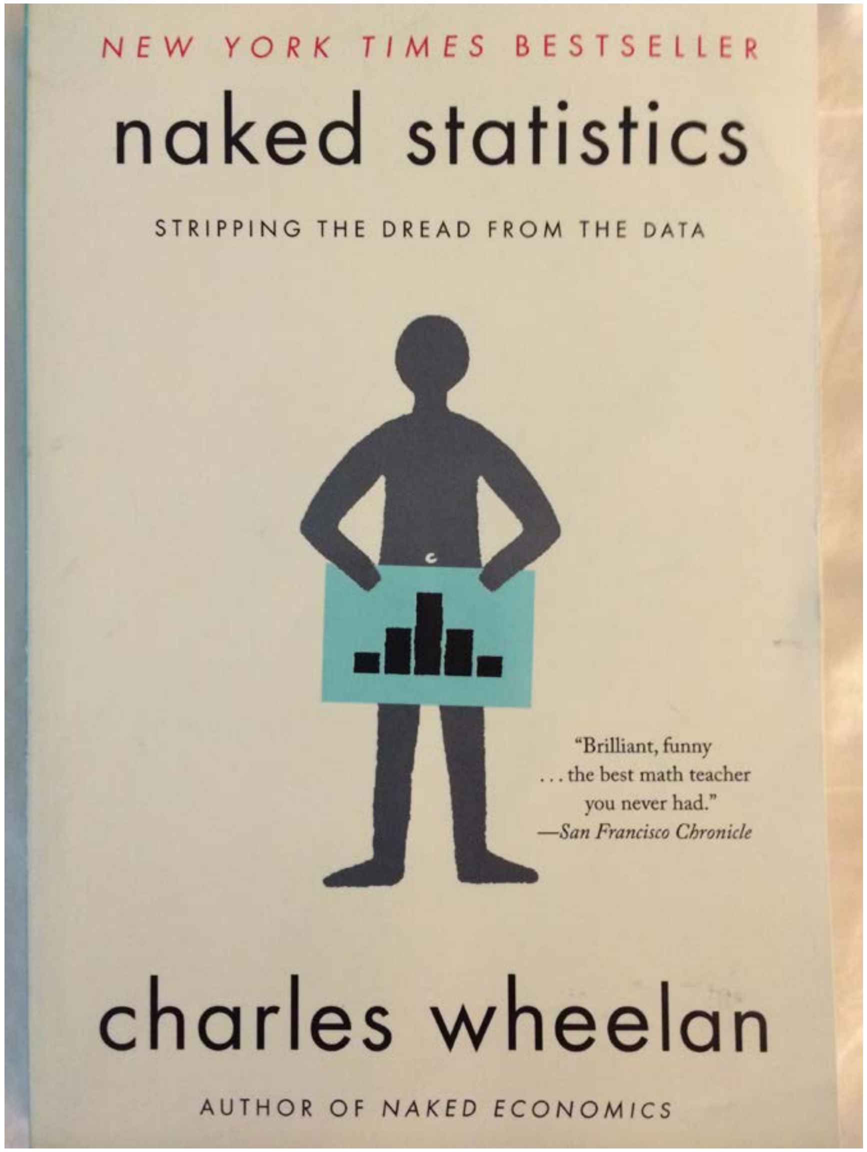
- Asset Allocation Update
  – Developed ARMB specific expected returns & risk projections
  – Worked with staff & advisors to develop and evaluate alternative potential policy mixes
  – Participated with staff & IAC to discuss recommended policies for Board consideration

- Manager Reviews for ARMB Investment Staff
  – *Everest Capital LLC (frontier markets)*
  – *Pyramis Tactical Bond strategy (active bond management)*
  – *KKR Asset Management (direct lending)*
  – *Allianz Global Investors (Structured Alpha)*
  – *Qualitative Management Associates (QMA's "Market Participation Strategy")*

- Renewal of Investment Consulting Services Agreement
  – Thank you!

Suggested reading

Statistics made understandable



Paperback, 282 pages
Published W. W. Norton & Company

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Allianz Structured Alpha 1000 Plus	ACTION:	X
DATE:	September 19, 2014	INFORMATION:	

BACKGROUND:

Allianz has been managing their Structured Alpha 1000 Plus portfolio since August 1, 2012. The Structured Alpha 1000 Plus portfolio which targets the 90-Day T-Bill + 10% net is constructed through option spreads using puts and calls on equity indices with a goal to create option-based profit zones. Additionally, a net long VIX exposure is implemented to dampen correlation to equity market declines. Over the simulated performance period of Sept. 2005 through July 2012, the Structured Alpha 1000 Plus portfolio has returned 19.8% net annualized compared to the S&P 500 Index return of 3.94% with a portfolio annualized standard deviation of 10.9% compared to the S&P 500 Index of 16.6%. Invested performance, from Aug. 2012 through July 2014, the portfolio has returned 6.7% net annualized compared to the S&P 500 Index return of 20.9 with a portfolio annualized standard deviation of 4.7% compared to the S&P 500 Index of 8.2%.

STATUS:

On June 5, 2014, staff met with Allianz at their office in San Francisco to review their structured alpha strategy as a means of managing downside risk within the equity portfolio. On August 6, 2014 staff held a conference call with the team to further discuss the portfolio methodology and historical performance. Subsequent to the call, staff directed Callan to perform due diligence on the team and portfolio. On August 29, 2014, Callan completed their analysis and determined that Allianz's platform and team are robust and experienced to compete within structured alpha.

RECOMMENDATION:

The Alaska Retirement Management Board hire Allianz to manage a $200 million Structured Alpha 1000 Plus portfolio targeting 90-Day T-Bills + 10 net, subject to successful contract and fee negotiations. The Structured Alpha Plus portfolio would be managed in the Absolute Return asset class.

Callan

Callan Associates Inc.
1660 Wynkoop Street
Suite 950
Denver, CO 80202

Main 303.861.1900
Fax 303.832.8230

www.callan.com

Allianz Global Investors – Structured Alpha
September 2014

Summary

In response to a request from ARMB's Chief Investment Officer, Gary Bader, Callan Associates conducted a review of Allianz's Structured Alpha strategy which is intended to deliver a targeted return of 250 basis points (bp), 500bp or 1000bp over Treasury Bills. This report presents our observations of the organization, investment team and strategy.

We conclude that the Allianz Global Investors' asset management platform is robust and deeply resourced. Our research indicates that AGI's Structure Alpha investment team is experienced and positioned to compete in the structured alpha arena. The next several sections of this report provide an overview of the organization, the strategy, and team.

Organization and Strategy Team

Allianz, headquartered in Munich Germany, is one of the largest insurance companies worldwide with a market capitalization of $60€ billion today. In 1998, Allianz made a strategic decision to add asset management to its core business activities which were mainly insurance related. Through acquisitions of PIMCO in 2000 and Dresdner Bank AG in 2001, asset management quickly became a meaningful part of its business alongside the insurance businesses. The acquisitions provided Allianz access to many wholly owned subsidiaries such as: RCM Capital Management LLC (RCM), Caywood-Scholl Capital Management LLC, PIMCO Advisors, PEA Capital, Nicholas Applegate, NFJ Investment Group, and Oppenheimer Capital. On October 25, 2004, Allianz branded the collection of U.S.- based subsidiaries as Allianz Global Investors U.S. LLC. (AGI) while keeping the names of some of the investment affiliates.

The team that manages the Structured Alpha strategies is called the AGI Structured Products Team (AGI SPT). It is headed up by Greg Tournant, who created the unit in 2005 and had previous experience managing options-based strategies at PEA Capital and Oppenheimer Capital. The team was launched within AGI off the back of an option overlay strategy used on a closed-end mutual fund called the AllianzGI NFJ Dividend, Interest & Premium Strategy Fund (ticker=NFJ). NFJ's inception was in February of 2005. This fund was one of the largest closed-end fund raisings that year with capital coming in at ~$2 billion. The fund was managed by AGI subsidiaries NFJ Investment Group, Nicholas Applegate, and Oppenheimer Capital (currently AGI Structured Products). In general, the objective of the option overlay was to enhance the income production of the fund by utilizing an option overlay on top of the NFJ Fund portfolio. Given that interest rates were considered to be at historic lows back in 2005, the yield enhancement provided by the option overlay created significant retail demand.

With the options effort led by Greg Tournant becoming a self-sustaining business, the AGI SPT launched the Structured Alpha 500 strategy (formerly the Absolute Yield strategy) on September 1, 2005. This strategy aims to offer fixed income like returns (90 Day T-Bills + 5% per year) without many of the headwinds of rising interest rates. They also observed the tremendous success of enhanced index strategies that employed fixed income collateral to enhance investment returns over an S&P 500 Index synthetic exposure; these strategies should also face challenges in an environment of rising interest rates.

Today, the AGI SPT manages ~$1.7 billion in the various applications of Structured Alpha. The team's composition is detailed in Table 1 below. Callan believes the team is of sufficient depth and experience relative to manage options-based strategies and is competitive with other options strategy teams in the institutional marketplace.

All team members but two of those listed in Table 1 have worked at one of AGI's affiliates since or prior to the formation of AGI SPT in 2005. Co-Lead Portfolio Manager Trevor Taylor is one of the individuals added to the team in 2008. Greg Tournant has known Mr. Taylor for more than 20 years. Mr. Tournant briefly departed Oppenheimer Capital in May of 2007, while still retaining role of non-discretionary sub advisor for Oppenheimer Capital, to become Co-CIO with Mr. Taylor at a hedge fund firm called Innovative Options Management. He also worked with Scott Powell and Kevin Cooney (who departed in April of 2009) at Innovative Options Management. In December 2008, Greg decided to formally rejoin the AGI SPT (then called Oppenheimer Capital) he had created and brought Mr. Taylor, Mr. Powell, and Mr. Cooney with him.

Table 1
AGI SPT Professionals

Investment Team			
Greg Tournant (18/11) *Chief Investment Officer U.S. Structured Products, Lead Portfolio Manager*	**Trevor Taylor (15/5)** *Co-Lead Portfolio Manager*	**Stephen Bond-Nelson (21/14)** *Portfolio Manager*	**Jeff Sheran, CFA (21/13)** *Product Specialist*
Valentin Ivanov, CAIA (15/13) *Research Analyst*	**Scott Powell, CFA (15/4)** *Research Analyst*	**Michael Purcell, CFA (10/7)** *Research Analyst*	**John Donnelly (7/3)** *Research Associate*
Trading			
Gary McAnly, CFA (20/14) *Head of Derivatives Trading US*	**Terence Duggan (18/14)** *Trader*		
Risk Management			
Douglas B. Stone (39/19) *Director of Risk Management*	**Fox Ling, Ph.D., CFA (20/19)** *Analyst*	**IDS GmbH** *Independent subsidiary of our parent, Allianz SE, that provides VaR related risk analytics*	

Investment Objective of Strategy

The AGI SPT's investment philosophy is to develop proprietary expected probabilities of the magnitude of future equity index movements. From this analysis, they construct option spreads using puts and calls on equity indices. The goal is to create option-based profit zones that, upon expiration of the options, will capture positive payoffs if the level of the underlying index ends up within the profit zones. The profit zones for each strategy are constructed with three goals in mind: 1) alpha target, 2) structural risk protection, and 3) flexibility to restructure profit zones when expected probabilities meaningfully change.

Callan used the long standing live record of the Structured Alpha 500 strategy (SA 500) as the basis for evaluating the newer Structured Alpha 1000 Plus strategy (SA 1000 Plus). This newer strategy is based on the same investment process as the original strategy, but has a more aggressive return objective (90 Day T-Bills +10% per year) and employs a long VIX exposure (which denotes the "Plus" in the strategy name) to ameliorate volatility.

A simulated track record for the SA 1000 & SA 1000 Plus, prior to August 2011 and August 2012, respectively, was supplied to Callan by AGI SPT in order to evaluate their longer performance trends. These track records are based on the same portfolio positioning experienced in the SA 500 with the risk tolerance scaled up to 12% annual volatility. It also includes transaction costs associated with the buying and selling of the underlying instruments of the strategy and investment management fees.

Additionally, for the SA 1000 Plus, a net long position in VIX futures is added, using excess available collateral, to dampen correlation to equity market declines. The simulated track records for the higher volatility versions of Structured Alpha appear to be of high integrity as they behave very similarly to the SA 500 during different market environments that include trending equity markets (up and down), moderately oscillating equity markets, and markets with abrupt changes in volatility (up and down).

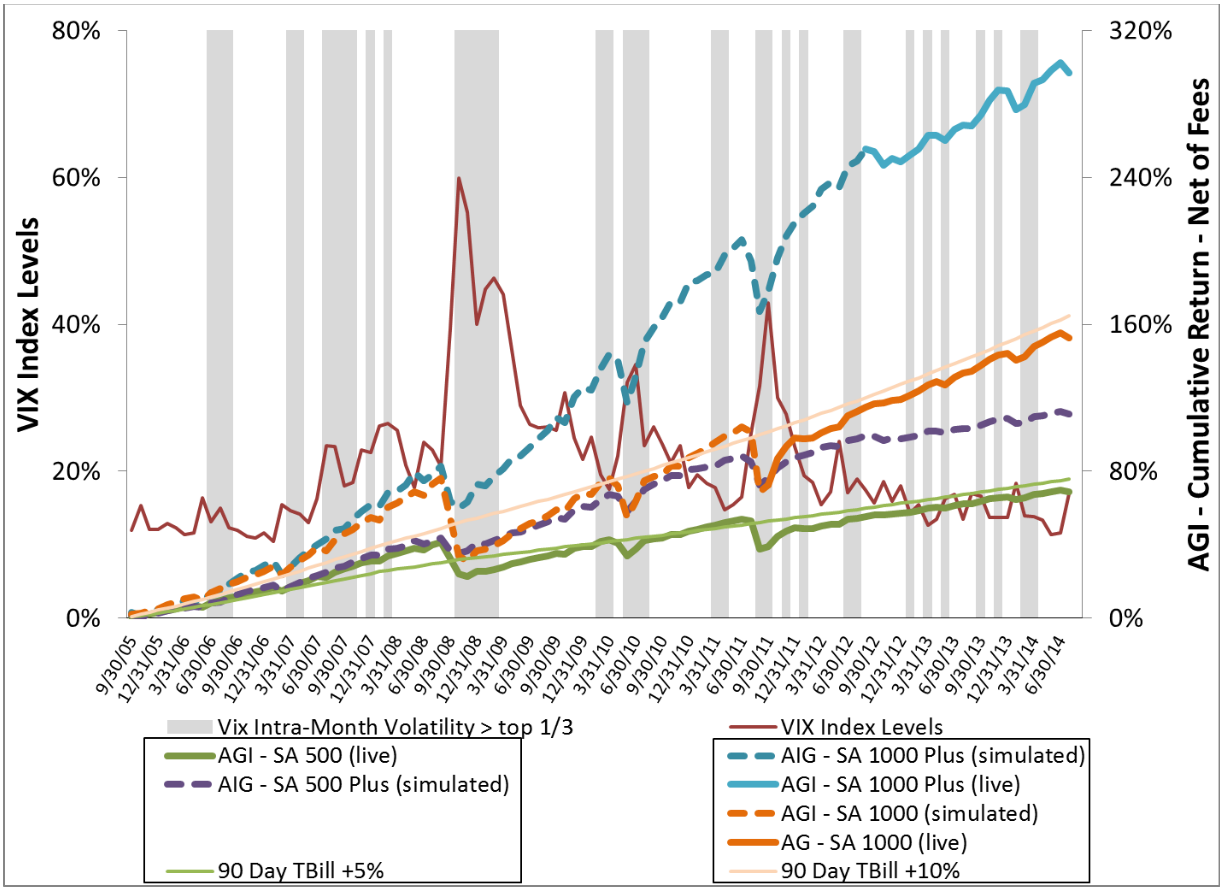
In Chart 1 on the following page, the various versions of AGI SPT's absolute return-oriented strategies are illustrated alongside the two return objectives of 90-Day T-bills: A) plus 5% and B) plus 10% per year. The historical expectations for volatility of the equity market are also represented by the VIX Index line. Shaded areas represent months of rapidly changing expectations as represented by the standard deviation of the daily VIX Index intra-month. Over the 8-3/4 year period measured, the data shows that both of the AGI SA strategies have essentially achieved their return objectives after all applicable fees.

Perhaps the most notable performance pattern generated by the AGI SA strategies is the sudden decline that occurs during spikes in the VIX Index over short periods of time. Over longer trending periods of a rising VIX Index (mid-2006 to mid-2008) and a falling VIX Index (late 2011 to date), the strategies have generated steady positive gains with very little variation. Particularly for the AGI SA 500 & 1000 strategies (not Plus versions), the majority of the portfolios are structured to have a high probability of profit should the equity markets perform within reasonable historical bounds (up, flat, or down) over the ensuing 1- to 3-month period.

The net proceeds from the basket of options (selling volatility) will become realized gains if the equity markets (i.e., S&P 500 Index) end-up inside a range considered normal by AGI SPT and the net options book expires with no losses. This is called a "range-bound spread" strategy.

Sudden spikes in volatility significantly change the typical range for the equity markets causing a net options book loss that more than offsets the premiums collected from the range-bound spreads.

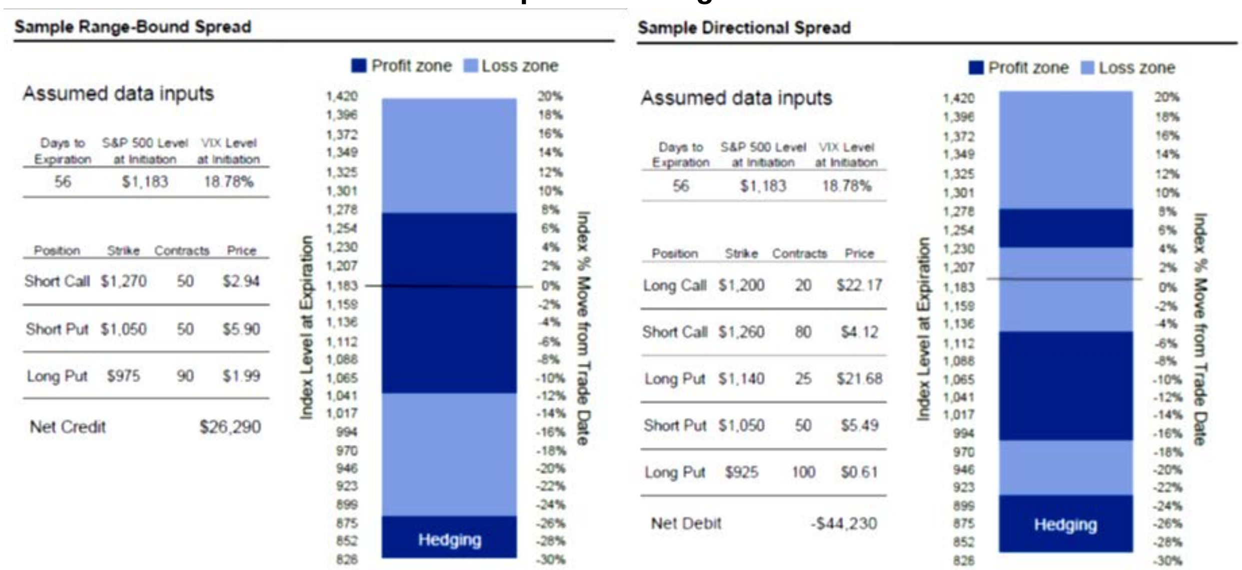
Chart 1
Simulated and actual results



AGI SPT's process also structures a portion of the SA portfolios to offset losses from non-normal market moves. This involves selling and/or buying volatility that will benefit if the equity markets move outside of the range of outcomes AGI considers normal. While this adds some protection on the downside, the net amount of premium paid for the options structured for non-normal markets is limited by the amount of premium collected from structuring the "range-bound spread".

Examples of a purely hypothetical range-bound spread strategy and a directional spread strategy (hedge against non-normal market) are illustrated below. While the example shows the cost of the directional spread strategy exceeding the range-bound spread strategy, it is only a partial example of the options structuring that exists in the SA strategies as they use between 175 and 300 individual options in the portfolio.

Chart 2
Spread Strategies



While the SA 500 and 1000 strategies have very attractive return profiles during normal equity markets, the non-normal periods characterized by sudden spikes in the VIX often can erase gains produced by the strategy over the 12 to 24 months preceding the VIX spiking event.

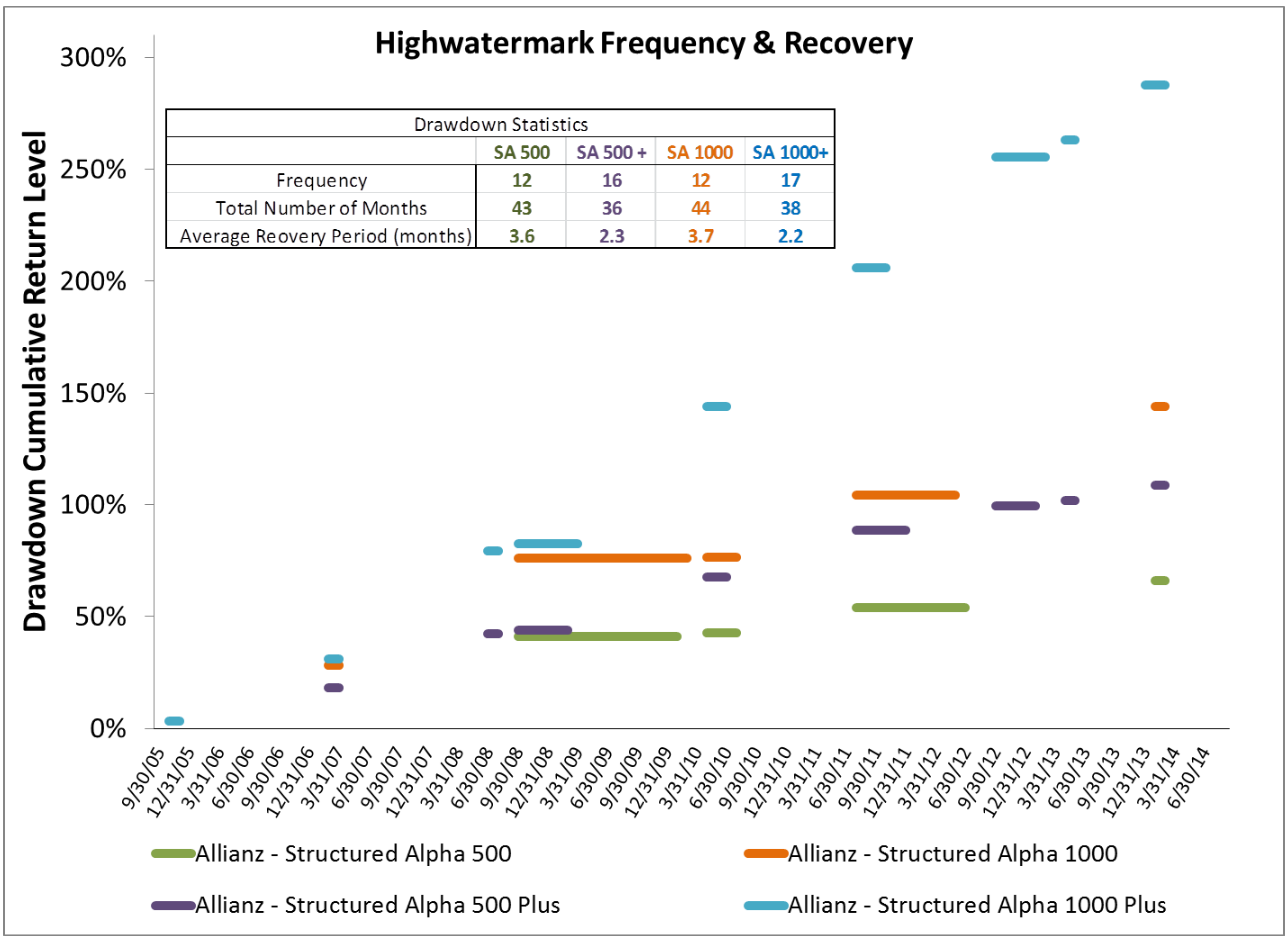
This observation led AGI SPT to research ways to minimize the loss experienced during the sudden spikes in equity market volatility. They discovered that a systematic long position in the VIX futures contract was a cost effective approach that did not unduly contribute to transaction costs and enabled the SA 500 and 1000 strategies to weather these periods with more resilience. Combining the diminished losses experienced during VIX's spikes and the likely higher returns from options strategies subsequent to elevated volatility regimes, adding long VIX futures contracts resulted in portfolios that recouped losses faster. This resulted in the "Plus" version of the SA strategies.

The long position in the VIX contract will be actively managed in an effort to minimize the costs associated with maintaining the position. This can include a combination of long and short exposure to the VIX Short-Term Index and the VIX Mid-Term Index, exchange traded funds, total return swaps, or options on futures or securities to achieve exposure to the VIX.

To analyze the quicker recovery assertion, Chart 3 illustrates a drawdown analysis for the various versions of the SA strategies. This analysis identifies at which point on the timeline that the trajectory of positive returns has been interrupted by a negative monthly return and how long it took to recover to its previous high level (i.e., high watermark).

As illustrated in Chart 3, the original non-Plus SA strategies have a lower frequency of positive monthly return disruption than the Plus strategies. We presume this occurs because non-normal equity markets happen less frequently than do normal markets. Therefore, long positions in the VIX futures contracts for the Plus Strategies add more exogenous, albeit subtle, impact to the strategy that can push the monthly return from a modest positive to a modest negative. However, an analysis of the average recovery rate for the Plus Strategies supports the added net long VIX futures contracts since their existence in the portfolio cuts by almost half the time required to recoup losses from a sudden spike in the VIX Index. Historically.

Chart 3



Drawdown Statistics	SA 500	SA 500 +	SA 1000	SA 1000+
Frequency	12	16	12	17
Total Number of Months	43	36	44	38
Average Reovery Period (months)	3.6	2.3	3.7	2.2

Risk Management

Risk management is a very important function for options-based strategies as portfolio values can change exponentially relative to changes in the equity market. AGI SPT performs risk analysis on a daily basis to verify that risk exposures are in line with each strategy's respective risk targets. As part of the risk analysis, stress tests are automatically generated on a daily or weekly basis, depending on the test, and are based on current holdings data. This information provides a snapshot of the portfolio against certain scenarios, giving the team an opportunity to ensure the risks are well understood and appropriate for each strategy.

Complementing the risk analysis described above, Allianz has a San Diego-based team that performs risk management on many of Allianz's US-based asset management managers. This team monitors daily trade activity and weekly risk profiles to check for any significant changes in the portfolios. On a daily basis, the Risk Management group runs each investment strategy through a series of analyses using proprietary risk management software and Sungard's APT risk management software. The results are reviewed with each investment team. These risk controls include:

- Non-Gaussian Value at Risk (VaR) and Expected shortfall
- 31 stress tests
- Contribution to risk by index product
- GARCH estimates of risk
- Delta, Gamma, and Vega analysis
- Analysis of performance statistics: drawdowns, correlations, skewness, kurtosis, Sharpe ratios, Cornish-Fisher VaR, and Omega

Finally, Allianz's independent risk subsidiary, Investment Data Services (IDS), aggregates risk and performs risk analysis on all of the parent company's underlying portfolios. This is another independent risk management function to which the AGI SPT strategies are exposed. At the firm level, they maintain an extensive set of scenario analyses to ensure that all portfolios' style and construction are consistent with their guidelines.

Team Compensation

While the AGI SPT is not independent of the parent company Allianz, they are a niche platform within the firm. They only manage options strategies and have their entire team located in New York. The team is given a share of the revenue generated from its strategies and the rest goes to the parent. Greg Tournant determines the compensation of his team with its share of the revenue split. He has ultimate say as to compensation for individual team members, but the scheme is very well known and formulaic.

Because virtually all of their revenue generation comes in the form of performance-based investment management fees, Callan believes that the AGI SPT team's interests are well aligned with those of their clients. The parent company pays for all other costs such as legal, compliance, distribution, and other relevant business and operating expenses.

Callan

Vehicle

The investment vehicle to access the SA 1000 Plus strategy is a Delaware limited liability company. The Managing Member of the fund is Allianz Global U.S. LLC, also a Delaware limited liability company. The terms and rights of its subscription agreement appear to be reasonable. The fund is a master fund in a master-feeder structure.

The following are the general terms of the LLC:

- Return Objective – ML 3 month US T-bill Index + 10% per annum
- Risk Target – 10% standard deviation per annum
- Fee – 0% base fee, 30% share on performance above return objective (ML 3 month US T-bill Index) with high watermark. Operating expenses are capped at .35% per annum
- Liquidity – Monthly with 5 day notice period
- Managing Member Removal – Yes, with majority-in-interest of non-affiliate members

Diversification

The fact that returns are being driven by contractual payoff zones makes the return pattern of the SA 1000 Plus strategy unique and therefore exhibits low correlation to most other asset classes. While the correlation will increase between this strategy and many other traditional asset classes during strong spikes in the VIX Index, these periods are generally very short-term in nature and offset somewhat in the "Plus" version of the SA strategies.

The scatter chart on the left (Chart 4) depicts the low correlations of the SA 1000 Plus to the S&P 500 Index, the BC Aggregate Index, and a combination of 60% S&P 500 Index/40% BC Aggregate Index. The scatter chart on the right (Chart 5) illustrates the risk and volatility for each of these portfolios. It is Callan's view that the SA 1000 Plus clearly has the potential to add both diversification and return to ARMB's overall investment structure.

Chart 4
Correlations

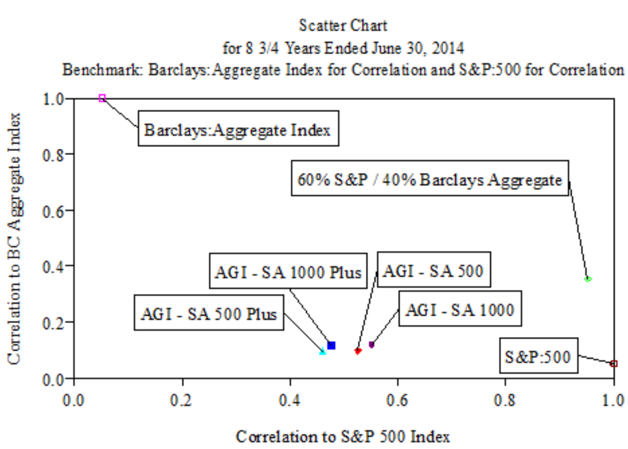
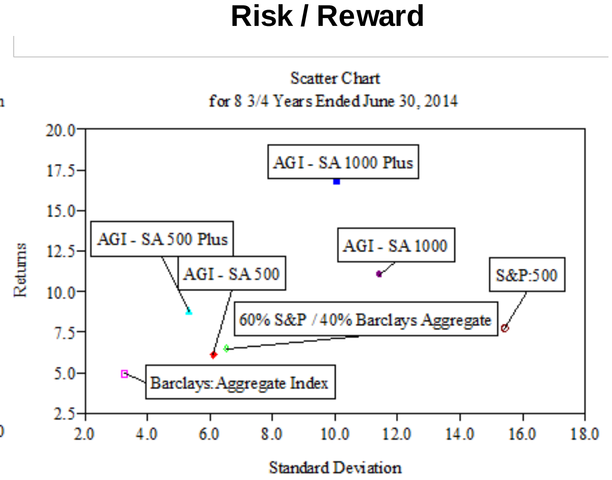


Chart 5
Risk / Reward



Conclusion

The experience and stability of the team, the success of the broad strategy suite, and the integrity and diligence of the research behind the Structured Alpha 1000 Plus strategy are all characteristics of the AGI SPT that make Callan supportive of Alaska Retirement Management Board making an investment with this strategy. The expected return patterns of the Structured Alpha 1000 Plus should improve the diversification of ARMB's total plan, as well offering a high probability of contributing to strong risk-adjusted returns.

We encourage a review of the strategy agreement's terms and investment guidelines by your legal counsel and investment staff before investing to ensure compliance with ARMB policies.

Please feel free to call if you have any questions.

Kelly Cliff, CFA, CAIA
Senior Vice President & Chief Investment Officer
August 26, 2014

Paul M. Erlendson
Senior Vice President
September 2, 2014

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Creation of the International Equity Fund & Brandes International Benchmark Change	ACTION:	X
DATE:	September 19, 2014	INFORMATION:	

BACKGROUND:

During the April 2014 Alaska Retirement Management Board (ARMB) meeting, Great West presented the advantages, disadvantages, and logistics of Branded Funds, also called White Label or Private Label Funds. ARMB directed staff to further research and work with Great West in the development of branded fund options and come back to the board with a recommendation.

Brandes Investment Partners, LP has managed an international option for ARMB's participant directed plans since 2001. In 2009, the fund changed from an institutional mutual fund to a collective investment trust offered by Wilmington Trust in order to lower fees and increase transparency. Brandes International has been benchmarked against the MSCI EAFE Index since inception.

STATUS:

Staff recommends the creation of the International Equity Fund which would initially contain the current Brandes International DC option as well as Allianz NFJ International, currently an ARMB DB manager. Each manager would have a target weight of 50% and the option would collectively be benchmarked against the MSCI ACWI ex-US Index. Staff viewed Allianz NFJ as the best compliment to the current Brandes option due to their performance characteristics, including a negative excess return correlation over the prior five years.

As of June 30, 2014, Brandes' emerging markets position represented 13.5% of their portfolio. Given Brandes' exposure to emerging markets, the portfolio's opportunity set most closely resembles that of the MSCI ACWI ex-US Index and should be measured accordingly.

In accordance with Alaska statutes, on September 5, 2014 staff conferred with the Commissioner of Administration regarding these recommended changes. The Commissioner was supportive of the recommended changes.

RECOMMENDATION:

The Alaska Retirement Management Board authorize staff to implement the International Equity Fund and change the Brandes International fund's performance benchmark to the MSCI ACWI ex-US Index.

Branded Funds

Defined Contribution Plan Committee

September 2014

Shane Carson, CAIA, CFA
State Investment Officer

Investment Option Menu

	DC	Deferred Comp	SBS	Active/Passive	Manager
Cash					
Alaska Money Market Master Trust	X			Active	T. Rowe
Interest Income Fund		X		Active	T. Rowe
Stable Value Fund			X	Active	T. Rowe
State Street Institutional Treasury Money Market Fund	X	X	X	Active	SSgA
Domestic Equity					
T. Rowe Price Small-Cap Stock Trust	X	X	X	Active	T. Rowe
S&P 500 Stock Index Fund	X	X	X	Passive	SSgA/BlackRock
Russell 3000 Index	X	X	X	Passive	SSgA
Allianz Socially Responsible Investment Fund	X	X	X	Active	Allianz
U.S. Real Estate Investment Trust Index	X	X	X	Passive	SSgA
International Equity					
Brandes International Equity Fund Fee CL-1	X	X	X	Active	Brandes
World Equity Ex-U.S. Index	X	X	X	Passive	SSgA
Domestic Bonds					
Government/Credit Bond Index Fund	X	X	X	Passive	BlackRock
Intermediate Bond Fund	X	X	X	Passive	BlackRock
Long U.S. Treasury Bond Index	X	X	X	Passive	SSgA
U.S. Treasury Inflation Protected Securities Index	X	X	X	Passive	SSgA
International Bonds					
World Government Bond Ex-U.S. Index	X	X	X	Passive	SSgA
Balanced/Target Date					
SSgA Global Balanced Fund	X	X	X	Active	SSgA
Alaska Long-Term Balanced Trust	X	X	X	Active	T. Rowe
Alaska Balanced Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2010 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2015 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2020 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2025 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2030 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2035 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2040 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2045 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2050 Trust	X	X	X	Active	T. Rowe
Alaska Target Date Retirement 2055 Trust	X	X	X	Active	T. Rowe

Current International Equity Options

- **Brandes International Eq Fund Fee CL-1**
  - Actively managed against the MSCI EAFE Index
  - AUM: $191,201,263
- **SSgA World Equity Ex-US Index**
  - Passively managed against the MSCI ACWI Ex-US Index
  - AUM: $75,681,181

	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years
Brandes	**4.08%**	**27.05%**	**22.04%**	**9.03%**
MSCI EAFE	*4.09%*	*23.57%*	*21.07%*	*8.10%*
SSgA	**5.10%**	**21.86%**	**17.44%**	**5.82%**
*MSCI ACWI Ex-US (net)**	*5.03%*	*21.75%*	*17.62%*	*5.73%*

Performance for period ending June 30, 2014

Sources: Brandes/Wilmington Trust, Callan Associates and Great West

* Net is used to remain consistent with Callan reporting. Net indicates the deduction of withholding taxes

Brandes International Equity – Emerging Markets Exposure

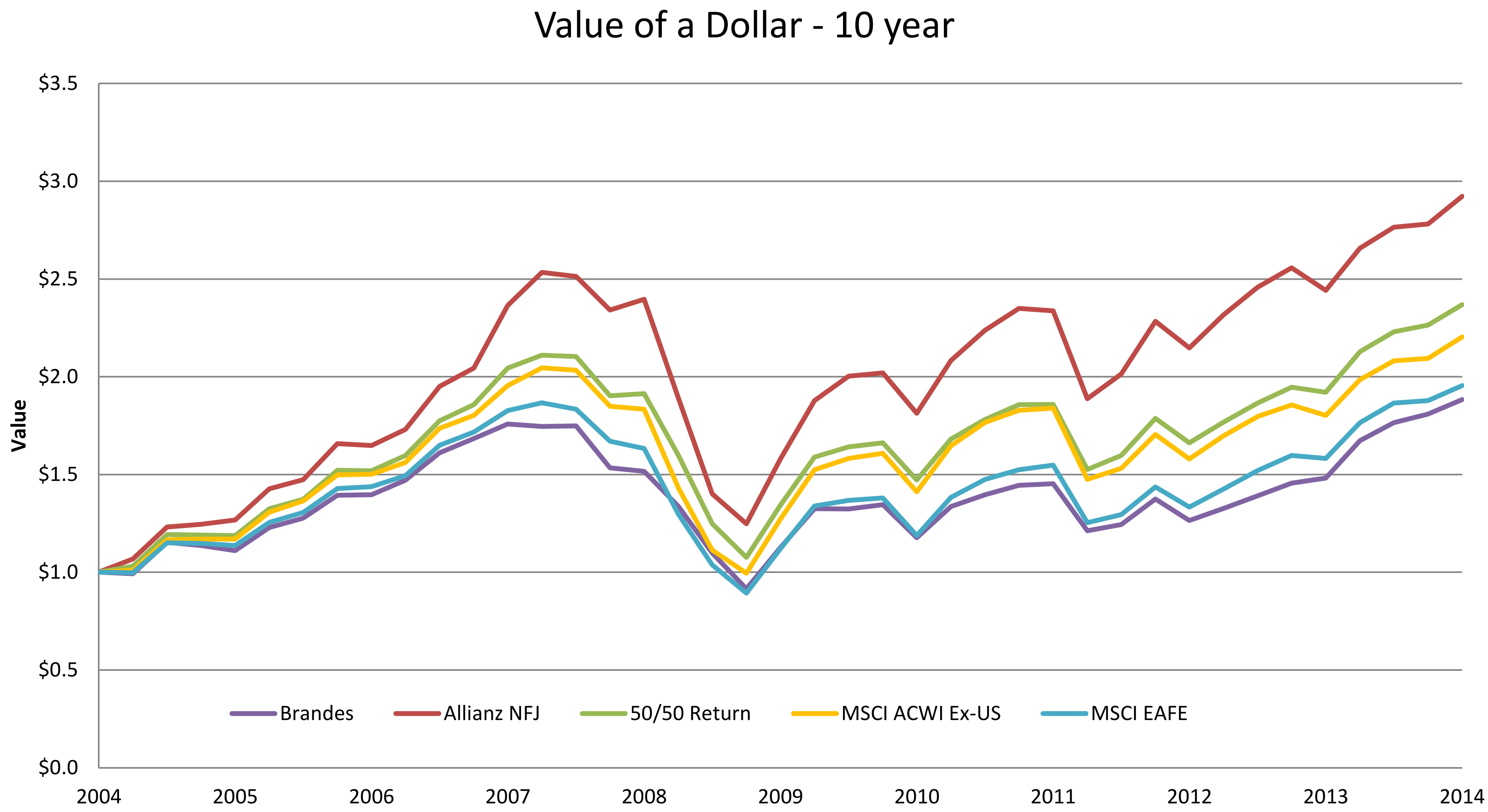
- **Emerging Markets Exposure as of June 30, 2014**
  - Brandes International: 13.5%
  - MSCI ACWI ex-US: 21.2%
  - MSCI EAFE: 0.0%
- **Advantages of ACWI ex-US over EAFE Index**
  - Broader investment opportunity set
  - More closely represents emerging markets exposure in Brandes portfolio
  - Represents the increased prevalence of emerging markets as a percentage of the international marketplace

Sources: Brandes/Wilmington Trust and MSCI Inc.

Branded Funds

- Branded Funds are the combination of managers to create one investment option.
- Structure allows for a more diversified suite of managers in each asset class.
- Maintains a manageable investment lineup while increasing manager diversity.
- Minimizes the impact on participants for manager termination/hire decisions.
- Manager style and performance diversification should smooth performance swings over time.
- Offers participants the ability to create portfolios which more closely resemble ARMB's defined benefit portfolio.
- Creates customized options to better cater to the investment needs of Alaska's defined contribution plan participants.

Performance



Source: Callan Associates

Performance Analysis

	Brandes	Allianz NFJ	50/50 Return	MSCI ACWI Ex-US
1yr Return	27.05%	19.67%	23.34%	22.27%
3yr Ann. Return	9.03%	7.74%	8.43%	6.21%
5yr Ann. Return	10.82%	13.08%	11.99%	11.59%
10yr Ann. Return	6.53%	11.32%	9.01%	8.22%
10yr Std. Dev.	18.49%	21.19%	19.46%	20.73%

10yr Excess Return Correlation (Brandes and Allianz NFJ) -0.32

Sources: Brandes/Wilmington Trust and Callan Associates

Returns are gross of fees ending June 30, 2014. Brandes account changed from a mutual fund to Wilmington Trust CIT during Q4 2009

Recommendations

- Change Brandes benchmark to better reflect investment strategy
- Direct staff to work with Great West, the Division of Retirement and Benefits, Brandes, Wilmington Trust and Allianz NFJ to develop the Alaska International Fund

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Investment Guidelines for Domestic, International, and Alternative Equities	ACTION:	X
DATE:	September 19, 2014	INFORMATION:	

BACKGROUND

At the February 2013 board meeting, ARMB approved the creation of the Alternative Equity asset class for the purpose of aggregating investments that do not fit into ARMB's current asset class structure.

STATUS

The Alternative Equity asset class may contain investments that are not currently found in ARMB's Domestic and International equity portfolios. Currently, investment in some alternative equities as a mandate or strategy is not provided for in ARMB's Investment Guidelines for Domestic and International Equities. These investments include but are not limited to ETFs, futures contracts, forward contracts, and swaps. This Investment Guideline revision allows for these investments if they are specified in the investment management agreement or determined to be fundamental to the manager's investment mandate or strategy.

Additionally, the Investment Guidelines have been revised to include the Alternative Equity benchmark which consists of the S&P 500 Index (50%), CBOE Buy Write Index (30%), and Bank of America Yield Alternatives Index (20%).

RECOMMENDATION

The Alaska Retirement Management Board approve Resolution 2014-24 which amends the Investment Guidelines for Domestic and International Equities to incorporate changes relating to the creation of the Alternative Equity asset class.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to Investment Guidelines for
Domestic, International, and Alternative Equities

Resolution 2014-24

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, the Board contracts an independent consultant to provide experience and expertise in asset allocation and other investment matters to come before the Board; and

WHEREAS, the Board has established an asset allocation for the funds that considers earnings and liabilities on a current as well as a future basis; and

WHEREAS, the Board has authorized investment in domestic, international, and alternative equities; and

WHEREAS, the Board will establish and from time to time as necessary modify guidelines for domestic, international, and alternative equities.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopt the Investment Guidelines for Domestic, International, and Alternative Equities, attached hereto and made a part hereof, regarding investment in domestic, international, and alternative equities.

This resolution repeals and replaces Resolution 2012-26

DATED at Fairbanks, Alaska this ___ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD (ARMB)

INVESTMENT GUIDELINES FOR DOMESTIC ~~AND~~, INTERNATIONAL, AND ALTERNATIVE EQUITIES

A. Purpose. The portfolio will have a primary emphasis on diversification to minimize risk.

B. Investment Structure. Permissible domestic, international, and alternative equity investments include:

1. ~~Common and preferred stock~~ equity and equity related securities of corporations incorporated in the United States that are listed on ~~the New York or American exchanges or are NASDAQ listed~~recognized stock exchanges where recognized stock exchanges are those acknowledged by a manager as a source of prudent investments for the fund;

2. ~~International~~ international equity and equity related securities listed on recognized stock exchanges~~, or securities of closed-end funds listed on other recognized stock exchanges and whose primary purpose is to invest in securities listed on recognized stock exchanges and~~ where recognized stock exchanges are those acknowledged by a manager as a source of prudent investments for the fund;

3. American Depository Receipts, American Depository Securities and Global Depository Securities; and

4. Convertible Debentures; and

5. ~~Publicly~~ publicly traded partnerships listed on recognized stock exchanges, where recognized stock exchanges are those acknowledged by a manager as a source of prudent investments for the fund; ~~and~~

6. investments owned as a result of a corporate action and not a direct purchase, including, but not limited to securities delisted and/or deregistered if held at a value deemed to be de minimis and compliant with the manager's specific investment mandate or strategy;

7. equity related composite instruments including, but not limited to exchange traded funds (ETFs) and closed end funds if specified in the investment management agreement or determined to be fundamental to the manager's investment mandate or strategy; and

~~5.~~8. equity related derivative instruments including futures contracts, forward contracts, options, and swaps if specified in the investment management agreement or determined to be fundamental to the manager's investment mandate or strategy.

6. ~~Securities delisted and/or deregistered, owned as a result of a corporate action and not a direct purchase, and held at a value deemed to be de minimis.~~

C. External Equity Management. The manager must represent and warrant:

1. that it is an "investment advisor" or "bank" as defined in the Investment Advisors Act of 1940 as amended; and

2. that it has completed, obtained and performed all registrations, filings, approvals, authorizations, consents or examinations required by any government or governmental authority for acts contemplated by this contract;

3. that it is a "Fiduciary", as that term is defined in Section 3(21)(a)(ii) of ERISA with respect to the securities, and that it will discharge its duties with respect to the securities solely in the interest of the ARMB and the beneficiaries of the funds administered by the ARMB; and

4. that it has and will maintain all forms of insurance and other prerequisites required by the ARMB.

D. Investment Management Service to be Performed. From time to time, equity managers shall invest and reinvest the cash and securities allocated to it and deposited in their account, without distinction between principal and income, in a portfolio consisting of stocks or other securities when market conditions warrant alternatives to stock. These securities will be selected and retained by the manager solely on the basis of their independent judgment relating to economic conditions, financial conditions, market timing, or market analysis, and will not be subject to direction from the ARMB; provided, however, that in the event the aggregate total of any security held by the ARMB exceeds five percent (5%) of total shares outstanding, the ARMB may direct portfolio managers to sell securities to the extent the aggregate is below five percent (5%). Other securities shall be limited to:

1. obligations of the United States government;

2. obligations of United States government agencies;

3. certificates of deposit;

4. corporate debt obligations;

5. commercial paper;

6. warrants;

7. bankers acceptances; and

8. repurchase agreements.

E. **Managers will be Authorized.** Managers are authorized to invest or reinvest or dispose of any cash or securities held in their account or invest the proceeds of any disposition, provided that:

1. no more than ten percent of the voting stock of any corporation is acquired or held;

2. certificates of deposit have been issued by domestic United States banks or trust companies which are members of the Federal Deposit Insurance Corporation, and are readily saleable in a recognized secondary market for such instruments;

3. corporate debt obligations are rated A or better by Moody's, Standard & Poor's or Fitch rating services (Note: This rating restriction does not apply to convertible debentures);

4. commercial paper bears the highest rating assigned by Moody's, Standard & Poor's or Fitch rating services;

5. bankers' acceptances must have been drawn on and accepted by United States banks which have capital and surplus of at least $200 million each;

6. repurchase agreements must be secured by the debt obligations set forth in 2 through 5 above;

7. except as provided in Section B, Investment Structure, future contracts for sale of investments or for the sale of currencies may be entered into only for the purpose of hedging an existing ownership in these investments;

8. except as provided in Section B, Investment Structure, futures and options will be authorized for the purposes of implementing a portfolio reallocation to gain immediate exposure to the appropriate country weighting:

   a. contracts are traded on recognized exchanges, or that OTC instruments are traded with AA rated or equivalent counterparts and no contracts exceed a period of twelve months;

   b. futures and options are not used to leverage the portfolio; and

   c. all futures and options positions must be reported to the client each month. The report must show both the nominal position and the "economic impact" of all derivative positions;

9. except as provided in Section B, Investment Structure, standardized equity index futures ~~and ETFs~~ will be authorized for the purpose of cash equitization;

10. purchases in commodities or the commodities of futures market of any kind are specifically prohibited;

11. no more than ten percent (10%) of any international portfolio benchmarked against the MSCI EAFE Index or the MSCI EAFE Small Cap Index may be invested in emerging markets.

F. **Cash Held in Portfolio.** Managers are expected to maintain fully invested equity portfolios. The ARMB considers a portfolio to be fully invested as long as cash levels are below a maximum of 5 percent for small capitalization and international equity managers and 3 percent for all other equity managers, calculated using a 10-day moving average. In implementing this portion of the equity guidelines, the Chief Investment Officer will consider any cash in an individual equity account in excess of the maximum to be available for use as a funding source for other ARMB needs. Any manager that expects to exceed the maximum cash level in the short-term as the result of a specific strategy must notify ARMB in writing in advance. Such notice will temporarily exempt the manager from the maximum cash rebalancing threshold. Staff shall regularly report all equity manager net cash holdings.

G. **Performance Standards**. Managers are expected to have returns, over time, in excess of their appropriate contractual benchmark, net of fees.

H. **Performance Benchmarks**. ARMB's asset class level benchmarks for domestic and international equities are as follows:

Broad Domestic Equity – Russell 3000 Index

Global Equity ex US – MSCI ACWI ex US Index

Alternative Equity – S&P 500 Index (50%), CBOE Buy Write (30%), Bank of America Yield Alternatives Index (20%)

I. **Brokerage and Commissions.** In carrying out its functions, a manager will use its best efforts to obtain prompt execution of orders at the most favorable prices reasonably obtainable, and in doing so, will consider a number of factors, including, without limitation, the overall direct net economic result to the ARMB (including commissions, which may not be the lowest available but which ordinarily will not be higher than the generally prevailing competitive range), the financial strength and stability of the broker, the efficiency with which the transaction is effected, the ability to effect the transaction at all where a large block is involved, the availability of the broker to stand ready to execute possible difficult transactions in the future and other matters involved in the receipt of "brokerage and research services" as defined in and in compliance with Section 28(e) of the Securities Exchange Act of 1934, as amended, and regulations thereunder.

Provided that, in the judgment of the manager, purchase or sale execution and transactions are competitive, approximately 30% of all listed large capitalization domestic equity trades will be executed with a brokerage firm participating in a commission recapture program with the ARMB.

The Chief Investment Officer will evaluate and report the commission recapture program to the ARMB that will include:

1. total commission dollars recaptured;

2. actual percentage of commissions recaptured; and

3. a full analysis of the commission recapture program with recommendations for expanding the program.

J. **Voting and Other Action.** The managers shall vote any or all of the securities held by or for the account of the ARMB, unless written instructions to the contrary have been provided by ARMB. In voting securities of the ARMB, the managers shall act prudently in the interest and for the benefit of the ARMB and the beneficiaries of the funds administered by the ARMB. The manager is to furnish, on an annual basis, copies of the contractor's policy and voting records in regards to voting proxies.

ALASKA RETIREMENT MANAGEMENT BOARD (ARMB)

INVESTMENT GUIDELINES FOR DOMESTIC, INTERNATIONAL, AND ALTERNATIVE EQUITIES

A. Purpose. The portfolio will have a primary emphasis on diversification to minimize risk.

B. Investment Structure. Permissible domestic, international, and alternative equity investments include:

1. equity and equity related securities of corporations incorporated in the United States that are listed on recognized stock exchanges where recognized stock exchanges are those acknowledged by a manager as a source of prudent investments for the fund;

2. international equity and equity related securities listed on recognized stock exchanges where recognized stock exchanges are those acknowledged by a manager as a source of prudent investments for the fund;

3. American Depository Receipts, American Depository Securities and Global Depository Securities;

4. Convertible Debentures;

5. publicly traded partnerships listed on recognized stock exchanges, where recognized stock exchanges are those acknowledged by a manager as a source of prudent investments for the fund;

6. investments owned as a result of a corporate action and not a direct purchase, including, but not limited to securities delisted and/or deregistered if held at a value deemed to be de minimis and compliant with the manager’s specific investment mandate or strategy;

7. equity related composite instruments including, but not limited to exchange traded funds (ETFs) and closed end funds if specified in the investment management agreement or determined to be fundamental to the manager’s investment mandate or strategy; and

8. equity related derivative instruments including futures contracts, forward contracts, options, and swaps if specified in the investment management agreement or determined to be fundamental to the manager’s investment mandate or strategy.

C. External Equity Management. The manager must represent and warrant:

1. that it is an "investment advisor" or “bank” as defined in the Investment Advisors Act of 1940 as amended; and

2. that it has completed, obtained and performed all registrations, filings, approvals, authorizations, consents or examinations required by any government or governmental authority for acts contemplated by this contract;

3. that it is a "Fiduciary", as that term is defined in Section 3(21)(a)(ii) of ERISA with respect to the securities, and that it will discharge its duties with respect to the securities solely in the interest of the ARMB and the beneficiaries of the funds administered by the ARMB; and

4. that it has and will maintain all forms of insurance and other prerequisites required by the ARMB.

D. **Investment Management Service to be Performed.** From time to time, equity managers shall invest and reinvest the cash and securities allocated to it and deposited in their account, without distinction between principal and income, in a portfolio consisting of stocks or other securities when market conditions warrant alternatives to stock. These securities will be selected and retained by the manager solely on the basis of their independent judgment relating to economic conditions, financial conditions, market timing, or market analysis, and will not be subject to direction from the ARMB; provided, however, that in the event the aggregate total of any security held by the ARMB exceeds five percent (5%) of total shares outstanding, the ARMB may direct portfolio managers to sell securities to the extent the aggregate is below five percent (5%). Other securities shall be limited to:

1. obligations of the United States government;

2. obligations of United States government agencies;

3. certificates of deposit;

4. corporate debt obligations;

5. commercial paper;

6. warrants;

7. bankers acceptances; and

8. repurchase agreements.

E. **Managers will be Authorized.** Managers are authorized to invest or reinvest or dispose of any cash or securities held in their account or invest the proceeds of any disposition, provided that:

1. no more than ten percent of the voting stock of any corporation is acquired or held;

2. certificates of deposit have been issued by domestic United States banks or trust companies which are members of the Federal Deposit Insurance Corporation, and are readily saleable in a recognized secondary market for such instruments;

3. corporate debt obligations are rated A or better by Moody's, Standard & Poor's or Fitch rating services (Note: This rating restriction does not apply to convertible debentures);

4. commercial paper bears the highest rating assigned by Moody's, Standard & Poor's or Fitch rating services;

5. bankers' acceptances must have been drawn on and accepted by United States banks which have capital and surplus of at least $200 million each;

6. repurchase agreements must be secured by the debt obligations set forth in 2 through 5 above;

7. except as provided in Section B, Investment Structure, future contracts for sale of investments or for the sale of currencies may be entered into only for the purpose of hedging an existing ownership in these investments;

8. except as provided in Section B, Investment Structure, futures and options will be authorized for the purposes of implementing a portfolio reallocation to gain immediate exposure to the appropriate country weighting:

   a. contracts are traded on recognized exchanges, or that OTC instruments are traded with AA rated or equivalent counterparts and no contracts exceed a period of twelve months;

   b. futures and options are not used to leverage the portfolio; and

   c. all futures and options positions must be reported to the client each month. The report must show both the nominal position and the "economic impact" of all derivative positions;

9. except as provided in Section B, Investment Structure, standardized equity index futures will be authorized for the purpose of cash equitization;

10. purchases in commodities or the commodities of futures market of any kind are specifically prohibited;

11. no more than ten percent (10%) of any international portfolio benchmarked against the MSCI EAFE Index or the MSCI EAFE Small Cap Index may be invested in emerging markets.

F. **Cash Held in Portfolio.** Managers are expected to maintain fully invested equity portfolios. The ARMB considers a portfolio to be fully invested as long as cash levels are below a maximum of 5 percent for small capitalization and international equity managers and 3 percent for all other equity managers, calculated using a 10-day moving average. In implementing this portion of the equity guidelines, the Chief Investment Officer will consider any cash in an individual equity account in excess of the maximum to be available for use as a funding source for other ARMB needs. Any manager that expects to exceed the maximum cash level in the short-term as the result of a specific strategy must notify ARMB in writing in advance. Such notice will temporarily exempt the manager from the maximum cash rebalancing threshold. Staff shall regularly report all equity manager net cash holdings.

G. **Performance Standards**. Managers are expected to have returns, over time, in excess of their appropriate contractual benchmark, net of fees.

H. **Performance Benchmarks**. ARMB's asset class level benchmarks for domestic and international equities are as follows:

Broad Domestic Equity – Russell 3000 Index

Global Equity ex US – MSCI ACWI ex US Index

Alternative Equity – S&P 500 Index (50%), CBOE Buy Write Index (30%), Bank of America Yield Alternatives Index (20%)

I. **Brokerage and Commissions.** In carrying out its functions, a manager will use its best efforts to obtain prompt execution of orders at the most favorable prices reasonably obtainable, and in doing so, will consider a number of factors, including, without limitation, the overall direct net economic result to the ARMB (including commissions, which may not be the lowest available but which ordinarily will not be higher than the generally prevailing competitive range), the financial strength and stability of the broker, the efficiency with which the transaction is effected, the ability to effect the transaction at all where a large block is involved, the availability of the broker to stand ready to execute possible difficult transactions in the future and other matters involved in the receipt of "brokerage and research services" as defined in and in compliance with Section 28(e) of the Securities Exchange Act of 1934, as amended, and regulations thereunder.

Provided that, in the judgment of the manager, purchase or sale execution and transactions are competitive, approximately 30% of all listed large capitalization domestic equity trades will be executed with a brokerage firm participating in a commission recapture program with the ARMB.

The Chief Investment Officer will evaluate and report the commission recapture program to the ARMB that will include:

1. total commission dollars recaptured;

2. actual percentage of commissions recaptured; and

3. a full analysis of the commission recapture program with recommendations for expanding the program.

J. **Voting and Other Action.** The managers shall vote any or all of the securities held by or for the account of the ARMB, unless written instructions to the contrary have been provided by ARMB. In voting securities of the ARMB, the managers shall act prudently in the interest and for the benefit of the ARMB and the beneficiaries of the funds administered by the ARMB. The manager is to furnish, on an annual basis, copies of the contractor's policy and voting records in regards to voting proxies.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Private Equity Policy Revision ACTION: X

DATE: September 19, 2014 INFORMATION:

BACKGROUND:

Staff periodically reviews the Private Equity Partnerships Portfolio Policies and Procedures for consistency with the current investment environment and broader ARMB policy.

STATUS:

Staff is recommending two changes to the private equity policy. A clean copy of the revised policy is attached and the proposed changes are redlined in this action memo.

The first recommendation is to modify the minimum hurdle rate from a fixed 13% return to a return that floats 350 basis points above the capital market expectation for the Russell 3000 index. The absolute hurdle rate of 13% was set at a time when public and private equity return expectations were higher. Changing the hurdle rate to a target that floats over a public equity market index will allow the portfolio to adjust to different market conditions while still ensuring that the ARMB can expect to receive a liquidity premium for investing in private markets. Using the current capital market assumption of 7.65% for the Russell 3000 plus 350 basis points results in a current hurdle rate of 11.15%.

C. PORTFOLIO PERFORMANCE

The ARMB shall use the following rate of return tests to evaluate the performance of the private equity asset class:

1. Total Return (Realized and Unrealized Gain/Loss Plus Income)

~~Based on long-term expectations of publicly traded equities producing an overall average return of 9-11%, t~~The private equity portfolio is expected to generate a minimum total rate of return that meets or exceeds the Russell 3000 Index plus 350 basis points. Performance will be measured on both an Internal Rate of Return (IRR) and a Time-Weighted Return basis, net of investment management fees, expenses and any incentive compensation. On investment, a~~A~~ny individual fund ~~investment~~ is expected to produce a minimum return that meets or exceeds the current capital market assumption for Broad Domestic Equity (Russell 3000) plus 350 basis points~~in excess of 13% IRR~~ to contribute to the overall portfolio return expectations.

The primary investment strategies included in the allocation will provide the opportunity for long term capital gains.

The portfolio and individual investments will be benchmarked against the universe contained in the Thomson ONE database. Benchmarks are published for venture capital and buyout and subordinated debt funds. For restructuring funds and other special situation private investments, returns should be competitive with buyout and subordinated debt funds, with the return falling between the two. ~~In any event, the 13% minimum hurdle rate will apply.~~

ALASKA RETIREMENT MANAGEMENT BOARD

PRIVATE EQUITY PARTNERSHIPS PORTFOLIO
POLICIES AND PROCEDURES

Revised 9/2014, Adopted by Resolution 2014-25

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ALASKA RETIREMENT MANAGEMENT BOARD

PRIVATE EQUITY PARTNERSHIP PORTFOLIO POLICIES & PROCEDURES

I. INVESTMENT OBJECTIVES

A. INVESTMENTS IN PRIVATE EQUITY AND DEBT ASSETS

The Alaska Retirement Management Board ("ARMB") has determined that, over the long term, inclusion of private equity and debt investments (herein after referred to collectively as "private equity") would enhance the ARMB's expected portfolio investment characteristics. Specifically, as a result of the possibility of enhanced rates of return over publicly traded securities and returns that have low correlation with those associated with other major asset classes, the use of private equity investments tends to increase the portfolio's overall long-term expected real return, and reduce year to year portfolio volatility.

Private equity investments involve the purchase of unlisted, illiquid common and preferred stock, and to a lesser degree, subordinated and senior debt of companies that are in most instances privately held. Investments in company private securities are made primarily through institutional blind pool limited partnership vehicles, further described in Section I.D. The private equity strategies to be pursued are further described in Section II.A.

The ARMB's investment policies are determined by the Board of Trustees. In general, ARMB's goal is to achieve the actuarial return at the minimum risk.

Private equity investments of the ARMB shall be made in a manner consistent with the fiduciary standards of the prudent expert rule: (1) for the sole interest of the ARMB's participants and their beneficiaries; and, (2) to safeguard and diversify the private equity portfolio. The selection and management of private equity assets will be guided to preserve investment capital and to maintain prudent diversification of assets and management responsibility. The diversification objective is required to manage overall market risk and the specific risks inherent in any single investment or management selection.

B. ASSET ALLOCATION

The ARMB commitment to private equity investments shall remain within the limits authorized by the Board of Trustees. The ARMB recognizes that it may be necessary to make capital commitments in excess of the target allocation in order to achieve and maintain the allocation target.

An important implementation goal for ARMB is to spread out timing of new commitments so as to avoid an undue concentration of commitments in any one fiscal year. In order to efficiently build the ARMB's private equity portfolio, Staff has the flexibility to approve in writing a variance of up to 50% beyond an investment manager's annual commitment target. Over the long-term it is expected that approximately equal amounts of new funding will be committed each year to garner the benefits of time diversification.

C. PORTFOLIO PERFORMANCE

The ARMB shall use the following rate of return tests to evaluate the performance of the private equity asset class:

1. <u>Total Return (Realized and Unrealized Gain/Loss Plus Income)</u>

The private equity portfolio is expected to generate a minimum total rate of return that meets or exceeds the Russell 3000 Index plus 350 basis points. Performance will be measured on both an Internal Rate of Return (IRR) and a Time-Weighted Return basis, net of investment management fees, expenses and any incentive compensation. On investment, any individual fund is expected to produce a minimum return that meets or exceeds the current capital market assumption for Broad Domestic Equity (Russell 3000) plus 350 basis points to contribute to the overall portfolio return expectations.

The primary investment strategies included in the allocation will provide the opportunity for long term capital gains.

The portfolio and individual investments will be benchmarked against the universe contained in the Thomson ONE database. Benchmarks are published for venture capital and buyout and subordinated debt funds. For restructuring funds and other special situation private investments, returns should be competitive with buyout and subordinated debt funds, with the return falling between the two.

2. <u>Risk</u>

Private equity investments are expected to provide a higher level of return than many asset classes, but they also have a higher degree of risk. Private equity generally involves investments in the unlisted securities of private companies through closed-end partnerships. These investments are illiquid since there is no efficient resale market. Private equity also has high fees and the potential for the fees to overcome early investment returns resulting in a return j-curve, where early net returns are generally negative. There are portfolio transparency and valuation issues and the potential for high leverage in certain strategies. The asset class also has incomplete data and benchmarks and high return dispersion between managers.

In private equity investing there is the risk of sustaining a loss on any of the individual investments. It is the ARMB's expectation that, while specific investments may incur losses of all or part of capital invested, a diversified portfolio of holdings will produce a positive rate of return in the expected range set forth in Section I.C.1., above.

D. PROGRAM MANAGEMENT

The selection and management of assets in the private equity portfolio will be guided to generate a high level of risk adjusted return, provide a moderate amount of current income, and to maintain prudent diversification of assets and specific investments.

With private equity investments, there is an inherent risk that the actual return of capital, gains and income will vary from the amounts expected. The ARMB shall manage the investment risk associated with private equity investments in several ways:

1. Institutional Quality

   All assets must be of institutional investment quality. Institutional quality will be defined as being of a quality whereby the investment would be considered acceptable by other prudent institutional investors (i.e. insurance company general accounts and separate accounts, commercial banks and savings institutions, public employee retirement systems, corporate employee benefit plans - domestic and foreign, and other tax-exempt institutions).

2. Diversification

   The private equity portfolio shall be diversified as to investment strategy, timing of investment, size and life cycle of investment, industry sector, investment sponsor organization (i.e., general partner group), and geographical location. Diversification reduces the impact on the portfolio of any one investment or any single investment style to the extent that any adversity affecting any one particular area will not impact a disproportionate share of the total portfolio.

   Investments will be made such that at full investment a maximum of 20% of the total private equity allocation can be invested at any point in time with any single, general partnership, entity or related organization. No single private equity investment strategy will comprise more than 60% of the allocation. It is also recognized that during the portfolio development and wind-down stages the full investment parameters may not, of necessity, be met. The ARMB is permitted to own up to 51% of any particular partnership subject to the partnership sponsor limitation above.

   The scope and size of Alaska's program is such that significant investments in fewer, more concentrated partnership investments are preferred to smaller investments in more numerous partnerships. However, investing with the highest quality partnerships remains the top priority. While Alaska has not set a minimum dollar amount per partnership, the investment manager will be charged with deploying the capital efficiently, such that funding targets are achieved with a reasonably small number of partnership holdings. Average investment size will be monitored.

Long-term diversification targets among eligible investment strategies will be set forth in Section II.A. Eligible Investments, and reviewed annually or as necessary. Interim investment goals toward the implementation of the private equity program will be set forth in an annual *Tactical Plan* (Appendix A) as described herein.

3. Ownership Structure

Account and Investment Structure: The ARMB's ownership structure will comprise separate account relationships with one or more fiduciary investment managers and direct investments by the ARMB. The separate account investment managers will in turn make commitments to private equity limited partnerships, on ARMB's behalf, on a discretionary basis. The ARMB may also make partnership investments directly or through authority delegated to the CIO in section III.A.1 of this policy. All investments will be subject to portfolio diversification targets established in the *Policies and Procedures*, approval of an annual *Tactical Plan* by the ARMB, and with prior notification as to program compliance via an *Investment Disclosure Form* (Appendix B). Other commingled vehicles or separate account investments, which are not limited partnership units, may only be purchased by the investment manager, subject to a structural compliance review by the staff, wherein the ARMB must approve any such proposed investment.

Direct Co-Investments and Direct Investments: Certain investment managers offer direct placement services on their client's behalf. Suitable arrangements for co-investment and direct investment authorization may be incorporated in the investment management agreement. Co-investments and direct investments have not been approved by ARMB.

Direct co-investments entail providing additional funding to specific company investments being made by the limited partnerships to which ARMB has commitments. In specific instances the general partner will invite the limited partners to provide additional capital when an investment is of a size which exceeds the partnerships diversification parameters. Co-investments will only be allowed in the same class of security as the partnership investment. Direct investments entail investments in companies that are sourced by the investment manager organization.

4. Reporting System

There shall be a comprehensive reporting and monitoring system for the entire portfolio, investment manager(s) and individual investments. Situations of underperforming investments, portfolio diversification deficiencies from the *Policies & Procedures*, and conflicts of interest can then be identified, facilitating active portfolio management. Further definition of this reporting system is provided in Sections III.C.2.b. "Investment Management Ongoing Operations" and III.C.3. "Investment Management Portfolio Accounting and Financial Control."

5. Distributions

ARMB prefers to receive distributions from the partnership investments in the form of cash, whenever possible. Otherwise, any in-kind (i.e., security) distributions should be freely tradable and, whenever possible, in the form of unrestricted stock. ARMB prefers to receive the cash realization of any in-kind distribution as soon as practicable, given market conditions. The investment manager will be responsible for managing to cash any in-kind distributions. The investment manager shall have well-defined and clearly articulated procedures in place for ensuring the orderly liquidation of in-kind distributions and the timely settlement of any liquidation transactions. ARMB's staff will monitor the investment manager's performance of the distribution functions.

6. Performance Measurement

The investment manager will provide cash flow, valuation, and any other requested information to ARMB's Staff and general consultant quarterly, and ARMB's custodian bank on a monthly basis. Regarding valuations the investment manager will notify the Staff of any instances where the investment manager is using different carrying values from those reported by the general partner.

Performance will be calculated on both a time-weighted and dollar-weighted (internal rate of return or IRR) basis, with primary emphasis being placed on the internal rate of return. The rate of return calculations will be net of all partnership fees and expenses, but gross of investment manager fees and expenses. So that the performance numbers reported by the manager and the custodian bank are the same, the manager will be responsible for reviewing the custodian's figures as to timing, amount, value of in-kind securities at distribution and reported net asset value, and reconciling any discrepancies. Staff will calculate and report a private equity portfolio IRR at least annually as part of the private equity tactical plan.

In-kind Distributions: Partnerships will be valued on the distribution price of the in-kind security or other valuation method stipulated in the partnership agreement. Any change from distribution price to realized price of the in-kind distributions will then be monitored as a separate component of the total portfolio return.

Benchmarks: For IRR calculations, the Vintage Year methodology will be used for purposes of performance comparisons to the industry. For time-weighted returns, comparable publicly traded market indicators (such as small cap indices) will be employed.

7. Lines of Responsibility

Well-defined lines of responsibility and accountability will be required of all participants in ARMB's private equity investment program. Participants are identified as:

Board of Trustees -	The fiduciaries appointed by the Governor to represent the beneficiaries' interest, who retain final authority over all private equity investment decisions.
Staff -	Investment professionals on the staff of the Department of Revenue and assigned ARMB responsibilities who will assist in the private equity investment program's design, implementation and administration.
Investment Manager(s) -	Qualified fiduciaries who provide institutional private equity investment management services and maintain a discretionary relationship with ARMB in implementing the private equity program. In separate account relationships the investment manager ("Manager") must be a Registered Investment Advisor under the Investment Company Act of 1940, registered with the Security and Exchange Commission.
Consultant -	Professionals retained to support ARMB through the provision of expert private equity and alternative investment program knowledge and technical support.

The responsibilities, with respect to the private equity portfolio, of the parties cited above are outlined in Section III.A.1-4. Unless otherwise stated, the remainder of the guidelines contained herein pertain to the limited partnership investments entered into by the ARMB.

E. CONFLICTS OF INTEREST

1. Manager Proprietary Products -- In private equity investing, unlike other asset classes, there may be situations wherein the investment manager may recommend its proprietary investment product(s) for investment. The investment managers do not have discretion to invest in their own proprietary products. If the ARMB is considering an investment manager's proprietary investment product(s), staff shall use the ARMB's private equity consultant to assist in analyzing the suitability of the investment(s).

2. Allocation of Investments Among Accounts -- There may be instances where the manager will need to allocate an investment opportunity among a number of clients or a competing product (i.e., fund-of-funds). Suitable protective covenants or processes for resolving conflicts in allocation among accounts will be incorporated in the investment management agreement.

3. Personal Investments -- The investment manager's employees are permitted to invest personally or otherwise have beneficial interest in investments held on behalf of clients such as ARMB, only upon the ARMB's first securing a full and appropriate allocation. Similarly, the investment manager's employees are permitted to sell an interest in investments that are also held by the ARMB only after the ARMB's holding has been first and fully liquidated. The investment manager will provide ARMB with its policies for personal investments by employees as an attachment to the Investment Management Agreement, and notify the Staff of any changes. In instances where the manager or its employees are securing an investment or beneficial interest, notice must be provided to ARMB at least five business days prior to the closings for either party.

4. Other Conflicts of Interest -- When and if other conflicts of interest become apparent, suitable protective covenants or processes for resolving conflicts will be incorporated into the investment management agreement.

II. INVESTMENT POLICIES

The private equity program will be guided by long-term target ranges to eligible investment strategies listed below. Each year the program will be further implemented and modified in accordance with an *Annual Tactical Plan* prepared by staff and the Investment Managers, reviewed by Staff and approved by the Board.

A. ELIGIBLE INVESTMENTS

The following private equity strategies and investment types will be considered eligible for the ARMB's portfolio. Long-term ranges are established for each strategy. Staff and the Consultant will seek to manage the allocations toward the mid-point of the ranges at full investment.

1. **Venture Capital:** Expected Range: 15% to 40%, Target: 25% – Investments in newer high growth companies typically addressing technology, life sciences and other specialty growth industries. Venture capital partnerships will be allocated into the following three categories and the manager will endeavor to select partnerships that represent the strategies in the appropriate amounts and diversity.

Early-Stage: Seed or start-up equity investments in private companies.

Later-Stage: Investments in more mature companies (e.g., with developed products, revenues, and potentially profits) to provide funding for growth and expansion.

Multi-Stage: Investments in venture capital companies at various stages of company development, including early-, late- and any other interim stages of development.

2. **Buyouts/Acquisition:** Expected Range: 30% to 60%, Target: 45% – Partnerships which provide funding to acquire majority or controlling interests in a business or product lines from either a public or private company. These partnerships are generally diversified by industry and other relevant measures. Buyout partnership cover company size ranges from very large to small-market.

3. **Special Situations:** Expected Range 20% to 40%, Target: 30% – Partnerships with private corporate finance investment strategies that do not fall under the prior two categories. The manager will seek to diversify the portfolio across various sub-strategies. Examples include:

   Hybrid Partnerships: Funds that have broad strategy mandates and may invest materially in non-control investment structures or a variety of strategies that would preclude a simple venture capital or buyout categorization.

   Industry Specific: Funds that target a specific industry (e.g., energy, financial services, media and communications, etc.). These funds may be considered as having greater industry specific risk than more diversified buyout funds.

   Subordinated Debt: Partnerships that make debt-related investments in unsecured or junior obligations in financings. These generally take the form of subordinated debentures or preferred stock. They typically earn a current coupon or dividend and have warrants on common stock or conversion features.

   Restructuring/Recovery: Investments made in distressed or poorly performing companies, with the intent of initiating a recovery via financial restructuring or the introduction of management expertise. Partnership investments may include debt and/or equity securities.

   Other: There are private equity/corporate finance partnerships that pursue strategies different from those cited above which the manager may, in its discretion, seek to participate in.

Exposure to these strategies may be pursued through direct partnership investments, fund-of-one, and/or commingled fund-of-funds vehicles.

B. GEOGRAPHICAL LOCATION DIVERSIFICATION

Although the priority of the portfolio should be to achieve diversification by investment strategy, another measure of diversification is by geographical location. Over the long-term, the ARMB portfolio should seek portfolio diversification with regard to major regional areas both domestically (i.e., Northeast, Mid-Atlantic, Southeast, Midwest/Plains, Southwest/Rockies, West Coast, Pacific Northwest), and internationally (i.e., Europe, Pacific Basin, South and Latin America).

International private equity investments shall comprise 20-45% of the private equity investment allocation measured at the portfolio company level, and shall be diversified in the context of the total portfolio.

C. INDUSTRY SECTOR DIVERSIFICATION

The ARMB portfolio will seek to diversify by industry sector (i.e., Biotechnology, Computers, Financial Services, Healthcare, Medical, Media/Communications, Electronics, Software, Consumer/Retail, Basic Industry, Other, etc.) such that no one industry classification will represent more than 25% of the private equity portfolio.

The Staff will review the industry classification methodology employed by the investment manager and will adopt the methodology if it is deemed sufficient, or work with the investment manager to develop mutually satisfactory categories.

D. LIFE CYCLE DIVERSIFICATION

Commitments to partnership investments will be staged over time. It is ARMB's long-term goal to spread out investment timing such that new commitments will be made each fiscal year. This policy will have the effect of dollar cost averaging the ARMB's portfolio over business cycles and helps insulate the portfolio from event risk. Capacity to make commitments will be allotted to the investment manager in accordance with the ARMB's investment projection model, which will be updated as part of the *Annual Tactical Plan*, described here-in, or as necessary.

E. INVESTMENT SPONSOR (GENERAL PARTNERSHIP GROUP) DIVERSIFICATION

The ARMB portfolio will seek to diversify by issuer of limited partnership securities, and other specific investments sponsors. No more than 20% of the ARMB's private equity portfolio net asset value will be invested with any one investment sponsor organization. Net asset value is defined as the carrying value of the investments reported by a partnership's general partner in the quarterly financial statements.

It is ARMB's intention to keep the total holdings of the portfolio to a reasonable number. Given the significant total dollar size of the ARMB's private equity net asset value target, large concentrated investments in fewer partnerships, are preferred to smaller investments in more numerous partnership securities. However, the ARMB recognizes that investing with the highest quality partnerships remains the top priority and smaller investments in venture capital will be warranted.

III. PROCEDURES FOR INVESTMENT

A. GENERAL ALLOCATION OF RESPONSIBILITIES

The private equity partnerships program shall be implemented and monitored through the coordinated efforts of the Board of Trustees for the Alaska Retirement Management Board (the "Board"); the ARMB's Staff (the "Staff"); the qualified Investment Investment Manager(s) (the "Manager") and the Consultant ("Consultant"). Delegation of responsibilities for each participant is described in the following sections.

1. Board of Trustees

The Board of Trustees shall approve the investment policies and objectives which the Trustees judge to be appropriate and prudent to implement its strategic plan for the investment of ARMB's assets; review the performance criteria and policy guidelines for the measurement and evaluation of the investment managers of the ARMB's assets; review the Consultant and Staff's recommendations to retain a qualified investment manager(s) and set discretionary investment limits; supervise the investment of ARMB's assets to ensure that the ARMB's investments remain in accordance with the Board's strategic planning and the Alaska Retirement Management Board's Objectives and Policies and the Private Equity Partnerships Portfolio *Policies and Procedures* documents. The Board shall select and make ongoing retention decisions regarding all service providers including the investment manager.

The Board of Trustees will guide the execution of the program by review and approval of a long term target ranges for private equity strategies prepared by Staff, which will be updated and revised periodically as appropriate; and a short term *Annual Tactical Plan* prepared by the Investment Manager, reviewed by Staff, and approved by the Board which details goals and objectives for the next 12 months. The Board will monitor the program's progress and results through a performance measurement report prepared quarterly by the Investment Manager and reviewed by Staff.

Direct Investments by the ARMB in Private Equity Partnerships

The ARMB shall set an allocation target for direct investments in private equity partnerships as part of the Annual Tactical Plan. For direct investments, the ARMB delegates authority to the Chief Investment Officer ("CIO") to commit the annual allocation target to a number of direct investments or fund-of-fund investments with private equity partnerships as follows:

a. The CIO has the authority to commit to private equity partnership investments of up to $100 million per fund. An investment with a manager that is new to the ARMB's portfolio requires concurrence on the investment decision from the ARMB private equity consultant or gatekeepers.

b. The CIO has the authority to engage consultants and take other action as may be necessary to ensure sufficient due diligence is performed on all investments under consideration.

c. With respect to the direct investment allocation target set by the ARMB annually, the CIO has the authority to commit up to an additional one percent of total defined benefit plan assets over the target to accommodate specific investment opportunities or manage the ARMB's allocation to private equity.

The CIO shall exercise this discretion within Board approved asset allocations, investment plans, and guidelines as they may apply.

The CIO will provide prior notification to the ARMB Chair before committing to any investment under this authority. All discretionary CIO investment actions shall be reported to the Board. With respect to direct investments, Staff will assume the relevant investment manager responsibilities addressed in Section III.C of this document and the Consultant will review the performance of the direct investments.

2. Staff

The Staff will develop draft investment objectives and policy language for Board consideration. The Staff will guide the execution of the program by developing long-term target ranges for private equity strategies, which will be updated and revised periodically as appropriate. The Staff will oversee the Manager in preparing a short term *Annual Tactical Plan*, which detail goals and objectives for the next twelve months. The Staff will also review the Manager's quarterly portfolio reports, review the Manager's proposed *Investment Disclosure Forms* (Appendix B) for compliance with the strategic plan and conflicts of interest, and review the Manager's and the portfolio's performance in relation to assigned responsibilities.

The Staff will coordinate program compliance among all participants and communicate the investment policies, objectives and performance criteria to the investment manager(s). The Staff will coordinate the receipt and distribution of capital.

The Staff and Consultant will identify qualified investment investment manager(s) for implementation of private equity investment program, and will advise the Board of Trustees of any material changes in the manager organization(s).

3. Investment Manager(s)

The Investment Manager(s) shall acquire and manage, on a discretionary basis, private equity investments on behalf of Alaska and in accordance with the Investment Objectives as described in Section I of the ARMB's *Private Equity Policy and*

Procedures document and the Investment Policies as described in Section II.

The choice of withholding discretion from the Managers for any investment vehicle that is not a limited partnership (or other limited liability entity), represents a policy decision that, among other things, is intended to protect the ARMB from liability beyond the invested capital.

The asset allocation executed by the Manager will be dictated by the target strategy ranges established in the *Policies and Procedures* and the *Annual Tactical Plans*.

4. Consultant

As approved by the Board, the Consultant shall advise on program development, conduct Investment Manager searches when requested; and provide independent, third party advice and information. The Consultant will also be available to be retained to conduct special project work when requested by the ARMB.

B. INVESTMENT PROCEDURE

Private equity investments in compliance with the ARMB's Policies (Section II) and the Investment Objectives (Section I) shall be acquired through the following process:

Eligible Investments and Target Ranges: As part of the *Policies and Procedures*, the Staff will prepare a long-term target capital allocation ranges for eligible private equity strategies (Section II.A.) after a review of investment criteria, performance expectations, and other relevant program requirements.

Annual Tactical Plan: Annually, Staff and the Investment Manager(s) will prepare a tactical plan which reviews the current status of the portfolio, recent historical and prospective market conditions, and proposes the steps to be taken over the next twelve month period to further implement the long-term strategic plan. The filing of ongoing *Annual Tactical Plans* will occur on the quarter-end every 12 months following the quarter in which the original plan was filed. The *Annual Tactical Plan* will be reviewed by the Staff and approved by the Board. The outline of concepts to address in the *Annual Tactical Plan* is provided in Appendix A.

Specific Investments: The Investment Manager will identify and evaluate limited partnerships and, as appropriate, other investment vehicles that are in compliance with ARMB investment guidelines and current *Annual Tactical Plan*. The Investment Manager will be responsible for all aspects of evaluation and closing, subject to prior notice via an *Investment Disclosure Form*, an example of which is provided in Appendix B.

C. SPECIFIC INVESTMENT MANAGER RESPONSIBILITIES

1. Funding Procedures

The Investment Manager shall provide the ARMB, on a best efforts basis, with five (5) days notice of drawdowns. ARMB shall also be provided with documented wiring instructions in advance.

2. Investment Management

Investment Managers are directly accountable for the following investment management responsibilities. This section designates certain investment responsibilities that the Investment Manager will perform or cause to be performed. Fees and expense reimbursements for these duties are outlined in the Manager's contract.

a. Investment Selection -- The Investment Manager will be responsible for evaluating investment opportunities and selecting, on a discretionary basis with fiduciary responsibility, private equity investments to be made on behalf of ARMB.

The screening and selection will be made with a view to maximize ARMB's risk adjusted rate of return, within the parameters and allocations of each private equity strategy as set by the Board of Trustees in the *Polices and Procedures*.

An *Annual Tactical Planning* process will be used in determining the number and types of investments within each strategy. The manager will also take into consideration relevant overall portfolio diversification considerations as set forth in the Objectives and Policies statement and Program Management (Section I.B.) of this document. The process will include, but not be limited to, the following services:

(1) *Annual Tactical Plan* preparation. This report outlines the steps the investment manager will take during the next fiscal year to further implement the ARMB's adopted strategic plan.

The *Annual Tactical Plan* will include a review of the current status of the portfolio, perceived investment environment, the types and number of partnerships to be sought and underlying rationale, and goals for other management responsibilities such as situations being monitored and adding value.

(2) Review and maintain a log of all opportunities available in the market over time, as well as investments directed to the manager by the ARMB.

(3) Screen and evaluate all opportunities to identify investments that will provide

the most attractive risk and return characteristics and are a fit with the portfolios long-term and short-term objectives.

(4) Conduct full and proper due diligence fully documenting the process. Due diligence will be conducted to a standard of completeness attributable to a prudent expert. The Investment Manager will make available for review by the ARMB, or its agents, the Manager policies, procedures, and standards for conducting due diligence, and the due diligence documentation performed on any investment made on the ARMB's behalf. The ARMB recognizes that there may be instances where the Investment Manager possesses confidential information which for legal or other verifiable reasons cannot be disclosed to the ARMB. On-site visits at the General Partners' main office will be a mandatory part of investment due diligence. In certain rare circumstances, the Manager may satisfy the requirement for an on-site visit if the Manager has made a relevant visit to the General Partner's main office within one year of the commencement of investment due diligence. The minimum requirements of due diligence will include the quality and expertise of the General Partner (including relevant experience, reputation, deal flow, staff turnover, etc.), historical performance, structure of the Limited Partnership (including, but not limited to, the alignment of interest of the General Partner and the Limited Partners) and diversification by industry, geography, strategy, etc.

(5) The Investment Manager will submit an *Investment Disclosure Form* to Staff at least five (5) business days prior to making a commitment on ARMB's behalf.

(6) Negotiate investment terms and conditions, partnership agreements and other closing documents on ARMB's behalf, with a view to maximize returns, minimize expenses, safeguard the ARMB's assets, and secure investor rights; and make investments on the ARMB's behalf. The investment manager shall provide ARMB counsel the opportunity to review partnership agreements and related documents prior to their execution.

(7) The investment manager will be charged with deploying the capital efficiently, such that funding targets are achieved with a minimal number of partnership holdings. Due to the scope and size of ARMB's program significant, concentrated investments in fewer partnership investments are preferred to smaller investments in more numerous partnerships. The manager will include discussions of the number and size of planned investments in the periodic portfolio planning and reporting documents.

b. <u>Ongoing Operations</u> -- The Manager shall manage or cause to be managed, each investment made such as to enhance the ARMB's value in the investment. The Manager shall be responsible for conducting or supervising the following services with respect to each investment:

(1) <u>Monitoring and Voting</u> -- Maintaining close communication with the General

Partners of the investments, maintaining an awareness of and documenting the progress and level of performance of each investment. This will include attendance at annual partnership meetings and, as appropriate, sitting on limited partner advisory boards. It will also involve voting on partnership and other portfolio securities matters on ARMB's behalf as need arises.

(2) Adding Value -- The Manager shall take all necessary or appropriate steps consistent with applicable capital and operating budgets to assure the ARMB's investment is managed to or above its anticipated performance level.

(3) Disbursement, Receipt and Cash Management -- Develop procedures for funding commitments on a timely basis and coordinating the receipt of cash distribution from the partnership investments, including a policy for the orderly liquidation of in-kind distributions (i.e., securities distributions) received from partnerships. The policy for liquidating in-kind distributions should include but not be limited to the Manager's process for deciding when to sell distributed shares and actions the Manager will take to ensure timely settlement of stock sales.

(4) Books and Records -- The Manager shall maintain books of account with correct entries of all receipts and expenditures incident to the management of the investment. These books, together with all records, correspondence, files and other documents, shall at all times be open to the inspection of the ARMB. The Manager shall maintain complete and accurate records of all transactions related to the managed investment, including receipts and all correspondence relating thereto on such forms as the ARMB's auditors may reasonably require and make such records available for inspection and copying by ARMB at all reasonable times. The Manager shall bear the costs associated with the retention of such records and if ARMB shall request copies of such records, the Manager shall bear the cost of duplicating and sending such records to the ARMB.

(5) On-Going Review -- The Manager shall keep itself informed of the overall market conditions relative to the managed investments and the managed investments' competitive position in the applicable investment strategies. The Manager will also be responsible for ensuring compliance with partnership agreements, attending to amendments, resolutions, voting proxies, and other investment related matters. All such activities will be undertaken with a view toward maximizing value to ARMB.

(6) Disposition Review -- The Manager shall review the managed investments with respect to continued timely return of capital, income and gains. The manager will be responsible for managing to cash any in-kind (i.e., security) distributions received from the partnership investments.

(7) Notice -- The Manager shall notify the Staff as soon a practicable in writing of

any investigation, examination or other proceeding involving the investments or investment sponsors commenced by any regulatory agency or of any action, suit or proceeding commenced against or by the Manager or an investment sponsor.

3. Portfolio Accounting and Financial Control

The Manager's accounting, reporting and financial control and administration system shall meet the following objectives:

a. Financial Control -- The Manager will provide control systems to protect assets, detect errors and insure the reliability of information generated by the accounting system.

c. Investments' Financial Statements -- On a quarterly basis, the Manager will receive from investee partnerships unaudited financial statements, and annually, audited financial statements.

d. Accounting Policies -- Accounting policies for ARMB are outlined below:

(1) Current Value Reporting -- Accounting data shall be computed using current values provided by the General Partners and Investment Sponsors of the investments. The Manager will make note of instances where performance presentation standards are not in compliance with Global Investment Performance Standards (GIPS®). The Manager will be held to a standard of reasonable care in verifying that the General Partners valuations reasonably reflect the underlying value of the investments. The Manager will make special note of investments which may be materially and permanently impaired in relation to the General Partners carrying value, and will notify the Staff of such investments, as soon as practicable, and in no instance later than by incorporation in the next quarterly performance measurement report.

4. Reporting Requirements

a. Manager Quarterly Report -- On a quarterly basis, within 45 days of quarter-end, the Manager(s) shall provide the Staff with a report on the portfolio which will address activities occurring during the quarter an updated list of holdings, cash flows, valuations, IRR, and any and all other items of which ARMB should be apprised.

b. Custodian Bank Monthly Statement -- On a monthly basis, the Manager(s) shall provide the Custodian a report of ARMB's account cash flows and valuations, and any other information reasonably requested.

c. Annual Tactical Plan -- Within 120 days of calendar year end, Staff, with input from the Investment Managers, shall prepare and submit an *Annual Tactical Plan* for approval of the Board. The *Annual Tactical Plan* shall cover the topics outlined in Appendix A and will include a review of the current status of the portfolio and outline the steps anticipated toward portfolio development over the course of the coming fiscal year.

d. Investment Disclosure Form -- At least five (5) business days prior to making a commitment on behalf of ARMB, the Manager will provide to the Staff an *Investment Disclosure* form. The investment disclosure form will be reviewed by the staff regarding an investments fit within the *Policies and Procedures*, *Annual Tactical Plan*, and any possible conflicts of interest.

   Any questions or discussion items with regard to an investment's fit within the portfolio structure can then be reviewed prior to the investment manager executing the subscription documents.

e. Other Information -- The Investment Manager will also provide any other reasonable information requested by the Staff, or the ARMB's Custodian Bank, or other agent of ARMB.

D. SPECIFIC CONSULTANT RESPONSIBILITIES

The Consultant will provide consultation on the initial development and ongoing review and recommendation of revisions to ARMB's Policies and Objectives, *Private Equity Policies and Procedures*, and assist with Investment Manager searches when requested by the ARMB. The Consultant will provide independent third party advice and information, and will also be available to be retained to perform special projects as requested by the Board.

ALASKA RETIREMENT MANAGEMENT BOARD
PRIVATE EQUITY
ANNUAL TACTICAL PLAN GUIDELINES

Tactical Plan: The Tactical Plan is a report which outlines the steps to be taken in the next 12 month period to further implement the private equity portfolio, and any other actions or considerations germane to the active management and success of the portfolio. It also documents the reasons for the particular courses of action to be taken, and importance of items under consideration.

The Staff reviews the Tactical Plan and recommends Board of Trustees approval of the finalized plan. All sections should be as brief as possible and should address the following issues with some flexibility with regard to format:

I. FUNDING LEVEL

Annual Tactical Plan Period: 1/1/xx through 12/31/xx

A. Funding Tables:

1. *Current Funding Position (As of x/xx/xx)*

Total Fund Market Value	$xx billion
% Target for Private Equity	7%
Total Private Equity Allocation	$xx million
Current Net Asset Value Deficit/(Surplus)	$(xx) million

2. *Projected Funding Position*(1)

Five Year Projected Market Value	$xx billion
% Target For Private Equity	$xx million
Total Private Equity Allocation	$xx million
Amount Available for Investment in Current Tactical Plan Period:	$xx million

3. *Analysis of Funding by Strategy*

II. DIVERSIFICATION

A. Strategy: (Commentary)

B. Industry Diversification: (Analysis and Commentary)

C. Geographic Diversification (Analysis and Commentary)

D. Stage of Investment: (Analysis and Commentary)

E. Current Portfolio Risk and Return: (Commentary)

III. MARKET CONDITIONS

A. Market Conditions: Discussion of Partnership Market.
   1. Past 12 months.
   2. Next 12 months.
   3. Conclusion.

IV. PROSPECTIVE INVESTMENT

A. Investment Objectives:

   1. Types: Strategies to receive the foremost attention or priority.
      a. Venture Capital
      b. Buyouts
      c. Special Situations

   2. Expected impact on the portfolio regarding:
      a. Return
      b. Risk
      c. Diversification

D. Dollar amount to be invested

E. Impact on the portfolio.

F. Diversification considerations: Strategy, Geographic, Industry, and any other relevant considerations.

V. MONITORING

A. Specific situations being monitored, underperforming investments.

B. Actions to be initiated or in progress with existing investments.

C. Other specific goals related to the monitoring of the ARMB's investments.

V. EXITING

A. Pending distributions or liquidations.

B. Any other relevant considerations relating to existing ARMB investments.

VI. OTHER

A. Other items relevant to the ARMB's portfolio.

SUMMARY

Investment Objectives: Summary of basic goals for the portfolio for the next 12 months.

APPENDIX:

Projected Funding Schedule and any other attachments the Investment Manager would like to submit.

ALASKA RETIREMENT MANAGEMENT BOARD
Prospective Private Equity Partnership Investment Disclosure Form

Please provide the following information in hard copy to the ARMB at least 5 business days prior to legally committing to any investment on behalf of the ARMB, as follows:

Mr./Ms. _______ ________, Title: Alaska Retirement Management Board, 333 Willoughby Avenue, 11th Floor, Juneau, AK 99811. Ph: 907-465-2350, Fax: 907-465-2394

1. General Information:

Name of Partnership: ____
GP/Investment Advisor: ____
Address: ____
____
Contact Person: ______________________ Title: ____________________
Phone: ______________________ Fax: ____________________

2. Investment Size:

Anticipated Total Partnership Size: $___________
Anticipated Commitment by the ARMB $___________
% ARMB Commitment of Total Partnership: __________%
# of other clients placed in investment ___________
Total Ownership of Advisor's Clients $___________ (excluding Alaska)

3. Proposed Category:

_____ VC Early
_____ VC Multi
_____ VC Late
_____ Buyouts - Large
_____ Buyouts - Small/Medium
_____ Buyouts - Industry Consolidation
_____ Special Situations - Hybrid
_____ Special Situations - Strategic Block
_____ Subordinated Debt
_____ Restructuring
_____ Project Finance/Other Cash Flow

4. Provide Brief Description of Investment Objective:

5. Description of Fit with the ARMB's Annual Tactical Plan:

6. Disclosure/Other Comments:

A. Please describe any prior investment history with the general partner group and of any existing holdings affiliated with the general partner group.
B. Are there any items associated with the investment of which the ARMB should be aware?
C. Are there any other comments the Investment Manager would like to mention?

8. Attachments:

A. Include Offering Memorandum and any other relevant materials.

The second recommended change is to the delegation of private equity investment authority to bring it in line with the broader delegation of authority adopted by the ARMB in June of 2014. Staff is recommending changing the authority to commit to additional private equity partnerships from a fixed $125 million to 1% of plan assets (roughly $220 million at current plan asset levels). This brings the private equity delegation in line with the broader June 2014 delegation of authority and allows the delegation to adjust to the level of plan assets over time.

Direct Investments by the ARMB in Private Equity Partnerships

The ARMB shall set an allocation target for direct investments in private equity partnerships as part of the Annual Tactical Plan. For direct investments, the ARMB delegates authority to the Chief Investment Officer ("CIO") to commit the annual allocation target to a number of direct investments or fund-of-fund investments with private equity partnerships as follows:

a. The CIO has the authority to commit to private equity partnership investments of up to $100 million per fund. An investment with a manager that is new to the ARMB's portfolio requires concurrence on the investment decision from the ARMB private equity consultant or gatekeepers.

b. The CIO has the authority to engage consultants and take other action as may be necessary to ensure sufficient due diligence is performed on all investments under consideration.

c. With respect to the direct investment allocation target set by the ARMB annually, the CIO has the authority to commit up to an additional one percent of total defined benefit plan assets ~~$125 million~~ over the target to accommodate specific investment opportunities or manage the ARMB's allocation to private equity.

RECOMMENDATION:

That the Alaska Retirement Management Board adopt Resolution 2014-25 revising the Private Equity Partnerships Portfolio Policies and Procedures to incorporate a floating hurdle rate and a 1% total asset level delegation of authority.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD

Relating to Private Equity Partnerships Portfolio Policies and Procedures

Resolution 2014-25

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, the Board contracts an independent consultant to provide experience and expertise in asset allocation and other investment matters to come before the Board; and

WHEREAS, the Board has established an asset allocation for the funds that considers earnings and liabilities on a current as well as a future basis; and

WHEREAS the Board has authorized investment in private equity; and

WHEREAS the Board will establish and from time to time as necessary modify guidelines for private equity.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopts the attached Private Equity Partnerships Portfolio Policies and Procedures, regarding investment in private equity.

This resolution repeals and replaces Resolution 2014-05

DATED at Fairbanks, Alaska this ______ day of September, 2014.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	ARMB Consultant Review RFP	ACTION:	X
	Sole Source Procurement		
DATE:	September 19, 2014	INFORMATION:	

BACKGROUND:

As required by AS 37.10.220(a)(11), the Board at its June 26-27 meeting directed staff to issue an RFP for an independent audit of the state's performance consultant. RFP 15-003 was issued July 18, 2014 with a response deadline date of August 18, 2014. The RFP was advertised in Pensions &Investments magazine, the P&I website, the ARMB website, and the State of Alaska on-line notices. No proposals were received. Just prior to the deadline, staff received a question regarding a proposal prepared with a contractor and sub-contractor providing the requested services. RFP 15-003 Sec. 1.17 specifically disallowed subcontractors or joint venture proposals. This question came from a principal at a firm who provided services to the Board on the performance consultant audit in 2010. Since the RFP disallowed subcontractors or joint venture proposals, the firms declined to submit a proposal.

STATUS:

ARMB procurement regulations Sec. 15 AAC 112.160 govern sole source procurements, and requires that the Board make a written determination as to why a procurement from a sole source is in the best interest of the pension funds; that such a sole source exists; the factual basis for the determination that sole source conditions exist; and for the selection of the particular source. The written determination shall specify the duration of its effectiveness and have the approval of the Board and signature of the Board secretary.

DETERMINATION:

1. As required by statute and pursuant to Board direction and delegation, staff issued RFP 15-003 July 18, 2014, in compliance with ARMB procurement regulations 15 AAC 112.140, with a response deadline of August 18, 2014.

2. No responses or proposals were received; staff responded to one inquiry regarding a subcontractor arrangement, which was not allowed by RFP 15-003.

3. Based upon inquiries received and the best information available to staff, issuing a second request for proposals permitting subcontracting would likely yield only one response; the delay, effort and expense of reissuing an RFP is therefore unnecessary and not in the best interests of the pension funds.

4. Two firms with appropriate qualifications and professional staff are available to provide the performance consultants' audit as lead firm and subcontractor firm.

5. A procurement from a sole source is in the best interest of the beneficiaries of the pension funds by allowing compliance with the requirement set forth in Alaska Statutes.

6. This determination shall be in effect until December 31, 2014.

RECOMMENDATION:

The Alaska Retirement Management Board directs staff to engage in negotiations with Cortex Consulting and Marvin and Company to provide services to conduct the required audit of the state's performance consultants, and pending successful terms and approval of legal counsel, enter into a contract for services.

ATTEST:

____

Gayle Harbo, Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	ARMB Investment Policy & Procedures Manual	ACTION:	X
DATE:	September 19, 2014	INFORMATION:	

BACKGROUND:

At its first meeting, the Alaska Retirement Management Board (Board) adopted the Investment Policy & Procedures Manual created and used by the Alaska State Pension Investment Board with the understanding it would be updated to reflect the changes in statutes, regulations and responsibilities of this Board. The updating process included Commissioner Rodell, Director Pam Leary, CIO Gary Bader, Rob Johnson, Chris Poag and Judy Hall. The editing process concentrated on revisions and edits to statutory and regulatory references as well as additions to descriptions and responsibilities that did not exist for ASPIB. With the exception of the Investment Policy Statement that ARMB adopted in December 2012 which is included in this manual, all other policies and procedures are in place.

Commissioner Rodell requested an agenda item at the next scheduled meeting so the Board could adopt the manual which would include updated language to reflect the passage of HB385 and SB119 during the 2014 Alaska Legislative Session.

STATUS:

The following edits are suggested:

Page 1: Introduction – Second sentence to clarify that manual is for guidance and consistency in decision-making, but the Board has discretion to exercise its fiduciary responsibility as circumstances warrant.

Last Paragraph – addition of staff as providing advice and services to the Board.

Page 8: Board Summary of Responsibilities – added language reflecting the statutory charge in setting contribution rates; clarified asset allocation responsibility as well as the directive to provide training and investment education for trustees.

Page 10: Updated supervisory authority for Liaison Officer in line with current DOR Organization Chart.

Page 17: Clarified Compliance reporting.

Appendix A, Pages 20-21: Updated references to the real estate mandate to real assets.

Appendix C, Pages 3- 26: In 1995, the CFA Institute, formerly known as the Association for Investment Management and Research (AIMR), sponsored and funded the Global Investment Performance Standards (GIPS) to develop global standards for calculating and presenting investment performance. References to AIMR and the previous AIMR standards set forth in Appendix C have been replaced with the GIPS standards.

Appendix F, Page 7: updates the statutory language to include HB385 language related to setting the appropriate contribution rates.

Appendix F, Page 13: sets forth the intent language contained in SB119 appropriating $3 billion to the PERS/TRS trust funds.

RECOMMENDATION:

That the Board adopt the updated and edited September 2014 Board of Trustees Investment Policy and Procedures Manual.

Alaska Retirement Management Board

Board of Trustees Investment Policy and Procedures Manual

2014

Table of Contents

I. Introduction

The purpose of this manual is to provide the Alaska Retirement Management Board (ARMB) with a comprehensive set of guidelines for proper management of its investment decisions. The guidelines set forth are not binding, but are intended to provide guidance and consistency when making decisions. ARMB, in its role as a fiduciary, is obligated to follow a procedurally prudent process when investing the trust assets. Fiduciary prudence is based on the conduct of the Trustees in managing the assets, and is evaluated by the *process* through which risk is managed, assets are allocated, managers are chosen, and results are supervised and monitored.

Evolving legal standards have made clear the legal responsibility of fiduciaries to manage a plan's assets in a prudent manner, and the guidelines contained in this manual are based on the relevant legislation and regulations confronted by public pension funds. However, the guidelines go beyond simply outlining legally prudent management of investment decisions--they are intended to assist the Trustees with long-term success in investing the plan's assets.

Today's prudence standard places the emphasis on fiduciary responsibility regarding the portfolio and its purpose, rather than on the performance of the plan. Trustees as fiduciaries have the responsibility for the general management of the plan's assets. They are responsible for setting and overseeing the implementation of the fund's investment policy, but need not be investment managers or investment specialists and are not responsible for the ultimate investment results. Although it is not possible to guarantee investment success, following the process outlined in this manual will significantly improve the odds of structuring an investment portfolio which will stand up to public scrutiny and benefit the plan's beneficiaries by providing an acceptable long-run return.

This manual, although comprehensive in its coverage, by its very nature does not provide an in-depth analysis of important issues that Trustees must deal with when investing the plan's assets. It therefore should not be viewed as the only "tool" required by the Trustees for prudent investment management, but rather as one component of the Trustees' "educational tool kit," to be used in conjunction with continuing education and the advice and services of staff, investment consultants and investment managers.

II. ARMB Statutes
Fiduciary and General Responsibilities

II. A. Statutes

The Alaska Retirement Management Board (ARMB) was established by the Legislature in 2005 as the successor to the Alaska State Pension Investment Board (ASPIB) which had been created by the legislature in 1992.

The purpose of ARMB is to serve as the trustee of the assets of the state's retirement systems, the State of Alaska Supplemental Annuity Plan, the deferred compensation program for state employees, and the Alaska retiree health care trusts established under AS 39.30.097. Consistent with standards of prudence, the board has the fiduciary obligation to manage and invest these assets in a manner that is sufficient to meet the liabilities and obligations of the systems, plan, program, and trusts.

The Alaska Retirement Management Board consists of nine trustees, as follows: Two members, consisting of the commissioner of administration and the commissioner of revenue; two trustees who are members of the general public (who may not hold another state office, position or employment and may not be members or beneficiaries of the system); one trustee who is employed as a finance officer for a political subdivision participating in either the PERS or TRS system; two trustees who are members of PERS; and two trustees who are members of TRS. The trustees representing PERS and TRS participants are selected from a list of four nominees submitted by the respective bargaining units. The seven trustees other than the two commissioners must meet residency requirements and be professionally credentialed or have recognized competence in investment management, finance, banking, economics, accounting, pension administration, or actuarial analysis.

The operational structure for ARMB is set forth in AS 37.10.210-390. These provisions set forth the powers and duties of ARMB and provide application of other provisions of law to ARMB (such as conflicts of interest), prescribe rules for regulations and open meetings, procurement, compensation, staff, an IAC, insurance, exemption from taxation, limitations on ARMB activity in the areas of banking or private trust activity and lending, and definitions.

ARMB is charged with fiduciary responsibility for funds held in trust for the beneficiaries of TRS and PERS defined benefit plans and is also charged as fiduciary and investor of funds held in trust for the beneficiaries of the Defined Contribution Retirement Plan, the Health Reimbursement Arrangement Plan, Supplemental Benefit System (SBS), the State's Deferred Compensation System, the Judicial Retirement System, and the Alaska National Guard and Naval Militia Retirement Trust Fund (Military Retirement System). The Department of Revenue, by law, provides staffing for ARMB, and ARMB is placed for purposes of organization in the executive branch within the Department of Revenue. As such, ARMB's annual operating budget is presented by the Department of Revenue to the legislature for appropriation, but ARMB develops that budget in consultation with the Department of Revenue.

The Department of Administration operates and administers the retirement systems, SBS and Deferred Compensation Plans.

General provisions and administrative aspects of ARMB are contained in Section 37.10 (Alaska Retirement Management Board), Section 44.25 (Department of Revenue), Section 39.25 (State Personnel Act), Section 14.25 (Teachers' Retirement Plan), Section 22.25 (Judicial Retirement Trust), Section 39.45 (State Deferred Compensation Plan), and Section 39.30 (State Supplemental Benefits System).

II. B. Fiduciary Responsibilities of the Various Parties

The fiduciary responsibilities of ARMB are prescribed by statute, particularly the provisions set forth in AS 37.10.071:

> *"In exercising investment, custodial or depository powers or duties, ARMB as fiduciary shall apply the prudent investor rule and exercise the fiduciary standard in the sole financial best interest of the funds entrusted to ARMB. Among beneficiaries of a fund, the fiduciaries shall treat beneficiaries with impartiality.*

This statutory standard would likely be applied by the court through the application of principles set forth in the Restatement (Third) of Trusts and in many respects ERISA. As outlined by the Restatement (Third) of Trusts, the fiduciary responsibilities of the ARMB Board of Trustees are the following:

1. All actions are for the sole benefit of the plan participants.

2. Prepare written investment policies and document the process. In doing so the Trustees must:

    - Determine the fund's missions and objectives;
    - Choose an appropriate asset allocation strategy;
    - Establish specific investment policies consistent with the fund's objectives; and
    - Select investment managers to implement the investment policy.

3. Diversify assets with regard to specific risk/return objectives for the participants/beneficiaries.

4. Use "prudent experts" to make investment decisions.

5. Control investment expenses.

6. Monitor the activities of all investment managers and investment consultants.

7. Avoid conflicts of interest.

ARMB and staff should regularly undertake continuing education relevant for their duties. Specifically, all Trustees and key staff should participate in an educational program which provides basic instruction on the four primary components of the investment management process:

- Fiduciary responsibility and procedural process;
- Developing investment policy guidelines and designing optimal investment manager structures;
- Implementing investment policy; and

- Monitoring and controlling an investment program.

Fiduciaries, including investment managers and others who are determined to be fiduciaries, are entitled to certain indemnification by ARMB and the State of Alaska. AS 37.10.071(e) provides that the State shall indemnify such fiduciaries against liability to the extent that the alleged act or omission was performed in good faith and was prudent under the applicable standard of prudence. However, actions which do not fall within the area of good faith and prudent practices are not statutorily entitled to indemnification. Indemnification language consistent with AS 37.10.071(e), as well as the desire of ARMB to hold appointed investment managers and other appointed fiduciaries to high standards, is included in contract language with such retained consultants.

Under AS 37.10.280, ARMB is required to ensure that trust assets and its own services are protected and in that respect ARMB may purchase insurance or provide for self-insurance retention in amounts recommended by the Commissioner of Revenue and approved by ARMB to cover the acts including fiduciary acts, errors and omissions of its Board members and agents. The law requires that insurance must protect ARMB and the State from liability to others and from loss of trust assets due to the acts or omissions of the trustees.

As a general matter, the Attorney General has advised members of boards analogous to that of ARMB that it would act in defense of such board member actions consistent with the provisions of AS 37.10.071(e), or would retain such counsel to act in that regard.

A fiduciary under Alaska law relating to ARMB is the Board, each trustee who serves on ARMB, and "any other person who exercises control or authority with respect to management or disposition of assets for which the Board is responsible or who gives investment advice to the Board". (AS 37.10.071(f)(2)) In this respect, the consultants retained by ARMB are not fiduciaries per se and as such are not entitled to the cross-indemnification for acts which were taken in good faith or within the scope of prudent behavior under AS 37.10.071. However, such consultants would certainly be held to a standard of care applicable to their standards of professional responsibility, and liability and requirement to indemnify ARMB may be built into contracts. Actuaries, auditors, and investment consultants are not fiduciaries within the statutory definition of a fiduciary of ARMB funds because they do not control or have authority with respect to management or disposition of assets or give investment advice. However, a custodial bank may have certain fiduciary obligations to the extent that, for example, it is involved in short-term cash management and securities lending functions if such services are utilized.

II. C. Code of Ethics and Conflicts of Interest

ARMB and its trustees, and employees of the Department of Revenue, are subject to the Alaska Executive Branch Ethics Act (AS 39.52). In general, the act provides that high moral and ethical standards are essential for the conduct of free government and that a Code of Ethics for the guidance of public officers will discourage those officers from acting upon personal or financial interests in the performance of their public responsibilities, and will improve standards for public service and promote and strengthen faith and confidence in public officers.

The Code of Ethics provides that any effort to benefit a personal or financial interest through official action is a violation. The Code details specific prohibitions pertaining to the abuse of official position, acceptance of gifts, improper use of disclosure of information and improper influence. Perhaps the most common potential for a violation of the Ethics Act arises under the improper gift provision which has been interpreted in regulation and attorney general's opinion from time to time. AS 39.52.130 provides:

"***Improper gifts.*** (a) A public officer may not solicit, accept, or receive, directly or indirectly, a gift, whether in the form of money, service, loan, travel, entertainment, hospitality, employment, promise, or in any other form, that is a benefit to the officer's personal or financial interests, under circumstances in which it could reasonably be inferred that the gift is intended to influence the performance of official duties, actions, or judgment. A gift from a person required to register as a lobbyist under AS 24.45.041 to a public officer or a public officer's immediate family member is presumed to be intended to influence the performance of official duties, actions, or judgment unless the giver is an immediate family member of the person receiving the gift.

(b) Notice of the receipt by a public officer of a gift with a value in excess of $150, including the name of the giver and a description of the gift and its approximate value, must be provided to the designated supervisor within 30 days after the date of its receipt

(1) if the public officer may take or withhold official action that affects the giver; or

(2) if the gift is connected to the public officer's governmental status.

(c) In accordance with AS 39.52.240, a designated supervisor may request guidance from the attorney general concerning whether acceptance of a particular gift is prohibited.

(d) The restrictions relating to gifts imposed by this section do not apply to a campaign contribution to a candidate for elective office if the contribution complies with laws and regulations governing elections and campaign disclosure.

(e) A public officer who, on behalf of the state, accepts a gift from another government or from an official of another government shall, within 60 days after its receipt, notify the Office of the Governor in writing. The Office of the Governor shall determine the appropriate disposition of the gift. In this subsection, "another government" means a foreign government or the government of the United States, another state, a municipality, or another jurisdiction.

(f) A public officer who knows or reasonably ought to know that a family member has received a gift because of the family member's connection with the public office held by the public officer shall report the receipt of the gift by the family member to the public officer's designated supervisor if the gift would have to be reported under this section if it had been received by the public officer or if receipt of the gift by a public officer would be prohibited under this section.

The Executive Branch Ethics Act requires disclosure and requires reports of potential violations. ARMB's "designated supervisor" with respect to delivery of notices of potential violation would be the Chair of ARMB.

In addition, transaction disclosure statements are required for all members of ARMB, members of ARMB's IAC, and the Deputy Commissioner for Treasury, the Treasury Division's investment officers in the portfolio management and real estate investment sections and the comptroller. ARMB has in place regulations required by law to restrict trustees from having a substantial interest in any entity or project in which assets under the control of ARMB are invested.

By law, the trustees are subject to conflict of interest disclosure requirements of AS 39.50 which includes the delivery of annual reports on financial and business interests to the Alaska Public Officers Commission.

The Department of Revenue has in place policies and procedures which implement the Executive Branch Ethics Act to preclude use of ARMB/Revenue-owned facilities by staff for personal use.

II. D. General Responsibilities of the Various Parties

The ARMB is the fiduciary responsible for the formulation, implementation and management of the funds under its supervision. ARMB has broad authority to engage experts and to delegate investment responsibilities as it deems appropriate. ARMB must report periodically to the Governor, the legislature, and employers participating in the retirement systems. ARMB coordinates certain activities with the Department of Administration. ARMB is staffed by the Department of Revenue and may contract for services necessary to carry out its powers and duties.

The principal entities include:

- Board of Trustees
- Investment Advisory Council
- Revenue Staff
- Auditor
- Actuaries
- Legal Counsel
- Bank Custodian(s)
- Investment Consultant(s)
- Investment Managers

Board of Trustees – Summary of Responsibilities

- Maintain fiduciary responsibility for the invested assets of the Public Employees', Teachers', Defined Contribution, Judicial, and Military Retirement Systems, the Health Reimbursement Arrangement Plan, Supplemental Benefits System, and the Deferred Compensation Program;
- Establish investment policies;
- Review the performance of each plan;
- Review actuarial assumptions, set contribution rates as required by statute;~~, and~~
- adopt asset allocations for each plan;
- Select consultants, external investment managers, Investment Advisory Council (IAC) members, legal counsel and custodian;
- Discuss and evaluate reports from the IAC;
- Develop annual budget;
- Engage independent certified public accountant to perform annual audit;
- Engage independent actuary to review and certify actuarial and health plan valuations made by the state actuary;
- Engage independent audit of the state actuary;
- Engage independent audit of state's performance consultant;
- ~~Adopt and implement~~Provide training and investment education ~~policy~~ for trustees;
- Report financial and investment policies and performance to the Governor and participating employees; and
- Submit quarterly and long range investment reports to the Legislative Budget and Audit Committee.

Investment Advisory Council – Summary of Responsibilities

- Review investment policies, strategies and procedures;
- Make recommendations concerning policies, investment strategies and procedures;
- Advise Board regarding selection of investment consultant and investment managers;
- Provide other advice as requested by ARMB; and
- Attend all Board meetings, with individual Council members providing an individual report either on a topic requested or on a topic they feel important to present, at least once each year.
- The Council consists of three members (although more could be appointed); it is desirable to obtain the widest range of viewpoints from the Council. To that end, selection of council members will be made to give preference among the three appointments to the following categories in addition to the statutory required qualifications:

  Seat One:
  The candidate shall possess experience and expertise in financial investments and management of investment portfolios for public, corporate or union pension benefit funds, foundations or endowments. Preference will be given to candidates with a minimum of ten years' experience as a manager/director or trustee of a pension or public fund of $10 billion or more in market value.

  Seat Two:
  The candidate shall possess experience and expertise in financial investments and management of investment portfolios for public, corporate or union pension benefit funds, foundations or endowments. Preference will be given to candidates with a minimum of two years' experience in portfolio management of a fund of $2 billion or more in market value.

  Seat Three:
  The candidate shall be a professor (preferably full-time) of investment theory or a closely related discipline at an accredited college or university. The candidate shall possess experience and expertise in financial investments and management of investment portfolios for public, corporate or union pension benefit funds, foundations or endowments. Preference will be given to candidates who demonstrate significant experience, including a minimum of five (5) years as an academic.

Department of Revenue Staff – Summary of Responsibilities

Treasury Division Director

Under the policy and executive direction of the Commissioner of Revenue, and acting as State Treasurer:

- Maintain responsibility for the administration and management of the Treasury Division, including debt, cash, comptroller and investment functions;
- Ensure Treasury and ARMB compliance with Alaska statutes, Alaska Administrative Code, Federal statutes, policies, and guidelines;
- Recommend and maintain information technology systems adequate to fulfill the accounting, monitoring, investing, cash management and other information needs of the Division;
- Prepare the annual ARMB budget for Board approval, recommend budget strategies and proposals to the Commissioner of Revenue and the ARMB; and
- Present Board approved proposals to the Legislature.

Liaison Officer To ARMB

Under the direction of the ~~Deputy Commissioner of Revenue for~~ Treasury Division Director and the ARMB Chair, the Liaison Officer to ARMB is responsible for coordinating general administrative functions for ARMB members. Duties include:

- Prepare and distribute agenda packets for Board members;
- Provide administrative assistance as necessary to Board members;
- Act as procurement officer for the board per written delegation;
- Update ARMB website as necessary;
- Coordinate and distribute newsletters, annual reports, and other types of informational materials to the legislature, beneficiaries, and employees of the various retirement systems;
- Coordinate trustee nominations for the PERS and TRS designated seats with the appropriate bargaining units, ensuring notification and publication in accordance with regulations;
- Coordinate with state and reviewing actuary for completions of valuations and review process for presentation to the Board; and
- Other duties as assigned.

Chief Investment Officer

- Act as "prudent expert" on behalf of ARMB;
- Develop and recommend investment policy and strategy ARMB;
- Implement investment policy and strategy for ARMB;
- Manage specific portfolios with guidelines set by ARMB;
- Evaluate the results of the investment policies and performance of the portfolios; and
- Manage investment officers with responsibilities for ARMB portfolios.

Comptroller

- Develop, recommend and implement internal control systems and procedures to ensure all investment assets are safeguarded;

- Account for and report on the investment activity of all funds under the investment responsibility of ARMB;
- Monitor investment managers and custodians for compliance with investment policies established by ARMB;
- Review and coordinate the update of the Departmental investment policy book; and
- Coordinate the annual audits of all funds in accordance with statutory requirements.

Auditor – Summary of Responsibilities

- Measure and validate financial statements and management of the plan;
- Work with ARMB Audit Committee in outlining annual audit plan, provide updates and answer any concerns expressed by the committee;
- The auditor is selected by Department of Administration. ARMB does not have a direct say over the work of the auditor; audits are based upon independent review consistent with the standards prescribed by the American Institute of Certified Public Accountants and its statement on auditing standards, and in conformance with generally accepted accounting principles and Government Accounting Standards Board guidelines.

Bank Custodian – Summary of Responsibilities

- Custodians are hired by, and responsible to, ARMB;
- Provide safekeeping and custody of all securities purchased by managers on behalf of the ARMB;
- Provide for timely settlement of securities transactions;
- Maintain short-term investment vehicles for investment of cash not invested by managers;
- Check all manager accounts daily to make sure that all available cash is invested;
- Collect interest, dividend and principal payments on a timely basis;
- Process corporate actions;
- Price all securities at least on a monthly basis, preferably on a daily basis contingent on asset class and types of securities;
- Provide monthly, quarterly and annual reports;
- Value and monitor derivatives and the trades from which they emanate;
- The Custodians generally are asked to provide data and reports directly to the ARMB and service providers on a regular basis; and
- Provide continuing education programs for the ARMB.

Investment Consultants – Summary of Responsibilities

ARMB selects and appoints investment consultants to provide objective, independent third-party advice on specific investment areas including real estate, alternative investments, and other areas where focused attention is needed. Investment consultants do not accept discretionary decision-making authority on behalf of ARMB. Investment consultants function in a research, evaluation, education and due diligence capacity for ARMB and have fiduciary responsibilities for the quality of the service delivered.

- Investment Consultants are identified and hired by, and provide advice and services to, ARMB. However, the investment consultants make no decisions on behalf of ARMB;
- Recommend strategic procedures and process;
- Identify problems, issues and opportunities and makes recommendations;
- Upon the request of ARMB, prepare an asset allocation study together with alternatives;
- Assist with manager structure, selection, monitoring and evaluation;
- Monitor and evaluate the overall performance of the portfolio
- Carry out special projects at the request of ARMB; and
- Provide continuing education to ARMB and staff, as appropriate.

Investment Managers – Summary of Responsibilities

- Act as a "prudent expert" on behalf of ARMB;
- Develop a portfolio strategy within the specific mandate and asset size determined by ARMB;
- Manage, purchase and sell assets for the portfolio;
- The specific relationship (including fees, investment restriction, etc.) between each Manager and ARMB are outlined in the agreement between the Manager and ARMB; and
- Act as a co-fiduciary for assets under its management.

Actuary

- ARMB coordinates with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system an appropriate contribution rate for normal costs and an appropriate contribution rate for liquidating any past service liability;
- ARMB reviews actuarial assumptions prepared and certified by the actuary and conducts experience analyses of the retirement systems not less than once every four years, except for health cost assumptions, which shall be reviewed annually;
- ARMB contracts with a reviewing actuary to certify the results of all actuarial assumptions prepared by the actuary before presentation to the board; and
- ARMB contracts for an independent audit of the state's actuary not less than once every four years.

Legal Counsel

- The Attorney General is legal counsel for ARMB.
- ARMB may retain an independent legal counsel, subject to approval of the Attorney General, to provide legal assistance as required.

III. ARMB Program Structure

A. Mission Statement

ARMB has adopted a mission statement and vision. ARMB also has adopted general goals that support fulfillment of the mission. Annually, specific objectives are developed and progress toward achievement of the specific objectives is regularly monitored.

Mission Statement: As fiduciaries, we will establish policy, set direction, and provide oversight and stewardship for the prudent investment and management of the fund.

Vision on Purpose: To be the best run and managed pension fund in the country.

Definition of “Best run and Managed”

1. Best financial performance: That we achieve top quartile investment returns on a risk-adjusted basis while limiting total risk to that of an average public sector plan over the long term.

2. Best process:

   - Good financial reporting;
   - Good manager selection and evaluation;
   - Asset allocation; and
   - Awareness of new investment alternatives (innovations in industry).

3. Best management:

   - Staff longevity;
   - Independence; and
   - Education and training.

4. Best communications with our constituents and stakeholders.

B. Investment Policy Statement

1. Purpose and background

The Alaska Retirement Management Board (ARMB) was established by the Legislature in 2005 to serve as trustee for the assets of the state's defined benefit and defined contribution retirement systems, the State of Alaska Supplemental Annuity Plan, the deferred compensation program for state employees, and the Alaska retiree health care trusts. Consistent with standards of prudence, the board has the fiduciary obligation to manage and invest these assets in a manner that is sufficient to meet the liabilities and obligations of the systems, plan, program, and trusts.

The ARMB manages over $18 billion of investments on behalf of a diverse set of over 16 retirement and benefits accounts, each with unique attributes including funding status and demographic profile. The two biggest defined benefit systems, the Public Employees' Retirement System (PERS) and the Teachers' Retirement System (TRS) are a large majority of the total assets. Both systems are significantly underfunded. The funding objective of these plans, as adopted by the ARMB, is to set a contribution rate that will pay the normal cost and amortize the initial unfunded actuarial accrued liability and each subsequent annual change in the unfunded actuarial accrued liability over a closed 25-year period. This funding objective is currently being met. The State of Alaska is the largest contributor to paying down the unfunded liability and the State is expected to make its contribution payments over the near term planning horizon. The demographics of PERS and TRS are such that over half of the total plan participants are retired and receiving benefits or otherwise no longer active in the system. Without investment gains, distributions out of PERS and TRS are now larger than payments into the systems. Like PERS and TRS, the other accounts that make up the system – the Judicial Retirement System (JRS) and the National Guard Naval Militia System (NGNMRS), have their own unique funding, demographic, and other attributes for the ARMB to consider.

2. Statement of Objectives

The ARMB's general investment goals are broad in nature. For the defined benefit plans under its responsibility, the overall objective of the ARMB investment program is to provide members and beneficiaries with benefits as required by law. This will be accomplished through a carefully planned and executed long-term investment program that efficiently and effectively allocates and manages the assets entrusted to the ARMB.

The investment policies have been designed to allow ARMB to seek its expected long-term total return. Reasonable and prudent risk-taking is appropriate within the context of overall diversification to meet ARMB long-term investment objectives. The assets of ARMB will be broadly diversified to reduce the effect of short-term losses within any investment program in a manner that controls the costs of administering and managing the portfolio.

Regarding the defined contribution plans under its responsibility, each participant has his or her own risk tolerance, time horizon, and investment objectives. Participants are responsible for their own investment decisions. To help meet these varying needs, the ARMB seeks to provide participants with an array of investment choices across a range of asset classes, risk levels, and investment strategies so they can construct and/or invest in portfolios that address their individual needs, and do so using investment vehicles and structures that provide competitive risk-adjusted returns at a reasonable cost.

3. Investment Guidelines

The ARMB endeavors to achieve its expected long-term total return, as determined by the actuarially-required rate of return, while minimizing risk as determined by the projected standard deviation of the range of potential future returns.

The target allocation of assets among various asset classes shall be approved by the ARMB. The asset allocation policy shall be predicated on the following factors:

- The historical performance and risk measures of capital markets adjusted for expectations of the future long-term capital market performance
- The correlation of returns and risk among the relevant asset classes
- The expectations of future economic conditions, including inflation and interest rate assumptions
- The projected liability stream of benefits and the costs of funding to both covered employees and employers
- The relationship between the current and projected assets of the plan and the projected actuarial liability stream.

This asset allocation policy will identify target allocations to the classes of assets ARMB can utilize and the ranges within which each can fluctuate as a percent of the total portfolio for each plan. At times the asset allocation for a plan may drift beyond the proscribed bands of the target allocation. At such times, staff will consider the costs and benefits of rebalancing the asset allocation to comply with the plan's asset allocation policy.

4. Securities Guidelines

The desired attributes of a security vary substantially by asset class. As such, care is taken by the ARMB to identify the types of securities that are allowable when formulating and updating the investment guidelines at the asset class level. Particular care is given when considering the inclusion of guideline language that would allow for leverage, shorting and the use of derivatives.

5. Selection of Investment Managers

The ARMB may use internal and external investment managers, subject to the Board's discretion. In selecting external investment managers, the ARMB will engage a consultant to conduct an investment manager search. Investment staff will work with the consultant to construct applicable search criteria which may include, but is not limited to:

- Relevant experience managing investments for institutional clients
- Stability in attracting and retaining high quality investment professionals
- A record of managing asset and client growth and an asset base sufficient to accommodate the ARMB's investment
- Performance reporting compliant with Global Investment Performance Standards (GIPS)
- Competitive investment management fees

The consultant will recommend a group of semi-finalist candidates to staff. Staff will engage in additional research and due diligence and will recommend one or more of the semi-finalists to the ARMB for hiring consideration. Under certain circumstances, the ARMB may delegate investment manager hiring authority to staff or use a modified hiring process.

6. Control procedures

The ARMB has control procedures in place to monitor compliance with investment policies and objectives. The following parties have responsibility for elements of the investment monitoring and control process:

Investment Consultant

The ARMB's general Investment Consultant is a fiduciary and the primary source of asset allocation and investment manager performance information. At least annually, the Consultant will:

- Assist the ARMB in establishing long term goals and objectives that incorporate results from actuarial studies which the ARMB will provide to the Consultant.
- Develop risk guidelines that offer an acceptable likelihood of achieving the objectives.
- Develop forward-looking capital market assumptions.
- Optimize the risk-return characteristics for the funds.
- Document the entire asset allocation in a written formal report and present the report to ARMB at a regular meeting.

At least quarterly, the Consultant will provide the ARMB and Investment Staff with a performance report that, at minimum, includes information on:

- Rates of return presented in tables and graphs for the component portfolios, the asset and sub-asset classes, and the total investments for each of the funds for the past quarter as well as the past one, three, and five year periods.
- Performance comparisons using relevant investment universes and indexes for fund level returns as well as individual investment manager returns.
- Performance attribution analyses; market sensitivity analyses; measures of diversification, capital ratios, price-earnings ratios, turnover; comparisons by style of management and other comparisons or information that is relevant to the particular manager, pool or asset class.

The Consultant will be available regularly to discuss the performance information with the ARMB.

Chief Investment Officer and Investment Staff

The ARMB's Chief Investment Officer (CIO) and Investment Staff advise on, implement, and monitor the board's investment program. Investment Staff is responsible for a variety of investment functions and provide the following investment controls that are reported to the ARMB:

- The CIO makes recommendations to the board on asset allocation and periodically rebalances the investment portfolio so that it remains compliant with the ARMB asset allocation. All rebalancing and manager allocation changes are regularly communicated to the ARMB Chair and communicated to the full ARMB at the next regular meeting.
- On an ongoing basis, often daily, the Investment Staff monitors managers using quantitative techniques, consultant information, discussions with managers, on-site due diligence, and other tools to identify potential issues. Issues are communicated through the CIO report to the ARMB at regular meetings. Exceptional issues are communicated to board members between regular meetings.
- The CIO leads a formal annual investment manager review. As part of this process, investment manager questionnaires are provided to the general consultant and the IAC. The CIO provides feedback to the ARMB on special concerns or other issues.
- The CIO and investment staff is responsible for reviewing all ARMB investment policies at least annually and recommending potential changes to the ARMB.

Comptroller and Accounting Staff

The State Comptroller is responsible for fund accounting and financial reporting. The State Comptroller and Accounting Staff perform a wide range of accounting functions and provide regular reporting to the ARMB that includes at minimum:

- A monthly financial report for each significant fund and investment manager including account balances and net cash flows.
- A monthly comparison of the target and the actual asset allocation.

Compliance

The Department of Revenue has a compliance function with direct reporting authority to the Comptroller. The Compliance function monitors the ARMB's investment managers and staff to ensure compliance with the ARMB's policies and procedures. Compliance reports to the ~~Deputy Commissioner~~Treasury Division Director, Commissioner and the ARMB Audit Committee at least monthly on the investment program's adherence to board policies.

Financial Auditing Firm and ARMB Audit Committee

Annually, an independent accounting firm audits the financial statements of the pension system. The ARMB has an audit committee charged with overseeing this process and both the audit committee and the full ARMB meets directly with the auditors annually.

Fiduciary Auditing Firm

Every four years, the ARMB hires an independent firm to perform a review of the ARMB's investment policies and present their findings to the ARMB.

Consultant Auditing Firm

Every four years, the ARMB hires an independent firm to audit the performance reports of the Investment Consultant and present their findings to the ARMB.

Investment Advisory Council

The ARMB has an Investment Advisory Council (IAC) composed of up to five investment experts charged with providing advice to the ARMB at board meetings and as requested.

C. Investment Policies and Guidelines

ARMB has adopted the following specific policies, procedures and guidelines regarding the investment and management of the assets under its control which can be found on the ARMB website or through the ARMB Liaison Officer.

Domestic and International Equity
Private Equity
Absolute Return
Fixed Income –
    Domestic, International, Convertible Bonds, Enhanced Cash, High Yield, Inflation Indexed, Intermediate US Treasury, Taxable Municipal Bonds
Real Assets –
    Farmland, Infrastructure, Timber and Real Estate
Asset Allocation – all trust funds
Contract Execution
Divestment in Iran
Delegation of Authority
Rebalancing
Litigation
Securities Class Action Litigation
Securities Lending
Watch List

D. Operating Procedures

Meetings

1. The schedule for the regular meetings shall be reviewed by the Trustees at the first meeting of the calendar year.

2. All special meetings shall be on days agreed upon by the Trustees.

3. The final composition of the agenda shall have the approval of the Chair of ARMB.

4. All regular meeting material should be sent to the Trustees no later than seven days prior to the meeting date. To the extent possible, all special meeting material should be sent to the Trustees no later than four days prior to the meeting date.

5. ARMB will look to Robert's Rules of Order as a guide to parliamentary procedure before ARMB.

Committees

Standing committees of ARMB are as follows:

- Audit Committee
- Budget Committee
- Defined Contribution Plan Committee
- Legislative Committee
- Real Assets Committee
- Salary Review Committee

Standing committees are charged with certain responsibilities set out in a committee charter approved by ARMB; committees may make recommendations to ARMB, but do not make decisions on behalf of ARMB.

Ad hoc committees may be appointed by the chair for temporary specified purposes; the term of the committee shall expire at the conclusion of the matter for which the committee was appointed.

Travel and Reimbursements

1. Honorariums will be paid for time expended by trustees in the manner prescribed by law. Entitlement to honorariums set by law shall be construed to mean that Board members shall be reimbursed daily honoraria for any day in which

attendance is required in person or by teleconferenced Board meetings, committee meetings, or workshops convened by ARMB; while on an ARMB-approved seminar; and while appearing on behalf of ARMB on legislative matters. Attendance shall include time spent in travel to or from a meeting if such travel time is not the same day as the scheduled meeting or gathering.

2. Reimbursement for travel expenses is outlined in the state travel regulations at AAM.60.

3. Travel Policy. Travel by trustees and travel outside Alaska by staff of Revenue on ARMB-related business shall be subject to approval by the Chair.

New Trustee Briefing

From time to time, new ARMB trustees are elected or appointed. To maintain continuity and expedite familiarity with ARMB business, ARMB will request Revenue to provide an initial briefing to include the following:

1. Department of Revenue Management:
   Personnel introductions and review of the following presentations (Sub-sections of each presentation will be reviewed in-depth):

   - AS 37.10.210 Alaska Retirement Management Board
   - ARMB Investment Policy and Procedures Book ARMB Trustee Manual
   - Historical Review
   - ARMB (Trustee Biography)
   - Investment Advisory Council
   - Ethics Video
   - Legal Opinions
   - Alaska Public Officer Commission (APOC)
   - Annual Reports
   - Newsletters
   - ARMB Web Page
   - Travel Regulations
   - ARMB Meeting Minutes
   - Trustee Disclosure Statements
   - Reference Materials/Training Conferences
   - Robert’s Rules of Order
   - Fiduciary Liability Insurance

2. Treasury Division, Portfolio Management:
   Personnel introductions and review of the following presentations:

- History Investment Management Review (Chronology of Events)
- Introduction to Management of State Pension Funds
- Allocation of Assets/Capital Market Assumption
- Investment Asset Classes
- Managers/Manager Performance
- Information Services (Bloomberg, BARRA, Standard & Poor's, Moody's, Salomon Yield Book, Telerate)

3. Treasury Comptroller Division:
   Personnel introductions and review of the following presentations:

   - Annual Reports (Audited)
   - Financial Statements
   - Budget
   - Custody/Safekeeping
   - Contracts

4. Division of Retirement & Benefits:
   Personnel introductions and review of responsibilities

Maintenance of Manual.

ARMB, through the Liaison Officer of the Department of Revenue, shall annually revisit the need to update or supplement provisions contained in this manual. A report at least once a year with regard to updating the manual shall be delivered to ARMB.

Appendix A

Fiduciary Responsibilities and Prudent Investment Decision Making

Material contained in this Appendix was obtained from two books: Procedural Prudence[1] and The Management of Investment Decisions[2]. The material contained in the Appendix is meant to serve as a general informational framework and is not an integral part of ARMB's policies and procedures.

A. Fiduciary Responsibilities

1. Fiduciary Guidelines

The guidelines set forth in this Appendix A are designed to be a framework for ARMB actions to fulfill its fiduciary responsibilities in the management of funds to which it has been entrusted with fiduciary responsibilities. Fiduciary responsibilities applicable to ARMB are spelled out in AS 37.10.071 and a summary of this provision would state the following:

> *"In exercising investment, custodial or depository powers or duties, ARMB as fiduciary shall apply the prudent investor rule and exercise the fiduciary standard in the sole financial best interest of the funds entrusted to ARMB. Among beneficiaries of a fund, the fiduciaries shall treat beneficiaries with impartiality.*

To the extent that the provisions of law are to be interpreted by the courts, it is highly likely that the courts would look to the requirements and codes of conduct contained in the Restatement (Third) of Trusts and the interpretations of the Employee Retirement Income Security Act of 1974 (ERISA). In this section the most important parts of these are outlined, and the main tasks which a fiduciary should carry out are summarized. Specific administrative tasks which fiduciaries should carry out are contained in Appendix C: Fiduciary Investment Compliance Checklist. ARMB is not bound by these fiduciary guidelines, as ERISA and the Third Restatement apply only to corporate pension plans. However, a number of states have adopted these standards for public pension plans, and the courts have often turned to these standards when asked to rule on "prudent" practices of any pension plan. It is recommended that public pension plans try, as much as is possible, to follow the standards set by ERISA and the Third Restatement, and the guidelines which they imply, for the simple reason that fiduciary responsibility, due diligence, and a procedurally prudent process of investment management should be undertaken by all pension plans, both corporate and public.

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[1] *Procedural Prudence for Fiduciaries, The Handbook for The Management of Investment Decisions*, Donald B. Trone/William R. Allbright/Philip R. Taylor (Library of Congress Cataloging -- In Publication -- Date Pending)

[2] *The Management of Investment Decisions*, Donald B. Trone/William R. Allbright/Philip R. Taylor (Irwin Professional Publishing, 1996)

Fiduciary Duty According to ERISA

ERISA defines the term *fiduciary* as any person who with respect to a plan:

1. Exercises any discretionary authority or discretionary control regarding management of the plan, or

2. Exercises any authority or control (discretionary or otherwise) regarding management or disposition of assets, or

3. Renders investment advice regarding plan assets for a fee or other compensation, direct or indirect, or has any authority or responsibility to do so, or

4. Has any discretionary authority or discretionary responsibility in the administration of such plan.*

ERISA stipulates that a *fiduciary* must act in all matters regarding the pension plan (including its investments):

> "with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims... The fiduciary must diversify the investments of the plan so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so."**

Restatement Third, Trusts, (Prudent Investor Rule)

In 1992 the Third Restatement, Trusts, was adopted by the American Law Institute, providing a set of new and more specific standards for the handling of the investment process by fiduciaries. These standards have brought legal thought closer to modern investment theory, and in essence shift fiduciary responsibility from the standards of a "prudent man" to those of a "prudent investor." The main points embodied in the Third Restatement are:

- The Trustees should construct a portfolio based upon the plan's objectives, specifically incorporating risk and return objectives;
- Prudent investment should be viewed within a total portfolio context, not on an asset-by-asset basis;
- Prudent investing does not call for the avoidance of risk, but rather prudent management of risk;

**ERISA Sec. 3(21)(A), 29 U.S.C. Sec. 1002 (21) (A) (1985).*
***ERISA Sec. 404 (a) (I) (B), (C).*

- Assets should be diversified unless there is a prudent reason not to do so;
- Trustees must take into account inflation so as to preserve the real value of trust assets and income payments;
- Investment and administrative expenses should be included in the investment decision-making process; and
- Strong consideration should be given to hiring an investment consultant.

2. Fiduciary Conduct and Primary Duties of the Trustees

Today's prudence standard places the emphasis on fiduciary responsibility regarding the portfolio and its purpose, rather than on the performance of the plan. Fiduciary prudence is therefore a test of management and conduct, not of performance. A fiduciary will be found to have met the prudence standard by examining the *process* through which risk is managed, assets are allocated, managers are chosen, and results are supervised and monitored. Trustees as fiduciaries have responsibility for the general management of the fund's assets. They are responsible for overseeing the implementation of the fund's investment policy, but need not be investment managers or investment specialists.

As outlined by ERISA and the Third Restatement, the most important tasks which the Trustees should carry out (i.e., should not delegate) in terms of proper fiduciary conduct are the following:

1. Prepare written investment policies and document the process. In doing so, the Trustees must:
   - Determine the fund's missions and objectives;
   - Choose an appropriate asset allocation strategy;
   - Establish specific investment policies consistent with the fund's objectives; and
   - Select investment managers to implement the investment policy.

2. Diversify assets with regard to specific risk/return objectives of the participants/beneficiaries.

3. Use "prudent experts" to make investment decisions.
4. Control investment expenses.
5. Monitor the activities of all investment managers and investment consultants.
6. Avoid conflicts of interest.

ARMB and Staff should regularly undertake continuing education relevant for their duties. Specifically, all Trustees and key Staff should participate in an educational program which provides basic instruction on the four primary components of the investment management process:

- Fiduciary responsibility and procedural process;

- Developing investment policy guidelines and designing optimal investment manager structures;
- Implementing investment policy; and
- Monitoring and controlling an investment program.

3. General Investment Guidelines for Trustees

In carrying out a process which fulfills their fiduciary duties, Trustees must make a number of basic decisions regarding investment of the portfolio. In this section the nature of the basic decisions confronted by the Trustees are outlined, and some general investment guidelines are provided. A more precise procedurally prudent process for managing a pension fund is provided on the following pages, and a checklist for fiduciary compliance is contained in Appendix C.

Basic Decisions which ARMB Must Make

For reasons to be explained below, the main decisions which must be made are ranked in a hierarchy, starting with the most important and concluding with the least important.

- What is the attitude towards risk?
- How long can the portfolio be committed to a specific investment policy?
- What asset classes will be considered for investing?
- How much of the portfolio will be invested in each asset class?
- Within each specific asset class, what strategies or styles will be used?
- Which and how many manager(s) will be selected to invest for each specific strategy or style?

Investment Risk Profile

A critical decision which the Trustees must make is to determine the degree of risk they wish to accept in investing the portfolio's assets. Although there are generally-accepted definitions of risk which are used in quantitative models of asset allocation, Trustees have to determine their attitude towards risk from a practical perspective, recognizing that the term "risk" has many different connotations depending on the investor's frame of reference, circumstances and objectives. It is useful to consider various types of risk to see how each impacts the investment process (formal definitions of each are provided in the glossary).

- **Liquidity Risk** — Will there be sufficient cash to meet disbursement and expense requirements?
- **Boardroom Risk** — Are decision makers willing to "ride out" short-term volatility in favor of appropriate long-term strategies?
- **Purchasing Power Risk** — Has an investment strategy been employed that will, at the very least, keep pace with inflation?

- **Funding Risk** — What is the probability that anticipated contributions will not be made?
- **Return vs. Risk** — Are expected investment returns consistent with the level of risk taken?
- **Asset Allocation Risk** — Are assets optimally allocated to meet required return and risk parameters?
- **Lost Opportunity Risk** — Have market timing strategies been inappropriately employed, exposing the investor to missed opportunities in the market?

Hierarchy of Decisions

An important study (B.G.P. Brinson, B.D. Singer and G.L. Beebower, "Determinants of Portfolio Performance II: An Update," *Financial Analysts Journal,* May-June 1991) has found that the historical return in U.S. capital markets can be broken down into the following components:

- asset allocation 91.5%
- security selection 4.6%
- market timing 1.7%
- other factors 2.2%

In other words, these figures indicate that 91.5% of the historical returns earned in U.S. capital markets results from the allocation of the total assets among different asset classes (e.g. stocks, bonds, real estate, etc.), while only 4.6% of the returns are the result of the selection of specific investments within an asset class. <u>Therefore, the most important decision in determining the return on the total portfolio is allocating the portfolio among different asset classes. The asset allocation, which encompasses the first four of the above "basic decisions," is one of the main responsibilities of ARMB</u>.

The last two decisions which ARMB must make are of much less importance in terms of the ultimate long-run performance of the portfolio. However, a mistake often made by fiduciaries is to reverse the hierarchy of decisions, beginning on the bottom and focusing on choosing specific managers and/or making specific investments.

4. Fundamental Investment Principles

There are a number of fundamental investment principles that a Board of Trustees should follow when making the decisions that fall under its responsibility:

1. Trustees should set policy, delegate implementation and monitor the results. Trustees should not focus on individual investment decisions and micro-manage.

2. Keep the plan structure simple.

- Simple asset allocation and simple investment manager structures have been shown to perform the best; complex structures are difficult to control and expensive; and
- The plan structure should be maintained over a long time period.

3. Do not expose the portfolio to more timing risk than is necessary.

- Any changes should evolve over a relatively long time period;
- It is difficult to predict movements of the markets and changes in the performance of managers; and
- The best policy is to average in and out of an investment manager or investment vehicle, as opposed to undertaking a large one-time purchase or sale of securities.

4. Select the appropriate investment managers for the defined roles.

- Most firms are best at managing one or a few type of assets;
- Investment managers should have strength in their designated areas; and
- While a single firm may perform multiple roles, the firm's capability in each must be considered independently.

5. Diversify investment manager styles in order to produce a more stable return and to reduce risk.

6. Cash flow is the best tool for reallocating assets.

- If rebalancing is necessary, the portfolio should be moving towards the target allocation; and
- If the investment policy changes drastically, move gradually towards the new allocation.

7. Investment manager structure should contain capacity for growth.

- Never make an unfavorable allocation because there is no appropriate place to put contributions; and
- Monitor portfolio sizes and the investment managers' ability to manage their allocated assets.

8. Weigh each investment manager based upon their impact on the total portfolio, allocating sufficient funds to each manager so that they can impact overall results.

9. Trustees should always have a plan for contributions, rather than deciding how to allocate contributions as they come in.

Investment Decision Making: The Procedurally Prudent Process

1. Overview of the Procedurally Prudent Process

Trustees are responsible for following a procedurally prudent process in investing the plan assets. Although it is not possible to guarantee investment success, following the five-step process outlined below will significantly improve the odds of structuring an investment portfolio which will stand up to public scrutiny and provide an acceptable long-run return. In this section the basic elements of this process are outlined. Detailed guidelines for each of the five steps are provided in following sections.

1. Analyze the Current Situation.

    - Conduct a fiduciary audit;
    - Review the legal and administrative constraints;
    - Review the actuarial and accounting assumptions on contributions and disbursements;
    - Review the current investment strategies and policies;
    - Conduct an analysis of the current asset allocation and investment activities; and
    - Review the costs of managing the portfolio.

2. Design the Optimal Portfolio.

    - Propose various optimal asset allocation strategies;
    - Address strategic (long-term) and tactical (short-term) investment strategies against the backdrop of capital markets; and
    - Analyze the investment alternatives based upon the concepts of modern portfolio theory.

3. Formalize the Investment Policy.

    - A critically important function a fiduciary performs is to set investment policy and implementation guidelines in a written Investment Policy Statement (IPS);
    - Once the IPS is prepared, under most circumstances, the portfolio should not deviate from the stated investment guidelines and asset allocation;
    - Any time that the Trustees are contemplating allocating assets to a new investment area, i.e., to an asset class not specified in the IPS, an analysis of the investment should be carried out along the same lines as that performed for the assets which currently are in the portfolio; and
    - If it is decided to invest in a new asset class, the IPS should be rewritten.

4. Implement the Investment Policy.

    - Propose a number of alternative investment manager structures, focusing on styles or strategies within each broad asset class;
    - Select investment managers;

- Negotiate account size minimums and fees with appropriate investment managers; and
- Coordinate custodial and brokerage services.

5. Monitor and Supervise the Portfolio.

- Provide ongoing supervision of the investment program;
- Prepare a detailed monthly appraisal of consolidated holdings and portfolio transactions;
- Prepare quarterly performance attribution reports comparing the performance of the portfolio against appropriate benchmarks, stated investment objectives and investment managers of similar style;
- Check the asset allocation to make sure that it meets that which is specified in the IPS and rebalance the portfolio if necessary, or change the IPS as appropriate; and
- Monitor and control investment expenses and costs.

2. Step 1: Analysis of the Current Situation

The investment management process begins with a thorough understanding of the current situation and future needs. Six main factors should be examined.

1. Conduct a fiduciary audit based upon the checklist contained in Appendix C.

2. Review the legal and administrative constraints.

- Review the local codes and regulations;
- Have any relevant government regulations concerning pension funds changed recently?
- Have there been any changes in legislation which specifically focus on the fund?

3. Review the actuarial and accounting assumptions on contributions and disbursements.

- Has the actuary indicated that important factors have changed since the last actuarial study?
- Has an audit indicated that the accounting and actuarial assumptions should be changed?
- Have the assumptions on contributions and disbursements changed due to either external economic forces or internal changes regarding the participants?

4. Review the current investment strategies and policies. Have any fundamental factors changed, such as:

- The broad asset classes in which the Trustees have identified as appropriate for the Plan;
- Key underlying economic variables;
- Attitude towards risk;
- Time horizon; and
- Expected returns of broad asset classes.

5. Conduct an analysis of the current asset allocation.

   - Examine how the current assets are allocated between the broad asset classes: stocks, bonds, cash, and others;
   - Examine how the assets are allocated to different styles within each broad asset class (i.e., review the investment manager structure); and
   - Verify that the asset allocation complies with the Investment Policy Statement.

6. Review the costs of managing the portfolio, including:

   - Custody costs, including transaction fees and annual expenses of money market accounts used for cash sweeps; and
   - Brokerage costs, including commission costs and "soft dollar" requirements; and
   - Fees of investment managers and/or annual expenses of mutual funds; and
   - Consulting fees.

3. Step 2: Design the Optimal Portfolio

The goal of this step is to evaluate the projected financial characteristics of the plan and *determine an appropriate investment policy that best meets the needs of the plan and its beneficiaries*. Simply stated, the goal of the plan is to design a portfolio which involves an acceptable level of risk and which produces investment returns which pay a significant portion of member benefits.

In many cases a plan sponsor will turn to an investment consultant to assist with the design of the optimal portfolio, as it relies on a highly technical and quantitative exercise. The purpose of the quantitative modeling of possible investment portfolios is to *assist* the decision-making process. However, the final choice by the Trustees of an optimal portfolio involves both qualitative and quantitative analysis.

The quantitative modeling used in assisting with the design of the optimal portfolio generally follows a three step process:

1. Model the asset side, which involves identifying a set of alternative optimal portfolios tailored to the plan's general constraints.
2. Model the liability projections of the plan.
3. Integrate the first two steps to identify alternative portfolios (with different return/risk characteristics) which are appropriate for the plan.

Modeling the Asset Side

Although there is no unique methodology for quantitatively analyzing and identifying the set of optimal portfolios, most asset allocation models rely heavily on Modern Portfolio Theory and the accepted financial theory. It is not appropriate in this manual to go into detail concerning the specifics of the basic model. Rather, the general nature of the model is described, the steps are outlined, and key aspects are highlighted. Simply put, based upon historical information on various asset classes and future projections concerning capital markets, the model produces a set of alternative investment portfolios, with each producing the greatest possible expected return for given level of risk, and compares these to the current portfolio.

a. The plan's general constraints. The first step in the process is to identify the asset classes in which the plan wishes to invest, and any limits on the allocation to a given asset class. In a strict sense, this decision is independent of the asset allocation modeling process, since an infinite number of different optimal portfolios can be constructed. In addition, the choice of which asset classes to invest in, and the limits on each, often involves non-economic considerations.

In practice, however, the choice of asset classes, and limits on the amount of the investment in each, is often determined as the modeling exercise proceeds, since the asset allocation modeling demonstrates the benefits (and risks) of various asset allocations. For example, many plans have recently decided to increase the size of their investment in the international asset class (relative to their previous investment or a preconceived target) once they have examined the diversification and risk/return benefits of international investments. An additional benefit of the asset allocation modeling process is that it clearly identifies the economic implications of alternative asset allocations. Also, it pinpoints the investment implications of introducing "non-economic" considerations into the asset allocation process, e.g. economically-targeted investments or an aversion to international investments.

b. Collection of data on the specified asset classes. Once the plan has specified the asset classes to be modeled, historical data must be collected on these assets, notably:

- average return of each asset class;
- standard deviation (i.e. statistical variation) of each asset class, which is the most commonly used quantitative measure of risk; and
- statistical correlation among the asset classes.

c. Capital market projections. Based on a variety of methodologies, projections must be made for the future values of the return, standard deviation and correlation of each asset class over some given time period (e.g. five years). In this step, careful attention is paid to the current and expected values of a number of economic variables, including:

- overall market valuations of each asset class;
- interest rates;
- economic growth;
- inflation;
- employment and productivity growth;
- consumer confidence;
- international economic trends; and

- special factors (e.g. wars).

d. Results. The optimization process identifies a number of different *optimal portfolios*. An optimal portfolio is defined as a portfolio which produces the highest expected return for any given level of risk (or, alternatively, minimum risk for a given level of expected return). The set of optimal portfolios form what is called an *efficient frontier* of asset mix alternatives, which can be compared to the current asset mix. Although taking on greater risk does not always guarantee greater return, the asset allocation model makes sure that portfolios are identified only where assuming greater risk does in fact lead to greater expected return.

It is not possible to uniquely identify the single "best" portfolio among the set of optimal portfolios, as each has a different risk/return profile. The ultimate choice of a portfolio will depend upon the liability side of the plan and the Trustees' attitudes towards risk as well as their preferences for investing in different asset classes.

The process of constructing the set of optimal portfolios illustrates a number of important points:

- Once the set of optimal portfolios is identified, greater expected return requires that greater risk be assumed;
- Risk is reduced by diversifying a portfolio among a number of assets;
- Allocating a portion of the portfolio to a "high return, high risk" asset class (e.g. international equity) often increases the overall return and reduces the overall risk of the portfolio;
- By looking at alternative proposals, it is possible to precisely examine the return/risk implications of adding or deleting a particular asset class from the portfolio; and
- The modeling of the optimal portfolios cannot answer a critical question which Trustees must confront: recognizing that greater expected return requires greater risk, how much risk should be taken?

Modeling the Liability Side

The second step in the process involves modeling the expected future liabilities of the plan, defined as the expected member benefits earned over a future time horizon. This step paints a general picture of the future of the plan based upon the most likely outcomes. The composition of the projected plan liabilities is also a useful exercise for general planning purposes, as it provides a direct way to evaluate the impact of investment results on the financial composition of the plan.

The actuarial liabilities in each year of the projection horizon are dependent upon a number of key assumptions used in the most recent actuarial valuation, including:

- Contributions;
- existing level of funding;
- actuarial discount rate;

- active workforce growth rates;
- salary scale growth rates;
- membership growth rate;
- COLAs for retiree benefits;
- decrement factors such as mortality, separation, retirement and disability; and
- actuarial funding method.

Combining Assets and Liabilities

After separately developing the asset and liability projections, the final stage of the process examines their interaction from a long-term perspective. The main focus of this step is to allow an asset allocation to be chosen by comparing the various possibilities against the plan's liabilities.

Since there are hundreds of possible cases when both the asset and liability sides are considered, a methodology for analyzing their interaction must be developed and a time horizon specified (e.g. five years). Once a method is chosen, a number of key variables and aspects of each portfolio are examined in conjunction with the plan's liabilities. Projections of all the key elements and ranges of conditions which might result from uncertain future conditions should be provided. Given that there is uncertainty of both future returns and liabilities, ranges (e.g., the median value as well as a number of percentiles) of the following variables for a given projection period (e.g. five years) should be examined:

- projected rates of return;
- projected funded status;
- unfunded liability; and
- expected contributions.

In evaluating the results of the simulation in order to determine the appropriate asset allocation for the plan, the Trustees should consider the following:

- How do the optimal portfolios under consideration compare to the current asset mix?
- Which optimal portfolios have five-year returns which equal or exceed the actuarial discount rate?
- What are the implications of various sources of risk, such as poor returns on the portfolio, increased benefit payments, and a reduced actuarial discount rate?
- The baseline results should be examined to see whether these are acceptable.
- The worst case results should be examined, with consideration given as to whether the plan can "survive" these.
- A common rule is to choose the asset mix with the best combination of baseline and worst-case results, which is either:
  -- the best baseline results, provided the associated worst-case is acceptable; or
  -- for the minimum acceptable worst case, the mix with the best baseline results.

Once again, it is important to emphasize that quantitative modeling of possible optimal portfolios can only assist in the final choice of the plan's asset allocation. The benefit of following a transparent and rigorous modeling exercise is that it forces the Trustees to explicitly identify and estimate the key parameters which determine the asset and liability values, as well as providing insights into the implications of various asset allocations.

4. Step 3: Formalization of the Investment Policy--The Investment Policy Statement

A critically important function that ARMB performs is to set investment policy and implementation guidelines in a written Investment Policy Statement (IPS). The current Investment Policy Statement approved by ARMB is contained in section III. By having specific policies and guidelines, the Trustees will: (1) have a well-developed investment strategy that is consistently applied; (2) concentrate resources to meet specific goals and objectives of the strategy; and (3) provide continuity to the strategy throughout market cycles.

Any time that the Trustees are contemplating allocating assets to a new investment area, i.e., to an area not specified in the IPS, an analysis of the investment should be carried out along the same lines as that performed for the assets which currently are in the portfolio. If it is decided that the new investment is to be undertaken, the IPS should be rewritten.

ERISA dictates that a strategy and guidelines are required, but does not specifically call for a written IPS: "Every employee benefit plan shall provide a procedure for establishing and carrying out a funding policy..." (Sec. 402 (2)(1)). However, subsequent case law and industry practices have clearly mandated the need for a written IPS as part of a procedurally prudent process. Moreover, the Third Restatement has reinforced the importance of a written IPS: "The Trustee must give reasonably careful consideration to both the formulation and the implementation of an appropriate investment strategy, with investments to be selected and reviewed in a manner reasonably appropriate to the strategy," (Restatement Third, Trusts (Prudent Investor Rule), pg. 14).

The above indicates that existing legislation and regulations require or at least strongly suggest the formulation and adoption of an IPS. Other than the legal requirements for an IPS, *there are five main reasons why an IPS is a necessary part of a procedurally prudent process:*

- The IPS provides a "paper trail" of policies and procedures concerning the plan's investment decisions. The IPS can be important evidence in the case of litigation or accusations of imprudence, and serves as an excellent testimony of compliance to auditors;
- The IPS negates second guessing by new Board members and other interested parties, and provides continuity of the investment strategy during turnover of ARMB;
- The IPS reassures individuals affected by the investment performance that the Trustees are following a prudent investment process;

- The IPS keeps the investment process intact during periods of market upheaval. Trustees may feel pressure to take action during periods of market decline, and the IPS serves to remind them of why the investment strategy was structured in the first place and the risks inherent in the portfolio; and
- The IPS provides a baseline from which to monitor investment performance of the overall portfolio, as well as the performance of individual investment managers. It also allows for proposed changes to the investment process to be evaluated and reviewed against a stated strategic investment policy.

An IPS consists of six main parts:

1. Purpose and background, including:

   - An explanation of the purpose of the portfolio;
   - The size of the portfolio, the likelihood and amount of future contributions and a schedule of pending disbursements;
   - Participant demographics, particularly as it impacts the timing of disbursements; and
   - The fiscal health of the plan sponsor.

2. Statement of objectives. Objectives should be set in conjunction with a comprehensive review and assessment of the goals, expectations, investment time horizon, level of risk tolerance, present investment allocation and current projected financial requirements. Standard investment objectives include:

   - Maximizing return within reasonable and prudent levels of risk;
   - Prudent diversification by providing exposure to a wide range of investment opportunities in various markets;
   - Establishing policies based on long-term total return; and
   - Controlling the costs of administering and managing the portfolio.

   There are a number of additional objectives that are relevant for pension plans:

   - To maintain a fully-funded status with regard to Accumulated Benefit Obligations, and to achieve a fully-funded status with regard to the Projected Benefit Obligation;
   - To have the ability to pay all benefit and expense obligations when due;
   - To maintain a funding cushion for unexpected developments, possible future increases in benefit structure and expense levels or a reduction in the expected earnings ratio;
   - To maintain flexibility in determining the future level of contributions; and
   - To exceed actuarial earnings assumptions.

3. Investment guidelines. Guidelines should be established to clearly identify the parameters of the investment strategy. The guidelines should be specific enough to identify the parameters of the desired investment process, yet still provide enough latitude so as to not "micro-

manage" the investment process. If properly written, the guidelines should make it easy for a reviewer to reconstruct the process which was used in putting together the portfolio. The following guidelines should be identified:

- risk tolerance;
- time horizon;
- asset class preferences ;
- rebalancing limits; and
- expected or desired rate of return.

4. Securities guidelines. Like the investment guidelines, the securities guidelines must be specific enough to define the boundaries of investment managers, but not so specific that the Trustees are in effect making detailed investment decisions.

5. Selection of investment managers. The IPS should clearly define the way in which investment managers are to be selected. By establishing a very specific asset allocation (number 3 above) and precise guidelines for selecting investment managers, a consistent framework is put into place in order to meet the goals and objectives of the plan.

6. Control procedures. This section delineates the specific duties and responsibilities of all parties involved in the investment management process, as well as the required periodic reviews.

5. Step 4: Implementation of the Investment Policy--Structure and Selection of Investment Managers

The fourth step mainly involves determining an investment manager structure and selecting individual investment managers, as well as arranging for low-cost administration of the ultimate investments. In addition, it is in the implementation stage that the specifics of real estate and alternative investments must be considered.

Fiduciary Responsibility

In the implementation step, fiduciary responsibility is fulfilled by (1) choosing a manager structure based upon sound investment principles, as dictated by ERISA Sec. 404(a)(1)(B); and (2) making sure that "prudent experts" are hired to make the investment decisions; this part of the fiduciary responsibility is referred to as the "safe harbor rule."

The "safe harbor rule" spelled out in ERISA comes close to providing fiduciaries with protection from liability concerning actual investment results:

> "If an investment manager or managers have been appointed....no Trustee shall be liable for the acts or commissions of such investment manager or managers, or be under any

obligation to invest or otherwise manage any asset of the plan which is subject to the management of such investment manager." (ERISA Sec. 405(d)(1))

The "safe harbor rule" underscores the importance which ERISA has placed on having investment decisions made by experienced investment professionals. However, the mere hiring of investment managers does not relieve Trustees from their fiduciary responsibility. The Trustees must still act in a prudent manner in selecting and supervising investment managers. In general, Trustees will fulfill their fiduciary responsibility in identifying investment professionals by fulfilling the following safe harbor rules:

- The selected investment manager must be a bank, an insurance company or a registered investment advisor as defined by the Investment Advisors Act of 1940;
- Due diligence must be undertaken in selecting investment managers, i.e., they must be "prudently selected";
- Investment managers must be given the power to manage, acquire and dispose of plan assets;
- Investment managers must acknowledge co-fiduciary status in writing; and
- Activities of investment managers must be carefully monitored.

Implementation Steps and Guidelines

In discussing the implementation of the investment policy, it is convenient to differentiate between (1) traditional financial asset classes, namely stocks, bonds and cash, and (2) real estate and alternative investments, e.g. private placements and venture capital. The first group, which follows a straightforward two-step process, is covered in the present and following sections. The second group is considered separately, as the process by which these investment decisions are made is often different than for stocks, bonds and cash.

A. Traditional financial asset classes: stocks, bonds and cash

Implementation of the investment policy for traditional financial asset classes follows a two-step process: first a manager structure is developed, then individual managers are selected. In general, the first step follows the same basic investment principles which are used in determining the asset allocation in the Investment Policy Statement, "Design the Optimal Portfolio." In the second step the Trustees must determine the performance benchmarks, gather and evaluate information on relevant managers, and make a final selection of managers. Basic guidelines for carrying out each step follow.

Manager Structure (Investment Style Groups)

The IPS should spell out the portfolio's allocation to broad capital market asset classes (e.g. domestic equities, domestic bonds, international). However, within each of these classes there are a number of more specific allocations which are available. In the implementation step, the Trustees usually decide on how they would like to invest within each of the broad asset classes by drawing up a "manager structure," which identifies the number and types of managers to which they want to allocate assets. This process is referred to as identifying "investment manager styles" or "investment manager strategies" within each broad asset category. Note that this step focuses on types of investment managers, not individual managers themselves. Individual investment managers are chosen only after the manager structure is determined.

The development of a sound investment manager structure is part of the Trustees' fiduciary obligations and is an outgrowth of the asset allocation decision which is determined in drawing up the IPS. Many of the factors considered in the asset allocation step are also brought into the manager structure, such as expected returns, risk tolerances, and diversification benefits of various manager styles. Similar to the asset allocation, the Trustees must decide on what manager styles will be employed as well as the amount of assets which will be allocated to each style.

In order to minimize investment and administrative costs, the manager structure should be as simple as possible in light of the investment goals of the plan.

In designing a manager structure, i.e. in determining the number and types of investment managers, the following factors should be considered:

1. Choice of style groups.

    - The first decision which must be made is the choice between active or passive management;
    - Style groups must be defined and appropriate benchmarks constructed;
    - Expected returns and risk of style groups must be calculated;
    - The impact of diversification within a broad asset class must be assessed; and
    - The overall benefits of style group diversification should be assessed, paying particular attention to whether chosen manager styles are complementary.

2. Cost and administrative concerns.

    - A choice must be made between commingled and separate accounts;
    - Complex structures are difficult to control and are expensive;
    - The active versus passive management decision must be evaluated in light of costs, as in some instances (e.g. international), active management may not be feasible or is too expensive; and
    - The custodian banks and plan staff must be able to effectively monitor the chosen manager styles.

3. Common style groups.

    There are a very large number of style groups which have been defined by firms tracking investment managers. The following general list illustrates the nature of the exercise, but is not meant to be exhaustive; a more complete list and description of styles groups is contained in Appendix D.

a. Equity

- Core;
- Yield;
- Value;
- Growth;
- Small Cap;
- International; and
- Many of the above can be combined, e.g. small cap growth, international value.

b. Fixed Income

* Defensive (short maturity);
* Core (intermediate maturity);
* Active Duration;
* Mortgage-backed;
* High yield;
* Munis; and
* International

c. Balanced

* A combination of equities and bonds;
* A decision must be made between strategic and tactical

d. Cash

* High quality;
* High yield;
* Tax free

Selection of Individual Investment Managers

Once a manager structure is chosen, i.e. specific manager styles have been identified, individual investment managers must be chosen to invest the assets committed to each style. When fiduciaries of institutional-size portfolios conduct a search for a new investment manager, they should undertake a formal search process.

Once the necessary information on investment managers is obtained, the "safe harbor rules" indicate that managers must be "prudently selected." In analyzing the large universe of investment managers, a number of specific factors should be examined and evaluated.

1. Performance numbers. These should be based upon quarterly results, as too much attention to annual results may hide the volatility of short-term performance. The performance evaluation should examine whether an investment manager's results are:

    - A composite of all portfolios managed, and not just those chosen for evaluation by the investment manager;
    - The result of actual management, and not simply historically-tested hypothetical performance;
    - Reported gross and net of fees and commissions; and
    - Reported on a time-weighted basis versus a dollar-weighted basis. Time-weighted results more accurately reflect the manager's ability to manage the total portfolio as the assets under management change due to contributions and withdrawals.

2. Performance relative to assumed risk.

    - An investment manager's performance should not be evaluated in isolation, but must be examined in light of the amount of risk assumed;
    - Risk is generally measured by statistics such as standard deviation, alpha, beta and the Sharpe ratio;
    - The results of the investment manager's poorest and best quarters should be examined;
    - The frequency and amount that an investment manager underperforms or outperforms the appropriate market indices should be examined; and
    - Performance should be examined in both rising and falling markets.

3. Investment manager's adherence to the stated investment style.

    - Investment managers should have a clearly articulated investment style;
    - Investment managers should have a demonstrated discipline to maintain the strategy over time; and
    - It is important to independently assess whether the investment manager does indeed fall into the desired manager style (i.e., it cannot be assumed that an investment manager's self-described style accurately reflects that which the plan has selected).

4. Performance among peers.

    - An investment manager's performance should be compared to managers of like style or strategy by use of an appropriate benchmark. A common mistake is to compare performance of several managers without taking their styles into consideration;

- The peer style group and benchmark should be chosen by the Trustees, not the investment manager; and
- The choice of the peer style group and benchmark is "objective" in the sense that it comes directly from the manager structure decision. For example, if it is decided to allocate assets to a "small cap value" manager, then for this part of the manager search the peer group and benchmark should be "small cap value";

5. Performance of key decision makers and their organization.

   - Examine whether the key decision makers that produced the performance record are still with the firm;
   - It should be determined whether any changes in the organization may impact the firm's abilities; and
   - Examine whether the firm has experienced a rapid growth in assets, and how this has affected the performance.

6. Subjective factors. ARMB shall utilize the IAC, Board committees, staff, and its consultants to identify those candidates to be interviewed by the full Board.

B. Real ~~estate~~ assets and alternative investments

By their very nature real ~~estate~~ assets and alternative investments cannot be treated like stocks, bonds and cash for two main reasons: they are a longer term investment and are less liquid. In addition, there are no disclosure requirements or active policing in the private placements arena, so the watch word is "buyer beware."

1. Real Assets. Annually, ~~T~~the ARMB ~~adopted~~ adopts by resolution a "Real ~~Estate~~ Assets Investment Policy and Procedures Manual~~," which is contained in section III~~. Given the detailed information contained in that ~~section~~resolution, it is appropriate here only to outline the main responsibilities of each party participating in the real ~~estate~~ assets investment program.

Board of Trustees

- Approve the investment policies and objectives judged to be appropriate and prudent in the context of implementing the strategic investment plan for the portfolio's total assets;
- Review the performance criteria and policy guidelines for the measurement and evaluation of the investment managers of the plans assets;
- Retain qualified investment managers and set investment limits; and
- Supervise the real ~~estate~~ asset investments to ensure that they remain consistent with the strategic planning and the Investment Policy Statement.

Staff

- Coordinate program compliance among all participants and communicate the investment policies, objectives and performance criteria to the managers;
- Coordinate the receipt and distribution of capital; and
- In conjunction with the Investment Consultant, periodically review the managers' and the portfolio's performance in relation to the assigned responsibilities.

Real Estate Consultant

- Ensure real estate program compliance in cooperation with the Staff;
- Assist in the implementation of the multiple manager real estate program;
- Review all real estate program documentation and management relationships;
- Conduct manager searches when requested;
- Provide periodic performance measurement analysis of the portfolio; and
- Provide special project research pertaining to technical real estate issues.

Managers

- Managers shall acquire and manage (on a non-discretionary basis) real estate and real asset investments on behalf of the plan and in accordance with the~~ Real Estate Investment~~ ~~G~~guidelines and the agreed upon ~~I~~investment ~~P~~plan.

2. Alternative investments. *Alternative investments* refers to institutional blind pool limited partnerships which generally make private debt and equity investments in privately held companies. The most common examples of these limited partnerships are venture capital and leveraged buyout funds, bankruptcy investing, oil and gas partnerships, and investments in subordinated debt.

The hiring of an "oversight advisor" should be seriously considered by any plan which includes alternative investments in its portfolio. Oversight advisors help shoulder the burden of fiduciary responsibility in their role as "prudent experts." These investment management firms assist in security selection, due diligence, negotiation of investments, monitoring and are proactive in value maximization.

The following are general guidelines for alternative investments:

- As with any other asset class, the guidelines, policies and procedures should be explicitly developed and set down in writing;
- Expectations for long-term rates of return and risk, a diversification strategy and appropriate benchmarks should be developed;
- Strategic consultants should be considered to assist with top-down aspects such as designing a program, setting-long term strategy and evaluation of performance; and
- Oversight managers or a fund of funds may provide assistance in bottom-up partnership selection and in-depth investment monitoring.

Once a strategic program is developed, a procedurally prudent process for selecting partnerships includes an examination of the following:

- The general partners should be evaluated based on criteria such as experience and prior achievement, management skills, creativity and integrity;
- The partnership's investment strategy should be assessed, focusing on the reasonableness of the objectives, the likelihood that they can be achieved, and whether the skills of the partners are well-matched with the planned investments;
- A thorough evaluation of the partnership's due diligence process should be undertaken;
- The partnership's monitoring process should be evaluated;
- The partnership's ability to generate a flow of quality investments should be assessed-- will they develop deals themselves or participate in deals originated by other parties?
- The ability to structure, negotiate and liquidate investments should be evaluated; and
- Partnership documents should be reviewed to determine:
  -- how profits are split.
  -- the general partners' authority.
  -- fees and expenses.
  -- advisory board rules.
  -- distribution of earnings.
  -- reporting requirements.

6. Step 5: Monitoring and Supervising the Portfolio

Fiduciary Requirements to Monitor and Supervise

A common fiduciary breach is the failure to supervise the activities of an investment manager once the manager has been hired. Both ERISA and the Third Restatement make specific references to this oversight duty of Trustees:

> "...in addition to any liability which he may have under any other provision of this part, a fiduciary with respect to a plan shall be liable for a breach of fiduciary responsibility of another fiduciary with respect to the same plan..." (ERISA Sec. 405(a)); and
>
> "The Trustee is under a duty to deal fairly and to communicate to the beneficiary all material facts the Trustee knows or should know in connection with the transaction." (Restatement Third, Trusts, (Prudent Investor Rule) Sec. 170).

Main Aspects to be Monitored

There are four broad aspects of the plan which must be monitored:

1. Determine whether the plan achieved its expected return and investment objectives.

- If the plan has not reached its objectives, additional contributions may be necessary and participants may question the Trustees' prudent handling of the plan assets; and
- If the plan has underperformed, what was the cause of the shortfall: underexposure to asset classes offering a greater return, market upheaval, manager performance, high administrative and/or investment expenses, or a combination of factors?

2. Determine whether investment managers are abiding by the plan's Investment Policy Statement.

   - Are restrictions and constraints for various asset classes being followed?
   - Is the overall asset allocation being adhered to? If not, rebalancing should be considered (see below).

3. Determine through performance attribution analysis what contributed to the total return of the portfolio. Performance attribution analysis, discussed more extensively below, provides insight into questions such as:

   - What part of the performance is due to the manager structure?
   - What was the value of choosing active versus passive management strategies?
   - What performance can be attributed to the Trustees' selection of individual investment managers?
   - How does the performance of the plan's investment managers compare to their peers?
   - Should an investment manager(s) be terminated?

4. Investment expenses must be monitored and controlled, and the services provided by custodian banks and consultants must be monitored. By their very nature, investment expenses have a direct impact on performance, and an important duty of the Trustees is to control these expenses.

Steps in Monitoring and Supervision

1. Measuring Investment Manager Performance.

In measuring the performance of investment managers it is necessary to apply consistent standards of measurement so that accurate evaluations and comparisons can be made. On January 1, 1993 a standardized reporting format was instituted by the Association for Investment Management and Research (AIMR). In 1995, AIMR became the CFA Institute, which sponsored and funded the Global Investment Performance Standards (GIPS) to establish global standards for calculating and presenting investment performance. Additional reporting standards have been adopted by the Investment Management Consultants Association (IMCA). In addition, the SEC has issued guidelines on advertising and reporting performance results. Some important guidelines follow, and a more complete treatment is provided in Appendix C: Performance Measurement Checklist and Detailed GIPS Standards.

A. **Performance Calculations.** The investment management industry has adopted certain measurements which should be made when examining and evaluating portfolio performance. Only short explanations of each measurement is provided here; more complete definitions are contained in Appendix E: Glossary of Investment Terms.

- standard deviation -- the most common statistical measure of risk;
- alpha -- measures the performance of the manager assuming the benchmark had no gains or losses;
- beta -- measures performance volatility against the market;
- Sharpe ratio -- measures return per unit of risk (standard deviation;
- geometric returns --calculates returns by linking time periods rather than simply taking a mathematical average;
- total return -- performance results are calculated on all realized and unrealized gains and losses, including accrued income;
- time-weighted -- performance results are calculated on a time-weighted basis (quarterly is required and daily is recommended) rather than dollar-weighted; and
- information ratio -- a mathematical measure of excess return per unit of non-market related risk.

B. **GIPS Standards.** The following is a summary of the main GIPS standards.

- A composite return figure must be calculated that includes all fee-paying discretionary portfolios that represent a specific asset class or similar strategy or investment objective;
- Firm composites must include only the actual assets under management;
- Performance results for accounts are to be asset weighted and not equal-weighted. Equal-weighted results are recommended as an additional measurement, but not required;
- Performance results should be presented by asset class, and include cash equivalents or any other securities held by the manager in place of assets of the particular asset class;
- The composite return results should be calculated for the investment management firm, not the individual manager that produced the return;
- Results should be presented before fees; performance net of fees is permitted as well. In either case, an appropriate fee schedule should be presented;
- Total return is to include both accrued income and capital appreciation;
- Portfolios should be valued at least quarterly;
- External risk measurements are strongly recommended but not mandatory for compliance. Reporting of the dispersion of portfolio returns and standard deviation is strongly recommended, and other measures such as beta and the Sharpe ratio are often useful; and

- Composite results and performance figures should be verified as outlined in Appendix C.

2. Performance Attribution Analysis.

Performance attribution analysis consists of two parts: performance measurement and performance evaluation. The performance attribution analysis should be undertaken by the Trustees, or an independent third party such as an investment consultant, and verified against and compared to measurements provided by the investment managers. General guidelines follow for each part of the performance attribution analysis.

Performance measurement consists of calculating various statistics concerning the portfolio. For equity portfolios the following averages should be calculated: price/earnings ratio; price/book ratio; yield; market capitalization weighting (small, mid, or large cap companies); industry, sector and country concentrations; trading costs; and turnover.

For fixed income portfolios, the following averages should be calculated: bond duration; bond maturity; quality ratings; sector weights; country weights (for international portfolios); and trading costs.

Performance evaluation consists of analyzing the factors that may have affected the performance of each portfolio. The first step is to analyze the capital market and overall economic factors, such as interest rates, economic growth, and market sentiment. Second, factors are examined which provide insights into how the investment decisions, and ultimate performance, of the investment manager compares to other managers following a similar style. This allows the Trustees to see whether the manager is deviating from the stated investment strategy. Also, if a manager's performance has significantly deviated (either positively or negatively) from the peer group, an examination of the portfolio's characteristics should reveal the source of the outlying performance.

Finally, the performance of the investment manager is compared against the benchmarks and security guidelines agreed upon in the IPS or in the written agreement between the plan and the manager. It is important to emphasize that the benchmarks and guidelines should be put in writing at the time the IPS is written and when individual investment managers are hired, not after the fact. A common mistake is to evaluate (either positively or negatively) a manager against other hired managers, rather than against the pre-determined benchmarks.

3. Rebalancing the Portfolio.

The third step in monitoring is rebalancing the portfolio back to the strategic asset allocation formalized in the IPS. As the asset mix changes as a result of price fluctuations in the portfolio, there will be times when the asset mix falls outside the limits that were established in the IPS. Once the asset mix has fallen outside of the established limits, steps generally will be taken as outlined in the Investment Policy Statement to return the actual asset allocation to within acceptable boundaries.

Some important general guidelines concerning rebalancing include the following:

- Rebalancing limits in the IPS have to be set realistically wide enough so that frequent readjustments of the portfolio do not occur;
- There are various methodologies which can be employed to rebalance, but a common method is to utilize a sweep account, into which new contributions, stock dividend income and bond interest income is placed;
- When rebalancing takes place, the asset allocation should be returned to within established limits, not necessarily back to the exact target allocation;
- Trustees should not be tempted to forego rebalancing due to its “counter-intuitive” nature, i.e. selling strong performing assets and purchasing weaker assets. It is precisely by selling high and buying low in order to maintain the chosen asset allocation that the portfolio continues to possess the preferred risk/return characteristics; and
- Periodic rebalancing of the portfolio creates additional transaction expenses. However, the benefits of rebalancing (maintaining the strategic asset allocation) outweigh these transactions costs.

4. Controlling Investment Expenses

The control of investment expenses is an important duty of the Trustees, since investment costs have a direct impact on performance. Investment expenses should be reviewed and evaluated on an annual basis. This is particularly important as plan assets increase in size, since larger assets increase the negotiating power of the plan. Many expenses remain hidden, and it is the duty of the Trustees to ask probing questions so that all costs are made transparent. There is a significant disparity in fees charged by service providers and investment managers, and through the insistence of full disclosure and the proper management of cost will the Trustees be assured of paying reasonable expenses (and, therefore, fulfilling their fiduciary duty).

A related topic is the monitoring of the services provided by vendors. The Trustees must ensure accountability on the part of the outside service providers which are engaged. Clearly defined authority, duties, expectations and forms of compensation should be put down in writing. Service providers which provide investment advice on a non-discretionary basis should be required to acknowledge fiduciary responsibility in writing.

Portfolio management costs and expenses can be broken down into four categories:

A. brokerage costs, including commissions, execution expenses and soft dollars;
B. custodial charges, including transaction fees and annual expenses of money market funds used for cash sweeps;
C. investment manager fees and/or annual expenses of mutual funds;
D. investment consulting fees;

A. **Brokerage Costs.** Brokerage costs, also referred to as trading costs, are comprised of commissions, and the related concept of soft dollars, and execution costs. Trustees are charged with seeking *best execution*, which means minimizing brokerage costs. Regarding commission costs and soft dollar accounts, the following guidelines should be used.

- The duty of the Trustees is to choose a commission cost structure and to negotiate commissions so that low, "competitive" commissions are paid. The negotiated fees for any manager should be consistent with those paid by the ARMB to other managers providing similar services; and
- If it is decided to place all trades through one broker to benefit from "reduced" commission costs and/or to receive ancillary services, such as investment consulting, it should be determined whether this results in best execution by asking:
  --Is the plan making full use of the ancillary services, or would it be better to purchase these directly?
  --Would total trading costs be lower if hired investment managers had been directed to shop for minimum trading costs?

Execution costs are somewhat more complex. The execution cost is defined as the difference between the price actually paid or received and the "fair market price." If the market price changes "immediately" after the trade is executed, the trade was not undertaken at the "fair market price," and therefore an execution cost was incurred. In evaluating execution costs, the following factors should be considered.

- There are various ways to measure execution cost, and it is recommended that the plan hire a vendor which provides trading cost analysis services;
- Best execution is a more important issue in bond trading and thinly-traded securities; and
- If the current policy is to place all trades through one brokerage firm, the alternative of asking hired investment managers to seek best execution should be evaluated.

Soft dollars refers to an arrangement where a particular broker is used so that part of the commission costs can be applied to an activity which benefits the plan. The balance of the commission cost is retained by the broker to cover the cost of the trade. A close corollary to soft dollars is the practice of *commission recapture,* in which the paying of commissions earns credits which can be applied for custodial fees or consulting services.

If the plan is using, or considering using, a soft dollar or commission recapture arrangement, best execution indicates that a number of factors should be considered.

- Are the services being provided ones which the plan would purchase if a soft dollar or commission recapture arrangement did not exist?

- How much would it cost to purchase the services directly, and how does this cost compare to the commissions paid under the soft dollar or commission recapture arrangement versus other possibilities?
- It is difficult to precisely equate the value of services received to the dollars "spent" through soft dollar and commission recapture arrangements;
- Trustees should account for all dollars spent for services, whether paid directly from the account or through soft dollar/commission recapture arrangements; and
- Soft dollar and commission recapture arrangements are ultimately paid for by the plan, so they should be transparently disclosed as a plan expense.

B. **Bank Custodial Charges.** A bank custodian serves as an independent third-party intermediary between the investment manager and the plan sponsor, and performs the following tasks: (1) takes custody of securities; (2) provides reports on holdings and transactions; (3) collects interest and dividends; and (4) effectuates trades. Bank custodians may be paid either directly or through soft dollar/commission recapture arrangements.

   In evaluating whether a custodian provides the necessary services in a cost-effective manner, a number of factors are important.

   - The plan's assets should be held in a separate account;
   - The annual charge should be stated in basis points, and can be negotiated to a competitive level;
   - Available cash and interest payments should be swept daily into a money market or cash management account. A reasonable annual expense for a money market account used for cash sweeps is less than 40 basis points;
   - Dividends should be posted as accrued income on the ex-dividend date;
   - Will the account be charged wire redemption fees for incoming interest and dividends?
   - What are the transaction costs, if any, for requesting checks for either beneficiaries or service providers?
   - In addition to asset-based fees, are there any fixed charges?

C. **Investment Manager Fees.** Investment manager fees, stated in basis points, vary widely depending upon the asset class and the size of the account. Trustees should negotiate the fees, and make sure that they are competitive and in line with the average pattern of fees in the industry.

   - Fees generally decrease as the size of the account increases;
   - For a given portfolio size, fees for equity portfolios usually exceed those for bond portfolios;
   - For a given portfolio size, fees for international portfolios generally exceed those for domestic portfolios;

- Fees for active management always exceed those for passive management;
- Fees are generally less if multiple portfolios are managed by the same organization; and
- Particular attention should be paid to a situation where a manager is being paid an above-average fee but is performing below its performance benchmark.

D. Investment Consulting Fees. Investment consultants may be paid either directly or through a soft dollar/commission recapture arrangement. Fees may be quoted on either a project or asset basis. There can be large disparities in the fees charged by consulting firms. In evaluating the costs (and benefits) of an investment consulting firm, the following should be examined.

- Does the investment consulting firm maintain a large support staff, maintain its own data bases, and service its own software? Investment consultants which do not rely on third-party vendors for services will generally charge higher fees, but provide more comprehensive and customized services;
- A good investment consultant should have a positive impact on the total fees paid by assisting with the negotiation of brokerage, custodial and investment manager fees; and
- Fees paid to an investment consultant should be evaluated against the assistance the investment consultant is providing in the management of investment decisions, most importantly contributing to both a procedurally prudent process and better risk control of the portfolio.

Terminating an Investment Manager

The monitoring process will eventually lead to a situation in which the Trustees will consider terminating an investment manager. Specific guidelines concerning the possible termination of an investment manager by the ARMB are contained in the watch list resolution. General questions which Trustees should ask when evaluating an investment manager for possible termination include:

- Has there been any change in the investment manager's investment style?
- Have there been any organizational changes or changes in ownership structure?
- Has the investment manager experienced any large increase or decrease in assets or accounts?
- Has there been any personnel turnover, or has a new portfolio manager been assigned?
- Is the investment manager beginning to consistently underperform relative to the peer group?
- Is the investment manager still properly registered with the SEC and State regulators?
- Is the investment manager still adhering to the securities, asset allocation and procedural guidelines established in the IPS?

- Has the investment manager been involved in any litigation, claims, assessments or regulatory investigations?

Appendix B

The following general principles provide a practical summary of the fiduciary guidelines to be followed by the ARMB.

FIDUCIARY CODE OF CONDUCT*

If you're going to do it,
do it right.

As you manage the investment decisions ----
document the process,
hire competent professionals,
and always, always remember
you work for the participant/beneficiary.

Never invest in something ----
you don't understand,
offers a below market return,
can't be sold within your own
investment horizon,
is difficult for you to value.

Only pay for what you get.
Don't buy commissioned products when
there are no-load or fee-based alternatives.
Don't hire... "the fox to count the chickens."

Understand that when everyone is talking about
making a killing - the market is already dead.
Believe in the statement ----
"The past is no indication of future performance."
Cautiously approach investments
that promise superior results.

Relish the opportunity to be a steward
of sound investment practices.
For in the end,
it's *procedural prudence*,
not performance, that counts.

Appendix C

Performance Measurement Checklist and Detailed GIPS Standards

Monthly

1. Review the custodian's appraisal report to:

   - check whether current holdings are consistent with each investment manager's investment strategy and mandate;
   - check whether the asset mix falls within the guidelines, paying particular attention to the cash component of an equity manager's portfolio; and
   - trading costs and custodial transactions.

2. Compare the performance against the relevant benchmarks for outlying performance (i.e., extreme over- or underperformance).

Quarterly

1. Review the portfolio for compliance with investment guidelines, paying particular attention to the asset mix and guidelines for securities. If rebalancing is required, consider the impact that forthcoming contributions and withdrawals will have on the asset mix.

2. Determine if there are anticipated withdrawals over the forthcoming quarter and insure that there is adequate cash to meet disbursements. If securities have to be liquidated to raise cash, determine which investment managers should be notified. Pay attention to how the liquidation of securities may interact with possible rebalancing.

3. Determine if contributions are going to be made to the portfolio over the forthcoming quarter, and decide how the contribution is to be invested. Pay attention to how the investment of additional contributions relates to possible rebalancing.

4. Review the market values of all securities held in the portfolio, especially those with limited marketability. If the investment manager is providing the market values, conduct periodic audits to ensure accuracy.

5. Resolve any differences that exist between the investment manager's report of holdings and transactions and those contained in the custodian's appraisal report.

6. Calculate the portfolio's rate of return by asset class, by style or strategy (peer group comparison), and on a composite basis.

7. Compare each manager's results against an appropriate benchmark, and against a performance universe of the manager's style or peer group.

8. Verify the fee computation of each investment manager and vendor.

Annually

1. Review the plan's short term investment procedures, including cash management.

2. Determine the performance results for short-term investments and cash management.

3. Review the managers' proxy voting policy and results/issues.

4. Review the managers' brokerage and trading activities, including:

   - use of soft dollars;
   - clearing arrangements and brokerage firms utilized;
   - quality of the execution of trades;
   - portfolio turnover; and
   - commission costs.

5. Review the investment manager's organizational structure to determine if significant changes have occurred in the corporate or capital structure, investment style, brokerage affiliation or practices, investment process and professional staff.

Monitoring the Custodian

Custodial or brokerage statements should be reviewed at least annually.

1. Check that expenses are as specified and determined in accordance with the custodial or brokerage agreement.

2. Examine the cash management procedures to verify that sweeps and other appropriate accounting methodologies are being utilized.

3. Examine the credits, execution and brokerage costs, and uses of commission dollars.

4. Where appropriate, proxy voting policies and procedures should be determined, particularly if the assets are in a third-party custodian's name.

5. Check that asset valuation is credible and, where appropriate, has been independently verified.

6. Make sure that income accruals are in place and are valid.

7. Verify that the account reconciles (i.e., that there are no suppressed trades).

Details of GIPS Performance Reporting Standards for Investment Managers (enacted January 2010)

The provisions within Chapter I of the GIPS standards are divided into the following nine sections: Fundamentals of Compliance, Input Data, Calculation Methodology, Composite Construction, Disclosure, Presentation and Reporting, Real Estate, Private Equity, and Wrap Fee/Separately Managed Account (SMA) Portfolios.

The provisions for each section are categorized into requirements and recommendations. Firms must meet all the requirements to claim compliance with the GIPS standards. Firms are encouraged to implement as many of the recommendations as possible. These recommended provisions are considered to be industry best practice and assist firms in fully adhering to the spirit and intent of the GIPS standards.

0. **Fundamentals of Compliance:** Several core principles create the foundation for the GIPS standards, including properly defining the firm, providing compliant presentations to all prospective clients, adhering to applicable laws and regulations, and ensuring that information presented is not false or misleading. Two important issues that a firm must consider when becoming compliant with the GIPS standards are the definition of the firm and the firm's definition of discretion. The definition of the firm is the foundation for firm-wide compliance and creates defined boundaries whereby total firm assets can be determined. The firm's definition of discretion establishes criteria to judge which portfolios must be included in a composite and is based on the firm's ability to implement its investment strategy.

1. **Input Data:** Consistency of input data used to calculate performance is critical to effective compliance with the GIPS standards and establishes the foundation for full, fair, and comparable investment performance presentations. For periods beginning on or after 1 January 2011, all portfolios must be valued in accordance with the definition of fair value and the GIPS Valuation Principles in Chapter II.

2. **Calculation Methodology:** Achieving comparability among investment management firms' performance presentations requires uniformity in methods used to calculate returns. The GIPS standards mandate the use of certain calculation methodologies to facilitate comparability.

3. **Composite Construction:** A composite is an aggregation of one or more portfolios managed according to a similar investment mandate, objective, or strategy. The composite return is the asset-weighted average of the performance of all portfolios in the composite. Creating meaningful composites is essential to the fair presentation, consistency, and comparability of performance over time and among firms.

4. **Disclosure:** Disclosures allow firms to elaborate on the data provided in the presentation and give the reader the proper context in which to understand the performance. To comply with the GIPS standards, firms must disclose certain information in all compliant presentations regarding their performance and the policies adopted by the firm. Although some disclosures are required for all firms, others are specific to certain circumstances and may not be applicable in all situations. Firms are not required to make negative assurance disclosures (e.g., if the firm does not use leverage in a particular composite strategy, no disclosure of the use of leverage is required). One of the essential disclosures for every firm is the claim of compliance. Once a firm meets all the requirements of the GIPS standards, it must appropriately use the claim of compliance to indicate compliance with the GIPS standards. The 2010 edition of the GIPS standards includes a revised compliance statement that indicates if the firm has or has not been verified.

5. **Presentation and Reporting:** After constructing the composites, gathering the input data, calculating returns, and determining the necessary disclosures, the firm must incorporate this information in presentations based on the requirements in the GIPS standards for presenting investment performance. No finite set of requirements can cover all potential situations or anticipate future developments in investment industry structure, technology, products, or practices. When appropriate, firms have the responsibility to include in GIPS-compliant presentations information not addressed by the GIPS standards.

6. **Real Estate:** Unless otherwise noted, this section supplements all of the required and recommended provisions in Sections 0–5 in Chapter I. Real estate provisions were first included in the 2005 edition of the GIPS standards and became effective 1 January 2006. The 2010 edition of the GIPS standards includes new provisions for closed-end real estate funds. Firms should note that certain provisions of Sections 0–5 in Chapter I of the GIPS standards do not apply to real estate investments or are superseded by provisions within Section 6 in Chapter I. The provisions that do not apply have been noted within Section 6 in Chapter I.

7. **Private Equity:** Unless otherwise noted, this section supplements all of the required and recommended provisions in Sections 0–5 in Chapter I. Private equity provisions were first included in the 2005 edition of the GIPS standards and became effective 1 January 2006. Firms should note that certain provisions in Sections 0–5 in Chapter I of the GIPS standards do not apply to private equity investments or are superseded by provisions within Section 7 in Chapter I. The provisions that do not apply have been noted within Section 7 in Chapter I.

8. **Wrap Fee/Separately Managed Account (SMA) Portfolios:** Unless otherwise noted, this section supplements all of the required and recommended provisions in Sections 0–5 in Chapter I. Firms should note that certain provisions in Sections 0–5 in Chapter I of the GIPS standards do not apply to wrap fee/SMA portfolios or are superseded by provisions within Section 8 in Chapter I. The provisions that do not apply have been noted within Section 8 in Chapter I.

0. FUNDAMENTALS OF COMPLIANCE

Fundamentals of Compliance — Requirements

0.A.1 Firms must comply with all the requirements of the GIPS standards, including any updates, Guidance Statements, interpretations, Questions & Answers (Q&As), and clarifications published by CFA Institute and the GIPS Executive Committee, which are available on the GIPS standards website (www.gipsstandards.org) as well as in the *GIPS Handbook*.

0.A.2 Firms must comply with all applicable laws and regulations regarding the calculation and presentation of performance.

0.A.3 Firms must not present performance or performance-related information that is false or misleading.

0.A.4 The GIPS standards must be applied on a firm-wide basis.

0.A.5 Firms must document their policies and procedures used in establishing and maintaining compliance with the GIPS standards, including ensuring the existence and ownership of client assets, and must apply them consistently.

0.A.6 If the firm does not meet all the requirements of the GIPS standards, the firm must not represent or state that it is "in compliance with the Global Investment Performance Standards except for..." or make any other statements that may indicate partial compliance with the GIPS standards.

0.A.7 Statements referring to the calculation methodology as being "in accordance," "in compliance," or "consistent" with the Global Investment Performance Standards, or similar statements, are prohibited.

0.A.8 Statements referring to the performance of a single, existing client portfolio as being "calculated in accordance with the Global Investment Performance Standards" are prohibited, except when a GIPS-compliant firm reports the performance of an individual client's portfolio to that client.

0.A.9 Firms must make every reasonable effort to provide a compliant presentation to all prospective clients. Firms must not choose to whom they present a compliant presentation. As long as a prospective client has received a compliant presentation within the previous 12 months, the firm has met this requirement.

0.A.10 Firms must provide a complete list of composite descriptions to any prospective client that makes such a request. Firms must include terminated composites on the firm's list of composite descriptions for at least five years after the composite termination date.

0.A.11 Firms must provide a compliant presentation for any composite listed on the firm's list of composite descriptions to any prospective client that makes such a request.

0.A.12 Firms must be defined as an investment firm, subsidiary, or division held out to clients or prospective clients as a distinct business entity.

0.A.13 For periods beginning on or after 1 January 2011, total firm assets must be the aggregate fair value of all discretionary and non-discretionary assets managed by the firm. This includes both fee-paying and non-fee-paying portfolios.

0.A.14 Total firm assets must include assets assigned to a sub-advisor provided the firm has discretion over the selection of the sub-advisor.

0.A.15 Changes in a firm's organization must not lead to alteration of historical composite performance.

0.A.16 When the firm jointly markets with other firms, the firm claiming compliance with the GIPS standards must be sure that it is clearly defined and separate relative to other firms being marketed, and that it is clear which firm is claiming compliance.

Fundamentals of Compliance — Recommendations

0.B.1 Firms should comply with the recommendations of the GIPS standards, including recommendations in any updates, Guidance Statements, interpretations, Questions & Answers (Q&As), and clarifications published by CFA Institute and the GIPS Executive Committee, which will be made available on the GIPS website (www.gipsstandards.org) as well as in the *GIPS Handbook.*

0.B.2 Firms should be verified.

0.B.3 Firms should adopt the broadest, most meaningful definition of the firm. The scope of this definition should include all geographical (country, regional, etc.) offices operating under the same brand name regardless of the actual name of the individual investment management company.

0.B.4 Firms should provide to each existing client, on an annual basis, a compliant presentation of the composite in which the client's portfolio is included.

1. INPUT DATA
Input Data — Requirements

1.A.1 All data and information necessary to support all items included in a compliant presentation must be captured and maintained.

1.A.2 For periods beginning on or after 1 January 2011, portfolios must be valued in accordance with the definition of fair value and the GIPS Valuation Principles in Chapter II.

1.A.3 Firms must value portfolios in accordance with the composite-specific valuation policy. Portfolios must be valued:

a. For periods beginning on or after 1 January 2001, at least monthly.

b. For periods beginning on or after 1 January 2010, on the date of all large cash flows. Firms must define large cash flow for each composite to determine when portfolios in that composite must be valued.

c. No more frequently than required by the valuation policy.

1.A.4 For periods beginning on or after 1 January 2010, firms must value portfolios as of the calendar month end or the last business day of the month.

1.A.5 For periods beginning on or after 1 January 2005, firms must use trade date accounting.

1.A.6 Accrual accounting must be used for fixed-income securities and all other investments that earn interest income. The value of fixed-income securities must include accrued income.

1.A.7 For periods beginning on or after 1 January 2006, composites must have consistent beginning and ending annual valuation dates. Unless the composite is reported on a non-calendar fiscal year, the beginning and ending valuation dates must be at calendar year end or on the last business day of the year.

Input Data — Recommendations

1.B.1 Firms should value portfolios on the date of all external cash flows.

1.B.2 Valuations should be obtained from a qualified independent third party.

1.B.3 Accrual accounting should be used for dividends (as of the ex-dividend date).

1.B.4 Firms should accrue investment management fees.

2. CALCULATION METHODOLOGY
Calculation Methodology — Requirements

2.A.1 Total returns must be used.

2.A.2 Firms must calculate time-weighted rates of return that adjust for external cash flows. Both periodic and sub-period returns must be geometrically linked. External cash flows must be treated according to the firm's composite-specific policy. At a minimum:

a. For periods beginning on or after 1 January 2001, firms must calculate portfolio returns at least monthly.

b. For periods beginning on or after 1 January 2005, firms must calculate portfolio returns that adjust for daily-weighted external cash flows.

2.A.3 Returns from cash and cash equivalents held in portfolios must be included in all return calculations.

2.A.4 All returns must be calculated after the deduction of the actual trading expenses incurred during the period. Firms must not use estimated trading expenses.

2.A.5 If the actual trading expenses cannot be identified and segregated from a bundled fee:

a. When calculating gross-of-fees returns, returns must be reduced by the entire bundled fee or the portion of the bundled fee that includes the trading expenses. Firms must not use estimated trading expenses.

b. When calculating net-of-fees returns, returns must be reduced by the entire bundled fee or the portion of the bundled fee that includes the trading expenses and the investment management fee. Firms must not use estimated trading expenses.

2.A.6 Composite returns must be calculated by asset-weighting the individual portfolio returns using beginning-of-period values or a method that reflects both beginning-of-period values and external cash flows.

2.A.7 Composite returns must be calculated:

a. For periods beginning on or after 1 January 2006, by asset-weighting the individual portfolio returns at least quarterly.

b. For periods beginning on or after 1 January 2010, by asset-weighting the individual portfolio returns at least monthly.

Calculation Methodology — Recommendations

2.B.1 Returns should be calculated net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Reclaimable withholding taxes should be accrued.

2.B.2 For periods prior to 1 January 2010, firms should calculate composite returns by asset-weighting the individual portfolio returns at least monthly.

3. COMPOSITE CONSTRUCTION

Composite Construction — Requirements

3.A.1 All actual, fee-paying, discretionary portfolios must be included in at least one composite. Although non-fee-paying discretionary portfolios may be included in a composite (with appropriate disclosure), non-discretionary portfolios must not be included in a firm's composites.

3.A.2 Composites must include only actual assets managed by the firm.

3.A.3 Firms must not link performance of simulated or model portfolios with actual performance.

3.A.4 Composites must be defined according to investment mandate, objective, or strategy. COMPOSITES MUST include all PORTFOLIOS that meet the composite definition. Any change to a composite definition must not be applied retroactively. The composite definition must be made available upon request.

3.A.5 Composites must include new portfolios on a timely and consistent basis after each portfolio comes under management.

3.A.6 Terminated portfolios must be included in the historical performance of the composite up to the last full measurement period that each portfolio was under management.

3.A.7 Portfolios must not be switched from one composite to another unless documented changes to a portfolio's investment mandate, objective, or strategy or the redefinition of the composite makes it appropriate. The historical performance of the portfolio must remain with the original composite.

3.A.8 For periods beginning on or after 1 January 2010, a carve-out must not be included in a composite unless the carve-out is managed separately with its own cash balance.

3.A.9 If the firm sets a minimum asset level for portfolios to be included in a composite, the firm must not include portfolios below the minimum asset level in that composite. Any changes to a composite-specific minimum asset level must not be applied retroactively.

3.A.10 Firms that wish to remove portfolios from composites in cases of significant cash flows must define "significant" on an ex-ante, composite-specific basis and must consistently follow the composite-specific policy.

Composite Construction — Recommendations

3.B.1 If the firm sets a minimum asset level for portfolios to be included in a composite, the firm should not present a compliant presentation of the composite to a prospective client known not to meet the composite's minimum asset level.

3.B.2 To remove the effect of a significant cash flow, the firm should use a temporary new account.

4. DISCLOSURE
Disclosure — Requirements

4.A.1 Once a firm has met all the requirements of the GIPS standards, the firm must disclose its compliance with the GIPS standards using one of the following compliance statements.

The claim of compliance must only be used in a compliant presentation. For firms that are verified:

"[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates]. The verification report(s) is/are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation."

For composites of a verified firm that have also had a performance examination:
"[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates]. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The [insert name of composite] composite has been examined for the periods [insert dates]. The verification and performance examination reports are available upon request."

For firms that have not been verified:
"[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has not been independently verified."

4.A.2 Firms must disclose the definition of the firm used to determine total firm assets and firm-wide compliance.

4.A.3 Firms must disclose the composite description.

4.A.4 Firms must disclose the benchmark description.

4.A.5 When presenting gross-of-fees returns, firms must disclose if any other fees are deducted in addition to the trading expenses.

4.A.6 When presenting net-of-fees returns, firms must disclose:

a. If any other fees are deducted in addition to the investment management fees and trading expenses;
b. If model or actual investment management fees are used; and
c. If returns are net of any performance-based fees.

4.A.7 Firms must disclose the currency used to express performance.

4.A.8 Firms must disclose which measure of internal dispersion is presented.

4.A.9 Firms must disclose the fee schedule appropriate to the compliant presentation.

4.A.10 Firms must disclose the composite creation date.

4.A.11 Firms must disclose that the firm's list of composite descriptions is available upon request.

4.A.12 Firms must disclose that policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

4.A.13 Firms must disclose the presence, use, and extent of leverage, derivatives, and short positions, if material, including a description of the frequency of use and characteristics of the instruments sufficient to identify risks.

4.A.14 Firms must disclose all significant events that would help a prospective client interpret the compliant presentation.

4.A.15 For any performance presented for periods prior to 1 January 2000 that does not comply with the GIPS standards, firms must disclose the periods of non-compliance.

4.A.16 If the firm is redefined, the firm must disclose the date of, description of, and reason for the redefinition.

4.A.17 If a composite is redefined, the firm must disclose the date of, description of, and reason for the redefinition.

4.A.18 Firms must disclose changes to the name of a composite.

4.A.19 Firms must disclose the minimum asset level, if any, below which portfolios are not included in a composite. firms must also disclose any changes to the minimum asset level.

4.A.20 Firms must disclose relevant details of the treatment of withholding taxes on dividends, interest income, and capital gains, if material. Firms must also disclose if benchmark returns are net of withholding taxes if this information is available.

4.A.21 For periods beginning on or after 1 January 2011, firms must disclose and describe any known material differences in exchange rates or valuation sources used among the portfolios within a composite, and between the composite and the benchmark.

4.A.22 If the compliant presentation conforms with laws and/or regulations that conflict with the requirements of the GIPS standards, firms must disclose this fact and disclose the manner in which the laws and/or regulations conflict with the GIPS standards.

4.A.23 For periods prior to 1 January 2010, if carve-outs are included in a composite, firms must disclose the policy used to allocate cash to carve-outs.

4.A.24 If a composite contains portfolios with bundled fees, firms must disclose the types of fees that are included in the bundled fee.

4.A.25 For periods beginning on or after 1 January 2006, firms must disclose the use of a sub-advisor and the periods a sub-advisor was used.

4.A.26 For periods prior to 1 January 2010, firms must disclose if any portfolios were not valued at calendar month end or on the last business day of the month.

4.A.27 For periods beginning on or after 1 January 2011, firms must disclose the use of subjective unobservable inputs for valuing portfolio investments (as described in the GIPS Valuation Principles in Chapter II) if the portfolio investments valued using subjective unobservable inputs are material to the composite.

4.A.28 For periods beginning on or after 1 January 2011, firms must disclose if the composite's valuation hierarchy materially differs from the recommended hierarchy in the GIPS Valuation Principles in Chapter II.

4.A.29 If the firm determines no appropriate benchmark for the composite exists, the firm must disclose why no benchmark is presented.

4.A.30 If the firm changes the benchmark, the firm must disclose the date of, description of, and reason for the change.

4.A.31 If a custom benchmark or combination of multiple benchmarks is used, the firm must disclose the benchmark components, weights, and rebalancing process.

4.A.32 If the firm has adopted a significant cash flow policy for a specific composite, the firm must disclose how the firm defines a significant cash flow for that composite and for which periods.

4.A.33 Firms must disclose if the three-year annualized ex-post standard deviation of the composite and/or benchmark is not presented because 36 monthly returns are not available.

4.A.34 If the firm determines that the three-year annualized ex-post standard deviation is not relevant or appropriate, the firm must:

a. Describe why ex-post standard deviation is not relevant or appropriate; and
b. Describe the additional risk measure presented and why it was selected.

4.A.35 Firms must disclose if the performance from a past firm or affiliation is linked to the performance of the firm.

Disclosure — Recommendations

4.B.1 Firms should disclose material changes to valuation policies and/or methodologies.

4.B.2 Firms should disclose material changes to calculation policies and/or methodologies.

4.B.3 Firms should disclose material differences between the benchmark and the composite's investment mandate, objective, or strategy.

4.B.4 Firms should disclose the key assumptions used to value portfolio investments.

4.B.5 If a parent company contains multiple firms, each firm within the parent company should disclose a list of the other firms contained within the parent company.

4.B.6 For periods prior to 1 January 2011, firms should disclose the use of subjective unobservable inputs for valuing portfolio investments (as described in the GIPS Valuation Principles in Chapter II) if the portfolio investments valued using subjective unobservable inputs are material to the composite.

4.B.7 For periods prior to 1 January 2006, firms should disclose the use of a sub-advisor and the periods a sub-advisor was used.

4.B.8 Firms should disclose if a composite contains proprietary assets.

5. PRESENTATION AND REPORTING
Presentation and Reporting — Requirements

5.A.1 The following items must be presented in each compliant presentation:

a. At least five years of performance (or for the period since the firm's inception or the composite inception date if the firm or the composite has been in existence less than five years) that meets the requirements of the GIPS standards. After a firm presents a minimum of five years of GIPS compliant performance (or for the period since the firm's inception or the composite inception date if the firm or the composite has been in existence less than five years), the firm must present an additional year of performance each year, building up to a minimum of 10 years of GIPS compliant performance.

b. Composite returns for each annual period. Composite returns must be clearly identified as gross-of-fees or net-of-fees.

c. For composites with a composite inception date of 1 January 2011 or later, when the initial period is less than a full year, returns from the Composite inception date through the initial annual period end.

d. For composites with a composite termination date of 1 January 2011 or later, returns from the last annual period end through the composite termination date.

e. The total return for the benchmark for each annual period. The benchmark must reflect the investment mandate, objective, or strategy of the composite.

f. The number of portfolios in the composite as of each annual period end. If the composite contains five or fewer portfolios at period end, the number of portfolios is not required.

g. composite assets as of each annual period end.

h. Either total firm assets or composite assets as a percentage of total firm assets, as of each annual period end.

i. A measure of internal dispersion of individual portfolio returns for each annual period. If the composite contains five or fewer portfolios for the full year, a measure of internal dispersion is not required.

5.A.2 For periods ending on or after 1 January 2011, firms must present, as of each annual period end:

a. The three-year annualized ex-post standard deviation (using monthly returns) of both the composite and the benchmark; and

b. An additional three-year ex-post risk measure for the benchmark (if available and appropriate) and the composite, if the firm determines that the three-year annualized ex-post standard deviation is not relevant or appropriate. The periodicity of the composite and the benchmark must be identical when calculating the ex-post risk measure.

5.A.3 Firms must not link non-GIPS-compliant performance for periods beginning on or after 1 January 2000 to their GIPS-compliant performance. Firms may link non-GIPS-compliant performance to GIPS-compliant performance provided that only GIPS-compliant performance is presented for periods beginning on or after 1 January 2000.

5.A.4 Returns for periods of less than one year must not be annualized.

5.A.5 For periods beginning on or after 1 January 2006 and ending prior to 1 January 2011, if a composite includes carve-outs, the firm must present the percentage of composite assets represented by carve-outs as of each annual period end.

5.A.6 If a composite includes non-fee-paying portfolios, the firm must present the percentage of composite assets represented by non-fee-paying portfolios as of each annual period end.

5.A.7 If a composite includes portfolios with bundled fees, the firm must present the percentage of composite assets represented by portfolios with bundled fees as of each annual period end.

5.A.8 a. Performance of a past firm or affiliation must be linked to or used to represent the historical performance of a new or acquiring firm if, on a composite-specific basis:

i. Substantially all of the investment decision makers are employed by the new or acquiring firm (e.g., research department staff, portfolio managers, and other relevant staff);

ii. The decision-making process remains substantially intact and independent within the new or acquiring firm; and

iii. The new or acquiring firm has records that document and support the performance.

b. If a firm acquires another firm or affiliation, the firm has one year to bring any non-compliant assets into compliance.

Presentation and Reporting — Recommendations

5.B.1 Firms should present gross-of-fees returns.

5.B.2 Firms should present the following items:

a. Cumulative returns of the composite and the benchmark for all periods;
b. Equal-weighted mean and median composite returns;
c. Quarterly and/or monthly returns; and
d. Annualized composite and benchmark returns for periods longer than 12 months.

5.B.3 For periods prior to 1 January 2011, firms should present the three-year annualized ex-post standard deviation (using monthly returns) of the composite and the benchmark as of each annual period end.

5.B.4 For each period for which an annualized ex-post standard deviation of the composite and the benchmark are presented, the corresponding annualized return of the composite and the benchmark should also be presented.

5.B.5 For each period for which an annualized return of the composite and the benchmark are presented, the corresponding annualized ex-post standard deviation (using monthly returns) of the composite and the benchmark should also be presented.

5.B.6 Firms should present additional relevant composite-level ex-post risk measures.

5.B.7 Firms should present more than 10 years of annual performance in the compliant presentation.

5.B.8 Firms should comply with the GIPS standards for all historical periods.

5.B.9 Firms should update compliant presentations quarterly.

6. REAL ESTATE

Unless otherwise noted, the following real estate provisions supplement the required and recommended provisions of the GIPS standards in Sections 0–5 in Chapter I. real estate provisions were first included in the GIPS standards in 2005 and became effective 1 January 2006. All compliant presentations that included real estate performance for periods beginning on or after 1 January 2006 were required to meet all the requirements of the real estate provisions of the 2005 edition of the GIPS standards.

The following real estate provisions are effective 1 January 2011. All real estate composites that include performance for periods beginning on or after 1 January 2011 must comply with all the requirements and should adhere to the recommendations of the following real estate provisions.

The following investment types are not considered real estate and, therefore, must follow Sections 0–5 in Chapter I:
• Publicly traded real estate securities;
• Commercial mortgage-backed securities (CMBS); and
• Private debt investments, including commercial and residential loans where the expected return is solely related to contractual interest rates without any participation in the economic performance of the underlying real estate.

REAL ESTATE — REQUIREMENTS
Input Data — Requirements (the following provisions do not apply: 1.A.3.a, 1.A.3.b, and 1.A.4)

6.A.1 For periods beginning on or after 1 January 2011, real estate investments must be valued in accordance with the definition of fair value and the GIPS Valuation Principles in Chapter II.

6.A.2 For periods beginning on or after 1 January 2008, real estate investments must be valued at least quarterly.

6.A.3 For periods beginning on or after 1 January 2010, firms must value portfolios as of each quarter end or the last business day of each quarter.

6.A.4 Real estate investments must have an external valuation:

a. For periods prior to 1 January 2012, at least once every 36 months.

b. For periods beginning on or after 1 January 2012, at least once every 12 months unless client agreements stipulate otherwise, in which case real estate investments must have an external valuation at least once every 36 months or per the client agreement if the client agreement requires external valuations more frequently than every 36 months.

6.A.5 External valuations must be performed by an independent external professionally designated, certified, or licensed commercial property valuer/appraiser. In markets where these professionals are not available, the firm must take necessary steps to ensure that only well-qualified independent property valuers or appraisers are used.

Calculation Methodology — Requirements (the following provisions do not apply: 2.A.2.a, 2.A.4, and 2.A.7)

6.A.6 Firms must calculate portfolio returns at least quarterly.

6.A.7 All returns must be calculated after the deduction of actual transaction expenses incurred during the period.

6.A.8 For periods beginning on or after 1 January 2011, income returns and capital returns (component returns) MUST be calculated separately using geometrically linked time-weighted rates of return.

6.A.9 Composite time-weighted rates of return, including component returns, must be calculated by asset-weighting the individual portfolio returns at least quarterly.

Disclosure — Requirements (the following provisions do not apply: 4.A.5, 4.A.6.a, 4.A.15, 4.A.26, 4.A.33, and 4.A.34)

6.A.10 The following items must be disclosed in each compliant presentation:

a. The firm's description of discretion;

b. The internal valuation methodologies used to value real estate investments for the most recent period;

c. For periods beginning on or after 1 January 2011, material changes to valuation policies and/or methodologies;

d. For periods beginning on or after 1 January 2011, material differences between an external valuation and the valuation used in performance reporting and the reason for the differences;

e. The frequency real estate investments are valued by an independent external professionally designated, certified, or licensed commercial property valuer/appraiser;

f. When component returns are calculated separately using geometrically linked time-weighted rates of return; and

g. For periods prior to 1 January 2011, if component returns are adjusted such that the sum of the income return and the capital return equals the total return.

6.A.11 For any performance presented for periods prior to 1 January 2006 that does not comply with the GIPS standards, firms must disclose the periods of noncompliance.

6.A.12 When presenting gross-of-fees returns, firms must disclose if any other fees are deducted in addition to the transaction expenses.

6.A.13 When presenting net-of-fees returns, firms must disclose if any other fees are deducted in addition to the investment management fees and transaction expenses.

Presentation and Reporting — Requirements (the following provisions do not apply: 5.A.1.i, 5.A.2, and 5.A.3)

6.A.14 Firms must present component returns in addition to total returns. Composite component returns must be clearly identified as gross-of-fees or net-of-fees.

6.A.15 Firms must not link non-GIPS-compliant performance for periods beginning on or after 1 January 2006 to their GIPS-compliant performance. Firms may link non-GIPS-compliant performance to their GIPS-compliant performance provided that only GIPS-compliant performance is presented for periods beginning on or after 1 January 2006.

6.A.16 The following items must be presented in each compliant presentation:

a. As a measure of internal dispersion, high and low annual time-weighted rates of return for the individual portfolios in the composite. If the composite contains five or fewer portfolios for the full year, a measure of internal dispersion is not required.

b. As of each annual period end, the percentage of composite assets valued using an external valuation during the annual period.

The following provisions are additional requirements for real estate closed-end fund composites:

Calculation Methodology — Requirements

6.A.17 Firms must calculate annualized since inception internal rates of return (SI-IRR).

6.A.18 The SI-IRR must be calculated using quarterly cash flows at a minimum.

Composite Construction — Requirements

6.A.19 Composites must be defined by vintage year and investment mandate, objective, or strategy. The composite definition must remain consistent throughout the life of the composite.

Disclosure — Requirements

6.A.20 Firms must disclose the final liquidation date for liquidated composites.

6.A.21 Firms must disclose the frequency of cash flows used in the SI-IRR calculation.

6.A.22 Firms must disclose the vintage year of the composite and how the vintage year is defined.

Presentation and Reporting — Requirements

6.A.23 The following items must be presented in each compliant presentation:

a. Firms must present the net-of-fees SI-IRR of the composite through each annual period end. Firms must initially present at least five years of performance (or for the period since the firm's inception or the composite inception date if the firm or the composite has been in existence less than five years) that meets the requirements of the GIPS standards. Each subsequent year, firms must present an additional year of performance.

b. For periods beginning on or after 1 January 2011, when the initial period is less than a full year, firms must present the non-annualized net-of-fees SI-IRR through the initial annual period end.

c. For periods ending on or after 1 January 2011, firms must present the net-of- fees SI-IRR through the composite final liquidation date.

6.A.24 If the gross-of-fees SI-IRR of the composite is presented in the compliant presentation, firms must present the gross-of-fees SI-IRR of the composite for the same periods as the net-of-fees SI-IRR is presented.

6.A.25 Firms must present, as of each annual period end:

a. composite since inception paid-in capital;

b. composite since inception distributions;

c. composite cumulative committed capital;

d. total value to since inception paid-in capital (investment multiple or TVPI);

e. since inception distributions to since inception paid-in capital (realization multiple or DPI);

f. since inception paid-in capital to cumulative committed capital (PIC Multiple); and

g. residual value to since inception paid-in capital (Unrealized Multiple or RVPI).

6.A.26 Firms must present the SI-IRR of the benchmark through each annual period end. The benchmark must:

a. Reflect the investment mandate, objective, or strategy of the composite;

b. Be presented for the same time period as presented for the composite; and

c. Be the same vintage year as the composite.

REAL ESTATE — RECOMMENDATIONS

Input Data — Recommendations (the following provision does not apply: 1.B.1)

6.B.1 For periods prior to 1 January 2012, real estate investments should be valued by an independent external professionally designated, certified, or licensed commercial property valuer/appraiser at least once every 12 months.

6.B.2 Real estate investments should be valued as of the annual period end by an independent external professionally designated, certified, or licensed commercial property valuer/appraiser.

Disclosure — Recommendations

6.B.3 Firms should disclose the basis of accounting for the portfolios in the composite (e.g., U.S. GAAP, IFRS).

6.B.4 Firms should explain and disclose material differences between the valuation used in performance reporting and the valuation used in financial reporting as of each annual period end.

6.B.5 For periods prior to 1 January 2011, firms should disclose material changes to valuation policies and/or methodologies.

Presentation and Reporting — Recommendations (the following provisions do not apply: 5.B.3, 5.B.4, and 5.B.5)

6.B.6 Firms should present both gross-of-fees and net-of-fees returns.

6.B.7 Firms should present the percentage of the total value of composite assets that are not real estate as of each annual period end.

6.B.8 Firms should present the component returns of the benchmark, if available.

The following provision is an additional RECOMMENDATION for REAL ESTATE CLOSED-END FUND COMPOSITES:

Calculation Methodology — Recommendations

6.B.9 The SI-IRR should be calculated using daily cash flows.

7. PRIVATE EQUITY

Unless otherwise noted, the following private equity provisions supplement the required and recommended provisions of the GIPS standards in Sections 0–5 in Chapter I.

Private equity provisions were first included in the GIPS standards in 2005 and became effective 1 January 2006. All compliant presentations that included private equity performance for periods ending on or after 1 January 2006 were required to meet all the requirements of the private equity provisions of the 2005 edition of the GIPS standards.

The following private equity provisions are effective 1 January 2011. All private equity composites that include performance for periods ending on or after 1 January 2011 must comply with all the requirements and should comply with the recommendations of the following private equity provisions.

The following are provisions that apply to the calculation and presentation of private equity investments made by fixed life, fixed commitment private equity investment vehicles including primary funds and funds of funds. These provisions also apply to fixed life, fixed commitment secondary funds, which must apply either the provisions applicable to primary funds or the provisions applicable to funds of funds depending on which form the secondary fund uses to make investments. private equity open-end end evergreen funds must follow Sections 0–5 in Chapter I. real estate closed-end funds must follow Section 6 in Chapter I.

PRIVATE EQUITY — REQUIREMENTS

Input Data — Requirements (the following provisions do not apply: 1.A.3.a, 1.A.3.b, and 1.A.4)

7.A.1 For periods ending on or after 1 January 2011, private equity investments must be valued in accordance with the definition of fair value and the GIPS Valuation Principles in Chapter II.

7.A.2 Private equity investments must be valued at least annually.

Calculation Methodology — Requirements (the following provisions do not apply: 2.A.2, 2.A.4, 2.A.6, and 2.A.7)

7.A.3 Firms must calculate annualized since inception internal rates of return (SI-IRR).

7.A.4 For periods ending on or after 1 January 2011, the SI-IRR must be calculated using daily cash flows. Stock distributions must be included as cash flows and must be valued at the time of distribution.

7.A.5 All returns must be calculated after the deduction of actual transaction expenses incurred during the period.

7.A.6 Net-of-fees returns must be net of actual investment management fees (including carried interest).

7.A.7 For funds of funds, all returns must be net of all underlying partnership and/or fund fees and expenses, including carried interest.

Composite Construction — Requirements (the following provision does not apply: 3.A.10)

7.A.8 Composite definitions must remain consistent throughout the life of the composite.

7.A.9 Primary funds must be included in at least one composite defined by vintage year and investment mandate, objective, or strategy.

7.A.10 Funds of funds must be included in at least one composite defined by vintage year of the fund of funds and/or investment mandate, objective, or strategy.

Disclosure — Requirements (the following provisions do not apply: 4.A.5, 4.A.6.a, 4.A.6.b, 4.A.8, 4.A.15, 4.A.26, 4.A.32, 4.A.33, and 4.A.34)

7.A.11 Firms must disclose the vintage year of the composite and how the vintage year is defined.

7.A.12 Firms must disclose the final liquidation date for liquidated composites.

7.A.13 Firms must disclose the valuation methodologies used to value private equity investments for the most recent period.

7.A.14 For periods ending on or after 1 January 2011, firms must disclose material changes to valuation policies and/or methodologies.

7.A.15 If the firm adheres to any industry valuation guidelines in addition to the GIPS Valuation Principles, the firm must disclose which guidelines have been applied.

7.A.16 Firms must disclose the calculation methodology used for the benchmark. If firms present the public market equivalent of a composite as a benchmark, firms must disclose the index used to calculate the public market equivalent.

7.A.17 Firms must disclose the frequency of cash flows used in the SI-IRR calculation if daily cash flows are not used for periods prior to 1 January 2011.

7.A.18 For gross-of-fees returns, firms must disclose if any other fees are deducted in addition to the transaction expenses.

7.A.19 For Net-of-fees returns, firms must disclose if any other fees are deducted in addition to the investment management fees and transaction expenses.

7.A.20 For any performance presented for periods ending prior to 1 January 2006 that does not comply with the GIPS standards, firms must disclose the periods of non-compliance.

Presentation and Reporting — Requirements (the following provisions do not apply: 5.A.1.a, 5.A.1.b, 5.A.1.c, 5.A.1.d, 5.A.1.e, 5.A.1.i, 5.A.2, and 5.A.3)

7.A.21 The following items must be presented in each compliant presentation:

a. firms must present both the net-of-fees and gross-of-fees SI-IRR of the composite through each annual period end. Firms must initially present at least five years of performance (or for the period since the firm's inception or the composite inception date if the firm or the composite has been in existence less than five years) that meets the requirements of the GIPS standards. Each subsequent year, firms must present an additional year of performance. composite returns must be clearly identified as gross-of-fees or net-of-fees.

b. For periods beginning on or after 1 January 2011, when the initial period is less than a full year, firms must present the non-annualized net-of-fees and gross-of-fees SI-IRR through the initial annual period end.

c. For periods ending on or after 1 January 2011, firms must present the net-of-fees and Gross-of-fees SI-IRR through the composite final liquidation date.

7.A.22 For periods ending on or after 1 January 2011, for fund of funds composites, if the composite is defined only by investment mandate, objective, or strategy, firms must also present the SI-IRR of the underlying investments aggregated by vintage year as well as other measures as required in 7.A.23. These measures must be presented gross of the fund of funds investment management fees and must be presented as of the most recent annual period end.

7.A.23 Firms must present as of each annual period end:

a. composite since inception paid-in capital;
b. composite since inception distributions;
c. composite cumulative committed capital;
d. total value to since inception paid-in capital (investment multiple or TVPI);
e. since inception distributions to Since inception paid-in capital (realization multiple or DPI);
f. since inception paid-in capital to cumulative committed capital (PIC multiple); and
g. residual value to since inception paid-in capital (unrealized capital or RVPI).

7.A.24 Firms must present the SI-IRR for the benchmark through each annual period end. The benchmark must:

a. Reflect the investment mandate, objective, or strategy of the composite;
b. Be presented for the same time periods as presented for the composite; and
c. Be the same vintage year as the composite.

7.A.25 For fund of funds composites, if the composite is defined only by investment mandate, objective, or strategy and a benchmark is presented for the underlying investments, the benchmark must be the same vintage year and investment mandate, objective, or strategy as the underlying investments.

7.A.26 For periods ending on or after 1 January 2011, for fund of funds composites, firms must present the percentage, if any, of composite assets that is invested in direct investments (rather than in fund investment vehicles) as of each annual period end.

7.A.27 For periods ending on or after 1 January 2011, for primary fund composites, firms must present the percentage, if any, of composite assets that is invested in fund investment vehicles (rather than in direct investments) as of each annual period end.

7.A.28 Firms must not present non-GIPS-compliant performance for periods ending on or after 1 January 2006. For periods ending prior to 1 January 2006, firms may present non-GIPS-compliant performance.

PRIVATE EQUITY — RECOMMENDATIONS
Input Data — Recommendations (the following provision does not apply: 1.B.1)

7.B.1 Private equity investments should be valued at least quarterly.

Calculation Methodology — Recommendations (the following provision does not apply: 2.B.2)

7.B.2 For periods ending prior to 1 January 2011, the SI-IRR should be calculated using daily cash flows.

Composite Construction — Recommendations (the following provision does not apply: 3.B.2)
Disclosure — Recommendations

7.B.3 Firms should explain and disclose material differences between the valuations used in performance reporting and the valuations used in financial reporting as of each annual period end.

7.B.4 For periods prior to 1 January 2011, firms should disclose material changes to valuation policies and/or methodologies.

Presentation and Reporting — Recommendations (the following provisions do not apply: 5.B.2, 5.B.3, 5.B.4, and 5.B.5)

7.B.5 For periods ending on or after 1 January 2011, for fund of funds composites, if the composite is defined only by vintage year of the fund of funds, firms should also present the SI-IRR of the underlying investments aggregated by investment mandate, objective, or strategy and other measures as listed in 7.A.23. These measures should be presented gross of the fund of funds investment management fees.

7.B.6 For periods ending prior to 1 January 2011, for fund of funds composites, firms should present the percentage, if any, of composite assets that is invested in direct investments (rather than in fund investment vehicles) as of each annual period end.

7.B.7 For periods ending prior to 1 January 2011, for Primary fund composites, firms should present the percentage, if any, of composite assets that is invested in fund investment vehicles (rather than in direct investments) as of each annual period end.

8. WRAP FEE/SEPARATELY MANAGED ACCOUNT (SMA) PORTFOLIOS
The following provisions apply to the calculation and presentation of performance when presenting a compliant presentation to a wrap fee/SMA prospective client (which includes prospective wrap fee/SMA sponsors, prospective wrap fee/SMA clients, and existing Wrap fee/SMA sponsors). Unless otherwise noted, the following wrap fee/SMA provisions supplement all the required and recommended provisions of the GIPS standards in Sections 0–5 in Chapter I.

Although there are different types of wrap fee/SMA structures, these provisions apply to all wrap fee/SMA portfolios where there are bundled fees and the wrap fee/SMA sponsor serves as an intermediary between the firm and the end user of the investment services. These provisions are not applicable to portfolios defined as other types of bundled fee Portfolios. These provisions are also not applicable to model portfolios that are provided by a firm to a wrap fee/SMA sponsor if the firm does not have discretionary portfolio management responsibility for the individual wrap fee/SMA portfolios. Similarly, a firm or overlay manager in a Multiple Strategy Portfolio (MSP) or similar program is also excluded from applying these provisions to such portfolios if they do not have discretion.

All wrap fee/SMA Compliant presentations that include performance results for periods beginning on or after 1 January 2006 must meet all the requirements of the following wrap fee/SMA provisions.

WRAP FEE/SMA REQUIREMENTS
Composite Construction — Requirements

8.A.1 Firms must include the performance record of actual Wrap fee/SMA portfolios in appropriate composites in accordance with the firm's established portfolio inclusion policies. Once established, these composites (containing actual wrap fee/SMA portfolios) must be used in the firm's compliant presentations presented to wrap fee/SMA prospective clients

Disclosure — Requirements (the following provision does not apply: 4.A.15)

8.A.2 For all wrap fee/SMA compliant presentations that include periods prior to the inclusion of an actual wrap fee/SMA portfolio in the composite, the firm must disclose, for each period presented, that the composite does not contain actual wrap fee/SMA portfolios.

8.A.3 For any performance presented for periods prior to 1 January 2006 that does not comply with the GIPS standards, firms must disclose the periods of non-compliance.

8.A.4 When firms present Composite performance to an existing wrap fee/SMA sponsor that includes only that sponsor's wrap fee/SMA portfolios (resulting in a "sponsor-specific composite"):

a. Firms must disclose the name of the wrap fee/SMA sponsor represented by the sponsor-specific composite; and

b. If the sponsor-specific composite compliant presentation is intended for the purpose of generating wrap fee/SMA business and does not include performance net of the entire wrap fee, the compliant presentation must disclose that the named sponsor-specific compliant presentation is only for the use of the named wrap fee/SMA sponsor.

Presentation and Reporting — Requirements (the following provision does not apply: 5.A.3)

8.A.5 When firms present performance to a wrap fee/SMA prospective client, the composite presented must include the performance of all actual wrap fee/SMA portfolios, if any, managed according to the composite investment mandate, objective, or strategy, regardless of the wrap fee/SMA sponsor (resulting in a “style-defined composite”).

8.A.6 When firms present performance to a wrap fee/SMA Prospective client, performance must be presented net of the entire wrap fee.

8.A.7 Firms must not link non-GIPS-compliant performance for periods beginning on or after 1 January 2006 to their GIPS-compliant performance. firms may link non-GIPS-compliant performance to their GIPS-compliant performance provided that only GIPS-compliant performance is presented for periods beginning on or after 1 January 2006.

Appendix D

Callan Manager Style Groups

Domestic Fixed Income

Active Cash
Managers whose objective is to achieve a maximum return on short-term financial instruments through active management. The average portfolio maturity is typically less than two years.

Active Duration
Managers who employ either interest rate anticipation or business cycle timing. Portfolios are actively managed so that wide changes in duration are made in anticipation of interest rate changes and/or business cycle movements.

Convertible Bond
Managers who invest in convertible bonds. Convertible bonds offer the downside price floor of a "straight bond" while potentially allowing the holder to share in price appreciation of the underlying common stock.

Core Bond
Managers who construct portfolios to approximate the investment results of the Lehman Brothers Government/Corporate Bond Index with a modest amount of variability in duration around the Index. The objective is to achieve value added from sector or issue selection.

Defensive
Managers whose objective is to minimize interest rate risk by investing only in short to intermediate-term securities. The average portfolio maturity is typically two to five years.

Extended Maturity
Managers whose average portfolio maturity is greater than that of the Lehman Brothers Government/Corporate Bond Index. Variations in bond portfolio characteristics are made to enhance performance results.

High Yield
Managers whose investment objective is to obtain high current income by investing in lower-rated, higher default-risk fixed income securities. As a result, security selection focuses on credit risk analysis.

Intermediate
Managers whose objective is to lower interest rate risk by investing only in intermediate-term securities. The average portfolio maturity is typically five to seven years.

Money Market
Managers who invest mutual funds in low-risk, highly liquid, short-term financial instruments. The average portfolio maturity is typically 30 to 60 days.

Short-Term Investment Funds
Managers who invest bank investment funds in low-risk, highly liquid, short-term financial instruments. The average portfolio maturity is typically 30 to 60 days.

Domestic Equity

Aggressive Growth
Managers who invest in growth securities with significantly higher risk/return expectations.

Contrarian
Managers who invest in stocks that are out of favor or which have little current market interest. These managers may sell stocks short as well.

Core Equity
Managers whose portfolio characteristics are similar to that of the S&P Index, with the objective of adding value over and above the Index, typically from sector or issue selection.

Growth
Managers who invest in companies that are expected to have above-average prospects for long-term growth in earnings and profitability.

Growth (Sector Rotation)
Growth managers who take advantage of expected changes in the performance of various sectors of the economy. Research is done to identify the sectors that will respond most favorably to emerging growth trends, after which markets and firms are targeted for investment within the selected sectors.

Growth (Stock Selection)
Growth managers who perform analysis on individual firms to identify those with favorable earnings growth prospects relative to the price of the stock.

Middle Capitalization
Managers who invest primarily in mid-range capitalization companies, defined as those lying between core equity companies and small capitalization companies. The average market capitalization of the companies is approximately $3 billion.

Sector Rotation
Managers who identify sectors of the economy that show the best potential for investment, and then target markets and firms for investment within the selected industrial sectors.

Small Capitalization
Managers who invest in companies with relatively small capitalization, on average approximately $400 million.

Small Capitalization (Growth)
Managers who invest in small capitalization companies that have demonstrated consistently high growth in earnings and profitability.

Small Capitalization (Value)
Managers who invest in small capitalization companies that are thought to currently be undervalued, typically due to earnings weakness. These companies are expected to have a near-term earnings rebound.

Value
Managers who invest in companies, believed to be undervalued or possessing lower than average price/earnings ratios, based on their potential for capital appreciation.

Value (Bottom Up)
Value managers who perform fundamental analysis on individual firms, regardless of which sector of the economy they are in, to identify securities that are underpriced relative to their underlying value.

Value (Top Down)
Value managers who first use fundamental industry analysis to identify sectors that show the best potential for investment, after which markets and firms are targeted for investment within the selected sectors.

Yield
Managers whose primary objective is a higher than average dividend yield.

International Fixed Income

Global Fixed Income
Managers who invest in both foreign and domestic fixed income securities, excluding regional and index funds. These funds seek to take advantage of international currency and interest rate movements, bond yields, and/or international diversification.

Non-U.S. Fixed Income
Managers who invest their assets only in non-U.S. fixed income securities, excluding regional and index funds. These funds seek to take advantage of international currency and interest rate movements, bond yields, and/or international diversification.

International Equity

Bottom Up/Stock Selection
Managers who primarily emphasize stock selection in their portfolio construction. The country selection process is a by-product of the stock selection decision.

Core
Managers whose portfolio characteristics are similar to that of an index such as EAFE, with the objective of adding value over and above the index, typically from stock selection and/or changes in country allocation.

Europe
Managers who invest exclusively in European securities.

Global Equity
Managers who invest in both foreign and domestic equity securities excluding regional and index funds.

Japan
Managers who invest exclusively in Japanese equities.

Non-U.S. Equity
Managers who invest their assets only in non-U.S. equity securities, excluding regional and index funds.

Pacific Basin
Managers who invest exclusively in Pacific Basin countries.

Pacific Rim
Managers who invest exclusively in Pacific Basin countries except for Japan.

Top Down/Country Allocator
Managers who attempt to add value over an index such as EAFE by emphasizing macroeconomic analysis in setting country allocation policies. Stock selection plays a secondary role in the investment decision making process.

Domestic Real Estate

CAI Total Real Estate Funds
This is not actually a style group. Rather, it consists of 150 open and closed-end commingled funds managed by real estate firms.

Appendix E

Glossary of Investment Terms

Accrual Basis Accounting
As opposed to cash basis accounting, this values assets based upon accrued changes in values, not actual cash flows. For example, dividends are included in the portfolio value (i.e. accrued) as of the ex-dividend date, rather than the payment date (or the declaration date).

Active Management
A form of investment management which involves buying and selling financial assets with the objective of earning positive risk-adjusted returns.

AIMR
The Association for Investment Management and Research is the umbrella organization for the two big investment management advisers' groups, the Institute of Chartered Financial Analysts and the Financial Analysts Federation. This organization administers the annual examinations for the CFA designation and also publishes industry guidelines for performance measurement reporting and calculations. AIMR instituted a standardized performance reporting format on January 1, 1993.

Alpha
A mathematical estimate of the amount of return expected from an investment. It is distinct from the amount of return caused by volatility.

Alternative Investments
These generally refer to institutional blind pool limited partnerships which make private debt and equity investments in privately held companies, as well as hedge funds and other publicly traded derivatives-based strategies.

American Depository Receipts (ADRs)
Financial assets issued by U.S. banks that represent indirect ownership of a certain number of equity shares in a foreign firm. ADRs are held on deposit in a bank in the firm’s home country.

Asset Allocation
The process of determining the optimal allocation of a fund’s portfolio among broad asset classes.

Asset Allocation Risk
The risk that a non-optimal asset allocation will be undertaken which does not meet the fund’s return and risk targets.

Balanced Fund
An investment strategy which is a combination of equities and bonds.

Basis Point
1/100th of 1%.

Benchmark Portfolio
A portfolio against which the investment performance of an investment manager can be compared for the purpose of determining the value-added of the manager. A benchmark portfolio must be of the same style as the manager, and in particular, similar in terms of risk.

Best Execution
This is formally defined as the difference between the strike price (the price at which a security is actually bought or sold) and the "fair market price," which involves calculating opportunity costs by examining the security price immediately after the trade is placed. Best execution occurs when the trade involves no opportunity cost, for example when there is no increase in the price of a security shortly after it is sold.

Beta
A mathematical measure of an investment's volatility in relation to the volatility of the market. A beta of 1 is equal to that of the market.

Boardroom Risk
The risk that Trustees will not ride out short term volatility (and therefore wind up altering a sound long-term strategy) due to pressure put on them in their role as Trustees.

Bottom-up Analysis
An approach to valuing securities which first involves analyzing individual companies, then the industry, and finally the economy and overall capital market.

Capital Asset Pricing Model
An equilibrium model of asset pricing which states that the expected return of a security increases as the security's sensitivity to the market (i.e. beta) increases. That is, as the expected return of a security or portfolio increases (decreases), risk increases (decreases) as well.

Capitalization-weighted Market Index
A method of calculating a market index where the return of a security (or group of securities) is weighted by the market value of the security (or group of securities) relative to total value of all securities.

Cash Sweep Accounts
A money market fund into which all new contributions, stock dividend income and bond interest income is placed ("swept") for a certain period of time. At regular intervals, or when rebalancing is necessary, this cash is invested in assets in line with the asset allocation stipulated in the IPS.

Commingled Fund
An investment fund which is similar to a mutual fund in that investors purchase and redeem units that represent ownership in a pool of securities.

Commission Recapture
An agreement by which a plan sponsor earns credits based upon the amount of brokerage commissions paid. These credits can be used for services which will benefit the plan, such as consulting services, custodial fees, or hardware and software expenses.

Convertible Bond
A bond which may, at the holder's option, be exchanged for common stock.

Core Bond
A fixed income investment strategy which constructs portfolios to approximate the investment results of the Lehman Government/Corporate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector or issue selection.

Core Equity
An investment strategy where the portfolio's characteristics are similar to that of the S&P 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection.

Correlation Coefficient
A statistical measure similar to covariance, in that it measures the mutual variation between two variables. The correlation coefficient is bounded by the values -1 and +1.

Covariance
A statistical measure of the mutual variation between two variables.

Current Yield
The annual dollar amount of coupon payments made by a bond divided by the bond's current market price.

Defensive
A fixed income investment strategy where the objective is to minimize interest rate risk by investing only in short to intermediate term securities. The average portfolio maturity is typically two to five years.

Derivative
A financial derivative is security which derives its value from a more fundamental financial security such as a stock or bond. For example, the value of a stock option depends upon the value from the underlying stock. Because the stock option cannot exist without the underlying stock, the stock option is derived from the stock itself.

Dividend Yield
The current annualized dividend paid on a share of common stock, expressed as a percentage of the stock's current market price.

Duration
A measure of the average maturity of the stream of interest payments of a bond. The value of a given bond is more sensitive to interest rate changes as duration increases, i.e. longer duration bonds have greater interest rate volatility than shorter duration bonds.

Dollar-weighted Measurement
In calculating summary statistics, a process by which performance measures are weighted by the dollar amounts of assets in each time period.

Earnings Per Share
A firm's reported earnings divided by the number of its common shares outstanding.

Economically-targeted Investment
Investments where the goal is to target a certain economic activity, sector or area in order to produce corollary benefits in addition to the main objective of earning a competitive risk-adjusted rate of return.

Efficient Market
A theory which claims that a security's market price equals its true investment value at all times since all information is fully and immediately reflected in the market price.

Efficient Portfolio
A portfolio which offers maximum expected return for a given level of risk or minimum risk for a given level of expected return.

ERISA
The Employee Retirement Security Act, signed into law in September 1974. ERISA established a strict set of fiduciary responsibilities for corporate pension funds, and some states have adopted the ERISA provisions for public plans. It is recommended that public pension plans use the ERISA regulations as guidelines for managing the plan's assets in a procedurally prudent manner.

Exculpatory
A clause or set of regulations, for example the "safe harbor rules", which generally frees Trustees from responsibility and liability.

Extended Maturity
A fixed income investment strategy where average portfolio maturity is greater than that of the Lehman Brothers Government/Corporate Bond Index. Variations in bond portfolio characteristics are made to enhance performance results.

Fiduciary
Indicates the relationship of trust and confidence where one person (the fiduciary) holds or controls property for the benefit of another person. For example, the relationship between a Trustee and the beneficiaries of the trust.

Funding Risk
The risk that anticipated contributions to the plan will not be made.

Geometric Returns
A method of calculating returns which links portfolio results on a quarterly or monthly basis. This method is best illustrated by an example, and a comparison to *arithmetic returns*, which does not utilize a time link. Suppose a $100 portfolio returned +25% in the first quarter (ending value is $125) but lost 20% in the second quarter (ending value is $100). Over the two quarters the return was 0%, and the method of calculating the geometric return would indicate this. However, the arithmetic calculation would simply average the two returns: (25%)(.5) + (20%)(.5) = +2.5%.

Global Equity
Managers who invest in both foreign and domestic equity securities but excludes regional and index funds.

Growth Equity
Managers who invest in companies that are expected to have above average prospects for long-term growth in earnings and profitability.

High Yield
A fixed income investment strategy where the objective is to obtain high current income by investing in lower rated, higher default-risk fixed-income securities. As a result, security selection focuses on credit risk analysis.

Index Fund
A passively managed investment in a diversified portfolio of financial assets designed to mimic the performance of a specific market index.

Interest Rate Risk
The uncertainty in the return on a bond caused by unanticipated changes in its value due to changes in the market interest rate.

Intermediate
A fixed income investment strategy where the objective is to lower interest rate risk by investing only in intermediate-term securities. The average portfolio maturity is typically five to seven years.

Liquidity
In general, liquidity refers to the ease by which a financial asset can be converted into cash. Liquidity is often more narrowly defined as the ability to sell an asset quickly without having to make a substantial price concession.

Liquidity Risk
The risk that there will be insufficient cash to meet the fund's disbursement and expense requirements.

Lost Opportunity Risk
The risk that through inappropriate market timing strategies a fund's portfolio will miss long-run market opportunities.

Manager Search
The selection of specific managers following the manager structure.

Manager Structure
The identification of the type(s) of managers to be selected within each broad class of assets.

Marked to the Market
The daily process of adjusting the value of a portfolio to reflect daily changes in the market prices of the assets held in the portfolio.

Market Risk
See Systematic Risk.

Market Timing
A form of active management that shifts funds between asset classes based on short-term expectations of movements in the capital markets.

Money Markets
Financial markets in which financial assets with a maturity of less than one year are traded.

Passive Management
For a given asset class, the process of buying a diversified portfolio which attempts to duplicate the overall performance of the asset class (i.e. the relevant market index).

Performance Attribution
The identification of the sources of returns for a security or portfolio over a particular time period.

Price-earnings Ratio
A firm's current stock price divided by its earnings per share.

Private Placement
The direct sale of a newly issued security to one or a small number of large institutional investors.

Proxy Voting
A written authorization given by a shareholder to someone else to vote his or her shares at a stockholders annual or special meeting called to elect directors or for some other corporate purpose.

Purchasing Power Risk
The risk that a portfolio will earn a return less than the rate of inflation, i.e., a negative real return.

Real Estate Investment Trust (REIT)
An investment fund whose objective is to hold real estate-related assets, either through mortgages, construction and development loans, or equity interests.

Restatement Third, Trusts (Prudent Investor Rule)
A set of new and more specific standards for the handling of the investment process by fiduciaries. These standards were adopted in 1992 and rely heavily on modern investment theory.

Return On Equity
The earnings per share of a firm divided by the firm's book value per share.

Risk-adjusted Return
The return on an asset or portfolio, modified to explicitly account for the risk of the asset or portfolio.

R-squared (R^2)
Formally called the coefficient of determination, this measures the overall strength or "explanatory power" of a statistical relationship. In general, a higher R^2 means a stronger statistical relationship between the variables which have been estimated, and therefore more confidence in using the estimation for decision-making.

Sharpe Ratio
This statistic is a commonly used measure of risk-adjusted return. It is calculated by subtracting the "risk-free" return (usually 3 Month Treasury Bill) from the portfolio return and dividing the resulting "excess return" by the portfolio's risk level (standard deviation). The result is a measure of return gained per unit of risk taken. The higher the Sharpe ratio, the better the fund's historical risk-adjusted performance.

Small Capitalization
Managers who invest in equities of companies with relatively small capitalization. The cut-off point for small capitalization varies from manager to manager, but on average targets firms with capitalization of $200-$600 million.

Socially-targeted Investment
An investment which is undertaken based upon social, rather than purely financial, guidelines.

Soft Dollars
The portion of a plan's commissions expense incurred in the buying and selling of securities that is allocated through a directed brokerage arrangement for the purpose of acquiring goods or services for the benefit of the plan. In many soft dollar arrangements, the payment scheme is effected through a brokerage affiliate of the investment consultant. Broker-investment consultants servicing smaller plans receive commissions directly from the counseled account. Other soft dollar schemes are effected through brokerages that, while acting as the clearing/transfer agent, also serve as the conduit for the payment of fees between the primary parties to the directed fee arrangement.

Specific Risk
The part of a security’s total risk which is not related to movements in the market and therefore can be diversified away.

Standard Deviation
A statistical measure of portfolio risk. It reflects the average deviation of the observations from their sample mean. Standard deviation is used as an estimate of risk since it measures how wide the range of returns typically is. The wider the typical range of returns, the higher the standard deviation of returns, and the higher the portfolio risk. If returns are normally distributed (i.e. has a bell shaped curve distribution) then approximately 2/3 of the returns would occur within plus or minus one standard deviation from the sample mean.

Strategic Asset Allocation
Rebalancing back to the normal mix at specified time intervals (quarterly) or when established tolerance bands (e.g., + and - 10%) are violated

Systematic Risk
The part of a security’s total risk that is related to movements in the market and therefore cannot be diversified away.

Tactical Asset Allocation
Closely related to a strategy of market timing, this strategy uses certain indicators to make adjustments in the proportions of a portfolio invested in stocks, bonds, and cash.

Term-to-maturity
The time remaining until a bond’s maturity date.

Time-weighted Return
A method of measuring the performance of a portfolio over a particular period of time. It is the cumulative compounded rate of return of the portfolio, calculated on each date that cash flow moves into or out of the portfolio.

Top-down Analysis
An approach to valuing equities which first looks at the economy and overall capital market, then industries, and finally individual firms.

Treynor Ratio
The portfolio's average excess return over a specified period divided by the beta relative to its benchmark over the same timeframe. This is used to measure the excess return per unit of systematic risk taken.

Value Equity
Managers who invest in companies believed to be undervalued or possessing lower than average price/earnings ratios, based on their potential for capital appreciation.

Appendix F

Compendium of Statutes

Sec. 22.25.048. Accounting and investment.

(a) The commissioner of administration shall establish a judicial retirement trust fund for the judicial retirement system in which the assets of the system are deposited and held. The commissioner shall maintain accounts and records for the system.

(b) All income of the judicial retirement fund and all disbursements made from the fund shall be credited or charged, whichever is appropriate, to the following accounts:

(1) an individual account that contains the mandatory contributions collected from a person under AS 22.25.011;

(2) an account that is credited with the contributions of the state court system;

(3) a retirement reserve account; and

(4) an expense account for the judicial retirement system that shall be credited with funds transferred from the account described in (2) of this subsection.

(c) The Alaska Retirement Management Board is the fiduciary of the fund and has the same powers and duties under this section in regard to the judicial retirement trust fund as are provided in AS 37.10.220.

(d) Within one year following retirement, an amount actuarially determined as necessary to pay fully for the benefits to be received by a person under this chapter shall be transferred first from the individual account described in (b)(1) of this section and, after the individual contributions have been exhausted, then from the court system account described in (b)(2) of this section, into the retirement reserve account described in (b)(3) of this section.

(e) The contributions of the court system to the retirement reserve account shall contain the actuarially determined amount necessary to fully fund the pension, death benefits, and other benefits paid under the judicial retirement system to a person under this chapter.

(f) The investment income of the judicial retirement fund shall be allocated in proportion to the balances of assets first to the retired reserve account described in (b)(3) of this section and then to the account described in (b)(2) of this section.

(g) The account described in (b)(4) of this section is charged with all disbursements representing the administrative expenses incurred by the judicial retirement system. Expenditures from this account shall be included in the budget of the governor for each fiscal year.

Sec. 26.05.228. Accounting and investment.

(a) The commissioner of administration shall establish a military retirement trust fund for the system in which the assets of the system are deposited and held. The commissioner shall maintain accounts and records for the system.

(b) All income of the fund and all disbursements made by the fund shall be credited or charged, whichever is appropriate, to the following accounts:

(1) an individual account for each retired member of the system that records the benefits paid under this system to the member or surviving beneficiary;

(2) a separate account for the Department of Military and Veterans' Affairs' contribution to fund the system based on the actuarial requirements of the system as established by the commissioner of administration under this chapter;

(3) an expense account for the system; this account is charged with all disbursements representing administrative expenses incurred by the system; expenditures from this account are included in the governor's budget for each fiscal year.

(c) The Alaska Retirement Management Board is the fiduciary of the fund and has the same powers and duties under this section in regard to the fund as are provided under AS 37.10.220.

Sec. 37.10.071. Investment powers and duties.

(a) In making investments under this section, the fiduciary of a state fund shall

(1) act as official custodian of cash and investments by securing adequate and safe custodial facilities for them;

(2) receive all items of cash and investments;

(3) collect and deposit the principal of and income from owned or acquired investments;

(4) invest and reinvest the assets in accordance with this section;

(5) receive and spend appropriations to cover the cost of the exercise of duties under this section;

(6) exercise the powers of an owner with respect to the assets;

(7) perform all acts, not prohibited by this section, whether or not expressly authorized, that the fiduciary considers necessary or proper in administering the assets;

(8) maintain accounting records in accordance with generally accepted accounting principles;

(9) engage an independent certified public accountant to conduct an annual audit of the financial condition and investment transactions;

(10) enter into and enforce contracts or agreements considered necessary, convenient, or desirable for the investment purposes of this section; and

(11) when choosing to acquire or dispose of investments, secure competitive national or international market rates or prices, or the equivalence of those rates or prices in the judgment of the fiduciary.

(b) Under this section, the fiduciary of a state fund or the fiduciary's designee may

(1) delegate investment, custodial, or depository authority on a discretionary or nondiscretionary basis to officers or employees of the state or to independent firms, banks, financial institutions, or trust companies by designation through appointments, contracts, or letters of authority;

(2) acquire or dispose of investments either directly, indirectly, or through investment pools or trusts, by competitive or negotiated agreements, contracts, or auctions, in public or private markets;

(3) concentrate or diversify investments as the fiduciary considers appropriate to increase the probable total rate of return or to decrease the overall exposure to potentially adverse market value risks;

(4) protect the market value or the rate of return of the investments by entering into forward agreements to buy or sell assets at a future date as a hedge against existing held assets or as a precommitment of future cash flows;

(5) lend assets, under an agreement and for a fee, against deposited collateral of equivalent market value;

(6) borrow assets on a short-term basis, under an agreement and for a fee, against the deposit of collateral consisting of other assets in order to accommodate temporary cash or investment needs;

(7) hold investments in bearer or registered form in the name of the state, a fund, or nominees authorized by the fiduciary;

(8) utilize consultants, advisors, custodians, investment services, and legal counsel for assistance in investment matters on either a continuing or a limited-term basis and with or without compensation;

(9) declare records to be confidential and exempt from AS 40.25.110 and 40.25.120 if the records contain information that discloses the particulars of the business or the affairs of a private enterprise, investor, borrower, advisor, consultant, counsel, or manager.

(c) In exercising investment, custodial, or depository powers or duties under this section, the fiduciary of a state fund shall apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the fund entrusted to the fiduciary. Among beneficiaries of a fund, the fiduciaries shall treat beneficiaries with impartiality.

(d) In exercising investment, custodial, or depository powers or duties under this section, the fiduciary or the fiduciary's designee is liable for a breach of a duty that is assigned or delegated under this section, or under, AS 14.40.255 , 14.40.280(c), 14.40.400(b), AS 37.10.070 , AS 37.14.110 (c), 37.14.160, 37.14.170, or. However, the fiduciary or the designee is not liable for a breach of a duty that has been delegated to another person if the delegation is prudent under the applicable standard of prudence set out in statute or if the duty is assigned by law to another person, except to the extent that the fiduciary or designee [check other statute cites]

(1) knowingly participates in, or knowingly undertakes to conceal, an act or omission of another person knowing that the act or omission is a breach of that person's duties under this chapter;

(2) by failure to comply with this section in the administration of specific responsibilities, enables another person to commit a breach of duty; or

(3) has knowledge of a breach of duty by another person, unless the fiduciary or designee makes reasonable efforts under the circumstances to remedy the breach.

(e) The state shall defend and indemnify the fiduciary or an officer or employee of the state against liability under (d) of this section to the extent that the alleged act or omission was performed in good faith and was prudent under the applicable standard of prudence.

(f) In this section, "fiduciary of a state fund" or "fiduciary" means

(1) the commissioner of revenue for investments under AS 37.10.070;

(2) with respect to the Alaska Retirement Management Board, for investments of the collective funds that it manages and administers,

(A) each trustee who serves on the board of trustees; and

(B) any other person who exercises control or authority with respect to management or disposition of assets for which the board is responsible or who gives investment advice to the board; or

(3) the person or body provided by law to manage the investments for investments not subject to AS 37.10.070.

Sec. 37.10.210. Alaska Retirement Management Board.

(a) The Alaska Retirement Management Board is established in the Department of Revenue. The board's primary mission is to serve as the trustee of the assets of the state's retirement systems, the State of Alaska Supplemental Annuity Plan, and the deferred compensation program for state employees, and the Alaska retiree health care trusts established under AS 39.30.097_. Consistent with standards of prudence, the board has the fiduciary obligation to manage and invest these assets in a manner that is sufficient to meet the liabilities and pension obligations of the systems, plan, program, and trusts. The board may, with the approval of the commissioner of revenue and upon agreement with the responsible fiduciary, manage and invest other state funds so long as the activity does not interfere with the board's primary mission. In making investments, the board shall exercise the powers and duties of a fiduciary of a state fund under AS 37.10.071_.

(b) The Alaska Retirement Management Board consists of nine trustees, as follows:

(1) two members, consisting of the commissioner of administration and the commissioner of revenue;

(2) seven trustees appointed by the governor who meet the eligibility requirements for an Alaska permanent fund dividend and who are professionally credentialed or have recognized competence in investment management, finance, banking, economics, accounting, pension administration, or actuarial analysis as follows:

(A) two trustees who are members of the general public; the trustees appointed under this subparagraph may not hold another state office, position, or employment and may not be members or beneficiaries of a retirement system managed by the board;

(B) one trustee who is employed as a finance officer for a political subdivision participating in either the public employees' retirement system or the teachers' retirement system;

(C) two trustees who are members of the public employees' retirement system, selected from a list of four nominees submitted from among the public employees' retirement system bargaining units;

(D) two trustees who are members of the teachers' retirement system selected from a list of four nominees submitted from among the teachers' retirement system bargaining units;

(E) the lists of the nominees shall be submitted to the governor under (C) and (D) of this paragraph within the time period specified in regulations adopted under AS 37.10.240 (a).

(c) The trustees, other than the two commissioners, shall serve for staggered terms of four years and may be reappointed to the board.

(d) The governor may, by written notice to the trustee, remove an appointed trustee for cause. After an appointed trustee receives written notice of removal, the trustee may not participate in board business and may not be counted for purposes of establishing a quorum.

(e) A vacancy on the board of trustees shall be promptly filled. A person filling a vacancy holds office for the balance of the unexpired term of the person's predecessor. A vacancy on the board does not impair the authority of a quorum of the board to exercise all the powers and perform all the duties of the board.

(f) Five trustees constitute a quorum for the transaction of business and the exercise of the powers and duties of the board.

(g) A trustee may not designate another person to serve on the board in the absence of the trustee.

(h) The board shall provide annual training to its members on the duties and powers of a fiduciary of a state fund and other training as necessary to keep the members of the board educated about pension management and investment.

(i) The board shall elect a trustee to serve as chair and a trustee to serve as vice-chair for one-year terms. A trustee may be reelected to serve additional terms as chair or vice-chair.

Sec. 37.10.215. Attorney general.

The attorney general is the legal counsel for the board and shall advise the board and represent it in a legal proceeding.

Sec. 37.10.220. Powers and duties of the board.

(a) The board shall

(1) hold regular and special meetings at the call of the chair or of at least five members; meetings are open to the public, and the board shall keep a full record of all its proceedings;

(2) after reviewing recommendations from the Department of Revenue, adopt investment policies for each of the funds entrusted to the board;

(3) determine the appropriate investment objectives for the defined benefit plans established under the teachers' retirement system under AS 14.25 and the public employees' retirement system under AS 39.35;

(4) assist in prescribing the policies for the proper operation of the systems and take other actions necessary to carry out the intent and purpose of the systems in accordance with AS 37.10.210 - 37.10.390;

(5) provide a range of investment options and establish the rules by which participants can direct their investments among those options with respect to accounts established under

(A) AS 14.25.340 - 14.25.350 (teachers' retirement system defined contribution individual accounts);

(B) AS 39.30.150 - 39.30.180 (State of Alaska Supplementary Annuity Plan);

(C) AS 39.35.730 - 39.35.750 (public employees' retirement system defined contribution individual accounts); and

(D) AS 39.45.010 - 39.45.060 (public employees' deferred compensation program);

(6) establish the rate of interest that shall be annually credited to each member's individual contribution account in accordance with AS 14.25.145 and AS 39.35.100 and the rate of interest that shall be annually credited to each member's account in the health reimbursement arrangement plan under AS 39.30.300 - 39.30.495; the rate of interest shall be adopted on the basis of the probable effective rate of interest on a long-term basis, and the rate may be changed from time to time;

(7) adopt a contribution surcharge as necessary under AS 39.35.160(c);

(8) coordinate with the retirement system administrator to have an annual actuarial valuation of each retirement system prepared to determine system assets, accrued liabilities, and funding ratios and to certify to the appropriate budgetary authority of each employer in the system

(A) an appropriate contribution rate for normal costs; and

(B) an appropriate contribution rate for liquidating any past service liability; in this subparagraph, the appropriate contribution rate for liquidating the past service liability of the defined benefit retirement plan under AS 14.25.009 – 14.25.220 or the past service liability of the defined benefit retirement plan under AS 39.35.095 – 39.35.680 must be determined by a level percent of pay method based on amortization of the past service liability for a closed term of 25 years;

(9) review actuarial assumptions prepared and certified by a member of the American Academy of Actuaries and conduct experience analyses of the retirement systems not less than once every four years, except for health cost assumptions, which shall be reviewed annually; the results of all actuarial assumptions prepared under this paragraph shall be reviewed and certified by a second member of the American Academy of Actuaries before presentation to the board;

(10) contract for an independent audit of the state's actuary not less than once every four years;

(11) contract for an independent audit of the state's performance consultant not less than once every four years;

(12) obtain an external performance review to evaluate the investment policies of each fund entrusted to the board and report the results of the review to the appropriate fund fiduciary;

(13) by the first day of each regular legislative session, report to the governor, the legislature, and the individual employers participating in the state's retirement systems on the financial condition of the systems in regard to

(A) the valuation of trust fund assets and liabilities;

(B) current investment policies adopted by the board;

(C) a summary of assets held in trust listed by the categories of investment;

(D) the income and expenditures for the previous fiscal year;

(E) the return projections for the next calendar year;

(F) one-year, three-year, five-year, and 10-year investment performance for each of the funds entrusted to the board; and

(G) other statistical data necessary for a proper understanding of the financial status of the systems;

(14) submit quarterly updates of the investment performance reports to the Legislative Budget and Audit Committee;

(15) develop an annual operating budget; and

(16) administer pension forfeitures required under AS 37.10.310 using the procedures of AS 44.62 (Administrative Procedure Act).

(b) The board may

(1) employ outside investment advisors to review investment policies;

(2) enter into an agreement with the fiduciary of another state fund in order to assume the management and investment of those assets;

(3) contract for other services necessary to execute the board's powers and duties;

(4) enter into confidentiality agreements that would exempt records from AS 40.25.110 and 40.25.120 if the records contain information that could affect the value of investment by the board or that could impair the ability of the board to acquire, maintain, or dispose of investments.

(c) Expenses for the board and the operations of the board shall be paid from the retirement fund.

Sec. 37.10.230. Conflicts of interest.

(a) Trustees are subject to the provisions of AS 39.50.

(b) If a trustee acquires, owns, or controls an interest, direct or indirect, in an entity or project in which assets under the control of the board are invested, the trustee shall immediately disclose the interest to the board. The disclosure is a matter of public record and shall be included in the minutes of the board meeting next following the disclosure. The board shall adopt regulations to restrict trustees from having a substantial interest in an entity or project in which assets under the control of the board are invested.

Sec. 37.10.240. Regulations and open meetings.

(a) The board may adopt regulations to implement AS 37.10.210 - 37.10.390. Regulations adopted by the board are not subject to the Administrative Procedure Act (AS 44.62). The board shall adopt regulations required by AS 36.30.015 (f) relating to procurement. The board shall comply with the requirements of AS 44.62.310 - 44.62.319 (Open Meetings Act).

(b) Notwithstanding (a) of this section, a regulation adopted under AS 37.10.210 - 37.10.390 shall be published in the Alaska Administrative Register and Alaska Administrative Code for informational purposes. A regulation adopted under this section shall conform to the style and format requirements of the drafting manual for administrative regulations that is published under AS 44.62.050 .

(c) At least 30 days before the adoption, amendment, or repeal of a regulation under this chapter, the board shall provide notice of the action that is being considered. The notice must include publication in one or more newspapers of general circulation in each judicial district of the state.

(d) A regulation adopted under this chapter takes effect 30 days after adoption by the board unless a later effective date is stated in the regulation.

(e) Notwithstanding the other provisions of this section, a regulation may be adopted, amended, or repealed, effective immediately, as an emergency regulation. For an emergency regulation to be effective the board must find that the immediate adoption, amendment, or repeal of the regulation is necessary. The board shall, within 10 days after adoption of an emergency regulation, give notice of the adoption under (c) of this section. An emergency regulation adopted under this subsection may not remain in effect past the date of the next regular meeting of the board unless the board complies with the procedures set out in this section and adopts the regulation as a permanent regulation.

(f) In this section, "regulation" has the meaning given in AS 44.62.640(a).

Sec. 37.10.250. Compensation of trustees.

Trustees, other than trustees who are employees of the state, a political subdivision of the state, or a school district or regional educational attendance area in the state, receive an honorarium of $400 for each day spent at a meeting of the board or at a meeting of a subcommittee of the board or at a public meeting as a representative of the board, including a day in which a trustee travels to or from a meeting. Trustees who are state employees are entitled to administrative leave for service as a trustee. Trustees who are employees of a political subdivision of the state or a school district or regional educational attendance area in the state are entitled to leave benefits provided by their employers comparable to those provided to state employees for service as a trustee. Trustees are entitled to per diem and travel expenses authorized for boards and commissions under AS 39.20.180.

Sec. 37.10.260. Staff.

(a) The Department of Revenue shall provide staff for the board.

(b) The board may designate a trustee or an officer or employee of the Department of Revenue to be responsible for signing on behalf of the board a deed, contract, or other document that must be executed by or on behalf of the board.

Sec. 37.10.270. Investment advisory council.

(a) The board may appoint an investment advisory council composed of at least three and not more than five members. Members of the council shall possess experience and expertise in financial investments and management of investment portfolios for public, corporate, or union pension benefit funds, foundations, or endowments.

(b) Members of the council serve at the pleasure of the board for staggered terms of three years.

(c) The board shall establish the compensation of members of the council. Members of the council are entitled to per diem and travel expenses authorized for boards and commissions under AS 39.20.180_.

(d) The council shall

(1) review the investments made by the board;

(2) make recommendations to the board concerning the board's investment policies, investment strategy, and investment procedures;

(3) advise the board on selection of performance consultants and on the form and content of annual reports;

(4) provide other advice as requested by the board.

(e) With approval of the board, the council may contract with other state agencies to provide investment advice.

Sec. 37.10.280. Insurance.

The board shall ensure that trusteed assets and its own services are protected. The board may purchase insurance or provide for self-insurance retention in amounts recommended by the commissioner of revenue and approved by the board to cover the acts, including fiduciary acts, errors, and omissions of its board members and agents. Insurance must protect the board and the state from liability to others and from loss of trusteed assets due to the acts or omissions of the trustees.

Sec. 37.10.290. Exemption from taxation.

Except as provided in AS 29.45.030(a) for property acquired through foreclosure or deed in lieu of foreclosure, the board and all properties at any time owned by it, managed by it, or held by it in trust, and the income from those activities, are exempt from all taxes and assessments in the state. All security instruments issued by the board and income from them are exempt from all taxes and assessments in the state, including transfer taxes.

Sec. 37.10.300. Limitations.

The board may not engage in commercial banking activity or private trust activity. The board may not act as a depository or trustee for a private person, association, or corporation. The board may not act as a lender to a private person, association, or corporation of money from any source except state funds under management by the board.

Sec. 37.10.310. Pension forfeiture by public officers convicted of crimes involving corruption.

(a) A public officer, as defined in AS 39.52.960, a legislator, or a person employed as a legislative director, as that term is defined in AS 24.60.990, who is convicted of a federal or state felony offense of bribery, receiving a bribe, perjury, subornation of perjury, scheme to defraud, fraud, mail fraud, misuse of funds, corruption, or tax evasion may not receive a state pension benefit if the offense was committed on or after July 10, 2007 and was in connection with the person's official duties.

(b) Pension benefits and employee contributions that accrue to a person before the date of the person's commission of the offense described in (a) of this section are not diminished or impaired by that subsection.

(c) A state pension benefit under (a) of this section does not include

(1) insurance, voluntary wage reductions, involuntary wage reductions, or supplemental or health benefits under AS 39.30.090 - 39.30.495 or former AS 39.37.145;

(2) member or employee contributions under AS 14.25.050, 14.25.055, 14.25.075, 14.25.340, 14.25.360(a), AS 22.25.011, AS 39.35.160, 39.35.165(f), 39.35.180, 39.35.730, 39.35.760(a), or former AS 39.37.070.

(d) In a pension forfeiture matter under this section, the board may award to a spouse, dependent, or former spouse of the person governed by the limitations in (a) of this section some or all of the amount that, but for the forfeiture under (a) of this section, may otherwise be payable. In determining whether to make an award under this subsection, the board shall consider the totality of circumstances, including

(1) the role, if any, of the person's spouse, dependent, or former spouse in connection with the illegal conduct for which the person was convicted; and

(2) the degree of knowledge, if any, possessed by the person's spouse, dependent, or former spouse in connection with the illegal conduct for which the person was convicted.

Sec. 37.10.390. Definitions.

In AS 37.10.210 - 37.10.390, unless the context otherwise requires,

(1) "board" means the board of trustees of the Alaska Retirement Management Board;

(2) "fund" means the fund or funds composed of the assets of each of the retirement systems administered and managed by the board;

(3) "recognized competence" means a minimum of 10 years' professional experience working or teaching in the field of investment management, finance, banking, economics, accounting, pension administration, or actuarial analysis;

(4) "retirement systems" or "systems" means the teachers' retirement system, the judicial retirement system, the Alaska National Guard and Alaska Naval Militia retirement system, the public employees' retirement system, the State of Alaska Teachers' and Public Employees' Retiree Health Reimbursement Arrangement Plan, and the elected public officers' retirement system under former AS 39.37.

At the request of the Governor, the 28th Legislature appropriated $3,000,000,000 to the PERS and TRS trust funds through SB119 which included the following intent language:

> (d) It is the intent of the legislature that the Alaska Retirement Management Board and the Department of Administration direct the plans' actuary to eliminate the two-year rate-setting lag in the public employees' retirement system and the teachers' retirement system actuarial valuations.
>
> (e) It is the intent of the legislature that the Alaska Retirement Management Board and the Department of Administration direct the plans' actuary to eliminate asset value smoothing from the public employees' retirement system and the teachers' retirement system actuarial valuations.

Sec. 39.30.160. Benefits.

(a) The Department of Administration shall, in accordance with policies prescribed by regulations of the Public Employees Retirement Board, provide to employees for whom special individual employee benefit accounts are established under AS 39.30.150(c) the following benefit options:

(1) supplemental health benefits,

(2) supplemental death benefits,

(3) supplemental disability benefits, and

(4) supplemental dependent care benefits.

(b) An employee may select the types and amounts of supplemental benefits to be purchased with the money deposited in the employee's special individual employee benefit accounts under AS 39.30.150. The selection must be from the benefit options listed in (a) of this section.

(c) [Repealed, sec. 9 ch 55 SLA 1988].

(d) [Repealed, sec. 40 ch 146 SLA 1980].

(e) Regulations adopted by the Public Employees Retirement Board implementing AS 39.30.150 and this section are not subject to AS 44.62 (Administrative Procedure Act).

Sec. 39.30.175. Investment of benefit program receipts.

(a) The Board is the fiduciary of the mandatory receipts, under AS 39.30.150 (a), of the employee benefits program established under AS 39.30.150 - 39.30.180 and has the same powers and duties concerning the management and investment in regard to those receipts as are provided under AS 37.10.220.

(b) The board may provide a range of investment options and permit a participant or beneficiary of the program to exercise control over the assets in the individual employee annuity account established under AS 39.30.150(a). If the board offers investment options, and if a participant or beneficiary exercises control over the assets in the individual employee annuity account,

(1) the participant or beneficiary is not considered a fiduciary for any reason on the basis of exercising that control; and

(2) a person who is otherwise a fiduciary is not liable under this section for any loss, or by reason of any breach, that results from the individual's exercise of control.

(c) If the board is considering entering into a contract or modifying an existing contract concerning the management or investment of the mandatory receipts of the supplemental employee benefits program, the board shall consult with the commissioner of administration before making a decision on the issue.

(d) The board shall develop a contingency plan that addresses the board's response to possible future investment problems.

(e) Except to the extent clearly set out in the terms of the plan document offered by the employer to the employee, the employer is not liable to the employee for investment losses if the prudent investment standard has been met.

Sec. 39.45.020. Administration of program.

(a) The administration of the deferred compensation program for state employees is under the direction of the Department of Administration. A political subdivision coming under the provisions of this chapter shall designate the office or official to administer its program.

(b) Payroll deductions are authorized by this chapter and shall be made by the appropriate payroll officer.

(c) The administrator of a deferred compensation program may contract with a private person for providing consolidated billing and other administrative services. The administrator may contract with an insurance carrier to reimburse the state or political subdivision of the state for the cost of administering the deferred compensation program.

Sec. 39.45.030. Investment authority.

(a) The Alaska Retirement Management Board is authorized, subject to contracts with individual employees, to invest the funds held under a deferred compensation program. The board has the same powers and duties concerning the management and investment in regard to those funds as are provided under AS 37.10.220.

(b) [Repealed, sec. 24 ch 31 SLA 1992].

(c) The board may provide a range of investment options and permit a participant or beneficiary of the program to exercise control over the assets in the individual's account. If the board offers investment options, and if a participant or beneficiary exercises control over the assets in the individual's account,

(1) the participant or beneficiary is not considered a fiduciary for any reason on the basis of exercising that control; and

(2) a person who is otherwise a fiduciary is not liable under this section for any loss, or by reason of any breach, that results from the individual's exercise of control.

(d) If the board is considering entering into a contract or modifying an existing contract concerning the management or investment of funds of the deferred compensation program, the board shall consult with the commissioner of administration before making a decision on the issue.

(e) The board shall develop a contingency plan that addresses the board's response to possible future investment problems.

(f) Except to the extent clearly set out in the terms of the plan document offered by the employer to the employee, the employer is not liable to the employee for investment losses if the prudent investment standard has been met.

(g) In this section, "board" means the Alaska Retirement Management Board.

Sec. 39.52.130. Improper gifts.

(a) A public officer may not solicit, accept, or receive, directly or indirectly, a gift, whether in the form of money, service, loan, travel, entertainment, hospitality, employment, promise, or in any other form, that is a benefit to the officer's personal or financial interests, under circumstances in which it could reasonably be inferred that the gift is intended to influence the performance of official duties, actions, or judgment. A gift from a person required to register as a lobbyist under AS 24.45.041 to a public officer or a public officer's immediate family member is presumed to be intended to influence the performance of official duties, actions, or judgment unless the giver is an immediate family member of the person receiving the gift.

(b) Notice of the receipt by a public officer of a gift with a value in excess of $150, including the name of the giver and a description of the gift and its approximate value, must be provided to the designated supervisor within 30 days after the date of its receipt

(1) if the public officer may take or withhold official action that affects the giver; or

(2) if the gift is connected to the public officer's governmental status.

(c) In accordance with AS 39.52.240, a designated supervisor may request guidance from the attorney general concerning whether acceptance of a particular gift is prohibited.

(d) The restrictions relating to gifts imposed by this section do not apply to a campaign contribution to a candidate for elective office if the contribution complies with laws and regulations governing elections and campaign disclosure.

(e) A public officer who, on behalf of the state, accepts a gift from another government or from an official of another government shall, within 60 days after its receipt, notify the Office of the Governor in writing. The Office of the Governor shall determine the appropriate disposition of the gift. In this subsection, "another government" means a foreign government or the government of the United States, another state, a municipality, or another jurisdiction.

(f) A public officer who knows or reasonably ought to know that a family member has received a gift because of the family member's connection with the public office held by the public officer shall report the receipt of the gift by the family member to the public officer's designated supervisor if the gift would have to be reported under this section if it had been received by the public officer or if receipt of the gift by a public officer would be prohibited under this section.

Sec. 39.52.240. Advisory opinions.

(a) Upon the written request of a designated supervisor or a board or commission, the attorney general shall issue opinions interpreting this chapter. The requester must supply any additional information requested by the attorney general in order to issue the opinion. Within 60 days after receiving a complete request, the attorney general shall issue an advisory opinion on the question.

(b) The attorney general may offer oral advice if delay would cause substantial inconvenience or detriment to the requesting party.

(c) The designated supervisor or a board or commission shall make a written determination based on the advice of the attorney general. If the advice of the attorney general provides more than one way for a public officer to avoid or correct a problem found under AS 39.52.110 - 39.52.190, the designated supervisor or the board or commission shall, after consultation with the officer, determine the alternative that is most appropriate and advise the officer of any action required of the officer to avoid or correct the problem.

(d) A public officer is not liable under this chapter for any action carried out in accordance with a determination made under AS 39.52.210 - 39.52.240 if the officer fully disclosed all relevant facts reasonably necessary to the determination.

(e) The attorney general may reconsider, revoke, or modify an advisory opinion at any time, including upon a showing that material facts were omitted or misstated in the request for the opinion.

(f) A person may rely on an advisory opinion that is currently in effect.

(g) A request for advice made under (a) of this section is confidential.

(h) The attorney general shall post on the Alaska Online Public Notice System (AS 44.62.175), with sufficient deletions to prevent disclosure of the persons whose identities are confidential under (g) of this section, the advisory opinions issued under this section that the attorney general determines to be of major import because of their general applicability to executive branch officers.

Sec. 44.25.020. Duties of department.

The Department of Revenue shall

(1) enforce the tax laws of the state;

(2) collect, account for, have custody of, invest, and manage all state funds and all revenues of the state except revenues incidental to a program of licensing and regulation carried on by another state department, funds managed and invested by the Alaska Retirement Management Board, and as otherwise provided by law;

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ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: ARMB Long Term Returns

ACTION: ______

DATE: September 19, 2014

INFORMATION: X

Annualized Returns	PERS	TRS	Average
30 Year	9.33%	9.70%	9.52%
25 Year	8.23%	8.27%	8.25%
20 Year	8.01%	8.09%	8.05%
15 Year	5.92%	5.95%	5.94%
10 Year	7.26%	7.31%	7.28%
5 Year	12.58%	12.68%	12.63%
3 Year	10.25%	10.29%	10.27%
1 Year	18.56%	18.56%	18.56%

Fiscal Year Returns	PERS	TRS	Average
1985	23.03%	36.65%	29.84%
1986	25.49%	25.45%	25.47%
1987	11.83%	10.73%	11.28%
1988	2.03%	1.84%	1.94%
1989	14.12%	14.19%	14.16%
1990	10.05%	10.15%	10.10%
1991	7.21%	7.05%	7.13%
1992	11.60%	11.17%	11.38%
1993	14.25%	14.38%	14.32%
1994	2.71%	2.65%	2.68%
1995	15.56%	15.90%	15.73%
1996	13.79%	14.44%	14.11%
1997	18.18%	18.11%	18.15%
1998	14.73%	14.83%	14.78%
1999	10.59%	10.67%	10.63%
2000	10.16%	10.25%	10.21%
2001	-5.37%	-5.44%	-5.40%
2002	-5.48%	-5.49%	-5.49%
2003	3.67%	3.68%	3.67%
2004	15.08%	15.09%	15.09%
2005	8.95%	9.01%	8.98%
2006	11.74%	11.78%	11.76%
2007	18.93%	18.97%	18.95%
2008	-3.13%	-3.12%	-3.12%
2009	-20.53%	-20.67%	-20.60%
2010	11.39%	11.58%	11.48%
2011	21.18%	21.36%	21.27%
2012	0.46%	0.51%	0.49%
2013	12.50%	12.59%	12.55%
2014	18.56%	18.56%	18.56%

ALASKA RETIREMENT MANAGEMENT BOARD GOVERNANCE DYNAMICS

Alaska Retirement Management Board
September 19, 2014
Fairbanks, Alaska

Robert M. Johnson
Law Office of Robert M. Johnson

A PROPOSITION AND FACT:

The composition of the board of ARMB has been of great benefit to the beneficiary of the retirement funds.

Prior to creation of ASPIB in 1992, the investment of the retirement funds rested with the Commissioner of Revenue

Scope of duties: “The Prudent Investor Rule,” a memorandum prepared for the Legislative Budget and Audit Committee, dated December 1, 1981, by Debevoise & Plimpton

The retirement funds are financed by contributions from public employers. Contributions to the Permanent Fund come principally from a percentage of the mineral revenues received by the State of Alaska. The Permanent Fund is administered by a separate corporation within the Department of Revenue, and the responsibility for managing its assets is vested in the corporation's board of trustees. The other Funds are managed by the Department of Revenue.

The State legislature has provided a list of permissible investments (and, in some cases, investment objectives) for each Fund. The investment practices of each Fund are further circumscribed by a statutory prudent investor rule which is virtually identical for each Fund. The following formulation was adopted for the Permanent Fund:

> The prudent-man rule shall be applied by the board in the management and investment of Alaska permanent fund assets. The prudent-man rule as applied to investments of the corporation means that in making investments the board shall exercise the judgment and care under the circumstances then prevailing which an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it not in regard to speculation but in regard to the permanent disposition of funds, considering probable safety of capital as well as probable income.[7]

The relevant statutes also contain various provisions requiring diversification of the Funds.

7/ AS § 37.13.120.

ASPIB (per ch 31 SLA 1992)
AS 37.10.210(b)

(b) The board consists of eight trustees. Two of the trustees shall be elected by the members of the public employees' retirement system from the membership of the system. Nominations may be made by the Public Employees' Retirement board of by petitions signed by at least 10 persons eligible to vote in the election. One of the trustees elected from the membership of the public employees' retirement system must be a participant in the supplemental employee benefits program established under AS 39.30.150 – 39.30.180. Two of the trustees shall be elected by the members of the teachers' retirement system from the membership of the system. Nominations may be made by the Teachers' Retirement Board of by petitions signed by at least 10 persons eligible to vote in the election. The governor shall appoint three trustees. At least one of the appointed trustees must represent employers, other than the state, who participate in one of the retirement systems. The appointed trustees must have business and investment experience. The commissioner of revenue serves as a trustee.

ARMB (per ch 9 FSSLA 2005)
AS 37.10.210(b)

(b) The Alaska Retirement Management Board consists of nine trustees, as follows:

(1) two members, consisting of the commissioner of administration and the commissioner of revenue;

(2) seven trustees appointed by the governor who meet the eligibility requirements for an Alaska permanent fund dividend and who are professionally credentialed or have recognized competence in investment management, finance, banking, economics, accounting, pension administration or actuarial analysis as follows:

(A) two trustees who are members of the general public; the trustees appointed under this subparagraph may not hold another state office, position or employment and may not be members or beneficiaries of a retirement system managed by the board;

(B) one trustee who is employed as a finance officer for a political subdivision participating in either the public employees' retirement system or the teachers' retirement system;

(C) two trustees who are members of the public employees' retirement system, selected from a list of four nominees submitted from among the public employees' retirement system bargaining units;

(D) two trustees who are members of the teachers' retirement system selected from a list of four nominees submitted from among the teachers' retirement system bargaining units;

(E) the lists of the nominees shall be submitted to the governor under (C) and (D) of this paragraph within the time period specified in regulations adopted under AS 37.10.240(a).

ARMB (per ch 31 SLA 1992)
AS 37.10.210(a)

(a) There is established the Alaska State Pension Investment Board in the Department of Revenue. The purpose of the board is to provide prudent and productive management and investment of state pension funds and, upon agreement with the commissioner of the department or the fiduciary responsible for the fund, of other state funds.

ARMB (per ch 9 FSSLA 2005)
AS 37.10.210(a)

(a) The Alaska Retirement Management Board is established in the Department of Revenue. The board's primary mission is to serve as the trustee of the assets of the state's retirement systems, the State of Alaska Supplemental Annuity Plan, and the deferred compensation program for state employees, and the Alaska retiree health care trusts established under AS 39.30.097. Consistent with standards of prudence, the board has the fiduciary obligation to manage and invest these assets in a manner that is sufficient to meet the liabilities and pension obligations of the systems, plan, program, and trusts. The board may, with the approval of the commissioner of revenue and upon agreement with the responsible fiduciary, manage and invest other state funds so long as the activity docs not interfere with the board 's primary mission. In making investments, the board shall exercise the powers and duties of a fiduciary of a state fund under AS 37.10.071.

Until creation of ARMB in 2005, the Public Employees Retirement Board and the Teachers Retirement Board

1. Set contribution rates and therefore needed input from DOR or later ASPIB
2. Prior to creation of ASPIB, informally advised on retention and selection of investment managers
3. Following creation of ASPIB, meet at least annually with ASPIB
4. Had potential of cross-over membership with ASPIB

TRB MEMBERS (by appearance in decisions)

RMJ first meeting/decision
82-1 9/29/82 in Kodiak

	Purdy, Harry
	Wells, Dorothy
	Gustafson, Jane
	Olson, Merritt
	Kinney, Steve
84	Arteaga, Charlie [Kinney]
	Larson, Catherine [Gustafson]
85	Covington, Bob [Purdy]
87	Winsor, Stephanie [Larson]
90	McDonagh, Roxie [Olson]
92	Koivisto, Cliff [Covington]
92	Aldrich, Roger [McDonagh]
93	Fowler, Marjorie [Arteaga]
95	Salo, Robb [Koivisto]
95	Hertz, Betty [Aldrich]
97	Arteaga, Charlie [Fowler]
99	Harbo, Gayle [Winsor]
00	Patterson, Jerry [Wells]

PERB MEMBERS (by appearance in decisions)

RMJ first meeting/decision
82-1 3/10/82 in Juneau

	*Wellington, Pat
	Hafling, Steve
	Reed, Morgan
	Henry, Ron
	*Carlson, Marian
83	Humphries, Ben [Henry]
84	Johnson, Marlene [Reed]
84	*Notar, Mary [Carlson]
88	Andrews, Mike [Humphries]
90	Andrews, Eleanor [Johnson]
90	Buckalew, S.J. (Judge) [Hafling]
92	Bader, Gary P. [Eleanor Andrews]
93	Call, David [Mike Andrews]
94	Hallgren, Peter [Call]
96	Hurley, Katie [Buckalew]
97	Parr, Charlie [Hurley]
99	Borg, Chuck [Bader]
00	*Narusch, Frank [Notar]
00	Hoover, Don [Parr]
01	Reed, Bette [Hallgren]

*Elected members.

ASPIB's original group of trustees:

Gail Schubert

Darryl Rexwinkle, Commissioner of Revenue

Bill Corbus

Ross Kinney

Pat Wellington

Gary Bader

Merritt Olsen

Roxy McDonaugh

Some themes common to PERB, TRB, and ASPIB joint meetings (1992-2005)

1. Differences between actuarial assumptions and investment projections
2. The role of health care costs
3. The Mercer issue

The remarkable capacity of ARMB, ASPIB, TRB and PERB to perform without actionable conflict or long-lasting acrimony notwithstanding the differing interests of the board members

But remember, as well, the start-up difficulties with the creation of ARMB

(1) DB plan vs DC plan differences of philosophy
(2) Control by line agencies over board desires
(3) The role of personalities
(4) The role of respect (aka turf maintenance)
(5) Who contracts for actuary
(6) Who resolves the "consult" or "coordinate" issues

Compare with CalPERS, or Louisiana, or West Virginia experiences

The legislature has permitted and effectively encouraged different interests and roles of members of ARMB, ASPIB, TRB and PERB

If such differences are legislatively created, can there be a "conflict in interests"?

In evaluating “conflicts” it is necessary to consider both the recognized disparate interests as well as conflicts addressed by the conflict-of-interest laws

Duty of loyalty to the board

Duty as a fiduciary

BOARD GOVERNANCE

The wisdom of collective discussion and deliberation: enhanced by different perspectives

The prospect of building the record in decision making

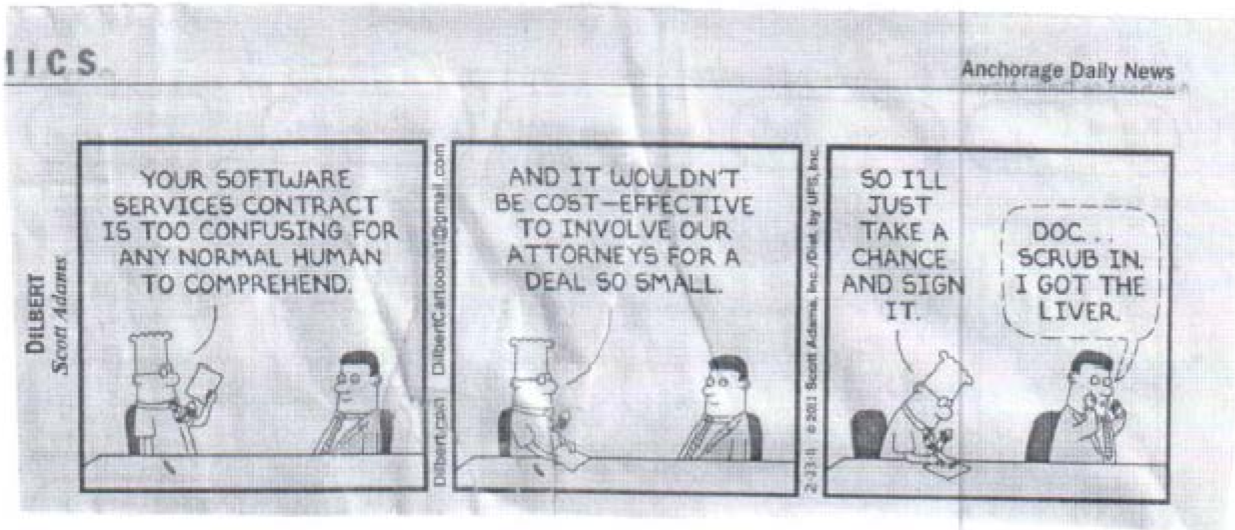
ARMB’s sound governance is enhanced by statutes:

DOR as staff (AS 37.10.260)

IAC (AS 37.10.270)

Self-education (AS 37.10.40(h))

Use of consultants (AS 37.10.220(b) and AS 37.10.215)



ICS
Anchorage Daily News
DILBERT
Scott Adams
YOUR SOFTWARE SERVICES CONTRACT IS TOO CONFUSING FOR ANY NORMAL HUMAN TO COMPREHEND.
AND IT WOULDN'T BE COST-EFFECTIVE TO INVOLVE OUR ATTORNEYS FOR A DEAL SO SMALL.
SO I'LL JUST TAKE A CHANCE AND SIGN IT.
DOC... SCRUB IN. I GOT THE LIVER.

ALASKA RETIREMENT MANAGEMENT BOARD
M E M O R A N D U M

To: ARMB Trustees
From: Judy Hall
Date: September 8, 2014
Subject: Financial Disclosures

As required by AS 37.10.230 and Alaska Retirement Management Board policy relating to investment conduct and reporting, trustees and staff must disclose certain financial interests. We are hereby submitting to you a list of disclosures for individual transactions made by trustees and staff.

Name	Position Title	Disclosure Type	Disclosure Date
Victor Djajalie	Investment Officer	Equities	8/8/14
Gary Bader	Chief Investment Officer	Equities	8/7/14 8/26/14 8/27/14
Bob Mitchell	Investment Officer	Equities	7/30/14 8/11/14
Scott Jones	Comptroller	Equities	8/5/14
Pamela Leary	Treasury Division Director	Equities	6/30/14

Alaska Retirement Management Board
2014 Meeting Calendar

September 17 – Wednesday	Committee Meetings: Audit Budget Real Assets Salary Review
September 18-19 Thursday-Friday Fairbanks	*Audit Results/Assets – KPMG *Approve Budget *Performance Measurement – 2nd Quarter *Real Estate Annual Plan *Real Estate Evaluation – Townsend Group *Manager Presentations
October 16-17 New York City	Education Conference
October ___	Audit Committee
December 3 – Wednesday	Committee Meetings: Audit Legislative
December 4-5 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement – 3rd Quarter Manager Review (Questionnaire) Private Equity Review *Manager Presentations

Alaska Retirement Management Board
2015 Meeting Calendar

February 11 – Wednesday	Committee Meetings: Audit Legislative
February 12-13 Thursday-Friday Juneau	*Review Capital Market Assumptions *Manager Presentations
April 22 – Wednesday	Committee Meetings: Legislative
April 23-24 Thursday-Friday Anchorage	*Adopt Asset Allocation *Performance Measurement – 4th Quarter *Buck Consulting Actuary Report *GRS Actuary Certification *Review Private Equity Annual Plan *Manager Presentations
June 17 – Wednesday	Committee Meetings: Audit
June 18-19 Thursday-Friday Anchorage	*Final Actuary Report/Adopt Valuation/Contribution Rates *Performance Measurement – 1st Quarter *Manager Presentations
September 23 – Wednesday	Committee Meetings: Audit Budget Real Assets Salary Review
September 24-25 Thursday-Friday Fairbanks	*Audit Results/Assets – KPMG *Approve Budget *Performance Measurement – 2nd Quarter *Real Estate Annual Plan *Real Estate Evaluation – Townsend Group *Manager Presentations
October _____ New York City	Education Conference
October ___	Audit Committee
December 2 – Wednesday	Committee Meetings: Audit Legislative
December 3-4 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement – 3rd Quarter Manager Review (Questionnaire) Private Equity Review *Manager Presentations