
ALASKA RETIREMENT MANAGEMENT BOARD

BOARD OF TRUSTEES MEETING

June 20-21, 2013

*Kenai-Denali Room
Marriott Anchorage
Downtown
820 West 7th Avenue
Anchorage, Alaska
907 279-8000*

Thursday, June 20, 2013

- 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 - April 18-19, 2013

- VII. 9:10 Reports
 - 1. Chair Report, *Gail Schubert*
 - 2. Committee Reports
 - A. Audit Committee, *Kris Erchinger, Acting Chair*
 - B. DC Plan Committee, *Sam Trivette, Chair*
 - C. IAC Evaluation Committee
 - D. Legislative Committee, *Gail Schubert, Chair*
 - 3. Retirement & Benefits Division Report
 - A. Buck Consulting Invoices (informational)
 - B. Membership Statistics
 - C. DRB Update
 - Jim Puckett, Director, Division of Retirement & Benefits*
 - 4. Treasury Division Report
Deputy Commissioner Angela Rodell
 - 5. CIO Report, *Gary Bader, Chief Investment Officer*
- 9:40-10:00 6. Fund Financial Presentation
Pamela Leary, Comptroller, DOR
Lee Hullinger, CFO, Division of Retirement & Benefits
- 10:05-10:45 7. Actuarial Audit Report
Kim Nicholl and Matthew Strom
The Segal Group

*10:45 - Break
10 Minutes*

10:55-11:25 8. Abbott Capital Management
Thaddeus Gray and Tim Maloney

11:30-12:00 9. Pathway Capital Management
Jim Chambliss and Canyon Lew

Lunch - 12:00 - 1:15 pm

1:15 10. Actuarial Review

1:15-1:45 A. Judicial Retirement System
National Guard Naval Militia Retirement Systems
Certification of Actuarial Valuation Review - FY12
Leslie Thompson, Gabriel Roeder Smith

1:50-2:20 B. Actuarial Valuation - FY12
Judicial Retirement System
National Guard Naval Militia System
*Dave Slishinsky and Christopher Hulla
Buck Consultants*

2:25-3:15 C. Board Discussion/Questions

*Action: Board Acceptance of GRS Certification for
FY12 PERS/TRS, DC Plan, NGNMRS, JRS Valuations*

*Action: Board Acceptance of FY 12 Buck Valuations for
PERS/TRS, DC Plan, NGNMRS, JRS*

*3:15 - Break
10 Minutes*

- 3:25-3:55 11. Health Plan Update
Mike Barnhill, Deputy Commissioner, Dept of Administration
Jim Puckett, Director, Division of Retirement & Benefits
- 4:00-4:20 12. Contribution Rates for FY2015
- Action: Relating to FY15 PERS Contribution Rate
Resolution 2013-08
- Action: Relating to FY15 PERS RMMI Contribution Rate
and FY15 PERS ODD Contribution Rate
Resolutions 2013-09 and 2013-10
- Action: Relating to FY15 TRS Contribution Rate
Resolution 2013-11
- Action: Relating to FY15 TRS RMMI Contribution Rate
and FY15 TRS ODD Contribution Rate
Resolutions 2013-12 and 2013-13
- Action: Relating to FY15 NGNMRS Contribution Amount
Resolution 2013-14
- Information: JRS Contribution
Mike Barnhill, Deputy Commissioner, Dept of Administration
Jim Puckett, Director, Division of Retirement & Benefits
- 4:20-4:40 13. Equity Yield Strategy
Gary Bader, Chief Investment Officer
- 4:40-5:00 14. Investment Actions
- A. EIG Fund XVI
- B. Review Actuary
- Gary Bader, Chief Investment Officer*

End of Day

Friday, June 21, 2013

9:00 Call to Order

9:00-10:00 15. Performance Measurement - 1st Quarter
*Michael O'Leary and Paul Erlendson,
Callan Associates, Inc.*

10:05-10:35 16. Mondrian Investment Partners
Todd Rittenhouse & Ormala Krishnan

*10:35 - Break
10 Minutes*

10:45-11:15 17. Schroders Investment Management
James MacMillan and Matthew Dobbs

11:15-12:00 18. Portfolio Risk Analysis
Kimberly Mounts and Marco Ricciardulli, MAP

Lunch - 12:00 - 1:15 pm

1:15-1:20 19. Investment Advisory Council Finalists
Sam Trivette, Chair, Evaluation Committee

1:25-1:55 A. Gary Dokes

2:00-2:30 B. Jeffrey Sharpe

2:35-3:05 C. Robert Shaw

*3:05 - Break
10 Minutes*

3:15-3:45 D. Robert Storer

3:50 E. Board Discussion and Appointment

VIII. Unfinished Business

1. *Calendar, Judy Hall, Liaison Officer*
Action: Adopt Proposed 2014 Calendar
2. *Disclosure Report, 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:
Centennial Hall
Egan Room
Juneau, Alaska

MINUTES OF
April 18-19, 2013

Wednesday, April 18, 2013

CALL TO ORDER

CHAIR GAIL SCHUBERT called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:00 a.m.

ROLL CALL

Nine 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
Commissioner Becky Hultberg
Commissioner Bryan Butcher
Martin Pihl
Tom Brice
Sandi Ryan

Board Members Absent

None

Investment Advisory Council Members Present

Dr. William Jennings

Investment Advisory Council Members Absent

Dr. Jerrold Mitchell
George Wilson

Department of Revenue Staff Present

Angela Rodell, Deputy Commissioner
Gary M. Bader, Chief Investment Officer
Pamela Leary, State Comptroller
Bob Mitchell, State Investment Officer
Zachary Hanna, State Investment Officer
Emily Peyton, Assistant Investment Officer
Kayla Wisner, Department of Revenue staff
Tim Shockley, Department of Revenue staff
Sharon Gill, Department of Revenue staff
Michelle Vuille, Department of Revenue staff
Judy Hall, Board Liaison

Department of Revenue Staff Absent

Steve Sikes, State Investment Officer
Scott Jones, Assistant State Comptroller

Department of Administration Staff Present

Mike Barnhill, Deputy Commissioner
Jim Puckett, Director, Division of Retirement & Benefits
Lee Hullinger, CFO, Division of Retirement & Benefits

Consultants, Invited Participants, and Others Present

Robert Johnson, ARMB legal counsel
Michael O'Leary, Callan Associates, Inc.
Paul Erlendson, Callan Associates, Inc.
Leslie Thompson, Gabriel Roeder Smith
Dana Woolfrey, Gabriel Roeder Smith & Company
David Slishinsky, Buck Consultants
Chris Hulla, Buck Consultants
Lee James, Buck Consultants
Monica DeGraff, Buck Consultants
Gail Levenson, Buck Consultants
Bob Ferraro, Buck Consultants
Chris Cook, Guggenheim Investments
James Pass, Guggenheim Investments
Joseph Carieri, Western Asset Management
Robert Amodeo, Western Asset Management
Lisa Terrell, State Street

PUBLIC MEETING NOTICE

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

APPROVAL OF AGENDA

MS. HARBO moved to approve the agenda. VICE-CHAIR TRIVETTE seconded the motion. MR. PIHL noted that the Board may need more than one hour to review the Buck presentations. With that note, the agenda was approved.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

None.

APPROVAL OF MINUTES

MR. BRICE moved to approve the minutes of the February 12-13, 2013 and March 15, 2013 meetings as presented. MR. PIHL seconded the motion.

VICE-CHAIR TRIVETTE made note of several corrections:

Page 6: A word was left out where Ms. Harbo inquired about the progress on the actuarial audit; Ms. Harbo referred specifically to the replication audit.

Page 15, third to the last line: should have said “every other asset category”.

Page 20, Line 1: “along with the Chair” is not necessary since all present were listed.

The minutes were approved as revised.

REPORTS

1. CHAIR REPORT

CHAIR SCHUBERT reported that they had sent the letter to the legislature on the funding request as requested by the Board, and that she testified before the Senate Finance Committee on the funding request. The letter, testimony, and supplements were also sent to the Legislative Committee.

2. COMMITTEE REPORTS

CHAIR SCHUBERT reported that the only committee that had met was the Legislative Committee, which met on April 17 and discussed actuarial services. The Legislative Committee decided that the full Board should have a work session with the actuary, and they are planning to schedule that when time permits. They also decided to start the planning process for legislative requests earlier this year, and are working to schedule a June meeting for that purpose.

MS. ERCHINGER requested that the Board make sure to discuss, as previously requested, the relationship between the Board and the actuaries, and the role of the Board, if any, in hiring the

actuaries. VICE-CHAIR TRIVETTE noted that they had discussed on the previous day needing to review with ROBERT JOHNSON the statute about who has what responsibilities.

3. RETIREMENT & BENEFITS DIVISION REPORT

MR. PUCKETT introduced the new CFO, LEE HULLINGER. MR. HULLINGER and his family moved from Salem, Oregon, where he recently served as CFO of Healthcare of Oregon and previously was CFO of Oregon State Hospital.

A. Legislative Update

MR. PUCKETT gave a legislative update, saving the bill of greatest interest to the ARM Board for COMMISSIONER HULTBERG to discuss.

- There were two companion bills dealing with pharmacy audits, which would have had minimal impact on the retiree health plan; one of them got into committee and has sat there since then.
- SB 30, the defined benefit/defined contribution choice, got into the State Affairs Committee, then did not move.
- SB 65, an update to Alaska trust law which would have had minimal impact to the Division, passed through the legislature and was sent to the Governor. This bill will strengthen current statutes that already protect retirement assets from assignment by creditors. MR. PUCKETT stated that they will do internal review of the processes of disbursing money to beneficiaries to make sure they are compliant with the changes in this bill.
- HB 116, which will allow police officers and firefighters to use some of their military service to purchase eligibility for retiree health plans, will also have minimal impact to the Division; MR. PUCKETT did not specify its disposition, but stated that the indebtedness created by it would be paid by the member.
- HB 124 would have changed the retiree health plan to offer coverage for dependents up to age 26, adding a cost of \$159 per member per month. It got into the House State Affairs Committee, and hasn't moved since.
- HB 152, which would have changed the method by which termination costs are calculated, got into one committee and hasn't moved in the past session.
- Companion bills HB 174 and SB 48 would exempt three communities, which had a drop of 25 percent or more in their populations between 2000 and 2010, from the 2008 salary floor. It made it to a second committee, but hasn't moved from there.

COMMISSIONER HULTBERG gave a briefing on SB 90 and companion bill HB 196, which would have rolled all school district employees into the Department's active health plan, adding about 47,000 new members to the existing 16,400. This bill would result in cost savings for many, but not all, school districts, but it was introduced very late in the session, when there was only about a month left. COMMISSIONER HULTBERG stated that this insurance pooling has several significant benefits, such as the ability to lower administrative costs by achieving scale, which also leads to better negotiating ability with providers; the ability to add new services that might not otherwise be possible, like a data warehouse and a transparency tool to help people research the cost of medical procedures; and the ability to ensure that care is appropriately managed for these employees who will be inherited into the state retiree plans.

These bills ended up in Senate Finance and in House Labor and Commerce, where the committee chairs expressed an interest in working on them over the interim.

COMMISSIONER HULTBERG stated that ARMB did not take an official position during this legislative session on SB 90 and HB 196, but did speak to the potential benefits of insurance pooling and will continue to do so next year. COMMISSIONER HULTBERG added that there will be significant resistance from some of the stakeholder groups concerned about losing local control, and from trusts and organizations that currently provide insurance to some of these groups, and she expects to see more discussion of these bills over the interim and during the next legislative session.

MR. PIHL asked if a fiscal note had been prepared; COMMISSIONER HULTBERG stated that there were three fiscal notes associated with it, but they were difficult to understand, and she suggests the board ask Deputy Commissioner MIKE BARNHILL to explain them. COMMISSIONER HULTBERG explained that essentially, the ARMB would bill the school districts the benefit credit, which is generally lower than the benefit credit most districts are currently paying, and the school districts would be required to have their employees as part of the ARMB plan. MR. PIHL asked whether the money would flow through the retirement system, and COMMISSIONER HULTBERG replied that it would not.

CHAIR SCHUBERT asked whether COMMISSIONER HULTBERG's department has seen any requests by beneficiaries for medical procedures outside of Alaska; COMMISSIONER HULTBERG replied that they do receive those requests, and enhancing travel benefits is on their long-term list of things to do. The travel benefit now only applies to surgical procedures, not diagnostic procedures, and does not allow benefits for someone to accompany the beneficiary. COMMISSIONER HULTBERG stated that they have issued an RFP for a new third-party administrator, and they are currently reviewing the proposals that have been submitted.

MR. PIHL noted that when the travel benefit is extended, they should make sure that the payment would be based on the cost of a procedure Outside, not in Alaska, as he knows of a workers' comp case in which the Alaska schedule was charged even though the work was done in Seattle. COMMISSIONER HULTBERG remarked that before the benefit is extended, they have to figure out how to demonstrate that there would be a savings in order to approve the travel.

MR. BRICE asked who establishes the benefit levels for retirees; COMMISSIONER HULTBERG

replied that she is the plan administrator, but much of the responsibility is delegated to JIM PUCKETT, and retiree organizations such as RPEA provide input through an informal process of meetings. COMMISSIONER HULTBERG added that they are working on establishing a Retiree Plan B, a different, stand-alone plan that retirees could elect into that would offer some of the benefits people ask for while giving administrators an enhanced ability to manage costs.

At the request of MS. HARBO, COMMISSIONER HULTBERG reviewed the four components of the RFPs issued for health insurance: the PMB, or pharmacy benefit manager; wellness; claims administration, traditional TPA (third party administrator); and dental network.

COMMISSIONER HULTBERG noted that dental network is a component which they don't currently have because there haven't been any dental networks in Alaska, but there are now, so they might be able to get some savings in that area. COMMISSIONER HULTBERG remarked that other states that broke their RFPs apart got different vendors bidding on different parts, which a few did on this one, but most of the vendors bid on the whole package. The department hopes to make a decision in May.

4. TREASURY DIVISION REPORT

Department of Revenue Deputy Commissioner ANGELA RODELL reported that Moody's had just released their new criteria for how they are going to evaluate states' general obligation ratings specific to adjusting the pension data. They will now discount at the taxable bond rate, currently 5.67 percent, as opposed to the current assumption of 8 percent. Also, they are doing away with asset smoothing, and will be reporting at fair or market value as of the reporting date. Alaska is rated AAA by Moody's, and the new criteria are not expected to change Alaska's rating, but will make it look different. MS. RODELL stated that she expects Moody's to publish statistics about how states rank, and when that information is released, she will bring it to the board.

5. CHIEF INVESTMENT OFFICER REPORT

Chief Investment Officer GARY BADER introduced a new staff member, EMILY PEYTON, who will work on reporting and operations within the portfolio unit and corporate bond research. Emily is a graduate of Juneau-Douglas High School and holds a bachelor's degree in Russian and mathematics from University of South Carolina.

MR. BADER reported transferring some funds among the various retirement accounts to bring them closer to the asset allocations approved by the Board, and a transfer of \$36 million from Lord Abbett Small Cap Fund to the SSgA Russell 2000 Value fund.

MR. BADER responded to an inquiry from MS. ERCHINGER about liquidity in the fund with a chart showing calculation of contributions plus earnings minus benefits of the PERS and TRS retirement trust, which shows that there is sufficient liquidity to proceed with the asset classes that are available to the Board at this time. MR. BADER noted that this is only an initial response, with more to come later. Buck Consultants has been asked to provide additional information on this as it relates to the defined contribution plans, which provide a lot of liquidity to the system because many of the benefits that will be paid out of those plans won't be for several years.

MR. BADER reported that the Board has received a communication from the public advocate for New York City and the California treasurer urging the ARMB to divest from companies that produce military-grade assault weapons and large ammunition clips.

MR. BADER brought before the Board a request to approve the ownership transfer of Victory Capital from KeyCorp to Crestview Partners. It will not change any of the investment team at Victory Capital, and MR. JOHNSON has looked at the agreement and found no problems.

MS. HARBO moved to approve the transfer of ownership. VICE-CHAIR TRIVETTE seconded the motion.

The motion carried unanimously.

MR. BADER reported two rebalancing efforts that took place on March 18th and March 25th to be closer to the Board's asset allocations.

MR. BADER informed the Board that Lord Abbett intends to change their small cap fund, which had a performance beneath the Russell 2000 index, into a small mid cap fund. The ARMB has elected not to continue into the small mid cap fund, and Lord Abbett has agreed to open up a small large cap fund which has 10-year returns well in excess of the Russell 2000 growth. This fund is closed to new investors, but Lord Abbett has agreed to open it for this board and to absorb all commission costs involved in the transfer.

MR. BADER reported that they sold \$75 million of intermediate treasury bonds and invested it in the BlackRock ACWI Index Fund.

In response to a request from COMMISSIONER HULTBERG for a report on fees paid by the retirement system, MR. BADER explained that the report in the packet does not include defined contribution fees, which are mostly borne by the participant. MR. BADER urged board members to read the footnotes, which reveal that there are several levels of fees that one could go down to, many of which are embedded in the returns of the managers.

MS. HARBO asked whether, when the Board gets a budget, they also get a list of the fees; MR. BADER replied that they do get a list of fees, but not of the embedded fees.

MS. ERCHINGER asked if the liquidity schedule includes both the DB and DC plan, and MR. BADER replied that it only includes the DB plan.

6. FUND FINANCIAL REPORT

State Comptroller PAMELA LEARY commented that she was happy to have the meeting in Juneau so that some of the accounting staff could attend. MS. LEARY introduced KAYLA WISNER, TIM SHOCKLEY, SHARON GILL, and MICHELLE VUILLE, and noted that LISA TERRELL from State Street is also in the audience.

MS. LEARY went over the fund financial report for the eight-month period ending February 28, 2013. Ending invested assets for PERS was at \$12.7 billion; TRS, \$5.2 billion; Judicial Retirement System, \$138 million; and National Guard/Naval Militia, \$34 million. For participant-directed plans, the Supplemental Annuity Plan was at \$2.8 billion, and the Deferred Compensation Plan was at \$664 million at the end of February. The total for all of the DB and DC plans is \$21.7 billion. MS. LEARY noted that the Defined Benefit Trust plans have all had a net withdrawal over the past eight months, whereas most other plans have had net contributions during that period.

MS. LEARY noted that page 3 of the report shows graphically what is happening with the PERS retirement plan, and all the numbers are well within the bands. Short-term fixed income is slightly on the lower end of the spectrum, domestic equity is higher, and absolute return is a little lower, a theme which goes through all of the different plans.

MS. LEARY pointed out that pages 10 through 14 show the manager breakdown of all of the assets for the month of February, and page 11 shows a new fund, the ARM Board Equity Yield Strategy, which just got invested in February. MS. LEARY also noted that in response to a request from a board member, they have added the monthly increase in the net assets and the amount due to income for the monthly results for February. She added that that information couldn't be fit in for every month, but the plans are available on the website.

MR. PIHL asked about the 9.39 percent return. MS. LEARY replied that as of February, the change in invested assets was 9.39 percent, and as of the end of April it was 10.97 percent for the whole plan, with an investment income increase from 8.89 percent to 10.75 percent at the end of March.

LEE HULLINGER, the new Chief Financial Officer for the Division of Retirement and Benefits, presented a supplemental report to the financial report presented by the Treasury Division. The DRB report presented by MR. HULLINGER breaks out the third column from the left in the Treasury's report, labeled "Net Contributions/Withdrawals", into contributions and expenditures.

Page 1 of Mr. Hullinger's report shows that during the eight-month period ending February 28, 2013, the fund has received almost \$644 million in contributions from employers and members. With legislative relief and other income, this comes to over \$1.25 billion in total contributions so far this fiscal year.

MR. HULLINGER explained that "other income" for the various healthcare trust funds is primarily Medicare reimbursements received from the retiree drug subsidy program.

MR. HULLINGER pointed out that of the \$970 million paid out in benefits so far this year, 68 percent is defined benefit pension payments to retirees in the PERS, TRS, and JRS plans, while 32 percent was spent to provide medical care for those retirees and their dependents.

MR. HULLINGER stated that total administrative expenses so far this year come to \$48.6 million, about 11 percent more than the same period last year. Of these expenses, 43 percent were DRB operating expenses and 57 percent were Division of Treasury and investment-related expenses paid

out by these funds.

MR. HULLINGER stated that page 2 shows \$81 million in contributions received during the month of February and \$117 million in benefits paid out; they also processed over \$19 million in refunds and disbursements during February.

MS. HARBO asked if the approximately \$15 million in refunds meant that that much had been refunded to DC people who have totally withdrawn from the system; MR. PUCKETT replied that that is correct.

VICE-CHAIR TRIVETTE noted that the Judicial Retirement System seems to be having trouble with medical, and asked whether that is ongoing or has been high in the last eight months. MR. PUCKETT replied that it has not been a serious issue, but he will check into it. COMMISSIONER HULTBERG added that the claims spending on the retiree side is only up about 3 percent compared to this time last year, and while they would look into the JRS plan, the trend for the Retiree Plan is actually pretty good this year.

MS. ERCHINGER thanked MR. HULLINGER for the deeper look at administrative expenses and for the breakdown between the Department of Administration and Revenue, commenting that this information is helpful.

7. PRIVATE EQUITY TACTICAL PLAN

State Investment Officer ZACHARY HANNA stated that his presentation was part of the annual review and planning cycle for the ARMB's investments in private equity. The more detailed written plan was included in the meeting packet. Abbott Capital Management, Pathway Capital Management, and Callan Associates, Inc., had already reviewed the tactical plan and recommendations.

MR. HANNA said the ARMB's return expectation for private equity is 350 basis points over the Russell 3000 Index. MR. HANNA explained that the private market is appealing because there are many opportunities, and private companies are generally less efficiently priced and operated than public companies, which creates an opportunity for private equity groups to improve efficiency and then sell the companies at higher valuations. The less positive characteristics of private equity include illiquidity, high fees, potential for high leverage, issues with portfolio transparency and valuation, and incomplete data and benchmarks.

MR. HANNA explained the structure of private equity investments and the usual pattern of cash flow, noting that there are three primary private equity strategies: venture capital funds, buyout funds, and special situation funds. Manager selection is critical, because access and careful due diligence is required, and diversification is important because private equity can be cyclical.

MR. HANNA stated that the fundraising in the private equity market is now roughly half of what it was during the peak years, as the peak was not sustainable. Fundraising has now become more rational and more friendly to limited partnerships. The overall level of investing activity has

decreased since 2011, and the overhang of uninvested capital from the peak fundraising years is declining significantly. MR. HANNA showed charts breaking down the main sources of liquidity for private equity, with the M&A market the largest at 70 percent. The second largest source is IPOs, which decreased in 2012 largely due to the slow European markets, and third is recapitalizations, which reached an all-time high of \$64 billion for 2012.

MR. HANNA stated that the ARM Board and its advisors have built a high-quality, well-diversified portfolio which has performed in the top quartile in most of the past ten years. The internal rate of return since inception is 9.4 percent, comparing favorably with the public market equivalent return of 4.9 percent for the Russell 3000. MR. HANNA stated that the Alaska retirement system is worth \$600 million more than it would have been if only invested in the public equity market. MR. HANNA showed that the private equity portfolio is diversified by strategy, industry, geography, and by investment stage.

MR. HANNA stated that the commitment target for 2012 was \$335 million, and during the year \$268.1 million of that was committed to 26 partnerships. Commitments to date for 2013 are on pace, with \$77 million committed to six partnerships so far. The outlook for private equity is expected to continue to improve in 2013. The IPO market is expected to stabilize further, and credit markets should remain open. The investment base should be measured due to increased competition for deals and relatively high prices. Fundraising is expected to recover modestly, since general partners have been returning capital and limited partner allocation issues have lessened.

For the 2013 tactical plan, MR. HANNA said staff was recommending a commitment target of \$355 million — \$145 million for Abbott, \$125 million for Pathway, and \$85 million for direct partnership investments — with a gradual increase in these totals over time. Based on the projected commitment pacing, private equity should move to its long-term allocation target of 9 percent over the 10-year planning cycle; however, it is likely to drop below its target over the mid term.

MR. BRICE asked if there was a reason why they didn't hit their target last year, and MR. HANNA replied that the long-term target and short-term targets differ, and they had been overallocated in private equity, which resulted in a lower level of commitments last year, but they think they'll hit the target this year.

COMMISSIONER HULTBERG asked about the 19.4 percent that is invested in Europe and the effect of the economic difficulties there. MR. HANNA replied that that percentage has probably already come down a little, and there has been some contraction in that segment of the portfolio, but the distressed market in Europe has been expected to pick up since 2008, and a lot of funds have been raised to try to address that opportunity.

MR. PIHL moved that the Alaska Retirement Management Board adopt Resolution 2013-03 approving the 2013 annual tactical plan for private equity investments. VICE-CHAIR TRIVETTE seconded the motion.

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

CHAIR SCHUBERT recessed the meeting from 10:18 a.m. to 10:33 a.m.

8. ACTIVE/PASSIVE INVESTMENT

Chief Investment Officer GARY BADER gave a presentation on the ongoing debate over active versus passive investment management, which he said comes up about every two and a half years on the ARM Board. MR. BADER stated that he prefers to avoid the term “active VERSUS passive” because both approaches have merit and the ARMB utilizes both approaches; he views them as complementary, not mutually exclusive. While the presentation focuses on active management, he reminds the Board that they have over \$3.6 billion invested passively, with almost 60 percent of the large cap investment pool passively invested.

MR. BADER began by explaining the difference between price-weighted and cap-weighted indexes, stating that the use of a capitalization-weighted index is often justified by the central conclusion of modern portfolio theory that the optimal investment strategy for any investor is to hold the capitalization-weighted portfolio of all assets. A passive investment strategy is one in which the investor invests in accordance with a predetermined strategy, usually to mimic the performance of an index such as the S&P 500, which is a cap-weighted index. Active management is the strategy where the manager makes specific investments with the goal of outperforming an investment benchmark index over the long run. MR. BADER discussed theories on efficiency of financial markets and whether active management strategies can consistently beat passive investment, then turned the presentation over to MICHAEL O’LEARY.

MR. O’LEARY spoke about his perspective on the issue of passive and active management, and the results of his analysis of managers in the Callan database. MR. O’LEARY began by explaining that the study focused on groups of managers by style: growth-oriented or value-oriented, large cap or small cap, and some with no identifiable style. The analysis looked at the managers over three-year periods, examining how they did relative to an appropriate market benchmark, and whether more of them did better by enough to overcome their fees. MR. O’LEARY stated that they have always believed that in the most efficient sectors of the market, passive management should be a big part of the portfolio, so they sought to find out whether there are certain areas of investment where active management is better.

MR. O’LEARY discussed the large cap broad equity style of management versus the S&P 500; he showed a graph demonstrating that pre-fee returns have been sometimes above and sometimes below zero, but the average has been consistently close to zero. MR. O’LEARY pointed out that a fund would have to be in the 45th percentile to cover its fees at 40 basis points, which means that a fund would be better off buying the index for 55 percent of those three-year periods.

MR. O’LEARY then examined the same style group relative to the Russell 1000 index, and said that it led to the same place. Looking at managers with a core or middle orientation, he showed a slide that showed them ending up in essentially the same place. MR. O’LEARY stated that a growing body of data show that with large cap domestic equities, a good index will be toward the middle of the pack and it will be hard for an active manager to overcome the fees.

Looking at large cap growth-oriented managers relative to the broad market, MR. O'LEARY stated that the deviations from the zero line seem to be bigger, but over a longer period, they end up in about the same place.

MR. O'LEARY noted that over a three-year period, the median small cap manager has outperformed the index regardless of the fee structure; he summed up by saying that in large cap he could understand being 100 percent passive, but in small cap he would be as heavy in active as possible. He discussed international investments and bonds, and concluded that overall, a halfway decent manager added value on an after-fee basis.

MR. BADER went over the December Callan report on the PERS, which showed that the actual return of the broad domestic pool was less than the target return, the target return being the Russell 3000 index. He explained that for accounting convenience, the managers are grouped into pools; for example, timber, real estate, farmland, energy, and TIPS are in the real assets pool. The domestic equity pool is not homogeneous, and they have not developed a benchmark. It is made up of four different investment pools, and some managers have holdings very different from the Russell 3000. MR. BADER gave some examples, including the Buy-Write Index, which they expected over the long term to deliver equity-like returns with lower risk. MR. BADER stated that there is a reason why Buy-Write is in the large pool, but it is not a good comparison to have Buy-Write and convertible bonds in the same pool, so they formed another investment pool called "other", which will not be reflected in the asset allocation until July 1st.

In deciding what time period to look at for active investment management, they graphed cycles, then compared 40 years of business cycles with 40 years of stock market returns, and found that economic cycles and the stock market are very similar. They concluded that a six-year cycle was reasonable, and the board approved an action memo changing our watch list criteria to six years.

Over the past six years, in large cap, four out of five managers beat their benchmark; in small cap, two out of three did; and in international, four out of five managers beat their index. Overall, three out of five of their index managers were able to equal or exceed their benchmark. MR. BADER noted that there is an inherent risk bias when analyzing data that excludes managers that have been terminated, especially for poor performance; however, the analysis showed that while managers over the past six years had exceeded their benchmark returns by \$79 million, if the managers that were terminated had been included, that number would have been \$165 million.

MR. BADER pointed out that although returns show an active management gain, active management is not free; managers' fees reduce the net gain to about a third of the total gain. MR. BADER commented that he thinks it is generally accepted that active management tends to outperform index funds in bear markets, and the Board has done a good job of selecting active investment marketers. MR. BADER told the Board about a tool called Active Share that helps monitor and select successful active managers, and noted that MR. O'LEARY had indicated that small cap is the most fertile ground for active investment dollars in his presentation.

MR. BADER stated that staff is going to increase the target passive allocation for large cap up to 65 percent, and they are going to begin equal-weighting managers of all type of assets.

COMMISSIONER HULTBERG requested that the two IAC members who missed this presentation be given an opportunity on the agenda at the next meeting to give their views on it. CHAIR SCHUBERT verified that it would be calendared. MR. BADER noted that Mr. Wilson has clearly stated his preference for passive management numerous times.

MR. JENNINGS commented on the pros and cons of indexing versus active management, stating that he believes having fewer managers is better for board oversight, because it's easier to keep track of the portfolio through time without waiting for quarterly reports; and running a broad active management program is difficult, because it requires investors to find and engage good managers and to manage the active management program. MR. JENNINGS read an excerpt from an e-mail from DR. JERROLD MITCHELL: "If a board thinks that. . . the staff consultant, the IAC, and they themselves have the ability to choose good managers that can beat the benchmarks with some regularity, then by all means, they should have more in active. But if they don't, they should have more in passive. It's a question of confidence."

MS. ERCHINGER requested that when an index is used in a report that doesn't clearly match the asset class, a footnote be included so a general audience will understand that.

VICE-CHAIR TRIVETTE reminded Trustees that the caveats that go with indexes for a particular fund are usually verbal, and tend to get lost from meeting to meeting, so perhaps they should look for a more formal way to record those caveats.

CHAIR SCHUBERT recessed the meeting from 11:58 a.m. to 1:12 p.m.

9. ACTUARIAL VALUATION REVIEW – FY 12

A. Review: Actuarial Smoothing Survey

LESLIE THOMPSON of Gabriel Roeder Smith reviewed an article published by the Society of Actuaries that explained about smoothing methods before discussing the audit of the valuations. Smoothing spreads the recognition of volatile experience into what is considered a more manageable pattern, so investors can make long-term decisions without being unduly influenced by short-term events. MS. THOMPSON advised that funding policy criteria for assessing smoothing should include whether it promotes solvency of the plan; whether it gets the plan to 100 percent funded; whether it enhances predictability of contribution requirements; and whether it creates transparency of financial information.

MS. THOMPSON showed graphic representations of how asset smoothing works. MS. THOMPSON stated that the ARM Board has an actuarial value of \$6.5 billion, which is 106 percent of market, \$6.1 billion, within the 80/120 corridor. Smoothing is also applied to output, and the ARM Board has gone to level dollar funding instead of level percent of pay, which results in a 5 or 6 percent increase in pension contributions. This change accelerates solvency, and is a conservative approach. MS. THOMPSON stated that amortizing year by year is how it's done in the private sector, and that the ARM Board's effective amortization period is currently 18 years, demonstrated

by the Buck valuation.

B. Certification of Draft FY 12 Actuarial Valuation – PERS/TRS

MS. THOMPSON presented the findings of Gabriel Roeder Smith's annual audit of Buck's annual valuation.

Gabriel Roeder Smith (GRS) audited the Defined Contribution Retirement plan; the TRS and PERS defined benefit plans, both pension and retiree medical; and they are still working on the Judicial Retirement System and the National Guard. MS. THOMPSON talked about the changes in Buck's assumptions that led to more discussion, including the plan value offset and the new assumption that future increases in medical will be split 50-50 rather than borne by the retirees. They also questioned the assumption that the retiree medical plan for DCR members will be about 12 percent less in cost or value than the retiree medical plan for the legacy members, which they found originated in the intention to develop a network design that will lower costs. MS. THOMPSON stated that GRS cannot certify the contribution rate that goes to the legislature for approval because they don't have anything in writing.

COMMISSIONER HULTBERG remarked that the reason the numbers are not concrete is that it is a draft plan that has not been finalized. MS. ERCHINGER asked who has the authority to finalize and approve the draft that will become the plan; COMMISSIONER HULTBERG replied that she is the plan administrator. COMMISSIONER HULTBERG stated that certifying and finalizing the plan is a high priority, but it has to be thoroughly vetted first; she added that the disposition of the HRA accounts for members who have terminated is an outstanding issue that has to be worked through before they can finalize the plan.

MS. THOMPSON shared some of the results that instigated discussions with Buck. The cost sharing assumption resulted in an increase of the total employer contribution for PERS from .82 to 1.96 percent, and TRS, from .47 to 2.04 percent. These are large increases in actuarial terms, driven by the changes in assumptions noted previously, and they result in a decrease in the funded status. PERS was 134 percent funded, and now is 53 percent funded; TRS was 173 percent funded and is now at 55 percent.

MS. THOMPSON stated that because these changes were so significant, they would recommend further written documentation supporting this new funding policy regarding cost sharing. She stated that they received a good write-up from Buck, but they have no validation from Alaska that this is in fact the plan as understood by everybody. The Governmental Accounting Standards Board (GASB) requires that the plan be communicated to be substantive, and there is no documentation yet. MS. ERCHINGER confirmed that MS. THOMPSON was talking about the DCR retiree health plan, which doesn't exist except in theory, so these changes pertain to a plan that doesn't really exist; MS. THOMPSON stated that her understanding is that the plan that is being valued and the contribution rates that the Board is being asked to certify to are based on Buck's best interpretation of the ultimate plan design. MS. THOMPSON recommended that the plan be put in writing before the ARM Board certifies to the legislature for the contribution.

DANA WOOLFREY of GRS (Gabriel Roeder Smith) spoke about the audit of the defined benefit plan, explaining that the review identified an issue with the post-retirement pension adjustment timing. The way that Buck rounds ages results in a potential bias understating the liability. In test cases run by the auditors, the numbers were off by about 2 to 3 percent, sometimes more. MS. WOOLFREY stated that although these issues only affect one projection year in the valuation, it is a heavily weighted valuation year with a big retirement probability, and they recommend fixing this projection for the next valuation.

C. FY 12 Draft Actuarial Valuation Reports

DAVE SLISHINSKY, a consulting actuary from the Denver office of Buck Consultants, introduced CHRIS HULLA, a healthcare consultant, and LEE JAMES, another consulting actuary from Buck's Houston office. They went over changes in the plans and the impacts of those changes since the 2011 valuations. One significant change was the move by the Board last June from an amortization method based on level percent of payroll to a level dollar amortization.

MR. SLISHINSKY stated that there were no changes in the benefit provisions or in the actuarial assumptions for the defined benefit plans, but they are recommending some changes in the healthcare assumptions.

MR. HULLA showed a chart with prior assumptions and the assumptions that they propose to switch to, explaining that it basically means higher near-term healthcare cost trend factors due to fees over the next five years from cost shifting from the uninsured, and lower longer-term costs. The basis for this assumption is that they have a better but still evolving picture of how the healthcare reform legislation should impact healthcare plans.

VICE-CHAIR TRIVETTE requested a list of the additional fees, and MR. HULLA replied that he could send that.

MR. BRICE asked if these figures assume that the Affordable Care Act is going to hold down inflation rates; MR. HULLA replied that with features to promote wellness and more education about how to provide better care, he believes it is rational to project lower trends in the long term. MR. HULLA said that he could also send a list of these driving factors.

MR. HULLA explained that the DCR health plan design differs from defined benefit tiers in that it can be actively managed. The plan will be designed so that out-of-pocket features will increase over time as health plan costs increase over time, and there may be additional demand management features and programs to promote health or get people engaged in disease management. MR. HULLA stated that the provider and network contracting landscape in Alaska has been evolving, and Buck Consultants has helped the Division analyze plan designs that take advantage of the progress; he recommends starting to revise assumptions to reflect these changes, rather than having to make a big adjustment all at once when the plan is fully concrete.

MR. SLISHINSKY highlighted four areas that had the biggest impact on the changes in contribution rates from 2011 to 2012:

- The change in amortization method from level percentage of payroll to level dollar method for both PERS and TRS defined benefit plans resulted in a rate increase of about 7.2 percent of pay for PERS and more than 13 percent of pay for TRS.
- The investment return for FY 12 was .2 percent as a net of all expenses, falling short of the long-term rate of return of 8 percent by 7.8 percent.
- Gains on healthcare costs for next year are projected to be lower than anticipated, reducing healthcare liabilities by about 6 percent, which translates to roughly 1.75 percent reduction in the contribution rate.
- Future healthcare cost trend sharing, instead of the retirees bearing most of the cost of the increase, has a dramatic impact on the DCR contribution rate, increasing the PERS portion about 1.2 percent and the TRS portion about 1.6 percent.

MR. SLISHINSKY went through the actuarial results for the PERS closed defined benefit plan, the TRS closed defined benefit plan, and the DCR plans, emphasizing that the change in the amortization method does not change the unfunded liability for these funds.

VICE-CHAIR TRIVETTE inquired if he is correct in thinking that using the level dollar approach saves them hundreds of millions of dollars every year, and MR. SLISHINSKY replied that the total cash outlay to pay off the unfunded liability is less under the new method.

CHAIR SCHUBERT recessed the meeting from 3:13 p.m. to 3:23 p.m.

After the break, MR. SLISHINSKY went through the calculations of the additional state contribution to DCR and to health reimbursement accounts under SB 125. The PERS rate for employer contributions is capped at 22 percent of total payroll, and the TRS rate is capped at 12.56 percent of total payroll.

MR. SLISHINSKY explained that the actuarial software projects two years out. Calculating a salary for both DB and DCR members in PERS, they got \$2.358 billion for total projected payroll for 2015, which results in an additional contribution by the state of \$519 million for PERS and \$456 million for TRS. The total state assistance for PERS and TRS is \$975 million, a \$272 million increase over the prior method.

D. Health Care Cost Assumptions Update – DCR Plan Design and Participation Assumptions

MR. SLISHINSKY showed where the state contribution rates were expected to go and why, comparing the two methodologies, the current level dollar method and the level percentage of pay methodology. He noted that under the level dollar method, as members in DB retire and terminate over time, the dollars coming in based on their payroll will decline. MR. SLISHINSKY stated that the state assistance contribution is expected to maximize in 2016, then decrease until the last active member is expected to retire in 2041, almost 30 years from now. By 2031 there would be no more state assistance as the rate would then drop below 22 percent, which would be paid by employers.

MR. PIHL asked why the state assistance stops two years earlier than 2031 on the graph on page 31, saying that it seems that it should continue until 2031 and require less earlier on. MR. SLISHINSKY explained that at the start of the amortization process, any unfunded liability that existed was fixed at the 2002 valuation. That valuation was used for funding for FY 05, and 25 years from FY 05 inclusive is 2029.

MR. PIHL noted that it seems to overstate the necessary state assistance early on by eliminating those two years, but that is a topic to discuss in the upcoming work session and perhaps change the funding policy.

Comparing the level percentage of pay method, MR. SLISHIINSKY showed that by 2016 the state assistance contribution would be fairly level, and the point of 100 percent funding would be reached at about the same time as by the current level dollar method.

MR. PIHL commented that in the full actuarial report, pages 56 and 57, the schedule goes all the way to 2073, showing full funding around 2031 but an \$8.6 billion surplus by 2073, which is misleading. He suggests that the ARM Board should ask that the schedule run only to the point when the plan is fully funded, and a footnote should be added stating that when the funding ratio nears or reaches 100 percent, state assistance will be adjusted to maintain that level so surpluses do not occur.

MR. BARNHILL replied that MR. PIHL had brought this to his attention about a month ago; he has since discussed it with Buck, and it can be adjusted before the report is made final.

MS. ERCHINGER commented that in a work session, the Board could work on articulating what they are trying to accomplish and then pass a resolution explaining in writing what they want to actuaries to do so the actuaries would have more tangible instructions to follow. CHAIR SCHUBERT agreed that a work session would be the appropriate venue for continuing this discussion.

E. Employer Group Waiver Plan (EGWP)

MR. BARNHILL stated that actuaries from Buck Consultants will describe what EGWP means. Over the years, people have wondered why Alaskan retirement systems don't do Medicare Part D, and there has been a good reason, but new developments in the law may offer a way to reduce costs significantly. With this in mind, Buck has been invited to give a presentation on EGWPs and get the Board thinking about it, perhaps to make a change in this direction in the next year or so.

BOB FERRARO, a pharmacist in Buck's national pharmacy practice based in Phoenix, Arizona, and his partner GAIL LEVENSON, Buck's Medicare Part D subject matter expert, came to educate the Board about the value of an EGWP. MR. FERRARO stated that some parts of the healthcare reform law have made an EGWP, which is a Medicare Part D waiver, a more financially advantageous way to cover prescription drugs for retirees without reducing the benefit or increasing the cost share, because the state would receive much more substantial subsidies from CMS (Center for Medicare and Medicaid Services). An EGWP would match the current benefit via two plans:

the initial primary plan, which is the standard Part D benefit, and it will also wrap around a secondary plan that will be fully paid for by the state.

MR. FERRARO explained that the EGWP entails a lot more work for a pharmacy benefit manager (PBM) than the current retiree drug subsidy program, therefore PBM vendor administrative fees would be higher, but it would reduce the state's administrative burden. MR. FERRARO described subsidies and rebates that would come back to the state to offset these costs. He compared the projected costs under the current RDS plan and under the EGWP, and showed an estimated \$7.5 million in savings under the most conservative scenario.

MS. LEVENSON described some issues that could arise in switching plans and how they could be addressed, one being that high-income retirees are subject to additional premiums that would be taken out of their Social Security checks. Board members noted that state employees do not pay into Social Security, in which case MS. LEVENSON stated that they would be billed by Social Security, but in most cases, the state will reimburse retirees for this charge.

MS. HARBO commented that most ARM Board members have not paid into Social Security, and those who are required to take Medicare Part B now have to pay that out of pocket. She added that in the last few years, Medicare Part B has been means-tested, and the rates are now about \$100-\$300 a month or more, so she thinks that people who have sufficient income will have higher costs under this plan. MS. LEVENSON stated that that is true, and it is similar to Medicare Part B in who it will impact.

COMMISSIONER BUTCHER asked for some examples of other states that have gone to EGWP and their experiences; MS. LEVENSON cited Alabama and Louisiana. She added that many private employers are also reimbursing people for the high-income premiums, and sometimes it's the only way they can get an EGWP approved.

MS. ERCHINGER asked if the state chooses to go this way and it doesn't pan out, whether it would be possible to go back to the previous plan. MS. LEVENSON replied that the state would have to remain in the EGWP for the year, but could opt out for the following year, because the state is required to reapply each year around October for the retiree drug subsidy for the following fiscal year.

MR. PIHL asked if the financial analysis should show a reduction in administrative costs to the state, since they would be paying the PBM for administrative services; MS. LEVENSON replied that the savings would not be much, as the state might now have only one employee administering the RDS system. COMMISSIONER HULTBERG stated that they had asked that question before, and it's not significant enough to offset those administrative costs. MR. PUCKETT added that it was estimated to be three-quarters of a full-time person handling the RDS.

VICE-CHAIR TRIVETTE asked about the mirroring of the plan design and the cost sharing programs called LIPS and LICS. MS. LEVENSON explained that the plan will maintain whatever a person's current co-pay is, and when a person hits the coverage gap, it would stay at 25 percent co-pay until the beneficiary hits their true maximum out of pocket. The Low Income Premium

Subsidy, or LIPS, would be provided on a monthly basis, and the Low Income Cost Sharing, or LICS, reimburses medication costs for low-income retirees.

MS. LEVENSON went on to say that a Health Information Claim Number (HCIN) is an absolute requirement for the EGWP, and the state does not have those numbers now, but Buck would work with Medicare to get them. There would also be a lot of confusing communication, but EGWPs do have latitude to edit, insert documents, and take other steps to make it easier for retirees to understand. She suggested attending retiree meetings to educate people and staff about EGWPs.

VICE-CHAIR TRIVETTE asked what VDSA means; MS. LEVENSON explained that it stands for Voluntary Data Sharing Agreement, a process in which Medicare is provided information, then Medicare provides the HICNs. She stated that it is a relatively timely process, and it can be costly. MS. LEVENSON stated that there are other ways to get HICNs, but VDSA is a great way to not to just identify people who are Medicare-eligible but are actually disabled.

COMMISSIONER HULTBERG stated that an EGWP might help the trends by 1 or 2 percent, so the Department wanted to look at pursuing it and bring the topic to the ARM Board.

RECESS FOR THE DAY

CHAIR SCHUBERT recessed the meeting at 4:44 p.m.

Friday, April 19, 2013

CALL BACK TO ORDER

CHAIR SCHUBERT reconvened the meeting at 9:00 a.m. Trustees Trivette, Harbo, Erchinger, Pihl, Brice, Ryan, Hultberg, and Butcher were also present.

REPORTS (Continued)

10. PERFORMANCE MEASUREMENT 4TH QUARTER

MR. O'LEARY from Callan Associates pointed out the graph on page 3 of the presentation, which shows that 2012 was almost a complete reversal of 2011. Equity returns and indices were up, and the first quarter of 2013 has been good. However, it has not been a friendly environment for active managers to add value. He discussed investment returns in international and U.S. markets in the past and present for different asset classes. Using PERS as a proxy for all of the ARMB plans, because they all have the same asset allocation targets and similar patterns except for the militia, MR. O'LEARY stated that domestic investments were overweight and international were underweight; fixed income was over target and cash was under target.

MR. O'LEARY stated that domestic equity, private equity, and fixed income outperformed their target during the most recent quarter, while real assets and international investments underperformed. Absolute return also underperformed, at 11.8 percent for the full calendar year, versus a target of 12.4 percent. MR. O'LEARY compared three years' annualized performance to the targets, and stated that cumulative returns were very close but below the target index.

PAUL ERLENDSON discussed the individual account plans, stating that across the board, these funds have been doing well, except for Brandes, which continues to have trouble with their deep value orientation. MR. ERLENDSON remarked that this is disappointing but consistent with the way they run money.

MR. O'LEARY stated that they have entered into a deal with InvestorForce, which has a larger number of funds in their database, to have their data as well. In the InvestorForce total plan sponsor database, the median in each situation had a lower return than in the Callan database.

MR. O'LEARY stated that one of their objectives for calendar year 2013 is to have meaningful fee data on plans across the database, and broadening the group will expand the validity of things like fee comparisons. This change to using InvestorForce is effective as of March 31, but they will still have the Callan database information. He discussed different managers and their performances. MR. PIHL asked if the ARM Board decided to change managers, whether Callan would have information on the 15-year, 5-, 3-, and 1-year performance of various options that might be compelling to the Board. MR. O'LEARY replied that there are not many organizations that haven't had significant changes over 15 years, stating that if they have a 15-year record, they will probably have an inferior ranking, and he worries more about changes in philosophical approach than about

shorter-term performance.

VICE-CHAIR TRIVETTE suggested that when the Board puts somebody on the watch list, they might want to put down in writing some of the issues driving that decision to help the Board remember what the issues were and what has happened since.

MS. RYAN asked if the next time they are together, they would see the differences and how they affect previous information the Board has been given. MR. O'LEARY stated that they would send that out in advance of the next meeting.

11. ADOPT ASSET ALLOCATION: RESOLUTIONS 2013-04, 2013-05, and 2013-06

MR. BADER reminded the Board that at the February 2013 meeting, they heard the Callan capital market assumptions, which are the basis for determining a recommended asset allocation to the Board for the following fiscal year. On March 22nd, MR. BADER met with MR. O'LEARY, DR. JENNINGS, DR. MITCHELL, and MR. WILSON to try to form a recommendation for asset allocation to the Board. MR. BADER stated that MR. O'LEARY presented some materials in that meeting which he will go through briefly to put the meeting in context.

MR. O'LEARY explained that they create a composite for the ARMB real asset portfolio, and in preparation for the teleconference with the IAC and staff, they had developed some alternatives to the policy that was in place for FY 2013 in an effort to increase the expected return without significantly changing the risk profile. The most significant point is that they had a long conversation about the need for liquidity and concluded that 6 percent in cash is too high and the cost of earning nothing on that is too great. Recognizing that 3 percent cash might get run down during the course of a year, they looked at increasing the real asset category and private equity. Page 5 of the report shows expected returns over multiple holding periods for the 2013 policy, and the report shows the contrast between that and the current policy. MR. O'LEARY noted that he is happy that the ARM Board continues to have high-quality government-oriented bonds, as they are a form of insurance in the event of serious economic problems.

MR. O'LEARY stated that the IAC considered a range of possibilities, and decided on Mix No. 4, which is a very conservative mix, essentially a 50/50 stock/bond policy.

Discussion ensued about the strategy of emphasizing the international investments; MR. O'LEARY stated that he believes, as many do, that the growth in emerging economies will be significantly greater than the growth in developed markets. MS. ERCHINGER and MR. PIHL expressed their support of this recommendation; DR. JENNINGS stated that comfort and good returns don't always go together, and this is a longer-term strategic plan. COMMISSIONER BUTCHER concurred that although the Board may feel a little uneasy, managers and experts emphasized that the international market is a great opportunity.

COMMISSIONER HULTBERG asked MR. O'LEARY to explain the distinction between domestic and international equity, because the company may not be located where the market is. MR. O'LEARY replied that some of the best emerging markets exposure can be gained through

U.S.-based companies that are selling products or delivering services in emerging markets, and the index reflects the legal domicile of the corporation. DR. JENNINGS suggested that it might be useful for the Board to have an education session on the difference between international small cap, emerging, and developed international, as well as currency hedging.

MR. PIHL moved to approve Resolutions 2013-04, 2013-05, and 2013-06. MS. HARBO seconded the motion.

MS. ERCHINGER suggested that it might be helpful to have the projected arithmetic return on the resolutions as well as the expected 5-year geometric return, to answer the question some people might have of why the Board is shooting for a return that is lower than the assumed rate of return. MR. BADER replied that that would not be difficult to do; there were no objections, so the Board requested the addition of that information.

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

CHAIR SCHUBERT recessed the meeting from 10:40 a.m. to 10:55 a.m.

12. TAXABLE MUNICIPAL BONDS SEARCH

MR. BADER stated that the Board had approved a search for a manager of taxable municipal bonds following a presentation by Alaska Permanent Capital. Callan was engaged to do a search, which was narrowed down to seven firms. MR. BADER and MR. MITCHELL visited two of the firms, Guggenheim Investments and Western Asset Management, and invited them to present at today's meeting.

MR. O'LEARY described Callan's process of selecting these two management firms. He stated that there were essentially no managers with a significant business managing portfolios with a focus as narrow as taxable municipal bonds, but there are many who invest in taxable municipal bonds as part of a total fixed income portfolio. Asked if they would be interested in pursuing this sort of assignment, many said no, it was too much of a niche area, so Callan developed a customized request for information, requesting a description of the process they would utilize, details with regard to their specific histories in municipal bonds of any type, and identification of their resources allocated to this type of activity. This request led to a group of about 15-20 firms, which Callan's consultant BRETT CORNWELL talked to, and from that point they narrowed the field to the seven that MR. MITCHELL and MR. BADER visited.

COMMISSIONER BUTCHER asked whether there was a route for an Alaskan firm to get business with the ARM Board through this process, acknowledging that he couldn't imagine an Alaskan firm being able to stack up to some of these worldwide firms. MR. BADER replied that McKinley Capital was an example of an Alaskan firm that was viewed as a candidate for investing Alaskan funds, and Callan Associates were asked to examine whether McKinley Capital was institutional quality in the work that they were doing for others. McKinley Capital was completely vetted by Callan, and was eventually awarded an initial mandate that grew over time.

MR. O'LEARY expanded on this situation, stating that he pushed pretty hard internally to have Alaska Permanent Capital included in this search because they were the source of information that drove the decision to even consider this narrow area, but they didn't have a taxable municipal bonds product in existence, and the committee decided not to advance them. COMMISSIONER BUTCHER added that he sits on other boards where Alaskan firms do business with the funds, so he was trying to figure out if there was some kind of exclusion, and maybe the Board should talk about that. MR. O'LEARY confirmed that one of the reasons the Alaskan firms weren't picked was because they don't currently invest in taxable municipal bonds, and the candidates all have extensive municipal bond research and portfolio management experience.

The Board heard presentations from the two firms that were selected.

A. Guggenheim Investments

CHRIS COOK expressed thanks from CIO Scott Minerd for the opportunity to present to the ARM Board. MR. COOK introduced JAMES PASS, the Senior Managing Director of Guggenheim, who joined the firm in 2009 with extensive background in investment banking. MR. COOK stated that he himself has been with Guggenheim since 2006, when they started presenting the firm to opportunities besides the one client that owned 35 percent of the company.

MR. COOK referred to page 7 in the presentation, showing an overview of the firm, which has three primary businesses: asset management, insurance services, and securities. Guggenheim has about 2200 employees worldwide in 25 offices, and they are 50 percent employee-owned. They currently have about \$9 billion in total municipal debt, and their management fees are 22 basis points.

MR. PASS explained Guggenheim's investment team and their macrocentric philosophy, emphasizing that research is the cornerstone of what they do. Every bond that they buy, they have a relationship with the budget director, the treasurer, or the CFO. Predominantly those bonds represent highly endowed private universities, health care institutions, and pension fund obligation bonds. MR. PASS stated that in the current taxable municipal bond arena, greater risk does not lead to greater compensation, so they stay in single-A or double-A categories and focus on essential revenue bonds.

VICE-CHAIR TRIVETTE requested a list of clients, and MR. COOK replied that he could provide that to the Trustees.

MR. ERLENDSON asked how quickly a portfolio could be put together and what it might look like. MR. PASS replied that it would probably take about six months, and would most likely be concentrated in higher education and healthcare, with a portion also in military housing.

CHAIR SCHUBERT recessed the meeting from 11:49 a.m. to 1:02 p.m.

B. Western Asset Management

JOE CARIERI, a client service executive, and ROBERT AMODEO, the senior portfolio manager and head of the municipal bond team based in New York City, represented Western Asset Management. MR. CARIERI described Western Asset as a global investment management firm founded in 1971, committed to understanding the needs of each client, identifying individualized investment solutions, and delivering superior long-term results for their clients. Their time-tested investment philosophy emphasizes three key fundamentals: long-term fundamental value discipline; employing diversified strategies; and overlaying that with robust, integrated analytics and risk management system.

Western Asset has nine offices in eight countries around the world, with a total of 865 employees, managing only fixed income assets, with over \$28 billion in municipal bonds. MR. CARIERI provided a list of clients that allow the firm to use their names in presentations, and encouraged Board members to contact anyone on the list; two Alaskan entities that they manage funds for are the Alaska Electrical Trust and the Alaska Housing Finance Corporation. Western's fee structure is 25 basis points for the first \$100 million, 15 basis points for the next \$100 million, combined, which would average out to just under 19 basis points total.

MR. AMODEO explained that Western Asset looks at trends in the national economy in different sectors like transportation, utility, healthcare, etc., to get a macro view, then they look at specific states and how they are performing compared to the national trends to identify opportunities and potential pitfalls. A team of credit analysts then looks at the fundamentals of specific bond issuers for security. They combine the top-down macro view and the bottom-up security analysis, look at what the market is charging for a particular risk, and assess whether they will get paid for owning the risk that is embedded within a security. The team includes seven portfolio managers followed by seven research analysts, each focused on a specific sector. MR. AMODEO explained the factors that they consider in assessing risk, and stated that they favor revenue bond sectors over general obligation debt sectors.

The Trustees asked a few questions, then moved on to the action item.

C. Trustee Discussion/Selection

GARY BADER, CIO, stated that staff thinks both Guggenheim Investments and Western Asset Management are well-suited to operate this mandate. Calculations of fees on a \$100 million mandate are \$220,000 for Guggenheim and \$250,000 for Western Asset. MR. O'LEARY stated that they hoped to compare the performance of the two firms over one, three, five, and seven years, but there was not meaningful data to make such a comparison; both firms have good track records in managing related products, but not the identical product that the Board is looking to hire.

MS. ERCHINGER asked what class the money for this investment would come from; MR. BADER stated that the asset allocation that the Board approved before the lunch break reduced fixed income and cash. He stated that this award would come from fixed income, and would not

result in a different asset allocation than was passed by the Board.

Deputy Commissioner ANGELA RODELL asked if this is a good time to move in this direction; MR. BADER replied that he looks at it as getting a start in something that could develop into an asset class that others will want to get into in five or ten years, as was the case when the Board invested in farmland.

MR. BRICE moved that the Board allocate \$100 million to Western Asset Management for taxable municipal bonds. MR. PIHL seconded the motion.

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

COMMISSIONER BUTCHER moved that the Board invest \$100 million with Guggenheim Investments for taxable municipal bonds. MS. RYAN seconded the motion.

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

13.

A. RFS – Investment Advisory Council

MR. BADER reminded the Board that a year ago, Mr. Wilson’s contract with the IAC was extended for one year. MR. WILSON holds Seat 1, which has the following description as read by MR. BADER:

“The candidate shall possess experience and expertise in financial investments and management of investment portfolios for public, corporate, or union benefit funds, foundations, or endowments. Preference will be given to candidates with a minimum of ten years of experience as a manager, director, and so on.”

MR. BADER stated that staff recommends that the Board direct it to advertise and solicit applications from MR. WILSON and other persons interested in serving on the Investment Advisory Council.

VICE-CHAIR TRIVETTE moved to do so. MR. PIHL seconded the motion.

The motion passed unanimously.

B. RFP – Review Actuary

MR. BADER stated that Gabriel Roeder Smith (GRS) was awarded a contract as reviewing actuary as of March 1st, 2006, following a procurement by RFP. The contract term specified five years with two optional periods for renewal, which have now been exercised. The current contract with GRS ends on June 30, 2013. Staff has developed an RFP with a timetable to ensure that a review actuary can be in place by July 1, 2013, to conduct their required review. MR. BADER stated that the recommendation is that the Board direct staff to prepare an RFP for a reviewing actuary and to

conduct the valuation assumption reviews as required by statute.

MS. ERCHINGER expressed concern about the lack of competition for these services, because there are few firms in Alaska that are eligible to do this kind of work. She suggested that it might be advantageous to try to have the expiration of contracts for these kinds of services coincide to enhance opportunities for competition, because otherwise some firms are precluded from bidding because they are already in cycle with a contract. Also, she suggested that a single RFP with a number of different scopes would allow firms to bid to provide various services under one RFP.

MR. JOHNSON stated that the statute requires coordinating with the Department of Administration, and a sole-source procurement would have to be approved by the Board. He stated that they could assert that there is a basis to engage in sole-source procurement for the purpose of reconfiguring the timing of RFPs when only a limited number of qualified applicants exist, but it would have to be vetted with Mr. Poag at the Attorney General's office.

MR. BARNHILL questioned whether there is really a dearth of actuaries, listing some that he knew of, and noted that overlapping contracts can be good for transitions and learning curves.

Discussion ensued about how this could be handled. MS. ERCHINGER stated that if two of five candidates are excluded from bidding because they are already providing actuarial services, that limits the Board's ability to get the best competitive environment and potential cost savings. However, even if they made this change, the situation could arise again with some contract terms being extended and others not.

COMMISSIONER HULTBERG said that the Department of Administration will cooperate with the Board's wishes regarding the secondary actuary, but the decision regarding a sole-source procurement is under the authority of the chief procurement officer by statute.

MR. JOHNSON cited 15 AAC 112.190, which provides that when a reference in the procurement code requires action by the chief procurement officer (CPO), the matter shall be referred to the Board. However, MR. JOHNSON said that it would still be good to consult with the CPO. COMMISSIONER BUTCHER suggested doing due diligence and background work and bringing some options back to the next ARMB meeting. MR. JOHNSON pointed out that by regulation, they would have to approve a sole-source procurement at a regular meeting, which would mean the early June meeting, and that might not be timely; MS. HALL stated that since the actuary starts the valuation process in late August or September, it could work.

MS. ERCHINGER submitted five findings in support of a sole-source contract, and moved to direct staff to prepare a contract with GRS to expire on June 30th, 2014. The motion was initially tabled, but discussion followed, with some questioning whether a motion that was tabled could be discussed under Robert's Rules.

VICE-CHAIR TRIVETTE recessed the meeting from 2:40 p.m. to 2:54 p.m. while MR. JOHNSON consulted the rule book.

After the break, MR. BADER asked to proceed with the action memo in front of the Board to do a one-year procurement, which would accomplish MS. ERCHINGER's desire not to bar firms committed to service to the Board from bidding on another actuarial contract, and then the RFP for the main actuary could be crafted to maximize the competition.

MS. ERCHINGER moved to direct staff to prepare an RFP for a review actuary to conduct the valuation assumption reviews as required by statute, the term of the contract to be one year with three one-year options to extend at the discretion of the state. MS. HARBO seconded the motion.

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

C. Contract Renewals

Callan Associates, Inc.

MR. BADER stated that in consultation with the Commissioner, staff recommends exercising the second one-year option to renew the Callan contract.

MS. HARBO moved to do so. MR. BRICE seconded the motion.

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

Townsend Group, Inc.

MR. BADER stated that staff recommends that the board exercise the second one-year option to renew the Townsend contract.

MS. HARBO moved to do so. MS. RYAN seconded the motion.

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

14. ALLOCATION OF ACTUARY COSTS: RESOLUTION 2013-07

MS. ERCHINGER stated that she thinks the administration has done a good job of allocating actuary costs to the retirement system versus the general fund, and the purpose of Resolution 2013-07 is to express the Board's expectation that actuarial costs that are charged to the retirement systems are seen by the Board as appropriate. MS. ERCHINGER stated that she and MR. BARNHILL worked on some language to express the Board's support for these charges, which is included in the meeting packet.

MR. BRICE moved to approve Resolution 2013-07. MS. HARBO seconded the motion.

COMMISSIONER BUTCHER asked what kind of numbers they are talking about that if they followed this resolution would not be charged to the retirement funds. MR. BARNHILL stated that it would be \$100,000 or \$200,000 over the course of a year.

MR. BADER stated that this resolution makes him question what governance the Board exercises, since it requires Board approval; he noted that he has asked for additional information from the actuaries during Board sessions and it did not require formal approval, which indicates that there are no policies about how to secure approval for such requests. MR. BADER pointed out that MS. ERCHINGER had asked for a work session on governance, and there should be some direction from the Board for how staff or contract staff responds to inquiries from an individual trustee without a formal action from the Board. VICE-CHAIR TRIVETTE acknowledged that at times the Board is not sure how to go about doing things, and they will have to continue to address this issue.

A roll call vote was taken, and the resolution was approved.

VICE-CHAIR TRIVETTE recessed the meeting from 3:12 p.m. to 3:24 p.m.

UNFINISHED BUSINESS

1. Disclosure Reports

MS. HALL stated that the disclosure reports were included in the meeting packet, and there was nothing unusual to disclose. MS. HALL also stated that CHAIR SCHUBERT had signed the quarterly ethics report before she left, and there was nothing to report on that either.

2. Meeting Schedule

MS. HALL noted some changes to the schedule:

- The Defined Contribution Committee would be meeting on June 19th.
- The Legislative Committee will be meeting in a strategy session on June 19th and doing additional legislative planning for the September meeting.
- The Legislative Committee added a meeting on December 4th.

Everything else is unchanged.

3. Legal Report

MR. JOHNSON responded to a question from COMMISSIONER HULTBERG about the distinction between regular and special meetings. He stated that there is no definition of “regular”, but there is recognition that there are two different kinds of meeting. MR. JOHNSON added that he thinks a work session on governance issues and the roles and duties of the ARM Board would be worthwhile, as some of the regulations originate from before the ARM Board was created from the ashes of ASPIB, and he would be happy to assist the Board in a discussion.

NEW BUSINESS

None.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

None.

PUBLIC/MEMBER COMMENTS

Deputy Commissioner MIKE BARNHILL stated that earlier this week he visited California's CalSTRS as part of a conference for pension professionals, and it was very interesting to see how pension programs are delivered on a much larger scale than in Alaska. California has 25 communication staff and 51 call center staff, so they answer all calls within 30 seconds. MR. BARNHILL noted that Alaskan stakeholders have expectations just as high as Californians, but the Alaskan program is administered with a fraction of the staff, so he complimented the staff of the Treasury and the DRB for delivering a high-quality program with so few people.

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. JENNINGS, recalling the discussion of governance, noted that there is a small and growing literature on pension governance among academic practitioners, and he thinks "governance" can mean different things. He offered to summarize the information for the Board. VICE-CHAIR TRIVETTE acknowledged that there are different definitions of "governance" and thanked DR. JENNINGS, remarking that it would be informative to discuss that.

TRUSTEE COMMENTS

COMMISSIONER HULTBERG thanked the Board for working through the procurement issue that was discussed earlier and finding a way to accomplish the objectives of the Board in a way that she feels more comfortable with.

MR. PIHL stated that he holds MR. SLISHINSKY from Buck in high regard for how open he has been, and clear and responsive in answering questions. MR. PIHL commented that he thinks the work session with the actuary is going to be very good for everyone.

MS. HARBO thanked TRUSTEE ERCHINGER for her work and leadership on the resolution to make sure actuary costs are properly assigned.

MS. ERCHINGER stated that she agrees with MR. PIHL that both actuaries do an excellent job and make their work easy to follow and understand. She remarked that when the Board asks questions, she appreciates the patience of the actuaries, as the questions are really an attempt to move beyond standard actuarial reporting to get information presented in a manner that reflects the particular interests of the ARM Board.

MS. ERCHINGER also thanked the Department of Administration for the tremendous amount of work that they are doing to help the Board understand what is happening in healthcare. She also

thanked MR. BADER for the information he provided in response to the questions that she asked at the last meeting.

MR. O'LEARY corrected a mistake: In his discussion under Agenda Item No. 8, he had stated that the Japanese weight at its high was 80 percent, but it was actually 65 percent in the fourth quarter of 1988.

VICE-CHAIR TRIVETTE noted that the Board has had only one planning session since its inception in 2005, and it's probably time to do it again, suggesting around the middle of October. He asked board members to send their comments to MS. HALL and MR. BADER about issues that should be addressed at the planning session so they can figure out whether one day will be sufficient. Staff will work on arranging a date.

VICE-CHAIR TRIVETTE also thanked both departments for their skill and support, remarking that without their good management, he would not have asked and been reappointed twice since his first appointment expired.

FUTURE AGENDA ITEMS

Two IAC members who missed the presentation on active versus passive investment will be given an opportunity at the next meeting to give their views on the subject.

ADJOURNMENT

There being no objection and no further business to come before the board, the meeting was adjourned at 3:48 p.m. on April 19, 2013, on a motion made by MR. BRICE and seconded by VICE-CHAIR TRIVETTE.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

Corporate Secretary

Note: Glacier Stenographic Reporters, Inc., an outside contractor, provided court reporting services for the meeting and prepared the summary minutes. For in-depth discussion and more presentation details, please refer to the transcript of the meeting and presentation materials on file at the ARMB office.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Invoices & Summary of Billings - ACTION: _____
Buck Consultants, a Xerox Company
DATE: June 20, 2013 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 and to certify to the appropriate budgetary authority of each employer in the system”.

As part of the oversight process, the Board has requested that the Division of Retirement & Benefits (Division) provide monthly invoices to review billings and services provided.

STATUS:

Attached are the summary totals for the nine months ended March 31, 2013.

**Buck Consultants
Billing Summary
Through the Three Months Ended September 30, 2012**

	<u>PERS</u>	<u>TRS</u>	<u>JRS</u>	<u>NG</u>	<u>EPORS</u>	<u>AHF</u>	<u>RHF</u>	<u>TOTAL</u>
Actuarial Valuations	\$ 26,289	18,814	-	-	-	-	-	\$ 45,103
Salaries and normal costs shown separate pension and healthcare	1,592	601	-	-	-	-	-	2,193
DCR Healthcare Plan design modeling tool	18,042	6,213	-	-	-	-	-	24,255
Actuarial Study to determine cost for DCR Healthcare plan designs	4,864	3,946	-	-	-	-	-	8,810
Misc emails and phone calls	1,318	511	-	-	-	-	-	1,829
TOTAL	\$ 52,105	30,085	-	-	-	-	-	\$ 82,190

**Buck Consultants
Billing Summary
Through the Three Months Ended December 31, 2012**

	<u>PERS</u>	<u>TRS</u>	<u>JRS</u>	<u>NGNMRS</u>	<u>EPORS</u>	<u>AHF</u>	<u>RHF</u>	<u>TOTAL</u>
Actuarial Valuations	\$ 87,244	70,360	17,393	-	877	-	-	\$ 175,874
DCR Healthcare Plan design modeling tool	5,848	2,014	-	-	-	-	-	7,862
Design of Plan B Healthcare benefit design	1,713	1,713	-	-	-	-	-	3,426
Audit Request	1,015	797	-	-	-	-	-	1,812
Allocation of ER Contributions between Pension & Healthcare to include salaries by ER	1,234	1,052	675	-	-	-	-	2,961
Misc emails and phone calls	2,588	1,003	-	-	-	-	-	3,591
TOTAL	\$ 99,642	76,939	18,068	-	877	-	-	\$ 195,526

**Buck Consultants
Billing Summary
Through the Three Months Ended March 31, 2013**

	<u>PERS</u>	<u>TRS</u>	<u>JRS</u>	<u>NGNMRS</u>	<u>EPORS</u>	<u>AHF</u>	<u>RHF</u>	<u>TOTAL</u>
Actuarial Valuations	\$ 63,186	44,367	14,168	10,975	5,670	-	7,185	\$ 145,551
Design of Plan B Healthcare benefit design	15,226	15,226	-	-	-	-	-	30,452
60-yr projection scenario of additional State Approp of \$500M and \$259M for FY14-FY17 requested by the ARMB	10,348	7,353	-	-	-	-	-	17,701
Actuarial assumptions for the long-term investment ROR & use of the GEMS econometric model of purposes of setting this assumption	2,151	852	21	97	-	-	-	3,120
Misc emails and phone calls	598	232	-	-	-	-	-	830
TOTAL	\$ 91,509	68,029	14,189	11,072	5,670	-	7,185	\$ 197,654

**Buck Consultants
Billing Summary
Through the Nine Months Ended March 31, 2013**

	<u>PERS</u>	<u>TRS</u>	<u>JRS</u>	<u>NGNMRS</u>	<u>EPORS</u>	<u>AHF</u>	<u>RHF</u>	<u>TOTAL</u>
Actuarial Valuations	\$ 176,719	133,541	31,561	10,975	6,547	-	7,185	\$ 366,528
Salaries and normal costs shown separate pension and healthcare	1,592	601	-	-	-	-	-	2,193
DCR Healthcare Plan design modeling tool	23,890	8,227	-	-	-	-	-	32,117
Actuarial Study to determine cost for DCR Healthcare plan designs	4,864	3,946	-	-	-	-	-	8,810
Design of Plan B Healthcare benefit design	16,939	16,939	-	-	-	-	-	33,878
60-yr projection scenario of additional State Approp of \$500M and \$259M for FY14 -FY17 requested by the ARMB	10,348	7,353	-	-	-	-	-	17,701
Actuarial assumptions for the long-term investment ROR & use of the GEMS econometric model of purposes of setting this assumption	2,151	852	21	97	-	-	-	3,120
Audit Request	1,015	797	-	-	-	-	-	1,812
Allocation of ER Contributions between Pension & Healthcare to include salaries by ER	1,234	1,052	675	-	-	-	-	2,961
Misc emails and phone calls	4,505	1,745	-	-	-	-	-	6,250
TOTAL	\$ 243,256	175,053	32,257	11,072	6,547	-	7,185	\$ 475,370

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Retirement System Membership Activity
as of March 31, 2013

ACTION: _____

DATE: June 20, 2013

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 March 31, 2013.

MEMBERSHIP STATISTICS AS OF SEPTEMBER 30, 2012

	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	3,689	6,149	12,753	13,557	36,148	1,277	5,788	3,820	10,885	71	n/a	27,939	7,564
Terminated Members	2,593	5,391	11,417	5,959	25,360	520	2,594	1,206	4,320	4	n/a	13,135	2,366
Retirees & Beneficiaries	21,990	4,422	1,127	1	27,540	10,079	853	-	10,932	102	554	n/a	n/a
Managed Accounts	n/a	n/a	n/a	7,070	7,070	n/a	n/a	1,826	1,826	n/a	n/a	819	672
Retirements - 1st QTR FY13	222	125	73	n/a	420	189	134	n/a	323	1	57	n/a	n/a
Full Disbursements - 1st QTR FY13	40	40	188	383	651	18	57	115	190	0	n/a	657	144
Partial Disbursements - 1st QTR FY13	n/a	n/a	n/a	11	11	n/a	n/a	2	2	n/a	n/a	418	432

MEMBERSHIP STATISTICS AS OF DECEMBER 31, 2012

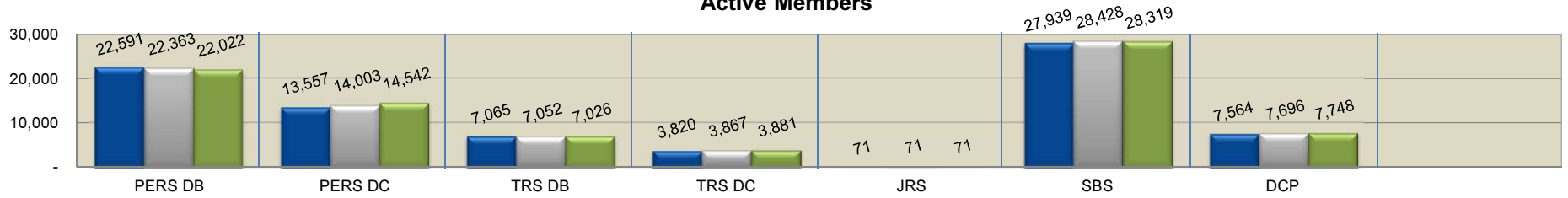
	PERS					TRS				JRS	NG	SBS	DCP
	DB		DC			DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	3,627	6,097	12,639	14,003	36,366	1,275	5,777	3,867	10,919	71	n/a	28,428	7,696
Terminated Members	2,563	5,356	11,377	5,873	25,169	512	2,581	1,171	4,264	4	n/a	13,020	2,355
Retirees & Beneficiaries	21,909	4,412	1,121	1	27,443	10,054	852	-	10,906	100	549	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,966	6,966	n/a	n/a	1,809	1,809	n/a	n/a	844	722
Retirements - 2nd QTR FY13	143	103	69	n/a	315	10	31	n/a	41	2	24	n/a	n/a
Full Disbursements - 2nd QTR FY13	21	51	190	358	620	10	21	44	75	0	n/a	611	108
Partial Disbursements - 2nd QTR FY13	n/a	n/a	n/a	18	18	n/a	n/a	1	1	n/a	n/a	422	452

MEMBERSHIP STATISTICS AS OF MARCH 31, 2013

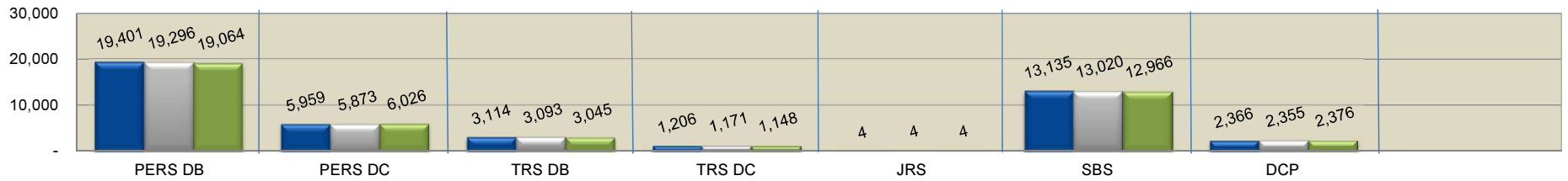
	PERS					TRS				JRS	NG	SBS	DCP
	DB		DC			DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	3,532	6,025	12,465	14,542	36,564	1,268	5,758	3,881	10,907	71	n/a	28,319	7,748
Terminated Members	2,441	5,284	11,339	6,026	25,090	493	2,552	1,148	4,193	4	n/a	12,966	2,376
Retirees & Beneficiaries	21,821	4,400	1,118	1	27,340	10,034	851	-	10,885	98	537	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,869	6,869	n/a	n/a	1,793	1,793	n/a	n/a	876	781
Retirements - 3rd QTR FY13	187	107	70	n/a	364	16	18	n/a	34	3	42	n/a	n/a
Full Disbursements - 3rd QTR FY13	27	34	147	319	527	10	52	47	109	-	n/a	564	109
Partial Disbursements - 3rd QTR FY13	n/a	n/a	n/a	23	23	n/a	n/a	1	1	n/a	n/a	436	433

Alaska Division of Retirement and Benefits
FY 2013 QUARTERLY REPORT OF MEMBERSHIP STATISTICS
as of March 31, 2013

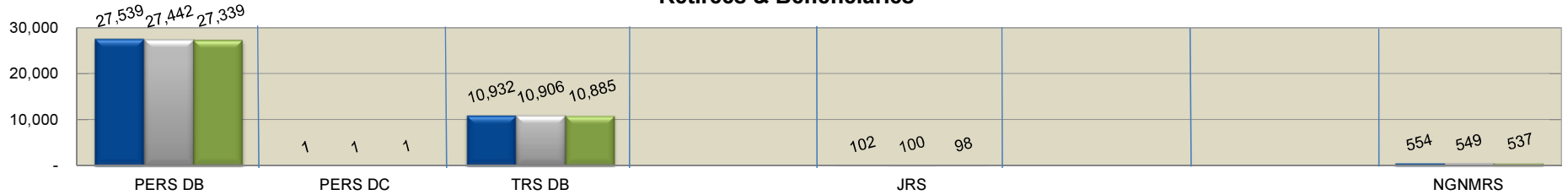
Active Members



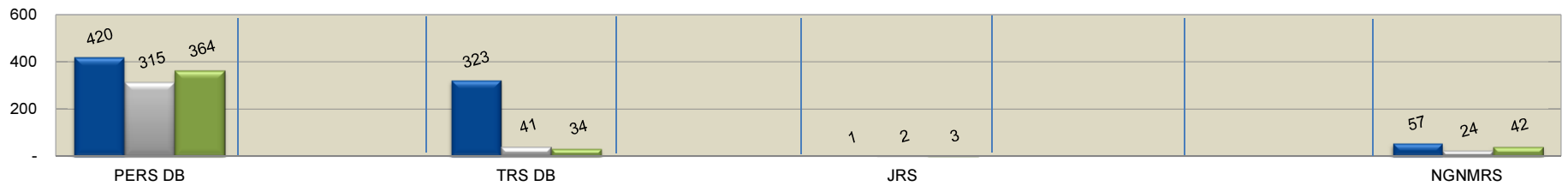
Terminated Members



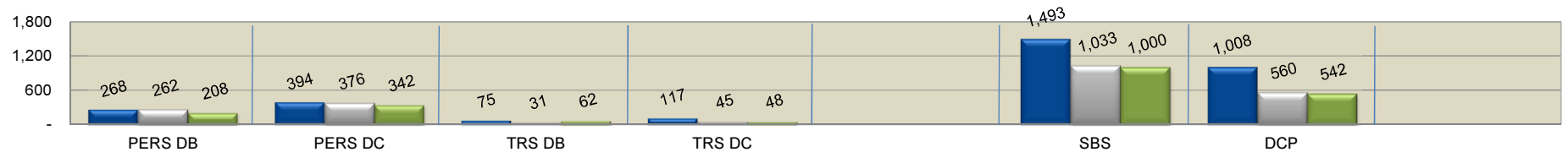
Retirees & Beneficiaries



Retirements



Disbursements



■ 1st QTR ■ 2nd QTR ■ 3rd QTR

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.

CHIEF INVESTMENT OFFICER REPORT

June 20, 2013

1. Defined Contribution communication from Michael B. Cerne.
2. Defined Contribution communication from Bernard Landeis.
3. Rebalance of Defined Benefit Plans.
4. Transfer \$6 million from SSgA S&P Index account to Analytic Investors.
5. Rebalance of Defined Benefit Plans.
6. Transfer ~\$111 million from McKinley Capital Large Cap Growth.
7. Transfer ~\$140 million from Allianz/RCM Large Cap.
8. Transfer ~\$88 million to QMA Large Cap.
9. Transfer ~\$83 million to Barrow Hanley Large Cap.
10. Transfer ~\$80 million from SSgA Russell 1000 value account.
11. Transfer ~\$162 million to SSgA Russell 1000 Growth.
12. Transfer \$150 million out of TIPs, \$37.5 million to FAMCO MLP, \$37.5 million to Tourtoise MLP, and \$75 million into REIT's.
13. Transfer \$119,510,512 from Lord Abbett Small Cap to Small Cap Growth.
14. Rebalance of Defined Benefit Plans.
15. _____
16. _____

Carson, Shane J (DOR)

From: Carson, Shane J (DOR)
Sent: Thursday, April 04, 2013 7:35 AM
To: Cerne, Michael B (ASMI)
Cc: Hall, Judith A (DOR)
Subject: Defined Contribution Plan Investment Options

Mr. Cerne,

I would like to start by thanking you for your recommendation that an all market bond index be included in the suite of investment options available in the Defined Contribution Plans. Your recommendation will be brought to the attention of the Alaska Retirement Management Board during the June board meeting.

Sincerely,

Shane Carson

*Shane Carson, CAIA
State Investment Officer
Alaska Retirement Management Board
(907) 465 - 3748
shane.carson@alaska.gov*

From: Michael Cerne [<mailto:mcerne@alaskaseafood.org>]
Sent: Friday, March 29, 2013 12:10 PM
To: Hall, Judith A (DOR)
Subject: Defined Contribution Plan Investment Options

I would like to recommend the ARMB consider adding an all market bond index fund to the suite of investment options available in the State of Alaska Defined Contribution Plans. Something akin to a total bond index mutual fund (e.g., VBMFX), or total bond market ETF (e.g., AGG, BND, BOND)

Michael B. Cerne
Executive Director
Alaska Seafood Marketing Institute

Carson, Shane J (DOR)

From: Landeis, Bernard T (DOT)
Sent: Thursday, April 04, 2013 9:06 AM
To: Carson, Shane J (DOR)
Subject: RE: Alaska Retirement Date 2020 Trust Question

Shane,

Perfect. Yes I understand perfectly regarding the impacts to the performance given the adjustments to the investment allocations as we approach the 2020 Target date.

Bernard Landeis

Project Manager

DOT&PF Southeast Region Construction

Office: 907-465-8883

Cell: 206-795-6718

bernard.landeis@alaska.gov

From: Carson, Shane J (DOR)
Sent: Thursday, April 04, 2013 7:52 AM
To: Landeis, Bernard T (DOT)
Cc: Hall, Judith A (DOR)
Subject: Alaska Retirement Date 2020 Trust Question

Mr. Landeis,

I would like to start by thanking you for your question regarding the alpha and beta of the Alaska Target Retirement 2020 Trust. The Target Date trusts are composed of underlying common trust funds with each one representing a different market sector (U.S. Stocks, non-U.S. stocks, bonds, and money market/cash). The benchmark for the Trust is currently a weighted average of the total return performance of the Russell 3000 Index, MSCI EAFE Index, Barclays Capital U.S. Aggregate Bond Index, and the Citigroup 3-month Treasury Bill Index. An alpha and beta can be calculated based on the historical performance of the Trust but the underlying common trust fund allocations will change as the portfolio and benchmark target allocations follow the retirement glidepath. The glidepath allocations increase the complexity when forecasting using Monte Carlo simulation. Considering the above, the historical alpha for the period 12/31/2000 to 03/31/2013 is 0.17% annualized and the beta is 0.98.

Sincerely,

Shane Carson

Shane Carson, CAIA

State Investment Officer

Alaska Retirement Management Board

(907) 465 - 3748

shane.carson@alaska.gov

From: Landeis, Bernard T (DOT) [<mailto:bernard.landeis@alaska.gov>]
Sent: Monday, April 01, 2013 3:44 PM
To: Sawicki, Lindsey
Subject: RE: Request An Appointment

Lindsey,

Thanks I really only have one question. I am investing in the Alaska Retirement Date 2020 Trust. I am currently running a Monte Carlo Analysis for planning my wife's and my retirement portfolio. I guess it is the engineer in me. Is it possible to get an alpha and beta for the Trust? Thanks

Bernard Landeis

Project Manager

DOT&PF Southeast Region Construction

Office: 907-465-8883

Cell: 206-795-6718

bernard.landeis@alaska.gov



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

May 9, 2013

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 Wednesday, May 15, 2013. Please process the following cash transfer as early as possible on that day:

State Street Global Advisors (038CDCJN0)	< \$6,000,000 >
Analytic Investors (038CDCNT2)	\$6,000,000

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

Sincerely,

A handwritten signature in blue ink that reads "Gary M. Bader".

Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer

GMB/smh



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May 10, 2013

Alex Slivka
Director of Institutional Marketing
McKinley Capital Management, LLC
3301 C. Street, Suite 500
Anchorage, AK 99503

Dear Mr. Slivka:

The Alaska Retirement Management Board (ARMB) has appointed State Street Global Markets (SSgM) as transition manager to facilitate a rebalance of our large cap managers. This will require a pro rata withdrawal of securities and cash in the amount of approximately **\$111,000,000** from our large cap growth account (AY48). The attached list of securities will be transferred out of McKinley Large Cap Growth (AY48) on Tuesday, May 14, 2013.

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

Sincerely,

A handwritten signature in blue ink that reads "Gary M. Bader".

Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer
Jon Gonthier, State Street Global Markets

GMB/smh

Attachment



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May 10, 2013

Melody McDonald
Allianz/RCM Capital Management
555 Mission Street
San Francisco, CA 94105

Dear Ms. McDonald:

The Alaska Retirement Management Board (ARMB) has appointed State Street Global Markets (SSgM) as transition manager to facilitate a rebalance of our large cap managers. This will require a pro rata withdrawal of securities in the amount of approximately **\$140,000,000** from our large cap account (AY38). The attached list of securities will be transferred out of Allianz/RCM Large Cap (AY38) on Tuesday, May 14, 2013.

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

Sincerely,

A handwritten signature in blue ink that reads "Gary M. Bader".

Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer
Jon Gonthier, State Street Global Markets

GMB/smh

Attachment



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Fax: 907.465.2389

May 10, 2013

Kevin McGrory
Quantitative Management Associates
2 Gateway Center, 6th Floor
Newark, NJ 07102

Dear Mr. McGrory:

The Alaska Retirement Management Board (ARMB) has appointed State Street Global Markets (SSgM) as transition manager for the rebalance of our large cap managers. This transition will occur on Wednesday, May 15, 2013 and an in-kind transfer into QMA Large Cap (AY4V) in the amount of approximately \$88M will occur upon settlement. Please provide our following contact at SSgM with the necessary information to facilitate this transition:

Jon R. Gonthier, CFA
Vice President
State Street Global Markets, LLC
617-664-1279 phone
857-350-6850 mobile
617-664-6055 fax
JRGonthier@statestreet.com

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

Sincerely,

A handwritten signature in blue ink that reads "Gary M. Bader".

Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer
Jon Gonthier, State Street Global Markets

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Fax: 907.465.2389

May 10, 2013

Matt Egenes
Barrow, Hanley, Mewhinney & Strauss
2200 Ross Avenue, 31st Floor
Dallas, TX 75201

Dear Mr. Egenes:

The Alaska Retirement Management Board (ARMB) has appointed State Street Global Markets (SSgM) as transition manager for the rebalance of our large cap managers. This transition will occur on Wednesday, May 15, 2013 and an in-kind transfer into BHMS Large Cap (AY4U) in the amount of approximately \$83M will occur upon settlement. Please provide our following contact at SSgM with the necessary information to facilitate this transition:

Jon R. Gonthier, CFA
Vice President
State Street Global Markets, LLC
617-664-1279 phone
857-350-6850 mobile
617-664-6055 fax
JRGonthier@statestreet.com

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

Sincerely,

A handwritten signature in blue ink that reads "Gary M. Bader".

Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer
Jon Gonthier, State Street Global Markets

GMB/smh



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ALASKA RETIREMENT MANAGEMENT BOARD

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

May 13, 2013

Mary Ellen MacDonald
State Street Corporation
Lafayette Corporate Center
2 Avenue de Lafayette, LCC 6N
Boston, MA 02111-2900

Dear Ms. MacDonald:

As we have previously conveyed, the Alaska Retirement Management Board (ARMB) will be rebalancing its large cap portfolio through the use of State Street Global Markets (SSgM) as our transition manager. In doing so, ARMB requests the following in-kind transfer to be made on Tuesday, May 14, 2013 into our large cap transition account (AY30). The attached list of securities should be transferred from AY4M to AY30 at market value using May 13, 2013 closing prices with the following approximate value:

SSgA Russell 1000 Value (AY4M) (In-kind)	< \$80,000,000 >
Large Cap Transition Account (AY30)	\$80,000,000

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

Sincerely,


Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer
Jon Gonthier, State Street Global Markets

GMB/smh

Attachment



THE STATE
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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

May 17, 2013

State Street Global Advisors
State Street Financial Center
One Lincoln Street
Boston, MA 02111

Completed by:

<input type="checkbox"/>	Revision
<input type="checkbox"/>	Cancellation

Attention: **SSgA Boston Shareholder Services -- (617) 204-0088**

Dear State Street Global Advisors:

The Alaska Retirement Management Board is writing to advise SSgA of our intent to make the below In-kind contribution to our separately managed account:

Trade Date :	5/20/2013
Transaction :	In-kind Contribution (securities and cash, list attached)
SSgA Strategy Name:	Russell 1000 Growth Separately Managed Account
SSgA Account Code :	AY4L
Amount :	Approximately \$162M
Currency:	USD
Special Instructions:	

We understand that this letter should be faxed to the **SSgA Boston Shareholder Services** at the following fax number at least 1 business day before the Trade Date.

We understand that SSgA is providing this template in order to ensure that all required information is included in the trade request. Before signing and returning the letter, we have reviewed it for accuracy and completeness and ensured that all instructions, as they appear, match our intent. We understand that SSgA will not be responsible for any inaccurate or incomplete information.

(617) 204-0088

Sincerely yours,

Harry M. Bader

Authorized Signature

Date: 5/17/2013



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

May 17, 2013

Ms. Mary Ellen MacDonald
State Street Corporation
Lafayette Corporate Center
2 Avenue de Lafayette
LCC3S
Boston, MA 02111-2900

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests to have the following cash transfers made as soon as possible on Tuesday, May 21, 2013:

TIPS (AY6N)	< \$150,000,000 >
FAMCO MLP (AYIP)	\$37,500,000
Tortoise MLP (AYIQ)	\$37,500,000
REIT Holdings (AY9H)	\$75,000,000

This transaction applies to the ARMB Defined Benefit Pension Plans AY21-AY23, but not AY24; the ARMB Retirement Health Funds AYW2-AYW4; and the ARMB Defined Contribution Plans AY6G, AY61, AXX2-AYX3, AYY2-AYY3. Please use a pro-rata split based on ownership in AY6N pertaining to the referenced Pension Plans, Retirement Health Funds and Defined Contribution Plans.

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

Sincerely,

A handwritten signature in cursive script that reads "Gary M. Bader".

Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Zachary Hanna, State Investment Officer
Steve Sikes, State Investment Officer

GMB/jnw



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Juneau, Alaska 99811-0405
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Fax: 907.465.2389

May 28, 2013

Mary Ellen MacDonald
State Street Corporation
Lafayette Corporate Center
2 Avenue de Lafayette, LCC 6N
Boston, MA 02111-2900

Dear Ms. MacDonald:

As we have previously conveyed, the Alaska Retirement Management Board (ARMB) has directed Lord Abbett to transition the Lord Abbett small cap portfolio into a small cap growth mandate. In doing so, ARMB requests the following in-kind and cash transfer to be made on Friday, May 31, 2013 into our Lord Abbett Small Cap Growth account (AY5F). The attached list of cash and securities should be transferred from AY4H to AY5F at market value using May 30, 2013 closing prices with the following approximate value:

Lord Abbett Small Cap (AY4H) (In-kind and cash)	< \$119,510,512 >
Lord Abbett Small Cap Growth (AY5F)	\$119,510,512

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

Sincerely,

A handwritten signature in black ink, appearing to read "Gary M. Bader".

For Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Angela Rodell, Deputy Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer

GMB/smh

Attachment

ALASKA RETIREMENT MANAGEMENT BOARD

FINANCIAL REPORT

As of April 30, 2013

ALASKA RETIREMENT MANAGEMENT BOARD
Schedule of Investment Income and Changes in Invested Assets by Fund
For the Ten Months Ending April 30, 2013

	<u>Beginning Invested Assets</u>	<u>Investment Income (¹)</u>	<u>Net Contributions (Withdrawals)</u>	<u>Ending Invested Assets</u>	<u>% Change in Invested Assets</u>	<u>% Change due to Investment Income (²)</u>
<u>Public Employees' Retirement System (PERS)</u>						
<u>Defined Benefit Plans:</u>						
Retirement Trust	\$ 6,105,946,336	\$ 770,280,060	\$ (122,534,147)	\$ 6,753,692,249	10.61%	12.74%
Retirement Health Care Trust	5,193,885,276	657,159,032	47,840,162	5,898,884,470	13.57%	12.59%
Total Defined Benefit Plans	<u>11,299,831,612</u>	<u>1,427,439,092</u>	<u>(74,693,985)</u>	<u>12,652,576,719</u>	11.97%	12.67%
<u>Defined Contribution Plans:</u>						
Participant Directed Retirement	236,965,621	46,355,368	55,481,239	338,802,228	42.98%	17.51%
Health Reimbursement Arrangement	74,424,033	10,351,836	19,224,636	104,000,505	39.74%	12.32%
Retiree Medical Plan	15,337,965	2,061,241	2,654,809	20,054,015	30.75%	12.37%
Defined Benefit Occupational Death and Disability:						
Public Employees	6,387,143	836,275	708,978	7,932,396	24.19%	12.40%
Police and Firefighters	2,499,287	343,257	550,225	3,392,769	35.75%	12.37%
Total Defined Contribution Plans	<u>335,614,049</u>	<u>59,947,977</u>	<u>78,619,887</u>	<u>474,181,913</u>	41.29%	15.99%
Total PERS	<u>11,635,445,661</u>	<u>1,487,387,069</u>	<u>3,925,902</u>	<u>13,126,758,632</u>	12.82%	12.78%
<u>Teachers' Retirement System (TRS)</u>						
<u>Defined Benefit Plans:</u>						
Retirement Trust	3,005,557,437	386,737,886	(71,845,601)	3,320,449,722	10.48%	13.02%
Retirement Health Care Trust	1,644,357,499	213,528,921	36,524,416	1,894,410,836	15.21%	12.84%
Total Defined Benefit Plans	<u>4,649,914,936</u>	<u>600,266,807</u>	<u>(35,321,185)</u>	<u>5,214,860,558</u>	12.15%	12.96%
<u>Defined Contribution Plans:</u>						
Participant Directed Retirement	107,836,445	20,243,506	17,920,761	146,000,712	35.39%	17.33%
Health Reimbursement Arrangement	24,431,777	3,304,695	4,736,436	32,472,908	32.91%	12.33%
Retiree Medical Plan	6,744,806	879,118	772,365	8,396,289	24.49%	12.33%
Defined Benefit Occupational Death and Disability	2,310,906	286,758	(23)	2,597,641	12.41%	12.41%
Total Defined Contribution Plans	<u>141,323,934</u>	<u>24,714,077</u>	<u>23,429,539</u>	<u>189,467,550</u>	34.07%	16.15%
Total TRS	<u>4,791,238,870</u>	<u>624,980,884</u>	<u>(11,891,646)</u>	<u>5,404,328,108</u>	12.80%	13.06%
<u>Judicial Retirement System (JRS)</u>						
Defined Benefit Plan Retirement Trust	107,053,406	13,605,992	(1,042,287)	119,617,111	11.74%	12.77%
Defined Benefit Retirement Health Care Trust	20,482,507	2,524,430	(294,143)	22,712,794	10.89%	12.41%
Total JRS	<u>127,535,913</u>	<u>16,130,422</u>	<u>(1,336,430)</u>	<u>142,329,905</u>	11.60%	12.71%
<u>National Guard/Naval Militia Retirement System (MRS)</u>						
Defined Benefit Plan Retirement Trust	32,700,652	3,296,775	(873,841)	35,123,586	7.41%	10.22%
<u>Other Participant Directed Plans</u>						
Supplemental Annuity Plan	2,656,000,434	293,579,398	5,165,184	2,954,745,016	11.25%	11.04%
Deferred Compensation Plan	614,417,787	72,022,428	4,740,782	691,180,997	12.49%	11.68%
Total All Funds	<u>19,857,339,317</u>	<u>2,497,396,976</u>	<u>(270,049)</u>	<u>22,354,466,244</u>		
Total Non-Participant Directed	16,242,119,030	2,065,196,276	(83,578,015)	18,223,737,291	12.20%	12.75%
Total Participant Directed	3,615,220,287	432,200,700	83,307,966	4,130,728,953	14.26%	11.82%
Total All Funds	<u>\$ 19,857,339,317</u>	<u>\$ 2,497,396,976</u>	<u>\$ (270,049)</u>	<u>\$ 22,354,466,244</u>	12.58%	12.58%

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 April 30, 2013

	<u>Beginning Invested Assets</u>	<u>Investment Income (¹)</u>	<u>Net Contributions (Withdrawals)</u>	<u>Ending Invested Assets</u>	<u>% Change in Invested Assets</u>	<u>% Change due to Investment Income (²)</u>
<u>Public Employees' Retirement System (PERS)</u>						
<u>Defined Benefit Plans:</u>						
Retirement Trust	\$ 6,666,393,549	\$ 110,019,880	\$ (22,721,180)	\$ 6,753,692,249	1.31%	1.65%
Retirement Health Care Trust	5,806,266,159	95,571,837	(2,953,526)	5,898,884,470	1.60%	1.65%
Total Defined Benefit Plans	<u>12,472,659,708</u>	<u>205,591,717</u>	<u>(25,674,706)</u>	<u>12,652,576,719</u>	1.44%	1.65%
<u>Defined Contribution Plans:</u>						
Participant Directed Retirement	322,709,937	7,518,776	8,573,515	338,802,228	4.99%	2.30%
Health Reimbursement Arrangement	99,734,540	1,682,114	2,583,851	104,000,505	4.28%	1.67%
Retiree Medical Plan	19,376,779	324,528	352,708	20,054,015	3.50%	1.66%
Defined Benefit Occupational Death and Disability:						
Public Employees	7,717,333	128,510	86,553	7,932,396	2.79%	1.66%
Police and Firefighters	3,265,010	54,954	72,805	3,392,769	3.91%	1.66%
Total Defined Contribution Plans	<u>452,803,599</u>	<u>9,708,882</u>	<u>11,669,432</u>	<u>474,181,913</u>	4.72%	2.12%
Total PERS	<u>12,925,463,307</u>	<u>215,300,599</u>	<u>(14,005,274)</u>	<u>13,126,758,632</u>	1.56%	1.67%
<u>Teachers' Retirement System (TRS)</u>						
<u>Defined Benefit Plans:</u>						
Retirement Trust	3,291,241,672	54,143,048	(24,934,998)	3,320,449,722	0.89%	1.65%
Retirement Health Care Trust	1,870,218,053	30,697,104	(6,504,321)	1,894,410,836	1.29%	1.64%
Total Defined Benefit Plans	<u>5,161,459,725</u>	<u>84,840,152</u>	<u>(31,439,319)</u>	<u>5,214,860,558</u>	1.03%	1.65%
<u>Defined Contribution Plans:</u>						
Participant Directed Retirement	140,326,521	3,184,559	2,489,632	146,000,712	4.04%	2.25%
Health Reimbursement Arrangement	31,365,102	525,151	582,655	32,472,908	3.53%	1.66%
Retiree Medical Plan	8,166,960	135,902	93,427	8,396,289	2.81%	1.65%
Defined Benefit Occupational Death and Disability	2,555,555	42,086		2,597,641	1.65%	1.65%
Total Defined Contribution Plans	<u>182,414,138</u>	<u>3,887,698</u>	<u>3,165,714</u>	<u>189,467,550</u>	3.87%	2.11%
Total TRS	<u>5,343,873,863</u>	<u>88,727,850</u>	<u>(28,273,605)</u>	<u>5,404,328,108</u>	1.13%	1.66%
<u>Judicial Retirement System (JRS)</u>						
Defined Benefit Plan Retirement Trust	117,940,561	1,948,700	(272,150)	119,617,111	1.42%	1.65%
Defined Benefit Retirement Health Care Trust	22,328,430	368,214	16,150	22,712,794	1.72%	1.65%
Total JRS	<u>140,268,991</u>	<u>2,316,914</u>	<u>(256,000)</u>	<u>142,329,905</u>	1.47%	1.65%
<u>National Guard/Naval Militia Retirement System (MRS)</u>						
Defined Benefit Plan Retirement Trust	34,861,185	482,603	(220,202)	35,123,586	0.75%	1.39%
<u>Other Participant Directed Plans</u>						
Supplemental Annuity Plan	2,911,718,946	44,502,802	(1,476,732)	2,954,745,016	1.48%	1.53%
Deferred Compensation Plan	679,329,607	9,833,786	2,017,604	691,180,997	1.74%	1.45%
Total All Funds	<u>22,035,515,899</u>	<u>361,164,554</u>	<u>(42,214,209)</u>	<u>22,354,466,244</u>		
Total Non-Participant Directed	17,981,430,888	296,124,631	(53,818,228)	18,223,737,291	1.35%	1.65%
Total Participant Directed	4,054,085,011	65,039,923	11,604,019	4,130,728,953	1.89%	1.60%
Total All Funds	<u>\$ 22,035,515,899</u>	<u>\$ 361,164,554</u>	<u>\$ (42,214,209)</u>	<u>\$ 22,354,466,244</u>	1.45%	1.64%

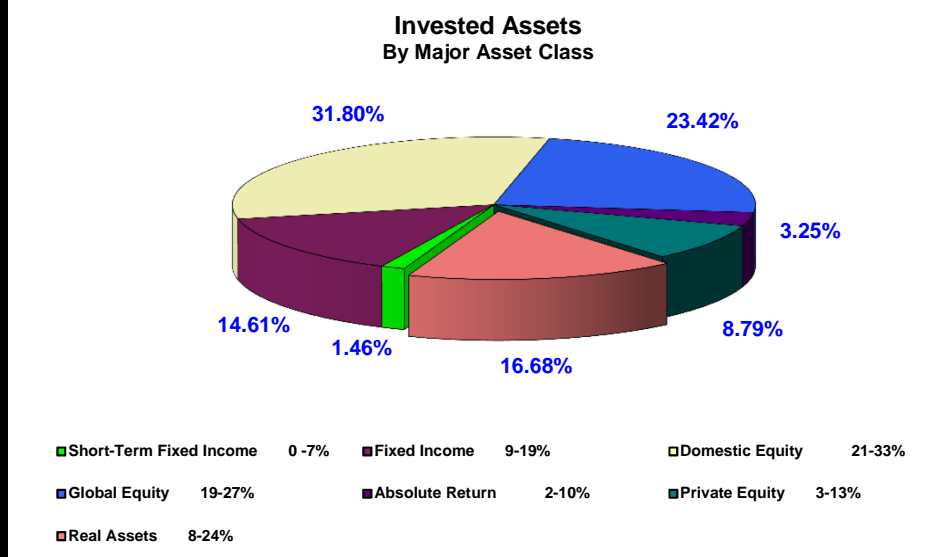
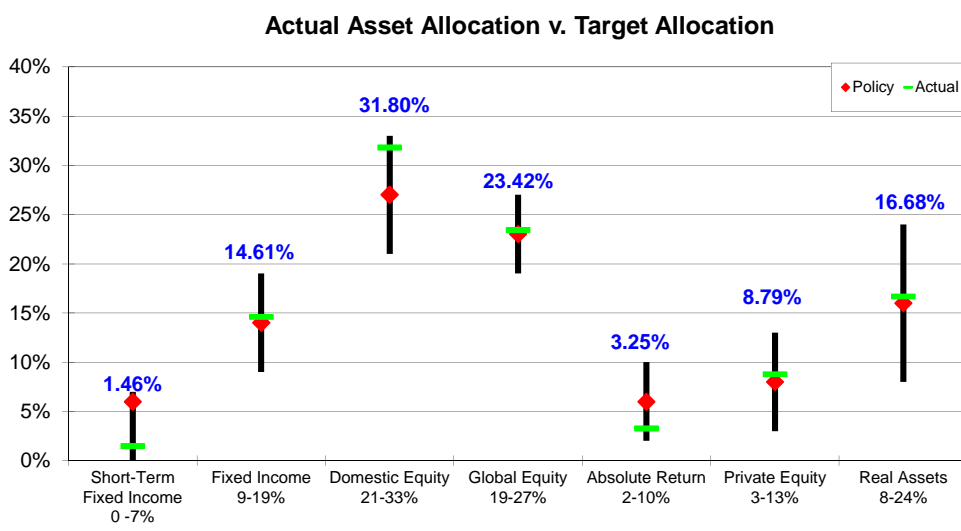
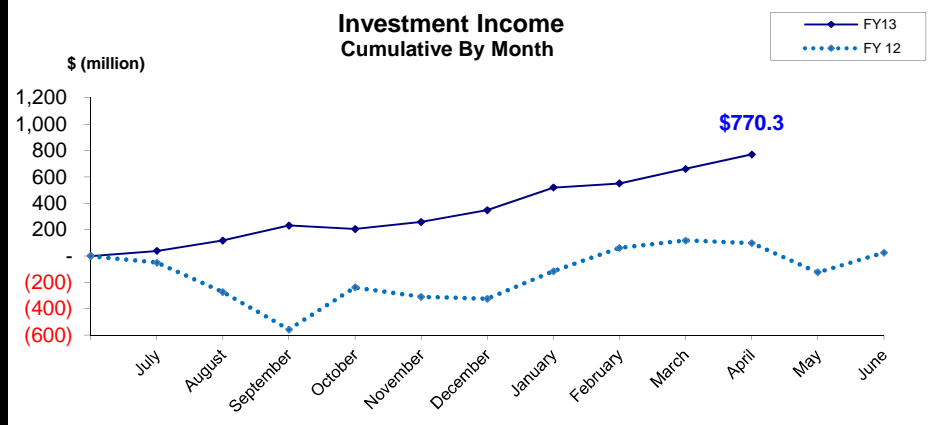
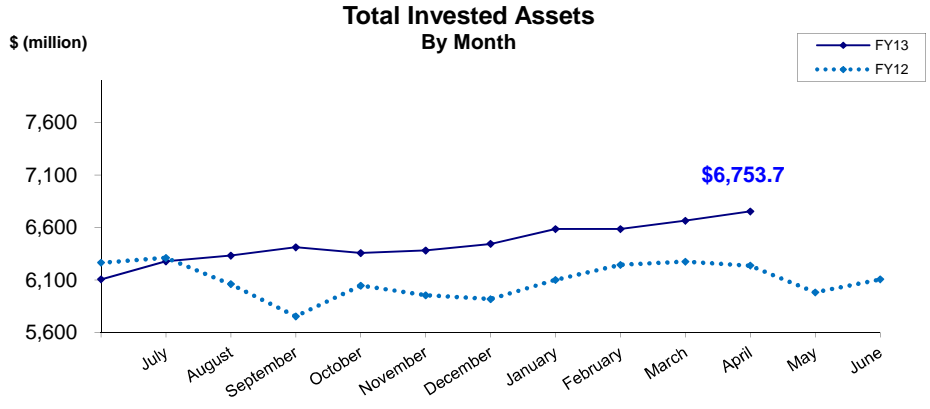
Notes:

(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>

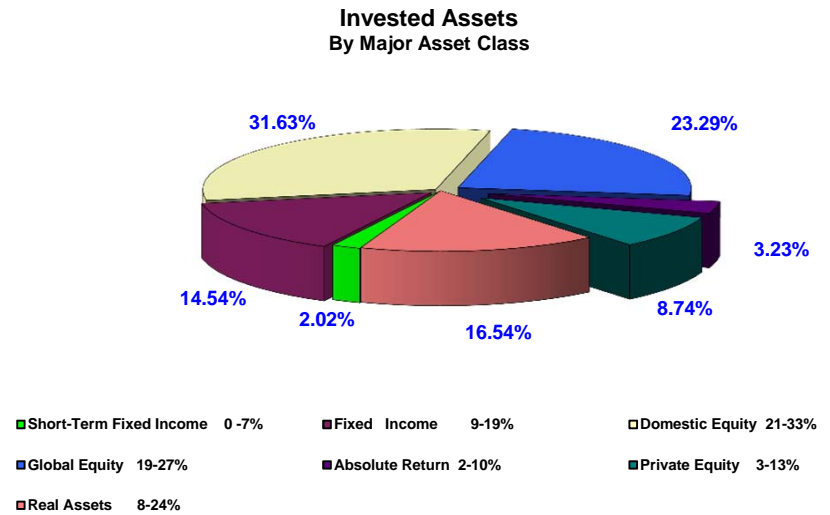
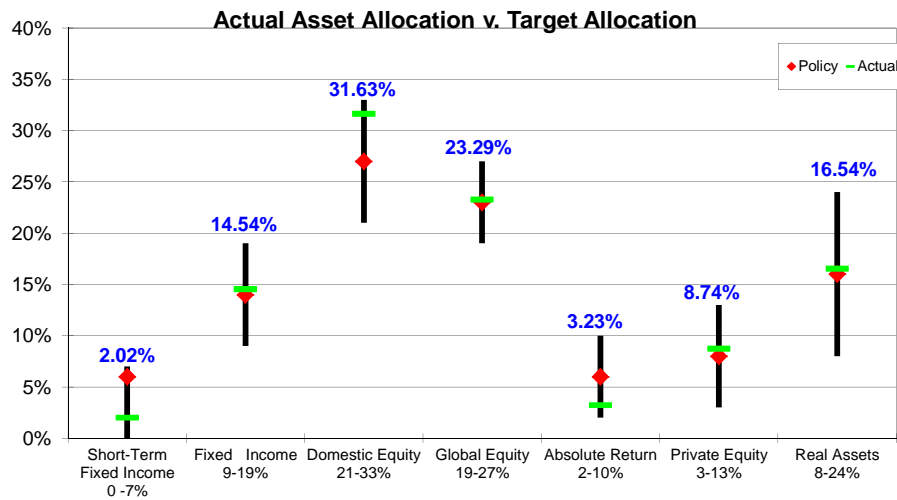
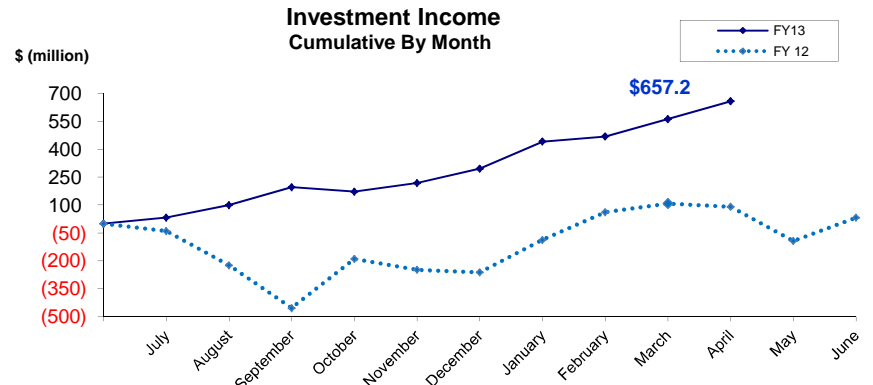
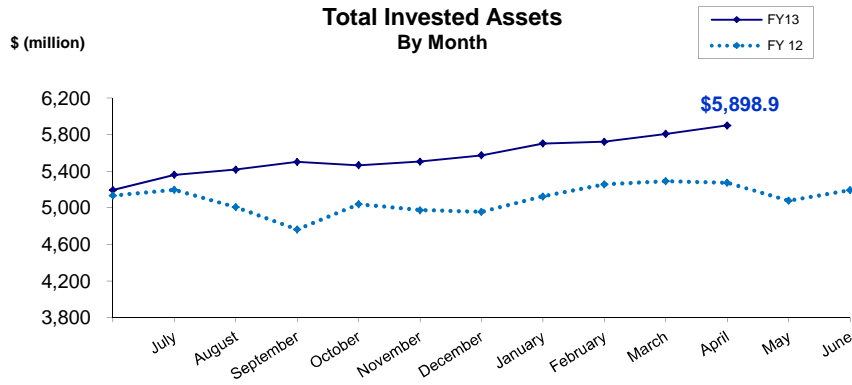
PUBLIC EMPLOYEES' RETIREMENT TRUST FUND

As of April 30, 2013



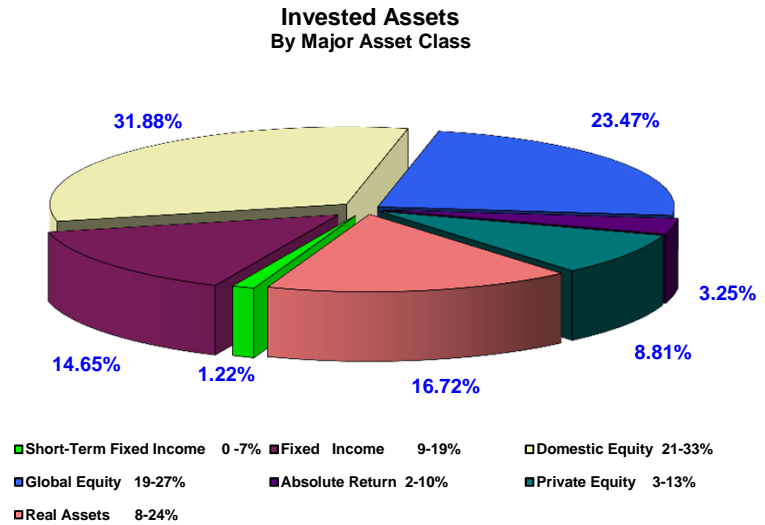
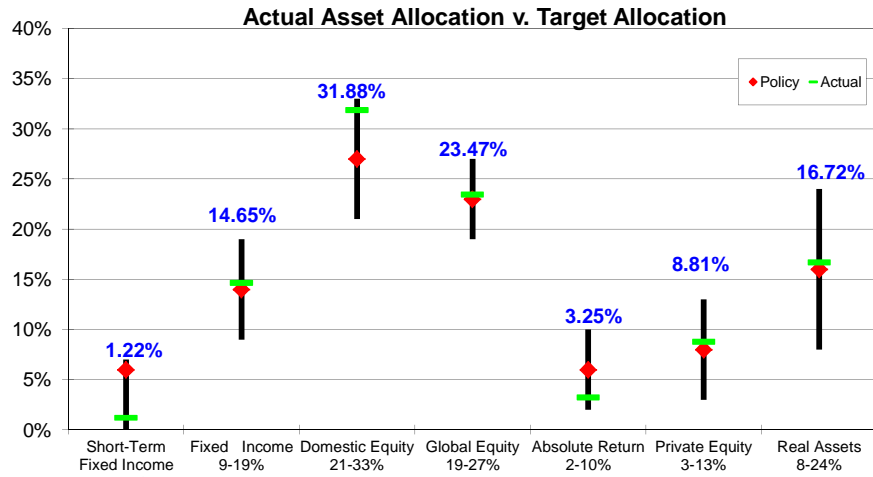
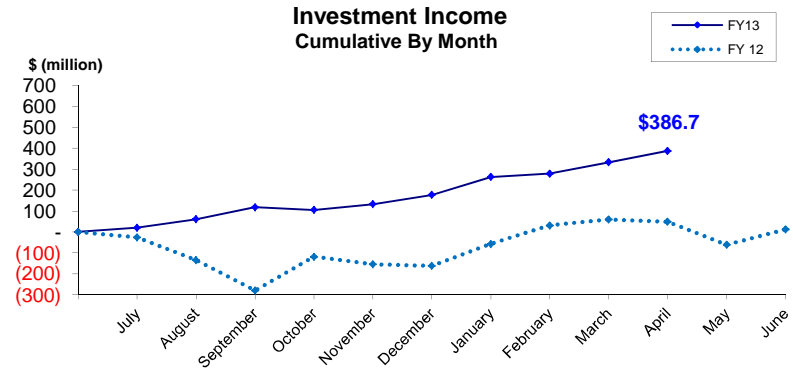
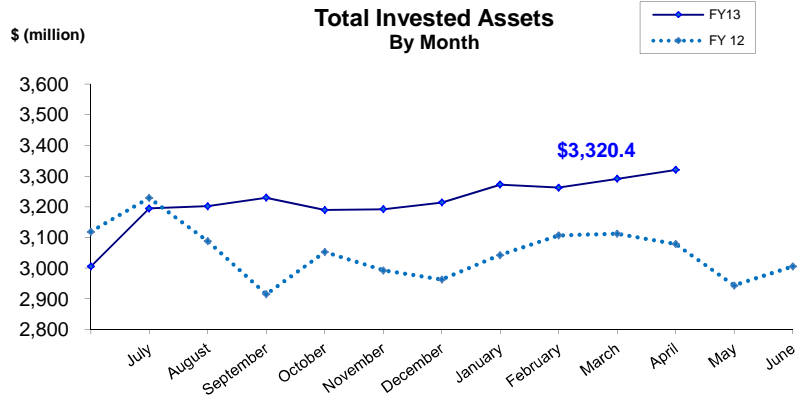
PUBLIC EMPLOYEES' RETIREE HEALTH CARE TRUST FUND

As of April 30, 2013



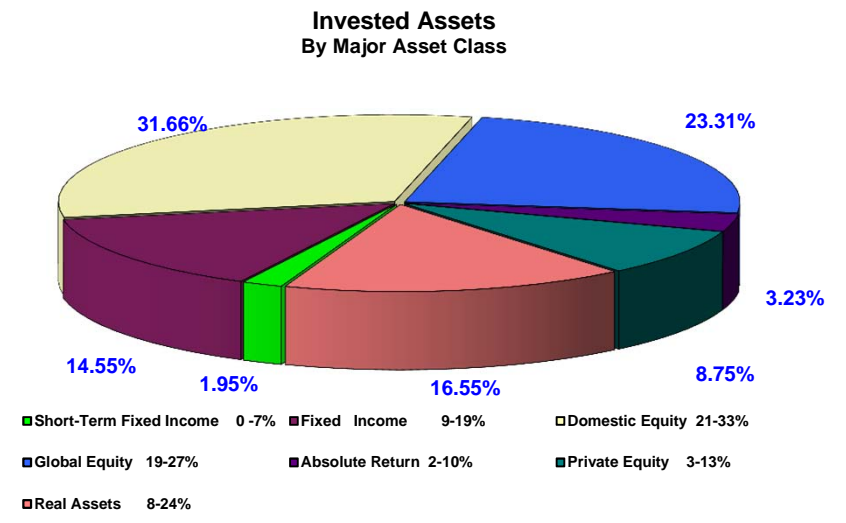
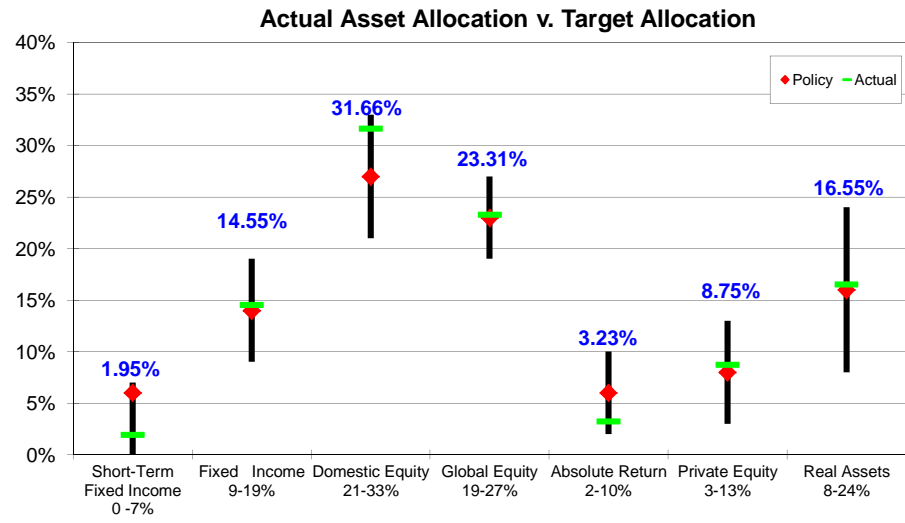
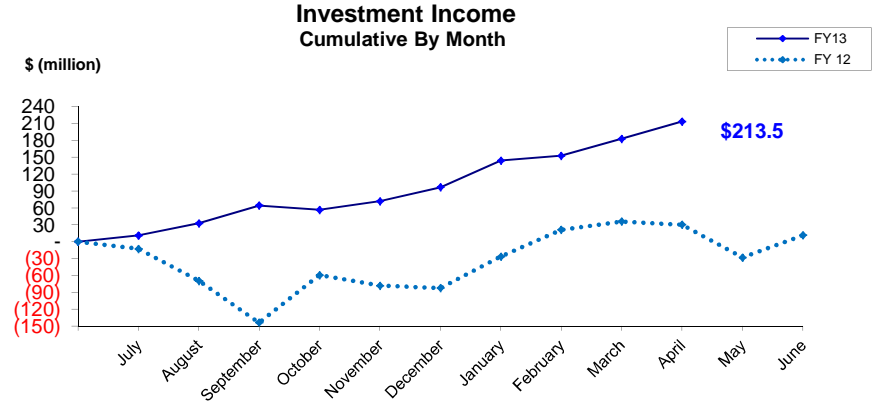
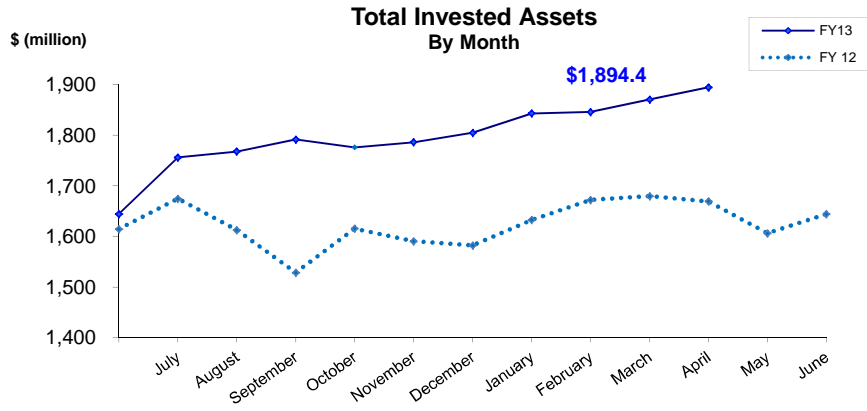
TEACHERS' RETIREMENT TRUST FUND

As of April 30, 2013



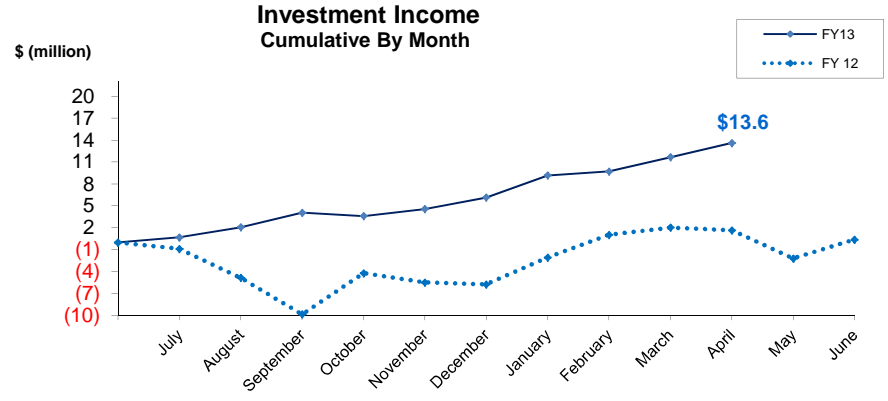
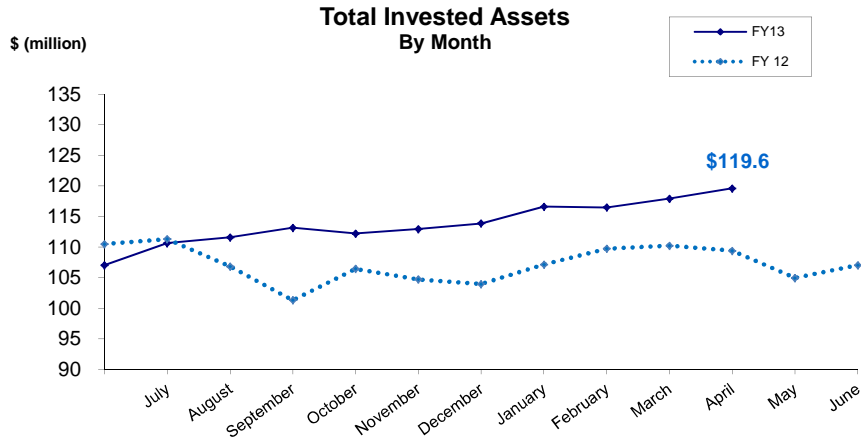
TEACHERS' RETIREE HEALTH CARE TRUST FUND

As of April 30, 2013

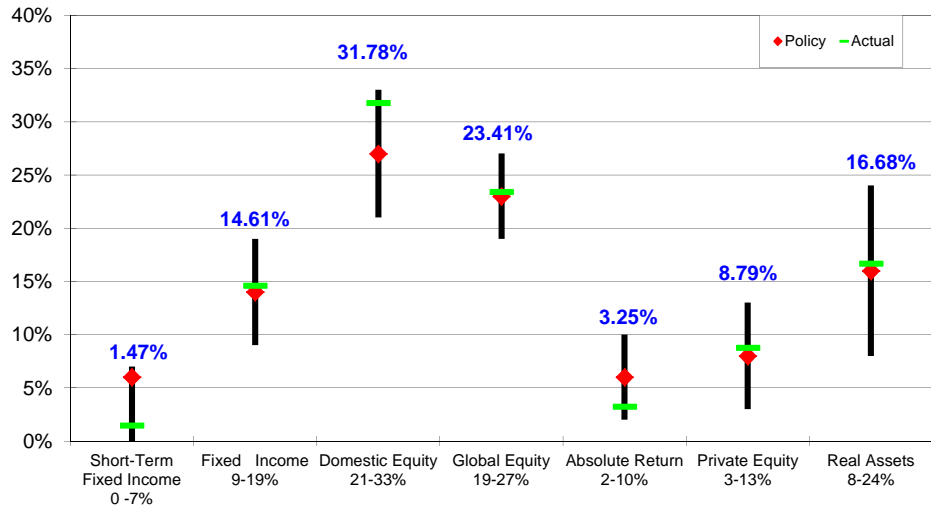


JUDICIAL RETIREMENT TRUST FUND

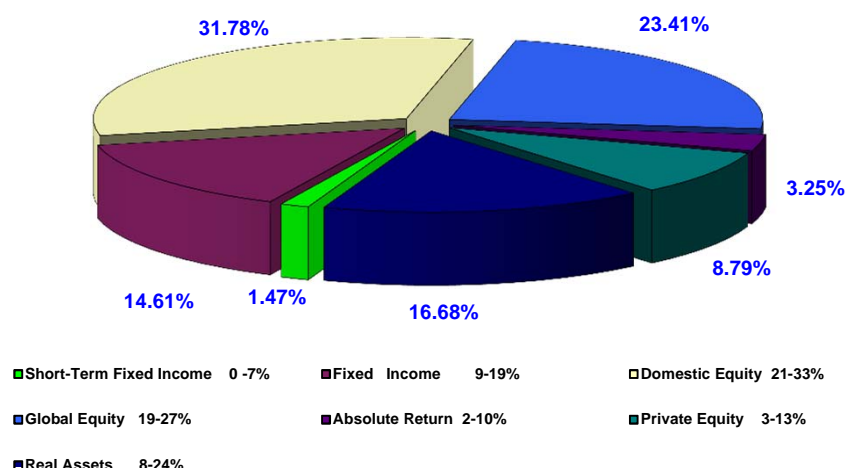
As of April 30, 2013



Actual Asset Allocation v. Target Allocation

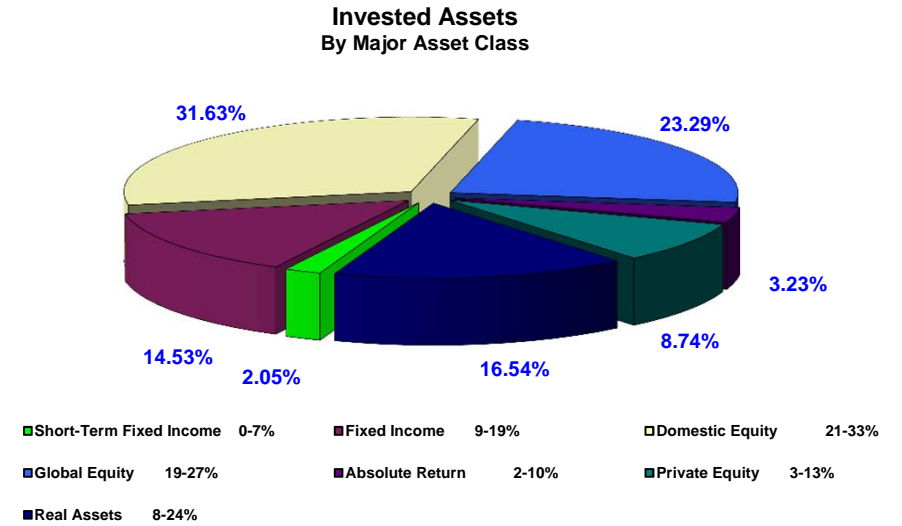
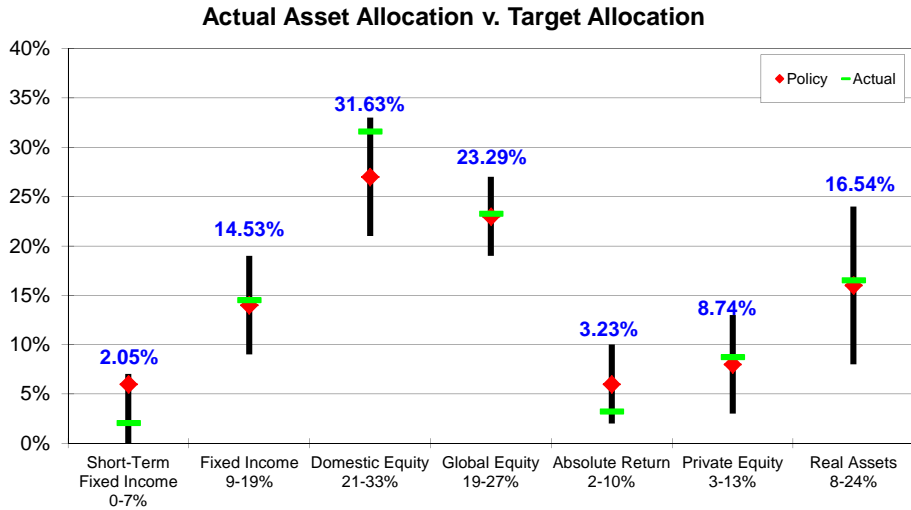
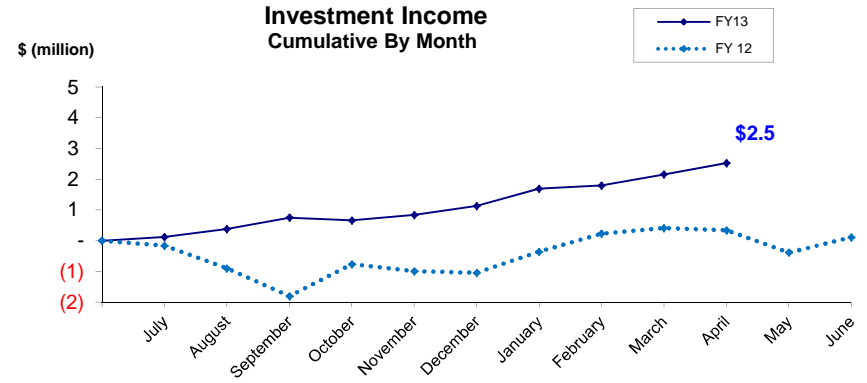
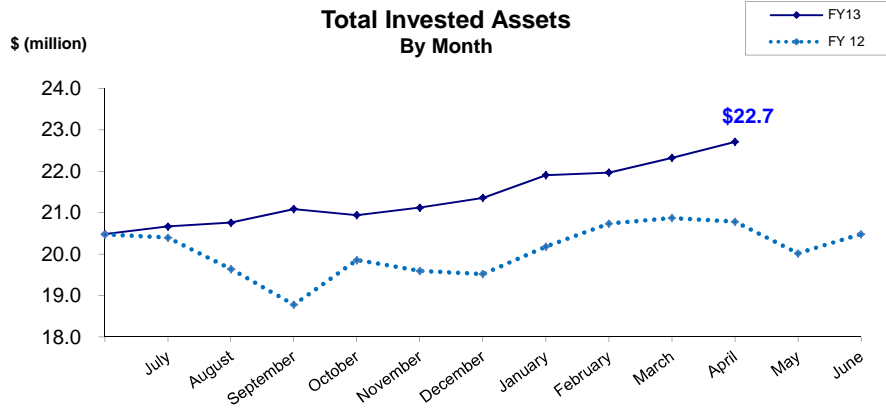


Invested Assets By Major Asset Class



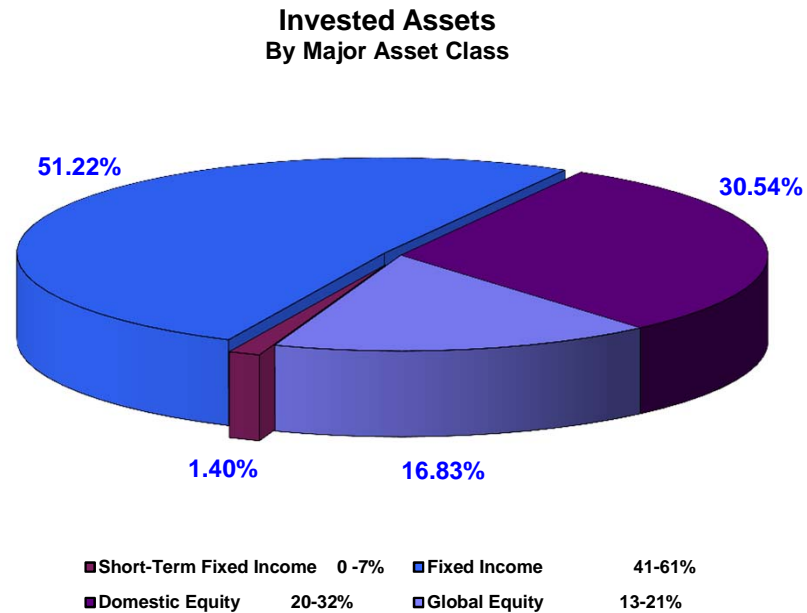
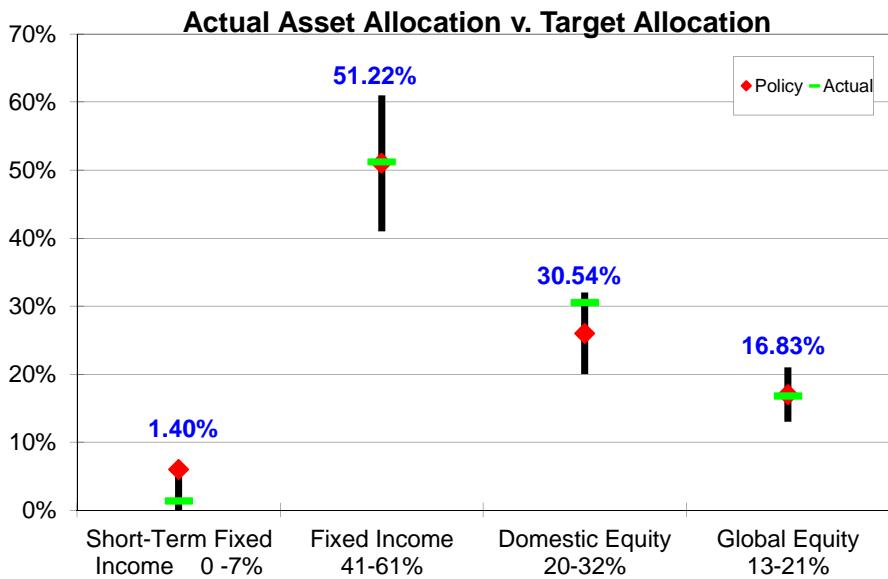
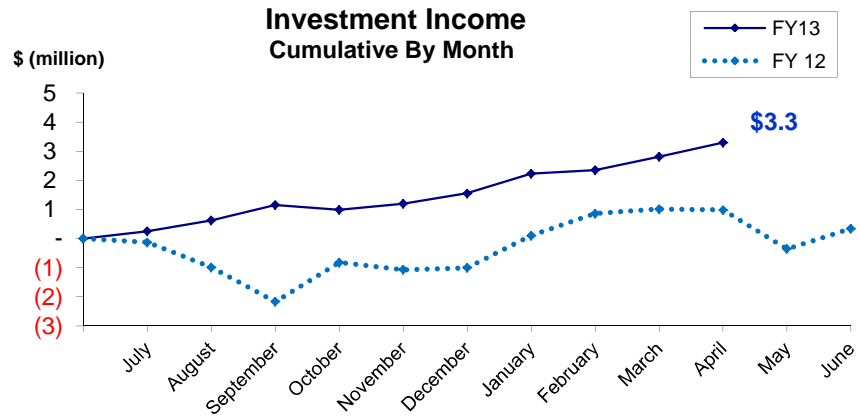
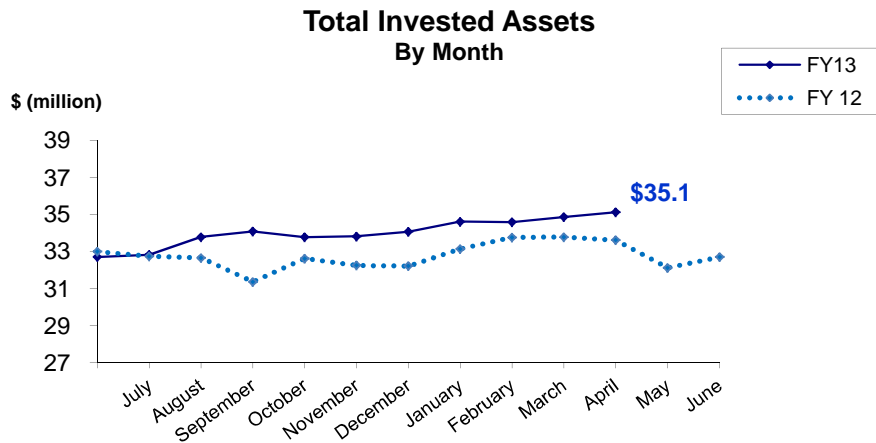
JUDICIAL RETIREE HEALTH CARE TRUST FUND

As of April 30, 2013



MILITARY RETIREMENT TRUST FUND

As of April 30, 2013



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 April 30, 2013

AY		Beginning Invested Assets	Total Investment Income	Net Contributions (Withdrawals) & Transfers In (Out)	Ending Invested Assets	% increase (decrease)
	Cash					
70	Short-Term Fixed Income Pool	\$ 276,667,037	\$ 55,672	\$ 26,503,987	\$ 303,226,696	9.60%
	Total Cash	<u>276,667,037</u>	<u>55,672</u>	<u>26,503,987</u>	<u>303,226,696</u>	<u>9.60%</u>
	Fixed Income					
1A	US Treasury Fixed Income	1,599,381,722	7,942,190	-	1,607,323,912	0.50%
77	Internal Fixed Income Investment Pool	3,358	-	-	3,358	0.00%
	International Fixed Income Pool					
63	Mondrian Investment Partners	374,488,030	5,950,149	-	380,438,179	1.59%
	High Yield Pool					
9P	MacKay Shields, LLC	515,843,996	7,731,929	-	523,575,925	1.50%
	Total High Yield	<u>515,843,996</u>	<u>7,731,929</u>	<u>-</u>	<u>523,575,925</u>	<u>1.50%</u>
	Emerging Debt Pool					
5M	Lazard Emerging Income	157,655,714	1,890,041	-	159,545,755	1.20%
	Total Fixed Income	<u>2,647,372,820</u>	<u>23,514,309</u>	<u>-</u>	<u>2,670,887,129</u>	<u>0.89%</u>
	(cont.)					

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For the Month Ended April 30, 2013

	Beginning Invested Assets	Total Investment Income	Net Contributions (Withdrawals) & Transfers In (Out)	Ending Invested Assets	% increase (decrease)	
Domestic Equities						
Small Cap Pool						
Passively Managed						
4N	SSgA Russell 2000 Growth	13,678,009	(90,183)	-	13,587,826	-0.66%
4P	SSgA Russell 2000 Value	51,638,664	(75,694)	-	51,562,970	-0.15%
	Total Passive	65,316,673	(165,877)	-	65,150,796	-0.25%
Actively Managed						
43	Transition Account	-	-	-	-	
4E	DePrince, Race & Zollo Inc.- Micro Cap	83,731,732	(743,018)	-	82,988,714	-0.89%
4F	Luther King Capital Management	148,030,693	(4,872,885)	-	143,157,808	-3.29%
4G	Jennison Associates, LLC	154,114,530	(1,138,343)	-	152,976,187	-0.74%
5G	Frontier Capital Mgmt Co.	149,257,135	(1,252,388)	-	148,004,747	-0.84%
5H	Victory Capital Management	86,459,355	(1,764,181)	-	84,695,174	-2.04%
6A	SSgA Futures Small Cap	8,441,511	(42,465)	-	8,399,046	-0.50%
4H	Lord Abbett & Co.	116,754,155	(2,239,955)	-	114,514,200	-1.92%
4Q	Barrow, Haney, Mewhinney & Strauss	149,114,974	(3,616,386)	-	145,498,588	-2.43%
4Z	Lord Abbett & Co.- Micro Cap	85,992,762	127,247	-	86,120,009	0.15%
	Total Active	981,896,847	(15,542,374)	-	966,354,473	-1.58%
	Total Small Cap	1,047,213,520	(15,708,251)	-	1,031,505,269	-1.50%
Large Cap Pool						
Passively Managed						
4L	SSgA Russell 1000 Growth	880,517,512	18,633,613	-	899,151,125	2.12%
4M	SSgA Russell 1000 Value	1,152,251,899	17,500,490	-	1,169,752,389	1.52%
4R	SSgA Russell 200	458,450,082	9,287,605	-	467,737,687	2.03%
	Total Passive	2,491,219,493	45,421,708	-	2,536,641,201	1.82%
Actively Managed						
47	Lazard Freres	352,056,251	5,704,135	-	357,760,386	1.62%
48	McKinley Capital Mgmt.	372,472,971	1,746,640	-	374,219,611	0.47%
4U	Barrow, Haney, Mewhinney & Strauss	176,180,650	4,093,748	-	180,274,398	2.32%
4V	Quantitative Management Assoc.	172,322,450	2,988,341	-	175,310,791	1.73%
4W/4X	Analytic Buy Write Account	119,275,810	1,784,627	-	121,060,437	1.50%
4Y	Allianz Global Investors Buy-Write Account	80,201,966	696,535	-	80,898,501	0.87%
38	Allianz Global Investors	394,980,902	7,949,799	-	402,930,701	2.01%
5E	ARMB Equity Yield Strategy	106,263,642	3,475,867	-	109,739,509	3.27%
6B	SSgA Futures large cap	10,596,764	208,627	-	10,805,391	1.97%
4J	Relational Investors, LLC	299,623,409	(5,154,810)	(20,290,140)	274,178,459	-8.49%
	Total Active	2,083,974,815	23,493,509	(20,290,140)	2,087,178,184	0.15%
	Total Large Cap	4,575,194,308	68,915,217	(20,290,140)	4,623,819,385	1.06%

(cont.)

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For the Month Ended April 30, 2013

	Beginning Invested Assets	Total Investment Income	Net Contributions (Withdrawals) & Transfers In (Out)	Ending Invested Assets	% increase (decrease)	
Convertible Bond Pool						
52	Advent Capital	126,182,562	2,049,387	-	128,231,949	1.62%
	Total Convertible Bond Pool	126,182,562	2,049,387	-	128,231,949	1.62%
	Total Domestic Equity	5,748,590,390	55,256,353	(20,290,140)	5,783,556,603	0.61%
Global Equities Ex US						
Small Cap Pool						
5B	Mondrian Investment Partners	135,708,108	2,492,316	-	138,200,424	1.84%
5D	Schroder Investment Management	125,784,786	3,861,504	-	129,646,290	3.07%
	Total Small Cap	261,492,894	6,353,820	-	267,846,714	2.43%
Large Cap Pool						
65	Brandes Investment Partners	844,994,267	58,430,188	-	903,424,455	6.91%
58	Lazard Freres	428,092,818	14,418,185	-	442,511,003	3.37%
67	Cap Guardian Trust Co	681,940,346	23,103,938	-	705,044,284	3.39%
68	State Street Global Advisors	566,911,649	20,648,859	-	587,560,508	3.64%
69	McKinley Capital Management	321,704,832	15,134,917	-	336,839,749	4.70%
6U	Blackrock ACWI Ex-US IMI	423,153,861	15,474,815	-	438,628,676	3.66%
	Total Large Cap	3,266,797,773	147,210,902	-	3,414,008,675	4.51%
Emerging Markets Equity Pool A ⁽¹⁾						
6P	Lazard Asset Management	351,326,199	3,818,763	-	355,144,962	1.09%
6Q	Eaton Vance	217,445,216	2,475,934	-	219,921,150	1.14%
	Total Emerging Markets Pool A	568,771,415	6,294,697	-	575,066,112	1.11%
	Total Global Equities	4,097,062,082	159,859,419	-	4,256,921,501	3.90%
Private Equity Pool						
7Y	Warburg Pincus Prvt Eqty XI	6,657,507	-	300,000	6,957,507	4.51%
7Z	Merit Capital Partners	12,160,634	32,157	(205,160)	11,987,631	-1.42%
98	Pathway Capital Management LLC	738,427,978	9,577,800	(9,110,851)	738,894,927	0.06%
85	Abbott Capital	716,825,103	12,466,171	(7,423,124)	721,868,150	0.70%
8A	Blum Capital Partners-Strategic	9,834,178	-	-	9,834,178	0.00%
8P	Lexington Partners	44,204,006	12	(983,750)	43,220,268	-2.23%
8Q	Onex Partnership III	17,945,542	-	-	17,945,542	0.00%
8W	Warburg Pincus X	28,534,299	-	-	28,534,299	0.00%
8X	Angelo, Gordon & Co.	16,281,778	-	-	16,281,778	0.00%
	Total Private Equity	1,590,871,025	22,076,140	(17,422,885)	1,595,524,280	0.29%

(cont.)

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For the Month Ended April 30, 2013

	Beginning Invested Assets	Total Investment Income	Net Contributions (Withdrawals) & Transfers In (Out)	Ending Invested Assets	% increase (decrease)
Absolute Return Pool ⁽²⁾					
8M	Global Asset Management (USA) Inc.	155,847,834	(491,700)	155,356,134	-0.32%
8N	Prisma Capital Partners	159,407,341	1,472,401	160,879,742	0.92%
9D	Mariner Investment Group, Inc.	9,041,943	55,269	9,097,212	0.61%
9F	Crestline Investors, Inc.	262,097,911	2,012,668	264,110,579	0.77%
	Total Absolute Return Investments	586,395,029	3,048,638	589,443,667	0.52%
Real Assets					
Farmland Pool A					
9B	UBS Agrivest, LLC	372,806,228	-	372,806,228	0.00%
9G	Hancock Agricultural Investment Group	236,014,062	(11)	237,014,051	0.42%
	Total Farmland Pool A	608,820,290	(11)	609,820,279	0.16%
Farmland Water Pool					
8Y	Hancock Water PPTY	9,074,971	-	9,074,971	0.00%
8Z	UBS Argivest, LLC	20,421,350	-	20,421,350	0.00%
	Total Farmland Water Pool	29,496,321	-	29,496,321	0.00%
Timber Pool A					
9Q	Timberland INVT Resource LLC	171,453,562	-	171,453,562	0.00%
9S	Hancock Natural Resource Group	79,426,478	-	79,426,478	0.00%
	Total Timber Pool A	250,880,040	-	250,880,040	0.00%
Energy Pool A					
5A	EIG Energy Fund XV	36,073,272	1,599,636	36,672,908	1.66%
9A	EIG Energy Fund XD	8,092,035	158,526	8,250,561	1.96%
9Z	EIG Energy Fund XIV-A	66,536,487	1,980,465	68,516,952	2.98%
	Total Energy Pool A	110,701,794	3,738,627	113,440,421	2.47%
REIT Pool					
9H	REIT Holdings	208,141,094	13,644,315	221,785,409	6.56%
Treasury Inflation Proof Securities					
6N	TIPS Internally Managed Account	161,305,256	1,401,778	162,707,034	0.87%
Master Limited Partnerships					
1P	FAMCO	136,475,427	2,051,783	138,527,210	1.50%
1Q	Tortoise Capital Advisors	141,324,966	1,385,984	142,710,950	0.98%
	Total Master Limited Partnerships	277,800,393	3,437,767	281,238,160	1.24%

(cont.)

Alaska Retirement Management Board
All Non-Participant Directed Plans by Manager
Schedule of Investment Income and Changes in Invested Assets
For the Month Ended April 30, 2013

	Beginning Invested Assets	Total Investment Income	Net Contributions (Withdrawals) & Transfers In (Out)	Ending Invested Assets	% increase (decrease)	
Real Estate						
Core Commingled Accounts						
7A	JP Morgan	187,533,534	1,586,582	(2,030,370)	187,089,746	-0.24%
7B	UBS Trumbull Property Fund	77,662,607	865,170	(593,297)	77,934,480	0.35%
	Total Core Commingled	<u>265,196,141</u>	<u>2,451,752</u>	<u>(2,623,667)</u>	<u>265,024,226</u>	-0.06%
Core Separate Accounts						
7D	Cornerstone Real Estate Advisers Inc.	95,378,242	19	(15,723)	95,362,538	-0.02%
7E	LaSalle Investment Management	210,401,511	70	(564,000)	209,837,581	-0.27%
7F	Sentinel Separate Account	184,087,796	34	(35,314,114)	148,773,716	-19.18%
7G	UBS Realty	265,073,842	3	(547,320)	264,526,525	-0.21%
	Total Core Separate	<u>754,941,391</u>	<u>126</u>	<u>(36,441,157)</u>	<u>718,500,360</u>	-4.83%
Non-Core Commingled Accounts						
7H	Coventry	17,445,725	-	-	17,445,725	0.00%
7J	Lowe Hospitality Partners	2,371,183	323,993	-	2,695,176	13.66%
7N	ING Clarion Development Ventures II	5,680,784	(755,156)	-	4,925,628	-13.29%
7P	Silverpeak Legacy Pension Partners II, L.P. ⁽³⁾	66,188,616	3,902,130	-	70,090,746	5.90%
7Q	Almanac Realty Securities IV ⁽⁵⁾	37,310,026	825,802	(416,208)	37,719,620	1.10%
7R	Tishman Speyer Real Estate Venture VI	66,670,066	(297,229)	-	66,372,837	-0.45%
7X	Tishman Speyer Real Estate Venture VII	19,368,820	662,648	(698,659)	19,332,809	-0.19%
7S	Almanac Realty Securities V ⁽⁶⁾	27,535,722	1,209,681	(330,701)	28,414,702	3.19%
7V	ING Clarion Development Ventures III	25,276,975	(686,534)	-	24,590,441	-2.72%
7W	Silverpeak Legacy Pension Partners III, L.P. ⁽⁴⁾	9,184,313	(188,443)	-	8,995,870	-2.05%
8R	BlackRock Diamond Property Fund	26,283,463	165,796	(15,803)	26,433,456	0.57%
8S	Colony Investors VIII, L.P.	21,224,032	1,224,362	(1,776,083)	20,672,311	-2.60%
8U	LaSalle Medical Office Fund II	17,774,757	51,758	(306,912)	17,519,603	-1.44%
8V	Cornerstone Apartment Venture III	24,875,303	1,200,938	-	26,076,241	4.83%
	Total Non-Core Commingled	<u>367,189,785</u>	<u>7,639,746</u>	<u>(3,544,366)</u>	<u>371,285,165</u>	1.12%
	Total Real Estate	<u>1,387,327,317</u>	<u>10,091,624</u>	<u>(42,609,190)</u>	<u>1,354,809,751</u>	-2.34%
	Total Real Assets	<u>3,034,472,505</u>	<u>32,314,100</u>	<u>(42,609,190)</u>	<u>3,024,177,415</u>	-0.34%
	Totals	<u>\$ 17,981,430,888</u>	<u>\$ 296,124,631</u>	<u>\$ (53,818,228)</u>	<u>\$ 18,223,737,291</u>	1.35%

Notes

- (1) Investment is represented by shares in (or as a percentage of) commingled equity investments which, at any given time, may be a combination of securities and cash.
- (2) Investment is represented by shares in various hedge funds.
- (3) Previously titled Lehman Brothers Real Estate Partners II
- (4) Previously titled Lehman Brothers Real Estate Partners III
- (5) Previously titled Rothschild Five Arrows Realty Securities V
- (6) Previously titled Rothschild Five Arrows Realty Securities IV

ALASKA RETIREMENT MANAGEMENT BOARD

Participant Directed Plans

Supplemental Annuity Plan
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
April 30, 2013

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 (3)
Treasury Division ⁽¹⁾							
Cash and Cash Equivalents	\$ 6,922,337	\$ 759	\$ (659,344)	\$ -	\$ 6,263,752	-9.51%	0.01%
Participant Options ⁽²⁾							
T. Rowe Price							
Stable Value Fund	334,906,241	659,334	(1,576,394)	4,324,784	338,313,965	1.02%	0.20%
Small-Cap Stock Fund	107,819,843	(471,186)	187,440	(2,446,106)	105,089,991	-2.53%	-0.44%
Alaska Balanced Fund	1,150,213,515	16,140,322	(3,428,107)	(3,415,643)	1,159,510,087	0.81%	1.41%
Long Term Balanced Fund	425,206,138	7,593,515	2,560,126	(638,856)	434,720,923	2.24%	1.78%
AK Target Date 2010 Trust	6,908,588	104,785	38,562	507,531	7,559,466	9.42%	1.46%
AK Target Date 2015 Trust	97,170,707	1,626,436	155,745	(1,582,571)	97,370,317	0.21%	1.69%
AK Target Date 2020 Trust	44,385,927	828,562	308,523	580,353	46,103,365	3.87%	1.85%
AK Target Date 2025 Trust	26,814,385	535,180	283,057	(145,720)	27,486,902	2.51%	1.99%
AK Target Date 2030 Trust	12,440,367	262,137	225,461	34,112	12,962,077	4.19%	2.09%
AK Target Date 2035 Trust	11,942,474	266,983	319,285	130,557	12,659,299	6.00%	2.19%
AK Target Date 2040 Trust	12,566,924	287,977	296,799	246,855	13,398,555	6.62%	2.24%
AK Target Date 2045 Trust	12,864,677	297,485	450,636	177,844	13,790,642	7.20%	2.26%
AK Target Date 2050 Trust	13,102,305	297,593	394,197	38,383	13,832,478	5.57%	2.23%
AK Target Date 2055 Trust	7,346,535	164,198	233,631	(176,761)	7,567,603	3.01%	2.23%
Total Investments with T. Rowe Price	<u>2,263,688,626</u>	<u>28,593,321</u>	<u>448,961</u>	<u>(2,365,238)</u>	<u>2,290,365,670</u>		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	37,075,623	1	(817,928)	(34,841)	36,222,855	-2.30%	0.00%
S&P 500 Stock Index Fund Series A	263,734,315	5,099,684	(324,694)	(1,588,320)	266,920,985	1.21%	1.94%
Russell 3000 Index	27,031,843	445,084	112,926	(96,345)	27,493,508	1.71%	1.65%
US Real Estate Investment Trust Index	34,868,566	2,502,312	(107,494)	3,314,706	40,578,090	16.37%	6.86%
World Equity Ex-US Index	21,866,583	832,928	109,594	396,393	23,205,498	6.12%	3.77%
Long US Treasury Bond Index	14,780,630	585,905	(8,164)	943,611	16,301,982	10.29%	3.84%
US Treasury Inflation Protected Securities Index	24,204,317	186,034	(65,799)	(609,863)	23,714,689	-2.02%	0.78%
World Government Bond Ex-US Index	6,940,854	78,632	(7,375)	184,925	7,197,036	3.69%	1.12%
Global Balanced Fund	54,690,914	1,185,959	87,530	72,444	56,036,847	2.46%	2.17%
Total Investments with SSGA	<u>485,193,645</u>	<u>10,916,539</u>	<u>(1,021,404)</u>	<u>2,582,710</u>	<u>497,671,490</u>		
BlackRock							
Government Bond Fund	49,825,596	606,343	(256,831)	96,455	50,271,563	0.90%	1.22%
Intermediate Bond Fund	15,027,555	63,503	(11,159)	216,475	15,296,374	1.79%	0.42%
Total Investments with BlackRock	<u>64,853,151</u>	<u>669,846</u>	<u>(267,990)</u>	<u>312,930</u>	<u>65,567,937</u>		
Brandes Institutional							
International Equity Fund Fee	60,122,181	4,071,103	(5,270)	(338,113)	63,849,901	6.20%	6.79%
RCM							
Sustainable Opportunities Fund	30,939,006	251,234	28,315	(192,289)	31,026,266	0.28%	0.81%
Total Externally Managed Funds	<u>2,904,796,609</u>	<u>44,502,043</u>	<u>(817,388)</u>	<u>-</u>	<u>2,948,481,264</u>		
Total All Funds	<u>\$ 2,911,718,946</u>	<u>\$ 44,502,802</u>	<u>\$ (1,476,732)</u>	<u>\$ -</u>	<u>\$ 2,954,745,016</u>	1.48%	1.53%

Notes: (1) Represents net contributions in transit to/from the record keeper. (2) Source data provided by the record keeper, Great West Life.

(3) 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
April 30, 2013
\$(Thousands)

Invested Assets (At Fair Value)	July	August	September	October	November	December	January	February	March	April
Investments with Treasury Division										
Cash and cash equivalents	\$ 5,603	\$ 2,468	\$ 7,824	\$ 7,484	\$ 6,134	\$ 5,460	\$ 6,435	\$ 6,546	\$ 6,922	\$ 6,264
Investments with T. Rowe Price										
Stable Value Fund	326,006	325,005	325,378	324,563	324,716	333,517	325,795	334,373	334,906	338,314
Small-Cap Stock Fund	87,043	90,590	93,235	93,340	93,578	93,655	100,130	101,086	107,820	105,090
Alaska Balanced Fund	1,106,437	1,115,765	1,126,596	1,117,241	1,118,848	1,119,855	1,134,183	1,137,452	1,150,213	1,159,510
Long Term Balanced Fund	364,538	374,612	381,984	382,020	387,609	392,911	408,903	412,547	425,206	434,721
AK Target Date 2010 Trust	5,659	5,871	5,963	6,282	6,480	6,509	6,674	6,674	6,909	7,559
AK Target Date 2015 Trust	87,366	88,482	90,247	89,370	90,553	90,873	93,397	95,098	97,171	97,370
AK Target Date 2020 Trust	37,937	38,854	39,786	39,063	39,768	39,860	41,752	42,847	44,386	46,103
AK Target Date 2025 Trust	20,564	21,316	21,949	21,991	22,430	23,587	25,188	25,099	26,814	27,487
AK Target Date 2030 Trust	8,543	9,384	9,572	9,852	9,990	10,384	11,386	11,777	12,440	12,962
AK Target Date 2035 Trust	7,861	8,348	8,759	9,136	9,484	9,803	10,800	11,443	11,942	12,659
AK Target Date 2040 Trust	7,841	8,519	8,890	9,357	9,715	10,158	11,232	11,696	12,567	13,399
AK Target Date 2045 Trust	7,784	8,599	9,173	9,474	9,852	10,519	11,720	12,076	12,865	13,791
AK Target Date 2050 Trust	8,039	8,818	9,234	9,530	10,092	10,693	11,808	12,141	13,102	13,832
AK Target Date 2055 Trust	4,064	5,137	5,617	5,528	5,809	6,151	6,677	6,612	7,346	7,568
Investments with State Street Global Advisors										
State Street Treasury Money Market Fund - Inst.	37,162	36,772	37,329	36,292	37,779	38,983	37,638	37,946	37,076	36,223
S&P 500 Stock Index Fund Series A	235,676	240,696	245,455	244,525	247,594	245,893	256,174	255,529	263,734	266,921
Russell 3000 Index	17,468	18,438	18,459	18,713	19,034	20,332	23,862	24,383	27,032	27,494
US Real Estate Investment Trust Index	35,011	34,755	35,941	34,179	32,090	33,457	35,440	34,300	34,869	40,578
World Equity Ex-US Index	12,961	13,852	14,652	15,585	15,959	18,438	20,963	21,789	21,867	23,205
Long US Treasury Bond Index	26,693	26,056	22,102	19,655	19,882	18,182	17,022	15,236	14,781	16,302
US Treasury Inflation Protected Securities Index	22,194	22,038	22,740	23,313	24,255	24,541	24,601	24,376	24,204	23,715
World Govt Bond Ex-US Index	6,058	6,160	6,175	6,269	6,572	6,180	6,358	6,747	6,941	7,197
Global Balanced Fund	49,376	50,626	51,948	51,870	52,246	52,790	54,180	54,135	54,691	56,037
Investments with BlackRock										
Government Bond Fund	50,680	50,983	50,397	51,084	51,423	51,657	50,793	50,347	49,826	50,272
Intermediate Bond Fund	14,852	14,511	14,461	14,467	15,157	15,227	15,538	16,627	15,028	15,296
Investments with Brandes Investment Partners										
International Equity Fund Fee	59,070	61,181	61,389	60,678	60,352	61,219	63,201	59,361	60,122	63,850
Investments with RCM										
Sustainable Opportunities Fund	28,526	29,265	29,114	27,738	28,147	28,188	29,805	29,934	30,939	31,026
Total Invested Assets	\$ 2,681,012	\$ 2,717,101	\$ 2,754,369	\$ 2,738,601	\$ 2,755,549	\$ 2,779,024	\$ 2,841,655	\$ 2,858,177	\$ 2,911,719	\$ 2,954,745
Change in Invested Assets										
Beginning Assets	\$ 2,656,000	\$ 2,681,012	\$ 2,717,101	\$ 2,754,369	\$ 2,738,601	\$ 2,755,549	\$ 2,779,024	\$ 2,841,655	\$ 2,858,177	\$ 2,911,719
Investment Earnings	23,717	35,162	35,514	(16,264)	16,508	24,017	64,499	16,847	49,076	44,503
Net Contributions (Withdrawals)	1,295	927	1,754	496	440	(542)	(1,868)	(327)	4,465	(1,477)
Ending Invested Assets	\$ 2,681,012	\$ 2,717,101	\$ 2,754,369	\$ 2,738,601	\$ 2,755,549	\$ 2,779,024	\$ 2,841,655	\$ 2,858,177	\$ 2,911,719	\$ 2,954,745

Deferred Compensation Plan
Schedule of Invested Assets and Changes in Invested Assets
for the Month Ended
April 30, 2013

	<u>Beginning Invested Assets</u>	<u>Investment Income</u>	<u>Net Contributions (Withdrawals)</u>	<u>Transfers In (Out)</u>	<u>Ending Invested Assets</u>	<u>% Change in Invested Assets</u>	<u>% Change due to Investment Income (3)</u>
Participant Options							
T. Rowe Price							
Interest Income Fund	\$ 179,840,265	\$ 409,206	\$ (315,749)	\$ 1,427,008	\$ 181,360,730	0.85%	0.23%
Small Cap Stock Fund	81,349,323	(333,988)	288,077	(1,246,353)	80,057,059	-1.59%	-0.41%
Long Term Balanced Fund	41,852,598	742,230	(83,597)	(248,323)	42,262,908	0.98%	1.78%
Alaska Balanced Trust	11,205,324	162,256	134,436	243,084	11,745,100	4.82%	1.42%
AK Target Date 2010 Trust	2,132,231	31,928	25,703	147,148	2,337,010	9.60%	1.44%
AK Target Date 2015 Trust	6,008,470	97,822	92,624	(229,982)	5,968,934	-0.66%	1.65%
AK Target Date 2020 Trust	6,892,045	136,947	180,345	270,138	7,479,475	8.52%	1.92%
AK Target Date 2025 Trust	3,494,515	72,099	126,965	90,183	3,783,762	8.28%	2.00%
AK Target Date 2030 Trust	2,218,286	46,999	57,198	(5,336)	2,317,147	4.46%	2.09%
AK Target Date 2035 Trust	1,582,953	36,588	85,091	14,900	1,719,532	8.63%	2.24%
AK Target Date 2040 Trust	1,304,157	29,614	78,229	(29,002)	1,382,998	6.05%	2.23%
AK Target Date 2045 Trust	846,464	19,433	48,234	-	914,131	7.99%	2.23%
AK Target Date 2050 Trust	475,495	10,849	26,416	-	512,760	7.84%	2.22%
AK Target Date 2055 Trust	639,331	16,062	19,844	58,345	733,582	14.74%	2.37%
Total Investments with T. Rowe Price	<u>339,841,457</u>	<u>1,478,045</u>	<u>763,816</u>	<u>491,810</u>	<u>342,575,128</u>		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	10,997,799	-	(123,024)	(566,131)	10,308,644	-6.27%	0.00%
Russell 3000 Index	9,027,082	149,905	92,892	116,572	9,386,451	3.98%	1.64%
US Real Estate Investment Trust Index	12,176,203	854,447	79,709	717,915	13,828,274	13.57%	6.79%
World Equity Ex-US Index	7,494,444	282,615	45,428	104,531	7,927,018	5.77%	3.73%
Long US Treasury Bond Index	4,880,943	192,951	25,820	264,084	5,363,798	9.89%	3.84%
US Treasury Inflation Protected Securities Index	11,506,375	88,465	71,753	84,524	11,751,117	2.13%	0.76%
World Government Bond Ex-US Index	2,582,410	30,114	16,439	75,026	2,703,989	4.71%	1.15%
Global Balanced Fund	39,414,758	843,823	87,345	(647,064)	39,698,862	0.72%	2.16%
Total Investments with SSGA	<u>98,080,014</u>	<u>2,442,320</u>	<u>296,362</u>	<u>149,457</u>	<u>100,968,153</u>		
BlackRock							
S&P 500 Index Fund	142,663,904	2,766,448	585,470	(799,180)	145,216,642	1.79%	1.94%
Government/Credit Bond Fund	32,734,925	398,318	19,283	80,934	33,233,460	1.52%	1.21%
Intermediate Bond Fund	16,088,523	67,852	(2,607)	81,235	16,235,003	0.91%	0.42%
Total Investments with Barclays Global Investors	<u>191,487,352</u>	<u>3,232,618</u>	<u>602,146</u>	<u>(637,011)</u>	<u>194,685,105</u>		
Brandes Institutional							
International Equity Fund Fee	37,401,361	2,578,255	215,800	2,089	40,197,505	7.48%	6.87%
RCM							
Sustainable Core Opportunities Fund	12,519,423	102,548	139,480	(6,345)	12,755,106	1.88%	0.81%
Total All Funds	<u>\$ 679,329,607</u>	<u>\$ 9,833,786</u>	<u>\$ 2,017,604</u>	<u>\$ -</u>	<u>\$ 691,180,997</u>	1.74%	1.45%

Notes: (1) Represents net contributions in transit to/from the record keeper. (2) Source data provided by the record keeper, Great West Life.
(3) 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
April 30, 2013
\$ (Thousands)

Invested Assets (at fair value)	July	August	September	October	November	December	January	February	March	April
Investments with T. Rowe Price										
Interest Income Fund										
Cash and cash equivalents	\$ 13,002	\$ 11,754	\$ 10,372	\$ 9,848	\$ 9,780	\$ 10,944	\$ 8,818	\$ 12,097	\$ 11,100	\$ 12,719
Synthetic Investment Contracts	164,611	164,424	165,758	166,460	166,551	166,734	167,680	167,752	168,740	168,641
Small Cap Stock Fund	68,583	71,208	71,952	71,176	71,916	73,142	77,682	77,899	81,349	80,057
Long Term Balanced Fund	35,553	36,717	37,429	37,325	37,898	38,720	40,557	40,466	41,852	42,263
Alaska Balanced Trust	8,884	9,253	9,341	9,447	9,965	10,500	11,099	10,993	11,205	11,745
AK Target Date 2010 Trust	1,829	1,761	1,785	1,953	2,003	2,086	2,148	2,072	2,132	2,337
AK Target Date 2015 Trust	4,489	4,805	5,086	5,170	5,343	5,356	5,599	5,692	6,008	5,969
AK Target Date 2020 Trust	4,475	4,874	5,100	5,128	5,370	5,440	6,048	6,380	6,892	7,479
AK Target Date 2025 Trust	2,153	2,289	2,281	2,382	2,534	2,642	2,884	3,177	3,494	3,784
AK Target Date 2030 Trust	1,418	1,493	1,540	1,629	1,755	1,828	2,102	2,133	2,218	2,317
AK Target Date 2035 Trust	1,155	1,199	1,127	1,178	1,251	1,330	1,436	1,541	1,583	1,720
AK Target Date 2040 Trust	714	779	900	849	865	917	1,063	1,186	1,304	1,383
AK Target Date 2045 Trust	406	414	446	611	647	689	795	778	846	914
AK Target Date 2050 Trust	272	289	318	341	358	376	441	455	475	513
AK Target Date 2055 Trust	474	614	590	522	532	443	537	560	639	734
State Street Global Advisors										
State Street Treasury Money Market Fund - Inst.	9,166	9,180	9,378	8,791	8,541	9,757	10,421	11,072	10,997	10,309
Russell 3000 Index	6,615	7,179	7,034	7,175	7,214	7,437	8,146	8,322	9,027	9,386
US Real Estate Investment Trust Index	11,944	11,629	12,375	11,142	10,758	11,073	11,980	11,947	12,176	13,828
World Equity Ex-US Index	4,491	4,836	5,042	5,419	5,595	6,341	7,133	7,337	7,494	7,927
Long US Treasury Bond Index	6,397	6,507	6,147	6,282	5,697	5,491	4,787	4,511	4,881	5,364
US Treasury Inflation Protected Securities Index	11,326	11,299	11,515	11,716	11,904	12,178	12,018	11,967	11,506	11,751
World Government Bond Ex-US Index	2,144	2,159	2,250	2,259	2,353	2,263	2,342	2,502	2,582	2,704
Global Balanced Fund	36,799	37,513	38,458	38,196	38,122	38,354	38,963	38,853	39,414	39,699
Investments with BlackRock										
S&P 500 Index Fund	127,174	129,612	131,039	130,568	131,647	131,068	137,781	137,424	142,663	145,217
Government/Credit Bond Fund	33,320	33,301	33,485	33,672	33,741	33,946	33,329	32,801	32,735	33,233
Intermediate Bond Fund	16,352	16,501	16,394	16,419	16,491	16,547	16,408	16,150	16,088	16,235
Investments with Brandes Institutional										
International Equity Fund Fee	34,990	35,910	36,217	35,953	35,949	37,072	38,795	36,774	37,401	40,198
Investments with RCM										
Sustainable Opportunities Fund	10,796	11,037	11,105	10,767	10,931	11,087	11,937	11,911	12,519	12,755
Total Invested Assets	\$ 619,532	\$ 628,536	\$ 634,464	\$ 632,377	\$ 635,711	\$ 643,763	\$ 662,929	\$ 664,752	\$ 679,330	\$ 691,181
Change in Invested Assets										
Beginning Assets	\$ 614,418	\$ 619,532	\$ 628,536	\$ 634,464	\$ 632,377	\$ 635,711	\$ 643,763	\$ 662,929	\$ 664,752	\$ 679,330
Investment Earnings	3,798	9,053	8,545	(4,575)	3,743	7,238	17,511	3,813	13,062	9,834
Net Contributions (Withdrawals)	1,316	(49)	(2,617)	2,488	(409)	814	1,654	(1,990)	1,516	2,017
Ending Invested Assets	\$ 619,532	\$ 628,536	\$ 634,464	\$ 632,377	\$ 635,711	\$ 643,763	\$ 662,929	\$ 664,752	\$ 679,330	\$ 691,181

Defined Contribution Retirement - Participant Directed PERS
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
April 30, 2013

	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (3)
Interim Transit Account							
Treasury Division ⁽¹⁾							
Cash and Cash Equivalents	\$ 6,548,627	\$ 1,163	\$ 1,790,146	\$ -	\$ 8,339,936	27.35%	0.02%
Participant Options ⁽²⁾							
T. Rowe Price							
Alaska Money Market	4,245,004	133	1,933	(122,027)	4,125,043	-2.83%	0.00%
Small-Cap Stock Fund	40,129,627	(159,841)	461,233	(671,767)	39,759,252	-0.92%	-0.40%
Long Term Balanced Fund	10,823,616	186,861	175,732	(622,250)	10,563,959	-2.40%	1.76%
Alaska Balanced Fund	1,106,947	16,141	19,940	17,808	1,160,836	4.87%	1.43%
AK Target Date 2010 Trust	968,729	15,195	46,844	-	1,030,768	6.40%	1.53%
AK Target Date 2015 Trust	3,956,343	69,118	149,506	(28,687)	4,146,280	4.80%	1.72%
AK Target Date 2020 Trust	7,640,813	145,769	333,046	(17,468)	8,102,160	6.04%	1.87%
AK Target Date 2025 Trust	10,639,977	215,869	376,660	(28,904)	11,203,602	5.30%	2.00%
AK Target Date 2030 Trust	10,832,649	233,896	417,239	(29,919)	11,453,865	5.73%	2.12%
AK Target Date 2035 Trust	11,830,958	266,259	503,825	17,799	12,618,841	6.66%	2.20%
AK Target Date 2040 Trust	15,961,962	360,715	479,643	(7,361)	16,794,959	5.22%	2.23%
AK Target Date 2045 Trust	18,504,083	420,768	709,456	(36,260)	19,598,047	5.91%	2.23%
AK Target Date 2050 Trust	20,438,665	465,240	806,836	(23,242)	21,687,499	6.11%	2.23%
AK Target Date 2055 Trust	8,259,154	191,092	450,025	5,768	8,906,039	7.83%	2.25%
Total Investments with T. Rowe Price	<u>165,338,527</u>	<u>2,427,215</u>	<u>4,931,918</u>	<u>(1,546,510)</u>	<u>171,151,150</u>		
State Street Global Advisors							
Money Market	904,352	-	(85,681)	52,879	871,550	-3.63%	0.00%
S&P 500 Stock Index Fund Series A	36,581,618	696,576	386,860	(872,149)	36,792,905	0.58%	1.92%
Russell 3000 Index	13,210,233	242,144	173,685	1,051,218	14,677,280	11.11%	1.75%
US Real Estate Investment Trust Index	5,352,607	368,910	72,363	21,611	5,815,491	8.65%	6.83%
World Equity Ex-US Index	24,160,023	975,395	308,357	1,537,534	26,981,309	11.68%	3.89%
Long US Treasury Bond Index	483,755	21,394	12,644	121,761	639,554	32.21%	3.88%
US Treasury Inflation Protected Sec Index	2,174,268	16,794	48,650	(43,463)	2,196,249	1.01%	0.77%
World Government Bond Ex-US Index	3,321,796	39,877	69,348	141,844	3,572,865	7.56%	1.16%
Global Balanced Fund	8,472,198	199,385	111,559	764,156	9,547,298	12.69%	2.24%
Total Investments with SSGA	<u>94,660,850</u>	<u>2,560,475</u>	<u>1,097,785</u>	<u>2,775,391</u>	<u>101,094,501</u>		
BlackRock							
Government Bond Fund	16,604,987	206,116	288,714	408,733	17,508,550	5.44%	1.22%
Intermediate Bond Fund	353,765	1,512	7,223	7,108	369,608	4.48%	0.42%
Total Investments with BlackRock	<u>16,958,752</u>	<u>207,628</u>	<u>295,937</u>	<u>415,841</u>	<u>17,878,158</u>		
Brandes Institutional							
International Equity Fund Fee	33,518,535	2,282,354	390,558	(1,166,679)	35,024,768	4.49%	6.89%
RCM							
Sustainable Opportunities Fund	5,684,646	39,941	67,171	(478,043)	5,313,715	-6.53%	0.73%
Total Externally Managed Funds	<u>316,161,310</u>	<u>7,517,613</u>	<u>6,783,369</u>	<u>-</u>	<u>330,462,292</u>		
Total All Funds	<u>\$ 322,709,937</u>	<u>\$ 7,518,776</u>	<u>\$ 8,573,515</u>	<u>\$ -</u>	<u>\$ 338,802,228</u>	4.99%	2.30%

Notes: (1) Represents net contributions in transit to/from the record keeper. (2) Source data provided by the record keeper, Great West Life.
(3) 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
April 30, 2013
\$ (Thousands)

Invested Assets (At Fair Value)	July	August	September	October	November	December	January	February	March	April
Investments with Treasury Division										
Cash and cash equivalents	\$ 7,044	\$ 7,083	\$ 7,266	\$ 7,170	\$ 6,883	\$ 6,719	\$ 6,565	\$ 6,719	\$ 6,549	\$ 8,340
Investments with T. Rowe Price										
Alaska Money Market	2,837	2,915	2,923	2,947	2,985	3,190	3,490	3,943	4,245	4,125
Small-Cap Stock Fund	35,862	37,861	38,924	38,827	39,745	40,299	41,018	39,728	40,130	39,759
Long Term Balanced Fund	4,530	4,643	4,811	4,803	4,953	5,976	7,937	9,992	10,823	10,564
Alaska Balanced Fund	692	733	776	859	903	983	1,023	1,057	1,107	1,161
AK Target Date 2010 Trust	670	703	740	776	821	857	915	951	969	1,031
AK Target Date 2015 Trust	2,703	2,862	2,992	3,095	3,205	3,369	3,619	3,775	3,956	4,146
AK Target Date 2020 Trust	5,001	5,300	5,540	5,761	6,054	6,371	6,877	7,230	7,641	8,102
AK Target Date 2025 Trust	6,857	7,381	7,764	8,073	8,504	8,985	9,721	10,078	10,640	11,204
AK Target Date 2030 Trust	6,955	7,437	7,766	8,030	8,472	8,993	9,746	10,164	10,833	11,454
AK Target Date 2035 Trust	7,477	8,061	8,451	8,724	9,210	9,750	10,661	11,138	11,831	12,619
AK Target Date 2040 Trust	10,594	11,431	11,958	12,261	12,802	13,478	14,609	15,074	15,962	16,795
AK Target Date 2045 Trust	11,567	12,582	13,180	13,676	14,330	15,287	16,634	17,360	18,504	19,598
AK Target Date 2050 Trust	12,904	13,946	14,668	15,210	16,026	16,992	18,478	19,248	20,439	21,687
AK Target Date 2055 Trust	4,667	5,180	5,474	5,768	6,163	6,613	7,236	7,638	8,259	8,906
Investments with State Street Global Advisors										
Money Market	590	649	887	882	961	875	845	947	904	872
S&P 500 Stock Index Fund Series A	29,959	33,231	36,327	38,256	38,976	38,312	38,200	36,328	36,582	36,793
Russell 3000 Index	4,171	4,147	4,003	3,824	3,892	6,319	9,282	11,971	13,210	14,677
US Real Estate Investment Trust Index	4,745	4,911	4,989	5,084	5,109	5,312	5,497	5,339	5,352	5,815
World Equity Ex-US Index	10,106	12,803	15,510	17,922	18,297	20,266	22,102	23,168	24,160	26,981
Long US Treasury Bond Index	720	518	494	538	602	564	500	467	484	640
US Treasury Inflation Protected Sec Index	1,046	1,085	1,216	1,165	1,251	1,317	1,579	2,015	2,174	2,196
World Government Bond Ex-US Index	1,449	1,516	1,593	1,614	1,653	1,729	2,207	2,796	3,322	3,573
Global Balanced Fund	5,280	5,547	5,921	6,060	6,241	6,417	7,113	7,573	8,472	9,547
Investments with BlackRock										
Government Bond Fund	10,162	10,453	10,825	11,140	11,344	11,579	12,834	14,898	16,605	17,508
Intermediate Bond Fund	328	338	319	321	328	344	351	345	354	370
Investments with Brandes Investment Partners										
International Equity Fund Fee	41,282	40,696	39,252	37,207	37,718	38,024	37,291	33,716	33,518	35,025
Investments with RCM										
Sustainable Opportunities Fund	11,830	10,130	8,354	6,163	6,339	6,316	6,208	5,860	5,685	5,314
Total Invested Assets	\$ 242,028	\$ 254,142	\$ 262,923	\$ 266,157	\$ 273,768	\$ 285,236	\$ 302,536	\$ 309,518	\$ 322,710	\$ 338,802
Change in Invested Assets										
Beginning Assets	\$ 236,966	\$ 242,028	\$ 254,142	\$ 262,923	\$ 266,157	\$ 273,768	\$ 285,236	\$ 302,536	\$ 309,518	\$ 322,710
Investment Earnings	855	5,831	5,379	(2,686)	2,366	5,720	12,092	1,167	8,112	7,519
Net Contributions (Withdrawals)	4,207	6,283	3,402	5,920	5,244	5,748	5,208	5,814	5,080	8,574
Ending Invested Assets	\$ 242,028	\$ 254,142	\$ 262,923	\$ 266,157	\$ 273,768	\$ 285,236	\$ 302,536	\$ 309,518	\$ 322,710	\$ 338,802

Defined Contribution Retirement - Participant Directed TRS
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
April 30, 2013

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 (3)
Treasury Division ⁽¹⁾							
Cash and Cash Equivalents	\$ 2,375,947	\$ 449	\$ 76,253	\$ -	\$ 2,452,649	3.23%	0.02%
Participant Options ⁽²⁾							
T. Rowe Price							
Alaska Money Market	1,733,743	55	17,914	16,619	1,768,331	1.99%	0.00%
Small-Cap Stock Fund	16,387,056	(67,745)	162,351	(309,553)	16,172,109	-1.31%	-0.42%
Long Term Balanced Fund	6,445,323	107,316	62,653	(529,887)	6,085,405	-5.58%	1.73%
Alaska Balanced Fund	250,171	3,607	6,789	203	260,770	4.24%	1.42%
AK Target Date 2010 Trust	312,647	4,834	8,775	-	326,256	4.35%	1.52%
AK Target Date 2015 Trust	1,314,777	22,516	5,207	19,350	1,361,850	3.58%	1.70%
AK Target Date 2020 Trust	2,631,709	49,387	66,837	-	2,747,933	4.42%	1.85%
AK Target Date 2025 Trust	3,482,613	69,308	63,208	-	3,615,129	3.81%	1.97%
AK Target Date 2030 Trust	3,571,931	76,414	108,354	-	3,756,699	5.17%	2.11%
AK Target Date 2035 Trust	5,794,725	128,709	196,528	(17,383)	6,102,579	5.31%	2.19%
AK Target Date 2040 Trust	6,249,754	140,815	191,762	-	6,582,331	5.32%	2.22%
AK Target Date 2045 Trust	11,382,374	256,486	332,710	-	11,971,570	5.18%	2.22%
AK Target Date 2050 Trust	14,988,328	338,373	433,640	(11,431)	15,748,910	5.07%	2.23%
AK Target Date 2055 Trust	1,685,130	38,771	104,713	(3,375)	1,825,239	8.31%	2.23%
Total Investments with T. Rowe Price	<u>76,230,281</u>	<u>1,168,846</u>	<u>1,761,441</u>	<u>(835,457)</u>	<u>78,325,111</u>		
State Street Global Advisors							
Money Market	80,352	-	702	30,294	111,348	38.58%	0.00%
S&P 500 Stock Index Fund Series A	14,453,868	271,902	140,984	(452,156)	14,414,598	-0.27%	1.90%
Russell 3000 Index	5,161,711	94,986	58,034	417,143	5,731,874	11.05%	1.76%
US Real Estate Investment Trust Index	1,965,567	133,903	20,145	(27,370)	2,092,245	6.44%	6.82%
World Equity Ex-US Index	10,433,297	421,211	108,718	685,760	11,648,986	11.65%	3.89%
Long US Treasury Bond Index	90,069	3,603	2,195	13	95,880	6.45%	3.95%
US Treasury Inflation Protected Sec Index	906,265	6,868	11,062	(23,464)	900,731	-0.61%	0.76%
World Government Bond Ex-US Index	1,552,043	18,818	17,691	69,878	1,658,430	6.85%	1.18%
Global Balanced Fund	5,270,038	124,550	53,425	516,667	5,964,680	13.18%	2.24%
Total Investments with SSGA	<u>39,913,210</u>	<u>1,075,841</u>	<u>412,956</u>	<u>1,216,765</u>	<u>42,618,772</u>		
BlackRock							
Government Bond Fund	7,474,931	92,197	83,054	269,389	7,919,571	5.95%	1.21%
Intermediate Bond Fund	107,620	455	1,514	1,737	111,326	3.44%	0.42%
Total Investments with BlackRock	<u>7,582,551</u>	<u>92,652</u>	<u>84,568</u>	<u>271,126</u>	<u>8,030,897</u>		
Brandes Institutional							
International Equity Fund Fee	12,329,317	833,459	132,351	(492,073)	12,803,054	3.84%	6.86%
RCM							
Sustainable Opportunities Fund	1,895,215	13,312	22,063	(160,361)	1,770,229	-6.59%	0.73%
Total Externally Managed Funds	<u>137,950,574</u>	<u>3,184,110</u>	<u>2,413,379</u>	<u>-</u>	<u>143,548,063</u>		
Total All Funds	<u>\$ 140,326,521</u>	<u>\$ 3,184,559</u>	<u>\$ 2,489,632</u>	<u>\$ -</u>	<u>\$ 146,000,712</u>	4.04%	2.25%

Notes: (1) Represents net contributions in transit to/from the record keeper. (2) Source data provided by the record keeper, Great West Life.

(3) 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
April 30, 2013
\$(Thousands)

Invested Assets (At Fair Value)	July	August	September	October	November	December	January	February	March	April
Investments with Treasury Division										
Cash and cash equivalents	\$ 2,513	\$ 2,494	\$ 2,515	\$ 2,766	\$ 2,448	\$ 2,651	\$ 2,691	\$ 2,566	\$ 2,376	\$ 2,453
Investments with T. Rowe Price										
Alaska Money Market	1,365	1,366	1,376	1,375	1,343	1,467	1,518	1,633	1,734	1,768
Small-Cap Stock Fund	15,252	15,807	16,168	16,152	16,587	16,783	16,963	16,344	16,387	16,172
Long Term Balanced Fund	2,302	2,405	2,537	2,574	2,648	3,315	4,633	5,966	6,445	6,085
Alaska Balanced Fund	165	124	128	133	141	147	230	239	250	261
AK Target Date 2010 Trust	378	364	356	321	319	333	288	298	313	326
AK Target Date 2015 Trust	1,010	1,026	1,058	1,059	1,107	1,165	1,208	1,248	1,315	1,362
AK Target Date 2020 Trust	1,923	1,972	2,022	2,048	2,141	2,258	2,391	2,488	2,632	2,748
AK Target Date 2025 Trust	2,430	2,439	2,539	2,626	2,752	2,898	3,075	3,200	3,483	3,615
AK Target Date 2030 Trust	2,360	2,408	2,519	2,630	2,790	2,987	3,235	3,368	3,572	3,757
AK Target Date 2035 Trust	3,894	3,918	4,087	4,220	4,478	4,810	5,182	5,422	5,795	6,103
AK Target Date 2040 Trust	4,427	4,465	4,607	4,694	4,950	5,265	5,651	5,872	6,250	6,582
AK Target Date 2045 Trust	8,006	8,164	8,381	8,539	8,972	9,590	10,365	10,764	11,382	11,972
AK Target Date 2050 Trust	10,300	10,457	10,828	11,108	11,698	12,489	13,539	14,072	14,988	15,749
AK Target Date 2055 Trust	808	817	880	978	1,095	1,237	1,410	1,522	1,685	1,825
Investments with State Street Global Advisors										
Money Market	45	51	56	35	36	34	31	79	80	111
S&P 500 Stock Index Fund Series A	12,356	13,434	14,644	15,548	15,865	15,465	15,324	14,449	14,454	14,415
Russell 3000 Index	1,734	1,608	1,492	1,314	1,387	2,431	3,696	4,715	5,162	5,732
US Real Estate Investment Trust Index	1,857	1,829	1,803	1,846	1,879	1,969	2,012	1,956	1,966	2,092
World Equity Ex-US Index	4,329	5,333	6,416	7,484	7,662	8,585	9,518	10,024	10,433	11,649
Long US Treasury Bond Index	55	56	56	73	97	96	80	92	90	96
US Treasury Inflation Protected Sec Index	438	460	474	507	522	543	638	794	906	901
World Government Bond Ex-US Index	660	707	754	782	798	836	1,044	1,316	1,552	1,658
Global Balanced Fund	3,112	3,243	3,451	3,544	3,648	3,805	4,211	4,612	5,270	5,965
Investments with BlackRock										
Government Bond Fund	4,816	4,943	5,125	5,367	5,395	5,352	5,832	6,614	7,475	7,920
Intermediate Bond Fund	76	76	77	79	102	101	100	105	108	111
Investments with Brandes Investment Partners										
International Equity Fund Fee	17,157	16,560	15,767	14,756	15,002	15,007	14,431	12,682	12,329	12,803
Investments with RCM										
Sustainable Opportunities Fund	4,989	4,185	3,410	2,456	2,516	2,433	2,305	2,023	1,895	1,770
Total Invested Assets	\$ 108,757	\$ 110,711	\$ 113,526	\$ 115,012	\$ 118,376	\$ 124,052	\$ 131,603	\$ 134,463	\$ 140,327	\$ 146,001
Change in Invested Assets										
Beginning Assets	\$ 107,836	\$ 108,757	\$ 110,711	\$ 113,526	\$ 115,012	\$ 118,376	\$ 124,052	\$ 131,603	\$ 134,463	\$ 140,327
Investment Earnings	421	2,609	2,392	(1,146)	1,052	2,435	5,252	547	3,497	3,184
Net Contributions (Withdrawals)	500	(655)	423	2,632	2,312	3,241	2,299	2,313	2,366	2,490
Ending Invested Assets	\$ 108,757	\$ 110,711	\$ 113,526	\$ 115,012	\$ 118,376	\$ 124,052	\$ 131,603	\$ 134,463	\$ 140,327	\$ 146,001

ALASKA RETIREMENT MANAGEMENT BOARD

FINANCIAL REPORT

(Supplement to the Treasury Division Report)

As of April 30, 2013

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 Ten Months Ending April 30, 2013

	Contributions				Expenditures				Net Contributions/ (Withdrawals)
	Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	
Public Employees' Retirement System (PERS)									
<u>Defined Benefit Plans:</u>									
Retirement Trust	\$ 246,586,768	\$ 164,087,043	\$ (17,595)	\$ 410,656,216	\$ (496,385,392)	\$ (9,523,089)	\$ (27,281,883)	\$ (533,190,364)	\$ (122,534,148)
Retirement Health Care Trust	190,892,479	143,215,349	9,858,958	343,966,786	(289,160,100)	-	(6,966,524)	(296,126,624)	47,840,162
Total Defined Benefit Plans	437,479,247	307,302,392	9,841,363	754,623,002	(785,545,492)	(9,523,089)	(34,248,407)	(829,316,988)	(74,693,986)
<u>Defined Contribution Plans:</u>									
Participant Directed Retirement	72,363,570	-	-	72,363,570	-	(14,686,067)	(2,196,261)	(16,882,328)	55,481,242
Health Reimbursement Arrangement	(a) 19,234,041	-	-	19,234,041	-	-	(9,405)	(9,405)	19,224,636
Retiree Medical Plan	(a) 2,664,214	-	-	2,664,214	-	-	(9,405)	(9,405)	2,654,809
Occupational Death and Disability:	(a)								
Public Employees	714,904	-	-	714,904	(5,925)	-	-	(5,925)	708,979
Police and Firefighters	589,698	-	-	589,698	(39,472)	-	-	(39,472)	550,226
Total Defined Contribution Plans	95,566,427	-	-	95,566,427	(45,397)	(14,686,067)	(2,215,071)	(16,946,535)	78,619,892
Total PERS	533,045,674	307,302,392	9,841,363	850,189,429	(785,590,889)	(24,209,156)	(36,463,478)	(846,263,523)	3,925,906
Teachers' Retirement System (TRS)									
<u>Defined Benefit Plans:</u>									
Retirement Trust	61,166,182	196,944,800	18,286	258,129,268	(316,365,194)	(2,390,292)	(11,219,384)	(329,974,870)	(71,845,602)
Retirement Health Care Trust	25,885,421	105,832,353	3,926,413	135,644,187	(96,418,264)	-	(2,701,506)	(99,119,770)	36,524,417
Total Defined Benefit Plans	87,051,603	302,777,153	3,944,699	393,773,455	(412,783,458)	(2,390,292)	(13,920,890)	(429,094,640)	(35,321,185)
<u>Defined Contribution Plans:</u>									
Participant Directed Retirement	23,683,179	-	-	23,683,179	-	(4,794,989)	(967,429)	(5,762,418)	17,920,761
Health Reimbursement Arrangement	(a) 4,739,677	-	-	4,739,677	-	-	(3,240)	(3,240)	4,736,437
Retiree Medical Plan	(a) 775,607	-	-	775,607	-	-	(3,242)	(3,242)	772,365
Occupational Death and Disability:	(a)								
(23)	(23)	-	-	(23)	-	-	-	-	(23)
Total Defined Contribution Plans	29,198,440	-	-	29,198,440	-	(4,794,989)	(973,911)	(5,768,900)	23,429,540
Total TRS	116,250,043	302,777,153	3,944,699	422,971,895	(412,783,458)	(7,185,281)	(14,894,801)	(434,863,540)	(11,891,645)
Judicial Retirement System (JRS)									
Defined Benefit Plan Retirement Trust	4,195,666	3,650,650	-	7,846,316	(8,578,343)	-	(310,258)	(8,888,601)	(1,042,285)
Defined Benefit Retirement Health Care Trust	471,599	134,921	30,329	636,849	(911,008)	-	(19,985)	(930,993)	(294,144)
Total JRS	4,667,265	3,785,571	30,329	8,483,165	(9,489,351)	-	(330,243)	(9,819,594)	(1,336,429)
National Guard/Naval Militia Retirement System (NGNMRS)									
Defined Benefit Plan Retirement Trust	(a) 739,100	-	-	739,100	(1,434,001)	-	(178,941)	(1,612,942)	(873,842)
Other Participant Directed Plans									
Supplemental Annuity Plan	138,324,554	-	-	138,324,554	-	(126,782,694)	(6,376,676)	(133,159,370)	5,165,184
Deferred Compensation Plan	36,026,354	-	-	36,026,354	-	(30,326,595)	(958,974)	(31,285,569)	4,740,785
Total All Funds	829,052,990	613,865,116	13,816,391	1,456,734,497	(1,209,297,699)	(188,503,726)	(59,203,113)	(1,457,004,538)	(270,041)
Total Non-Participant Directed	558,655,333	613,865,116	13,816,391	1,186,336,840	(1,209,297,699)	(11,913,381)	(48,703,773)	(1,269,914,853)	(83,578,013)
Total Participant Directed	270,397,657	-	-	270,397,657	-	(176,590,345)	(10,499,340)	(187,089,685)	83,307,972
Total All Funds	\$ 829,052,990	\$ 613,865,116	\$ 13,816,391	\$ 1,456,734,497	\$ (1,209,297,699)	\$ (188,503,726)	\$ (59,203,113)	\$ (1,457,004,538)	\$ (270,041)

(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 April 30, 2013

	Contributions			Expenditures				Net Contributions/ (Withdrawals)	
	Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment		Total Expenditures
Public Employees' Retirement System (PERS)									
<u>Defined Benefit Plans:</u>									
Retirement Trust	\$ 30,854,399	\$ -	\$ -	\$ 30,854,399	\$ (49,015,257)	\$ (1,015,325)	\$ (3,544,997)	\$ (53,575,579)	\$ (22,721,180)
Retirement Health Care Trust	23,147,665	-	282,555	23,430,220	(25,713,678)	-	(670,068)	(26,383,746)	(2,953,526)
Total Defined Benefit Plans	54,002,064	-	282,555	54,284,619	(74,728,935)	(1,015,325)	(4,215,065)	(79,959,325)	(25,674,706)
<u>Defined Contribution Plans:</u>									
Participant Directed Retirement	10,401,066	-	-	10,401,066	-	(1,721,762)	(105,789)	(1,827,551)	8,573,515
Health Reimbursement Arrangement (a)	2,583,851	-	-	2,583,851	-	-	-	-	2,583,851
Retiree Medical Plan (a)	352,708	-	-	352,708	-	-	-	-	352,708
Occupational Death and Disability: (a)									
Public Employees	92,478	-	-	92,478	(5,925)	-	-	(5,925)	86,553
Police and Firefighters	76,753	-	-	76,753	(3,948)	-	-	(3,948)	72,805
Total Defined Contribution Plans	13,506,856	-	-	13,506,856	(9,873)	(1,721,762)	(105,789)	(1,837,424)	11,669,432
Total PERS	67,508,920	-	282,555	67,791,475	(74,738,808)	(2,737,087)	(4,320,854)	(81,796,749)	(14,005,274)
Teachers' Retirement System (TRS)									
<u>Defined Benefit Plans:</u>									
Retirement Trust	7,888,902	-	119	7,889,021	(31,046,010)	(203,268)	(1,574,741)	(32,824,019)	(24,934,998)
Retirement Health Care Trust	2,480,176	-	106,540	2,586,716	(8,835,286)	-	(255,751)	(9,091,037)	(6,504,321)
Total Defined Benefit Plans	10,369,078	-	106,659	10,475,737	(39,881,296)	(203,268)	(1,830,492)	(41,915,056)	(31,439,319)
<u>Defined Contribution Plans:</u>									
Participant Directed Retirement	2,890,522	-	-	2,890,522	-	(366,046)	(34,844)	(400,890)	2,489,632
Health Reimbursement Arrangement (a)	582,655	-	-	582,655	-	-	-	-	582,655
Retiree Medical Plan (a)	93,427	-	-	93,427	-	-	-	-	93,427
Occupational Death and Disability: (a)	-	-	-	-	-	-	-	-	-
Total Defined Contribution Plans	3,566,604	-	-	3,566,604	-	(366,046)	(34,844)	(400,890)	3,165,714
Total TRS	13,935,682	-	106,659	14,042,341	(39,881,296)	(569,314)	(1,865,336)	(42,315,946)	(28,273,605)
Judicial Retirement System (JRS)									
Defined Benefit Plan Retirement Trust	644,346	-	-	644,346	(872,868)	-	(43,628)	(916,496)	(272,150)
Defined Benefit Retirement Health Care Trust	84,443	-	798	85,241	(67,206)	-	(1,885)	(69,091)	16,150
Total JRS	728,789	-	798	729,587	(940,074)	-	(45,513)	(985,587)	(256,000)
National Guard/Naval Militia Retirement System (NGNMRS)									
Defined Benefit Plan Retirement Trust (a)	-	-	-	-	(195,999)	-	(24,203)	(220,202)	(220,202)
Other Participant Directed Plans									
Supplemental Annuity Plan	14,310,677	-	-	14,310,677	-	(15,262,961)	(524,448)	(15,787,409)	(1,476,732)
Deferred Compensation Plan	5,219,646	-	-	5,219,646	-	(3,105,843)	(96,199)	(3,202,042)	2,017,604
Total All Funds	101,703,714	-	390,012	102,093,726	(115,756,177)	(21,675,205)	(6,876,553)	(144,307,935)	(42,214,209)
Total Non-Participant Directed	68,881,803	-	390,012	69,271,815	(115,756,177)	(1,218,593)	(6,115,273)	(123,090,043)	(53,818,228)
Total Participant Directed	32,821,911	-	-	32,821,911	-	(20,456,612)	(761,280)	(21,217,892)	11,604,019
Total All Funds	\$ 101,703,714	\$ -	\$ 390,012	\$ 102,093,726	\$ (115,756,177)	\$ (21,675,205)	\$ (6,876,553)	\$ (144,307,935)	\$ (42,214,209)

(a) Employer only contributions.

ALASKA RETIREMENT MANAGEMENT BOARD

*Actuarial Peer Review Audit
of Actuarial Valuations and
Experience Study*

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June 11, 2013

Board of Trustees
Alaska Retirement Management Board
Department of Administration
Division of Retirement and Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Re: **Actuarial Peer Review Audit of Actuarial Valuations and Experience Study**

Ladies and Gentlemen:

We are pleased to present the results of Segal's actuarial peer review audit of the June 30, 2011 actuarial valuations for the Public Employees' Retirement System (PERS), Teachers' Retirement System (TRS), and Defined Contribution Retirement (DCR) systems, and the June 30, 2010 actuarial valuations for the Judges Retirement System (JRS) and National Guard Naval Militia Retirement System (NGNMRS). The scope of the audit also included a peer review of the Actuarial Experience Study for the period July 1, 2005 to June 30, 2009 for PERS and TRS. The purpose of this audit is to conduct a review of the actuarial methods, assumptions, and procedures employed by the Alaska Retirement Management Board (ARMB) and the System's actuary, Buck Consultants (Buck). This audit includes the following:

1. **Report review** – a review of the valuation/experience study reports to evaluate how they comply with actuarial standards, and whether such reports reflect appropriate disclosure information under any required reporting.
2. **Methods and assumptions review** – an analysis of the actuarial assumptions (including an independent reproduction of the experience study) and a review of the actuarial methods utilized in determining the funded status and accrued liability in each valuation for compliance with generally accepted actuarial principles.
3. **Valuation results and data review** – an evaluation of the participant data, valuation results, and projections, with a detailed review of the findings. This includes reproducing the June 30, 2011 (PERS, TRS and DCR) and June 30, 2010 (JRS and NGNMRS) valuation results.

This review was conducted under the supervision of Kim Nicholl, a Fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and an Enrolled Actuary under the Employee Retirement Income Security Act (ERISA), and Matthew Strom, a Fellow of the Society of Actuaries, a member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA. This review was conducted in accordance with the standards of practice prescribed by the Actuarial Standards Board.

Alaska Retirement Management Board
June 11, 2013
Page 2

The assistance of the ARMB staff and Buck is gratefully acknowledged.

We appreciate the opportunity to serve as an independent actuarial advisor for the ARMB and we are available to answer any questions you may have on this report.

Sincerely,



Kim Nicholl, FSA, MAAA, EA
Senior Vice President and Actuary



Matthew A. Strom, FSA, MAAA, EA
Consulting Actuary

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Alaska Retirement Systems

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Alaska Retirement Systems

I. Introduction

Statement of Project

The ARMB retained The Segal Company (Segal) to conduct an independent review of the System's current actuarial calculations, assumptions and methods. ARMB requested an independent review of the reasonableness, consistency and accuracy of:

- The method, factors and assumptions used in the actuarial valuations;
- The compilation of the actuarial valuations; and
- The results and the actuarial assumptions generated from the experience study.

The ARMB also asked for an evaluation of the data used for performance of the valuation, including the degree to which data is sufficient to support the conclusions of the valuations and experience study, and the use and appropriateness of any assumptions made regarding the data. The ARMB requested an assessment of the conclusions of the valuation report for completeness and accuracy. Finally, the ARMB requested an assessment of whether the actuarial assumptions, procedures and methods are consistent with the actuarial parameters of the Governmental Accounting Standards Board (GASB) Nos. 25, 27, 43 and 45, updates thereof, and any applicable professional pronouncements with which the systems are required to comply.

We reviewed all information supplied to us. We also requested and reviewed additional information provided by Buck. Finally, we considered the reasonableness of the actuarial assumptions and methods by virtue of a replication of the four-year experience analysis, in the context of our own experience, and those of other state and local pension systems.

Summary of Findings

This audit validates the findings of the actuarial valuations and experience review we studied. We believe the stated methods and assumptions were properly employed in determining the cost of the systems.

The data appears complete and we believe it is sufficient to support the conclusions reached in the valuation reports and experience study. For the most part, we were able to match valuation results within an acceptable degree of accuracy. In general, the items identified in Section IV of this report (regarding actuarial liability replication) are minor relative to the total liability of the System and do not have a significant impact on plan costs. All parameters and methods appear consistent with current GASB standards and generally accepted actuarial practices as promulgated in the various Actuarial Standards of Practice applicable to State of Alaska systems.

Improvement Recommendations

As a result of our analysis, we would like to highlight the following issues, concerns, and recommendations:

Alaska Retirement Systems

I. Introduction

- The post-termination mortality assumption is developed based on head counts of actual deaths and exposures. We recommend weighting the experience and exposures by benefit amount to take into consideration any correlation between the health of the annuitants and their benefit size.
- Turnover experience was analyzed without regard to terminated employees who are subsequently rehired. We recommend that the turnover rates reflect the significant number of employees that are rehired.
- Actual salary increase experience was significantly greater than expected for all groups in all years (except fiscal 2007 for TRS). In the valuations during the study period, there were consistent experience losses due to salaries (again, except for fiscal 2007 for TRS). We would have recommended that the assumption be brought at least half way up to actual increases over the period; Buck's recommendations were for relatively minor increases. In the two valuations subsequent to the assumption change, the net impact of salary experience has been actuarial losses.
- Buck's recommendation for retirement rates included raising the 100% retirement age for all three groups: age 70 for PERS Peace Officer/Firefighter, age 85 for TRS, and age 90 for PERS Others. In our opinion, this extends the assumed retirement age beyond what we believe is reasonable and could lead to experience losses in future valuations.
- We were unable to match Buck's figures for the percentage of PERS members that terminate vested and elect a refund of contributions. We recommend that Buck review the data, monitor this experience, and revise this assumption if warranted.
- In the economic assumptions section of the report, the inflation assumption should be analyzed first, followed by the investment return and other related assumptions. The inflation assumption is the base component of all the economic assumptions under the "building block" approach, and therefore we believe it makes sense to discuss and establish a recommendation for this assumption prior to the other economic assumptions.
- In 2010/2011, many funds were lowering their investment return assumptions to below 8%. However, an 8% assumption was adopted as a result of the experience study. As it stands in 2013, expectations are slightly better than they were three years ago. Using capital market expectations from today, Segal would likely recommend an investment return assumption of 7.75% to 8%.
- When reviewing the age difference between husbands and wives, Buck looked at the age spread for all retirees electing the joint and survivor form of payment. Since the assumption is applied to future retirees, we would suggest that Buck instead focus on new retirees when evaluating the appropriateness of the assumption. In many plans, we have observed a trend over time towards a smaller age spread between husband and wife among new retirees. While the age spread between husbands and wives for younger (newer) female retirees is

Alaska Retirement Systems

I. Introduction

similar to the age spread for the entire female retiree population, the age spread for male retirees is noticeably younger for newer retirees. While the current 3-year age spread assumption for both male and female retirees is not unreasonable, Buck should consider a separate assumption for male and female retirees, and monitor any trend towards a smaller age spread among new retirees.

- In the Defined Contribution Retirement Plan valuations, the full plan premiums (per capita costs) used to determine the retiree rates do not take into account the plan's anticipated Medicare Part D reimbursements. If these reimbursements are factored into the premium rates charged to retirees, then the projected retiree contributions would be lower and the projected retiree health obligation would be higher.

Each of these concerns is described more fully in this report.

We offer ideas to improve the quality and understanding of the valuation reports. Several suggestions and recommendations are made throughout this document. We would classify them as either: a) presentation suggestions to enhance the valuation processes or reports; b) something to be examined during the next experience review; and c) something that may affect the cost of the program. Where we make a comment in this regard in this report, we have identified the location in the margin with the following icons:



Enhancement to valuation process or report



Examine during next experience review



May affect the cost of the program

Alaska Retirement Systems

II. Actuarial Certification

This is to certify that Segal Consulting, a member of The Segal Group, Inc. (“Segal”) has replicated and reviewed the Experience Study as of June 30, 2009 for PERS and TRS, the June 30, 2011 PERS, TRS and DCR actuarial valuations, and the June 30, 2010 JRS and NGNMRS actuarial valuations in accordance with generally accepted actuarial principles and practices. The opinions presented in this report have been made on a basis consistent with our understanding of the applicable Actuarial Standards of Practice.

The actuarial valuations are based on the plan of benefits verified by ARMB and reliance on participant, premium, and expense data provided by ARMB or from vendors employed by ARMB. Segal did not audit the data provided by the Plan Administrator. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

The actuarial computations made are for purposes of replication and review of the reports described above. Determinations for purposes other than as described here may be significantly different from the results reported here.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, this report is complete and accurate.



Kim Nicholl, FSA MAAA EA
Senior Vice President and Actuary



Matthew A. Strom, FSA MAAA EA
Consulting Actuary

Alaska Retirement Systems

III (A). Experience Study and Assumptions: Data

As part of our analysis, we have performed a peer review audit of the actuarial experience study for the four-year period ending June 30, 2009. For this purpose, we have conducted our own analysis of the census data files (supplied to us by Buck) for the years ending June 30, 2005 through June 30, 2009. Five years of census data allowed us to track experience over four “valuation” years.

Presumably, the census data files provided to us by Buck are substantially the same as those used in connection with the performance of their experience study report dated March 2011. Each file contains identifying information, basic census fields (e.g., date of birth, date of hire, gender, etc.), credited service, salary for the prior year, and each member’s status as of the census file date. The identifying information and status field allow us to track each member’s demographic movement between valuation dates. For example, in the June 30, 2005 data, a member is coded as active and in the June 30, 2006 data, the same member is coded as retired. This tells us to count this person as an “actual retirement” for the 2005-2006 year. All members in the June 30, 2005 data that *could have* retired during the 2005-2006 year are counted as retirement exposures. In this example, the retirement assumption applied to the corresponding cohort of exposures generates “expected” retirements. Therefore, with these handful of fields, the actuary is able to track and analyze much of the demographic experience of the group for items such as mortality, active turnover, incidence of disability, and retirement.

Other assumptions require additional data to analyze. For example, evaluating the assumption for percentage of retirees that reside in Alaska and receive a special Cost of Living Allowance (COLA) requires a separate data field for Alaska COLAs currently being paid. We believe there are only a few assumptions where the necessary data fields are not sufficient or not available. One such assumption is that for the number of dependent children; the pension census data does not include information related to dependents of active members so a general assumption must be applied. In this case, the general assumption (“members who are married and between the ages of 25 and 45 have two dependent children”) is reasonable and the impact on overall valuation results is immaterial, so we do not believe additional data needs to be collected to analyze this assumption.

An example of an assumption where there is insufficient data to properly analyze, but might have a material impact on results, is the occupational vs. non-occupational death benefits. According to Buck’s experience study report, data is not available to determine whether occupational or non-occupational death benefits are paid. The occupational death benefit is generally more valuable than the non-occupational counterpart, so the ability to predict what portion of active death benefits would be payable under each form would be desirable.

Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

DEMOGRAPHIC ASSUMPTIONS

Mortality

We matched the expected and actual counts for post-termination mortality to within a reasonable tolerance for the PERS Peace Officer/Firefighter and TRS groups. For PERS Others, our counts were low compared to Buck, but the ratio of actual deaths to expected deaths is substantially the same. Buck recommended a change in post-termination (healthy) mortality tables that was based on the 1994 GAM Table (no margin), projected to 2013 with age setbacks to better align with actual experience. Their analysis was based on comparing the actual number of deaths to the expected number, and built in margins of 5-15% to allow for future improvements in mortality.

The approach used by Buck is sound. We would point out some possible alternatives (and potential improvements) that could be considered in the future. For example, rather than perform the actual versus expected analysis using head counts, another approach is to perform the analysis on a benefits-weighted basis. This methodology takes into consideration any correlation between the health of the annuitants and their benefit size.



A comparison of the two methodologies based on our analysis of the experience is shown below:

Post-Termination Mortality	Count-weighted Exposures	Actual Deaths	Expected Deaths	Ratio of Actual Deaths to Expected Deaths
PERS Others				
Female	44,179	828	770	107.53%
Male	34,529	772	883	87.43%
Total	78,708	1,600	1,653	96.79%
Reported by Buck		1,785	1,837	97.17%
PERS Peace Off./Fire.				
Female	1,904	17	16	106.25%
Male	7,475	92	107	85.98%
Total	9,379	109	123	88.62%
Reported by Buck		102	126	80.95%
TRS				
Female	21,956	276	312	88.46%
Male	15,923	230	273	84.25%
Total	37,879	506	585	86.50%
Reported by Buck		512	615	83.25%

Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

Post-Termination Mortality	Benefit-weighted Exposures ¹	Actual Deaths	Expected Deaths	Ratio of Actual Deaths to Expected Deaths
PERS Others				
Female	575,910	9,723	9,420	103.22%
Male	695,020	13,286	16,875	78.73%
Total	1,270,930	23,009	26,295	87.50%
PERS Peace Off./Fire.				
Female	37,947	278	289	96.14%
Male	247,574	2,351	3,375	69.67%
Total	285,521	2,629	3,664	71.75%
TRS				
Female	630,669	7,211	8,757	82.35%
Male	552,239	7,260	9,670	75.07%
Total	1,182,908	14,471	18,427	78.53%

Our headcount-weighted analysis shows the ratio of actual to expected deaths is 97%, 89%, and 87% for PERS Others, PERS Peace Officer/Firefighter, and TRS, respectively. These figures are close to those reported by Buck. However, accounting for the relative size of members' benefits reveals lower ratios of actual to expected deaths across all three plans. This means that from an accrued liability standpoint, even less liability is being released from post-termination deaths compared to expected than when viewed based on headcounts only. In effect, there may be less conservatism built into the proposed assumption than was originally intended.

Another alternative would be to build no margin into the proposed assumption for the base year and apply generational improvements thereafter, instead of using a static projection to account for improvement in mortality rates. Applying generational improvement allows the valuation to reflect projected improvements in mortality in each future year. For example, using a generational mortality table, the rate at age 65 fifteen years from the valuation date will have fifteen years of improvement reflected.



The following tables summarize mortality experience for the exposure period, and include data for proposed rates based on a table Segal would have recommended in connection with the study – the RP-2000 Combined Mortality Table, set back 1 year for males for PERS and set back 4 years for males and 3 years for females for TRS, with generational improvement.

¹ Numbers shown in thousands.

Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SERVICE RETIREE AND BENEFICIARY MORTALITY RATES – PERS

Male

Age Range	Exposures ²	Actual Deaths	Expected Deaths	Ratio of Actual to Expected	Proposed Expected Deaths	Ratio of Actual to Proposed
Under 50	14,270	36	31.2	115.53%	21.4	168.56%
50 – 54	64,818	213	238.6	89.28%	141.5	150.48%
55 – 59	214,427	967	1,342.9	72.01%	804.1	120.25%
60 – 64	232,373	1,890	2,554.0	74.00%	1,596.6	118.37%
65 – 69	172,689	2,698	3,290.7	81.99%	2,189.6	123.22%
70 – 74	113,588	2,138	3,452.7	61.92%	2,462.7	86.82%
75 – 79	71,173	2,932	3,413.4	85.90%	2,637.3	111.17%
80 – 84	37,561	2,375	2,984.0	79.59%	2,471.3	96.10%
85 and Over	21,695	2,388	2,942.7	81.15%	2,778.7	85.94%
Total	942,594	15,637	20,250.1	77.22%	15,103.3	103.53%

Female

Age Range	Exposures ²	Actual Deaths	Expected Deaths	Ratio of Actual to Expected	Proposed Expected Deaths	Ratio of Actual to Proposed
Under 50	6,244	1	7.5	13.28%	7.1	14.10%
50 – 54	35,014	222	69.1	321.23%	67.7	327.96%
55 – 59	136,392	631	452.2	139.53%	473.1	133.38%
60 – 64	153,240	603	966.9	62.36%	984.4	61.26%
65 – 69	105,068	1,197	1,190.1	100.58%	1,211.4	98.81%
70 – 74	73,582	1,289	1,309.8	98.41%	1,440.7	89.47%
75 – 79	49,894	2,093	1,507.7	138.82%	1,590.8	131.57%
80 – 84	30,695	1,377	1,604.6	85.82%	1,620.6	84.97%
85 and Over	23,728	2,588	2,601.1	99.50%	2,613.1	99.04%
Total	613,827	10,001	9,709.0	103.01%	10,008.9	99.92%

Grand Total	1,556,451	25,638	29,959.1	85.58%	25,112.1	102.09%
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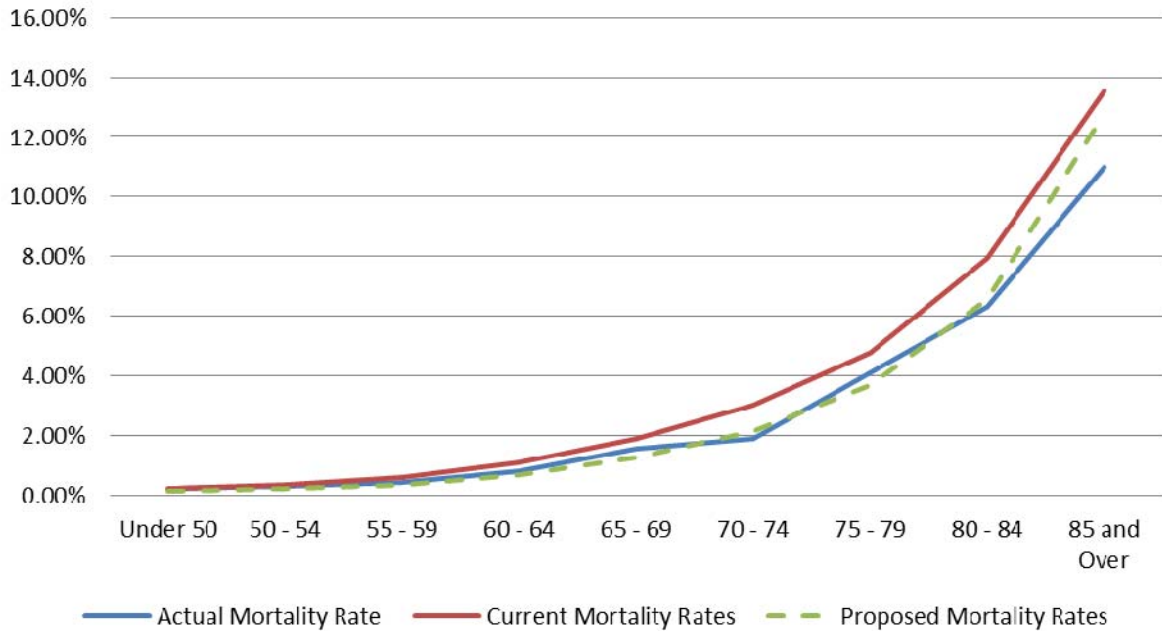
² Exposures and experience have been weighted by benefit payments and are shown above in thousands.

Alaska Retirement Systems

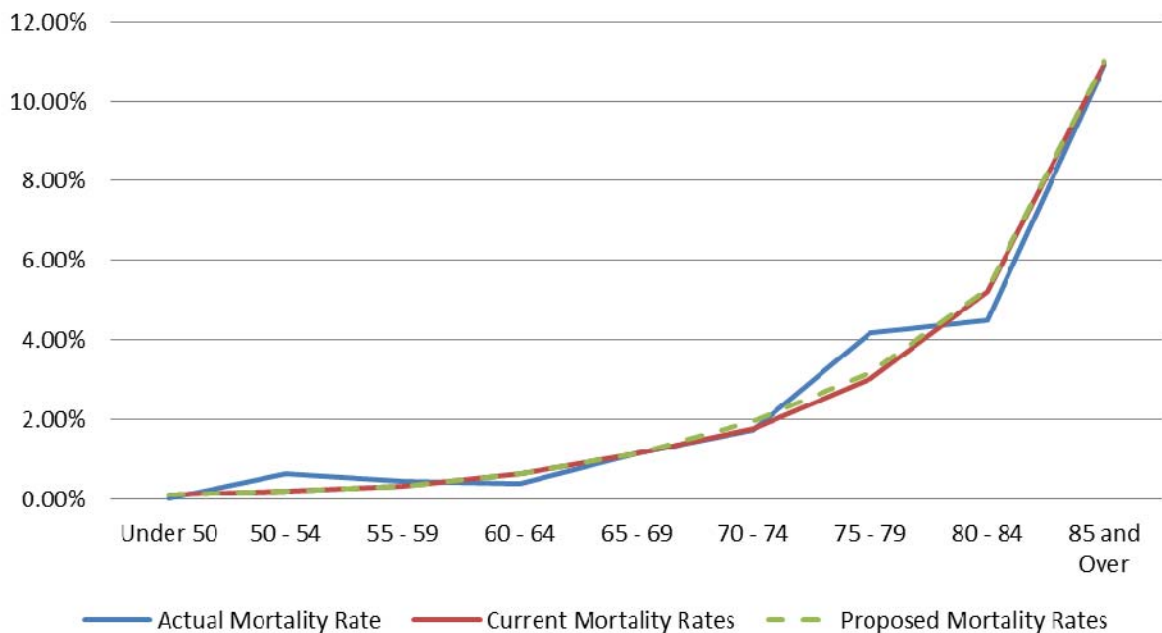
III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SERVICE RETIREE AND BENEFICIARY MORTALITY RATES – PERS

Males – Initial Year Only



Females – Initial Year Only



Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SERVICE RETIREE AND BENEFICIARY MORTALITY RATES – TRS

Male

Age Range	Exposures ³	Actual Deaths	Expected Deaths	Ratio of Actual to Expected	Proposed Expected Deaths	Ratio of Actual to Proposed
Under 50	10,829	19	16.7	113.54%	12.8	148.85%
50 – 54	35,029	131	93.7	139.80%	59.4	220.53%
55 – 59	92,816	307	413.7	74.21%	241.4	127.16%
60 – 64	128,291	593	1,002.1	59.18%	610.1	97.20%
65 – 69	120,672	595	1,660.8	35.83%	1,060.8	56.09%
70 – 74	77,094	1,465	1,784.7	82.09%	1,224.1	119.68%
75 – 79	49,217	1,218	1,791.8	67.97%	1,321.7	92.15%
80 – 84	23,579	1,212	1,383.5	87.60%	1,090.9	111.10%
85 and Over	14,712	1,720	1,523.4	112.91%	1,358.3	126.63%
Total	552,239	7,260	9,670.4	75.07%	6,979.5	104.02%

Female

Age Range	Exposures ³	Actual Deaths	Expected Deaths	Ratio of Actual to Expected	Proposed Expected Deaths	Ratio of Actual to Proposed
Under 50	16,866	11	18.6	59.20%	14.8	74.22%
50 – 54	46,556	127	82.7	153.62%	65.8	193.12%
55 – 59	126,196	304	368.9	82.40%	299.6	101.46%
60 – 64	158,433	624	879.1	70.98%	688.8	90.60%
65 – 69	114,931	893	1,173.0	76.13%	939.5	95.05%
70 – 74	71,771	542	1,158.4	46.79%	1,024.5	52.90%
75 – 79	44,557	1,181	1,203.5	98.13%	1,056.0	111.84%
80 – 84	26,490	994	1,251.3	79.44%	1,037.9	95.77%
85 and Over	24,869	2,535	2,621.1	96.71%	2,146.5	118.10%
Total	630,669	7,211	8,756.6	82.35%	7,273.5	99.14%

Grand Total	1,182,908	14,471	18,427.0	78.53%	14,253.0	101.53%
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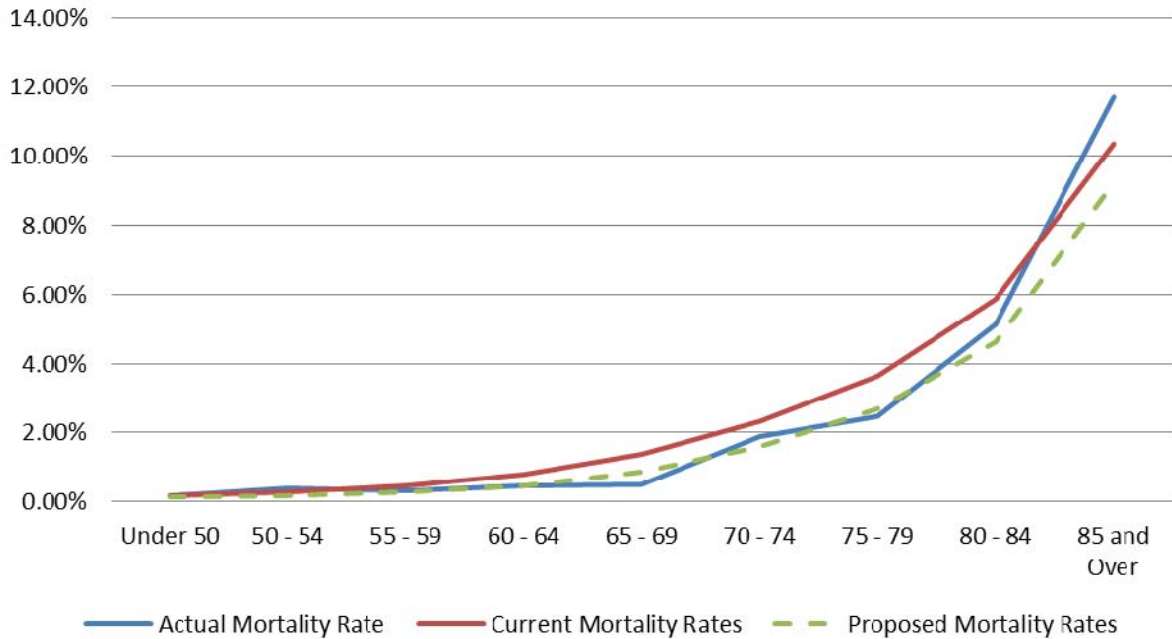
³ Exposures and experience have been weighted by benefit payments and are shown above in thousands.

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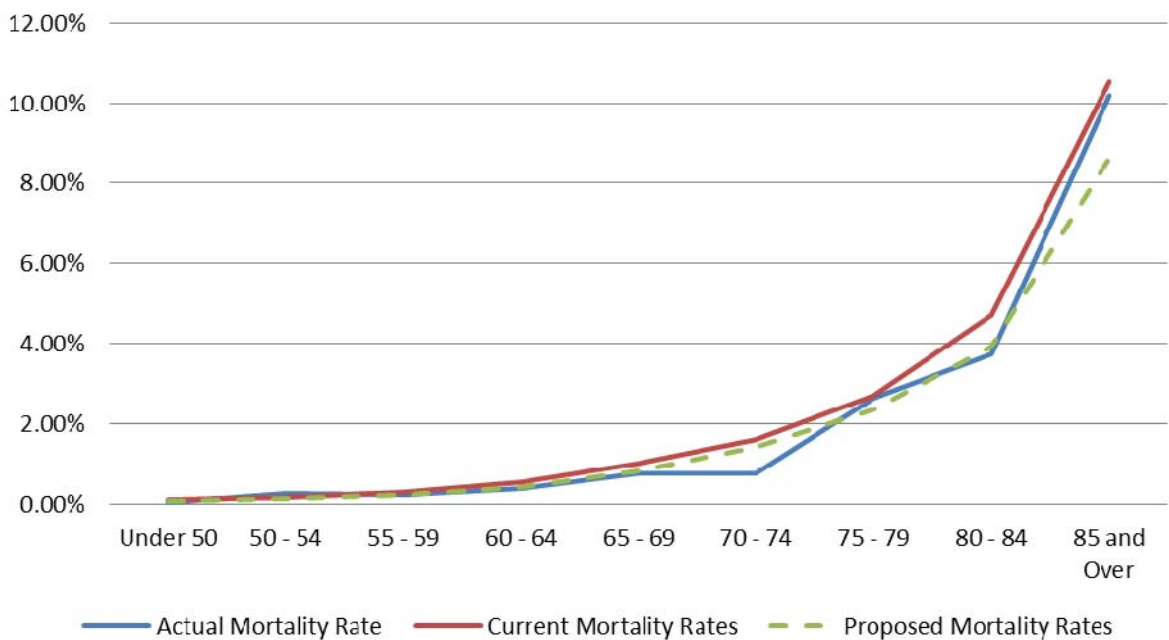
III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SERVICE RETIREE AND BENEFICIARY MORTALITY RATES – TRS

Males – Initial Year Only



Females – Initial Year Only



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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

The tables and charts above show that the suggested RP-2000 tables, with age setbacks, align well with the mortality experience over the experience period. By applying generational adjustments, future rates of mortality will contain adequate margin for improvements in mortality. Also, by weighting experience by benefit amounts, the positive correlation between the health of the annuitant and their benefit size is taken into consideration.

For mortality during active service, the PERS and TRS plans are not large enough to have credible experience for developing a table based on actual data. In many cases, when we recommend an assumption for active mortality, we base our recommendation on the table suggested for post-retirement lives and apply an adjustment to reflect the characteristics of the underlying group. For plans that cover general employees and teachers, the rates of mortality are generally lower than those in published tables. For plans that cover public safety employees, mortality rates are generally greater than those for general employees and teachers. We have reviewed Buck's recommendations with respect to pre-termination mortality and believe they are reasonable.

Mortality after Disability Retirement

Given the relatively small number of disability retirees, a review of the data does not provide a credible basis for setting an assumption. In cases like this, it is best to rely on an up-to-date published mortality table. This is what Buck did, as they recommended updating from the 1979 PBGC Disability Mortality Table to the RP-2000 Disabled Retiree Table. We agree with their recommendation.

Withdrawal from Service before Retirement

The assumed turnover rates used in annual actuarial valuations project the percentage of employees at each age or service duration that will terminate membership before retirement. These rates take account of possible terminations for all causes other than retirement, death, or disability. They include both voluntary and involuntary withdrawals from service.

Terminations before retirement give rise to some benefit rights, but may also involve the forfeiture of a portion of previously accrued benefits. Forfeitures resulting from turnover are anticipated in advance and help finance benefits that become payable to other members. In some cases, vested members who leave the plan and are eligible for deferred vested benefits withdraw their deposits, thus forfeiting the portion of their accrued benefit rights based on employer contributions.

For purposes of our analysis, the turnover experience studied includes all terminations from active employment. The types of terminations include members not vested at termination (since such members are not eligible for other benefits, termination of employment will, most likely, result in a withdrawal of employee contributions) and terminations of membership for members

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who were vested and either withdrew their contributions or are eligible for future benefits. Only terminations of members who are not eligible to retire and receive an immediate benefit from the plan – whether reduced or unreduced – are included.

In our experience performing such studies, these terminations are typically offset by rehired members (not including members that had previously taken a refund of contributions) to arrive at “net” turnover for each year of the study period. For comparison purposes, the counts below are not adjusted by rehires since this was the approach used by Buck in their study.

Withdrawal from Service	Exposures	Actual Terms	Expected Terms	Ratio of Actual Terms to Expected Terms
PERS Others				
Female	52,287	6,537	5,943	109.99%
Male	36,446	3,846	3,771	101.99%
Total	88,733	10,383	9,714	106.89%
Reported by Buck		10,085	9,603	105.02%
PERS Peace Off./Fire.				
Female	1,346	99	86	115.12%
Male	7,450	405	392	103.32%
Total	8,796	504	478	105.44%
Reported by Buck		525	477	110.06%
TRS				
Female	18,156	1,514	1,366	110.83%
Male	8,273	677	657	103.04%
Total	26,429	2,191	2,023	108.30%
Reported by Buck		2,172	1,982	109.59%

In their experience study report, Buck indicates that they typically recommend withdrawal rates with a margin for conservatism, which is intended to offset losses experienced from new entrants with prior service or rehires who repay refunded contributions to reinstate prior service credit. They recommended minor changes in turnover rates that slightly decreased the amount of expected turnover for PERS (by 1.50% for Others and 0.42% for Peace Officer/Firefighter) and increased expected turnover for TRS (by 1.46%). Between 2006 and 2009, the valuation reports show that both PERS and TRS experienced actuarial losses due to termination experience in all four years (i.e., there was less actual turnover than expected). In addition, both PERS and TRS valuation reports for 2010 and 2011 – the two years subsequent to the experience study – showed actuarial losses due to termination experience. We believe these losses are related to a relatively large number of rehires that are not accounted for in the conservatism built into the turnover rates.



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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

As previously mentioned, an alternative approach would be to analyze the experience data “net” of rehires and base recommended rates on actual experience with little to no built in margin (unless actual experience is deemed to not be indicative of future expectations). For PERS Others, we agree with Buck’s recommendation of a 5-year select period for a member’s first 5 years of service. We also agree that actual experience for this cohort of members was different for members hired at earlier ages compared to members hired at later ages (Buck used age 35 as a cutoff point and we believe this is reasonable). In the Buck analysis, members hired prior to age 35 had a significantly greater probability of turnover during the first 5 years of employment than members hired after age 35. We observed a similar trend and believe that age 35 is an appropriate breakpoint. Beyond the select period of 5 years, Buck developed unisex age-based rates and we agree with this approach.



For PERS Peace Officer/Firefighter, Buck recommended unisex select rates for the first 5 years of service and sex-distinct age-based ultimate rates for 5 or more years of service. Based on our analysis, we would agree with Buck’s approach with the exception that we would also have continued to use sex-distinct rates during the select period. Although the female exposures were relatively low, we did observe actual termination experience for females that was 50% greater than for males. However, given the low exposures of females compared to males in the select period, we do not find the use of unisex rates to be inappropriate.

For TRS, Buck recommended continued use of an 8-year, service-based, select period with sex-distinct rates and unisex age-based ultimate rates for 8 or more years of service. Despite the 8-year vesting schedule for TRS, we observed that the relationship between service and turnover was strongest over the first 5 years of service and therefore would have recommended a 5-year select period. In addition, we observed only a marginal difference between male and female experience in the first 5 years of service and would have recommended the use of unisex select rates. We do agree with Buck’s recommendation of unisex ultimate turnover rates.



A comparison of the actual experience, current rates and proposed rates are shown in the following tables and charts.

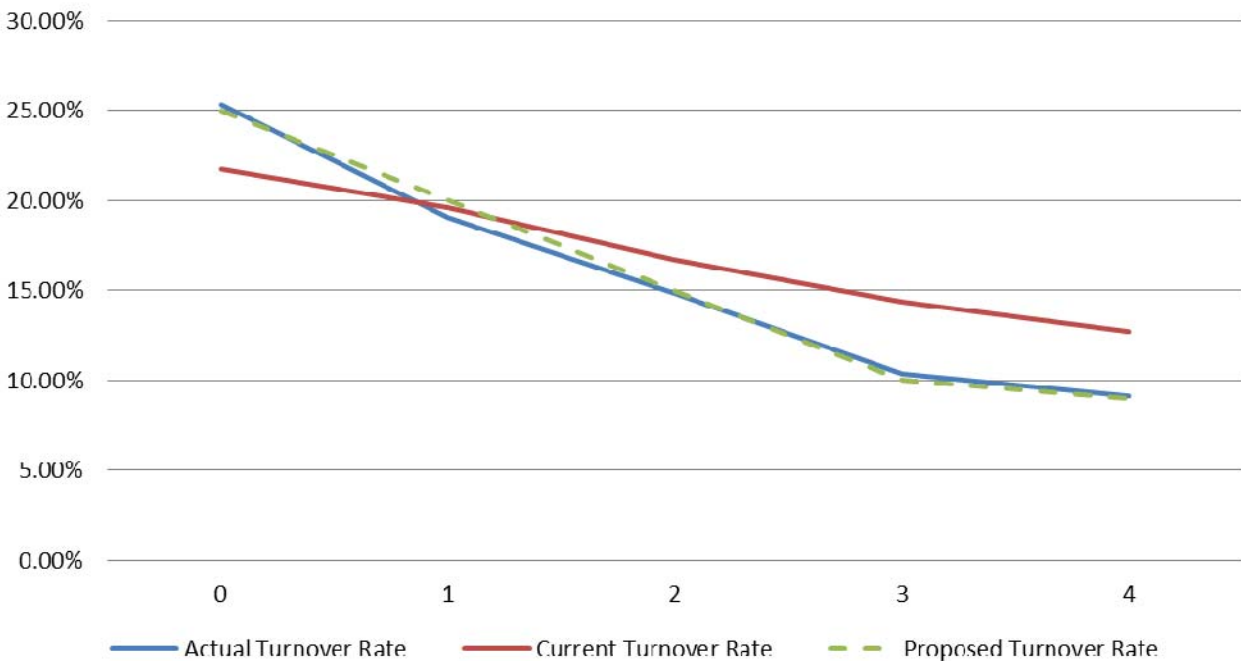
Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Others

5-year Select Period; Hired Prior to Age 35

Service Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
0 – 0.99	3,761	952	817.5	116.46%	940.3	101.25%
1 – 1.99	3,883	739	761.3	97.07%	776.6	95.16%
2 – 2.99	3,718	552	621.6	88.80%	557.7	98.98%
3 – 3.99	3,062	318	440.3	72.23%	306.2	103.85%
4 – 4.99	2,722	248	345.6	71.76%	245.0	101.23%
Total	17,146	2,809	2,986.3	94.06%	2,825.7	99.41%



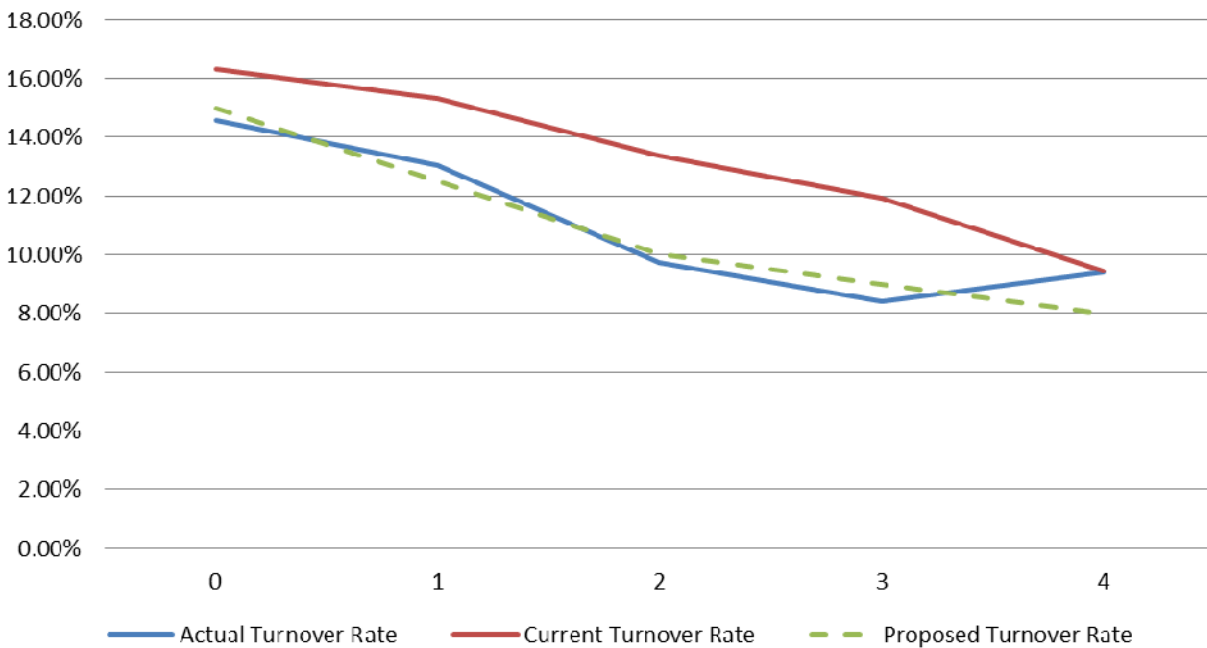
Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Others

5-year Select Period; Hired On or After Age 35

Service Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
0 – 0.99	4,114	600	671.6	89.33%	617.1	97.23%
1 – 1.99	5,589	729	855.7	85.19%	698.6	104.35%
2 – 2.99	6,064	589	809.6	72.75%	606.4	97.13%
3 – 3.99	5,854	492	698.9	70.40%	526.9	93.38%
4 – 4.99	4,783	449	451.9	99.36%	382.6	117.34%
Total	26,404	2,859	3,487.7	81.97%	2,831.6	100.97%



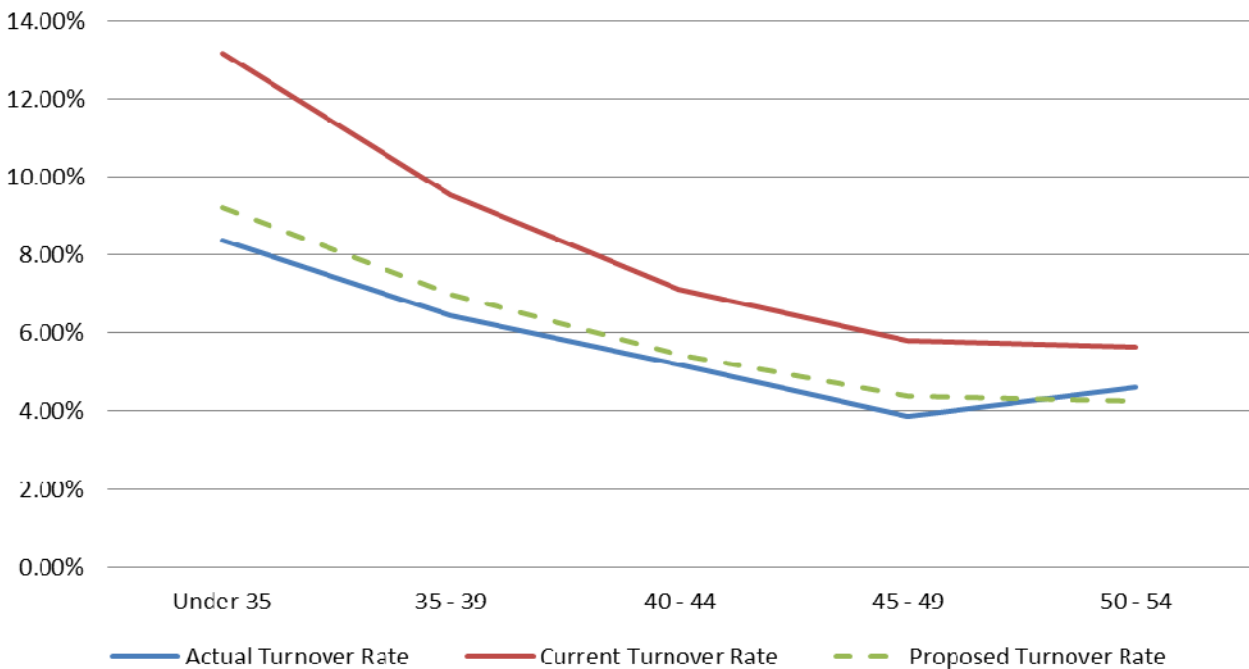
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Others

Ultimate Unisex Rates

Age Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
Under 35	4,036	338	531.3	63.62%	372.0	90.87%
35 – 39	5,780	373	550.1	67.81%	404.3	92.25%
40 – 44	9,497	492	676.0	72.78%	518.4	94.90%
45 – 49	15,459	596	896.5	66.48%	677.9	87.93%
50 – 54	10,360	477	584.7	81.59%	440.3	108.34%
Total	45,132	2,276	3,238.5	70.28%	2,412.9	94.33%



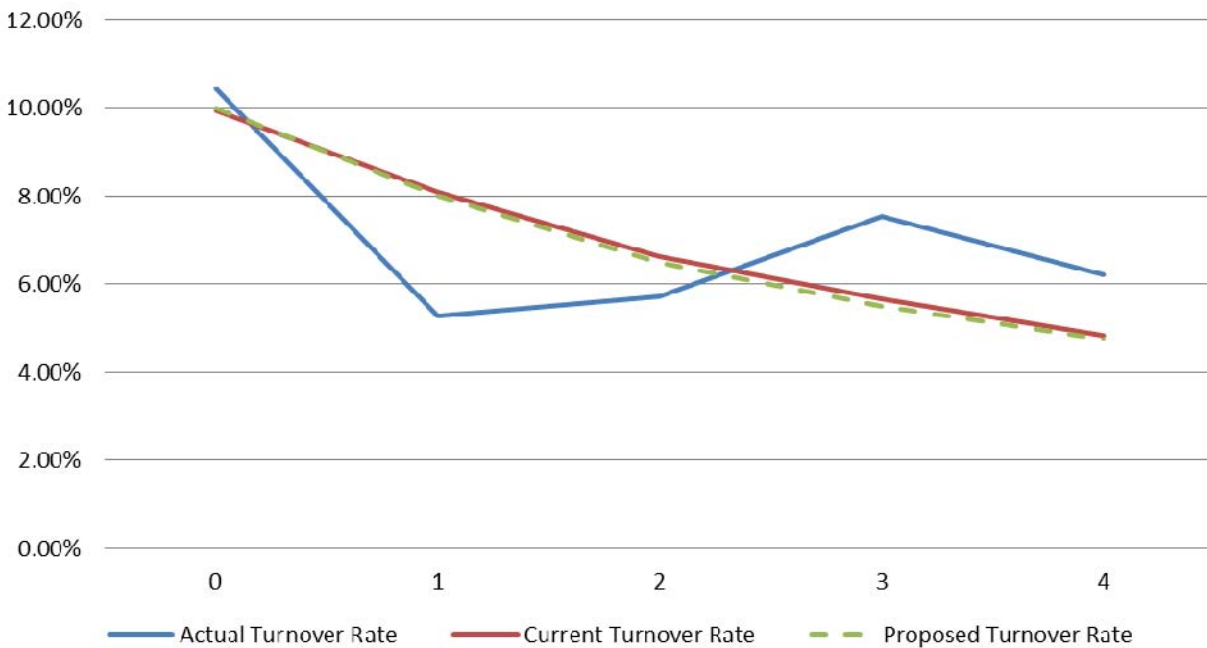
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Peace Officer/Firefighter

5-year Select Period; Males

Service Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
0 – 0.99	393	41	39.1	104.94%	39.3	104.33%
1 – 1.99	513	27	41.5	65.11%	41.0	65.79%
2 – 2.99	647	37	42.9	86.35%	42.1	87.98%
3 – 3.99	624	47	35.4	132.80%	34.3	136.95%
4 – 4.99	548	34	26.5	128.35%	26.0	130.62%
Total	2,725	186	185.3	100.39%	182.7	101.78%



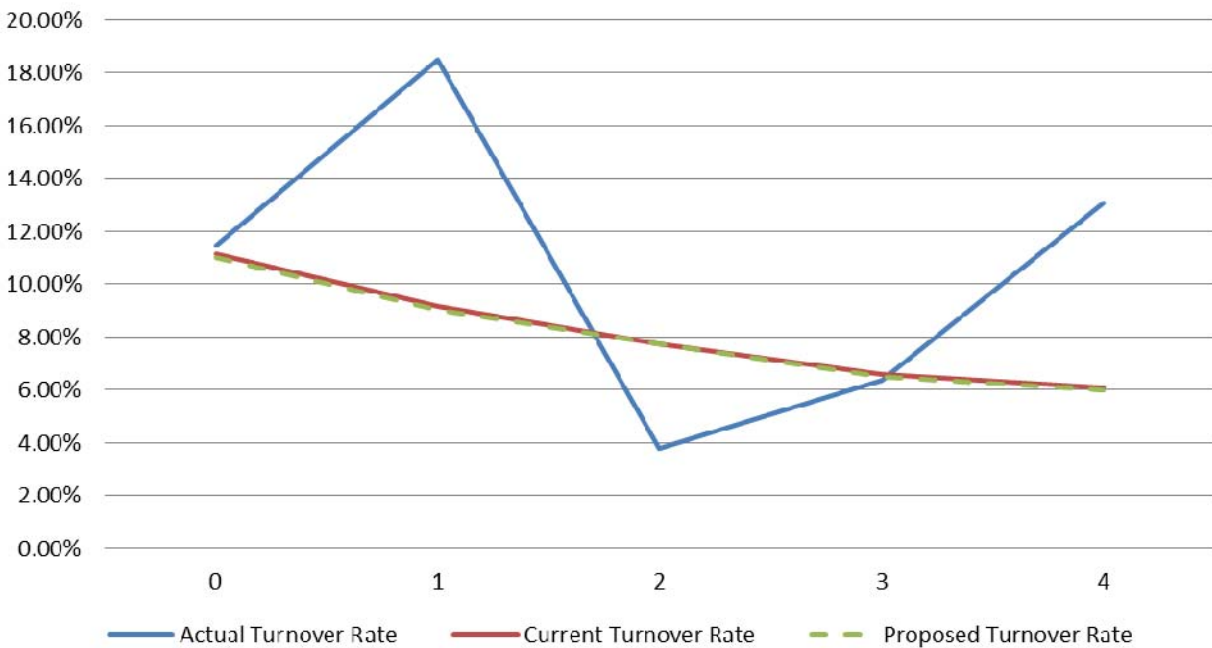
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Peace Officer/Firefighter

5-year Select Period; Females

Service Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
0 – 0.99	61	7	6.8	103.24%	6.7	104.32%
1 – 1.99	92	17	8.4	201.90%	8.3	205.31%
2 – 2.99	106	4	8.2	48.78%	8.2	48.69%
3 – 3.99	110	7	7.2	96.91%	7.2	97.90%
4 – 4.99	107	14	6.5	215.91%	6.4	218.07%
Total	476	49	37.1	132.05%	36.8	133.24%



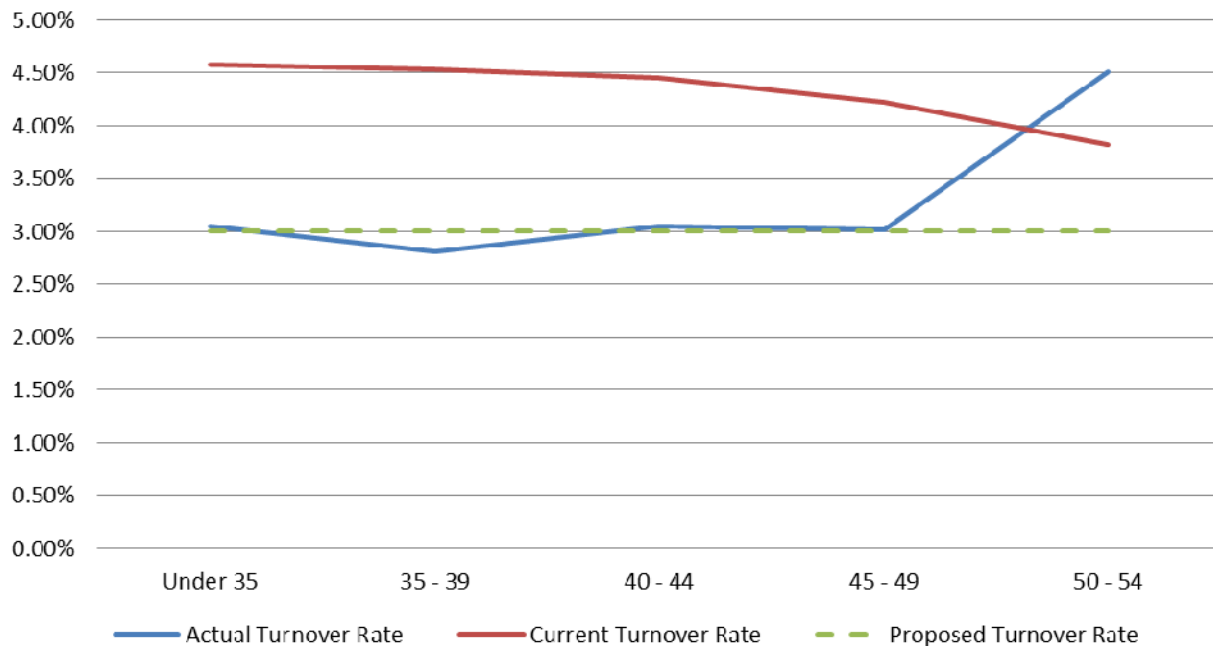
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Peace Officers/Firefighters

Ultimate Rates; Males

Age Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
Under 35	1,017	31	46.6	66.56%	30.5	101.61%
35 – 39	1,352	38	61.2	62.11%	40.6	93.69%
40 – 44	1,117	34	49.7	68.48%	33.5	101.46%
45 – 49	796	24	33.6	71.39%	23.9	100.50%
50 – 54	421	19	16.1	118.34%	12.6	150.44%
Total	4,703	146	207.1	70.50%	141.1	103.48%



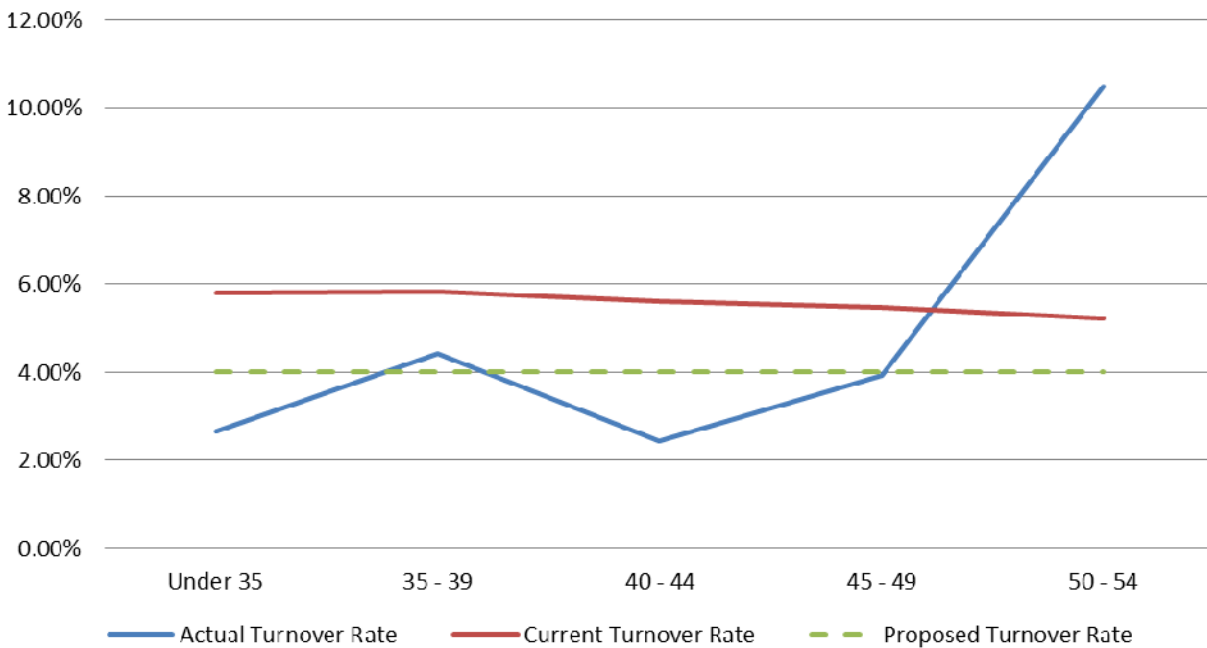
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – PERS Peace Officers/Firefighters

Ultimate Rates; Females

Age Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
Under 35	151	4	8.7	45.80%	6.0	66.23%
35 – 39	226	10	13.1	76.07%	9.0	110.62%
40 – 44	206	5	11.5	43.37%	8.2	60.68%
45 – 49	178	7	9.7	71.81%	7.1	98.31%
50 – 54	105	11	5.5	201.24%	4.2	261.90%
Total	866	37	48.6	76.09%	34.6	106.81%



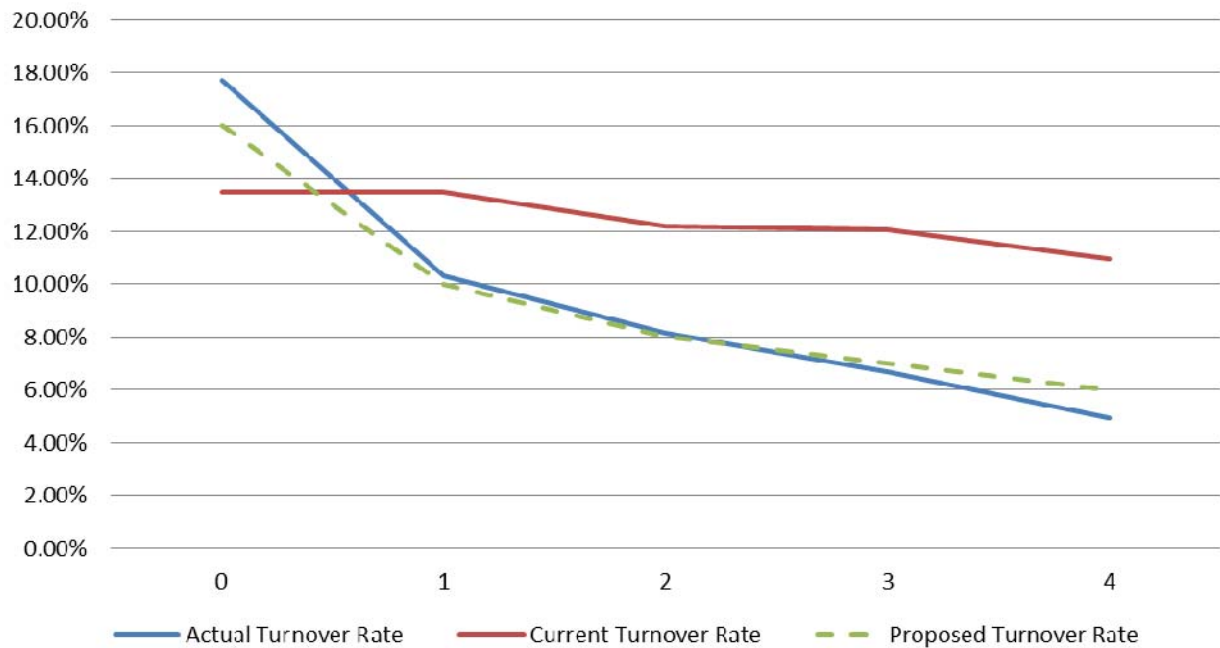
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – TRS

5-year Unisex Select Period

Service Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
0 – 0.99	395	70	53.3	131.41%	63.2	110.76%
1 – 1.99	1,581	163	212.9	76.58%	158.1	103.10%
2 – 2.99	1,938	158	236.4	66.84%	155.0	101.91%
3 – 3.99	2,291	153	275.8	55.48%	160.4	95.40%
4 – 4.99	2,169	107	237.3	45.09%	130.1	82.22%
Total	8,374	651	1,015.6	64.10%	666.9	97.62%



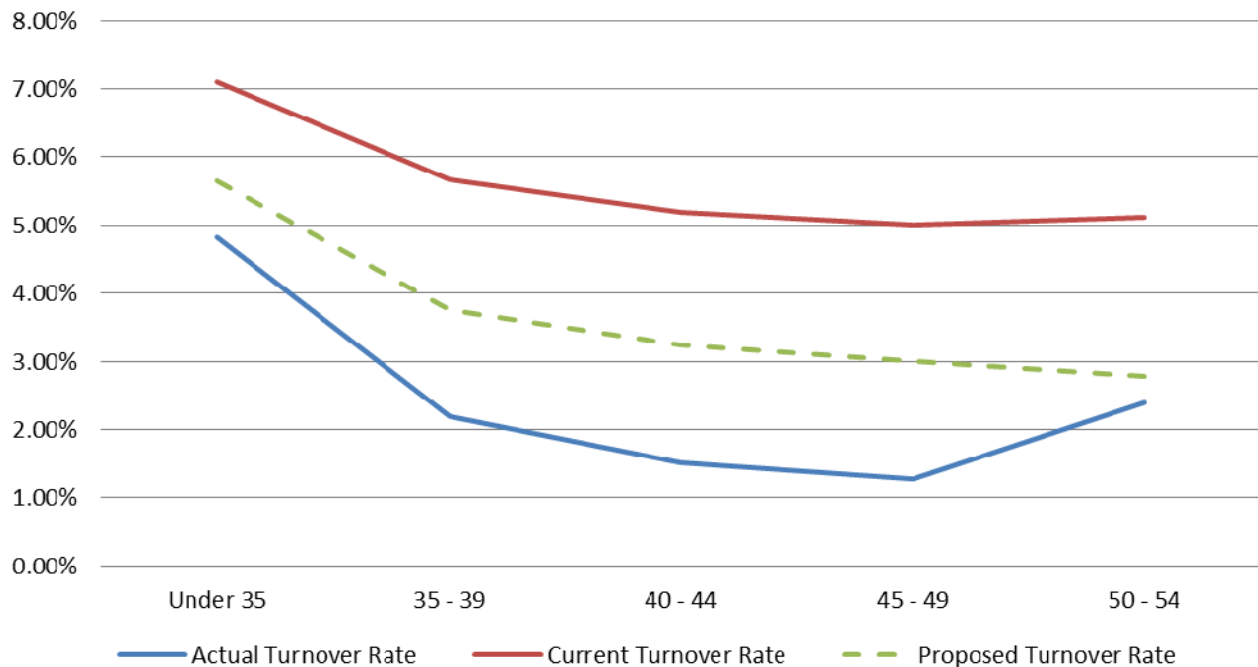
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TURNOVER RATES – TRS

Unisex Ultimate Rates

Age Range	Exposures	Actual Turnover	Expected Turnover	Ratio of Actual to Expected	Proposed Turnover	Ratio of Actual to Proposed
Under 35	2,469	119	175.2	67.91%	139.7	85.21%
35 – 39	3,697	81	209.3	38.70%	138.7	58.41%
40 – 44	4,100	62	212.4	29.19%	133.2	46.55%
45 – 49	4,145	53	207.7	25.52%	124.4	42.62%
50 – 54	2,831	68	144.7	47.00%	78.7	86.38%
Total	17,242	383	949.3	40.34%	614.6	62.32%



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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

Retirement and Terminated Vested Retirement Age

Retirement from active status

Under the plans, members are eligible to retire following attainment of various eligibilities. In general, the normal retirement eligibility conditions for the various plans/tiers are:

PERS Others Tier 1: Age 55 with 5 years of service or 30 years of service
PERS Others Tiers 2 & 3: Age 60 with 5 years of service or 30 years of service

PERS Peace Officer/Firefighter Tier 1: Age 55 with 5 years of service or 20 years of service
PERS Peace Officer/Firefighter Tiers 2 & 3: Age 60 with 5 years of service or 20 years of service

TRS Others Tier 1: Age 55 with 8 years of service or 25 years of creditable service (20 years of membership service)
TRS Others Tier 2: Age 60 with 8 years of service or 25 years of creditable service (20 years of membership service)

Participants are allowed to retire early with an actuarially reduced benefit if they meet the following eligibility:

PERS Others Tier 1: Age 50 with 5 years of service
PERS Others Tiers 2 & 3: Age 55 with 5 years of service

PERS Peace Officer/Firefighter Tier 1: Age 50 with 5 years of service
PERS Peace Officer/Firefighter Tiers 2 & 3: Age 55 with 5 years of service

TRS Others Tier 1: Age 50 with 8 years of service
TRS Others Tier 2: Age 55 with 8 years of service

The retirement assumptions are significant in order to predict the relative importance of retirement benefits versus ancillary (i.e., death and disability) benefits, and to properly measure the overall magnitude of retirement liabilities.

The actual number of retirements was generally more than expected for those retiring with an actuarially reduced benefit and lower than expected for those retiring with an unreduced benefit (shown in the following table). Male and female actual experience was generally consistent with one another (meaning that when actual retirements were more than expected, both male and female experience was more than expected and vice versa).

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

<u>Reduced</u> Retirement	Exposures	Actual Retirement	Expected Retirement	Ratio of Actual to Expected Retirement
PERS Others				
Female	9,232	716	662	108.16%
Male	7,420	515	526	97.93%
Total	16,652	1,231	1,188	103.63%
Reported by Buck		1,380	1,218	113.30%
PERS Peace Off./Fire.				
Female	126	9	14	63.23%
Male	401	28	47	60.04%
Total	527	37	61	60.79%
Reported by Buck		48	63	76.19%
TRS				
Female	2,221	168	159	105.78%
Male	920	77	56	136.65%
Total	3,141	245	215	113.87%
Reported by Buck		253	225	112.44%

<u>Unreduced</u> Retirement	Exposures	Actual Retirement	Expected Retirement	Ratio of Actual to Expected Retirement
PERS Others				
Female	6,958	1,358	1,453	93.49%
Male	5,920	1,239	1,332	93.01%
Total	12,878	2,597	2,785	93.26%
Reported by Buck		2,548	2,903	87.77%
PERS Peace Off./Fire.				
Female	258	46	54	85.95%
Male	1,209	207	253	81.96%
Total	1,467	253	306	82.66%
Reported by Buck		255	323	78.95%
TRS				
Female	5,036	707	926	76.35%
Male	2,653	356	487	73.07%
Total	7,689	1,063	1,413	75.22%
Reported by Buck		1,042	1,410	73.90%

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

Currently, the retirement assumption used in the valuations is based on the members' age and gender, and whether or not they are eligible for reduced or unreduced retirement benefits. We did examine experience by gender to determine whether there is enough difference in male and female experience to warrant using separate sex-distinct tables for the retirement assumption. However, we did not see a large enough difference in the experience data for any of the groups to recommend continued use of sex-distinct rates for these plans.

Actual experience for PERS Others members retiring with a reduced benefit was slightly more than expected, yet approximately 7% less than expected for members retiring with an unreduced benefit. Similarly, actual experience for TRS members retiring with a reduced benefit was approximately 14% more than expected and 25% less than expected for members retiring with an unreduced benefit. Therefore, we would recommend decreasing the retirement rates for ages associated with reduced benefits (particularly for TRS; PERS Others will remain largely unchanged) and increasing the rates for ages associated with unreduced benefits.

Actual experience for PERS Peace Officers/Firefighters was less than expected for members at both reduced and unreduced benefits. Therefore, we would recommend an overall increase in retirement rates for this group.

According to the experience data for PERS Others and TRS, there are more than a de minimum number of exposures older than age 70. Based on this analysis, we would have recommended 100% retirement at age 75 for these two groups. Buck's recommendation included raising the 100% retirement age for all three groups: age 70 for PERS Peace Officer/Firefighter, age 85 for TRS, and age 90 for PERS Others. In our opinion, this extends the assumed retirement age beyond what we believe is reasonable and could lead to experience losses in future valuations.

Our analysis revealed that a sizeable portion of members that "retire" from active status do not immediately commence payment of their annuity and, instead, defer payment to a later age. Based on our review of the data, and the members that fall into this category, 50% of members in PERS Other and TRS and 35% of members in PERS Peace Officer/Firefighter that retire with a reduced benefit defer payment to a later age. In addition, 10% of members in PERS Other, 17% of members in TRS, and 7% of members in PERS Peace Officer/Firefighter that retire with an unreduced benefit defer payment to a later age. This experience is not common, but we would recommend Buck study this experience and consider an additional assumption to defer payments for these members.

In addition, we recommended that Buck study the retirement experience separately for Tier 1 and Tier 2 (plus Tier 3 in the the case of PERS) since these groups have different retirement eligibility criteria. It would not be unusual for separate rates to apply for Tier 1 and Tier 2/3, or at least introduce a "bump" in rates at the first eligibility age for each Tier.



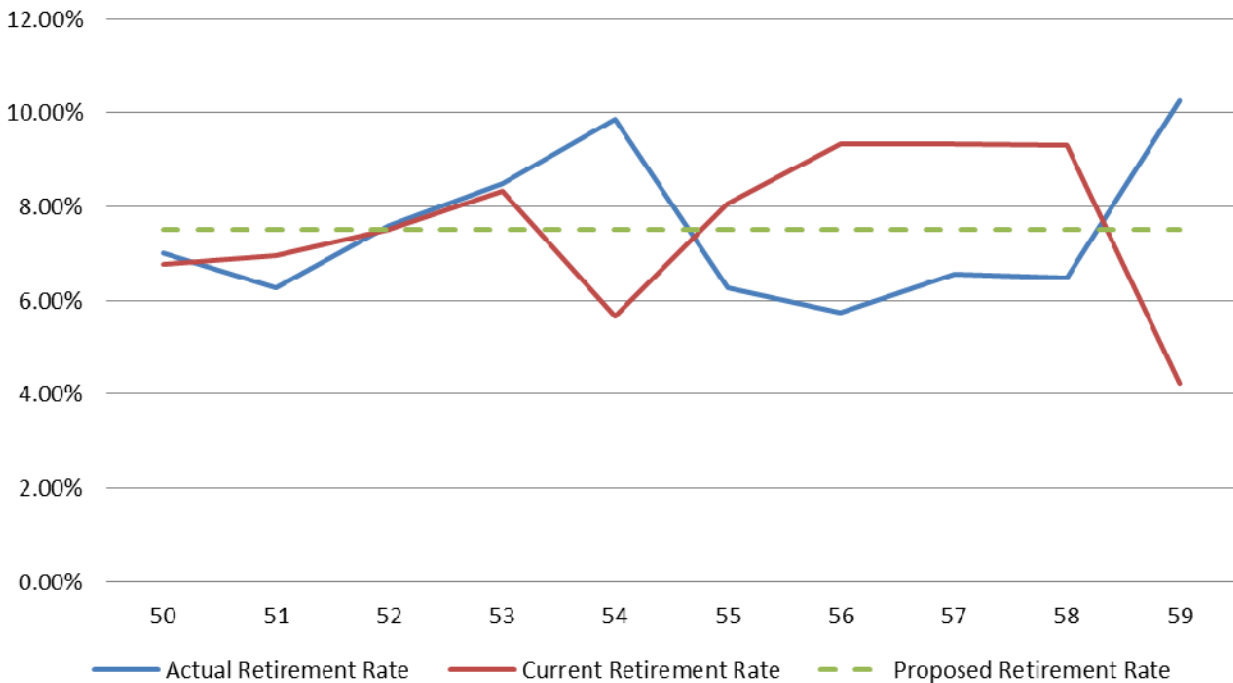
Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

RETIREMENT RATES – PERS Others

Reduced Benefit; Unisex Rates

Age	Exposures	Actual Rets.	Expected Rets.	Ratio of Actual to Expected	Proposed Rets.	Ratio of Actual to Proposed
50	1,614	113	103.3	109.34%	121.1	93.35%
51	1,693	106	112.5	94.24%	127.0	83.48%
52	1,754	133	125.9	105.62%	131.6	101.10%
53	1,816	154	143.7	107.14%	136.2	113.07%
54	1,672	165	89.3	184.69%	125.4	131.58%
55	1,949	122	147.0	82.98%	146.2	83.46%
56	1,777	102	154.4	66.07%	133.3	76.53%
57	1,588	104	136.7	76.07%	119.1	87.32%
58	1,433	93	121.8	76.33%	107.5	86.53%
59	1,356	139	47.6	261.73%	101.7	136.68%
Total	16,652	1,231	1,187.9	103.63%	1,248.9	98.57%



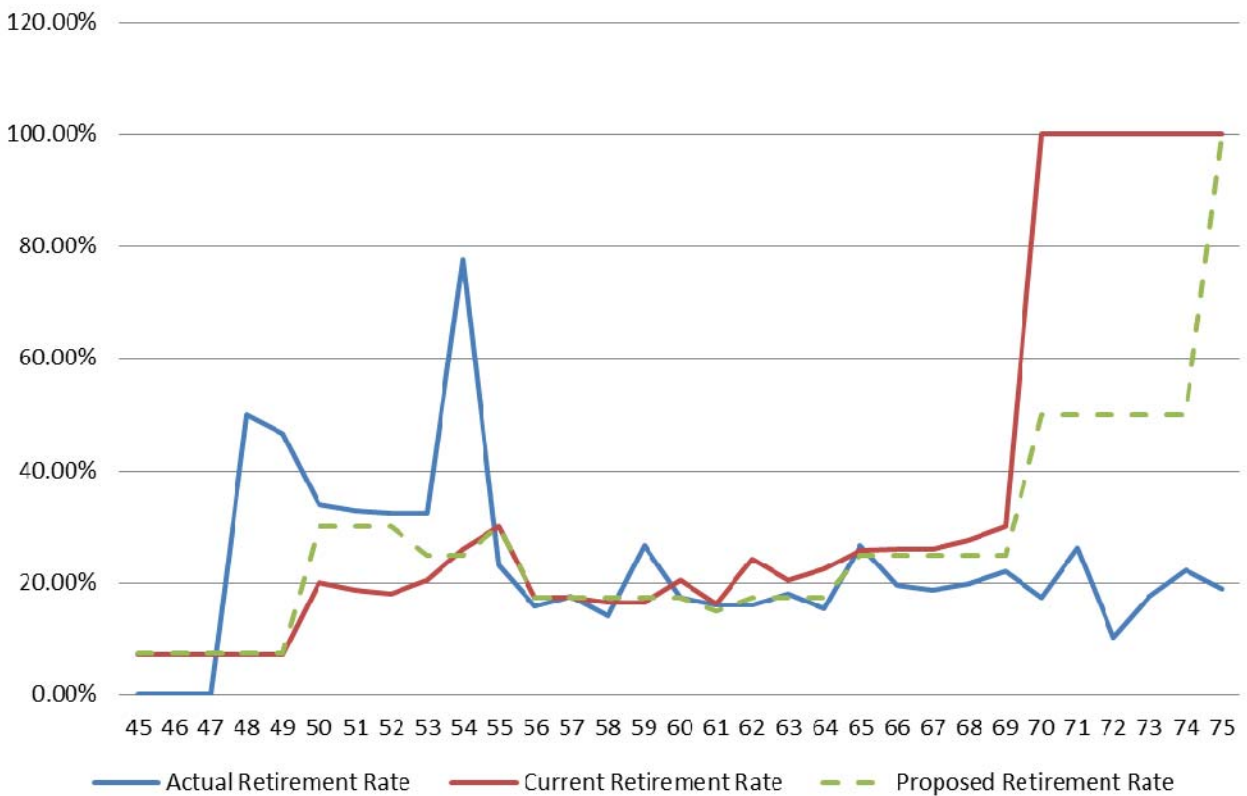
Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

RETIREMENT RATES – PERS Others

Unreduced Benefit; Unisex Rates

Age Range	Exposures	Actual Rets.	Expected Rets.	Ratio of Actual to Expected	Proposed Rets.	Ratio of Actual to Proposed
45 – 49	37	17	0.9	1990.63%	2.8	612.61%
50 – 54	525	285	58.8	484.30%	141.0	202.20%
55 – 59	5,434	1,064	1,020.2	104.29%	1,142.7	93.11%
60 – 64	5,220	870	1,027.1	84.71%	881.8	98.66%
65 – 69	1,356	303	374.0	81.02%	339.0	89.38%
70 – 74	232	44	229.6	19.17%	116.0	37.93%
75+	74	14	74.0	17.49%	74.0	18.92%
Total	12,878	2,597	2,784.6	93.26%	2,697.3	96.28%



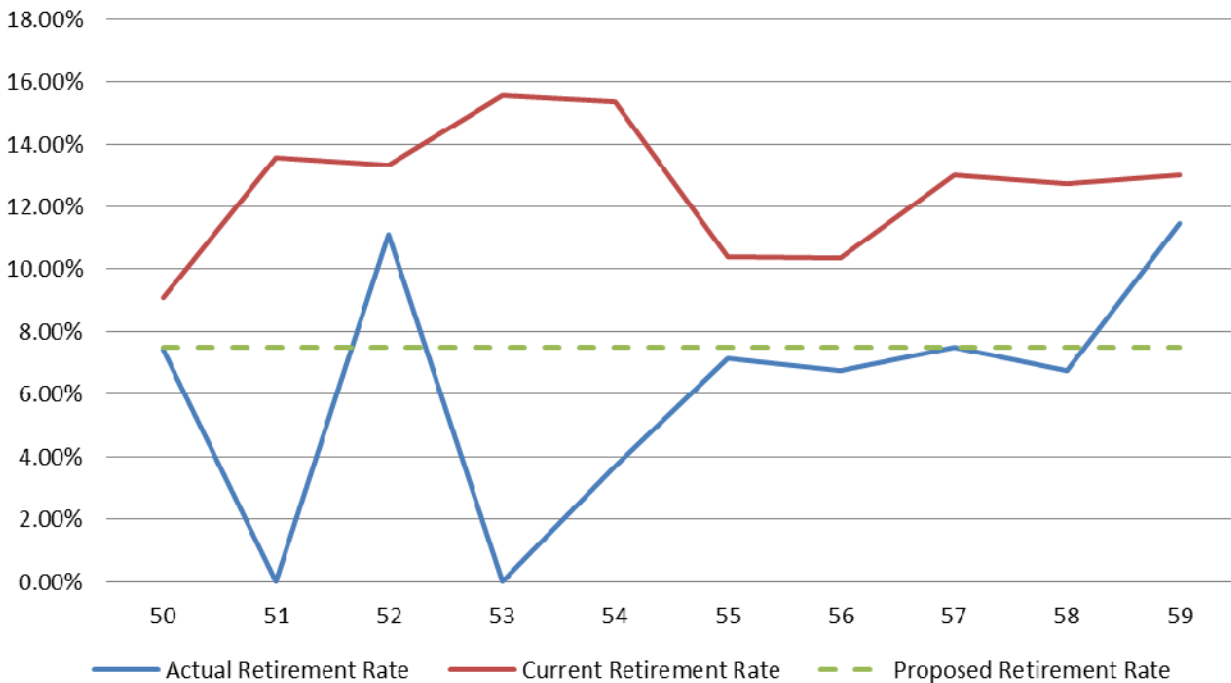
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

RETIREMENT RATES – PERS Peace Officer/Firefighter

Reduced Benefit; Unisex Rates

Age	Exposures	Actual Rets.	Expected Rets.	Ratio of Actual to Expected	Proposed Rets.	Ratio of Actual to Proposed
50	27	2	2.5	81.40%	2.0	98.77%
51	23	0	3.1	0.00%	1.7	0.00%
52	27	3	3.4	87.59%	2.0	148.15%
53	21	0	3.3	0.00%	1.6	0.00%
54	27	1	3.8	26.01%	2.0	49.38%
55	98	7	9.5	73.50%	7.4	95.24%
56	89	6	8.9	67.40%	6.7	89.89%
57	80	6	9.9	60.73%	6.0	100.00%
58	74	5	8.9	56.02%	5.6	90.09%
59	61	7	7.5	92.96%	4.6	153.01%
Total	527	37	60.9	60.79%	39.5	93.61%



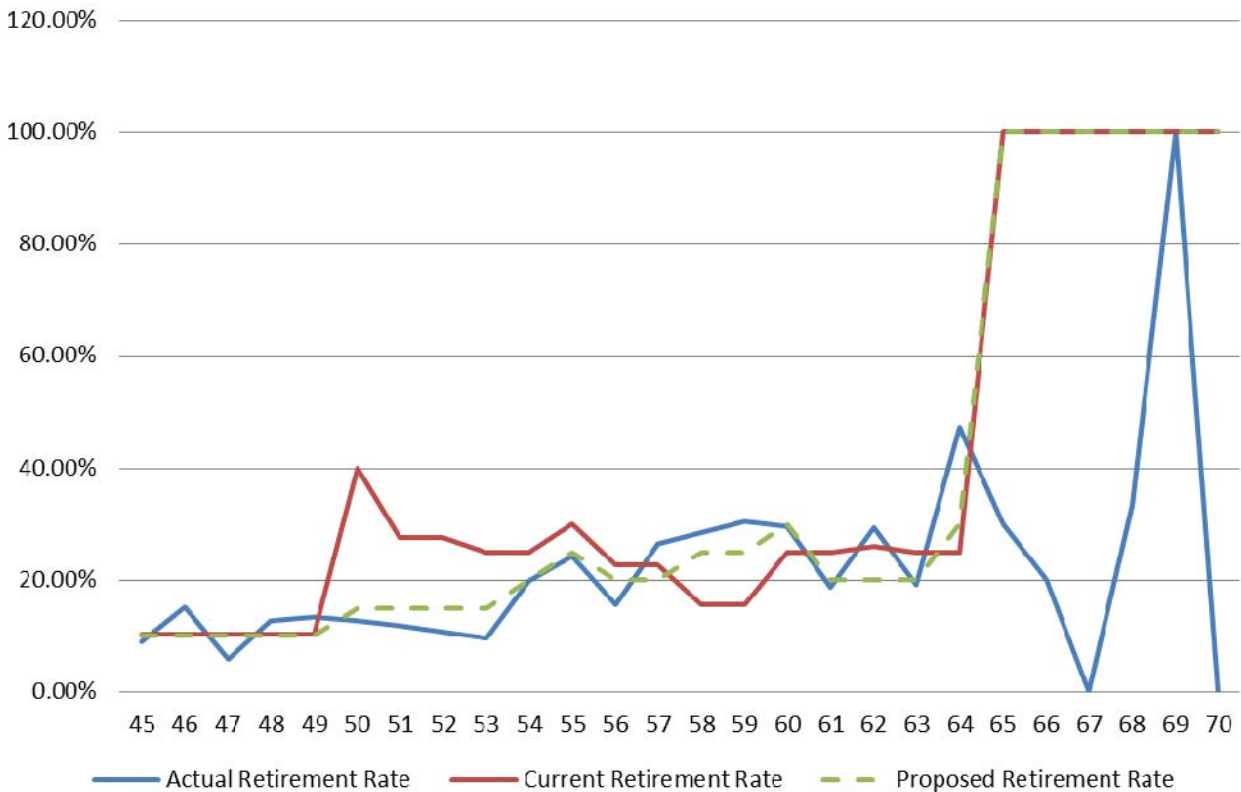
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

RETIREMENT RATES – PERS Peace Officer/Firefighter

Unreduced Benefit; Unisex Rates

Age Range	Exposures	Actual Rets.	Expected Rets.	Ratio of Actual to Expected	Proposed Rets.	Ratio of Actual to Proposed
45 – 49	433	46	32.0	143.65%	43.3	106.24%
50 – 54	446	58	122.4	47.40%	71.5	81.18%
55 – 59	327	78	72.4	107.69%	75.2	103.79%
60 – 64	238	64	57.3	111.73%	58.3	109.78%
65+	23	7	22.0	31.82%	23.0	30.43%
Total	1,467	253	306.1	82.66%	271.2	93.29%



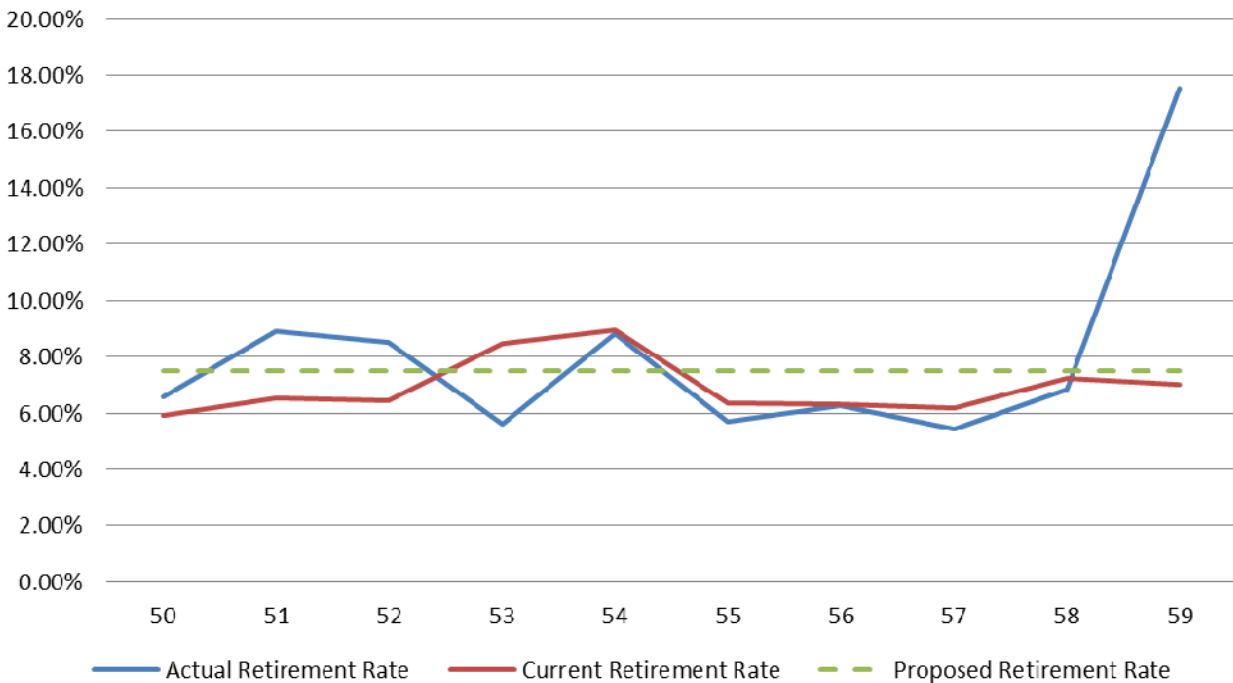
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RETIREMENT RATES – TRS

Reduced Benefit; Unisex Rates

Age	Exposures	Actual Rets.	Expected Rets.	Ratio of Actual to Expected	Proposed Rets.	Ratio of Actual to Proposed
50	258	17	15.3	111.35%	18.1	94.13%
51	281	25	18.4	136.17%	19.7	127.10%
52	282	24	18.2	132.04%	19.7	121.58%
53	267	15	22.6	66.47%	18.7	80.26%
54	249	22	22.3	98.83%	17.4	126.22%
55	440	25	28.0	89.19%	30.8	81.17%
56	415	26	26.1	99.45%	29.1	89.50%
57	350	19	21.6	87.94%	24.5	77.55%
58	308	21	22.3	94.04%	21.6	97.40%
59	291	51	20.4	249.78%	21.8	233.68%
Total	3,141	245	215.2	113.87%	235.6	104.00%



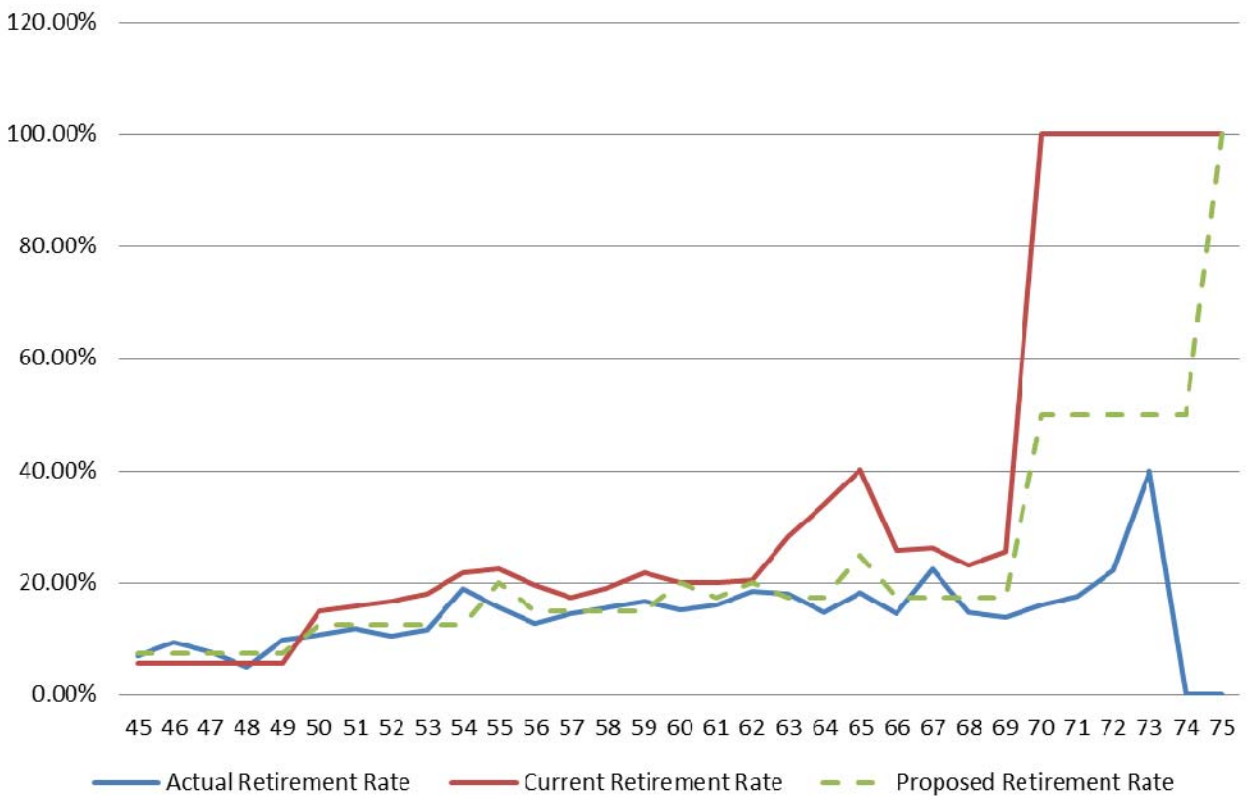
Alaska Retirement Systems

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RETIREMENT RATES – TRS

Unreduced Benefit; Unisex Rates

Age Range	Exposures	Actual Rets.	Expected Rets.	Ratio of Actual to Expected	Proposed Rets.	Ratio of Actual to Proposed
45 – 49	1,079	83	48.7	170.54%	80.9	102.56%
50 – 54	2,006	261	338.3	77.14%	250.8	104.09%
55 – 59	2,580	384	503.6	76.25%	419.3	91.58%
60 – 64	1,581	258	345.6	74.66%	296.6	87.00%
65 – 69	375	65	111.1	58.51%	75.9	85.64%
70 – 74	56	11	54.0	20.37%	28.0	39.29%
75+	12	1	12.0	8.33%	12.0	8.33%
Total	7,689	1,063	1,413.3	75.22%	1,163.4	91.37%



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Retirement from deferred vested status

The current benefit commencement assumption for deferred vested members is that payments will begin at their earliest retirement age. We agree with Buck’s assessment that actual experience shows that these members are waiting longer to retire. Buck’s recommendation to change the PERS Others and TRS assumption to the earliest unreduced age and age 53 for Tier 1 and age 60 for Tier 2 and Tier 3 for PERS Peace Officer/Firefighter is reasonable.

Disability Retirement

The table below compares the actual and expected disability retirement counts of our analysis of the data and Buck’s analysis.

Disability Retirements	Actual Disabilities	Expected Disabilities	Ratio of Actual Disabilities to Expected
PERS Others			
Female	38	85	44.71%
Reported by Buck	37	83	44.58%
Male	33	74	44.59%
Reported by Buck	33	72	45.83%
PERS Peace Off./Fire.			
Female	3	4	75.00%
Reported by Buck	3	4	75.00%
Male	15	22	68.18%
Reported by Buck	15	21	71.43%
TRS			
Female	13	26	50.00%
Reported by Buck	13	26	50.00%
Male	5	15	33.33%
Reported by Buck	5	14	35.71%

As the table above demonstrates, we matched Buck’s counts very closely (in many cases, exactly). Based on the experience data, we believe Buck’s recommendations for changes to the disability retirement rates are reasonable.

Withdrawal of Contributions at Termination

Active members who terminate with a vested benefit have the option of withdrawing their contributions with interest or leaving their account balances in the plan and therefore be entitled

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to a deferred annuity at retirement. In most cases, it is more valuable to a member to leave their balances in the plan and receive the deferred retirement annuity. However, in some cases the value of the contributions with interest may have a greater present value than the deferred annuity, or a terminating member may simply choose to take the refund for other reasons. Following is an analysis of refund elections from the experience period for withdrawing members who were vested upon termination:

	PERS Others	PERS Peace Officer/Fire.	TRS
Number of member who terminated vested	4,920	292	947
Terminating members who elected a refund	865	118	30
Rate electing refunds	17.6%	40.4%	3.2%
Reported by Buck	11%	22%	2%

We agree with Buck that, based on the data, a small amount of TRS members elect a refund of contributions, and do not disagree with maintaining a relatively small election percentage (10%) for this group. We were unable to match the rate electing refunds for PERS and were significantly higher than Buck's values for both groups. We recommend Buck review the data, monitor this experience and revise this assumption if warranted.



An alternative method for valuing the refund of contributions benefit is to assume that terminated members will elect the choice that has the greatest value to them on an individual basis. Then, as part of the valuation program, the liability associated with the turnover decrement is equal to the larger of the present value of a deferred annuity or the amount of accumulated member contributions with interest.



Other Demographic Assumptions

Marriage Assumption, Age Difference, and Number of Dependent Children

We reviewed the data and proposed assumptions related to percent married, age difference between husbands and wives, and number of dependent children.

The assumptions regarding percent married and age difference between husbands and wives can have a noticeable impact on the value of retiree health care benefits. In developing their assumption, Buck reviewed the marital status of all members who are eligible to retire. However, since only a fraction of retirees under age 60 are assumed to elect health care coverage, the experience of the retirees under age 60 should be reviewed separately to ensure that the assumption is appropriate for this subset of the retirees. We performed such an analysis, and conclude that the current assumption is appropriate.



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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

When reviewing the age difference between husbands and wives, Buck looked at the age spread for all retirees electing the joint and survivor form of payment. Since the assumption is applied to future retirees, we would suggest that Buck instead focus on new retirees when evaluating the appropriateness of the assumption. In many plans, we have observed a trend over time towards a smaller age spread between husband and wife among new retirees. Using retirees currently under age 65 as a proxy for “newer retirees”, the 2009 data shows:

Average age spread between husband and wife		
2009 Data	Male retirees	Female retirees
All retirees	3.7 years	1.7 years
Retirees under age 65 (“newer retirees”)	2.9 years	1.8 years
Assumption	3.0 years	3.0 years

While the age spread between husbands and wives for younger (newer) female retirees is similar to the age spread for the entire female retiree population, the age spread for male retirees is noticeably younger for newer retirees.

While the current 3-year age spread assumption for both male and female retirees is not unreasonable, Buck should consider a separate assumption for male and female retirees, and monitor any trend towards a smaller age spread among new retirees.



Alaska Residency

Since payment of the Alaska cost of living allowance is predicated on a benefit recipient’s residence in Alaska, this assumption is important as the Alaska COLA has considerable value.

	PERS Others	PERS Peace Officer/Fire.	TRS
Number of benefit recipient exposures	92,708	10,767	45,907
Number of recipients receiving Alaska COLA	56,298	6,475	25,509
Portion receiving Alaska COLA	60.7%	60.1%	55.6%
Reported by Buck	61%	59%	55%
Total benefit amount of all COLA eligible benefit recipient exposures (in thousands)	109,385	23,832	93,396
Total benefit amount of recipients receiving Alaska COLA (in thousands)	75,396	15,622	57,531
Portion receiving Alaska COLA	68.9%	65.5%	61.6%
Reported by Buck	69%	65%	61%

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

We matched the counts reported by Buck very closely and we agree with their recommended assumptions of 70% for PERS members and 60% for TRS members.

Number of Unused Sick Days (TRS only)

This assumption is used to estimate the amount of additional service credit TRS members will receive due to unused sick days at retirement. The current assumption is that a member's service will be increased by 2.73% (or 4.7 days for each year of service).

	Segal's Analysis	Reported by Buck
Total benefit amount for all retirees	\$ 74,700,118	\$ 74,700,118
Total sick leave benefit amount for all retirees	\$ 1,749,999	\$ 1,750,000
Portion receiving sick leave benefit	2.34%	2.34%

Our analysis matched Buck's calculations exactly and we agree with their recommendation to stay with the more conservative 2.73% assumption until more experience data can be gathered.

Part-time Service Earned During the Year

For those active members who are employed on a part-time basis, an assumption is made regarding what portion of a year of service they will accrued in each future valuation year. For PERS Others the assumption is 0.65 years and for TRS the assumption is 0.55 years. There is no assumption made for PERS Peace Officer/Firefighter with respect to part-time service earned.

	PERS Others	TRS
Average increase in service	0.64	0.58
Reported by Buck	0.66	0.61

We agree with Buck's recommendations to increase the assumption for TRS from 0.55 to 0.60 years and to keep the PERS Others assumption at 0.65 years.

Occupational versus Non-occupational Disability and Death

Due to different benefits that are payable to members who become disabled or die due to occupational causes (death only, in the case of TRS), an assumption is made as to the proportion of disabilities that occur for occupational reasons. While there is insufficient data available to analyze occupational versus non-occupational causes of death, there is data regarding the number of disabled members currently receiving occupational or non-occupational disability benefits. The proportion of disability benefit recipients that are from occupational causes can be used as a proxy for what portion of future disabilities will be occupational.

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	PERS Others	PERS Peace Officer/Fire.
Members receiving a non-occupational disability benefit	788	105
Member receiving an occupational disability benefit	836	187
Portion of disability benefits that are occupational	51.5%	64.0%
Reported by Buck	52%	64%

Our analysis matched Buck's calculations exactly and we have no issue with their recommendation to increase the assumption for PERS Others from 50% to 55% and to maintain the assumption for PERS Peace Officers/Firefighters at 75%. Both assumptions appear to be slightly conservative compared to an analysis of the data and we believe this is reasonable.

With the lack of data regarding deaths from active status due to occupational versus non-occupational reasons, it is within reason to assume that actual experience would mimic that of disabilities. Therefore, we agree with the recommendations relative to the PERS assumptions for the proportion of active deaths due to occupational reasons (i.e., 55% for Others and 75% for Peace Officers/Firefighters).

For TRS, the existing assumption was 0% of deaths are occupational, but for conservatism and consistency between the DCR and DB valuations, this assumption was increased to 15%. We agree that there should be consistency between the DCR and DB valuations. However, a 15% assumption for occupational deaths in a plan that covers primarily teachers is on the high-end relative to what we see from other teacher plans. As a result, this assumption may be a little too conservative.



ECONOMIC ASSUMPTIONS

The economic assumptions have a significant impact on the development of plan liabilities. Changes to these assumptions can substantially alter the results determined by the actuary. The goal of an experience study is to produce a consistent set of economic assumptions that appropriately reflect expected future economic trends.

The primary economic assumptions that affect the Plan's funding are:

- > Inflation;
- > Investment Rate of Return;
- > Salary Scale;
- > Payroll Growth Rate; and
- > Administration Expenses

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

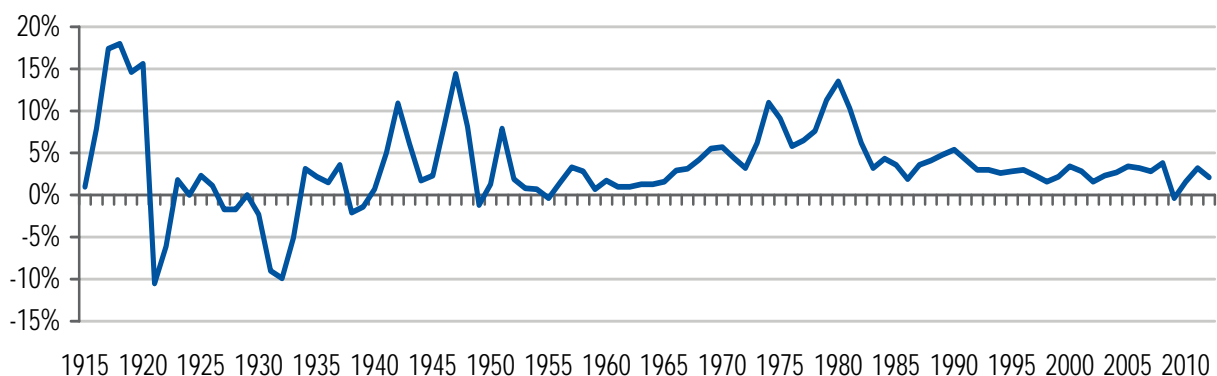
The Actuarial Standards Board (ASB) has adopted Actuarial Standard of Practice No. 27 (ASOP 27 - Selection of Economic Assumptions for Measuring Pension Obligations) to provide actuaries guidance in developing economic assumptions. A key feature of the ASB's guidance is the "building block" approach in developing economic assumptions.

The "building block" approach uses the actuary's best estimate for key components of economic assumptions. The actuary begins with a reasonable range of each component then selects a specific point within the range based on historical data, plan specific data and future economic environment.

The inflation component is included in all economic assumptions, and therefore is key to developing a consistent set of actuarial assumptions. The investment rate of return assumption includes an inflation component and a real rate of return component. The components of the salary increase assumption are inflation, productivity, and merit increases. The components of the payroll growth assumption include inflation and productivity.

Inflation

Inflation continues at relatively low levels from a historical perspective, as shown in the graph below.



In developing the recommendation for the assumed inflation component, actuarial standards of practice suggest the actuary review appropriate inflation data. This data may include consumer price indexes, the implicit price deflator, forecasts of inflation, and yields on government securities of various maturities. For this study, we referred to commonly referenced historical measures of inflation: the "Anchorage, AK" consumer price index and National Consumer Price Index for all urban consumers (CPI-U).

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

The table below shows that recent inflation experience (measured up through June 2009) was well below the longer-term average rate.

Average Annual Change	Anchorage, AK	CPI-U
Past 5 Years	2.51%	2.60%
Past 10 Years	2.45%	2.64%
Past 20 Years	2.70%	2.80%

The average annual rate of increase in the CPI-U in the 2000s has been at its lowest levels since the early 1960s. Regional inflation has been close to, but slightly less than, National CPI. Historical trend is a less important consideration for the assumed rate of inflation, but assists in determining the reasonable bounds of expected inflation.

Next, we would also consider the measure of future inflation expectation. An indication of future expectation is a market-based forecast. Treasury Inflation Protection Securities (TIPS) are government bonds, which, in addition to a fixed yield, add the actual percentage change in CPI to the principal value. Therefore, the spread between the TIPS and the Conventional Treasury note/bond of the same maturity is an indication of the market's forecast for inflation.

Because of the inflation protection, TIPS' yields are almost always considerably lower than those of regular Treasury securities of similar maturities. As of the end of May 2010 (around the time when the Buck study was being prepared), 30-year Treasuries yielded 2.39% more than 30-year TIPS. This means that for 30-year TIPS to match the return of the conventional 30-year Treasury for a buy-and-hold income investor, inflation would have to measure 2.39% per year over the next 30 years. The market's expectation of inflation alone is not a definitive basis for an inflation assumption, but is useful as one indicator of future trends.

Considering this information, we would have determined a reasonable range to be between 2.50% and 3.00%.

As a check of the validity of this reasonable range, we reference the *2010 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds (2010 OASDI Trustees Report)*. The range of inflation rates in this report was 1.80% for the low-cost projection, 2.80% for the intermediate projection, and 3.80% for the high-cost projection. The 2.80% assumptions used in the OASDI report falls within our established reasonable range.

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

Once the reasonable range is set, we determine the specific point in the range that is the best estimate of long-term future inflation rates. The current inflation assumption is 3.50% per annum. Buck's experience study report recommended a reasonable range between 3.00% and 3.50%, but did not offer a recommendation as to a specific assumption with that range. Based on all of the above information, we would have recommended that the assumption be lowered to 3.00%.

Investment Return

The investment rate of return is used to determine the present value of expected future plan payments. The existing assumption was 8.25%, net of all (i.e., investment and administrative) expenses.

The investment rate of return assumption is developed using the "building block" approach as outlined in ASOP 27. Under this approach, the investment rate of return assumption is made up of two components; the inflation component and the real rate of return component, with adjustment for investment expense and risk. The reasonable range of the real rate of return component is combined with the inflation assumption to determine a reasonable range of the investment return. The selection of an investment return assumption considers historical returns, capital market outlook and the Plan's portfolio mix.

In developing the real rate of return, we examined the capital market assumptions used by The Segal Group's investment consulting department, Segal Advisors. The assumptions for the asset classes and the portfolio's expected real return as of 2010 are shown below.

Asset Class	Real Return	Target Allocation	Weighted Average
Domestic Equities	5.75%	30%	1.73%
Global Equities (non-U.S.)	6.33%	22%	1.39%
Fixed Income	1.65%	20%	0.33%
Real Assets	4.50%	16%	0.72%
Private Equity	5.87%	7%	0.41%
Absolute Return	5.00%	5%	0.25%
Total		100%	4.83%

The real rate of return for the portfolio needs to be reduced to account for expenses. If administrative expenses are included as a component of the plan's normal cost, then the adjustment to the real rate of return needs to include only investment expenses. Since Buck does not include a provision for administrative expenses in normal cost, this adjustment should include both investment and administrative expenses.

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

The investment and administrative expenses as a percent of the average actuarial value of assets for the past four years are shown on the following table.

Year Ended June 30	Average Actuarial Value of Assets (000's)	Admin and Investment Expenses (000's)	
		Amount	Percent
2009	\$15,940,777	\$35,120	0.22%
2008	14,424,768	42,887	0.29%
2007	13,002,741	38,306	0.29%
2006	12,223,682	38,240	0.31%
Total	\$55,591,968	\$154,553	0.28%

The real rate of return assumption for the portfolio should also be adjusted to reflect potential risk of shortfalls in the return assumptions. The Plan's asset allocation determines this portfolio risk, since volatility varies by asset class.

The purpose of this risk adjustment is to increase the likelihood of achieving the expected investment return. The 4.83% expected real rate of return is the expected average arithmetic return and is expected to be met or exceeded 50% of the time. The risk adjustment is intended to increase this probability, which is consistent with our experience that retirement plan fiduciaries would generally prefer that returns exceed the assumed rate more often than not.

In our model, the confidence level represents the likelihood that the actual average return would be at least the assumed value over a 10-year period. For example, if our real rate of return assumption is set using a risk adjustment that produces a confidence level of 51%, then there would be a 51% chance that the average return over 10 years will be equal to or greater than the assumed value. The following table summarizes the components of the investment return assumption.

Assumption Component	Recommended Assumption
1. Inflation	3.00%
2. Portfolio Real Rate of Return	4.83%
3. Expenses	0.28%
4. Risk Adjustment	<u>0.05%</u> ⁴
5. Total [(1) + (2) - (3) - (4)]	7.50%
6. Confidence Level	51%

⁴ Based on an annual portfolio return standard deviation of 12.25%.

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Based on this analysis, we would have recommended lowering the investment return assumption from 8.25% to 7.50%.



Individual Salary Increases

The salary scale assumption is used to determine participants' projected benefits provided by the Plan. Generally, a participant's salary will change over the long term in accordance with inflation, productivity growth, and merit scale. The actuary should review available compensation data when selecting this assumption, including: plan sponsor's current compensation practices and any anticipated changes; historical compensation increases and practices of the plan sponsor and other sponsors in the same industry or geographic area; and historical national wage and productivity increases.

The best estimate salary scale is generally constructed using the "building block" approach recommended in ASOP 27, which combines best-estimate ranges for the components of salary scale: inflation, productivity and merit. The inflation and productivity components are combined to produce the assumed rate of wage inflation. This rate represents the "across the board" average annual increase in salaries shown in the experience data. The merit component includes the additional increases in salary due to performance, seniority, promotions, etc.

We evaluated the historical compensation data for the experience period based on age and service. A strong service-related trend occurs for the first several years of employment in all three participant groups. For PERS Others, the trend is strong during the first 5 years; beyond this point, experience seemed to be more or less tied to age, with a decreasing trend as age increases. For the PERS Peace Officer/Firefighter and TRS participant groups, the correlation between years of employment and salary increase were stronger than the correlation with age for all years of service. Therefore, we would have recommended the use of a select and ultimate salary scale assumption based on years of service in the select period and age-based ultimate rates for PERS Others, and service-based only tables for PERS Peace Officer/Firefighter and TRS.

The historical compensation data for the experience period (shown in the tables that follow) were adjusted by approximately 3% to account for actual inflation during the study period. Our recommended scale is based on estimates of real wage growth (productivity and merit) plus expected future inflation (using the building block approach).

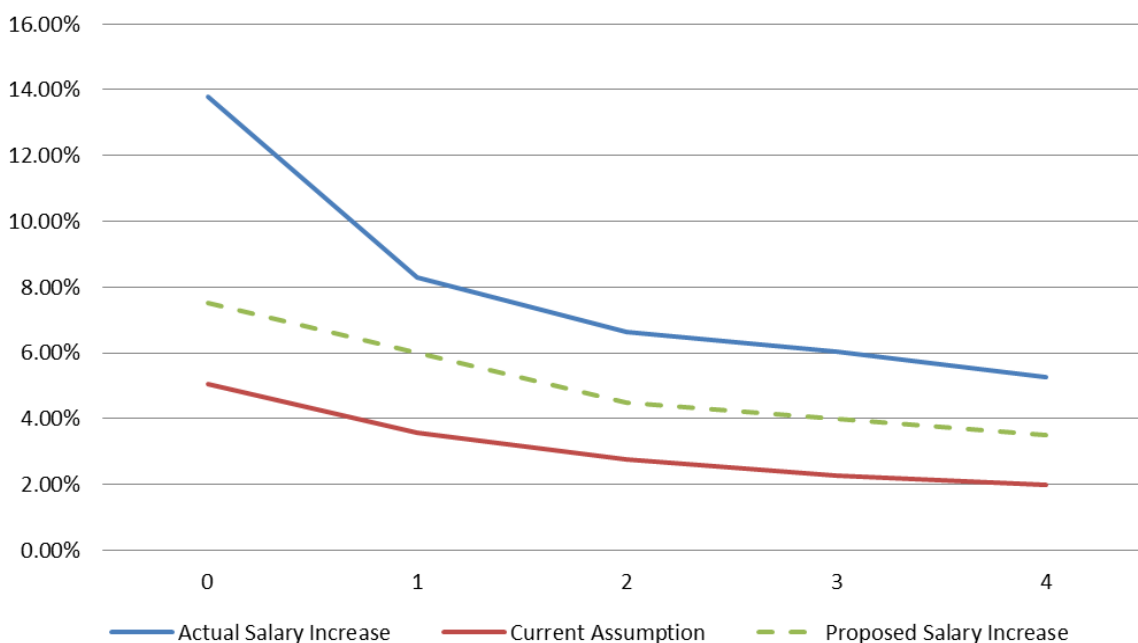
Alaska Retirement Systems

III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SALARY INCREASE EXPERIENCE — PERS Others

Service Related Rates; First Five years of Service

Service Range	Total Exposures	Actual Increase ⁵	Expected Increase ⁶	Proposed Increase ⁷	Proposed + Inflation ⁸
0 – 0.99	5,739	13.77%	5.06%	7.50%	10.50%
1 – 1.99	7,590	8.28%	3.58%	6.00%	9.00%
2 – 2.99	8,362	6.65%	2.77%	4.50%	7.50%
3 – 3.99	7,863	6.04%	2.25%	4.00%	7.00%
4 – 4.99	7,238	5.25%	1.99%	3.50%	6.50%
Total	36,792	7.49%	2.95%	4.87%	7.87%
Reported by Buck		8.90%	3.10%	3.60%	7.10%



⁵ Adjusted for actual average inflation of approximately 3% during the experience period.

⁶ Adjusted for assumed inflation of 3.5%.

⁷ Proposed salary scale table is based on completed years of service as of the valuation date and does not reflect underlying assumption for inflation.

⁸ Reflects Segal's proposed inflation assumption of 3% and Buck's assumption of 3.5%.

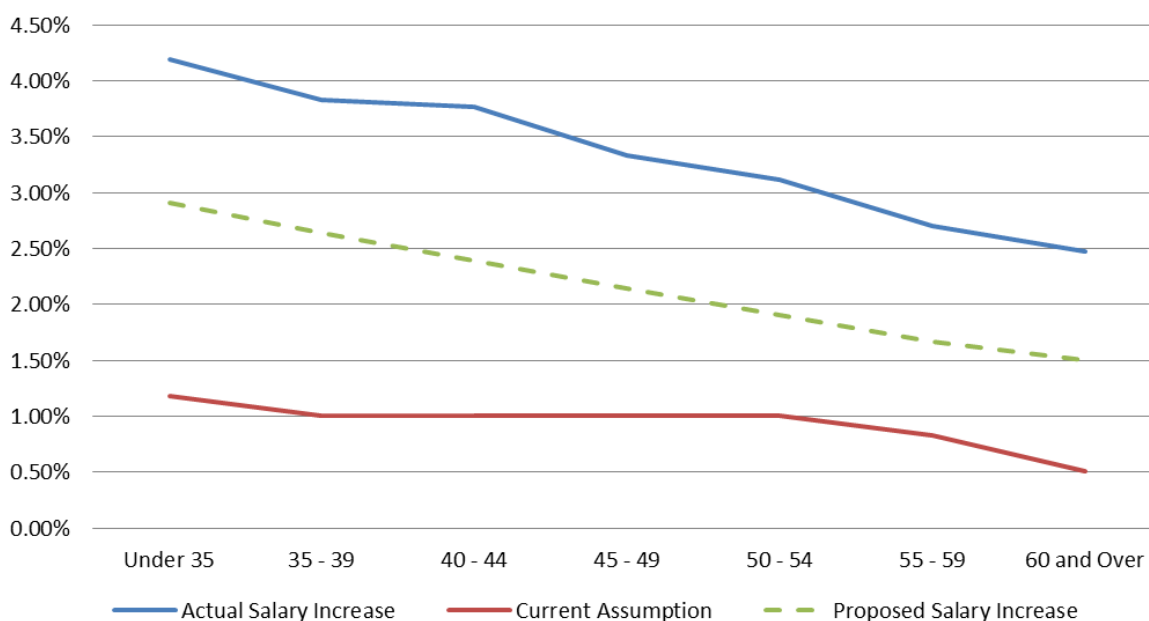
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SALARY INCREASE EXPERIENCE — PERS Others

Age Related Rates; Five or More Years of Service

Age Range	Total Exposures	Actual Increase ⁹	Expected Increase ¹⁰	Proposed Increase ¹¹	Proposed + Inflation ¹²
Under 35	3,620	4.20%	1.18%	2.90%	5.90%
35 – 39	5,309	3.83%	1.01%	2.64%	5.64%
40 – 44	8,827	3.77%	1.01%	2.39%	5.39%
45 – 49	14,555	3.34%	1.00%	2.14%	5.14%
50 – 54	17,394	3.12%	1.00%	1.90%	4.90%
55 – 59	10,983	2.70%	0.83%	1.66%	4.66%
60 and Over	5,178	2.47%	0.51%	1.50%	4.50%
Total	65,866	3.24%	0.94%	2.05%	5.05%
Reported by Buck		2.60%	1.00%	1.30%	4.80%



⁹ Adjusted for actual average inflation of approximately 3% during the experience period.

¹⁰ Adjusted for assumed inflation of 3.5%.

¹¹ Proposed salary scale table is based on age as of the valuation date and does not reflect underlying assumption for inflation.

¹² Reflects Segal's proposed inflation assumption of 3% and Buck's assumption of 3.5%.

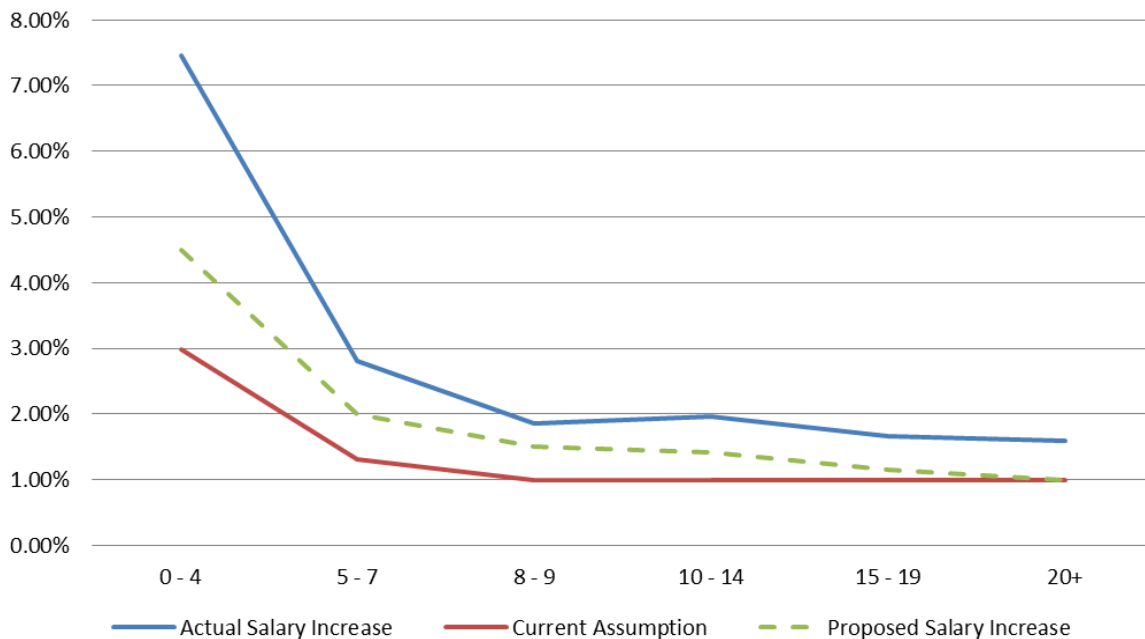
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SALARY INCREASE EXPERIENCE — PERS Peace Officer/Firefighter

Service Related Rates

Service Range	Total Exposures	Actual Increase ¹³	Expected Increase ¹⁴	Proposed Increase ¹⁵	Proposed + Inflation ¹⁶
0 – 4.99	2,908	7.46%	2.98%	4.50%	7.50%
5 – 7.99	1,833	2.81%	1.31%	2.00%	5.00%
8 – 9.99	973	1.85%	1.00%	1.50%	4.50%
10 – 14.99	1,952	1.96%	1.00%	1.41%	4.41%
15 – 19.99	1,301	1.66%	1.00%	1.16%	4.16%
20+	918	1.59%	1.00%	1.00%	4.00%
Total	9,885	3.43%	1.56%	2.24%	5.24%
Reported by Buck		3.70%	1.60%	1.70%	5.20%



¹³ Adjusted for actual average inflation of approximately 3% during the experience period.

¹⁴ Adjusted for assumed inflation of 3.5%.

¹⁵ Proposed salary scale table is based on completed years of service as of the valuation date and does not reflect underlying assumption for inflation.

¹⁶ Reflects Segal's proposed inflation assumption of 3% and Buck's assumption of 3.5%.

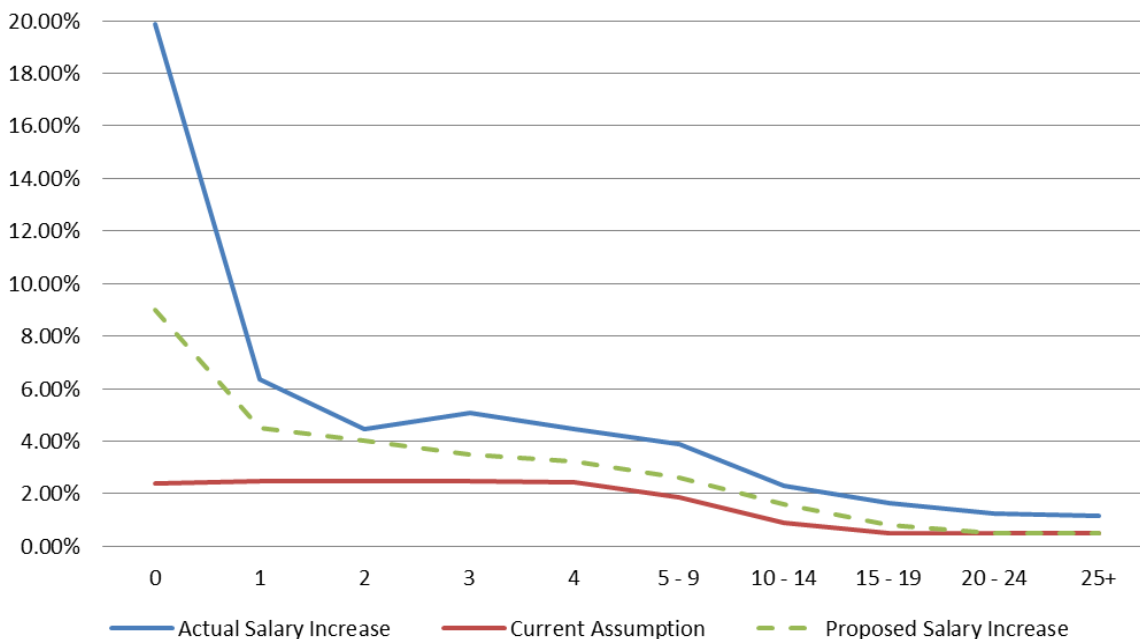
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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

SALARY INCREASE EXPERIENCE — TRS

Service Related Rates

Service Range	Total Exposures	Actual Increase ¹⁷	Expected Increase ¹⁸	Proposed Increase ¹⁹	Proposed + Inflation ²⁰
0 – 0.99	253	19.87%	2.40%	9.00%	12.00%
1 – 1.99	1,280	6.34%	2.49%	4.50%	7.50%
2 – 2.99	1,639	4.45%	2.49%	4.00%	7.00%
3 – 3.99	2,027	5.07%	2.47%	3.50%	6.50%
4 – 4.99	1,950	4.47%	2.45%	3.25%	6.25%
5 – 9.99	9,261	3.91%	1.84%	2.60%	5.60%
10 – 14.99	6,483	2.28%	0.90%	1.62%	4.62%
15 – 19.99	5,477	1.62%	0.50%	0.82%	3.82%
20 – 24.99	3,094	1.23%	0.50%	0.50%	3.50%
25+	1,989	1.16%	0.50%	0.50%	3.50%
Total	33,453	2.89%	1.25%	1.88%	4.88%
Reported by Buck		2.70%	1.40%	1.90%	5.40%



¹⁷ Adjusted for actual average inflation of approximately 3% during the experience period.

¹⁸ Adjusted for assumed inflation of 3.5%.

¹⁹ Proposed salary scale table is based on completed years of service as of the valuation date and does not reflect underlying assumption for inflation.

²⁰ Reflects Segal's proposed inflation assumption of 3% and Buck's assumption of 3.5%.

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

Payroll Growth

The payroll growth assumption represents the expected annual increase in total covered payroll from one year to the next. This assumption is used to determine the amortization of unfunded actuarial accrued liability (in the actuarially determined contribution) as a level percentage of payroll. The current assumption for payroll growth is 4% per year. To the extent that actual payroll increases were less than 4%, fewer dollars have gone toward paying off the unfunded liability than anticipated and future amortization payments are larger.

We match the 4-year average increase Buck calculations (5.0% for PERS and 3.8% for TRS) exactly. However, given the fact that we would have recommended a decrease in the inflation assumption from 3.5% to 3.0%, we would have recommended that the payroll growth assumption be lowered by 0.5% as well, from 4.0% to 3.5%.

Since existing law states that contribution rates will be paid for the members in both the defined benefit plan and the DCR plan, we agree with the recommendation to utilize a payroll growth assumption. However, we recommend that consideration be given to adopting a level dollar approach for amortizing the unfunded liability for the two “closed group” defined benefit plans.

General Comments about the Economic Assumptions

Some additional observations surrounding the economic assumptions are:

- Buck states on page 47 of their report that “A change in [the inflation assumption] alone has no material impact on the funding...” However, some cost of living allowances are tied to CPI and, therefore, the inflation assumption would have a direct impact on the liability and normal cost calculations for benefits that receive such COLAs.
- In the economic assumptions section of the report, the inflation assumption should be analyzed first, followed by the investment return and other related assumptions. The inflation assumption is the base component of all the economic assumptions under the “building block” approach, and therefore we believe it makes sense to discuss and establish a recommendation for this assumption prior to the other economic assumptions.
- Actual salary increase experience was significantly greater than expected for all groups in all years (except fiscal 2007 for TRS). In the valuations during the study period, there were consistent experience losses due to salaries (again, except for fiscal 2007 for TRS). We would have recommended that the assumption be brought at least half way up to actual increases over the period; Buck’s recommendations were for relatively minor increases. In the two valuations subsequent to the assumption change, the net impact of salary experience has been actuarial losses.
- In 2010/2011, many funds were lowering their investment return assumptions to below



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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

8%. As it stands in 2013, expectations are slightly better than they were three years ago. Using capital market expectations from today, Segal would likely recommend an investment return assumption of 7.75% to 8%.

POSTEMPLOYMENT HEALTHCARE ASSUMPTIONS

Base Claim Cost Rate Derivation

Base claim cost rates are the initial annual benefit costs for estimating the future health care obligations. The accuracy of the measurement model depends in large part on its ability to forecast annual claims costs for the plan. In the actuarial development of health care rates, plan experience is generally considered the best predictor of future claims experience, preferable to sole reliance on normative claims databases or other measures. Therefore, preferred methods involve development of annual per capita health care rates from the claim experience of the retiree group benefits plan. Buck utilized this preferred method.

We agree with their use of the “trend and blend” approach to claims development, whereby separate claims cost rates are developed for each of the three prior years, each rate is adjusted to the valuation year, and then the three rates are blended.

Buck appropriately developed claim cost rates separately for medical and prescription drug benefits, further distinguished by Medicare status (non-Medicare, Medicare A and B, Medicare B only). Since the experience study was performed, Buck has been provided with additional information regarding members with Medicare Part B only, so they have been able to refine their estimate of the claims for that group.

Claims experience was not provided separately by plan (TRS, PERS, etc.), and therefore claim cost rates were not developed separately by plan. If it were possible to develop such claims costs separately by plan, the resulting per capita claims costs might be different between the plans, but the total projected health care costs across all plans would likely remain essentially unchanged.

Using the raw data provided, we matched the initial per capita claims costs rates for all benefit types (pre-Medicare medical, Medicare A&B medical, Medicare B only medical, and prescription drug). For the June 30, 2011 valuation, Buck followed their prior recommendation and changed from weighting each year’s data in the 5-year experience period at 20% to a 3-year experience period at 33-1/3%. We would agree if Buck were to recommend an additional change in the weighting of experience periods from a straight average to a greater emphasis on more recent years.

Health Care Trend Rate

Trend is a measure of the rate of change, over time, of the per capita health care rates. It includes factors such as medical inflation, utilization, plan design, and technology improvements.

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

Buck utilizes the Society of Actuaries (SOA) LongTerm Healthcare Cost Trend Resource Model to develop health care trend rates. This model provides a benchmark projection of medical cost increases when estimating retiree health benefits liabilities and premium increases for the next 5 to 75 years. The model provides for plan-specific inputs. We agree with the use of the model, but would recommend that the valuation reports include the sample report language provided by the SOA, which explicitly details the differences between the baseline assumptions and the input variables. Without this information, we were unable to independently assess the appropriateness of the input variables used. However, the trend rates developed are reasonable, and produced results consistent with trend rates used for other similar plans.



Morbidity

Morbidity or aging factors are used to estimate variation in per capita health care rates by age for the benefits being modeled. The aging factors used by Buck are reasonable and appropriate for the valuation.

While it is appropriate to develop the relationship between the rates at various ages based on normative databases, we agree with Buck's intention to use the expanded data available from the new administrator to assess these factors using experience specific to the State of Alaska.

Retiree-Paid Premiums

Report descriptions indicate that Buck is using retiree premiums based on actual dependent coverage for current retirees, and for future retirees they are using a composite rate (a weighted blend of retiree-only and retiree-plus-dependent(s) rates). However, it appears that they actually used the retiree-only rate for those projected to have single coverage and two times the single rate for those projected to have a covered spouse. We believe that valuing the individual rates in this manner is the preferred approach. While this approach does not account for the additional contributions from those covering children, the overall difference would be minimal.

Participation Rates

The participation assumption is used to project what percentage of members elect retiree health coverage upon retirement.

The current assumption is that 100% of those eligible for System-paid coverage will participate, while only 10% of non-System-paid retirees will participate. It is also assumed that non-System-paid retirees who waived coverage will resume participation at age 60 when benefits are System-paid.

While the Actuarial Experience Study did not detail any analysis, our review of the enrollment experience for 2008 and 2009 supports Buck's assumed participation rates.

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

TRS	Non-System-Paid				System-Paid			
	Receiving Pension & Health	Receiving Pension Only	Total	Percent Enrolled	Receiving Pension & Health	Receiving Pension Only	Total	Percent Enrolled
2008	3	36	39	7.7%	9,160	51	9,211	99.4%
2009	2	32	34	5.9%	9,370	28	9,398	99.7%
Total	5	68	73	6.8%	18,530	79	18,609	99.6%
Assumption				10.0%				100.0%

PERS	Non-System-Paid				System-Paid			
	Receiving Pension & Health	Receiving Pension Only	Total	Percent Enrolled	Receiving Pension & Health	Receiving Pension Only	Total	Percent Enrolled
2008	27	287	314	8.6%	20,857	270	21,127	98.7%
2009	17	275	292	5.8%	21,669	330	21,999	98.5%
Total	44	562	606	7.3%	42,526	600	43,126	98.6%
Assumption				10.0%				100.0%

We recommend that Buck continue to monitor the non-System-paid participation rates.



ANALYSIS OF DCR EXPERIENCE STUDY RECOMMENDATIONS

We have also reviewed the recommendations outlined by Buck in their letter dated March 9, 2011 with respect to proposed changes to assumptions for the PERS and TRS defined contribution plans. The letter outlines recommended changes to certain demographic and economic assumptions.

Demographic and Economic Assumptions

In general, Buck recommended that since there is not a large body of experience to study for these groups, that changes be made that mimic the recommendations for the respective defined benefit plans. We agree that this is the correct approach for this situation since the characteristics of members in the DCR plans are highly likely to match that of members in the DB plans. In this regard, we believe it is reasonable to recommend the same assumption for mortality, disability, percent married, spouse age difference, part time service, and occupational versus non-occupational death and disability benefits.

For the retirement assumption, Buck recommends no change to the rates as there is no experience to analyze. We agree with Buck, but find the recommendation inconsistent with their recommendations to increase the retirement ages for the PERS and TRS plans. For example, for the TRS DB plan, the retirement rates include assumptions that teachers could work as late as age 85 while for the DCR plan the retirement assumption stops at age 70.



We believe that to the extent that plan-managed assets are invested in a substantially similar way

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III (B). Experience Study and Assumptions: Replication of Experience Study and Assessment of Assumptions

to the DB plan assets, the investment return assumption (including the underlying rate of inflation) should be the same. Also, since there was not much actual experience relative to individual salary increases, we believe it would be reasonable to recommend the same salary increase assumption as was recommended for the DB plans.

In future experience studies, since new members are entering the DCR membership only, we would recommend that some assumptions be studied with exposures from the DB and DCR populations combined. For example, in order to get a clear picture of the productivity and merit components of individual salary increases across all ages and lengths of service, Buck should study PERS Others, PERS Peace Officers/Firefighters and TRS membership in the aggregate. As more experience emerges, we believe this approach would be reasonable for assumptions such as individual salary increases, payroll growth, mortality, incidence of disability (as well as type), percent married, and spouse age difference



Postemployment Healthcare Assumptions

Base Claim Cost Rate Derivation and Health Trend

As there was no claims experience that could be used to develop the base claim rate, the Experience Analysis indicates that healthcare costs and trends will be updated to be consistent with the PERS and TRS DB plans.

The DCR base claims rates were developed by applying factors to reduce the base claims rates used for the TRS, PERS, and JRS plans to account for anticipated differences in plan design. The Actuarial Experience Analysis does not address how these factors were developed, and the reports do not include a description of the “substantive plan” that is being valued. We understand that no formal DCR plan of benefits had been adopted; accounting standards indicate that if there is no comprehensive plan document, other information should be considered when determining the benefits to be valued.

In reviewing the differences between the plan of benefits described in the “Retiree Insurance Information Booklet (May 2003)” and the “PERS and TRS Defined Contribution Retirement Plan - Plan Summary (January 1, 2012)”, we arrived at a similar factor for the medical per capita cost and a smaller factor (bigger reduction in costs) for the prescription drug per capita cost. This would indicate that the per capita prescription drug cost may be conservative, but we believe that both the medical and the prescription drug per capita claims costs are reasonable. Both factors should continue to be re-evaluated as the plan designs evolve, until claims experience becomes available for the DCR plan.



Retiree-Paid Premiums and Participation Rates

Under the DCR plan, retirees under age 65 pay the full plan premium (no subsidy), and retirees age 65 and over will pay 10-30% of the full premium depending on service. Buck’s approach of

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applying the retiree's required percentage to the age-graded average per capita cost (instead of a single average premium) is appropriate, since it takes into account anticipated changes to the covered retiree population (and resulting changes in premiums) over time. We also find it appropriate to set service-based participation rates for those who are Medicare-eligible. The rates are consistent with those generally seen for participants who pay a given percentage of the full premium. Actual experience should be monitored as it develops.



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III (C). Experience Study and Assumptions: Format of Report

The format of the experience study report is generally acceptable and provides the majority of information that should be communicated in this type of study. We believe the report format could be improved by making the following changes or additions:



- Include the number of exposures in the report tables. Including exposures will allow the reader to assess the current and proposed rates.
- Show the total of male and female for each assumption. Showing totals will provide additional information to the reader.
- In the economic assumptions section of the report, the inflation assumption should be analyzed first, followed by the investment return and other related assumptions. The inflation assumption is the base component of all the economic assumptions under the “building block” approach, and therefore we believe it makes sense to discuss and establish a recommendation for this assumption prior to the other economic assumptions.

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IV (A). Actuarial Valuations: Data

Segal requested and was provided with summaries of the data assumptions used by Buck to process the data into a valuation-ready format for the JRS and TRS defined benefit plans. In general, the data assumptions described are reasonable and consistent with similar assumptions used for valuations performed by Segal.

We received census data for all plans within the scope of this study from Buck. These files consisted of the “scrubbed” data files that were used to perform the actuarial valuations. The head counts from each status matched those reported in the valuation reports. Typically, when aspects of the raw census data are incomplete or missing, the actuary relies on a series of assumptions and procedures to make the data whole. We assume that Buck relies on assumptions for filling in missing data for the ARMB plans, but a description of the assumptions is not shown in the valuation reports; we recommend that Buck add a brief paragraph in the assumptions and methods section of their reports that outlines their adjustments for missing data.



In any event, we believe the data files provided are comprehensive enough to perform actuarial valuations and develop conclusions from the results.

We noted that the “Tier” designator within plans and the Plan designator (between PERS/TRS versus DCR) are sometimes inconsistent with the date of hire. We do not know whether Buck resolved this inconsistency with those who provided the census data. The valuations used Tier and Plan designators, not date of hire, to determine a participant’s plan of benefits.



The data included a field that indicates whether those with retiree health coverage were also covering a spouse. For JRS, the code indicated that most surviving spouses receiving retiree health coverage were also covering a dependent spouse, so total retiree health liabilities included liability for a dependent spouse of a surviving spouse. According to Buck, this was remedied in the 2012 valuation data.

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

PERS

Comparison of Valuation Results

In replicating the results of the PERS June 30, 2011 valuation, we found that overall, Buck has a sound valuation process. We successfully matched all valuation statistics and liabilities for PERS within a tolerable range.

PERS (June 30, 2011)	Buck	Segal	Ratio of Segal/Buck
Members			
Active members	24,393	24,393	100.0%
Average age	49.22	49.22	
Average credited service	12.60	12.60	
Average entry age	36.62	36.58	
Average annual earnings	\$63,201	\$63,201	
Terminated vested members	6,414	6,414	100.0%
Average age	50.29	50.30	
Average monthly pension	\$821	\$822	
Number nonvested with account balances	14,028	14,028	
Average account balance	\$5,074	\$5,074	
Retirees, disableds, beneficiaries	27,359	27,359	100.0%
Average age	67.05	67.05	
Average monthly pension	\$1,662	\$1,662	
Accrued Liability (\$000s)			
Active members			
Pension	\$4,261,530	\$4,250,420	99.7%
Healthcare, net of Part D subsidy	\$3,008,658	\$2,951,746	98.1%
Terminated members			
Pension	\$545,950	\$559,324	102.4%
Healthcare, net of Part D subsidy	\$927,093	\$914,417	98.6%
Retirees, disableds, beneficiaries			
Pension	\$6,111,567	\$6,148,332	100.6%
Healthcare, net of Part D subsidy	\$3,885,752	\$3,853,675	99.2%
Total Accrued Liability	\$18,740,550	\$18,677,914	99.7%
Assets and Funding (\$000s)			
Actuarial Value of Assets	\$11,813,774	\$11,813,774	100.0%
Unfunded Accrued Liability	\$6,926,776	\$6,864,140	99.1%
Funded Ratio	63.0%	63.3%	100.5%

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

Normal Cost			
Pension	\$172,968	\$174,744	102.7%
Healthcare, net of Part D subsidy	<u>\$115,940</u>	<u>\$108,828</u>	93.9%
Total	\$288,908	\$283,572	98.2%

Further, Segal reviewed the calculations for the actuarial gain and loss analysis and actuarial value of assets, and found that these calculations were performed correctly.

All data, assumptions, methods and plan provisions used to perform this actuarial valuation are described in Buck's report, *State of Alaska Public Employees' Retirement System Actuarial Valuation Report as of June 30, 2011*.

Comments

A review of test lives indicate that the percent married assumption was applied to current disableds and retirees, instead of using current marital status.

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

TRS

Comparison of Valuation Results

In replicating the results of the TRS June 30, 2011 valuation, we found that overall, Buck has a sound valuation process. We successfully matched all valuation statistics and liabilities for TRS within a tolerable range.

TRS (June 30, 2011)	Buck	Segal	Ratio of Segal/Buck
Members			
Active members	7,303	7,303	100.0%
Average age	48.50	48.50	
Average credited service	14.52	14.52	
Average entry age	33.98	33.50	
Average annual earnings	\$74,648	\$74,648	
Terminated vested members	852	852	100.0%
Average age	49.75	49.75	
Average monthly pension	\$1,184	\$1,183	
Number nonvested with account balances	2,675	2,675	
Average account balance	\$16,274	\$16,274	
Retirees, disableds, beneficiaries	11,016	11,016	100.0%
Average age	67.40	67.40	
Average monthly pension	\$2,729	\$2,729	
Accrued Liability (\$000s)			
Active members			
Pension	\$1,844,069	\$1,838,139	99.7%
Healthcare, net of Part D subsidy	\$1,053,127	\$1,065,282	101.2%
Terminated members			
Pension	\$139,111	\$139,215	100.1%
Healthcare, net of Part D subsidy	\$158,446	\$155,060	97.9%
Retirees, disableds, beneficiaries			
Pension	\$4,212,924	\$4,199,764	99.7%
Healthcare, net of Part D subsidy	\$1,721,118	\$1,696,550	98.6%
Total Accrued Liability	\$9,128,795	\$9,094,010	99.6%
Assets and Funding (\$000s)			
Actuarial Value of Assets	\$4,937,937	\$4,937,937	100.0%
Unfunded Accrued Liability	\$4,190,858	\$4,156,073	99.2%
Funded Ratio	54.1%	54.3%	100.4%

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

Normal Cost			
Pension	\$69,548	\$70,392	101.2%
Healthcare, net of Part D subsidy	<u>\$28,308</u>	<u>\$28,332</u>	100.1%
Total	\$97,856	\$98,724	100.9%

Further, Segal reviewed the calculations for the actuarial gain and loss analysis and actuarial value of assets, and found that these calculations were performed correctly.

All data, assumptions, methods and plan provisions used to perform this actuarial valuation are described in Buck's report, *State of Alaska Teachers' Retirement System Actuarial Valuation Report as of June 30, 2011*.

Comments

For those who terminate due to non-occupational death, retiree health benefits (but not expenses) were reduced by 10%. Buck informed us that this is due to an assumption that 10% are assumed to withdraw their contributions. However, this assumption was not applied to pension benefits, nor to those who terminate due to occupational death.

A review of test lives indicate that the percent married assumption was applied to current non-occupational disableds, instead of using current marital status as was done for other retirees.



Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

DCR

Comparison of Valuation Results

In replicating the results of the DCR June 30, 2011 valuations, we found that overall, Buck has a sound valuation process. We successfully matched all valuation statistics and liabilities for the DCR within a tolerable range.

DCR (June 30, 2011)	Buck	Segal	Ratio of Segal/Buck
PERS Members			
Active members	10,965	10,965	100.0%
Average age	38.76	38.76	
Average credited service	2.02	1.98	
Average entry age	36.74	36.75	
Average annual earnings	\$47,796	\$47,796	
Terminated members	4	4	100.0%
Retirees, disableds, beneficiaries	1	1	100.0%
Average age	N/A	N/A	
Average monthly benefits	N/A	N/A	
PERS Accrued Liability (\$000s)			
Active members			
Occupational Death and Disability	\$1,721	\$1,728	100.4%
Healthcare, net of Part D subsidy	\$11,302	\$11,611	102.7%
Retirees, disableds, beneficiaries			
Occupational Death and Disability	\$228	\$228	100.0%
Healthcare, net of Part D subsidy	___\$0	___\$0	
PERS Total Accrued Liability	\$13,251	\$13,657	102.4%
PERS Assets and Funding (\$000s)			
Actuarial Value of Assets	\$19,058	\$19,058	100.0%
Unfunded Accrued Liability	(\$5,807)	(\$5,401)	93.0%
Funded Ratio	143.8%	139.5%	97.0%
Total Normal Cost			
Occupational Death and Disability	\$1,981	\$1,924	97.1%
Healthcare, net of Part D subsidy	<u>\$2,784</u>	<u>\$2,819</u>	101.3%
Total	\$4,765	\$4,743	99.5%

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

TRS Members			
Active members	2,708	2,708	100.0%
Average age	37.25	37.25	
Average credited service	2.62	2.59	
Average entry age	34.63	34.63	
Average annual earnings	\$55,860	\$55,860	
Terminated members	24	24	100.0%
Retirees, disableds, beneficiaries	0	0	100.0%
Average age	N/A	N/A	
Average monthly benefits	N/A	N/A	
TRS Accrued Liability (\$000s)			
Active members			
Occupational Death and Disability	\$57	\$56	98.2%
Healthcare, net of Part D subsidy	\$3,801	\$3,827	100.7%
Retirees, disableds, beneficiaries			
Occupational Death and Disability	\$0	\$0	
Healthcare, net of Part D subsidy	<u>\$0</u>	<u>\$0</u>	
TRS Total Accrued Liability	\$3,858	\$3,883	100.6%
TRS Assets and Funding (\$000s)			
Actuarial Value of Assets	\$7,566	\$7,566	100.0%
Unfunded Accrued Liability	(\$3,708)	(\$3,683)	99.3%
Funded Ratio	196.1%	194.8%	99.4%
Total Normal Cost			
Occupational Death and Disability	\$80	\$80	100.0%
Healthcare, net of Part D subsidy	<u>\$867</u>	<u>\$866</u>	99.9%
Total	\$947	\$946	99.9%

Further, Segal reviewed the calculations for the actuarial gain and loss analysis and actuarial value of assets, and found that these calculations were performed correctly.

All data, assumptions, methods and plan provisions used to perform these actuarial valuations are described in Buck's reports, *State of Alaska Public Employees' Retirement System Defined Contribution Retirement Plan For Occupational Death and Disability And Retiree Medical Benefits Actuarial Valuation Report as of June 30, 2011* and *State of Alaska Teachers' Retirement System Defined Contribution Retirement Plan For Occupational Death and Disability And Retiree Medical Benefits Actuarial Valuation Report as of June 30, 2011*.

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

Comments

The full plan premiums (per capita costs) used to determine the retiree rates do not take into account the plan's anticipated Medicare Part D reimbursements. If these reimbursements are factored into the premium rates charged to retirees, then the projected retiree contributions would be lower and the projected retiree health obligation would be higher.



Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

JRS

Comparison of Valuation Results

In replicating the results of the JRS June 30, 2010 valuation, we found that overall, Buck has a sound valuation process. We successfully matched all valuation statistics and liabilities for the JRS within a tolerable range.

JRS (June 30, 2010)	Buck	Segal	Ratio of Segal/Buck
Members			
Active members	72	72	100.0%
Average age	56.58	56.58	
Average credited service	9.20	9.03	
Average entry age	47.38	48.38	
Average annual earnings	\$167,813	\$167,813	
Terminated vested members	4	4	100.0%
Average age	57.53	57.53	
Average monthly pension	\$6,823	\$6,823	
Number nonvested with account balances	0	0	
Average account balance	\$0	\$0	
Retirees, disableds, beneficiaries	99	99	100.0%
Average age	71.42	71.42	
Average monthly pension	\$7,484	\$7,482	
Accrued Liability			
Active members			
Pension	\$44,680,046	\$44,065,684	98.6%
Healthcare, net of Part D subsidy	\$5,673,507	\$5,656,446	99.7%
Terminated members			
Pension	\$5,193,610	\$5,244,665	101.0%
Healthcare, net of Part D subsidy	\$867,200	\$850,807	98.1%
Retirees, disableds, beneficiaries			
Pension	\$114,650,119	\$113,945,771	99.4%
Healthcare, net of Part D subsidy	\$13,763,624	\$13,719,027	99.7%
Total Accrued Liability	\$184,828,106	\$183,482,400	99.3%
Assets and Funding			
Actuarial Value of Assets	\$134,694,195	\$134,694,195	100.0%
Unfunded Accrued Liability	\$50,133,911	48,788,205	97.3%
Funded Ratio	72.9%	73.4%	100.7%

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

Normal Cost			
Pension	\$4,885,249	\$5,118,949	104.8%
Healthcare, net of Part D subsidy	<u>\$661,591</u>	<u>\$715,706</u>	108.2%
Total	\$5,546,840	\$5,834,655	105.2%

Further, Segal reviewed the calculations for the actuarial gain and loss analysis and actuarial value of assets, and found that these calculations were performed correctly.

All data, assumptions, methods and plan provisions used to perform this actuarial valuation are described in Buck's report, *State of Alaska Judicial Retirement System Actuarial Valuation Report as of June 30, 2010*.

Comments

The data included a field that indicates whether those with retiree health coverage were also covering a spouse. For JRS, the code indicated that most surviving spouses receiving retiree health coverage were also covering a dependent spouse, so total retiree health liabilities included liability for a dependent spouse of a surviving spouse. According to Buck, this was remedied in the 2012 valuation data.

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

NGNMRS

Comparison of Valuation Results

In replicating the results of the NGNMRS June 30, 2010 valuation, we found that overall, Buck has a sound valuation process. We successfully matched all valuation statistics and liabilities for the NGNMRS within a tolerable range.

NGNMRS (June 30, 2010)	Buck	Segal	Ratio of Segal/Buck
Members			
Active members	4,085	4,085	100.0%
Average age	33.99	33.99	
Average total military service	12.14	12.13	
Terminated vested members	1,251	1,251	100.0%
Average age	54.78	54.78	
Average total military service	25.61	25.61	
Retirees, disableds, beneficiaries	547	547	100.0%
Average age	58.75	58.76	
Average years remaining	11.61	11.85	
Accrued Liability			
Active members	\$10,846,367	\$10,829,128	99.8%
Terminated members	\$14,705,434	\$14,622,862	99.4%
Retirees, disableds, beneficiaries	<u>\$4,482,606</u>	<u>\$4,481,659</u>	100.0%
Total Accrued Liability	\$30,034,407	29,933,649	99.7%
Assets and Funding			
Actuarial Value of Assets	\$32,000,585	\$32,000,585	100.0%
Unfunded Accrued Liability	(\$1,966,178)	(\$2,066,936)	105.1%
Funded Ratio	106.5%	106.9%	100.4%
Normal Cost, including expense load	\$739,097	\$780,905	105.7%

Further, Segal reviewed the calculations for the actuarial gain and loss analysis and actuarial value of assets, and found that these calculations were performed correctly.

All data, assumptions, methods and plan provisions used to perform this actuarial valuation are described in Buck's report, *State of Alaska National Guard and Naval Militia Retirement System Actuarial Valuation Report as of June 30, 2010*.

Alaska Retirement Systems

IV (B). Actuarial Valuations: Replication of Valuations

OVERALL COMMENTS

Application of Decrements

When applying the decrement rates, the service used to trigger certain events seems to be inconsistent between decrements. For example, the termination rates should stop when retirement rates start. However, it appears from some of the test lives provided that that the service used to determine whether someone is eligible for retirement is sometimes inconsistent with the service used to “turn off” the termination rates. While this inconsistency can have a noticeable effect on the liability of an individual, the overall effect on the valuations is not material.

Healthcare Retiree Premiums

Report descriptions indicate that Buck is using retiree premiums based on actual dependent coverage for current retirees, and for future retirees they are using a composite rate (a weighted blend of retiree-only and retiree-plus-dependent(s) rates). However, it appears that they actually used the retiree-only rate for those projected to have single coverage and two times the single rate for those projected to have a covered spouse. We believe that valuing the individual rates in this manner is the preferred approach.



Alaska Retirement Systems

IV (C). Actuarial Valuations: Assessment of Conclusions

Based on our replication valuations, we believe that, overall, the results are reasonable, consistent, and accurate. We believe the valuation conclusions accurately portray the actuarial status of the systems and accurately generate the required contributions rates. We offer comments for improvement throughout this report.

Alaska Retirement Systems

IV (D). Actuarial Valuations: Review of Information for Financial Reporting Purposes

For financial reporting purposes, GASB requires that two schedules be included in the footnotes to the financial statements. The first schedule is the "Schedule of Funding Progress," which includes a short history of the Accrued Liability, Actuarial Value of Assets, Unfunded Actuarial Obligation, Funded Ratio, Covered Payroll, and the Unfunded Accrued Liability, Funded Ratio, Member Payroll, and Unfunded Accrued Liability as a Percentage of Member Payroll. The second required schedule is the "Schedule of Employer Contributions," which shows a short history comparing the actual employer contributions made for a given fiscal year to the Annual Required Contribution (ARC) for that year. Typically, the ARC under GASB rules is an amount equal to the Normal Cost for the year, plus the amortization of Unfunded Actuarial Obligation over a period not to exceed 30 years. The Unfunded Accrued Liability for this purpose can be either positive (i.e., when the Accrued Liability exceeds the Actuarial Value of Assets) or negative (i.e., when the Actuarial Value of Assets exceeds the Accrued Liability). There is flexibility in the method for determining the amortization component. For example, it can be computed either on a level dollar basis or as a level percent of payroll.

Both of the required schedules appear in the valuation reports, are consistent with the GASB requirements, and appropriately reflect the information required to be disclosed.

In addition to the two schedules required by GASB standards, we commonly see two additional tables in the financial reporting section of valuation reports. First is a table that outlines the actuarial methods and assumptions applicable to the amortization component of the ARC. The other is a "Solvency Test" that compares components of the Accrued Liability (typically, active member contributions, the liability of inactive members, and the amount of the employer-financed portion of active members) to the Actuarial Value of Assets, showing the percentage of each component that is covered. These tables are in the valuation reports and are appropriate.

Alaska Retirement Systems

IV (E). Actuarial Valuations: Format of Reports

Buck provides ARMB with comprehensive actuarial valuation reports that contain a summary of the data, the actuarial funding results, development of the actuarial value of assets, a reconciliation of the actuarial gains/losses, accounting information, as well as various projections of contribution rates and funding ratios. These reports generally include enough information for an individual to gain a clear understanding of the financial picture of the Plans. Overall, all of the valuation reports communicate results with clarity, are complete, and follow the required actuarial standards of practice for actuarial communications.

We offer the following recommendations for adding useful information or improving the clarity of these reports.



Public Employees' Retirement System (June 30, 2011)

Page 9: As in noted in the table, the rates are based upon total salaries for DB and DC members, combined. "Normal Cost Rate Net of Member Contributions" is determined as a percent of payroll that includes DCR members (as required by law.) It may be informational to show the DB and the DCR payrolls separately.

Page 9: The contribution rates for the DCR employers are noted, but the mechanism or calculations that determine these amounts are not discussed in detail. We recommend a brief description of this mechanism in this section or in the Summary of Plan Provisions.

Page 12: Maturity Ratio is shown, but no definition is provided. We recommend that the definition be included in this section.

Page 27: Relative to the "Actuarial Gain/(Loss) for FY11," it is unclear how the total gain/(loss) for 2011 is allocated between Peace Officer/Firefighters (page 19) and Others (page 22) for both Pension or Healthcare. If the amounts are allocated by the UAL as in past years, it should be noted. If the amounts are calculated independently, those calculations should be included in the report.

Page 34: Liquidity Factor is shown, but no definition is provided. We recommend that the definition be included in this section and that commentary be added about the potential impact of this figure on the Plan. Information about the Liquidity Factor trend would also be useful.

Page 37: Only seven years of historical information are shown in the "Historical Asset Rate of Return" table. It may be useful to show more years of data in this schedule. Ten years are shown in the "History of UAAL and Funded Ratio" on page 31.

Page 44: "Asset Valuation Method" should mention the 80%/120% market value corridor that is part of the method.

Pages 45 – 47: We recommend that the interest rates be included. For example, on page 47

Alaska Retirement Systems

IV (E). Actuarial Valuations: Format of Reports

there is a statement that the healthcare liabilities are calculated using the funding assumptions. The interest assumption would be informational.

Page 49: Projections are shown under the “Best Case”, “Optimistic” and “Pessimistic” asset return scenarios. All scenarios assume a 1% increase in total active member population. It may be more appropriate to assume a 0% increase for the “Best Case” scenario, 1% increase for the “Optimistic” scenario, and 1% decrease for the “Pessimistic” scenario.

Page 64-65: For the age and service distributions, it may be useful to add a table that combines the data in “Annual Earnings by Age” and “Annual Earnings by Credited Service” into a single table similar to “Years of Credited Service by Age”.

Page 101: For future retirees projected to pay a retired member contribution, the description says that Buck used a composite rate (a weighted blend of retiree-only and retiree-plus-dependent(s) rates), but individual rates were valued instead.

Page 101: Healthcare Participation correctly describes the assumption regarding the percentage of retirees assumed to elect coverage upon retirement. However, the report should also indicate that 100% of those who retired prior to age 60 and declined coverage are assumed to re-enroll at age 60.

Teachers’ Retirement System (June 30, 2011)

Page 9: As in noted in the table, the rates are based upon total salaries for DB and DC members, combined. “Normal Cost Rate Net of Member Contributions” is determined as a percent of payroll that includes DCR members (as required by law.) It may be informational to show the DB and the DCR payrolls separately.

Page 9: The contribution rates for the DCR employers are noted, but the mechanism or calculations that determine these amounts are not discussed in detail. We recommend a brief description of this mechanism in this section or in the Summary of Plan Provisions.

Page 14: Maturity Ratio is shown, but no definition is provided. We recommend that the definition be included in this section.

Page 25: Liquidity Factor is shown, but no definition is provided. We recommend that the definition be included in this section and that commentary be added about the potential impact of this figure on the Plan. Information about the Liquidity Factor trend would also be useful.

Page 28: Only seven years of historical information are shown in the “Historical Asset Rate of Return” table. It may be useful to show more years of data in this schedule. Ten years are shown in the “History of UAAL and Funded Ratio” on page 22.

Page 35: “Asset Valuation Method” should mention the 80%/120% market value corridor that is

Alaska Retirement Systems

IV (E). Actuarial Valuations: Format of Reports

part of the method.

Pages 36 – 38: We recommend that the interest rates be included. For example, on page 36 there is a statement that the healthcare liabilities are calculated using the funding assumptions. The interest assumption would be informational.

Page 40: Projections are shown under the “Best Case”, “Optimistic” and “Pessimistic” asset return scenarios. All scenarios assume a 1% increase in total active member population. It may be more appropriate to assume a 0% increase for the “Best Case” scenario, 1% increase for the “Optimistic” scenario, and 1% decrease for the “Pessimistic” scenario.

Page 54: For the age and service distributions, it may be useful to add a table that combines the data in “Annual Earnings by Age” and “Annual Earnings by Credited Service” into a single table similar to “Years of Credited Service by Age”.

Page 82: For future retirees projected to pay a retired member contribution, the description says that Buck used a composite rate (a weighted blend of retiree-only and retiree-plus-dependent(s) rates), but individual rates were valued instead.

Page 83: Healthcare Participation correctly describes the assumption regarding the percentage of retirees assumed to elect coverage upon retirement. However, the report should also indicate that 100% of those who retired prior to age 60 and declined coverage are assumed to re-enroll at age 60.

Judges Retirement System (June 30, 2010)

Page 2: The description of the actuarial value of assets should mention the 80%/120% market value corridor that is part of the method. According to page 9, the Actuarial Asset Value is subject to the Market Value corridor for the Pension plan. It would be appropriate to note this in the highlights section of the report and to briefly discuss the effects on the smoothing method.

Page 10: The calculation of the 6/30/2009 asset gain/(loss) amounts for Pension and Healthcare are not shown. If these amounts were not calculated in the 2009 roll-forward report, they should be included here.

Page 13: Since the Actuarial Value of Assets and Market Value of Assets differ significantly, it is appropriate to calculate the recommended contribution using the Market Value of Assets as an informational item.

Page 20: “Asset Valuation Method” should mention the 80%/120% market value corridor that is part of the method.

Page 27: For the age and service distributions, it may be useful to add a table that combines the data in “Annual Earnings by Age” and “Annual Earnings by Credited Service” into a single table

Alaska Retirement Systems

IV (E). Actuarial Valuations: Format of Reports

similar to “Years of Credited Service by Age”.

National Guard and Naval Militia Retirement System (June 30, 2010)

Page 7: The calculation of the 6/30/2009 asset gain/(loss) amount is not shown. If these amounts were not calculated in the 2009 roll-forward report, they should be included here.

Page 13: “Asset Valuation Method” should mention the 80%/120% market value corridor that is part of the method.

PERS Defined Contribution Retirement Plan (June 30, 2011)

Page 19: Relative to the “Actuarial Gain/(Loss) for FY11,” it is unclear how the total gain/(loss) for 2011 is allocated between Peace Officer/Firefighters (page 11) and Others (page 14) for either Occupational Death and Disability or Retiree Medical. If the amounts are allocated by the UAL as in past years, it should be noted. If the amounts are calculated independently, those calculations should be included in the report.

Page 30: “Asset Valuation Method” should mention the 80%/120% market value corridor that is part of the method.

Page 36: For the age and service distributions, it may be useful to add a table that combines the data in “Annual Earnings by Age” and “Annual Earnings by Credited Service” into a single table similar to “Years of Credited Service by Age”.

TRS Defined Contribution Retirement Plan (June 30, 2011)

Page 22: “Asset Valuation Method” should mention the 80%/120% market value corridor that is part of the method.

Page 28: For the age and service distributions, it may be useful to add a table that combines the data in “Annual Earnings by Age” and “Annual Earnings by Credited Service” into a single table similar to “Years of Credited Service by Age”.

Alaska Retirement Systems

V. Glossary of Actuarial Terms

Actuarial Obligation

For Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Obligation

For Retirees:

The single sum value of lifetime benefits to existing retirees. This sum takes account of life expectancies appropriate to the ages of the retirees and of the interest which the sum is expected to earn before it is entirely paid out in benefits.

Actuarial Present Value of Total Projected Benefits (PVB):

Present value of all future benefit payments for current retirees and active employees taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions.

Actuarial Value of Assets (AVA):

The value of assets used by the actuary in the valuation. These may be at market value or some other method used to smooth variations in market value from one valuation to the next.

Amortization of the Unfunded

Actuarial Obligation:

Payments made over a period of years equal in value to the Program's unfunded actuarial obligation.

Annual Required

Contribution (ARC):

The ARC is equal to the sum of the normal cost and the amortization of the unfunded actuarial accrued liability.

ARC as a Percentage of Covered

Payroll:

The ratio of the annual required contribution to covered payroll.

Assumptions or Actuarial

Assumptions:

The estimates on which the cost of the Program is calculated including:

- (a) Investment return — the rate of investment yield that the Program will earn over the long-term future;

Alaska Retirement Systems

V. Glossary of Actuarial Terms

- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Covered Payroll:	Annual reported salaries for all active participants on the valuation date.
Funded Ratio:	The ratio of Actuarial Value of Assets to Actuarial Obligation.
Health Care Cost Trend Rates:	The annual rate of increase in net claims costs per individual benefiting from the Program.
Investment Return (discount rate):	The rate of earnings of the Program from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next. If the Program is funded on a pay-as-you-go basis, the discount rate is tied to the expected rate of return on day-to-day employer funds.
Net OPEB Obligation (NOO):	The NOO is the cumulative difference between the ARC and actual contributions made. If the Program is not pre-funded, the actual contribution would be equal to the annual benefit payments less retiree contributions. There are additional adjustments in the NOO calculations to adjust for timing differences between cash and accrual accounting, and to prevent double counting of OPEB Program costs.
Normal Cost:	The amount of contributions required to fund the benefit allocated to the current year of service.
Unfunded Actuarial Obligation:	The extent to which the actuarial obligation of the Program exceeds the assets of the Program. There is a wide range of approaches to paying off the unfunded actuarial obligation,

Alaska Retirement Systems

V. Glossary of Actuarial Terms

from meeting the interest accrual only to amortizing it over a specific period of time.

Abbott Capital Management, LLC

Mandate: Private Equity

Hired: 1998

Firm Information	Investment Approach	Total ARMB Mandate
<p>Abbott is a leading independent investment management firm founded in 1986. Abbott creates and manages private equity separate accounts and fund of funds for institutional investors worldwide. The firm currently manages approximately \$7.5 billion. Abbott focuses on private equity investments in venture capital, buyouts and special situations.</p> <p>Abbott is registered as an investment advisor with the SEC in the United States. In 2011, Abbott formed Abbott Capital Management (Europe), LLP (“Abbott Europe”) as a subsidiary located in London.</p> <p>Abbott has 45 professionals including 15 investment professionals.</p> <p>Key Executives: Jonathan Roth, President Thaddeus Gray, Chief Investment Officer Tim Maloney, Managing Director</p>	<p>Abbott’s decision-making process uses a team approach; no one individual has authority to make decisions regarding portfolio management without the input of other senior professionals.</p> <p>Abbott is extremely selective in choosing private equity investment funds. Every partnership must meet rigid standards regarding the overall quality of the investment opportunity, such as:</p> <ul style="list-style-type: none"> ▪ Target markets that can support private equity investing; ▪ Long-term and proven private equity business model; ▪ Stable management team operating under a consistent firm culture; ▪ Proven access to high-quality investment opportunities and resources; ▪ Strong track record. <p>Final investment decisions are made using a consensus-driven approach. Investment decisions are made based on a team effort emphasizing the ongoing responsibility and accountability of Abbott’s investment staff with analysis and further review designed to meet the rigorous levels of Abbott’s managing directors and investment staff.</p> <p>Benchmark: Russell 3000 +350 basis points and Thomson Reuters vintage year peer comparison.</p>	<p>Assets Under Management: (5/31/13) Commitments: \$1,809 million Market Value: \$ 732 million</p> <p>2012 Management Fees: \$1,910,153</p>

Concerns: None

Performance

The since inception internal rate of return (IRR) for Abbott’s ARMB portfolio is 8.8% through 12/31/2012, which compares favorably with the public market equivalent return for the Russell 3000 of 4.2%.

In Callan’s December 2012 vintage year comparison of the Abbott portfolio and the Thomson Reuters database for the 11 years from 1998 through 2008, the Abbott portfolio is in the top quartile for 5 years and in the second quartile for 6 years.

Alaska Retirement Management Board

June 20, 2013

*Abbott Capital Management, LLC
1290 Avenue of the Americas, 9th Floor, New York, NY 10104*

Tel: 212-757-2700 Fax: 212-757-0835

Important Disclosure Statements

Past returns are not indicative of future performance or expected realized returns and there is the possibility of complete or partial loss of capital with any private equity investment. Future returns will vary. There can be no assurance that the Alaska Retirement Management Board portfolio, its Portfolio Funds, or the private and public equity markets in general will perform similarly to prior investments or Portfolio Funds.

Forward-Looking Statements:

Statements or information contained herein that are not historical fact may constitute “forward-looking statements” regarding the future plans, opinions, objectives and performance of Abbott, the Alaska Retirement Management Board portfolio, the Portfolio Funds, their underlying portfolio companies and the private equity and financial markets in general. These statements may be identified by the use of forward-looking terminology such as “may,” “will,” “likely,” “appear,” “should,” “expect,” “anticipate,” “project,” “estimate,” “intend,” “continue,” or “believe,” or comparable terminology. Due to various risks and uncertainties, such as the stability of the public capital and debt markets, the impact of increased regulatory market oversight, changes to the regulatory environment in general and the reliability and timeliness of the data and information received by third party sources, including the managers or general partners of the Portfolio Funds, actual events or results and the actual performance of the private equity and the financial markets, Abbott, the Alaska Retirement Management Board portfolio, any Portfolio Funds or any underlying portfolio company may differ materially and adversely from the performance reflected or contemplated by such forward-looking statements. No representation or warranty is made as to the accuracy of any forward-looking statement contained herein, the future stability of the private equity and financial markets, or the performance of Abbott, the Alaska Retirement Management Board portfolio, the Portfolio Funds or underlying portfolio companies. Abbott undertakes no duty and expressly disclaims any obligation or implied undertaking, to disseminate any updates or revisions to analysis, or any forward-looking statements, contained herein, whether to reflect any change in expectations with regard thereto as a result of a change in events, conditions, regulatory landscape or environment or circumstances on which such statement or opinion is based, or receipt of new information, future events or otherwise.

Summary and Statements of Investments:

Amounts with respect to Commitments, Amount Paid and Net Distributions may reflect additional fee or interest payments paid by, or received from the Portfolio Funds in excess of the actual Alaska Retirement Management Board subscription amount. Latest Valuation for the account and with respect to any Portfolio Fund reflects the most recently available “Fair Value” adjusted for subsequent cash activity through March 31, 2013. “Fair Value” is based on the most recent available capital account balances reported to Abbott Capital Management, LLC by the Portfolio Funds as of May 29, 2013, including allocations of unrealized gain or loss on the underlying portfolio company investments. The capital account balances may have been adjusted by other amounts necessary to reflect the fair value of the Portfolio Funds as determined by Abbott during its most recently completed valuation review. Latest Valuation with respect to the account also includes the value of distributed stock not yet sold. As of March 31, 2013, approximately 75% of the aggregate Portfolio Funds’ valuation represents valuations based on March 31, 2013 capital account balances reported by the Portfolio Funds and approximately 25% of the aggregate Portfolio Funds’ valuation represents valuations based on December 31, 2012 capital account balances that have been adjusted for subsequent cash flow activity (capital calls, cash and stock distributions) through March 31, 2013. Approximately 20% of ARMB’s Portfolio Funds have yet to issue March 31, 2013 capital accounts as of the date of this report. Total Value equals distributions plus latest valuation. Net Multiple or Total Value versus Paid In (TVPI) equals Total Value divided by Amount Paid. Commitments with respect to Portfolio Funds denominated in non-U.S. currency reflect the amount funded (in U.S. dollars) plus the unfunded portion of the foreign-denominated commitment amount converted to U.S. dollars at the relevant March 31, 2013 exchange rates. With respect to secondary interests, “Maximum Cash Outlay” refers to the purchase price plus the unfunded capital commitment of the secondary interest at the time of purchase and the “Amount Paid” refers to the purchase price plus the amounts contributed to the secondary interest subsequent to purchase.

Return Data:

Alaska Retirement Management Board pooled net returns are calculated by Abbott and are net of Partnership management fees, expenses and carried interest, but do not reflect any deduction for advisory fees paid by Alaska Retirement Management Board to Abbott. Returns were calculated using the Latest Valuation of the Portfolio Funds and net monthly cash flows between the Alaska Retirement Management Board portfolio and the Portfolio Funds. Pooled performance data set forth herein is unaudited and does not represent the actual return anticipated for the Alaska Retirement Management Board account. Except as otherwise noted, pooled returns are not net of gains and losses realized upon the sale of distributed stock, including brokerage and other related commissions.

Unrealized investments may not be realized at the values used herein. While Abbott believes that the unrealized values used when calculating the returns set forth herein are based on assumptions that are likely reasonable under the circumstances and at the time made, actual realized returns on unrealized investments will depend upon, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs and the timing and manner of sale, all of which may differ from the assumptions used for the valuations incorporated herein. Accordingly, actual realized returns on unrealized investments may differ materially and adversely from the (assumed) pooled returns indicated herein.

Interim performance data regarding an underlying partnership investment may not accurately reflect the current or expected future performance of the Partnership or the fair value of the Alaska Retirement Management Board portfolio. Such performance data should not be used to compare returns among multiple private equity funds due to, among other factors, differences in vintage year, investment strategy, investment size, etc., and has not been calculated, reviewed, verified or in any way sanctioned or approved by the general partner or the advisor of the Partnership investment, or any of their affiliates.

The information set forth herein is based on March 31, 2013 information received by Abbott from the underlying Portfolio Funds as of May 29, 2013 and is qualified in its entirety by reference to the detailed and updated information set forth in the Quarterly Reports to be delivered to Alaska Retirement Management Board by Abbott.

Additional Disclosure Statements

Industry Data:

This presentation contains information sourced from, based on, or derived from data received or provided by independent third-party sources and information otherwise publicly available. Unless otherwise noted or referenced below, all private equity market information and data is sourced from Thomson Reuters; all fundraising information and data is sourced from Thomson Reuters/Thomson ONE database as of the indicated date; all information and data with respect to venture IPO and exit activity is sourced from Thomson Reuters/NVCA, January 2, 2013 and July 2, 2012; all information and data with respect to venture investment activity is sourced from PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters, 4Q 2012; and all information and data with respect to buyout/LBO investment, IPO and exit activity is sourced from Buyouts, April 8, 2013, January 1, 2013, January 2, 2012 and January 3, 2011 or Thomson Reuters. While Abbott believes that the third party independent sources cited herein are widely-cited sources of market information for the private equity industry, Abbott cannot guarantee the accuracy of any information from such third party sources and has not independently verified the accuracy or completeness of such information or the assumptions on which such information is based. Information sourced from third parties, such as Thomson Reuters, is continually updated to account for new information, and therefore all data herein is subject to change. Third party sources of information often include data from only a limited number of private equity funds and may not be representative of the entire private equity market. Any statistical or third party information contained herein has been supplied for informational purposes only.

- I. **Review of Market Conditions**
- II. **Abbott Capital Management Update**
- III. **2012 / 2013 Investment Activity**
- IV. **Portfolio Review & Portfolio Fund Investments**
- V. **Summary & Outlook**

Appendix

- Statement of Investments

I. Review of Market Conditions

Highlights of an evolving private equity investment landscape

Venture Capital and Growth Equity

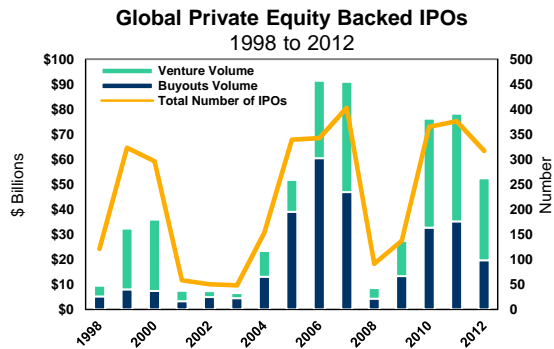
- Headlines focused on enterprise and big data solutions (cloud computing, software, etc.) as interest shifted away from social media and cleantech
- Total number of disclosed M&A deals and IPOs decreased however total value increased in 2012
 - Increase in value due to impact of the Facebook IPO in May 2012, the largest venture-backed offering ever
- VC fundraising “barbell”: investors committed most capital to larger “brand name” funds and smaller, niche funds
- Fundraising market in 2013 remains challenging

Buyouts and Special Situations

- Deal pace remained relatively steady for the year, supported by receptive credit markets
- A record number of dividend recaps occurred in 2012, which supported significant distributions
- The 10 largest funds gathered an increasing share of funds raised compared to the prior few years
- Deal activity has slowed since the end of 2012

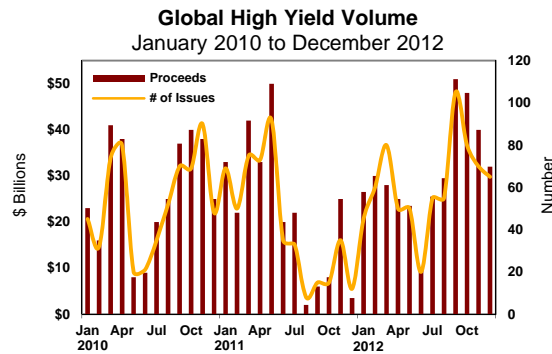
Health Stats for the Private Equity Market

Despite market volatility, PE-backed IPOs and M&A exits endured



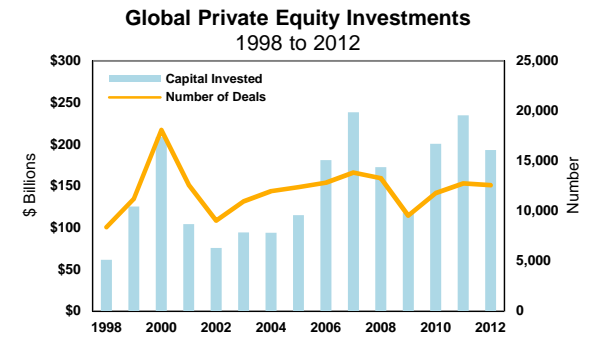
Source: Thomson ONE, May 30, 2013

Ample debt availability supported financings and recapitalizations

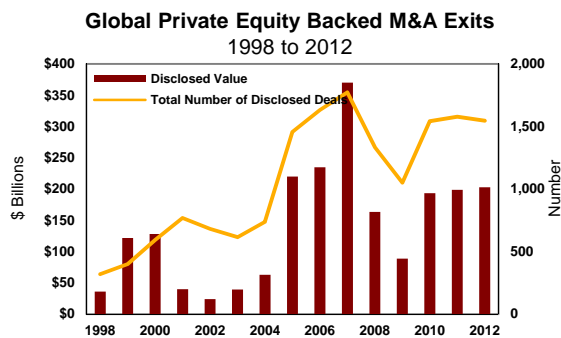


Source: Derived by Abbott from Thomson Reuters, Debt Capital Markets, Full Year 2012

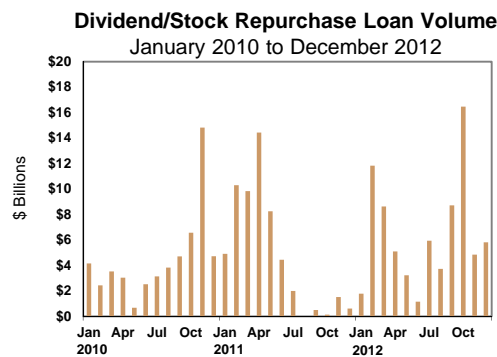
Which, in turn, supported relatively healthy investment and fundraising



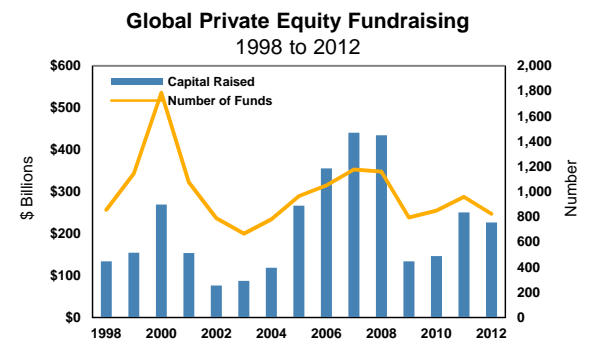
Source: Thomson ONE, May 30, 2013



Source: Thomson ONE, May 30, 2013



Source: LCD's Leveraged Buyout Review – 4Q12, Standard & Poor's 2013



Source: Thomson ONE, May 30, 2013

Venture & Growth Investment Shifted

- **Some “hot sectors” fell out of favor in 2012**

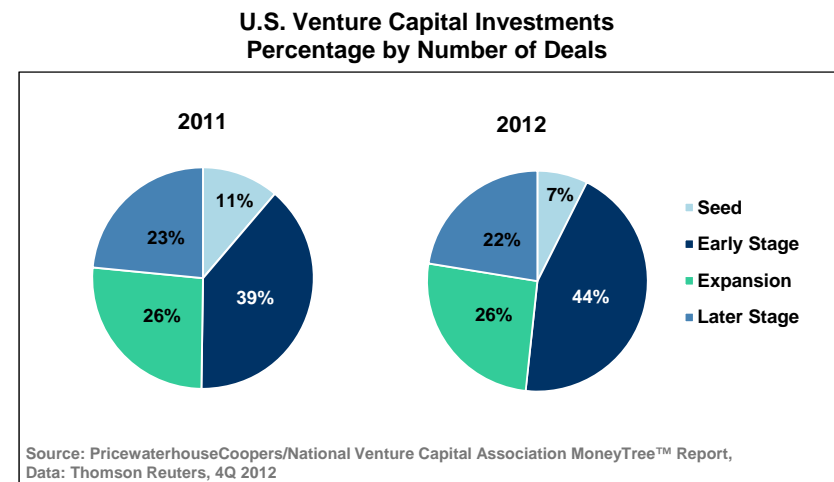
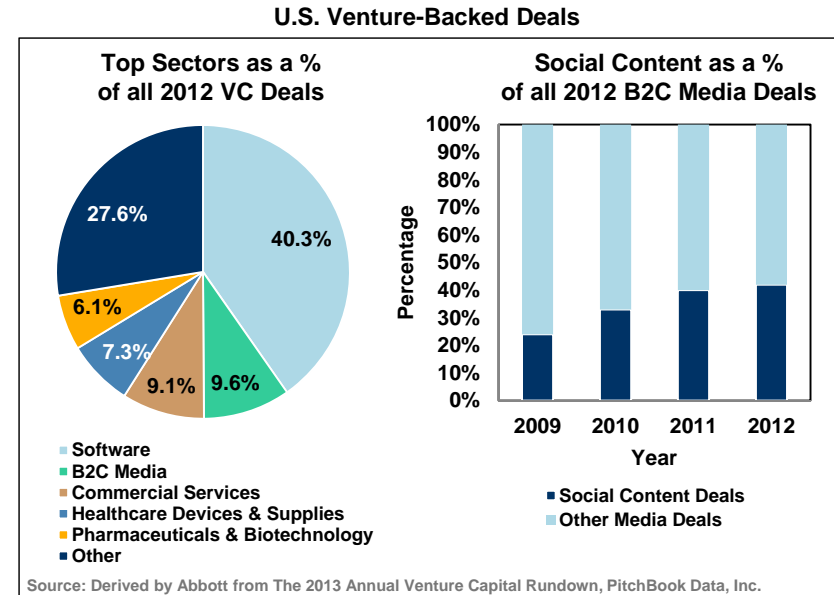
 - Interest in social media and web 2.0 appeared to have significantly decreased following disappointing post-IPO results (e.g., Facebook, Groupon, Zynga)
 - Cleantech investment volume dropped approximately 25% from 2011 to 2012, likely due to a lack of realizations and continued uncertainty (*MoneyTree, 4Q 2012*)

- **Interest may be shifting to other promising sectors**

 - Interest in cloud computing and enterprise solutions investing appeared to continue throughout the year
 - The software sector again received the highest level of investments in 2012, and reached the highest yearly level of investment since 2001 (*MoneyTree, 4Q 2012*)

- **Venture capitalist risk appetite appears to have decreased, potentially with long-term impact**

 - Seed stage investment volume (# deals) declined approximately 35% from 2011 to 2012
 - U.S.-based venture capitalists overall invested with companies later in their life cycle in 2012



Many Venture & Growth Exits Throughout 2012

- **Consistent with fleeting IPO opportunities, average time to exit via IPO increased**
 - 8.0 years for 2012 IPOs, vs. 6.6 years for 2011 and 5.7 years for 2010
 - Average time to exit for M&A in venture was stable at 5.9 years
- **U.S. VC exit activity totaled \$43 billion in 2012**
 - Tied with 2007 as the highest annual value since the venture bubble peaked in 2000
 - Facebook IPO accounted for \$16 billion of 2012 total

U.S. Venture-Backed IPOs 2009 to 2012

Year	# of IPOs	Avg. Time to Exit (Years)	Sum Post-Offer Value (\$M)	Avg. Post-Offer Value (\$M)
2009	15	6.3	\$30,227	\$2,015
2010	77	5.7	\$123,122	\$1,620
2011	52	6.6	\$101,573	\$1,953
2012	48	8.0	\$122,107	\$2,544

Source: VCJ, January 2013; data is year-to-date through mid-December for IPOs on NYSE and Nasdaq.

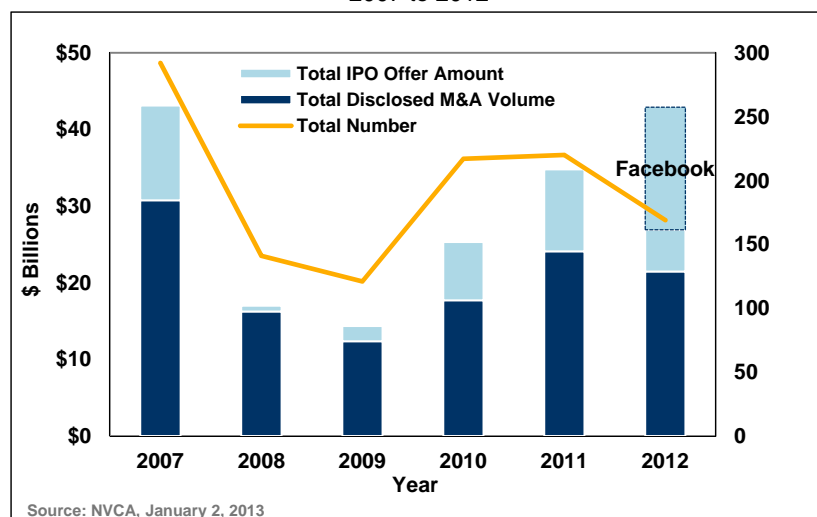
Announced Acquisitions of U.S. Venture-Backed Companies 2011 and 2012

Exit Type by Company Industry Major Group	# of Deals 2011	# of Deals 2012	Avg. Time to Exit (Years) 2011	Avg. Time to Exit (Years) 2012	Value of Disclosed Deals (\$M) 2011	Value of Disclosed Deals (\$M) 2012
Computer Related	353	301	5.5	5.5	\$13,669	\$9,931
Non-High Technology	103	80	5.5	6.1	\$5,389	\$4,730
Communications & Media	81	67	6.9	5.9	\$1,787	\$3,351
Medical/Health/Life Science	69	47	6.8	6.3	\$4,962	\$8,375
Semiconductors/Other Elect	40	33	6.5	7.1	\$2,881	\$970
Biotechnology	36	22	7.0	6.8	\$6,650	\$3,343
Total	682	551	5.9	5.9	\$35,337	\$30,700

Source: VCJ, January 2013

Source: Thomson ONE

U.S. Venture-Backed Disclosed M&A Deals & IPOs 2007 to 2012

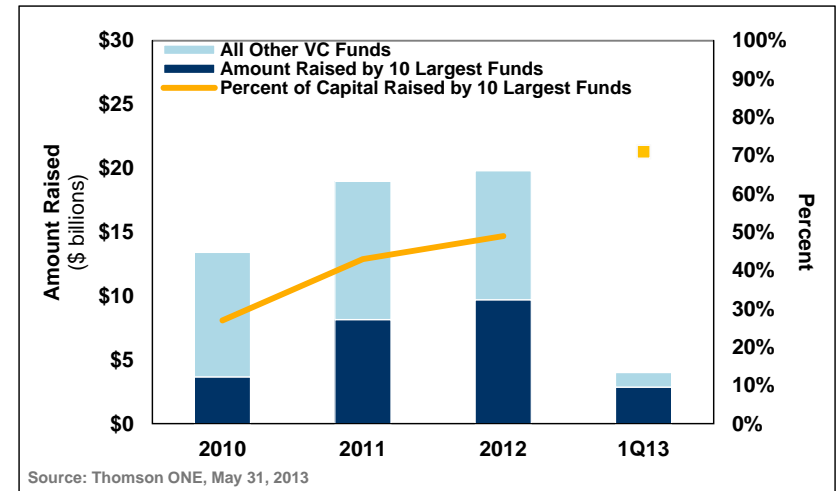


- **VC and GE assets increasingly went to 10 largest funds**
 - Larger scale may create potential for greater number of hits to offset expected losses
 - Presence, resources, and network of larger platforms may attract entrepreneurs
 - The fundraising “barbell”: smaller, niche funds were the other group to enjoy fundraising success in 2012 (NVCA, January 7, 2013)

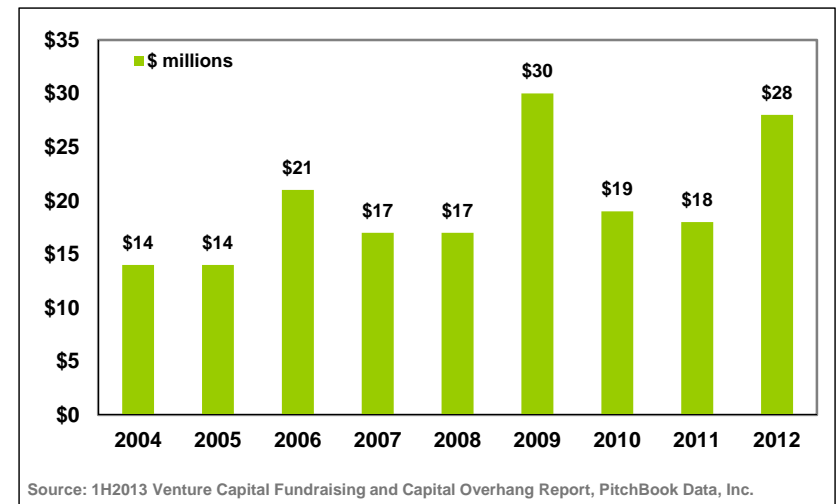
- **U.S. VC fundraising may be settling into a new normal**
 - \$20 billion raised by U.S. venture firms in 2012
 - Less than \$25 billion raised each year since 2008

- **LP’s average commitment to venture capital funds increased in 2012**

Amount Raised by 10 Largest U.S. Venture Funds
2010 to 1Q13



Average LP Commitment to VC Funds
2004 to 2012



Buyouts & Special Situations Investing Steady

- **Buyouts and Special Situations funds continued to invest to build value in existing portfolio companies**

 - Platform investments (as a percentage of total number of deals) continued to increase in 2012
 - An increase in carve-out investments by GPs likely stemmed from divestitures as corporates focused on their core businesses

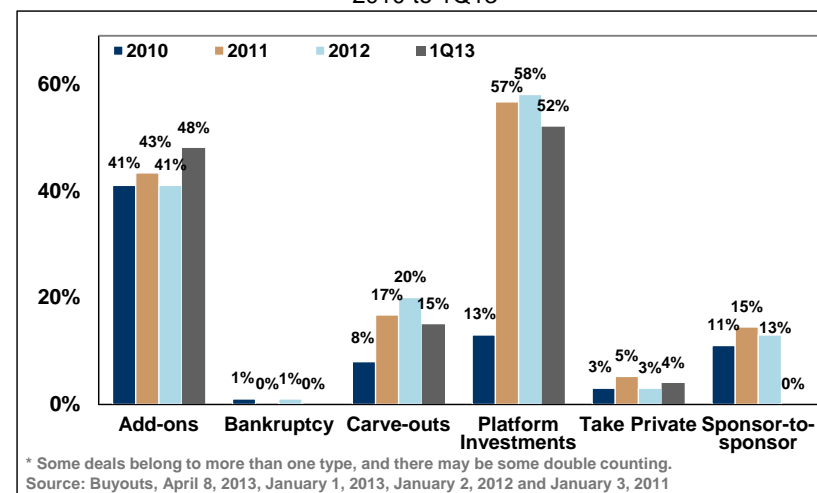
- **Deal size was smaller in 2012, as funds of all sizes sought less efficient spaces for attractive potential returns**

 - After increasing in 2010 and 2011, median deal size fell 23% during the year (*PitchBook, January 10, 2013*)
 - Potentially greater competition in the mid-market segment

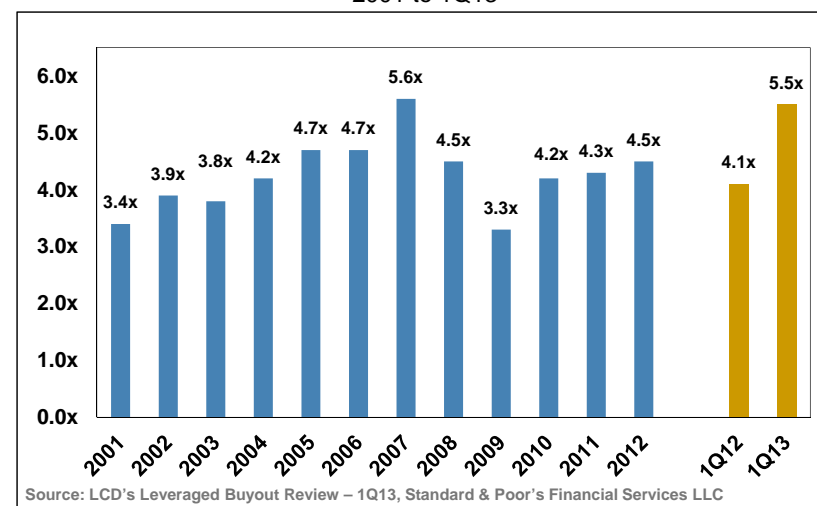
- **Deal financing in the U.S. was widely available and at attractive terms in 2012**

 - Average debt multiples for middle-market companies (EBITDA of \$50 million or less) reached 4.5x EBITDA in 2012 (5.0x EBITDA in 4Q12), the highest yearly average since 2008
 - Equity contribution continued to decrease from a peak in 2009 (*S&P's LCD, 4Q12*)
 - Many of the larger non-U.S. managers may have turned to U.S. capital sources, not having access to the same financing terms locally

U.S. Buyout Deals by Type*
2010 to 1Q13



Average Debt Multiples of Middle-Market LBO Loans
2001 to 1Q13

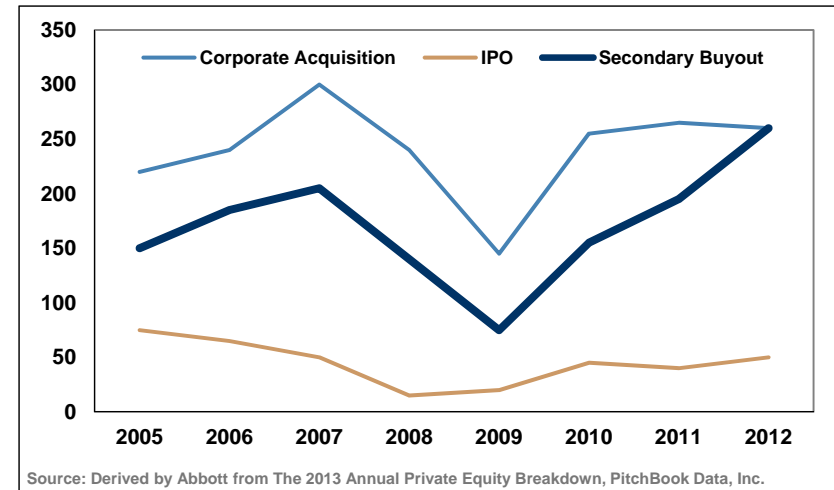


BO/SS Distributions – Partial versus Full Exits

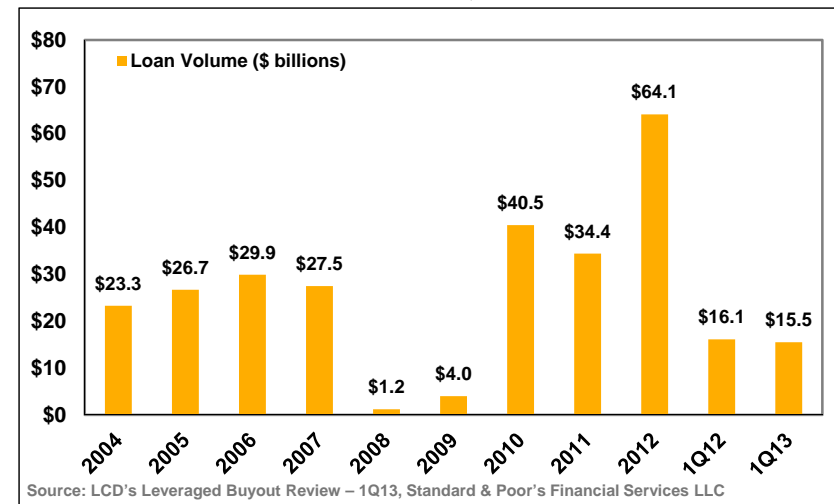
- **U.S. Buyout-backed IPOs and strategic sales have remained roughly flat for three years**
 - Corporates may have been cautious about spending cash on acquisitions
 - Secondary buyouts (sales to another financial sponsor) exceeded corporate acquisitions in 2012 for the first time
 - Number of M&A exits >\$1 billion has increased for the past three years, as large deals matured (*Buyouts, January 1, 2013*)

- **Distributions increased, partially due to a record volume of dividend recaps in 2012**
 - Anticipated tax rate changes one likely driver
 - Not all recaps are created equal, but they can be a meaningful and appropriate route to liquidity

Number of U.S. Buyout Exits by Type
2005 to 2012



Sponsored Dividend/Stock Repurchase Loan Volume
2004 to 1Q13

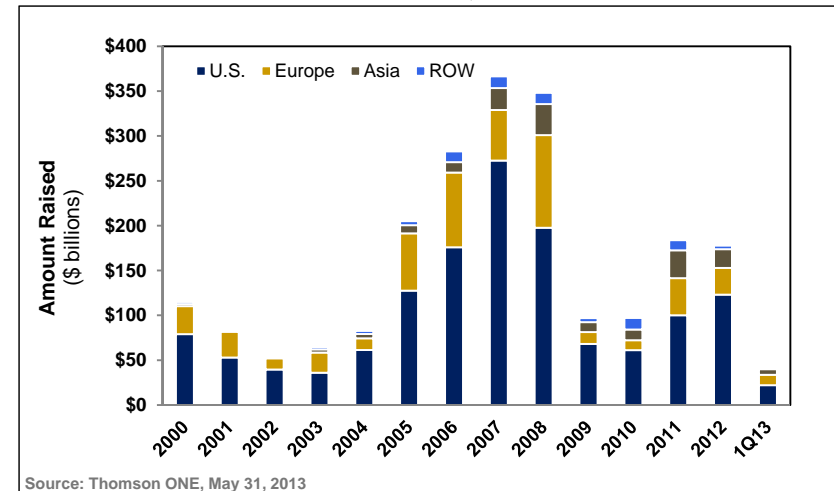


Buyouts and Special Situations Fundraising

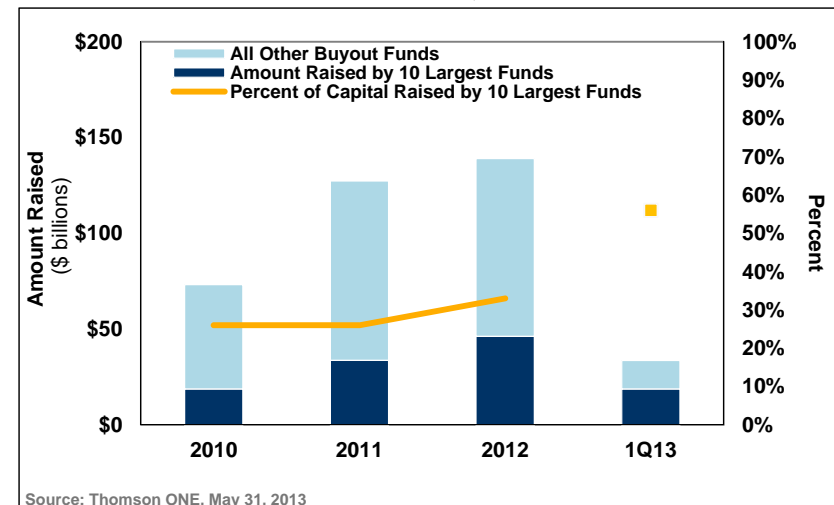
- **Global buyout and special situations fundraising remained relatively flat from 2011 to 2012**
 - Fundraising by U.S. firms increased 23%
 - Europe and Asia each down approximately 30%
 - 1Q13 global fundraising pace roughly the same as 1Q12

- **“Mega” funds as a group gathered significant assets as LPs fielded many re-ups and some sought to reduce number of GP relationships**
 - Important to understand distinction between fund size and target investment size
 - Asset-gathering platforms can raise questions about alignment of interests

Global Buyout & Special Situations Fundraising
2000 to 1Q13



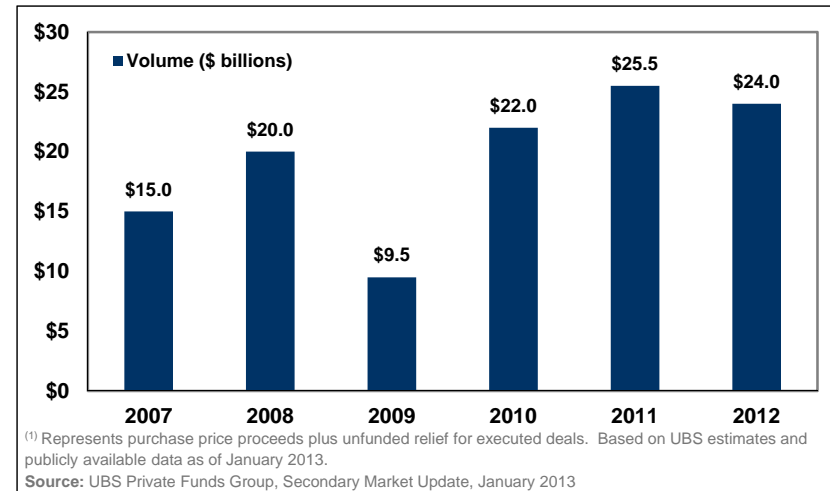
Amount Raised by 10 Largest Global Buyout Funds
2010 to 1Q13



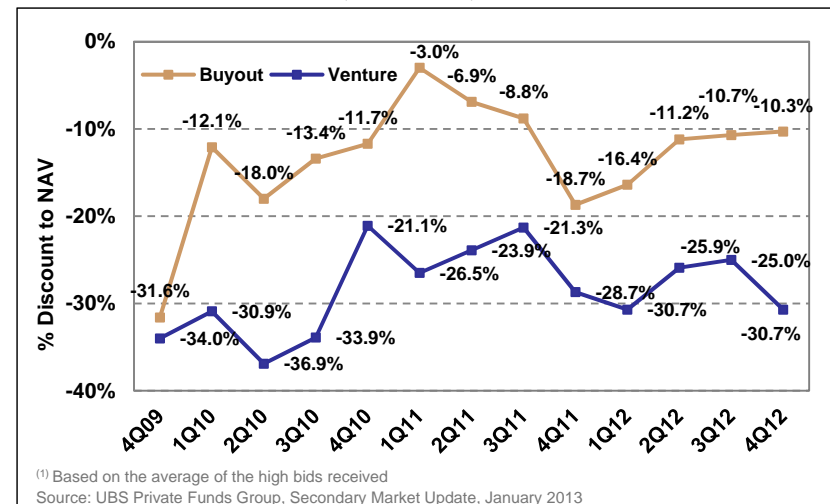
Secondary Opportunities Remained Abundant

- **Secondary transaction volume in 2012 was behind record 2011 level**
 - Regulatory-driven sales did not appear to materialize to the expected levels muting volume in 2012 and shifting volume to 2013
 - Active pension fund portfolio management continues to provide deal flow
 - Foundations and endowments reducing specific manager and strategy exposure
 - Rising public markets and capital market liquidity offsetting PE overallocation in 1Q13
- **Buyout fund pricing increased while venture fund pricing weakened**
 - Interests in top quality manager's funds can demand par and even premium prices
 - Venture capital and boom-year large cap LBO funds continue to be discounted
- **According to Cogent⁽¹⁾, secondary transactions focused on**
 - Buyout funds concentrated in the 2005, 2006, 2007 vintage years
 - Venture funds typically over 10 years old
- **According to UBS, an estimated \$35.9 billion in dedicated dry powder was available at the beginning of 2012**
 - 85% held by just 20 secondary buyers with 11 buyers with \$1 billion or more of dry powder
 - Dry powder increasing in current slow deal environment
 - Large funds coming to market—Lexington, Harbourvest adding to supply imbalance
 - 1Q13 had \$3.0 billion in transaction volume versus \$7.0 billion in 1Q12⁽²⁾

Secondary Transaction Volume⁽¹⁾
2007 to 2012



Historical Secondary Market Pricing⁽¹⁾
4Q 2009 to 4Q 2012



⁽¹⁾ Cogent Partners, Secondary Pricing Trends & Analysis, January 2013
⁽²⁾ Cogent Partners, Secondary Market Update, May 2013

Highlights of an evolving private equity investment landscape

A Final Word – Looking Forward

- **Volatility a concern for 2013, despite what appeared to be a relative calm in the beginning of the year**
 - Economic uncertainties in all major markets
 - Public markets driven by hopeful but skittish sentiment

- **Institutional investors' objectives have not changed**
 - Liabilities consistent or rising; expected returns being revised
 - We believe there will be greater willingness to embrace risk in 2013, leading to rotation in asset allocation

- **Attractive alpha is still available in private equity asset class**
 - Uncertainty = opportunity for skilled, disciplined GPs
 - Requires significant effort to identify and access
 - Ensure appropriate mindset about returning capital
 - Long-term nature of PE can offer some protection against short-term decisions
 - Continuing public dialogue about private equity

II. Abbott Capital Management Update

Experienced Firm

- Leading independent private equity investment adviser with offices in New York and London
- Attractive institutional track record spanning over 25 years
- Solely focused on private equity; over \$7.5 billion in AUM
- Stable, multi-generational management team
- Significant investment alongside fund investors

Consistent Investment Style

- Applying extensive knowledge, experience and resources
- Identifying managers with potentially repeatable attractive performance
- Key disciplines
 - *Rigorous due diligence and selection process*
 - *Balanced diversification*
 - *Extensive monitoring*
 - *Seeking alignment of interests at all levels*

High Conviction Portfolios

- Building portfolios of best of breed private equity managers
 - *Core, globally-diversified*
 - *Specialized strategies*
- Seeking attractive risk-adjusted returns in a variety of economic and financial environments
- Superior client service

An Entire Organization Focused on Private Equity

Investments



Thad Gray
Managing Director
Chief Investment Officer
24 yrs./24 yrs.



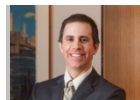
Tim Maloney
Managing Director
12 yrs./8 yrs.

Martha Cassidy
Director
29 yrs./<1 yr.

Björn Seebach
Investment Associate
4 yrs./1 yr.



Jonathan Roth
Managing Director
President
21 yrs./21 yrs.



Chris Ragazzo
Managing Director
8 yrs./8 yrs.

Young Lee
Principal
8 yrs./5 yrs.

Jonathan Tubiana
Sr. Investment Analyst
5 yrs./3 yrs.



Katie Stokel
Managing Director
Chief Operating Officer
27 yrs./15 yrs.



Meredith Rerisi
Managing Director
12 yrs./12 yrs.

Len Pangburn
Vice President
8 yrs./8 yrs.

Lance Zhou
Sr. Investment Analyst
6 yrs./6 yrs.



Matthew Smith*
Managing Director
13 yrs./13 yrs.

Tanner Lund
Investment Associate
4 yrs./<1 yr.

Oscar Engqvist*
Investment Analyst
1 yr./<1 yr.

Marketing & Client Services



Charles van Horne
Managing Director
Marketing & Client Services
28 yrs./12 yrs.

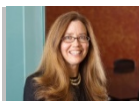
Mona Marquardt
Principal
Investor Relations &
Client Services
10 yrs./1 yr.

Kate Kelly
Sr. Analyst
Marketing & Client Services
3 yrs./3 yrs.

Samantha Hewitt
Sr. Associate
Marketing & Client Services
6 yrs./5 yrs.

Adrienne Everett
Analyst
Marketing & Client Services
2 yrs./2 yrs.

Operations, Legal & Compliance



Lauren Massey
Managing Director
Finance & Administration
22 yrs./18 yrs.



Mary Hornby
Managing Director
General Counsel
17 yrs./8 yrs.

Andrea Heidbreder
Project Manager
18 yrs./12 yrs.

Jennifer Lagnado
Controller
12 yrs./12 yrs.



Paolo Parziale
Managing Director
Corporate & Fund
Accounting
13 yrs./11 yrs.

Joe Juliano
Sr. Manager
Operations
11 yrs./11 yrs.

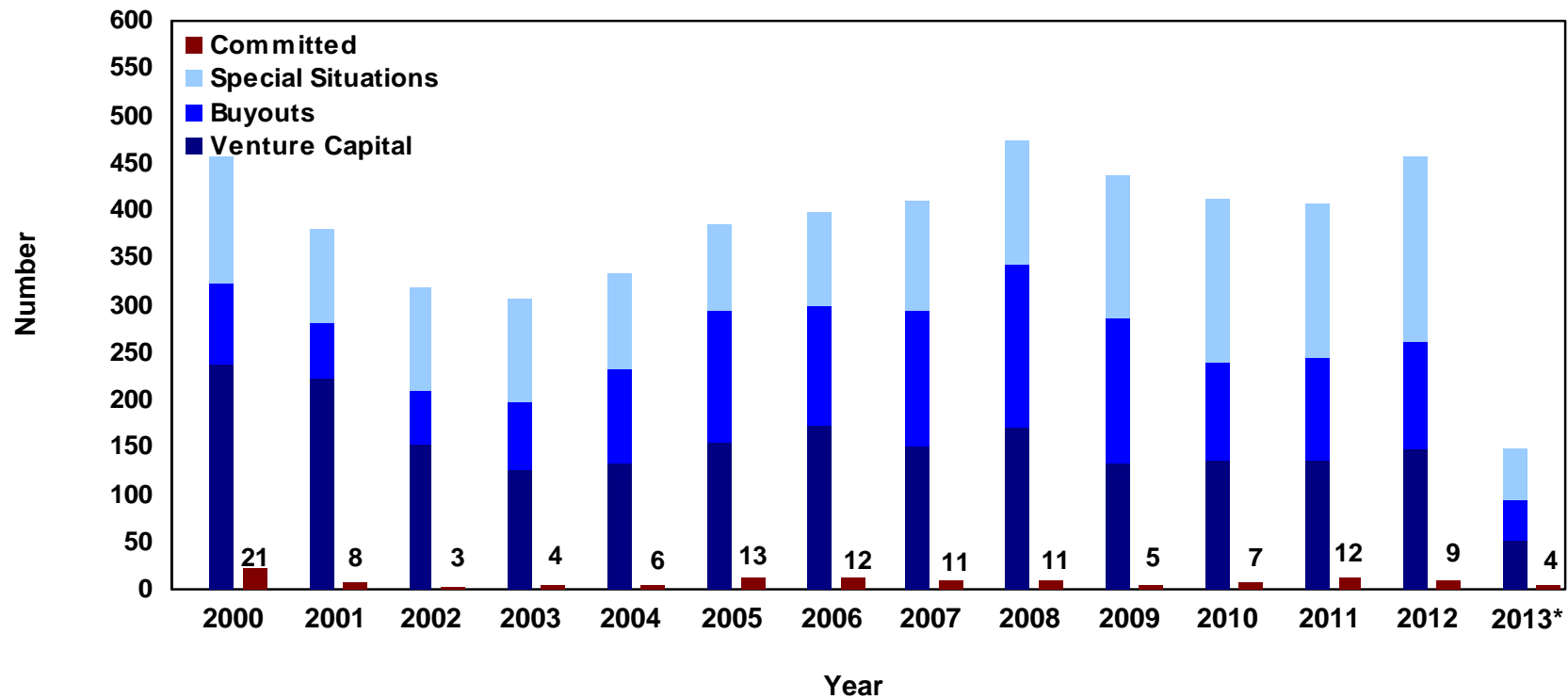
- **45 professionals located in New York and London**
- **Managing Directors together have an average of over 18 years private equity experience**
- **Diverse backgrounds, stable team and consensus-driven decision making process**
- **Deep proprietary networks**
- **Focus on delivering superior client service across the organization**
- **Institutional processes and systems**

Private Equity Experience / Tenure at Abbott
*Abbott Capital Management (Europe), LLP
See Appendix for complete biographies.

III. 2012 / 2013 Investment Activity

Abbott Deal Flow and ARMB Primary Commitments

Abbott Deal Flow**
ARMB Primary Commitments
2000 to YTD* 2013



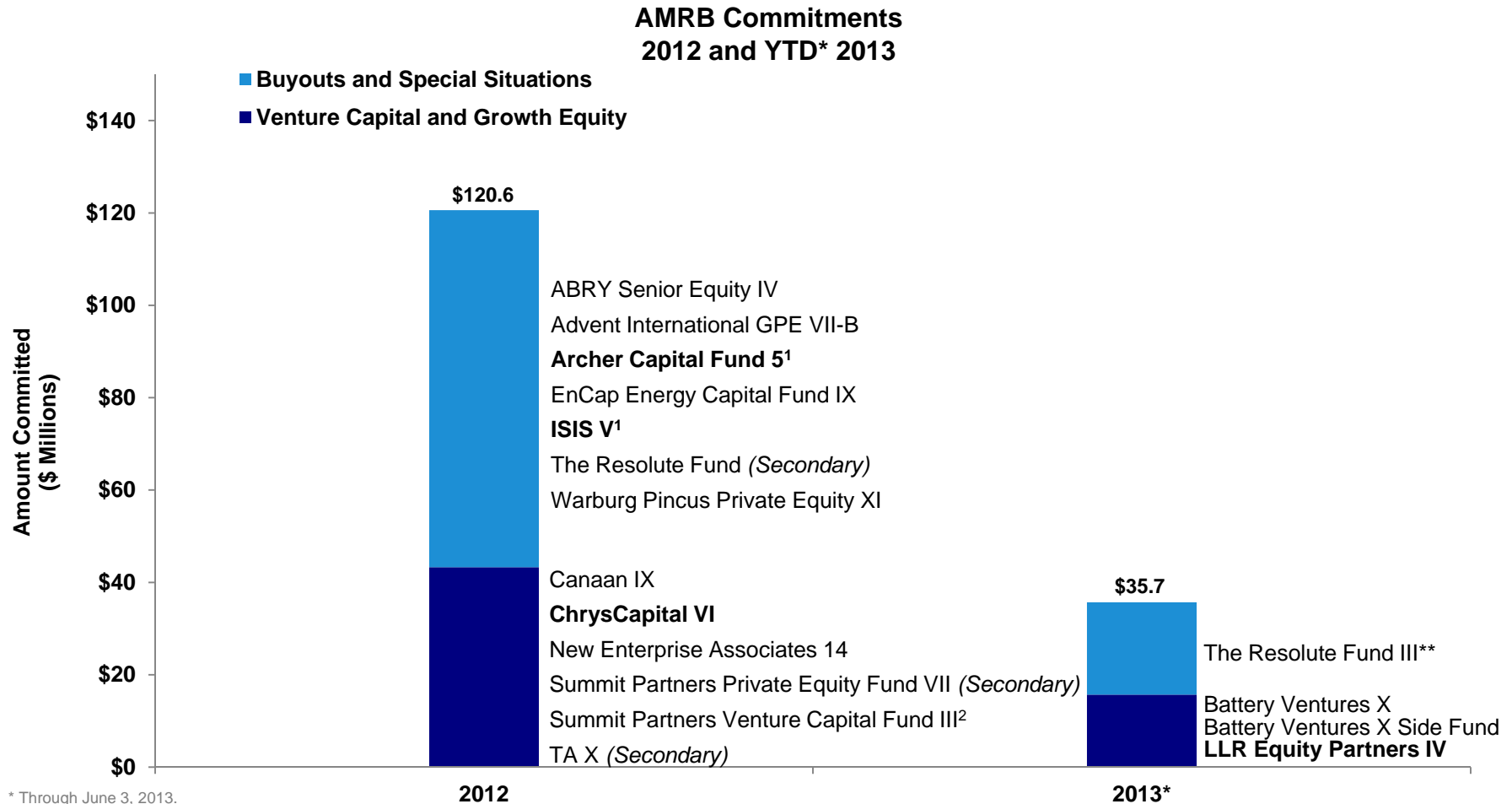
* Through June 3, 2013. The commitment to Resolute Fund III is pending close.

** Abbott Deal Flow represents primary investment opportunities presented to, or reviewed by, Abbott during the referenced calendar year for all client accounts. Investment opportunities presented to Abbott and still under review in a subsequent calendar year may be reflected in the totals for both the year presented and the year under review.

2012 and 2013 Commitment Activity

2012 and 2013 commitment target: \$140.0 million and \$145.0 million

- \$120.6 million committed to portfolio funds in 2012
- Slow commitment pace for 2013 is expected to pick up



* Through June 3, 2013.

** Committed but not closed.

Funds in bold represent a new manager relationship for Abbott.

¹ Non-U.S. dollar denominated Portfolio Fund.

² ARMB made an initial commitment to Summit Partners Venture Capital Fund III in 2011. The \$6.7 million commitment included above represents a follow-on commitment made and closed in 2012.

Pipeline of potential investments:

Category	Fund Name	Strategy
Venture Capital and Growth Equity	5am Ventures IV	Early-Stage Venture
	M/C Ventures VII	Multi-Stage Venture
	Trident Capital Fund VIII	Multi-Stage Venture
	Weston Presidio VI	Late Stage/Growth Equity
Buyouts & Special Situations	CVC European Equity Partners VI	European and North American Buyouts
	Friedman, Fleischer & Lowe Capital Partners IV	Hybrid
	GI Partners Fund IV	Hybrid
	Great Hill Equity Partners V	Hybrid
	GTCR Fund XI	Medium North American Buyouts and Special Situations
	Kelso Investment Associates IX	Medium North American Buyouts and Special Situations
	New Mountain Fund IV	Medium North American Buyouts and Special Situations
	Sentinel Capital Partners V	Small North American Buyouts
	Thomas H. Lee Equity Fund VII	Medium North American Buyouts
Vitruvian Fund II	Hybrid	

IV. Portfolio Review & Portfolio Fund Investments

Portfolio Summary – Current & Liquidated

Fund Summary – as of March 31, 2013

Total Portfolio Fund Commitments	\$1,809.4 million
Total Portfolio Fund Investments	\$1,791.0 million
<i>Primary Investments</i>	\$1,770.0 million
<i>Secondary Investments</i>	\$21.0 million*
Number of Investments (Primary/Secondary)	154/18

Fund Metrics – as of March 31, 2013

Amount Paid	\$1,422.1 million (78.6%)
Net Distributions**	\$1,288.6 million (71.2%)
Latest Valuation	\$745.1 million
Net IRR	9.1%
Net Multiple (TVPI)**	1.4x

Current Portfolio Metrics – as of December 31, 2012

Underlying portfolio companies	1,911
Underlying portfolio company investments	2,166
Average duration of investments	4.5 years
Number/Percent of Investments valued above cost	1,002 / 46%
Number/Percent of Investments valued at cost	407 / 19%
Number/Percent of Investments valued below cost	757 / 35%

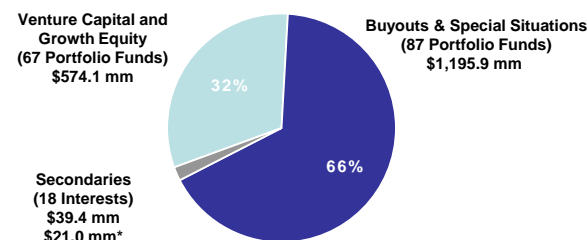
* Maximum cash outlay.

**Net of gains and losses realized upon the sale of distributed stock, including brokerage and other related commissions.

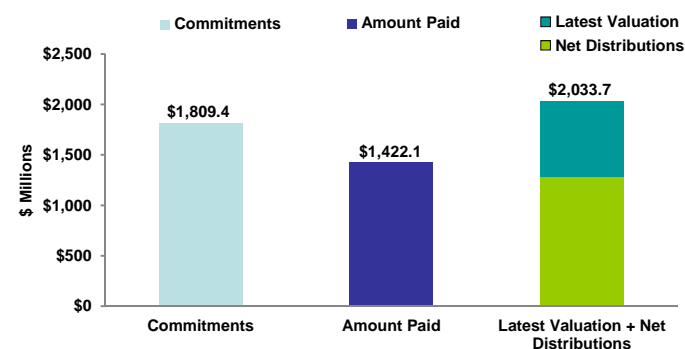
Please refer to the Important Disclosures page for detail on Abbott's calculation of valuation and return data.

Past returns are not indicative of future performance or expected realized returns and there is the possibility of complete or partial loss of capital with any private equity investment. Future returns will vary.

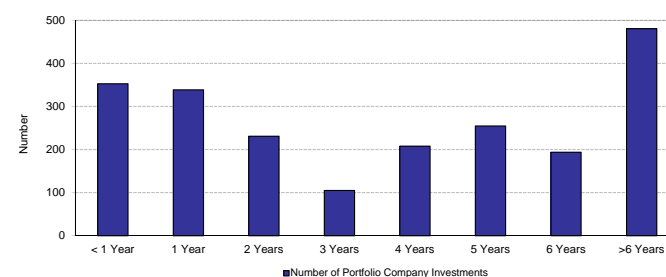
Cumulative Portfolio Commitments – By Style as of March 31, 2013



Fund Metrics – as of March 31, 2013



Current Portfolio Duration – as of December 31, 2012

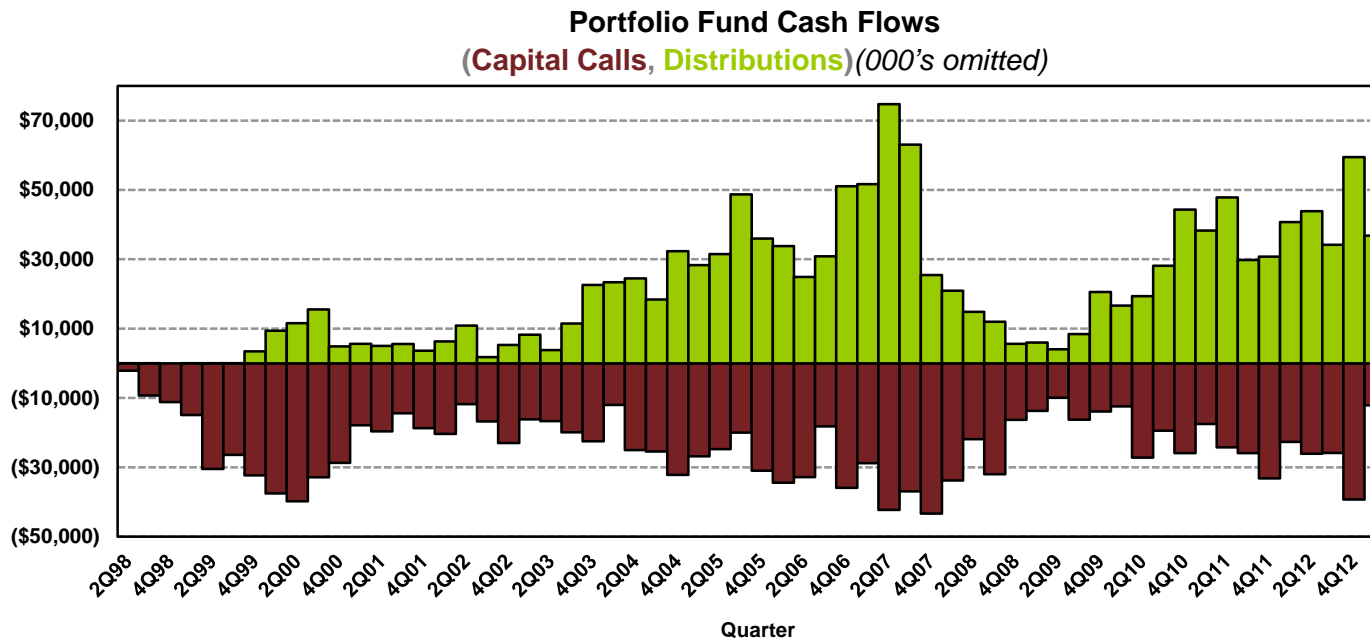


ARMB Cash Flows – Current & Liquidated

Portfolio Fund Cash Flows

- **Increase in both capital calls and distributions reflect improved deal environment**
 - Capital calls totaled \$113.9 million in 2012, a 13% increase from 2011
 - ARMB received distributions of \$178.2 million in 2012, a 22% increase from 2011

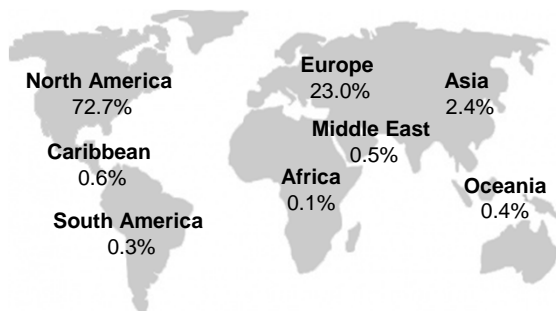
- **91.1% of called capital has been returned by the portfolio funds as of March 31, 2013**
 - An additional \$13.7 million was called from 4/1/2013 – 5/31/2013
 - An additional \$30.2 million was distributed from 4/1/2013 – 5/31/2013



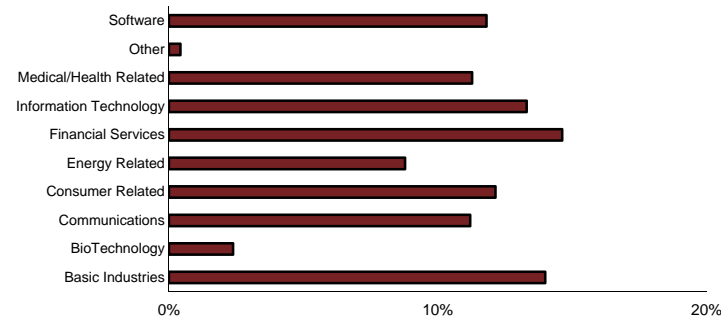
Cash flows do not include gains and losses realized upon the sale of distributed stock, including brokerage and other related commissions. Past returns are not indicative of future performance or expected realized returns and there is the possibility of complete or partial loss of capital with any private equity investment. Future returns will vary.

Current Portfolio Company Diversification

Geography Diversification by Value



Industry Diversification by Value



Top Ten Portfolio Companies By Proportionate Value

Company Name	Portfolio Fund Name
Zayo Bandwidth, Inc. (Zayo Group, LLC)	Battery Ventures VII, Battery Ventures VIII, GTCR Fund X, M/C Venture Partners VI, Oak Investment Partners XII
KAR Holdings, LLC*	Kelso Investment Associates VII
Local TV Holdings, LLC	Oak Hill Capital Partners II, Oak Hill Capital Partners III
Service-now.com, Inc.*	JMI Equity Fund V
Kosmos Energy Holdings LLC*	Blackstone Capital Partners IV, Warburg Pincus Private Equity VIII
NEW Asurion Corporation	Berkshire Fund VIII, Madison Dearborn Capital Partners V, Welsh, Carson, Anderson & Stowe X, Welsh, Carson, Anderson & Stowe XI
Bausch & Lomb Incorporated	Thomas, McNerney & Partners II, Warburg Pincus Private Equity X, Welsh, Carson, Anderson & Stowe X
Sensus Metering Systems (Bermuda 1) Ltd.	The Resolute Fund
Formula One Group	CVC European Equity Partners IV
Firth Rixson Ltd.	Oak Hill Capital Partners II, Oak Hill Capital Partners III
Total Top Ten Portfolio Companies	\$58,491,696

* Denotes publicly traded company.

Information is based on the original investment stage and portfolio company values as of December 31, 2012.

Proportionate Value is calculated based on ARMB's share of the total reported net asset value of the portfolio fund.

V. Summary & Outlook

ARMB

- High-conviction, well-diversified portfolio in place
- Expect to continue development of ARMB's strategic portfolio through selection of best-of-breed managers
- Fundraising and investment pace has slowed YTD in 2013
 - ARMB commitment pace for 2013 slightly behind target through May
- Discipline and due diligence remain as important as ever when evaluating new investments

Appendix

Statement of Investments – Current Portfolio

As of March 31, 2013 (est.)

Portfolio Funds	Initial Closing Date	Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Venture Capital and Growth Equity</u>						
ABS Capital Partners VII	10/27/2011	\$9,000,000	\$2,394,983	\$0	\$2,301,733	
Alta Partners VIII	09/25/2006	\$4,000,000	\$3,400,000	\$1,755,690	\$1,901,969	
Atlas Venture Fund VI	03/27/2001	\$6,200,000	\$6,200,000	\$2,328,745	\$2,394,650	
Atlas Venture Fund VII	11/21/2005	\$9,000,000	\$8,322,344	\$1,250,616	\$9,775,945	
Austin Ventures IX	04/01/2005	\$6,000,000	\$5,628,249	\$548,975	\$5,544,932	
Austin Ventures VI	11/17/1998	\$5,000,000	\$5,000,000	\$2,716,555	\$456,499	
Austin Ventures VII	10/29/1999	\$8,000,000	\$8,000,000	\$4,410,640	\$1,819,159	
Austin Ventures VIII	01/29/2001	\$5,533,333	\$5,533,333	\$3,633,512	\$4,409,368	
Battery Ventures IX	02/24/2010	\$2,700,000	\$1,854,765	\$255,600	\$1,964,864	
Battery Ventures VII	09/30/2004	\$800,000	\$784,889	\$585,253	\$389,421	
Battery Ventures VIII	07/02/2007	\$2,300,000	\$2,244,340	\$1,282,250	\$2,015,747	
Battery Ventures VIII Side Fund	08/15/2008	\$1,035,000	\$816,707	\$810,373	\$822,903	
Battery Ventures X	02/07/2013	\$4,050,000	\$0	\$0	\$0	
Battery Ventures X Side Fund	02/07/2013	\$1,600,000	\$0	\$0	\$0	
Canaan IX	01/06/2012	\$9,000,000	\$1,755,000	\$0	\$1,571,574	
Canaan VII	04/18/2005	\$8,000,000	\$7,200,000	\$3,854,930	\$11,033,532	
Canaan VIII	11/19/2007	\$8,000,000	\$5,880,000	\$1,819,308	\$6,163,758	
ChrysCapital VI	03/26/2012	\$5,000,000	\$1,050,000	\$0	\$966,682	
Columbia Capital Equity Partners II	05/27/1999	\$5,842,450	\$5,839,926	\$4,637,718	\$170,382	
El Dorado Ventures VI	11/29/2000	\$10,000,000	\$8,480,000	\$6,263,357	\$2,443,623	
El Dorado Ventures VII	02/03/2005	\$10,000,000	\$9,000,000	\$0	\$7,096,039	
InterWest Partners IX	08/17/2004	\$9,000,000	\$7,200,000	\$497,948	\$7,124,022	
InterWest Partners VIII	07/10/2000	\$7,500,000	\$7,500,000	\$2,897,174	\$2,490,304	
JMI Equity Fund V	05/20/2005	\$3,900,898	\$3,755,948	\$10,975,468	\$5,426,754	
JMI Equity Fund VI	06/14/2007	\$6,800,526	\$6,650,926	\$1,729,611	\$6,669,598	

Please refer to the Important Disclosures page for detail on Abbott's calculation of valuation and return data.

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Statement of Investments – Current Portfolio

ABBOTT CAPITAL

As of March 31, 2013 (est.)

Portfolio Funds	Initial Closing Date	Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Venture Capital and Growth Equity</u>						
JMI Equity Fund VII	07/13/2010	\$6,500,000	\$3,393,000	\$0	\$3,156,086	
LLR Equity Partners IV	03/21/2013	\$10,000,000	\$0	\$0	\$0	
M/C Venture Partners V	09/14/2000	\$10,000,000	\$9,946,344	\$14,473,715	\$1,562,135	
M/C Venture Partners VI	03/03/2006	\$9,000,000	\$8,456,695	\$1,407,273	\$12,557,610	
Mayfield X	06/17/1999	\$2,300,000	\$2,300,000	\$411,074	\$78,468	
Mayfield X Annex	05/15/2002	\$338,553	\$220,059	\$204,677	\$39,980	
Mayfield XI	04/14/2000	\$9,000,000	\$7,740,000	\$2,981,811	\$2,823,840	
Morgan Stanley Dean Witter Venture Partners IV	12/20/1999	\$4,501,306	\$4,501,306	\$3,261,018	\$586,140	
Morgenthaler Partners VI	03/31/2000	\$6,000,000	\$6,000,000	\$2,896,896	\$471,483	
Morgenthaler Partners VII	07/19/2001	\$12,000,000	\$12,000,000	\$8,508,186	\$2,631,967	
New Enterprise Associates 10	01/25/2001	\$10,013,479	\$9,863,479	\$8,445,990	\$3,022,461	
New Enterprise Associates 11	12/05/2003	\$12,000,000	\$11,400,000	\$9,195,187	\$8,831,002	
New Enterprise Associates 12	04/25/2006	\$17,000,000	\$16,065,000	\$5,787,406	\$16,367,613	
New Enterprise Associates 13	01/15/2009	\$11,000,000	\$8,855,000	\$1,286,037	\$10,707,668	
New Enterprise Associates 14	05/04/2012	\$20,000,000	\$4,500,000	\$0	\$4,255,471	
New Enterprise Associates 9	01/27/2000	\$11,018,353	\$10,798,353	\$2,871,049	\$2,369,689	
New Enterprise Associates VIII	02/19/1999	\$13,031,307	\$13,031,307	\$19,778,021	\$1,572,473	
Oak Investment Partners IX	09/30/1999	\$10,000,000	\$10,000,000	\$5,904,813	\$766,958	
Oak Investment Partners VIII	09/14/1998	\$8,000,000	\$8,000,000	\$14,404,687	\$115,578	
Oak Investment Partners X	12/01/2000	\$15,000,000	\$15,000,000	\$12,562,231	\$7,522,977	
Oak Investment Partners XI	07/01/2004	\$15,000,000	\$15,000,000	\$5,872,873	\$8,265,701	
Oak Investment Partners XII	05/19/2006	\$12,000,000	\$11,833,137	\$3,107,704	\$10,784,299	
Oak Investment Partners XIII	06/30/2009	\$11,500,000	\$5,946,221	\$1,259,277	\$5,544,146	
Summit Partners Growth Equity Fund VIII	03/11/2011	\$20,000,000	\$1,400,000	\$0	\$1,267,204	
Summit Partners Private Equity Fund VII-A	05/27/2005	\$17,500,000	\$17,500,000	\$3,802,691	\$16,700,066	

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Statement of Investments – Current Portfolio

Portfolio Funds	Initial Closing Date	As of March 31, 2013 (est.)				
		Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Venture Capital and Growth Equity</u>						
Summit Partners Venture Capital Fund III-A	03/11/2011	\$9,500,000	\$1,235,000	\$0	\$1,222,326	
Summit Ventures VI-B	12/07/2000	\$10,000,000	\$10,000,000	\$14,115,955	\$5,025,920	
TA IX	07/11/2000	\$20,000,000	\$19,400,000	\$44,781,837	\$1,617,451	
TA X	03/23/2006	\$15,000,000	\$14,475,000	\$8,175,000	\$8,395,106	
TA XI	04/30/2009	\$20,000,000	\$9,700,000	\$500,000	\$10,540,320	
Thomas, McNerney & Partners II	08/03/2006	\$6,500,000	\$5,573,750	\$811,307	\$4,889,238	
Trident Capital Fund-V	10/16/2000	\$7,074,667	\$7,015,865	\$6,208,850	\$3,899,417	
Trident Capital Fund-VI	11/05/2004	\$10,000,000	\$10,000,000	\$2,960,441	\$7,040,710	
Trident Capital Fund-VII	01/14/2010	\$6,500,713	\$4,654,713	\$899	\$5,222,233	
U.S. Venture Partners VI	12/02/1998	\$5,000,000	\$5,000,000	\$6,113,319	\$23,578	
U.S. Venture Partners VII	12/09/1999	\$7,791,667	\$7,791,667	\$2,720,207	\$557,839	
U.S. Venture Partners VIII	01/31/2001	\$7,500,000	\$7,380,000	\$7,598,819	\$1,074,089	
U.S. Venture Partners X	06/24/2008	\$9,100,000	\$5,824,000	\$363,648	\$7,042,120	
Weston Presidio V	03/06/2006	\$6,500,000	\$6,125,561	\$3,730,727	\$6,418,618	
Total Venture Capital and Growth Equity		\$561,432,251	\$442,416,867	\$278,757,348	\$269,923,438	+4.83%

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Statement of Investments – Current Portfolio

As of March 31, 2013 (est.)

Portfolio Funds	Initial Closing Date	Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Buyouts and Special Situations</u>						
ABRY Partners VII	04/29/2011	\$3,000,000	\$1,911,501	\$0	\$2,034,757	
ABRY Senior Equity III	03/31/2010	\$4,500,000	\$3,989,251	\$79,150	\$4,957,142	
ABRY Senior Equity IV	12/07/2012	\$5,002,755	\$823,822	\$0	\$835,236	
Advent International GPE V-D*	02/28/2005	\$16,044,584	\$14,990,493	\$23,413,285	\$13,225,102	
Advent International GPE VI-A	03/12/2008	\$17,000,000	\$16,133,000	\$3,017,497	\$18,781,522	
Advent International GPE VII-B	06/29/2012	\$20,000,000	\$4,300,000	\$0	\$4,158,506	
Alta Communications VIII	02/23/2000	\$15,000,000	\$14,700,000	\$9,403,955	\$676,611	
Apollo Investment Fund IV	06/30/1998	\$10,000,000	\$9,978,482	\$16,612,890	\$135,566	
Archer Capital Fund 5*	01/31/2012	\$3,227,586	\$371,113	\$0	\$277,561	
BCI Growth V	02/10/1999	\$10,003,256	\$9,477,376	\$4,119,485	\$524,456	
Berkshire Fund VIII	05/11/2011	\$6,500,000	\$1,005,738	\$0	\$870,657	
Blackstone Capital Partners IV	11/09/2001	\$15,171,311	\$14,665,316	\$28,818,012	\$8,296,405	
Blackstone Communications Partners I	08/04/2000	\$10,828,982	\$8,037,371	\$10,206,586	\$1,174,678	
Candover 2005 Fund*	08/12/2005	\$11,153,314	\$10,913,498	\$2,130,353	\$4,375,420	
Candover 2008 Fund*	12/18/2008	\$2,153,939	\$1,811,622	\$40,525	\$983,181	
Cinven Fifth Fund*	12/23/2011	\$18,560,933	\$1,026,927	\$0	\$829,143	
Cinven Fourth Fund*	02/24/2006	\$11,537,147	\$10,156,338	\$2,982,406	\$10,936,328	
Cinven Second Fund*	04/30/1998	\$18,440,421	\$17,796,052	\$28,108,661	\$546,893	
Cinven Third Fund*	07/17/2001	\$33,827,758	\$32,114,547	\$61,274,874	\$4,385,255	
CVC European Equity Partners II	06/03/1998	\$10,000,000	\$9,218,056	\$20,509,926	\$944,176	
CVC European Equity Partners III	12/29/2000	\$15,000,000	\$14,325,025	\$37,636,701	\$3,370,714	
CVC European Equity Partners IV*	07/29/2005	\$26,139,553	\$23,125,327	\$30,342,085	\$12,015,447	
CVC European Equity Partners V*	04/18/2008	\$16,941,844	\$11,760,120	\$3,922,470	\$10,457,153	
ECI 8*	04/08/2005	\$9,333,405	\$9,181,512	\$1,082,980	\$5,591,245	
ECI 9*	12/03/2008	\$10,446,477	\$5,889,687	\$0	\$5,837,985	

* Non-U.S. dollar denominated Portfolio Fund.

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Statement of Investments – Current Portfolio

As of March 31, 2013 (est.)

Portfolio Funds	Initial Closing Date	Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Buyouts and Special Situations</u>						
EIF United States Power Fund IV	06/01/2011	\$7,000,000	\$1,699,644	\$165,915	\$1,283,306	
EnCap Energy Capital Fund IX	12/19/2012	\$16,000,000	\$175,152	\$0	\$100,523	
EnCap Energy Capital Fund VIII	01/31/2011	\$3,500,846	\$1,433,542	\$144,620	\$1,570,048	
EnCap Energy Capital Fund VIII Co-Investors	12/08/2011	\$900,000	\$429,531	\$0	\$496,327	
Energy Spectrum Partners VI	03/31/2011	\$7,001,433	\$1,342,955	\$0	\$1,185,845	
Eos Capital Partners IV	02/28/2007	\$5,000,000	\$3,654,478	\$832,842	\$3,185,991	
EQT IV*	08/03/2004	\$10,403,081	\$10,348,953	\$11,927,781	\$8,803,679	
EQT V*	10/23/2006	\$12,840,398	\$11,774,172	\$8,909,465	\$6,412,268	
First Reserve Fund X	12/23/2003	\$10,000,000	\$10,000,000	\$16,226,460	\$1,686,799	
First Reserve Fund XI	07/28/2006	\$15,000,000	\$14,980,530	\$4,507,502	\$12,883,314	
First Reserve Fund XII	10/30/2008	\$20,040,697	\$15,994,129	\$1,110,490	\$16,664,525	
Green Equity Investors V	01/30/2007	\$10,348,097	\$9,542,879	\$5,978,132	\$8,312,856	
Green Equity Investors VI	12/23/2011	\$20,000,000	\$1,926,353	\$50,826	\$1,797,282	
GTCR Fund IX	06/23/2006	\$10,000,000	\$9,271,991	\$4,212,155	\$9,395,479	
GTCR Fund VI	04/24/1998	\$25,000,000	\$25,000,000	\$21,614,878	\$797,843	
GTCR Fund VII	01/06/2000	\$15,002,243	\$14,889,743	\$35,034,393	\$62,062	
GTCR Fund VIIA	01/06/2000	\$5,000,000	\$3,312,500	\$9,231,043	\$19,894	
GTCR Fund VIII	05/12/2003	\$10,000,000	\$9,252,480	\$13,472,828	\$2,832,286	
GTCR Fund X	10/15/2010	\$20,000,000	\$12,289,721	\$0	\$13,412,558	
Harvest Partners VI	05/31/2011	\$10,000,000	\$3,539,023	\$20,102	\$3,759,987	
Hellman & Friedman Capital Partners VII	09/08/2009	\$10,000,000	\$2,966,795	\$277,752	\$2,491,715	
ISIS V*	03/23/2012	\$9,122,378	\$230,089	\$0	\$47,324	
Kelso Investment Associates VII	12/16/2003	\$25,000,000	\$23,757,453	\$25,057,753	\$14,649,941	
Kelso Investment Associates VIII	07/13/2007	\$20,000,000	\$14,081,959	\$1,782,051	\$12,193,386	
KKR 2006 Fund	02/13/2007	\$10,501,627	\$9,883,427	\$4,580,222	\$7,863,716	

* Non-U.S. dollar denominated Portfolio Fund.

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Statement of Investments – Current Portfolio

As of March 31, 2013 (est.)

Portfolio Funds	Initial Closing Date	Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Buyouts and Special Situations</u>						
Madison Dearborn Capital Partners III	01/26/1999	\$15,000,000	\$14,875,733	\$22,714,757	\$21,824	
Madison Dearborn Capital Partners IV	11/21/2000	\$13,000,000	\$12,581,554	\$18,654,275	\$5,207,209	
Madison Dearborn Capital Partners V	02/16/2006	\$15,696,806	\$13,259,653	\$3,681,871	\$13,955,631	
Madison Dearborn Capital Partners VI	07/11/2008	\$21,171,217	\$10,346,239	\$6,061,881	\$6,360,829	
Montagu IV*	12/22/2010	\$9,807,702	\$3,206,474	\$0	\$3,061,062	
Oak Hill Capital Partners	04/01/1999	\$10,000,000	\$10,000,000	\$17,964,129	\$141,230	
Oak Hill Capital Partners II	12/17/2004	\$25,000,000	\$24,659,950	\$25,308,898	\$12,497,043	
Oak Hill Capital Partners III	11/21/2007	\$20,000,000	\$14,919,771	\$56,965	\$17,740,693	
Spectrum Equity Investors V	02/17/2005	\$15,000,000	\$14,062,500	\$18,535,133	\$9,263,267	
Spectrum Equity Investors VI	11/10/2008	\$7,500,000	\$3,618,750	\$0	\$3,267,777	
Summit Partners Subordinated Debt Fund IV-A	04/02/2008	\$8,000,000	\$5,176,944	\$726,519	\$5,193,043	
TA Subordinated Debt Fund	03/10/2000	\$15,000,000	\$15,000,000	\$22,100,138	\$103,459	
TA Subordinated Debt Fund III	05/18/2009	\$5,000,000	\$3,500,000	\$262,500	\$3,524,340	
The Resolute Fund	09/30/2002	\$20,000,000	\$18,920,118	\$34,150,334	\$8,887,561	
The Resolute Fund II	04/06/2007	\$20,020,429	\$15,187,282	\$2,101,437	\$16,816,893	
Thomas H. Lee Equity Fund V	04/21/2000	\$26,360,412	\$26,152,199	\$38,727,542	\$3,498,175	
Thomas H. Lee Equity Fund VI	04/27/2007	\$10,679,644	\$8,568,755	\$1,495,414	\$8,761,763	
Three Cities Fund III	10/08/1999	\$9,558,084	\$9,549,242	\$16,749,987	\$1,201,115	
Trident V (Stone Point)	09/22/2010	\$15,016,858	\$6,846,627	\$7,977	\$6,790,576	
Vestar Capital Partners IV	10/20/1999	\$7,908,815	\$7,788,317	\$12,119,739	\$1,532,248	
Vestar Capital Partners V	08/11/2005	\$12,000,000	\$11,817,875	\$3,562,428	\$8,899,268	
VS&A Communications Partners III	02/05/1999	\$7,500,000	\$7,440,476	\$9,545,426	\$659,128	
Warburg Pincus Private Equity VIII	02/26/2002	\$20,069,361	\$20,069,361	\$29,765,508	\$14,961,328	
Warburg Pincus Private Equity X	10/05/2007	\$20,000,000	\$19,580,000	\$3,813,930	\$19,022,860	
Warburg Pincus Private Equity XI	05/09/2012	\$20,000,000	\$4,350,000	\$0	\$4,162,605	

* Non-U.S. dollar denominated Portfolio Fund.

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Statement of Investments – Current Portfolio

Portfolio Funds	Initial Closing Date	As of March 31, 2013 (est.)				
		Amount Committed	Amount Paid	Total Distributions	Latest Valuation	IRR
<u>Buyouts and Special Situations</u>						
Warburg, Pincus Equity Partners	06/11/1998	\$25,000,000	\$25,000,000	\$39,911,032	\$917,522	
Welsh, Carson, Anderson & Stowe IX	06/28/2000	\$20,000,000	\$19,800,000	\$27,282,745	\$4,620,656	
Welsh, Carson, Anderson & Stowe VIII	07/01/1998	\$25,000,000	\$25,000,000	\$32,125,405	\$46,755	
Welsh, Carson, Anderson & Stowe X	12/15/2005	\$15,086,770	\$14,636,770	\$6,127,328	\$13,675,131	
Welsh, Carson, Anderson & Stowe XI	06/20/2008	\$20,000,000	\$13,251,929	\$862,167	\$15,611,809	
Total Buyouts and Special Situations		\$1,101,850,163	\$858,646,192	\$843,254,517	\$458,532,893	+11.22%

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Statement of Investments – Current Portfolio

ABBOTT CAPITAL

As of March 31, 2013 (est.)

Portfolio Funds	Type	Purchase Date	Maximum Cash Outlay	Amount Paid	Total Distributions	Latest Valuation	IRR
Secondaries							
Advent International GPE V-B*	Buyouts	01/31/2012	\$2,539,818	\$2,274,823	\$772,650	\$2,361,236	
M/C Venture Partners V	VC and GE	12/31/2007	\$2,705,634	\$2,691,457	\$2,696,830	\$412,761	
Morgenthaler Partners VI	VC and GE	05/06/2003	\$147,000	\$147,000	\$144,844	\$23,572	
Morgenthaler Partners VII	VC and GE	05/16/2005	\$690,962	\$690,961	\$544,267	\$170,750	
Oak Investment Partners IX	VC and GE	12/31/2003	\$322,387	\$322,387	\$582,985	\$83,377	
Oak Investment Partners VIII	VC and GE	12/31/2003	\$75,508	\$75,508	\$192,012	\$10,900	
Oak Investment Partners X	VC and GE	07/02/2003	\$311,998	\$311,999	\$342,435	\$203,535	
Oak Investment Partners X	VC and GE	12/31/2003	\$701,390	\$701,390	\$811,486	\$515,266	
Oak Investment Partners XII	VC and GE	12/31/2008	\$571,266	\$559,348	\$188,456	\$770,178	
Oak Investment Partners XII	VC and GE	03/30/2012	\$3,207,162	\$3,137,637	\$516,142	\$4,493,460	
Summit Partners Private Equity Fund VII-A	VC and GE	12/31/2012	\$2,245,401	\$2,245,401	\$0	\$2,757,579	
TA X	VC and GE	12/31/2012	\$364,663	\$336,027	\$16,364	\$457,915	
The Resolute Fund	Buyouts	06/28/2012	\$3,366,380	\$3,085,612	\$1,901,019	\$2,310,725	
Three Cities Fund III	Buyouts	06/24/2003	\$1,794,926	\$1,790,505	\$7,305,565	\$600,557	
U.S. Venture Partners VI	VC and GE	01/01/2009	\$57,271	\$57,271	\$117,158	\$10,055	
U.S. Venture Partners VII	VC and GE	01/01/2009	\$245,954	\$245,954	\$560,011	\$188,479	
U.S. Venture Partners VIII	VC and GE	01/01/2009	\$903,065	\$840,138	\$2,913,067	\$563,231	
Total Secondaries			\$20,250,785	\$19,513,419	\$19,605,292	\$15,933,576	+26.40%

* Non-U.S. dollar denominated Portfolio Fund.

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Statement of Investments – Liquidated Portfolio

Portfolio Funds	Initial Closing Date	As of March 31, 2013 (est.)			
		Amount Committed	Amount Paid	Total Proceeds	IRR
<u>Liquidated</u>					
Alta Communications VII	07/09/1998	\$12,000,000	\$12,000,000	\$11,469,194	
CCEP II (QP) – Riviera	09/15/2000	\$157,550	\$157,550	\$ 4,025	
El Dorado Ventures V	09/17/2000	\$5,000,000	\$5,000,000	\$2,827,440	
First Reserve Fund VIII	04/07/1998	\$20,789,303	\$20,019,582	\$39,941,067	
First Reserve Fund IX	03/09/2001	\$15,000,000	\$15,000,000	\$44,971,370	
Kelso Investment Associates VI	06/01/1998	\$25,000,000	\$21,147,011	\$29,514,170	
M/C Venture Partners IV	01/05/1999	\$7,500,000	\$6,937,500	\$5,202,148	
M/C Venture Partners IV – <i>Secondary</i>	12/31/2007	\$775,000 ⁽¹⁾	\$700,000	\$493,184	
Mezzanine Management Fund III	06/22/2000	\$8,063,342	\$7,845,672	\$9,826,759	
Phildrew Ventures Fifth Fund*	04/30/1999	\$3,765,068	\$3,701,952	\$1,969,162	
Thomas H. Lee Equity Fund IV	03/23/1998	\$9,456,157	\$9,021,376	\$7,834,457	
Total Liquidated		\$107,506,420	\$101,530,643	\$154,052,976	+9.91%

	<u>Amount Committed</u>	<u>Amount Paid</u>	<u>Total Distributions</u>	<u>Latest Valuation</u>
Total Portfolio Funds – Current & Liquidated Portfolio	\$1,791,039,619	\$1,422,107,121	\$1,295,670,133	\$744,389,906

* Non-U.S. dollar denominated Portfolio Fund.

⁽¹⁾ Maximum cash outlay.

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Pathway Capital Management

Mandate: Private Equity

Hired: 2002

Firm Information	Investment Approach	Total ARMB Mandate
<p>Founded in 1991, Pathway creates and manages private equity separate accounts and funds of funds for institutional investors worldwide. Pathway manages capital on behalf of some of the largest corporate and public pension plans, government entities, and financial institutions around the globe. The firm manages assets of \$25.9 billion.</p> <p>Pathway is registered as an investment advisor with the SEC in the United States and as a portfolio manager and exempt market dealer in Ontario, Quebec, and Saskatchewan, Canada. Pathway's wholly owned UK subsidiary is regulated in the UK by the Financial Services Authority.</p> <p>Key Executives: Jim Chambliss, Managing Director Canyon Lew, Director</p>	<p>Pathway's decision-making process uses a team approach; no one individual has authority to make decisions regarding portfolio management without the input of other senior professionals.</p> <p>Final investment decisions are made by the Investment Committee comprised of four senior managing directors and four managing directors.</p> <p>Pathway is extremely selective in choosing private equity investment funds. Every partnership must meet rigid standards regarding the overall quality of the investment opportunity, such as:</p> <ul style="list-style-type: none"> ▪ Target markets that can support private equity investing; ▪ Long-term and proven private equity business model; ▪ Stable management team operating under a consistent firm culture; ▪ Proven access to high-quality investment opportunities and resources; ▪ Strong track record. <p>Benchmark: Russell 3000 +350 basis points and the Thomson Reuters vintage year peer comparison.</p>	<p>Assets Under Management: (5/31/13) Commitments: \$1,417 million Market Value: \$ 761 million</p> <p>2012 Management Fees: \$2,241,666</p>

Concerns: None

Performance

The since inception internal rate of return (IRR) for Pathway's ARMB portfolio is 11.9% through 12/31/2012, which compares favorably with the public market equivalent return for the Russell 3000 of 5.7%.

In Callan's December 2012 vintage year comparison of the Pathway portfolio and the Thomson Reuters database for the eight years from 2001 through 2008, the Pathway portfolio is in the top quartile for 6 years and in the second quartile for 2 years.

Presentation Prepared For

Alaska Retirement Management Board

June 20, 2013





- Pathway Update
- Private Equity Environment
- Portfolio Update
- Appendix



Pathway Update



Pathway Overview

- **Established**— 1991
- **Assets Under Management**—\$25.9 billion¹
- **Global Investor Base**—Institutions across North America, Europe, and Asia
 - Corporate Pension Funds
 - Financial Institutions
 - Public Pension Funds and Trusts
- **Ownership**—Independent, 100% employee owned
- **Personnel**—111 employees, including 36 investment professionals, supported by a deep team of legal, accounting, client services, information technology, and administrative personnel
- **Locations**—California • Rhode Island • London • Hong Kong • Tokyo²
- **Global Private Equity Specialist**—Pathway creates specialized private equity funds for institutional investors.

SEC-Registered ■ FCA-Regulated ■ SFC-Regulated

1. Represents roll-forward market value plus undrawn capital at March 31, 2013.

2. Strategic alliance with Tokio Marine Asset Management, a Japanese investment adviser.



Organizational Chart

Partners

Douglas K. Le Bon Senior Managing Director	James H. Reinhardt Senior Managing Director	Karen J. Jakobi Senior Managing Director & CIO	James R. Chambliss Managing Director	James E. Heath† Managing Director	Thomas W. Laders* Managing Director	Richard S. Mazer Managing Director	Terrence G. Melican Managing Director	
Milt M. Best, CFA Director & CCO	Alex M. Casbolt† Director	Anne M. Collins* Director	Vincent P. Dee, CFA Director	Curtis P. Gerlach Director & CFO	Canyon J. Lew Director	Cheryl L. Maliwanag Director	Valerie A. Ruddick Director	Wayne D. Smith, CFA* Director

Investing & Reporting

Paul J. de Groot, CFA Sr. Vice President	Jason C. Jenkins, CFA Sr. Vice President	Matthew M. Lugar* Sr. Vice President	Derrek I. Ransford, CFA† Sr. Vice President	Pete Veravanich Sr. Vice President	Simon Y.S. Lau† Vice President	Matthew J. Coyne* Sr. Associate	Mikael Sand, CFA† Sr. Associate	Joseph C. Tien† Sr. Associate
John T. Ruggieri, CFA* Associate	Nicholas J. Siemsen Associate	Stefan Goettl† Sr. Investment Analyst	Daniel R. Marks Sr. Investment Analyst	Bryan P. Nelson Sr. Investment Analyst	Seema R. Shah Sr. Investment Analyst	Jeffrey L. Buress* Investment Analyst	Sean J. Castillo Investment Analyst	Justin C. Maney Investment Analyst
Jenna R. Sandvig Investment Analyst	William Bin Xu† Investment Analyst	Tonie X. Zhu Investment Analyst						

Corporate Accounting

Christine P. Cornejo, CPA (inactive) Sr. Vice President—Corporate Finance	Lori L. Espinosa Accounting Manager
Stacey A. Jaswell Sr. Staff Accountant	Eric A. Thomson, CPA Sr. Staff Accountant
Evan Lai Staff Accountant	Mitzi Ledesma Payroll/HR Administrator

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Kelly K. Gould, CPA Accountant	Nora Herand-Yesire Accountant	Patrick Y. Kim, CPA Accountant	Athena Y. Lu, CPA Accountant
Gracielle V. Samson Accountant	Pamela Stanford, CPA (inactive) Accountant	Heidi T. Jauregui Sr. Operations Specialist	Katherine M. Dabu Operations Specialist
Rochele L. Porpora Operations Specialist			Amanda I. Erwin Operations Specialist

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Michael A. Codipilly Tax Accountant	Erik Gonzalez Tax Accountant
Aryn K. Guenther Tax Operations Specialist	

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--------------------------------------	---

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---	---	--	--------------------------------	------------------------------------	---

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Kristy R. Valadez Sr. Graphic Designer	

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Dustin H. Smith Sr. Systems Administrator

Software Development

Michael C. Long Mgr.—Software Development	Rodney D. Kent Software Developer
Dat T. Nguyen Software Developer	

Human Resources

Laurie N. Kiley Vice President of HR
--

Administrative

Reeny A. Higuchi Office Manager	Monica A. Burgos†	Kelley S. Cattanach
Sandra A. Clay	Kelly N. Charlshe	Mia N. Chimento
Deanna L. Handy	Terri A. D'Amore	Meri K. Eaton
Michelle M. Loel	Kathleen G. Kling	Jennifer A. Leddy*
Pilar N. Parsons	Gloria R. McVicker	Megan M. Osborn
Laura E. Stevenson	Patricia A. Pierce	Linda M. Steavens

*Rhode Island staff. †London staff. ‡Hong Kong staff.



Private Equity Environment



Overview

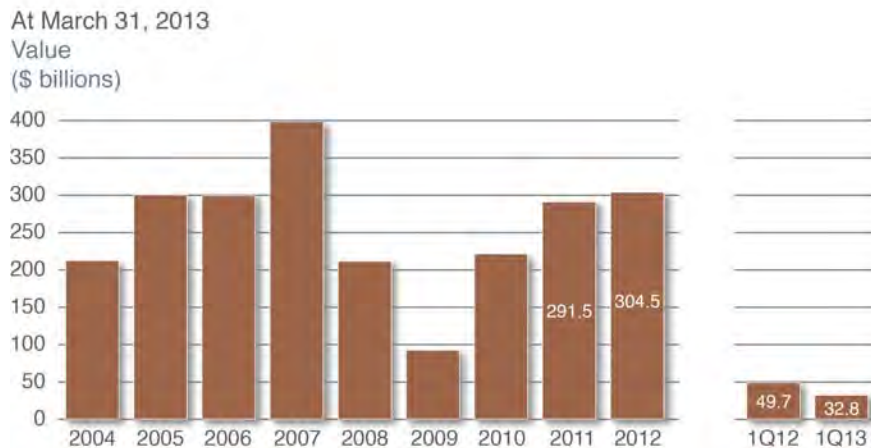
- Private equity has performed well in a volatile environment.
- M&A exit markets for private equity–backed companies were strong in 2012; however, global IPO markets remained constrained.
- U.S. non-investment-grade credit markets are accommodative; European non-investment-grade credit markets are loosening.
- Default rates remain at extremely low levels in both the United States and Europe.
- U.S. private equity market is outperforming other regions in terms of exit, fundraising, and investment activity.
- Global macroeconomic outlook has improved but uncertainty continues to impact overall sentiment, IPO markets, and private equity investment activity.



GPs Have Successfully Navigated Erratic Exit Markets

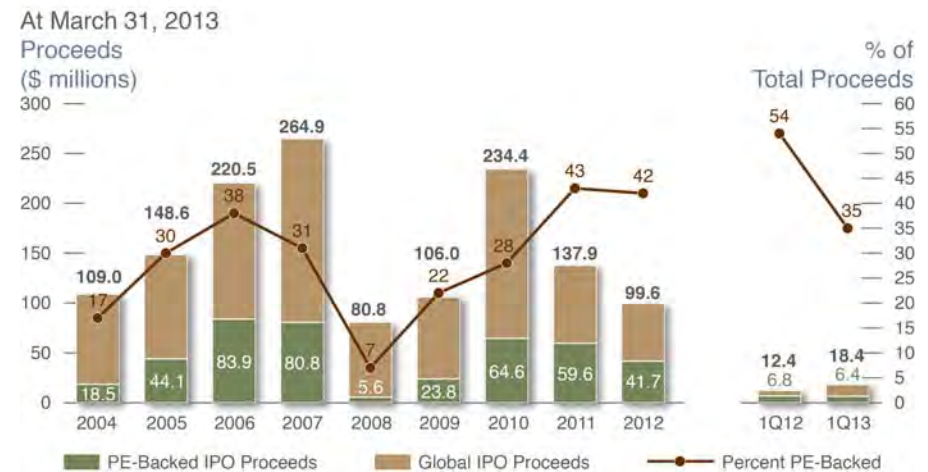
- IPO and M&A exit markets have been open and shut intermittently over the past few years.
 - Global PE-backed IPO issuance declined by 6% in 1Q13 from the year-ago period following a 30% decline in 2012.
 - However, follow-on offerings led by financial sponsors generated a record \$20.5 billion in proceeds in 1Q13.
- M&A exit activity has been driven by strategic acquirers with record-high cash balances seeking to drive growth and expand product offerings.
 - \$304.5 billion in PE-backed M&A exit value in 2012 is the highest annual total since 2007. The pace of M&A exits, however, declined in 1Q13.
 - E.g., Goldman Global (\$3.7bn sale to Daikin), Bolthouse Farms (\$1.6bn sale to Campbell Soup), Starbev (€2.7bn sale to Molson Coors), Nicira (\$1.3 billion sale to VMware), Anchor Glass (\$880mm sale to Ardagh), and Talaris (\$1.0bn sale to Glory).
- GPs have been creative in generating their own exit opportunities in a volatile market environment.
 - E.g., CVC Capital Partners sold part of its stake in Formula One to 3 large institutional investors in a pre-IPO private placement and an additional stake following the postponement of the IPO due to adverse market conditions.

Global PE-Backed M&A Exit Activity



SOURCE: mergermarket.

Global PE-Backed IPO Issuance



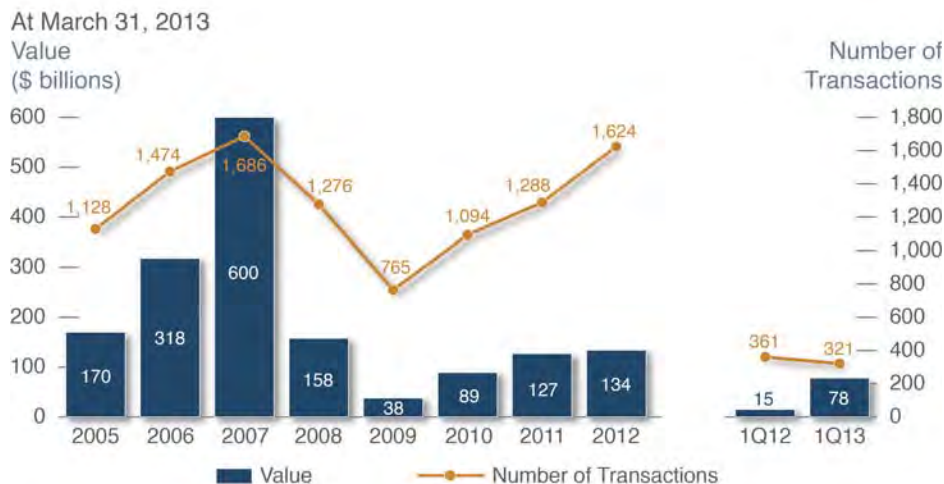
SOURCE: Renaissance Capital and Thomson Reuters.



Macroeconomic Uncertainty Has Hampered PE Investment Activity

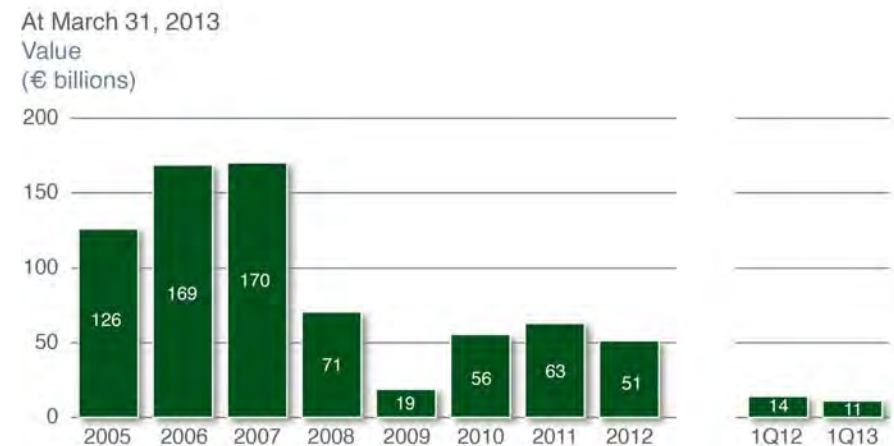
- Market volatility and uncertainty has negatively impacted confidence and deal-making activity.
 - However, there is a growing divergence across regions: U.S. buyout investment activity was up five-fold in 1Q13 over the year-ago period (due to Dell and Heinz), while European and Asian buyout investment activity declined by 21% and 33%, respectively.
 - Improving global macroeconomic outlook may increase overall market sentiment and confidence, which may spur an increase in investment activity over the coming quarters.
- GPs have been opportunistic and creative in deploying capital in this environment.
 - Corporate carveouts of non-core divisions from liquidity constrained or restructuring sellers have been a fertile source of opportunity for private equity (e.g., DuPont Performance Coatings, Hamilton Sundstrand, Capsugel, Skype).
 - Other notable investment trends include energy (Kinder Morgan assets, Cheniere, El Paso E&P Assets, Samson), restructuring/distressed opportunities (Knight Capital, Alinta, BankUnited), and public-to-private buyouts (Dell, Heinz, Rue21, and Par Pharmaceutical).

U.S. Buyout Transaction Value & Volume



SOURCE: Thomson Reuters.

European Buyout Transaction Value



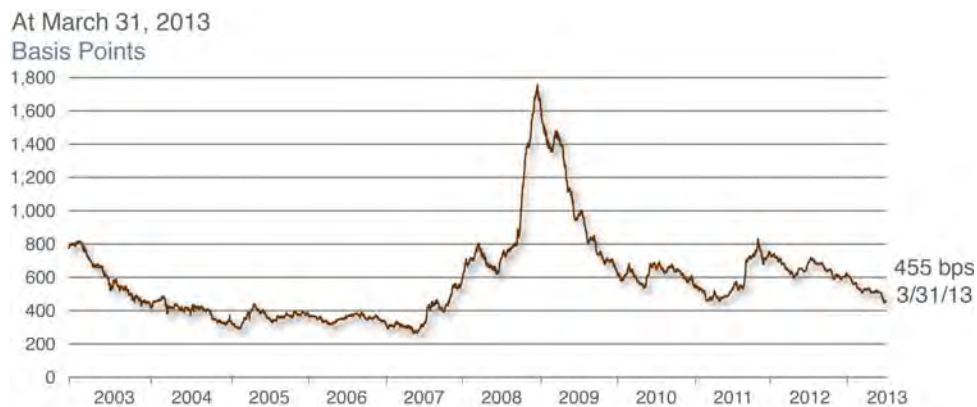
SOURCE: CMBOR.



U.S. Leveraged Credit Markets are Accommodative

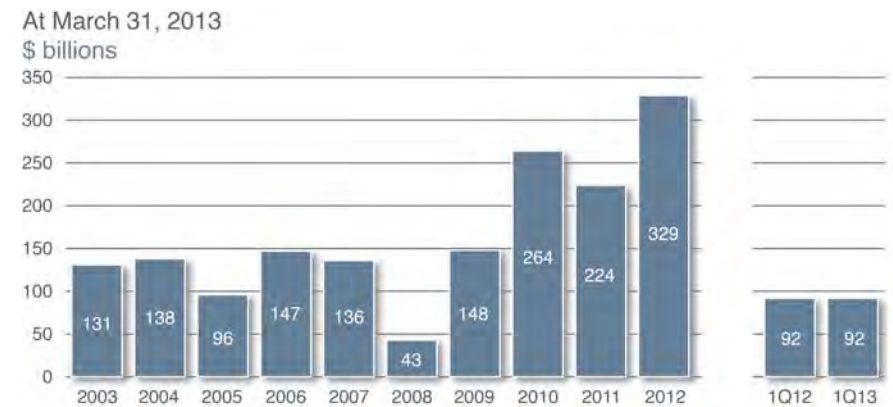
- U.S. credit markets have been highly accommodative. Debt financing is available for most transactions at historically low rates.
 - High-yield bond issuance reached an all-time high of \$329 billion in 2012, 25% higher than the prior record set in 2010.
 - Average debt-to-EBITDA multiple for new buyout loans was 5.1x in 2012, up from 4.9x in 2011.
- Credit spreads and yields have decreased from year-end 2011 levels, benefiting borrowers.
 - Secondary spreads for U.S. high-yield bonds averaged 455 bps as of March 2013, down from 565 bps at the end of 2012.
 - Average yield-to-maturity for a new B-rated leveraged loan was 5.3% as of March 2013, down from 6.2% at the end of 2012.
 - Effective yield-to-maturity on high-yield debt securities reached an all-time low in January 2013, according to Bank of America/Merrill Lynch.
- European credit markets have been constrained due to the sovereign debt crisis; however, there are recent signs of improvement.
 - The ECB's actions to contain the region's debt crisis are having a positive effect on European credit markets.
 - European high-yield issuance reached a record high in 2012 (€53.1 billion), an increase of 30% over the prior year. Spreads for euro-denominated high-yield bonds declined significantly in 2012.

High-Yield Bond Spreads Over U.S. Treasuries



SOURCE: Standard & Poor's.

U.S. High-Yield Bond Issuance



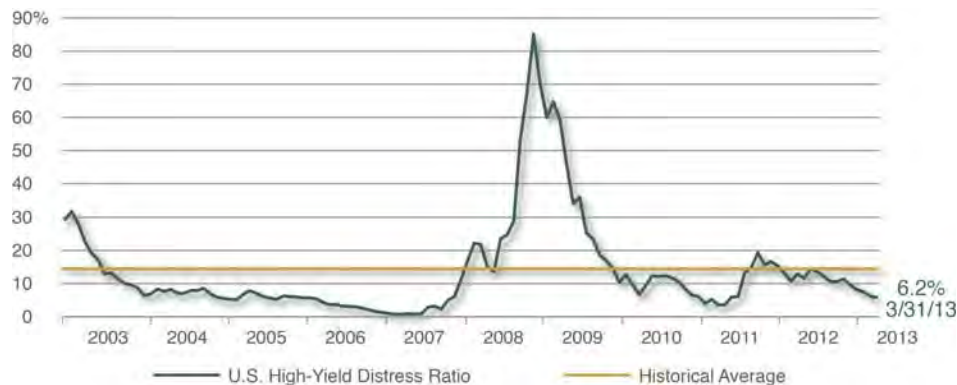
SOURCE: SIFMA.



Default Rates Remain at Historically Low Levels

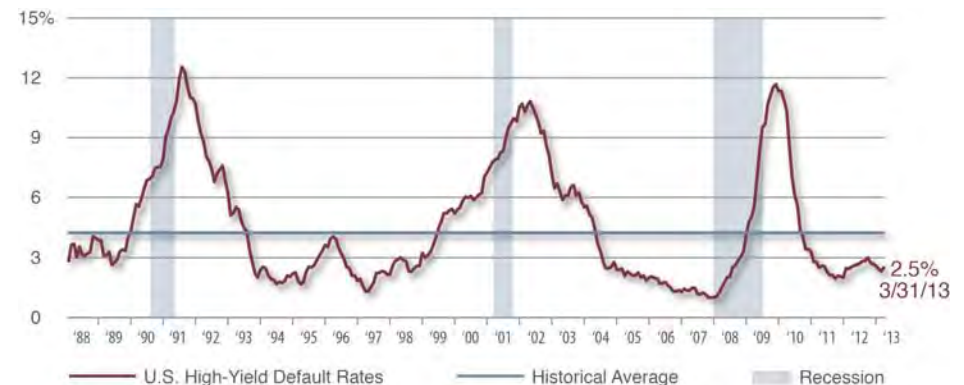
- Traditional distressed debt opportunity set (e.g., corporate bonds, bank loans) is a fraction of what it was in 2009.
 - U.S. high-yield default rate was 2.5% as of March 2013 vs. prior cycle peak of 11.5% in November 2009.
 - Dollar value of U.S. defaulted debt was \$39bn in 2012 vs. \$516bn in 2009.
 - Companies have exhibited stable operating performance and have benefited from relatively strong credit markets in the U.S.
- High-yield distress ratio has declined since reaching a 2-year high of 19.3% in October 2011.
 - Distress ratio (percentage of bonds with spreads of 1,000 bps or higher over U.S. Treasuries) was 6.2% as of March 2013.
- Many distressed managers have been anticipating an increase in investment opportunities as a result of Europe's debt crisis.
 - Investment activity in the region to date has been limited, due in part to the ECB's aggressive actions to contain the debt crisis.
 - European high-yield default rate was 2.4% as of March 2013, compared with 7.7% at year-end 2009.

U.S. High-Yield Distress Ratio



SOURCE: S&P Ratings Direct.

U.S. High-Yield Default Rate



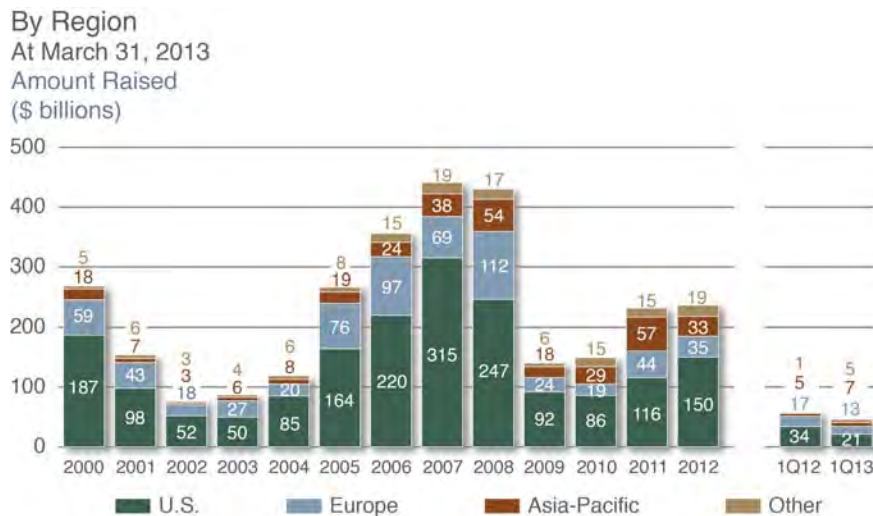
SOURCE: S&P Ratings Direct and National Bureau of Economic Research.



Fundraising Market Remains Selective

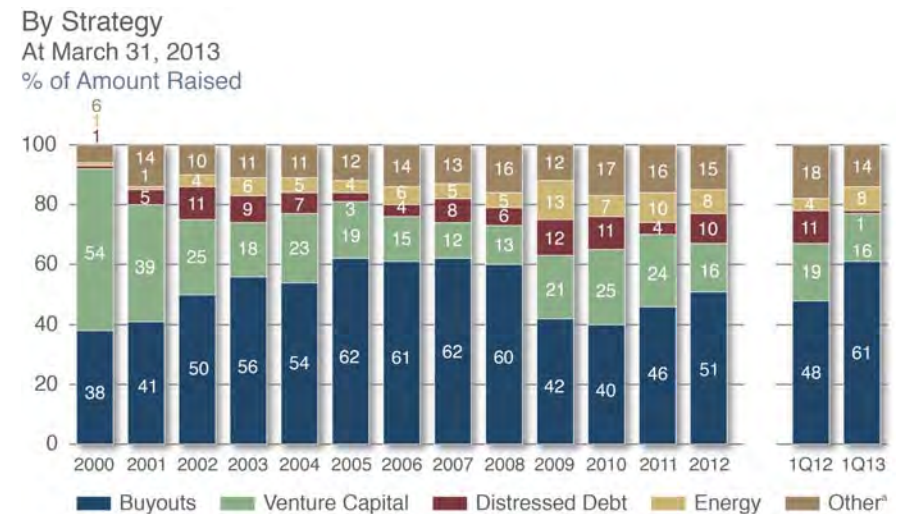
- Global fundraising activity has improved since 2009 as a result of increasing industry-wide performance, distributions, and investment activity; however, the fundraising market remains very challenging for most general partners.
 - Private equity firms worldwide raised \$46.2bn in 1Q13, a 20% decrease from the year-ago period.
 - The decline was driven primarily by a steep drop in distressed debt-related and venture capital fundraising activity.
- Europe and the Asia-Pacific region experienced significant decreases in fundraising activity in 2012, declining by 44% and 24%, respectively.
 - Volatility and weak exit market conditions in Europe and the Asia-Pacific region has negatively impacted investor sentiment.

Worldwide Private Equity Fundraising



SOURCE: Thomson Reuters.
 NOTES: Fundraising amounts are based on net amounts raised, which are adjusted for fund-size reductions.
 Comprises buyout, venture capital, distressed and subordinated debt, energy, infrastructure, and other fund strategies.
 Amounts may not foot due to rounding.
 Data is continuously updated and is therefore subject to change.

Worldwide Private Equity Fundraising



SOURCE: Thomson Reuters.
 NOTES: Fundraising amounts are based on net amounts raised, which are adjusted for fund-size reductions.
 Amounts may not foot due to rounding.
 Data is continuously updated and is therefore subject to change.
^aComprises subordinated debt, infrastructure, special situations, and other fund strategies not classified as either venture capital- or buyout-focused.



Portfolio Update



ARMB Highlights

Commitments

- Reviewed 301 opportunities and conducted 257 due diligence meetings from June 1, 2012, to May 31, 2013.
 - Committed \$122.6 million to 11 buyout, venture, restructuring, and special situation partnerships.
-

Performance

- The portfolio generated gains of \$91.7 million and 1-year net IRR of 12.4% over the 12 months to March 31, 2013.
 - Positive returns in all 4 quarters during this period.
-

Portfolio Management

- Met every general partner at least once, including 55 one-on-one meetings with senior team members.
 - Participated in 120 annual and advisory board meetings.
-

Communication

- Made 2 in-person presentations to staff in Juneau (Sep 2012, May 2013) and conducted 2 update conference calls and numerous informal telephone discussions.
 - Provided regular written updates through monthly, quarterly, environmental, investment analysis, ad-hoc, and client-specific reporting.
-



2013 Tactical Plan Review & Progress

At May 31, 2013

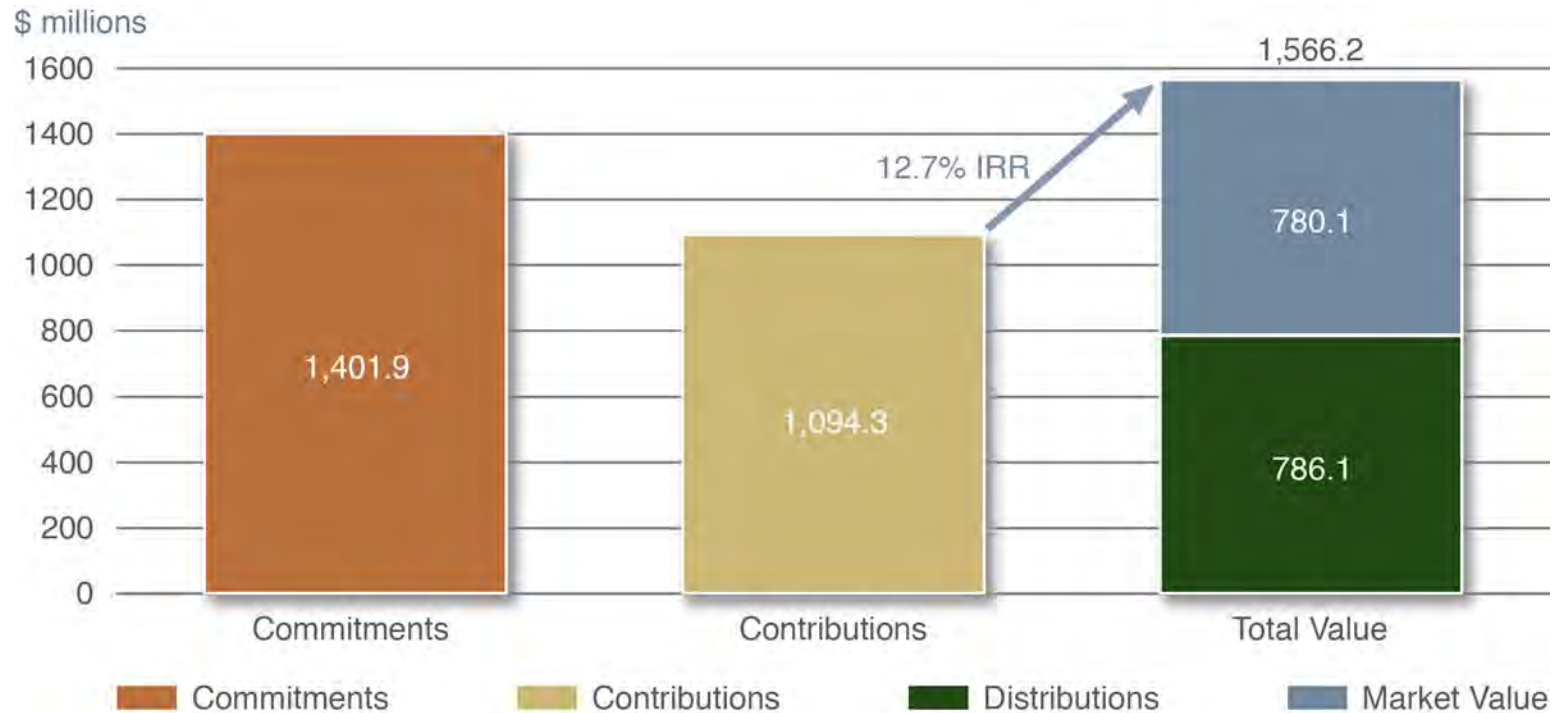
	Plan	Actual to Date
Commitments	\$125 million	\$69.7 million
Number of Partnerships	Up to 14 partnerships	5 partnerships
Size of Investments	\$10–\$20 million	\$13.9 million avg. commitment
Investment Strategies	Buyouts, Venture Capital, Special Situations, and Restructuring	Buyouts (3), Venture Capital (2)

Strategy	2013 Plan		Commitments to Date	
	No. of Psp.	Targeted Commitments (MM)	No. of Psp.	Commitments (MM)
Buyouts	Up to 6	Up to \$85	3	\$39.7
Venture Capital	Up to 6	Up to \$70	2	\$30.0
Special Situations	Up to 3	Up to \$30	–	–
Restructuring	Up to 3	Up to \$30	–	–
Total	Up to 14	\$125	5	\$69.7



Financial Summary

At March 31, 2013



Inception: 2002

Partnerships: 107

Managers: 53

Average Age: 4.6 Years

NOTES: Performance is based on the most-recent information provided by the general partners, adjusted for cash flows through March 31, 2013. As of the printing of this presentation, 99 of the portfolio's 102 active partnerships, representing 99% of the portfolio's market value, had provided March 31, 2013, data.

Amounts may not foot due to rounding.

^aCommitments to non-USD-denominated partnerships are accounted for by multiplying unfunded commitments by the quarter-ending exchange rate, then adding the result to cumulative capital contributions, causing commitments to non-USD-denominated partnerships to fluctuate quarterly.

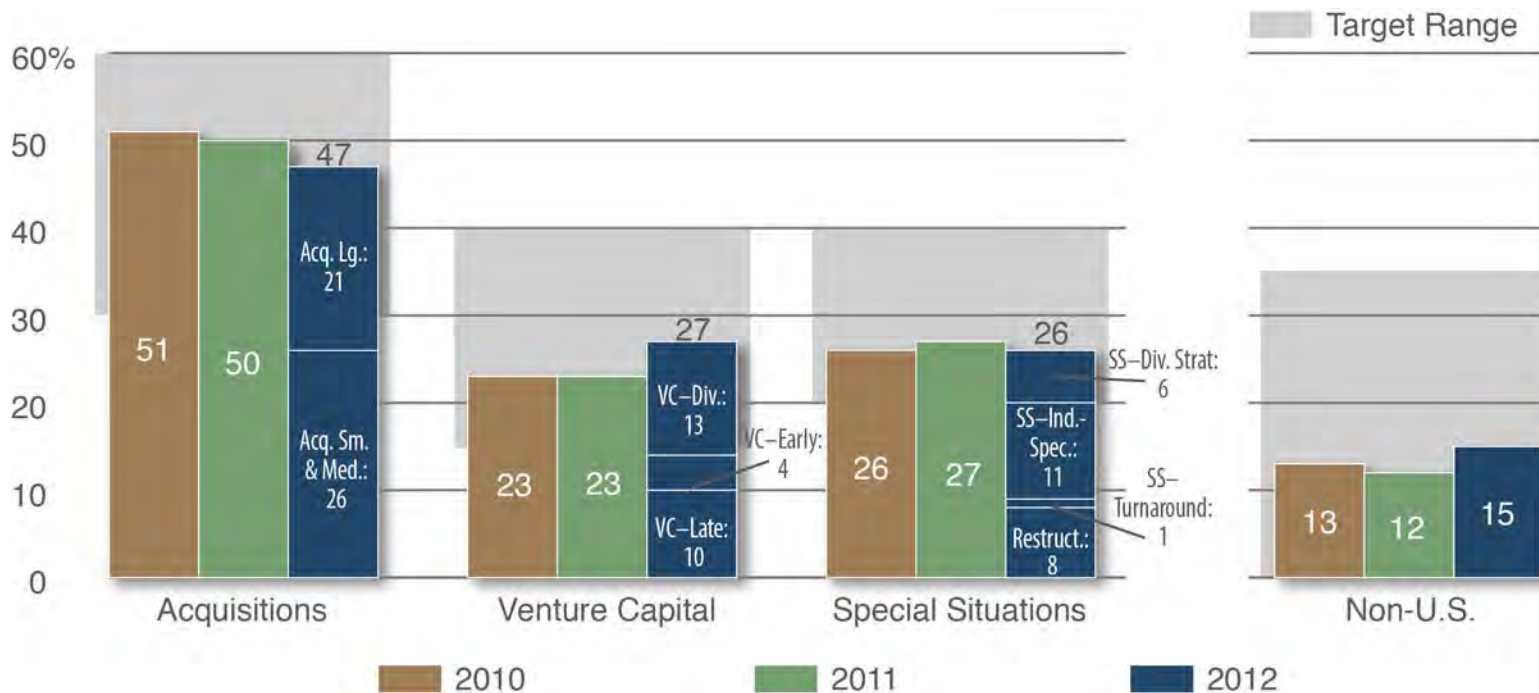
^bIncludes capital contributed for management fees called outside the total commitment.



Investment Strategy Diversification

Partnership Market Value plus Unfunded Commitments

At December 31, 2012



NOTE: Based on partnership market values and unfunded partnership commitments at December 31, plus new commitments made during the first quarter of the following year.

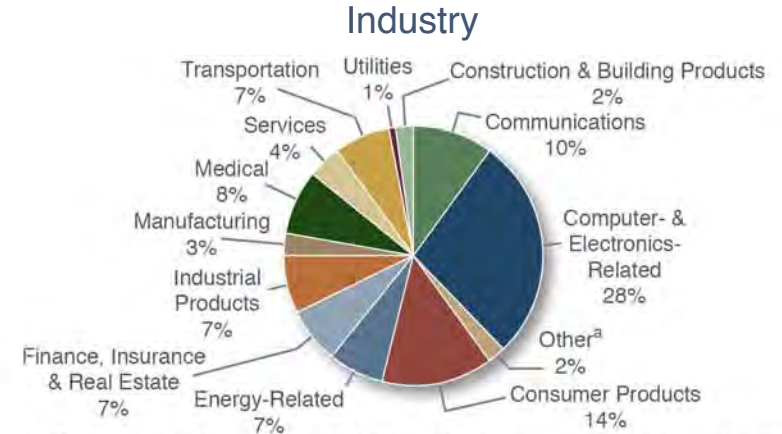
- Each investment strategy is within its long-term allocation target range, as of December 31, 2012.



Portfolio Diversification

Company Market Value—1,737 Investments

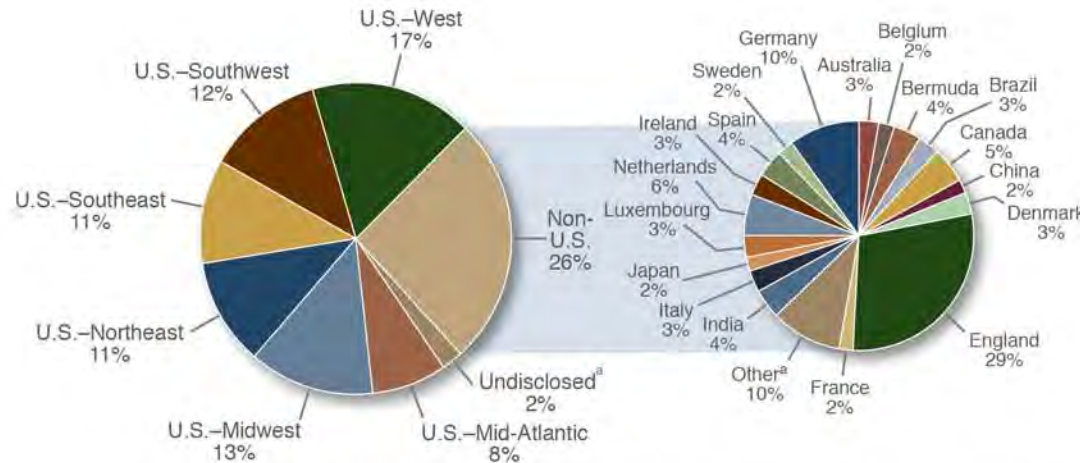
At December 31, 2012



NOTES: Acquisition substrategies are based on the following ranges of total enterprise values: Mega >\$10 billion, Large \$1–\$10 billion, Medium \$200 million–\$1 billion, and Small <\$200 million. Excludes investments for which the general partners have not provided investment strategy classifications.

^aComprises agriculture-, forestry-, and fishing-related companies, as well as investments for which the general partners have not provided industry classifications.

Geographic Region



^aComprises investments for which geographic classifications have not been provided by the general partners.

^bComprises regions that each account for less than 2% of the portfolio's non-U.S. market value.

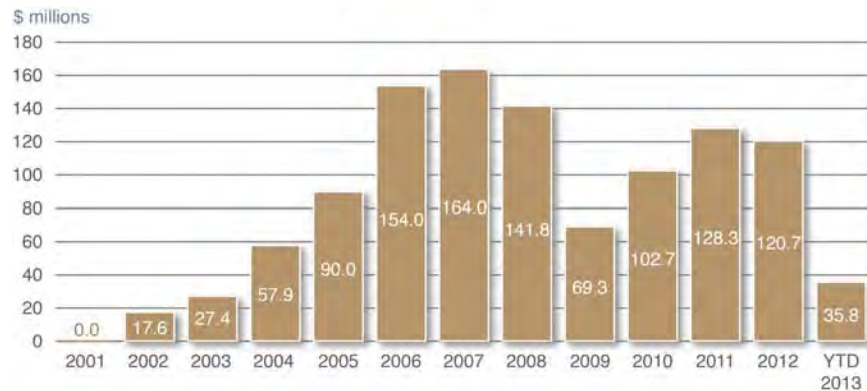


Contribution & Distribution Activity

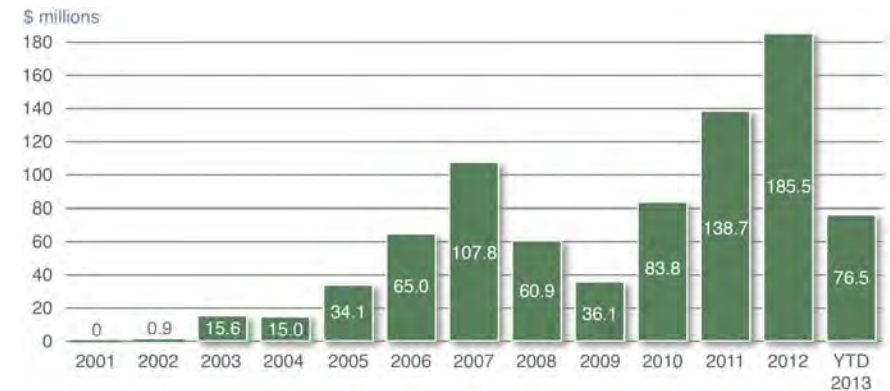
At May 31, 2013

(\$ in millions)

Annual Contributions



Annual Distributions



- Contributions remained strong in 2012, totaling \$121 million.
- The \$186 million distributed by ARMB's partnerships in 2012 represents the largest annual distribution total since the portfolio's inception.
- 2012 marks the second-consecutive year in which the portfolio has exhibited positive cash flow.
- 2013 is developing into another strong year for liquidity: YTD distributions have exceeded the amount received over the same period in 2012 by nearly \$18 million, or 31%.

NOTES: Data is preliminary and subject to change.
Amounts may not foot due to rounding.



Portfolio Performance

At March 31, 2013

(\$ in millions)

	No. of Partnerships	Commitments ^a	Contributions ^b	Market Value	Distributions	Total Value	Gain/ (Loss)	Since-Incep. Net IRR
Mar 31, 2013	107	\$1,401.9	\$1,094.3	\$780.1	\$786.1	\$1,566.2	\$471.9	12.7%
Mar 31, 2012	94	1,266.6	978.5	768.5	590.3	1,358.7	380.2	12.8%
YOY Change	13	\$135.3	\$115.8	\$11.7	\$195.8	\$207.5	\$91.7	0.0%

NOTES: Performance is based on the most-recent information provided by the general partners, adjusted for cash flows through March 31, 2013. As of the printing of this presentation, 99 of the portfolio's 102 active partnerships, representing 99% of the portfolio's market value, had provided March 31, 2013, data. Amounts may not foot due to rounding.

^aCommitments to non-USD-denominated partnerships are accounted for by multiplying the unfunded commitments by the quarter-ending exchange rate, then adding the result to cumulative capital contributions, causing commitments to non-USD-denominated partnerships to fluctuate.

^bIncludes capital contributed for management fees called outside the total commitment.

- During the 1-year period ended March 31, 2013, ARMB's portfolio generated a gain of \$91.7 million and a net return of 12.4%.
 - The portfolio experienced positive performance across all investment strategies.
 - 73 of the portfolio's 92 partnerships active for more than 1 year generated a positive 1-year net return; 48 of these partnerships generated double-digit 1-year returns.
 - The portfolio has posted positive performance in all 4 quarters since March 31, 2012.



Portfolio Performance

Top 1-Year Performers

At March 31, 2013

(\$ in millions)

Partnership	Vintage Year	Strategy	1-Year Gain	Since-Inception Gain	Since-Inception Net IRR
JMI V	2005	VC–Diversified	\$13.2	\$26.6	37.6%
Spectrum V	2005	SS–Industry Specific	\$5.4	\$13.7	16.2%
Odyssey IV	2008	Acquisitions–Medium	\$3.9	\$5.0	20.6%
GTCR IX	2006	Acquisitions–Medium	\$3.4	\$5.9	11.8%
M/C Venture VI	2006	VC–Diversified	\$3.4	\$7.0	12.1%
CVC European IV	2005	Acquisitions–Large	\$3.4	\$15.9	16.9%
Wind Point VI	2006	Acquisitions–Medium	\$3.0	\$6.7	7.8%
Resolute II	2007	Acquisitions–Medium	\$2.8	\$3.8	8.5%
Carlyle V	2007	Acquisitions–Large	\$2.5	\$5.9	11.4%

NOTE: Performance is based on the most-recent information provided by the general partners, adjusted for cash flows through March 31, 2013. As of the printing of this presentation, 99 of the portfolio's 102 active partnerships, representing 99% of the portfolio's market value, had provided March 31, 2013, data.



Recent Significant Events within the ARMB Portfolio

Notable IPO Pricings

This section displays logos for ten companies that have recently completed notable IPO pricings. The logos are arranged in two rows. The top row includes TaylorMorrison, LifeLock, shutterstock, NCL Norwegian Cruise Line, and Fleetmatics. The bottom row includes SeaWorld Adventure Parks, workday, PBF Energy, QUINTILES, and ARTISAN PARTNERS.

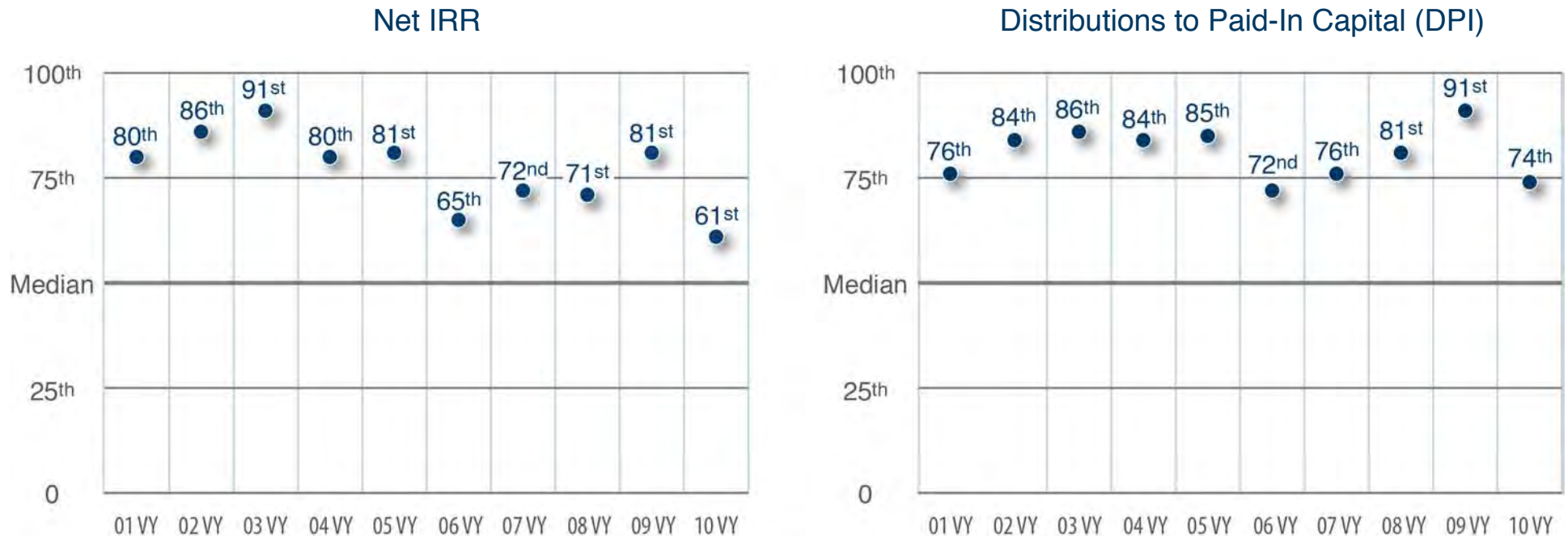
M&A Activity

This section displays logos for ten companies involved in M&A activity. The logos are arranged in two rows. The top row includes ancestry.com, Massage Envy SPA, HEARTLAND DENTAL CARE, lighttower fiber networks, and cvingenuity. The bottom row includes ACTEON, ATI Physical Therapy, Chromalox, hulu, and actient pharmaceuticals.



Vintage Year Performance vs. Thomson Reuters Benchmarks

At March 31, 2013



NOTES: Median benchmarks and percentile rankings based on Thomson Reuters December 31, 2012, All Regions All Private Equity returns.

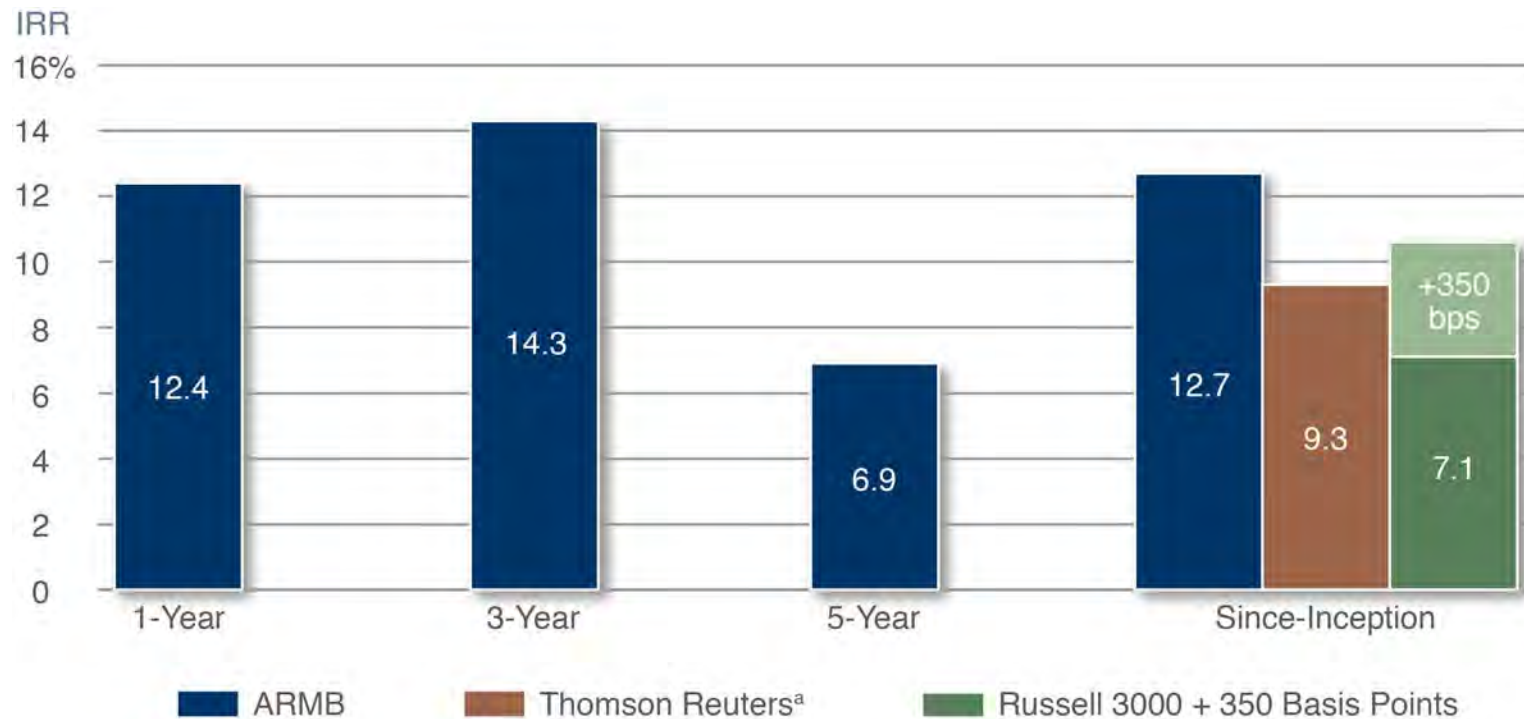
Performance is based on the most-recent information provided by the general partners, adjusted for cash flows through March 31, 2013. As of the printing of this presentation, 99 of the portfolio's 102 active partnerships, representing 99% of the portfolio's market value, had provided March 31, 2013, data.

- The ARMB portfolio has generated above-median performance compared with the private equity industry, with an average ranking in the upper quartile on both a net IRR and DPI basis.



Net Performance vs. Public and Private Market Indices

At March 31, 2013



NOTES: Performance is based on the most-recent information provided by the general partners, adjusted for cash flows through March 31, 2013. As of the printing of this presentation, 99 of the portfolio's 102 active partnerships, representing 99% of the portfolio's market value, had provided March 31, 2013, data. The performance of the Russell 3000 and the Russell 3000 + 350 basis points was derived by applying ARMB's cash inflows and outflows to the index's daily returns. Performance is preliminary and subject to change.

^aThomson Reuters December 31, 2012, pooled All Regions All Private Equity returns for 2001- through 2012-vintage funds.



Appendix



Biographies



James R. Chambliss
Managing Director

Mr. Chambliss joined Pathway in 1994 and is a managing director in the California office. He is responsible for screening, analyzing, and conducting due diligence on private equity investment opportunities; negotiating and reviewing investment vehicle documents; and client servicing. Mr. Chambliss is a member of Pathway's Investment Committee and currently serves on the advisory boards and valuation committees of several private equity limited partnerships.

Mr. Chambliss received a BS in business administration, with an emphasis in finance, from Loyola Marymount University and an MBA from the University of Southern California.



Canyon J. Lew
Director

Mr. Lew joined Pathway in 2004 and is a director in the California office. Mr. Lew is responsible for investment analysis and due diligence, negotiating and reviewing investment vehicle documents, and client servicing.

Prior to joining Pathway, Mr. Lew worked for Fleet Fund Investors as an associate, where he monitored investments within Fleet Bank's private equity portfolio and reviewed new investment opportunities. Mr. Lew received an AB in economics and engineering from Brown University and an MS, with high honors, in investment management from Boston University.



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Draft

ALASKA RETIREMENT MANAGEMENT BOARD
ACTUARIAL REVIEW OF THE JUDICIAL RETIREMENT
SYSTEM PENSION AND HEALTH PLANS
JUNE 7, 2013

June 7, 2013

Mr. Gary Bader
Chief Investment Officer
Department of Revenue, Treasury Division
Alaska Retirement Management Board
P.O. Box 110405
Juneau, AK 99811-0405

Subject: Actuarial Review of June 30, 2012 valuation for the State of Alaska Judicial Retirement System (JRS).

Dear Gary:

We have performed an actuarial review of the June 30, 2012 Actuarial Valuation for JRS.

This report includes a review of:

- Pension Assumptions and Benefits
- Retiree Health Care Cost Assumptions
- Actuarial Valuation Methods and Procedures
- Contribution Rate Determination
- Actuarial Valuation Report
- Potential Areas for Future Review

A major part of our review is a thorough analysis of the test lives provided by Buck Consultants. This year we have included exhibits in our report which summarize the detailed analysis of these sample test cases for JRS, as well as a comparison of the results between Buck Consultants and GRS. We wish to thank the staff of the State of Alaska Treasury Division and Buck Consultants without whose willing cooperation this review could not have been completed.

Sincerely,

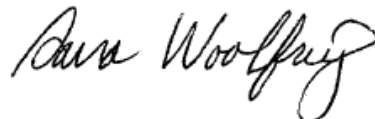
Gabriel, Roeder, Smith & Company



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cc: Ms. Judy Hall

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SECTION 1

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Gabriel, Roeder, Smith & Co. was engaged by the Alaska Retirement Management Board (ARMB) to review the June 30, 2012 Actuarial Valuation of the State of Alaska Judicial Retirement System (JRS).

This report presents our findings in the following areas:

- General Approach
- Pension Assumptions and Benefits
- Health Care Cost Assumptions
- Actuarial Valuation Methods and Procedures
- Contribution Rate Determination
- Actuarial Valuation Report
- Potential Areas for Future Review
- Summary and Conclusions

This audit also includes a review of the assumptions that were recommended in the most recent experience study and their subsequent incorporation into their respective actuarial valuations.

In general, we found that the Buck's actuarial results and reports were reasonable. We found no significant areas of concern in the actuarial valuation results, and find the assumptions consistent with generally accepted actuarial practice. Any findings we have would come under the heading of "de minimus", in that we expect that there would be little impact to the plan liabilities.

FINDINGS FROM JUNE 30, 2012 AUDIT

There were no new findings in the June 30, 2012 audit. The test cases completed by GRS closely matched those provided by Buck.

FINDINGS FROM JUNE 30, 2010 AND PRIOR AUDITS

In addition, we continue to monitor the findings and recommendations from the June 30, 2010 audit against the test lives and reports submitted by Buck for the June 30, 2012 audit. At the end of this Section we have included a checklist of our review of these items and Buck's status and/or explanation for each item. We have noted the minor areas of concern below, and a more detailed interpretation of the correspondence of resolution and/or explanation between Buck and GRS is noted in Section 3.

The actuarial valuation report as of June 30, 2012 does not include the cost of living assumption or the methodology for projection of 415 limits in the assumption section. This was a previous recommendation that was not incorporated.

SUMMARY OF TEST LIFE REVIEW

We have included as a part of this report a detailed test life results summary.

- We matched the present value of benefits closely in total on all testlives submitted. We have included exhibits in Section 5 of the report which summarize the differences in calculations by decrement for the test lives analyzed. Differences between actuarial firms will always occur due to system differences and other nuances in the calculations. The only differences worthy of notice are referenced in the findings section.
- The actuarial basis used for the funding of the plan lies within the range of reasonableness. We have found nothing of significant concern regarding the reasonableness of the liabilities or costs for the JRS plan.

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Issue	GRS Recommendations		Comments
Benefits			
1. Calculations			
a. Survivor Benefit	Benefit is greater of 50% survivor continuation and 30% of the current office salary. Buck appears to have valued only the 50% continuation.	✓	
b. Benefit Limits	Benefits limits appear to be applied without indexation and the mechanics are not clearly disclosed in the methods section of the report.	✓	Methodology updated, but no disclosure of method in report.
2. Miscellaneous			
a. Investment Return Assumption	The 8.25% assumption is not as conservative as a more typical 8.00%.	✓	This assumption has been changed to 8.0%.
b. Retiree Medical Detail	The determination of the total present value of benefits (PVB) should be illustrated along with the breakout between the amortization of the UAAL and normal cost.	✓	Page 11 could be enhanced to include a breakdown of the PVB.
c. Amortization Base Detail	The total unfunded accrued liability (UAL) and its reconciliation to the amount of the amortization should have more detail provided to more clearly show that the UAL is being paid over time.	✓	Pages 12-14 have been enhanced to show this more clearly and balance between the gain/loss reconciliation and the service cost amortizations.
3. JRS Report	The valuation report is not clear on how the cost-of-living adjustment is applied	✓	The supplementary notes on page 26 were updated, but no cost-of-living assumption is included in the assumption section (5.2)

SECTION 2

GENERAL APPROACH

GENERAL APPROACH

Gabriel, Roeder, Smith & Co. was charged with reviewing the actuarial assumptions of the pension and health care provisions of the actuarial valuation of JRS.

We requested a number of items from Buck Consultants in order to perform the actuarial review and health cost assumption review:

1. We received the draft report on May 21, 2013. We received the test lives on December 13, 2012 for pension and retiree health, and valuation data for pension and health on December 6, 2012.

In performing our review, we:

1. Reviewed actuarial assumptions – we checked to see if they were consistent, comprehensive, and appeared reasonable.
2. Reviewed the actuarial valuation report as of June 30, 2012 for completeness, GASB compliance and a review of financial determinations.
3. Reviewed, in detail, the sample members provided us – This provided us with a perspective on the actuarial process utilized by Buck with respect to the plan and allowed us to review the valuation methods and procedures.
4. Reviewed the health cost assumptions and trend.
5. Identified areas for future more detailed review.

KEY ACTUARIAL CONCEPTS

An actuarial valuation is a detailed statistical simulation of the future operation of a retirement system using the set of actuarial assumptions adopted by the Board. It is designed to simulate all of the dynamics of such a system for each current system member including:

1. Earning future service and making contributions,
2. Receiving changes in compensation,
3. Leaving the system through job change, disablement, death, or retirement, and
4. Determination of and payment of benefits from the System.

This simulated dynamic is applied to each active member of the System. It results in a set of expected future benefit payments to that member. Bringing those expected payments to present value, at the assumed rate of investment return, produces the Actuarial Present Value (“APV”) of future benefits for that member. In like manner, an APV of future salaries is determined.

The actuarial present value of future benefits and the actuarial present value of future salaries for the entire System are the total of these values across all members. The remainder of the actuarial valuation process depends upon these building blocks.

Once the basic results are derived, an actuarial method is applied in order to develop information on contribution levels and funding status. An actuarial method splits the APV of future benefits into two components:

1. Present Value of Future Normal Costs, and
2. Actuarial Accrued Liability (“AAL”).

The actuarial method in use by the State of Alaska is known as the Entry Age Normal (EAN) method. Under entry age normal funding method, the Normal Cost for a member is that portion of the Actuarial Present Value of the increase in the value of that member’s benefit for service during the upcoming year. The actuarial accrued liability is the difference between the total actuarial present value and the present value of all future normal costs.

For JRS, the present value of future benefits applies to the following benefits:

- Retirement benefits
- Withdrawal benefits
- Disability benefits
- Death benefits
- Return of contributions
- Medical benefits
- Indebtedness (from contributions which might be redeposited)

The retiree medical benefits are based on potential future health care benefits, while the others are a type of post-employment income replacement benefit, based on salary. For the medical benefits, estimates must be made of the future health care costs. This is done by determining current per capita health care claim costs by age of retiree, and projecting them into the future based on anticipated future health care inflation. Per capita claims used were those used in the PERS and TRS valuations as of June 30, 2012 and the methodology used to determine those claims was found to be appropriate in the audit of those plans.

SECTION 3

REVIEW OF PENSION ASSUMPTIONS AND BENEFITS

REVIEW OF PENSION ASSUMPTIONS AND BENEFITS

GENERAL

In our review of the testlives as well as the report we confirmed that the assumptions shown in the report were the assumptions used in the JRS valuation.

BACKGROUND

The findings below are based on the detailed review of one active JRS test life and one retired JRS test life summarized in exhibits at the end of Section 5:

Note that the active test life analyzed is not necessarily exposed to all of the possible benefits under the plan (i.e. already beyond the eligibility period for certain benefits, or not eligible for particular benefits). Therefore, findings may occur for these other benefits in future audits depending on the set of test lives chosen for review at that time. However, the vast majority of the liability for each plan is due to the retirement benefits, and retirement-related withdrawal benefits, so any future findings are also expected to be de minimus. Also, the impact for any one test life may not be representative of the impact on the total plan.

JUNE 30, 2012 AUDIT

There were no new findings in the June 30, 2012 audit. The test cases completed by GRS closely match those provided by Buck.

JUNE 30, 2010 AND PRIOR AUDITS

The following minor issues remain as of the June 30, 2012 valuation.

Cost-of-Living Adjustment (Report):

GRS Finding From June 30, 2008 audit: The cost-of-living adjustment (COLA) of 4.00% shown on page 19 of the 2008 valuation report is not referenced in either Section 3.1 (Summary of Plan Provisions) or Section 3.5 (Summary of Actuarial Assumptions and Methods) making it difficult to verify how this COLA has been applied to the benefits. We have determined that on page 22, under Section 3.1 (6) Computation of Normal Retirement Benefit, the second sentence: "JRS benefits are recalculated when the salary for the office held changes." is the basis for this COLA. We recommend enhancing the valuation report in Section 2.3 (Actuarial Assumptions, Methods and Additional Information) to include a footnote on the COLA stating this description and

also in Section 3.5 (Summary of Actuarial Assumptions and Methods) to indicate this assumption has been applied.

Resolution: This recommendation was partially incorporated into the June 30, 2012, valuation report, but the cost of living assumption is still excluded from the assumption section (5.2).

Benefit Limits:

A. Limitations without Indexing

GRS Finding: The large pay increases are creating issues on maximum benefit limits and maximum compensation limits. It appears the programs are applying limitations without indexation. We recommend that if limitations are applied that they be done so with indexation and the mechanics of the limitations be disclosed in the methods section of the report.

Recommendation: It appears that the limits are being applied with indexation, but could find no method disclosure in the valuation. We recommend that this be stated in the valuation report.

ECONOMIC ASSUMPTIONS

General

These assumptions simulate the impact of economic forces on the amounts and values of future benefits. Key economic assumptions are the assumed rate of investment return and assumed rates of future salary increase.

Investment Return Assumption

Economic assumptions are normally defined by an underlying inflation assumption. Buck has cited 3.12% as its inflation assumption. In recent years, long-term inflation forecasts have been declining. With the decline, the 3.12% inflation assumption is now at the higher end of the generally accepted range.

The nominal investment return assumption is 8.00%. The assumption is net of all investment and administrative expenses. A net investment return rate of 8.00% per annum is a commonly used assumption by many large public employee retirement systems. Combined with the 3.12% inflation assumption, this yields a 4.88% real net rate of return. This 4.88% real return should be continuously tested with the JRS asset allocation.

Base Salary Increase Assumption

The Base Salary Increase Assumption (also known as the wage inflation assumption) is 4.12%. The 4.12% is comprised of 3.12% for general inflation and 1.0% for productivity increases. This assumption appears reasonable.

DEMOGRAPHIC ASSUMPTIONS

The set of actuarial assumptions continues to appear to be reasonable and will be studied in the upcoming experience study.

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SECTION 4

REVIEW OF HEALTH CARE COST ASSUMPTIONS

REVIEW OF HEALTH CARE COST ASSUMPTIONS

GENERAL

The valuation of retiree medical and prescription benefits was done using per capita claims costs and healthcare-related assumptions from the PERS and TRS valuations. We found these assumptions to be appropriate in our audit report dated April 8, 2013.

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SECTION 5

REVIEW OF ACTUARIAL VALUATION METHODS AND PROCEDURES

REVIEW OF ACTUARIAL VALUATION METHODS AND PROCEDURES

I. Background

An actuarial valuation is a detailed statistical simulation of the future operation of a retirement system using the set of actuarial assumptions adopted by the Board.

The actuarial values generated from this process are based not only on these assumptions, but also on the additional assumptions built into each actuarial firm's pension valuation software.

Our scope for performing the review did not include a complete replication of the valuation results as determined by Buck Consultants at June 30, 2012. Rather, we reviewed a number of sample test lives from Buck in great detail, and made our determinations as to whether the methods and assumptions being employed were being done so properly.

Though this approach does not meet the rigors of a full scale replication of results – it still serves as a strong indicator of the appropriateness of the assumptions and methods being used to value the liabilities and determine the costs for these plans.

II. Process:

Our review process can be summarized as follows:

Computation: Valuation Liabilities

We analyzed test cases to compare the Actuarial Liability under the EAN funding method for the test cases of the JRS. As a starting point, we wanted to first replicate Buck's test case liabilities by using their assumptions and methods to ensure that the computations were in sync with the descriptions listed in the valuation report.

When conducting an actuarial audit, and reviewing the testlives, we look at the projected benefits at each age for each decrement type. We also look at the component of the benefit (final average earnings and years of service). This is critical to understanding what the valuation system is actually valuing and making sure that they valuation is not "right for the wrong reasons", (meaning, errors could occur in two different directions making total liabilities approximate a correct value.)

We also review the construction of the commutation functions- the varying probabilities for each decrement and the discounting to the valuation date.

III. Actuarial Method:

Findings:

The actuarial method used for producing Alaska JRS June 30, 2012 Actuarial Valuation is known as the Entry Age Normal (EAN) Method. Under this method, benefits are projected to the assumed occurrence of future events based on future salary levels and service to date. The Normal Cost is the present value of benefits to be earned for the current year while the Actuarial Accrued Liability (AAL) is the present value of benefit earned for all prior years

Conclusion:

The level percent of pay method for both amortization of the unfunded accrued liability and the normal cost are both appropriate as a funding policy, considering that that payroll is not closed (as promulgated under SB 123.) For GASB reporting purposes (as opposed to funding purposes), a different set of numbers may need to be disclosed to account for the closed nature of the group.

Additionally, to account for the Part D subsidy in the retiree medical plan, a different set of numbers may need to be disclosed for GASB reporting purposes (again, as opposed to funding purposes).

The EAN method is the most commonly used method in the public sector. The EAN method tends to produce the most stable costs- a tool widely appreciated for its budgeting purposes.

IV. Actuarial Calculations:

We reviewed sample test cases used for the June 30, 2012 valuation draft report. In order to accomplish this, we requested a number of sample cases from Buck with intermediate statistics to assist us in analyzing the results. We combined this with our understanding of the plan provisions in an attempt to analyze the liability values produced by Buck for these sample cases only.

Findings:

We analyzed the test cases and have found nothing significant to report.

Conclusion and Results:

We matched the liabilities in total quite closely for the test cases submitted under the Pension Plan and Retiree Health Plan for JRS. In addition we have analyzed the calculations of the ancillary benefits and have provided a summary of this detailed analysis at the end of this section. These exhibits provide a comparison of the calculations by decrement provided to us from Buck against our replication of those benefits as we interpret them from the plan provisions and assumptions. We completed this detail for one active test life and one retired member under JRS. Some of the decrements match very well, and others show a slight discrepancy. The significant differences are shown in the exhibits where the percentage difference of the comparison between Buck and GRS is not close to 0%. Hence we recommend further study of these particular areas. We did not see any major areas of concern.

In matching the present value of benefits, it is being determined that all benefits are being valued, and that the valuation of the liability for those benefits is consistent with the stated assumptions and methods.

PENSION PLAN

For JRS pension, the test life PVB match was within 0.8% on the active test case shown. The retiree matches to within 0.2%. This would be considered as an overall match for purposes of the valuation.

We have surmised there are no significant issues to report for the Pension Plan under JRS.

RETIREE HEALTH PLAN

For JRS retiree health, the test life PVB match on the active test case was within 0.6%. The retiree matches to within 1.7%. This would be considered as an overall match for purposes of the valuation.

We have surmised there are no significant issues to report for the Retiree Health Plan under JRS.

ALASKA RETIREMENT MANAGEMENT BOARD
 Actuarial Review of Pension and Health Plans - June 30, 2012
 Comparison of Present Value of Benefits - JRS

Actives	Test Case 1 - Pension			Actives	Test Case 2 - Health		
<u>Basic Data:</u>				<u>Basic Data:</u>			
Sex		Male		Sex		Male	
Current Age		44.55		Current Age		44.55	
Current Credited Service		7.35		Current Credited Service		7.35	
Present Value of Benefits (PVB)	GRS*	Buck	% Diff	Present Value of Benefits (PVB)	GRS*	Buck	% Diff
<u>Retirement:</u>				<u>Retirement:</u>			
Normal Retirement Benefit	518,315.41	522,212.58	-0.7%	Benefit - Member	58,561.31	58,180.95	0.7%
Early Retirement Benefit	178,677.33	181,196.03	-1.4%	Benefit - Spouse	64,043.81	65,088.76	-1.6%
				Post 65 Part D Contribution - Member	(4,555.05)	(4,540.08)	0.3%
				Post 65 Part D Contribution - Spouse	(4,093.92)	(4,082.44)	0.3%
Total Retirement PVB	696,992.74	703,408.61	-0.9%	Total Retirement PVB	113,956.15	114,647.19	-0.6%
<u>Disability:</u>				<u>Disability:</u>			
Disability Benefit	6,543.95	6,545.95	0.0%	Benefit - Member	612.89	609.56	0.5%
Disability Benefit < 2	-	-		Benefit - Spouse	910.52	919.96	-1.0%
				Post 65 Part D Contribution - Member	(11.56)	(11.41)	1.3%
				Post 65 Part D Contribution - Spouse	(27.28)	(27.03)	0.9%
Total Disability PVB	6,543.95	6,545.95	0.0%	Total Disability PVB	1,484.58	1,491.08	-0.4%
<u>Death:</u>				<u>Death:</u>			
Married and Eligible	7,935.37	7,935.35	0.0%	Benefit	3,865.54	3,810.89	1.4%
Married and Not Eligible	9,099.64	9,077.58	0.2%	Post 65 Part D Contribution	(184.77)	(180.41)	2.4%
Single	484.94	484.96	0.0%				
Death Benefit < 2	-	-					
Total Death PVB	17,519.95	17,497.89	0.1%	Total Death PVB	3,680.77	3,630.48	1.4%
<u>Withdrawal:</u>				<u>Withdrawal:</u>			
Nonvested	-	-		Benefit - Member	14,427.66	14,305.52	0.9%
Normal DV Benefit	119,487.01	119,451.98	0.0%	Benefit - Spouse	15,793.65	16,080.57	-1.8%
Normal DV Death Benefit	1,786.96	1,867.48	-4.3%	Post 65 Part D Contribution - Member	(879.32)	(871.56)	0.9%
				Post 65 Part D Contribution - Spouse	(745.50)	(738.77)	0.9%
Total Withdrawal PVB	121,273.97	121,319.46	0.0%	Total Withdrawal PVB	28,596.49	28,775.76	-0.6%
GRAND TOTAL PVB	842,330.61	848,771.91	-0.8%	GRAND TOTAL PVB	147,717.99	148,544.51	-0.6%

Inactives - PVB	GRS*	Buck	% Diff
Retiree - Pension	435,395	434,613	0.2%
Retiree - Health	207,614	211,174	-1.7%

* GRS' audit of Buck's calculation includes review of the benefit amounts, annuity values, assumptions and other factors related to the PVB calculation at each projected age. Differences may exist due to different interpretations of the statutes, as well as additional items as discussed throughout this audit report.

ALASKA RETIREMENT MANAGEMENT BOARD
Actuarial Review of Pension and Health Plans - June 30, 2012

Comparison of Present Value of Benefits - JRS Pension & Health

JRS - Pension

Benefits - Buck Valuation Terminology	Description*
<p><u>Retirement:</u> Normal Retirement Benefit Early Retirement Benefit</p> <p><u>Disability:</u> Disability Benefit Disability Benefit < 2</p> <p><u>Death:</u> Married and Eligible Married and Not Eligible Single Death Benefit < 2</p> <p><u>Withdrawal:</u> Nonvested Normal DV Benefit Normal DV Death Benefit</p>	<p>Normal Retirement (base) Benefit Early Retirement (base) Benefit</p> <p>Disability Benefit Disability Benefit for Employees With Less Than Two Years of Service</p> <p>Death Benefit for Married Participants Who are Eligible for Unreduced Benefits Death Benefit for Married Participants Who are Not Eligible for Unreduced Benefits Refund of Contributions for Participants With no Beneficiary Death (base) Benefit for Employees With Less Than Two Years of Service</p> <p>Nonvested Term Benefit Normal Deferred Vested Benefit Normal Deferred Vested Death benefit for Married Employees</p>

JRS - Health

Benefits - Buck Valuation Terminology	Description*
<p><u>Retirement:</u> Pre 65 <Member> Pre 65 <Spouse> Post 65 <Member> Post 65 <Spouse> Post 65 Part D <Member> Post 65 Part D <Spouse></p> <p><u>Disability:</u> Pre 65 <Member> Pre 65 <Spouse> Pre 65 Contribution <Member> Pre 65 Contribution <Spouse> Post 65 <Member> Post 65 <Spouse> Post 65 Contribution <Member> Post 65 Contribution <Spouse> Post 65 Part D <Member> Post 65 Part D <Spouse> Post 65 Part D Contribution <Member> Post 65 Part D Contribution <Spouse></p> <p><u>Death:</u> Pre 65 Post 65 Post 65 Part D</p> <p><u>Withdrawal:</u> Pre 65 <Member> Pre 65 <Spouse> Post 65 <Member> Post 65 <Spouse> Post 65 Part D <Member> Post 65 Part D <Spouse></p>	<p>Base Benefit Paid to Employee While Employee is Under 65 Base Benefit Paid to Spouse While Employee is Under 65 Base Benefit Paid to Employee While Employee is at Least 65 Base Benefit Paid to Spouse While Employee is at Least 65 Employee Post-Age 65 Medicare Part D Reimbursement Spouse Post-Age 65 Medicare Part D Reimbursement</p> <p>Base Benefit Paid to Disabled Employee While Employee is Under 65 Base Benefit Paid to Spouse of Disabled Employee While Employee is Under 65 Member Contributions Made While Employee is Under 65 Spouse Contributions Made While Employee is Under 65 Base Benefit Paid to Disabled Employee While Employee is at Least 65 Base Benefit Paid to Spouse of Disabled Employee While Employee is at Least 65 Member Contributions Made While Employee is at Least 65 Spouse Contributions Made While Employee is at Least 65 Disabled Employee Post-Age 65 Medicare Part D Reimbursement Spouse of Disabled Employee Post-Age 65 Medicare Part D Reimbursement Member Reimbursement for Medicare Part D Spouse Reimbursement for Medicare Part D</p> <p>Base Benefit Paid to Spouse While Employee would have been Under 65 Base Benefit Paid to Spouse While Employee would have been at Least 65 Spouse Post-Age 65 Medicare Part D Reimbursement</p> <p>Base Benefit Paid to Terminated Employee While Employee is Under 65 Base Benefit Paid to Spouse of Terminated Employee While Employee is Under 65 Base Benefit Paid to Terminated Employee While Employee is at Least 65 Base Benefit Paid to Spouse of Terminated Employee While Employee is at Least 65 Terminated Employee Post-Age 65 Medicare Part D Reimbursement Spouse of Terminated Employee Post-Age 65 Medicare Part D Reimbursement</p>

SECTION 6

**REVIEW OF CONTRIBUTION RATE
DETERMINATION**

REVIEW OF CONTRIBUTION RATE DETERMINATION

GRS was to analyze the funding method being used and verify its computation (as shown in page 9 of the JRS valuation report). The goal here is to start with the Actuarial Accrued Liabilities and the Normal Costs that are developed from the data and valuation software and compare this to the assets in the system. The difference between the two, the Unfunded Actuarial Accrued Liability (UAAL) in conjunction with the Normal Cost forms the basis of the contributions that the actuary recommends the system make in order to ensure that benefits can be provided for current and future retirees.

JUNE 30, 2012 AUDIT:

The calculations were reasonable and consistent with actuarial practice.

The normal cost rate for healthcare decreased from 5.48% of payroll for fiscal year 2013 to 3.87% of payroll for fiscal year 2015. In addition to the 26 retirees identified as having healthcare benefits covered under the PERS plan, the active member file was reconciled against the other plan (PERS, TRS) data and 20 of the 69 active members as of June 30, 2012 were identified in the other plans and were excluded from the JRS retiree healthcare valuation.

JUNE 30, 2010 AND PRIOR AUDITS

The language was updated on page 26 of the report regarding the amortization method. Previously, the report language could be misread as indicating that healthcare unfunded liabilities were amortized as a level percent of payroll.

SECTION 7

REVIEW OF ACTUARIAL VALUATION REPORT

REVIEW OF ACTUARIAL VALUATION REPORT

GASB No. 25 DISCLOSURE:

GASB (Governmental Accounting Standards Board) sets out guidelines for financial accounting and reporting for state and local government entities. Under GASB No. 25, the actuarial valuation report for JRS must disclose a set of financial statistics. These include:

- Schedule of Funding Progress
- Schedule of Employer Contributions
- Notes to Required Supplementary Information

Findings:

No issues to report.

Conclusion:

Buck has indicated that they do calculate the actuarial present value of assumed Part D Retiree Drug Subsidy (RDS) payments separately. For funding purposes, the total healthcare liability is offset by the RDS amounts to conform to the ARMB's current policy of funding discounted net cash flow. Figures used for GASB 43 purposes have been illustrated without the RDS offset.

VALUATION REPORT:

GRS reviewed the June 30, 2012 valuation report for scope as well as content to determine if actuarial statistics were being reflected fairly and if the details of the plan were being correctly communicated.

Findings:

The layout of the June 30, 2012 was changed slightly from the prior report. Actuarial funding results were brought to the front of the report with the asset section following. The June 30, 2012 draft valuation report submitted by Buck to the board had the following layout:

1. Actuarial Certification – This introduces the report, lists the valuation date in question, and provides a disclaimer that the results are predicated on the census data received from the Systems and the financial information received from KPMG LLP. It also discusses the basic actuarial concepts and provides the funded ratios.

2. Report Highlights – Shows funding status and the employer recommended contribution rate.
3. Analysis of the Valuation – Explains the change in the funded status and calculated contribution rate. Includes retiree medical costs, investment return, and other factors. Within this section there are three sections that show the development of valuation results, basis of the valuation, and other historical information.

Conclusion:

- We consider the scope and content of Buck’s report to be effective in communicating the financial position and contribution requirements of JRS. We believe it is in accordance with standard actuarial reporting methodologies for public sector systems. We recommend the following for additional disclosure:
 - Including the COLA assumption in the assumption section (5.2)
 - Disclosing mechanics used for indexation of benefit limits in the methods section of the report.
- The page numbering in the Table of Contents should also be updated.
- As recommended in the June 30, 2010 audit, the present value of benefits by decrement is shown on page 8 of the report and the amortization method of healthcare unfunded liabilities was clarified on page 26 of the report.

SECTION 8

POTENTIAL AREAS FOR FUTURE REVIEW

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POTENTIAL AREAS FOR FUTURE REVIEW

AMORTIZATION METHODOLOGY:

There is a two year lag between the development of the contribution rate and actual payment of the rate developed. Since this plan has an unfunded liability (funded ratio of 67.2%), this timing lag creates an underfunding which, in turn, leads to a contribution increase. If the Board would like to move toward stabilizing these contributions, then we would recommend a contribution rate development that anticipates the rate paid during the lag period and estimates the unfunded liability at the time of payment.

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ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Certification of Actuarial Review

ACTION: X

DATE: June 20, 2013

INFORMATION:

BACKGROUND:

AS 39.10.220 (a) (9) prescribes certain duties and reports that the Alaska Retirement Management Board is responsible for securing from a member of the American Academy of Actuaries. Additionally it contains a requirement that “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, the board’s actuary, has completed: (1) a valuation of the Public Employees’ Retirement System (PERS) as of June 30, 2012, (2) a valuation of the Teachers’ Retirement System (TRS) as of June 30, 2012, (3) a valuation of the Defined Contribution Retirement Plan as of June 30, 2012, (4) a valuation of the Judicial Retirement System (JRS) as of June 30, 2012, and (5) a valuation of the National Guard Naval Militia System (NGNMRS) as of June 30, 2012.

Gabriel Roeder Smith & Company (GRS), the board’s second actuary, has reviewed the work products prepared by Buck Consultants: A letter and report describing a review of the June 30, 2012 PERS and TRS valuations, and a letter and report describing a review of the June 30, 2012 Defined Contribution Retirement Plan were provided to the Board at its April 18-19, 2013 meeting.

A letter and report describing a review of the June 30, 2012 JRS valuation, and a letter and report describing a review of the June 30, 2012 NGNMRS valuation are provided for the Board’s review and discussion

RECOMMENDATION:

That the Alaska Retirement Management Board formally accept the review and certification of actuarial reports by Gabriel Roeder Smith & Company, and that staff coordinate with the Division of Retirement & Benefits and Buck Consultants to discuss and implement the suggestions and recommendations of the reviewing actuary where considered appropriate.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Acceptance of Actuarial Valuation	ACTION:	X
	Report - NGNMRS		
DATE:	June 20, 2013	INFORMATION:	

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 and to certify to the appropriate budgetary authority of each employer in the system”.

AS 37.10.220(a)(9) provides that the Board have “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 actuarial valuation of the National Guard and Naval Militia Retirement System as of June 30, 2012 and the report has been presented to the Board.

Gabriel Roeder Smith & Company (GRS), the Board’s actuary, has reviewed the actuarial valuation and has provided their report to the Board.

RECOMMENDATION:

That the Alaska Retirement Management Board accepts the actuarial valuation report prepared by Buck Consultants for the National Guard and Naval Militia Retirement System as of June 30, 2012 in order to set the actuarially determined contribution amount.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: History of PERS / TRS Employer
Contribution Rates
 DATE: June 20, 2013

ACTION: _____
 INFORMATION: X

Attached is a history of employer contribution rates adopted by the Alaska Retirement Management Board for Fiscal Years 2008 through 2014, as well as the proposed FY 2015 contribution rates.

ARMB ADOPTED RATES								
		FY09	FY10	FY11	FY12 (a)	FY13	FY14 (b)	PROPOSED FY15 (b)
Public Employees' Retirement System (PERS)								
	DB Employer Contribution Rate	35.22%	27.65%	27.96%	33.49%	35.84%	35.68%	44.03%
	DCR - Retiree Medical Plan	0.99%	0.83%	0.55%	0.51%	0.48%	0.48%	1.66%
	DCR - Occupational Death & Disability - All Others	0.58%	0.30%	0.31%	0.20%	0.14%	0.20%	0.22%
	DCR - Occupational Death & Disability - Peace Officer/Fire Fighter	1.33%	1.33%	1.18%	0.97%	0.99%	1.14%	1.06%
Teachers' Retirement System (TRS)								
	DB Employer Contribution Rate	44.17%	39.53%	38.56%	45.55%	52.67%	53.62%	70.75%
	DCR - Retiree Medical Plan	0.99%	1.03%	0.68%	0.58%	0.49%	0.47%	2.04%
	DCR - Occupational Death & Disability	0.62%	0.32%	0.28%	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."							

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY 15 PERS Employer Contribution Rate ACTION: X
Tier I - III
DATE: June 20, 2013 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 actuarial valuation of the PERS as of June 30, 2012. The valuation has been reviewed by the Board's actuary, Gabriel, Roeder, Smith & Co. (GRS).

RECOMMENDATION:

That the Alaska Retirement Management Board set Fiscal Year 2015 PERS actuarially determined contribution rates attributable to employers consistent with its fiduciary duty, as set out in the attached form of Resolution 2013-08.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Employer Contribution Rate
For the Public Employees' Retirement System

Resolution 2013-08

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 June 30, 2012 PERS actuarial valuation report determines that the actuarially determined contribution rate for pension benefits is 23.24 percent composed of the normal cost rate of 2.57 percent and past service rate of 20.67 percent;

WHEREAS, the June 30, 2012 PERS actuarial valuation report determines that the actuarially determined contribution rate for postemployment healthcare benefits is 16.61 percent composed of the normal cost rate of 4.25 percent and past service rate of 12.36 percent;

WHEREAS, in April 2013 Buck Consultants presented the employer rate incorporating the normal cost of the Defined Contribution Retirement Plan of 4.18 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Fiscal Year 2015 actuarially determined contribution rate attributable to employers participating in the Public Employees' Retirement System is set at 44.03 percent, composed of the contribution rate for defined benefit pension of 23.24 percent, the contribution rate for postemployment healthcare of 16.61 percent, and the contribution rate for defined contribution pension of 4.18 percent.

DATED at Anchorage, Alaska this _____ day of June, 2013.

Chair

ATTEST:

Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY 2015 PERS Retiree Major ACTION: X
Medical Insurance and Occupational
Death & Disability Benefit Rates

DATE: June 20, 2013 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, 2012. 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 2015 actuarially determined contribution rate attributable to employers for the Retiree Major Medical Insurance (RMMI) should be 1.66 percent; for the peace officer/firefighter

Occupational Death & Disability (OD&D) Benefit should be 1.06 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 2013-09: Public Employees’ Defined Contribution Retirement Plans Retiree Major Medical Insurance Rate
- 2) Resolution 2013-10: Public Employees’ Defined Contribution Retirement Plan Occupational Death & Disability Benefit Rates

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Employer Contribution Rate
For Public Employees' Defined Contribution Retirement Plan
Retiree Major Medical Insurance

Resolution 2013-09

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, 2012 PERS Defined Contribution actuarial valuation report determines that the actuarially determined contribution rate for retiree major medical insurance is 1.66 percent composed of the normal cost rate of 1.39 percent and past service rate of 0.27 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, the Fiscal Year 2015 employer contribution rate for the retiree major medical insurance for the public employees' defined contribution plan is set at 1.66 percent.

DATED at Anchorage, Alaska this _____ day of June, 2013.

Chair

ATTEST:

Secretary

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Employer Contribution Rate
For Public Employees' Defined Contribution Retirement Plan
Occupational Death & Disability Benefit Rates

Resolution 2013-10

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, 2012 PERS Defined Contribution actuarial valuation report determines that the actuarially determined contribution rate for peace officer / firefighter occupational death & disability is 1.06 percent composed of the normal cost rate of 1.13 percent and past service rate of -0.07 percent and the "all other" is 0.22 percent composed of the normal cost rate of 0.29 percent and past service rate is -0.07 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 1.06 percent for peace officers and fire fighters, and at 0.22 percent for all other Public Employees' Retirement System employees.

DATED at Anchorage, Alaska this _____ day of June, 2013.

Chair

ATTEST:

Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY 15 TRS Employer Contribution Rate ACTION: X
Tier I - II
DATE: June 20, 2013 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 actuarial valuation of the TRS as of June 30, 2012. The valuation has been reviewed by the Board's actuary, Gabriel, Roeder, Smith & Co. (GRS).

RECOMMENDATION:

That the Alaska Retirement Management Board set Fiscal Year 2015 TRS actuarially determined contribution rates attributable to employers consistent with its fiduciary duty, as set out in the attached form of Resolution 2013-11.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Employer Contribution Rate
For the Teachers' Retirement System

Resolution 2013-11

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 June 30, 2012 TRS actuarial valuation report determines that the actuarially determined contribution rate for pension benefits is 44.55 percent composed of the normal cost rate of 2.81 percent and past service rate of 41.74 percent;

WHEREAS, the June 30, 2012 TRS actuarial valuation report determines that the actuarially determined contribution rate for postemployment healthcare benefits is 21.76 percent composed of the normal cost rate of 3.59 percent and past service rate of 18.17 percent;

WHEREAS, in April 2013 Buck Consultants presented the employer rate incorporating the normal cost of the Defined Contribution Retirement Plan of 4.44 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, that the Fiscal Year 2015 actuarially determined contribution rate attributable for employers participating in the Teachers' Retirement System is set at 70.75 percent, composed of the contribution rate for defined benefit pension of 44.55 percent, the contribution rate for postemployment healthcare of 21.76 percent, and the contribution rate for defined contribution pension of 4.44 percent.

DATED at Anchorage, Alaska this _____ day of June, 2013.

Chair

ATTEST:

Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY 2015 TRS Retiree Major ACTION: X
Medical Insurance and Occupational
Death & Disability Benefit Rates

DATE: June 20, 2013 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, 2012. 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 2015 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 2015 TRS Retiree Major Medical Insurance and Occupational Death & Disability Benefit rates as set out in the following resolutions:

- 1) Resolution 2013-12: Teachers' Defined Contribution Retirement Plans Retiree Major Medical Insurance Rate
- 2) Resolution 2013-13: Teachers' Defined Contribution Retirement Plan Occupational Death & Disability Benefit Rate

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Employer Contribution Rate
For Teachers' Defined Contribution Retirement Plan
Retiree Major Medical Insurance

Resolution 2013-12

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, 2012 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 1.72 percent and past service rate of 0.32 percent;

NOW THEREFORE, BE IT RESOLVED BY THE ALASKA RETIREMENT MANAGEMENT BOARD, the Fiscal Year 2015 employer contribution rate for the retiree major medical insurance for the teachers' defined contribution plan is set at 2.04 percent.

DATED at Anchorage, Alaska this _____ day of June, 2013.

Chair

ATTEST:

Secretary

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Employer Contribution Rate
For Teachers' Defined Contribution Retirement Plan
Occupational Death & Disability Benefit Rate

Resolution 2013-13

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, 2012 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 2015 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 Anchorage, Alaska this _____ day of June, 2013.

Chair

ATTEST:

Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY 15 Alaska National Guard and Naval
Militia Contribution Amount

DATE: June 20, 2013

ACTION: X

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 actuarial valuation of the Alaska National Guard and Naval Militia Retirement System (NGNMRS) as of June 30, 2012. 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, 2012 actuarial valuation report, and confirmed by GRS, the Fiscal Year 2015 actuarially determined contribution amount should be \$627,327.

For FY 2014, the Alaska Legislature appropriated the normal cost in House Bill (HB) 65, Section 1 in DMVA’s operating budget. The NGNMRS was fully funded as of the June 30, 2011 valuation, therefore, no separate appropriation was made for past service cost. The Division anticipates a similar approach for FY 2015.

RECOMMENDATION:

That the Alaska Retirement Management Board set the Fiscal Year 2015 NGNMRS annual actuarially determined contribution amount consistent with its fiduciary duty, as set out in the attached form of Resolution 2013-14.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to the Fiscal Year 2015 Actuarially Determined Contribution Amount
For the Alaska National Guard and Naval Militia Retirement System

Resolution 2013-14

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, 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 2015 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 \$627,327, composed of the contribution amount for the normal cost of \$631,921, past service cost of (\$142,594), and expense load cost of \$138,000.

DATED at Anchorage, Alaska this ____ day of June, 2013.

Chair

ATTEST:

Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: FY 15 JRS Employer Contribution Rate ACTION: _____
DATE: June 20, 2013 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).”

Discussion at prior Alaska Retirement Management Board (Board) meetings noted that Alaska Statutes state the Commissioner of Administration shall establish the employer contribution rate for JRS. However, AS 37.10.220(a)(8) states that the board shall “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.”

STATUS:

The Division of Retirement & Benefits’ consulting actuary, Buck Consultants, has completed the actuarial valuation of the Alaska Judicial Retirement System (JRS) as of June 30, 2012.

According to the JRS actuarial valuation report as of June 30, 2012, the Fiscal Year 2015 employer contribution rate should be 79.06 percent based on the following table:

	Pension	Post-Employment Health Care	Total
Normal Cost Rate	35.92%	3.87%	39.79%
Past Service Cost Rate	40.55%	(1.28%)	39.27%
Total Employer Contribution Rate	76.47%	2.59%	79.06%



ARMB Board Meeting

Investment Performance
Periods Ended 3/31/13

Michael J. O'Leary, CFA
Executive Vice President

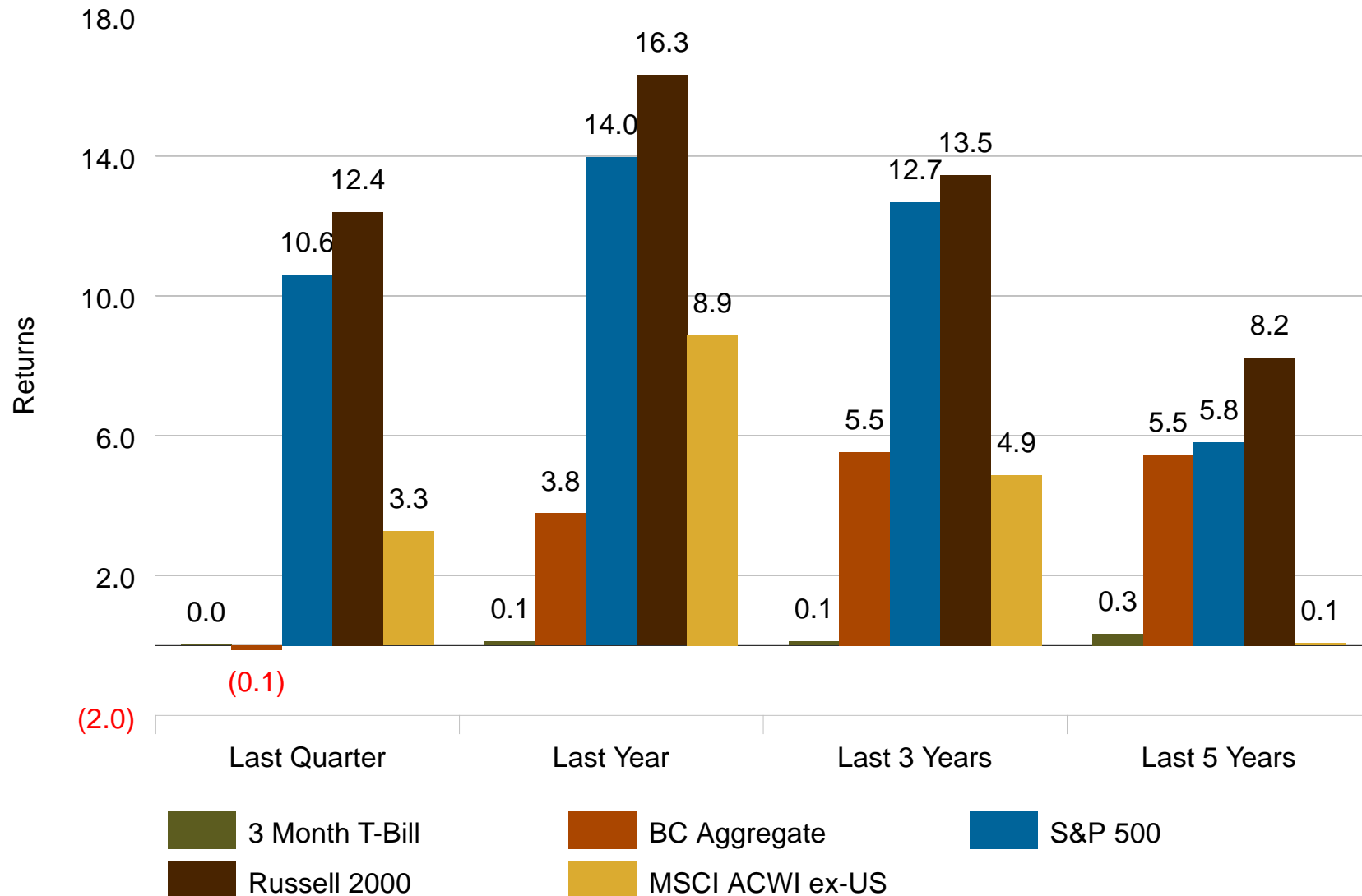
Paul Erlendson
Senior Vice President

Agenda

- Market and Economic Environment
- Total Fund Performance
 - Major Asset Classes
- Review of Major Activities

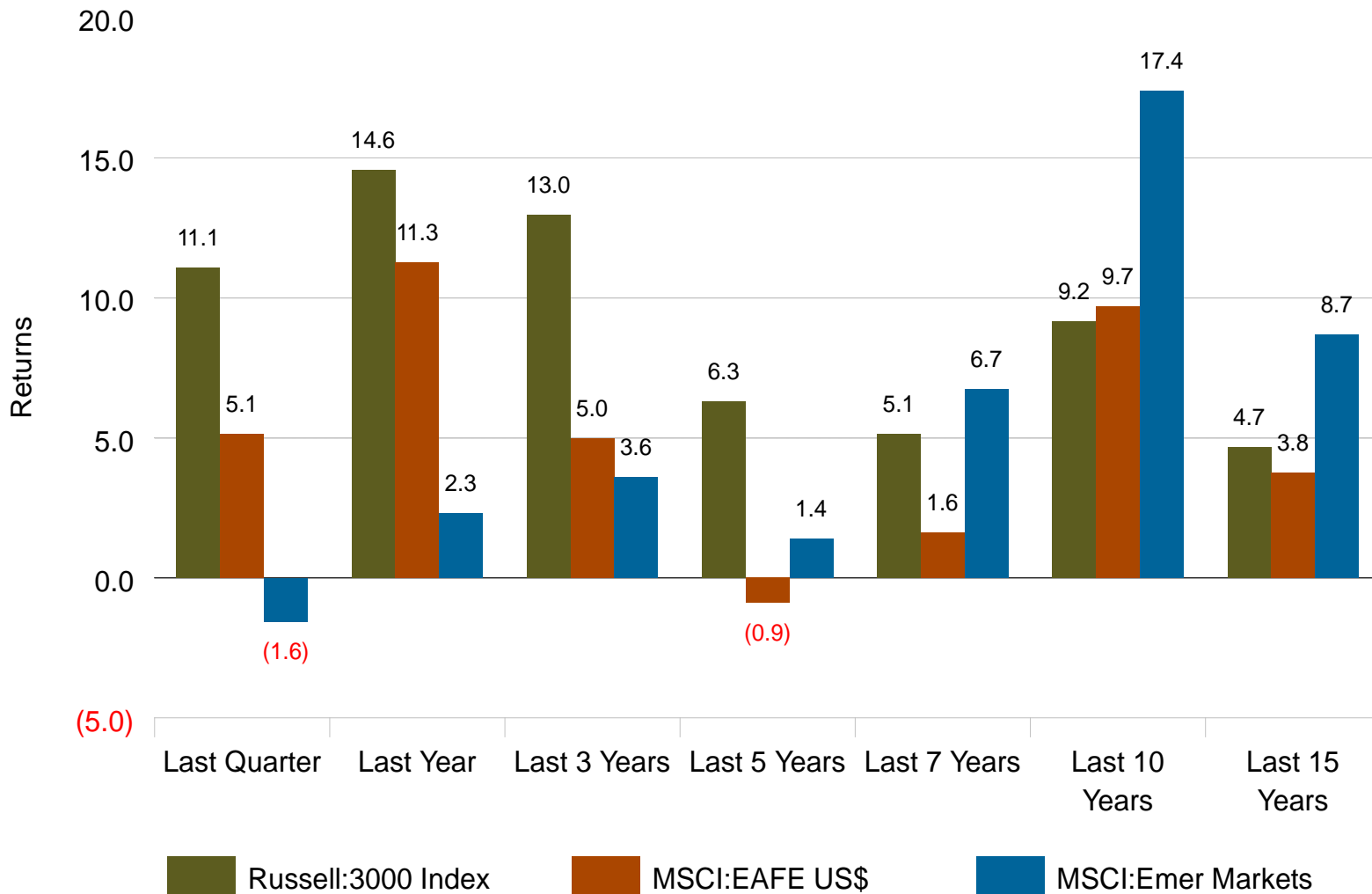
Asset Class Performance

Returns for Quarter Ended March 31, 2013



Domestic, Developed, and Emerging Stock Returns

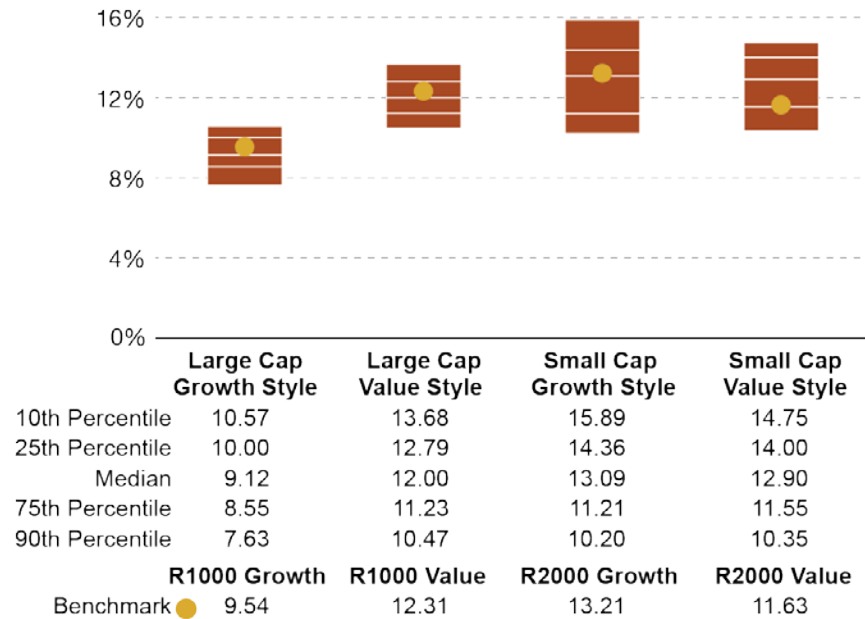
Returns for Various Periods
Current Quarter Ending March 31, 2013



U.S. Equity

Quarterly Returns

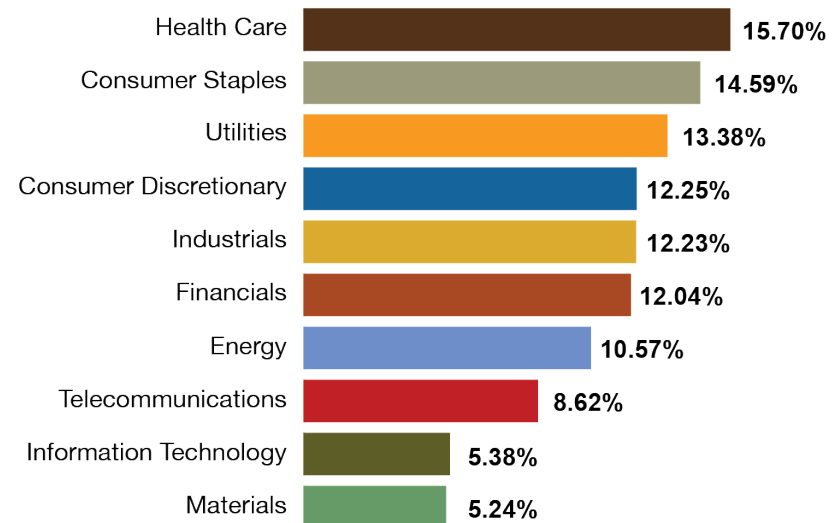
Callan Style Group Quarterly Returns



Sources: Callan Associates Inc., Russell Investment Group

Economic Sector Quarterly Returns

(Russell 3000)

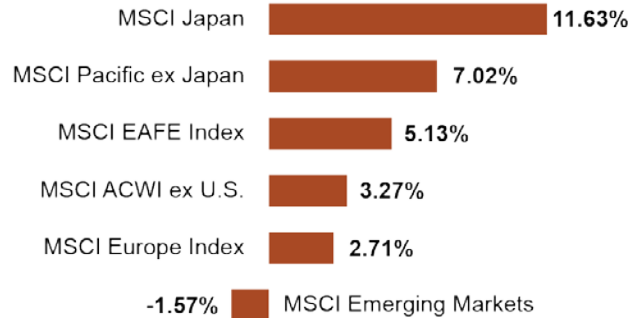


- US stock markets were the best performing asset class in the first quarter.
- Stocks across the capitalization range rose 11% to 13%. Small and mid cap outpaced larger cap names (Russell 1000: +10.96%; Russell Midcap: +12.96%; Russell 2000: +12.39%).
- All sectors turned in positive returns led by defensive sectors, such as Health Care, Consumer Staples, and Utilities.

International Equity Returns

Regional Quarterly Performance

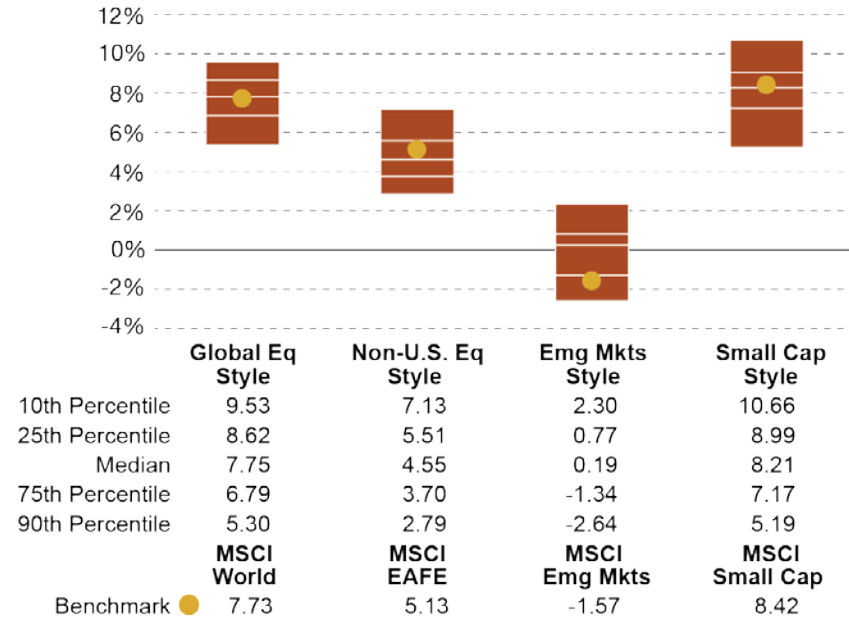
(U.S. Dollar)



Source: MSCI Inc.

- Broad foreign equities turned in positive absolute returns for the quarter, but did not keep pace with US results.
- Developed markets, as represented by the MSCI EAFE, earned a respectable 5.13%.
- Meanwhile, the MSCI ACWI ex-US Index (+3.27%) was weighed down by emerging markets equities (-1.57%), which posted the only loss among global stock indices over the quarter.
- From a currency perspective, the US dollar strengthened relative to both the euro and the yen, as well as most other currencies.

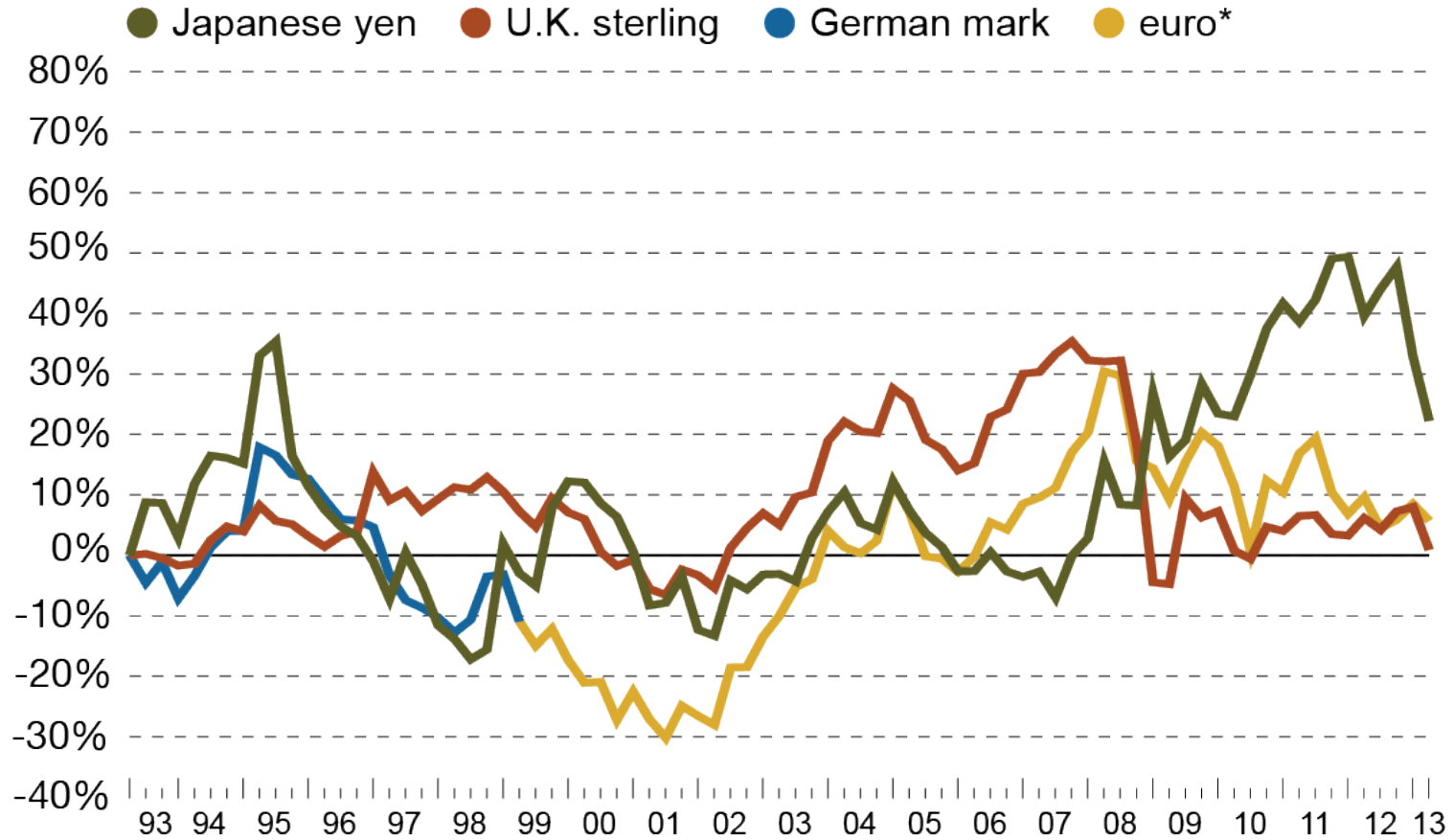
Callan Style Group Quarterly Returns



Sources: Callan Associates Inc., MSCI Inc.

Interesting Perspectives

Major Currencies' Cumulative Returns (vs. U.S. Dollar)

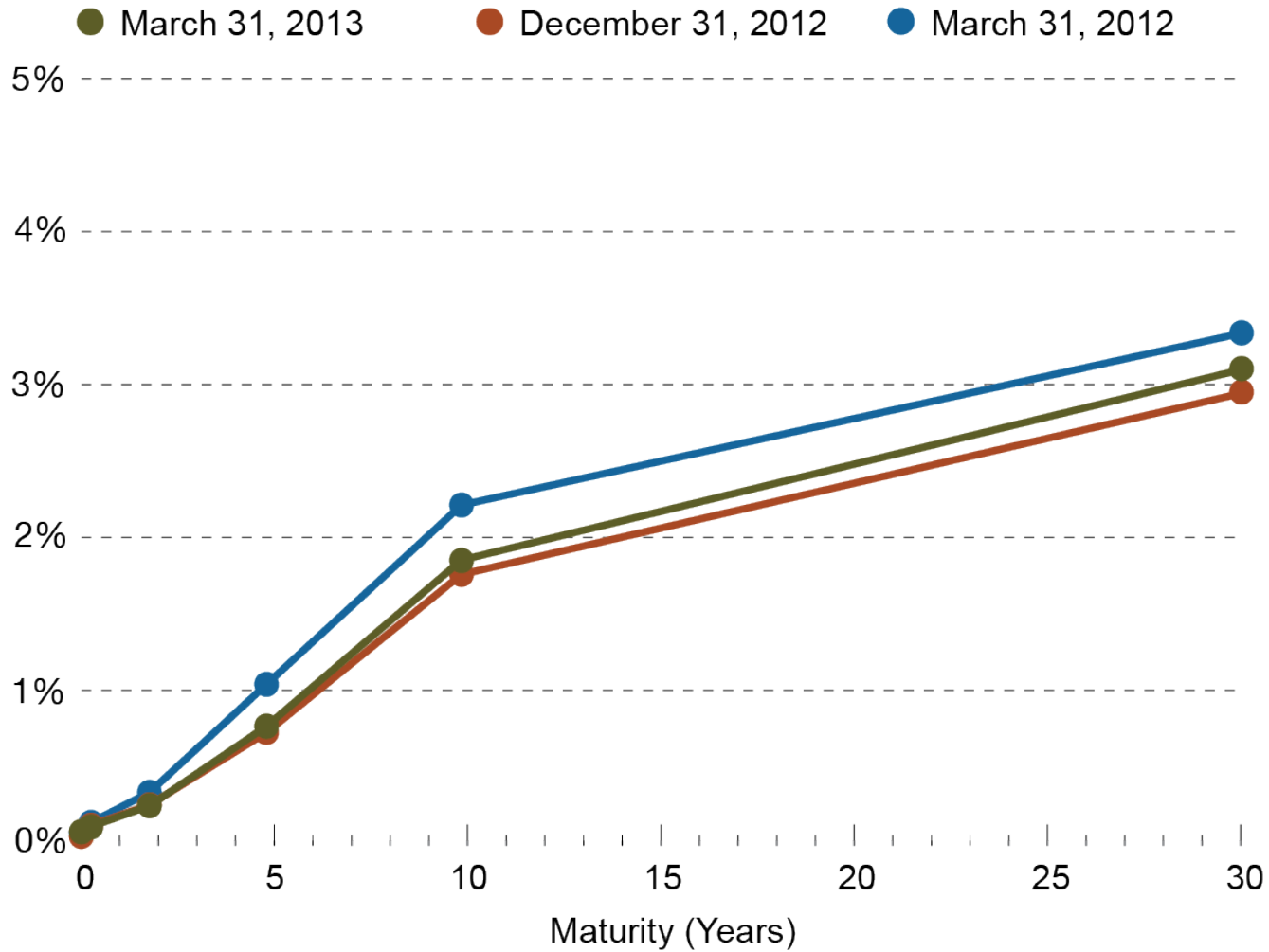


*euro returns from 1Q99

Source: MSCI Inc.

Recent Treasury Yield Curve

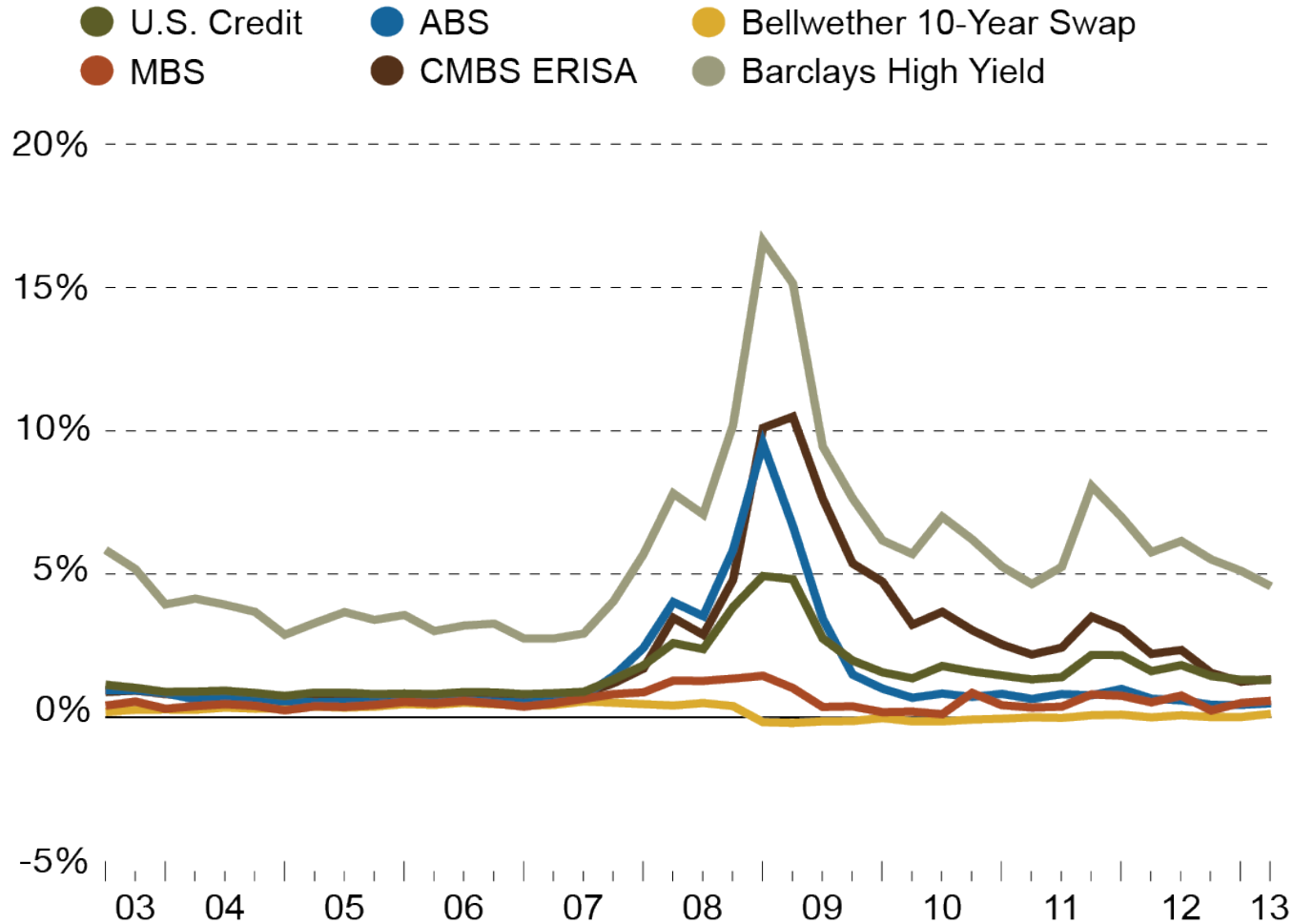
U.S. Treasury Yield Curves



Source: Bloomberg

U.S. Fixed Income

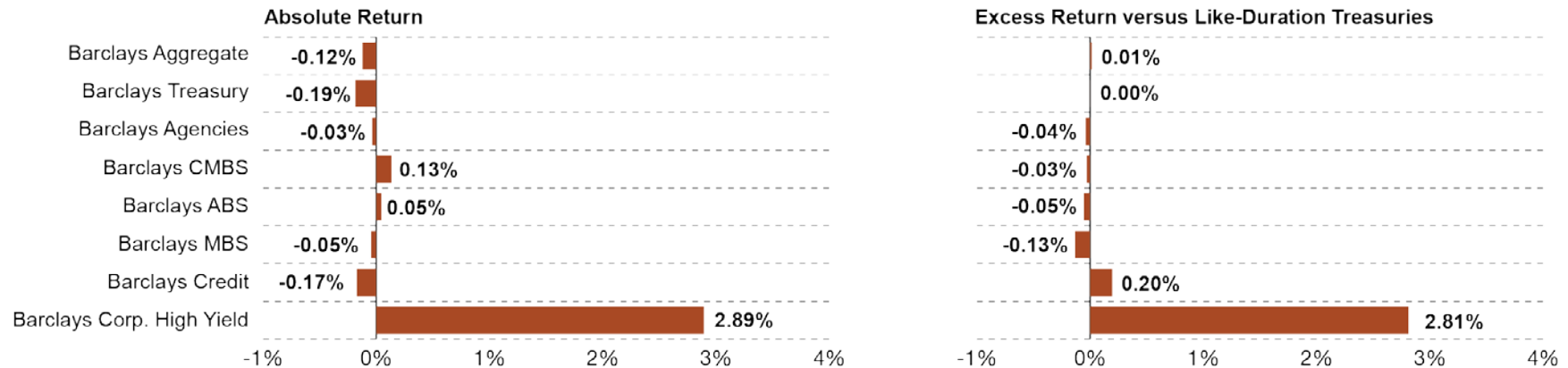
Effective Yield Over Treasuries



Source: Barclays

Fixed Income

Quarterly Returns



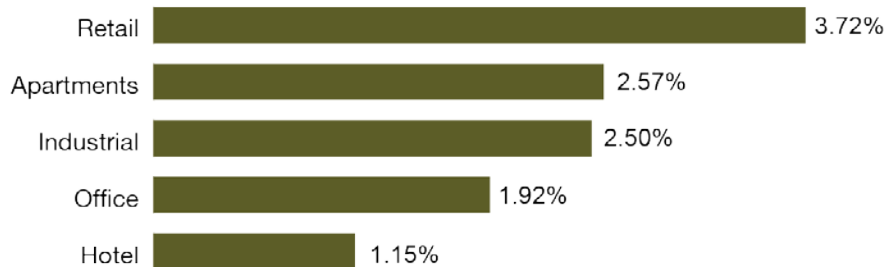
Source: Barclays

- Interest rates rose marginally across the curve over the quarter. The yield curve steepened slightly with the spread between 2-year and 30-year Treasuries widening 16 basis points to 2.86%. As a result, both the 10-year and 30-year Treasury delivered negative quarterly returns (-0.34%; -3.11%, respectively).
- The Federal Open Market Committee reiterated its commitment to its monetary easing programs. Asset purchases in the amount of \$85 billion per month will continue along with the reinvestment of all Treasury and mortgage interest and principal payments.
- The U.S. Federal Reserve policy kept rates in the range of 0-25 basis points, as it has now for roughly three years.

Real Estate

NCREIF All Equity Sector Quarterly Performance

Quarterly Returns by Property Type



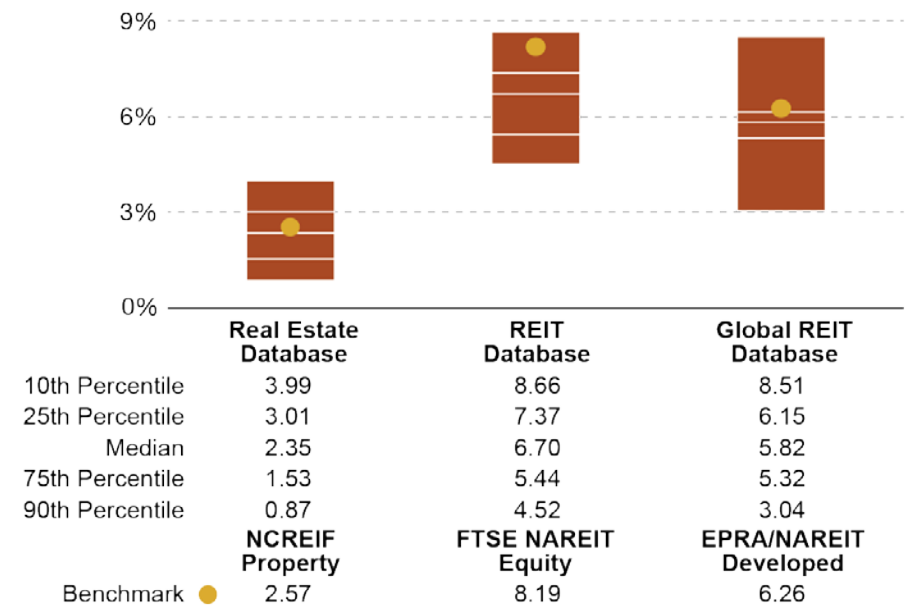
Quarterly Returns by Region



Source: NCREIF

- Institutional real estate assets, as measured by the NCREIF Property Index, advanced 2.6% during the first quarter; income returns totaled 1.4% and appreciation represented 1.2%. Retail (+3.7%) led property-type performance while Hotels (+1.2%) trailed.
- The NAREIT Equity index rose 8.2% in the quarter, mildly underperforming broad US equity markets. Health Care was the strongest sector (+14.7%) while Residential REITs trailed notably (+1.0%).
- From a global perspective, Domestic REITs outperformed Global REITs by 1.9%.

Callan Style Group Quarterly Returns

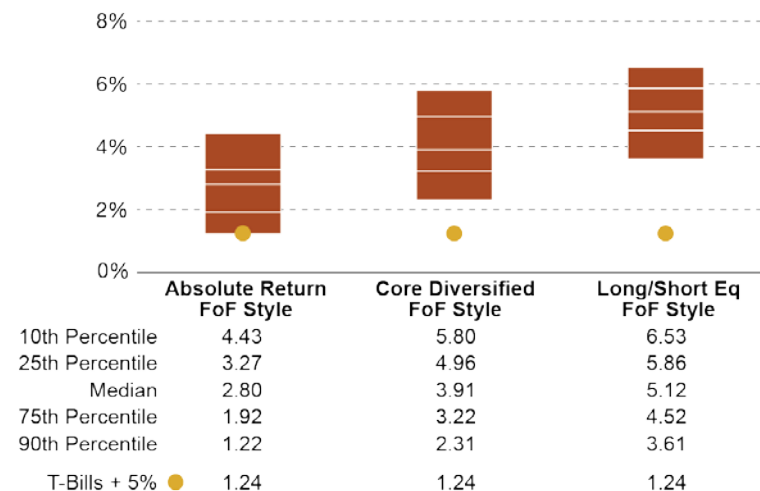


Sources: Callan Associates Inc., NAREIT, NCREIF, The FTSE Group

Hedge Funds

- The median manager in Callan's Hedge Fund-of-Funds Database returned 3.8%, net of fees during the quarter.
- Exposures to market risks differentiated performance; the median Long-Short Equity FoF manager (+5.1%) outperformed the median Core Diversified (+3.9) and median Absolute Return (+2.8%) FoF managers.
- Directional equity, credit, and event driven strategies performed best while short biased and macro/CTA strategies struggled.

Callan Style Group Quarterly Returns



Sources: Callan Associates Inc., Merrill Lynch

Style Median and Index Returns* for Periods ended March 31, 2013

Diversified Hedge Fund Strategies	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Hedge Fund-of-Funds Database	3.83	6.77	4.13	2.01	5.26	6.83
DJCS Hedge Fund Index	3.55	7.17	5.37	3.38	7.05	6.65
DJCS Investable Blue Chip Index	2.54	4.31	4.27	1.55	3.85	--
DJCS Subindices	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Equity Market Neutral	0.73	0.24	1.97	-8.48	-0.50	3.26
Convertible Arb	2.68	5.57	6.26	6.27	4.82	6.84
Fixed Income Arb	2.17	10.21	8.86	5.39	4.45	4.57
Multi-Strategy	3.10	9.48	7.54	4.80	7.13	7.34
Distressed	4.99	10.82	5.67	4.11	8.65	8.20
Risk Arb	0.33	1.06	1.90	2.49	5.08	5.21
Event Driven Multi	4.71	9.87	3.55	3.95	8.16	7.37
Long-Short Equity	5.09	6.09	3.87	2.86	7.48	7.90
Short Bias	-8.56	-16.26	-13.53	-14.52	-9.38	-5.51
Global Macro	2.16	5.17	7.95	5.13	9.50	9.04
Managed Futures	3.66	1.30	1.95	1.61	4.56	5.87

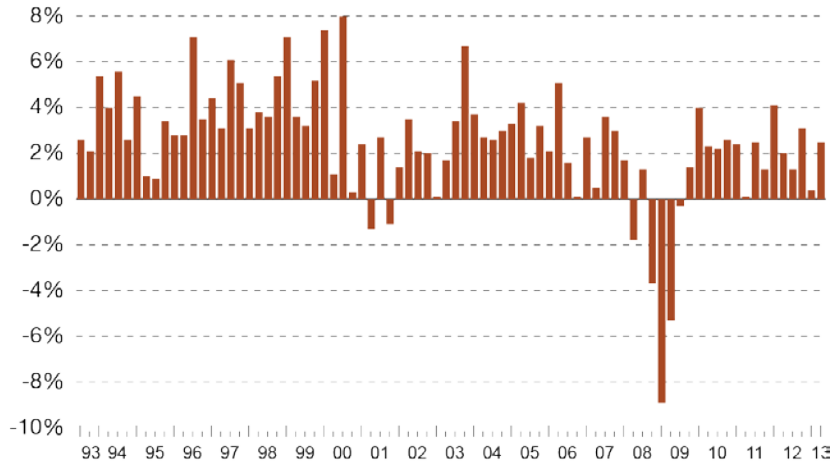
*Returns less than one year are not annualized.

Sources: Callan Associates Inc., Credit Suisse Hedge Index LLC

US Economy

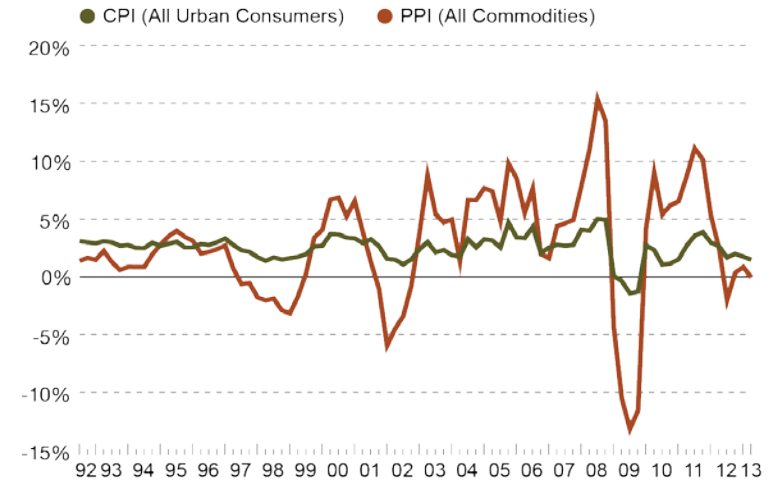
A Tight Squeeze

Quarterly Real GDP Growth* (20 Years)



Source: U.S. Department of Labor

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

Labor Force Statistics from the Current Population Survey Original Data Value

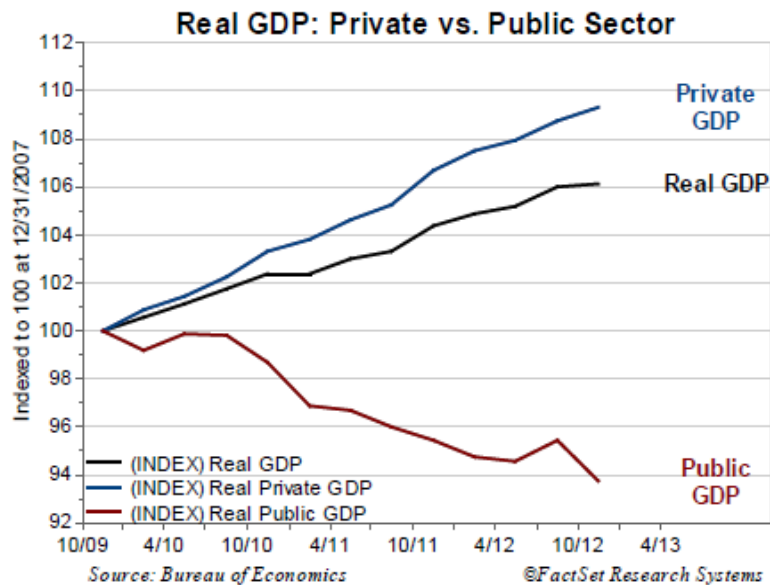
2013 (Seasonally Adjusted)	Jan	Feb	Mar	Apr	Notes
Employment Level	143,322	143,492	143,286	143,579	(In 1,000's)
Unemployment Level	12,332	12,032	11,742	11,659	(In 1,000's)
Civilian Labor Force Level	155,654	155,524	155,028	155,238	(In 1,000's)
Unemployment Rate	7.9%	7.7%	7.6%	7.5%	
Labor Force Participation Rate	63.6%	63.5%	63.3%	63.3%	

US Economy Prior Recoveries

Source - PNC

Economic Growth: U.S. Private vs. Public Sectors

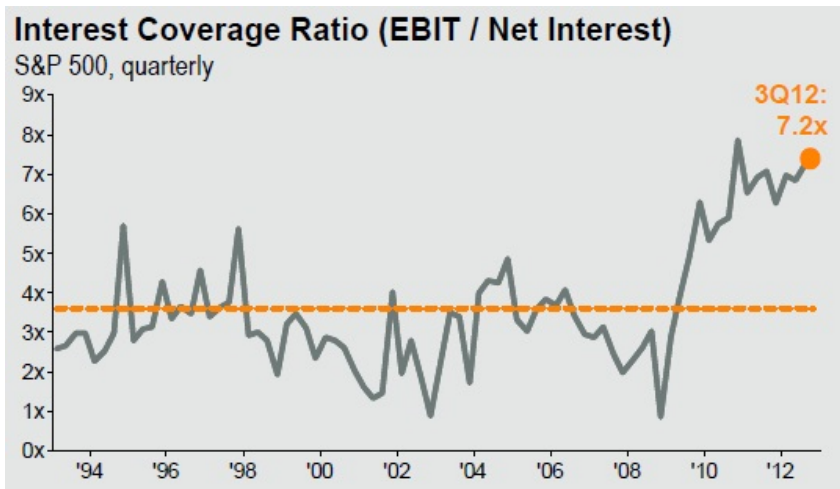
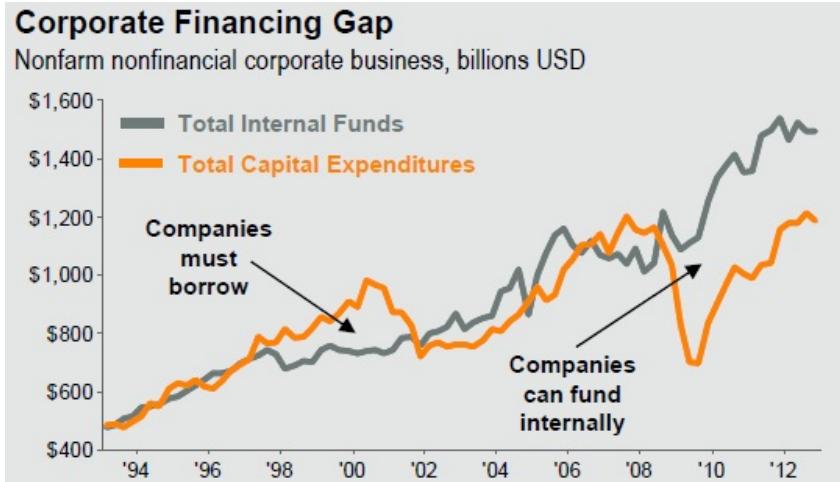
- The pace of real GDP growth has been below previous expansions due in part to a drag from the public sector. The private sector has grown at an annual rate of 3% since the end of the recession.



NBER Business Cycle Expansions	Length of Expansion In Months	Annualized Growth of Real GDP		
		Total GDP	Private Sector	Public Sector
4Q'49 - 2Q'53	42	7.5%	2.9%	18.0%
2Q'54 - 3Q'57	39	4.0%	6.0%	0.0%
2Q'58 - 2Q'60	24	5.7%	7.8%	1.3%
1Q'61 - 4Q'69	105	4.8%	5.3%	3.8%
4Q'70 - 4Q'73	36	5.2%	7.6%	-1.1%
1Q'75 - 1Q'80	60	4.3%	5.1%	1.9%
3Q'80 - 3Q'81	12	4.4%	5.4%	1.2%
4Q'82 - 3Q'90	93	4.2%	4.4%	3.5%
1Q'91 - 1Q'01	120	3.6%	4.2%	1.3%
4Q'01 - 4Q'07	81	2.5%	2.6%	2.1%
Average	77	4.6%	5.1%	3.2%
2Q'09 - Current	42	2.1%	3.0%	-1.5%

Source: NBER, Bureau of Economic Analysis, PNC Capital Advisors

U.S. Corporate Financial Health - Source JP Morgan



- Borrowing costs are extremely low (Barclays U.S. Corporate Index yield is 2.76%) but the need for external financing is lower than anytime in the last 20 years
- Total leverage is very low and continues to fall

An Unusual Perspective – Something to think about

How have negative real interest rates and low nominal interest income affected investors and their use of leverage?

US household & corporate cash balances, Percent of tangible assets



**NYSE margin debt
Billion USD**



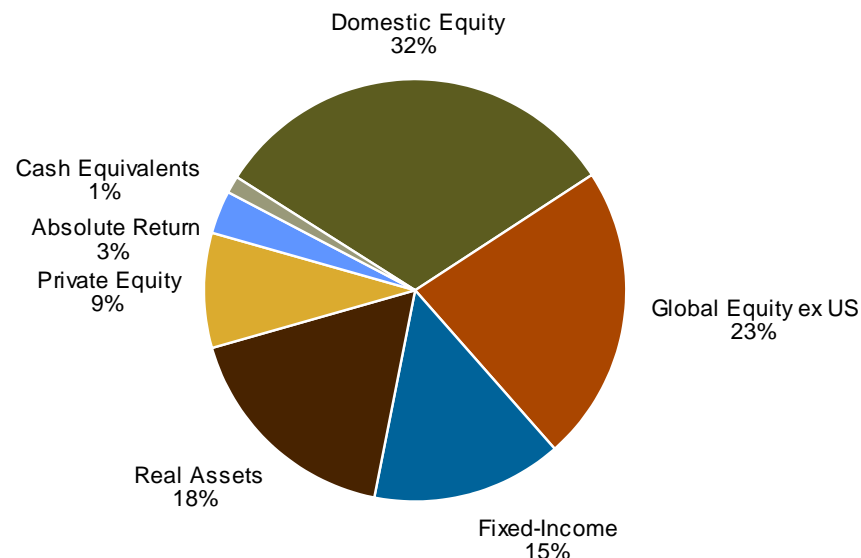
**Announced share buybacks
Percent of potential GDP**



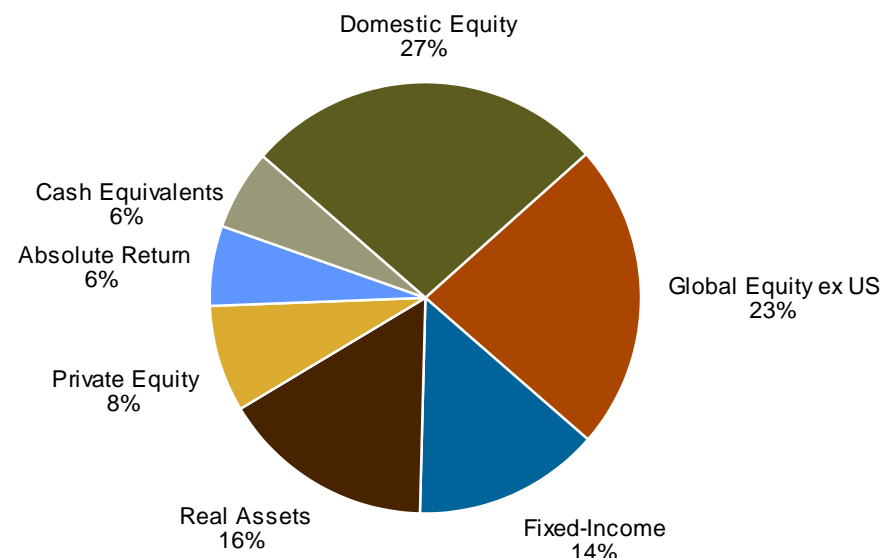
Asset Allocation – Employees’ Retirement Plan

ERP is used as illustrative throughout the presentation. The other plans exhibit similar modest and understandable variations from strategic target allocations.

Actual Asset Allocation



Target Asset Allocation

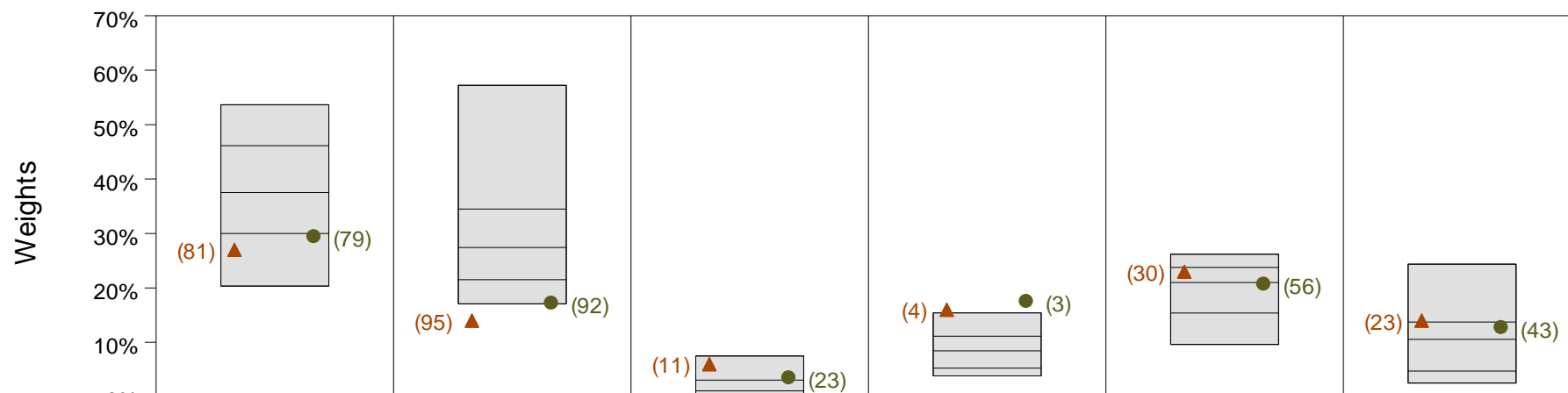


Asset Class	\$000s Actual	Percent Actual	Percent Target	Percent Difference	\$000s Difference
Domestic Equity	2,136,127	31.8%	27.0%	4.8%	323,475
Global Equity ex US	1,523,147	22.7%	23.0%	(0.3%)	(20,964)
Fixed-Income	978,920	14.6%	14.0%	0.6%	39,027
Real Assets	1,176,911	17.5%	16.0%	1.5%	102,746
Private Equity	592,254	8.8%	8.0%	0.8%	55,306
Absolute Return	218,305	3.3%	6.0%	(2.7%)	(184,507)
Cash Equivalents	87,862	1.3%	6.0%	(4.7%)	(314,949)
Total	6,713,525	100.0%	100.0%		

Asset Allocation Versus Public Funds (ERP)

Callan Public Fund Database

Asset Class Weights vs CAI Public Fund Sponsor Database



	Domestic Equity	Fixed-Income	Cash Equivalents	Real Assets	Global Equity ex US	Alternative
10th Percentile	53.65	57.21	7.51	15.41	26.20	24.38
25th Percentile	46.12	34.49	3.08	11.14	23.76	13.73
Median	37.52	27.43	1.09	8.44	20.98	10.55
75th Percentile	30.01	21.51	0.21	5.28	15.39	4.73
90th Percentile	20.34	17.08	0.03	3.85	9.62	2.51
Fund ●	29.25	17.03	3.30	17.33	20.54	12.55
Target ▲	27.00	14.00	6.00	16.00	23.00	14.00
% Group Invested	95.12%	97.56%	65.85%	51.22%	86.59%	50.00%

- Total domestic equity is above target while international equity is 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 – 1st Quarter 2013 & Trailing 12 Months

Relative Attribution Effects for Quarter ended March 31, 2013

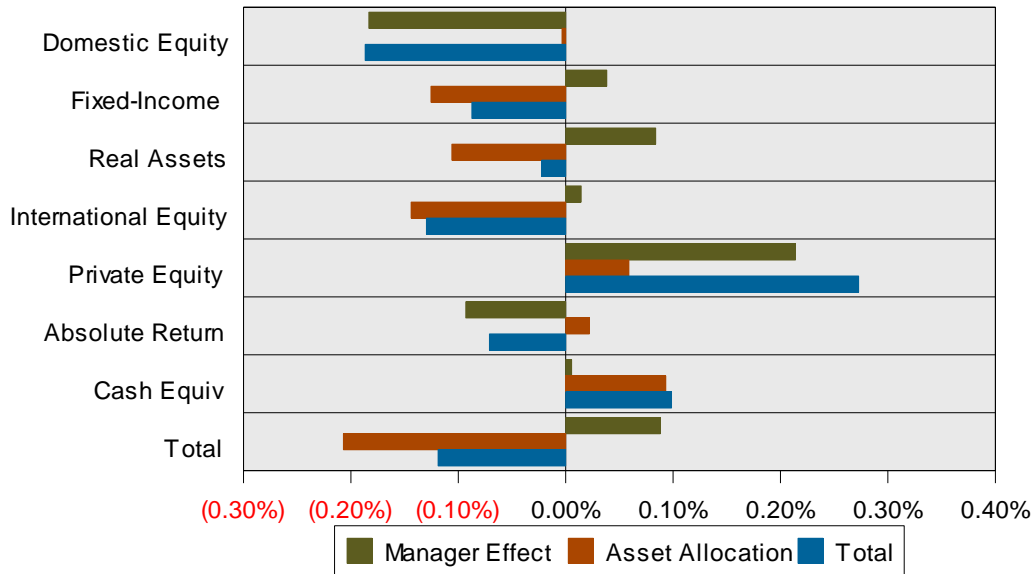
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	27%	10.83%	11.07%	(0.07%)	0.15%	0.08%
Fixed-Income	16%	14%	0.18%	0.07%	0.02%	(0.12%)	(0.10%)
Real Assets	17%	16%	6.43%	2.88%	0.62%	(0.03%)	0.58%
Global Equity ex US	22%	23%	3.81%	3.27%	0.12%	0.02%	0.14%
Private Equity	9%	8%	2.43%	9.38%	(0.63%)	0.05%	(0.59%)
Absolute Return	3%	6%	3.45%	1.24%	0.07%	0.09%	0.16%
Cash Equivalents	2%	6%	0.06%	0.02%	0.00%	0.17%	0.17%
Total			5.47%	= 5.03%	+ 0.12%	+ 0.32%	0.44%

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	30%	27%	12.86%	14.56%	(0.49%)	0.11%	(0.38%)
Fixed-Income	16%	15%	3.92%	3.15%	0.13%	(0.37%)	(0.24%)
Real Assets	17%	16%	11.22%	11.18%	0.03%	(0.04%)	(0.01%)
Global Equity ex US	21%	23%	7.92%	8.87%	(0.20%)	(0.19%)	(0.39%)
Private Equity	9%	8%	13.03%	13.94%	(0.08%)	0.05%	(0.03%)
Absolute Return	4%	6%	5.77%	5.12%	0.00%	0.13%	0.13%
Cash Equiv	3%	5%	0.32%	0.12%	0.01%	0.31%	0.32%
Total			9.24%	= 9.83%	+ (0.59%)	+ 0.01%	(0.59%)

PERS Intermediate Term Performance

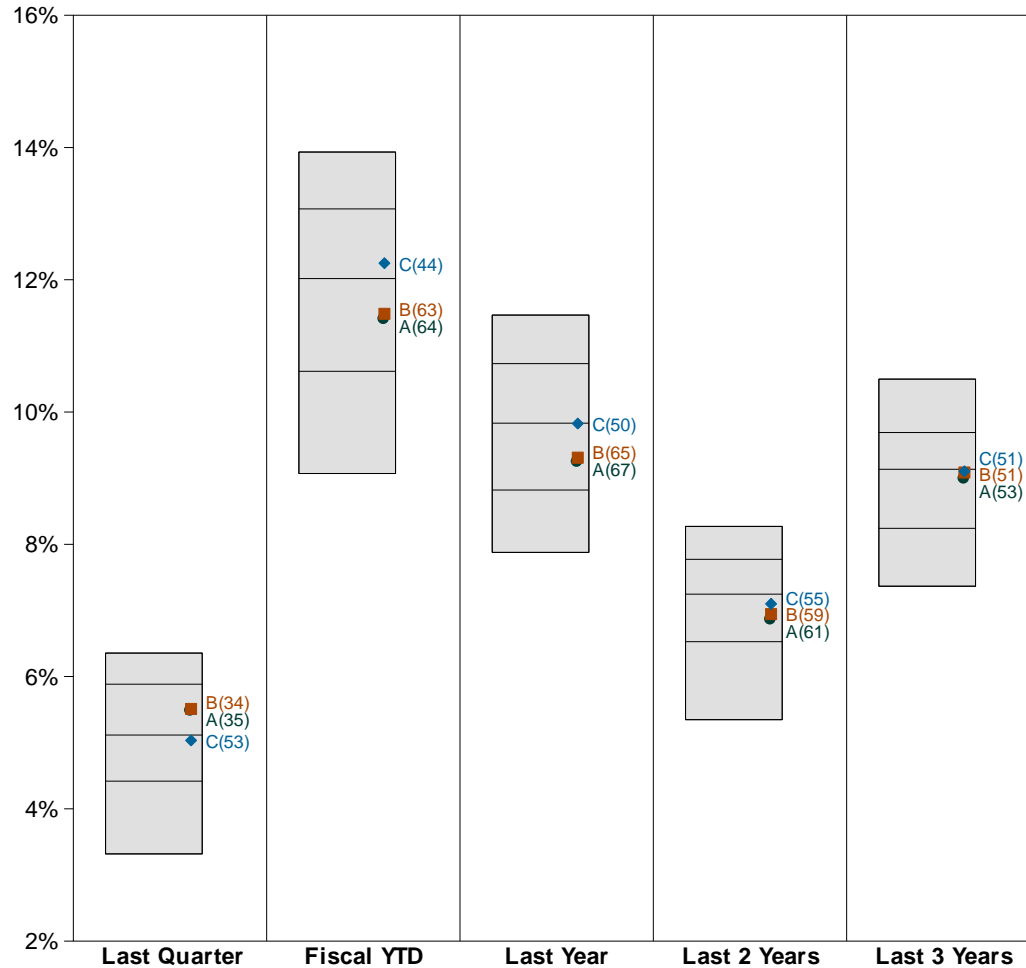
Three Year Annualized Relative Attribution Effects



Three Year Annualized 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%	28%	12.30%	12.97%	(0.18%)	(0.00%)	(0.19%)
Fixed-Income	17%	18%	5.19%	4.88%	0.04%	(0.13%)	(0.09%)
Real Assets	16%	16%	12.50%	11.89%	0.08%	(0.11%)	(0.02%)
International Equity	22%	23%	4.97%	4.87%	0.01%	(0.14%)	(0.13%)
Private Equity	9%	8%	13.93%	10.46%	0.21%	0.06%	0.27%
Absolute Return	4%	6%	3.49%	5.11%	(0.09%)	0.02%	(0.07%)
Cash Equiv	2%	2%	-	-	0.01%	0.09%	0.10%
Total			8.98%	9.10%	+ 0.09%	+ (0.21%)	(0.12%)

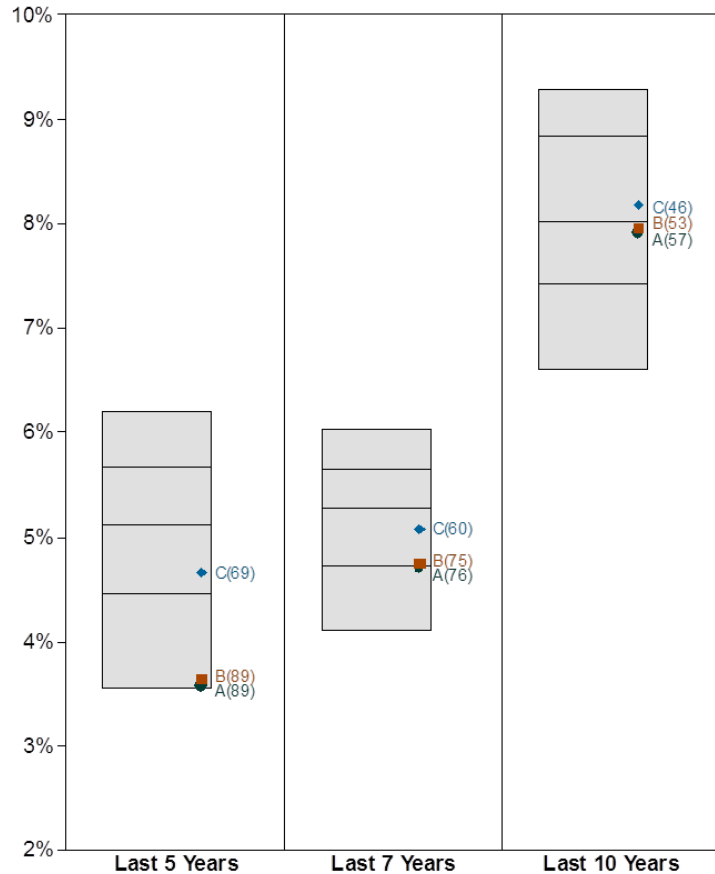
Cumulative Total Fund Returns



Strong quarter has helped raise three year returns to target

10th Percentile	6.36	13.93	11.47	8.27	10.50
25th Percentile	5.88	13.07	10.73	7.77	9.69
Median	5.12	12.02	9.83	7.25	9.13
75th Percentile	4.42	10.62	8.82	6.53	8.24
90th Percentile	3.32	9.07	7.88	5.35	7.37
PERS Total Plan ● A	5.47	11.40	9.24	6.85	8.98
TRS Total Plan ■ B	5.51	11.49	9.31	6.94	9.09
Target Index ◆ C	5.03	12.25	9.83	7.10	9.10

Longer-term Returns

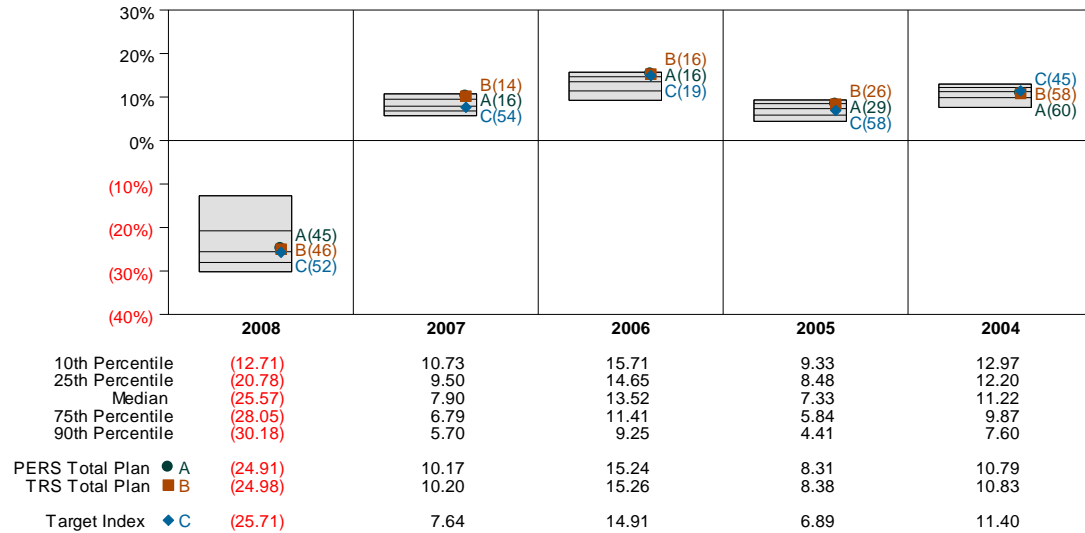
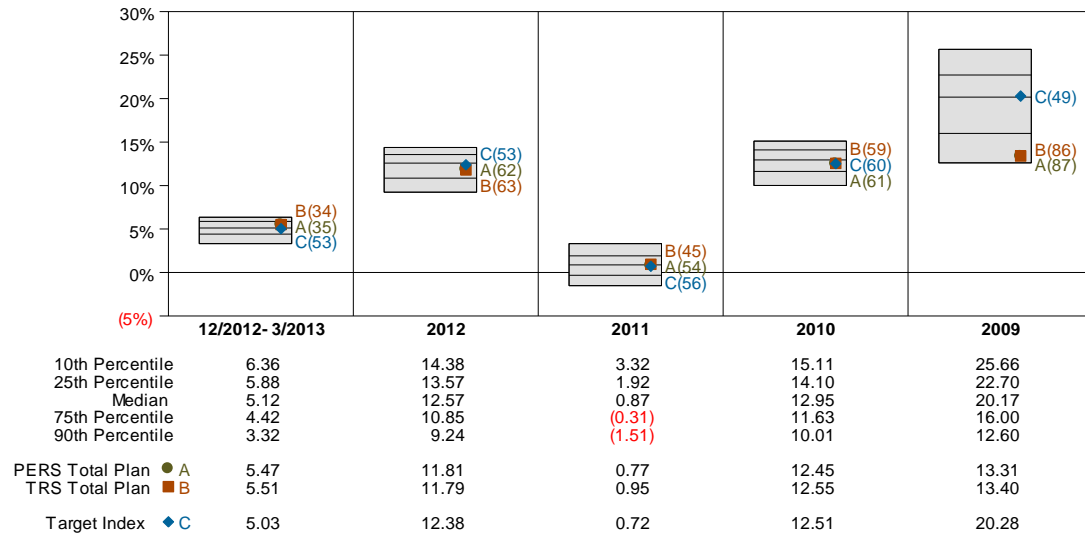


- 5-year performance still affected by 2009 timing related issues
- Both shorter & longer-term results improving relative to target
- Target has been close to median (see preceding page) & 10 year return shown here.

10th Percentile		6.21	6.03	9.28
25th Percentile		5.67	5.64	8.83
Median		5.12	5.27	8.03
75th Percentile		4.45	4.73	7.42
90th Percentile		3.56	4.10	6.61
PERS Total Plan	◆ A	3.58	4.70	7.91
TRS Total Plan	■ B	3.63	4.74	7.95
Target Index	◆ C	4.66	5.08	8.17

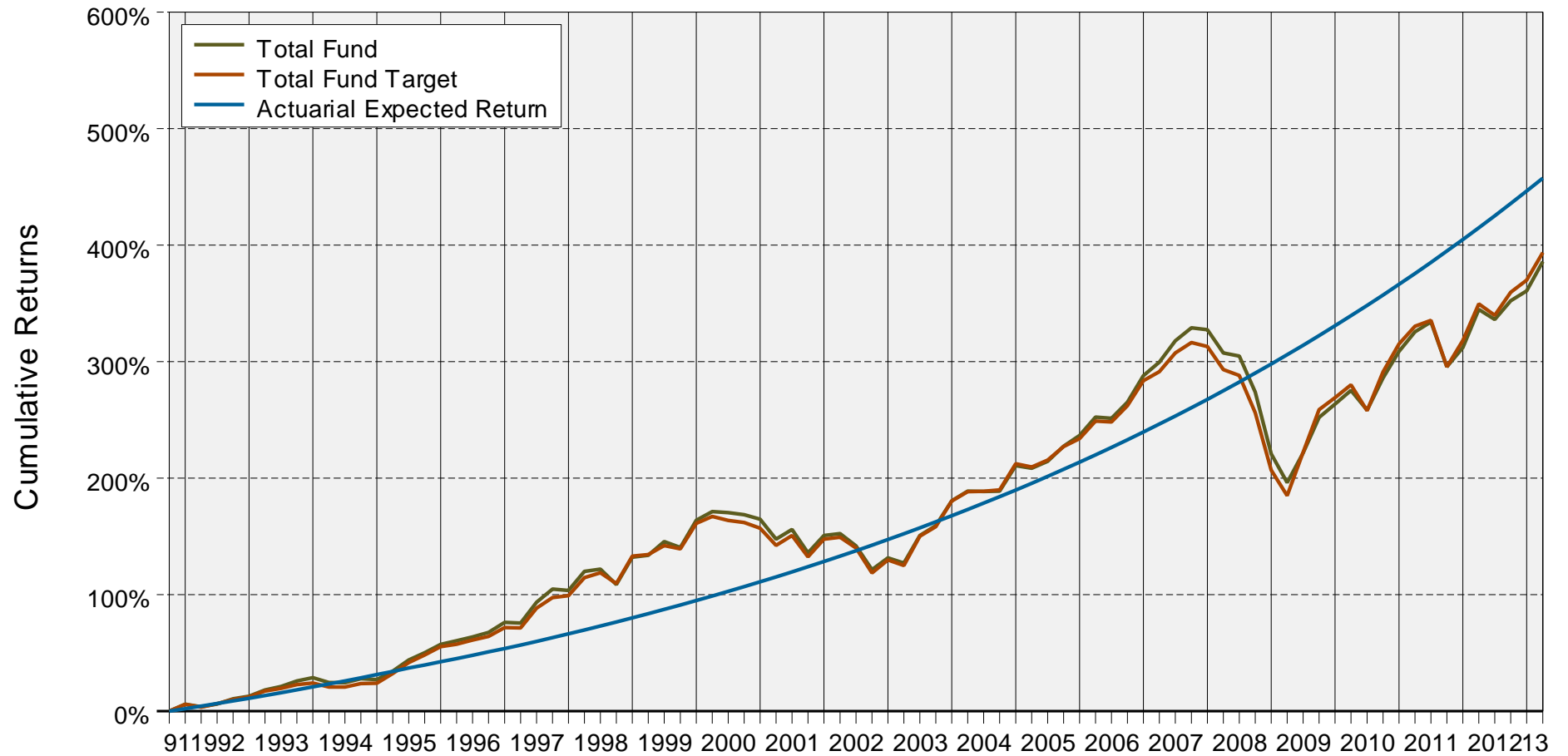
Calendar Period Performance

Relative to Public Fund Database



Long-term Return Relative to Target –TRS

Cumulative Returns Actual vs Target

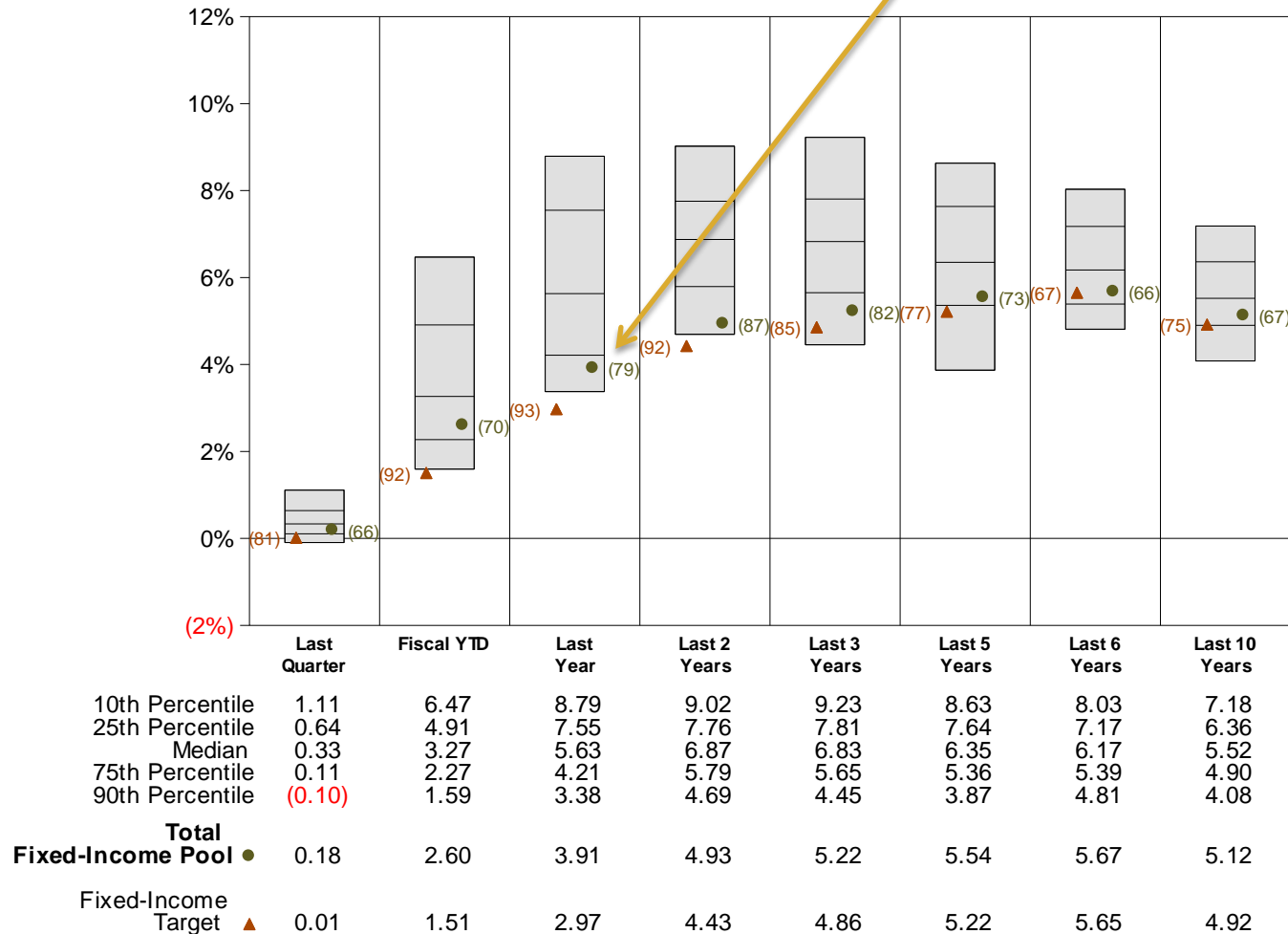


Total Bond Performance

Includes In-House and External Portfolios

Performance vs Public Fund - Domestic Fixed (Gross)

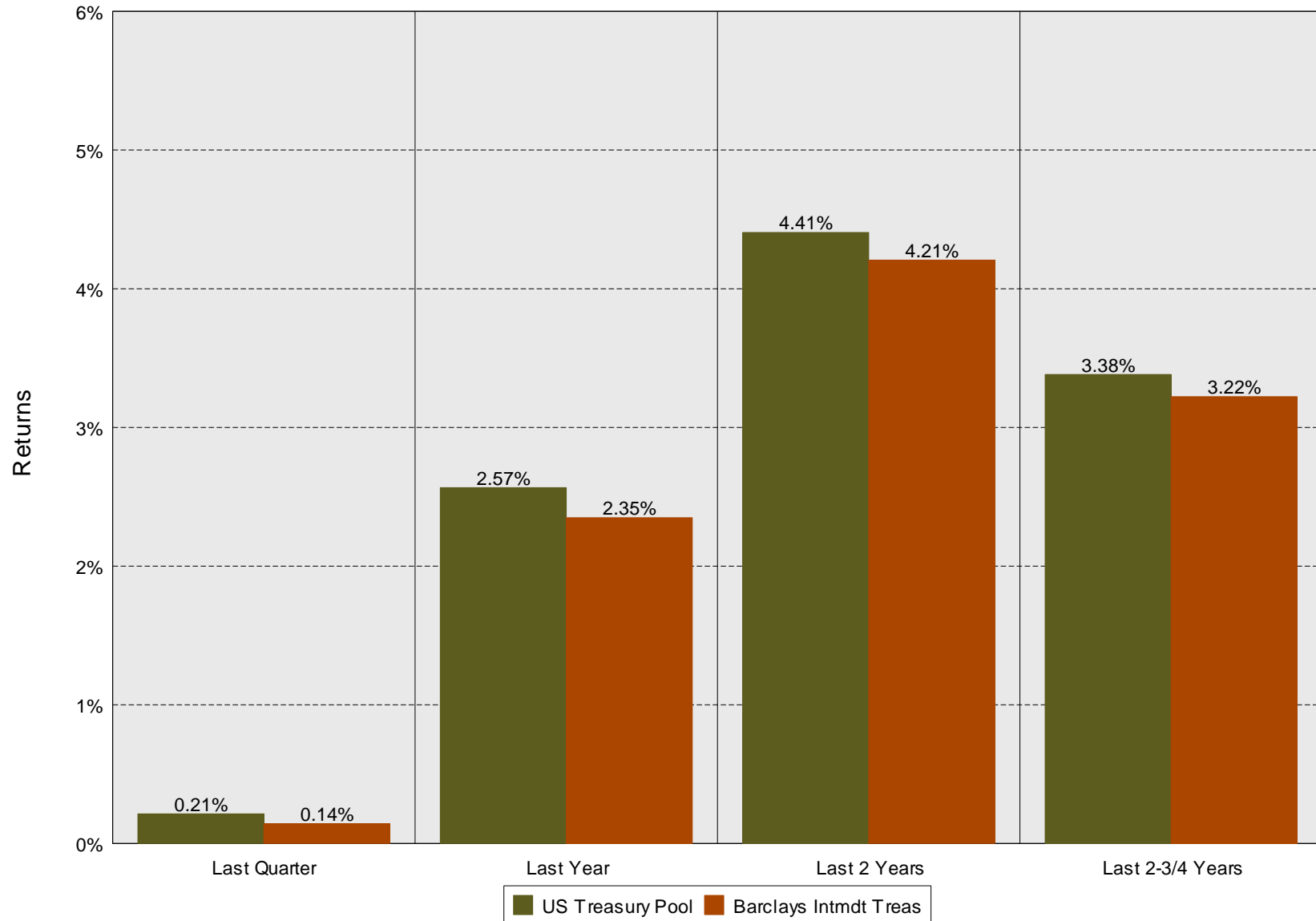
Focus on trailing 1-year return



- The Treasury component outpaced the Intermediate Treasury Index but Treasuries lagged credit sectors of the bond market. The Mondrian portfolio trailed its custom non-\$ benchmark. McKay Shields posted the greatest absolute return (12.65% vs. HY benchmark of 13.11%).

In-House Portfolio

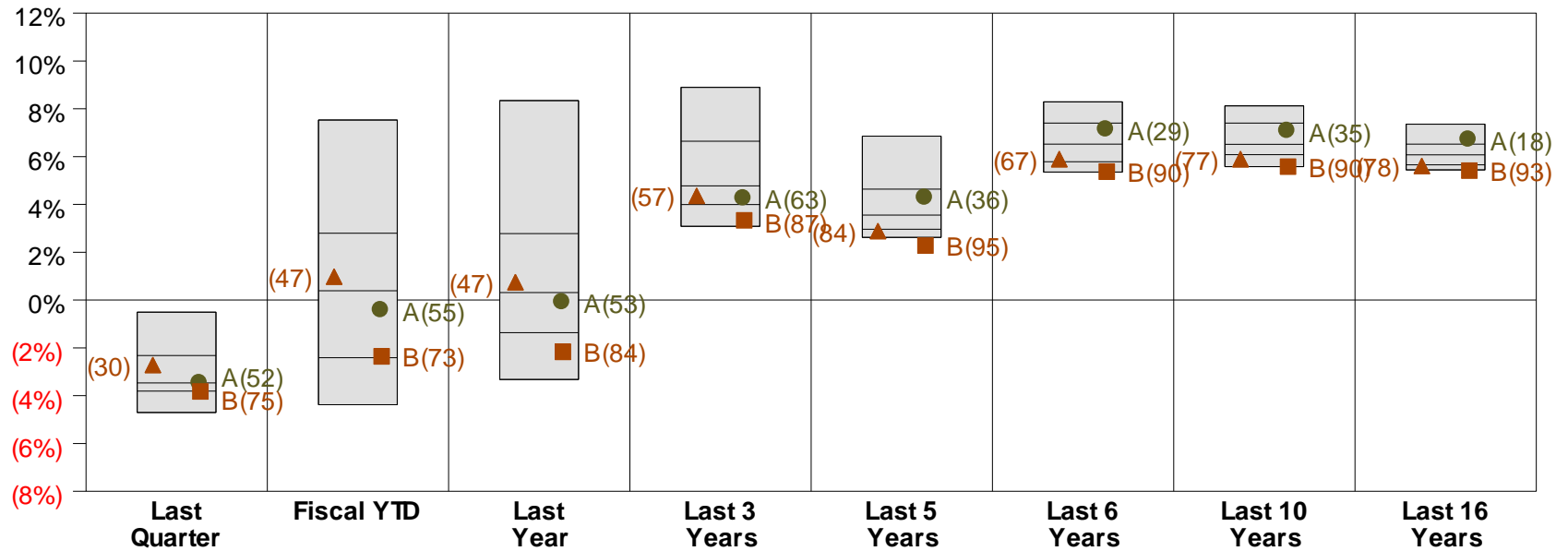
Compared to BC Intermediate Treasury Index



Non-US Fixed Income

Mondrian - Consistently better than benchmark for longer term periods.

Performance vs CAI Non-U.S. Fixed-Inc Style (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years	Last 16 Years
10th Percentile	(0.51)	7.53	8.34	8.90	6.86	8.29	8.12	7.36
25th Percentile	(2.32)	2.79	2.78	6.64	4.64	7.40	7.40	6.52
Median	(3.47)	0.39	0.32	4.77	3.56	6.52	6.51	6.08
75th Percentile	(3.81)	(2.41)	(1.36)	4.00	2.96	5.79	6.08	5.65
90th Percentile	(4.70)	(4.37)	(3.32)	3.09	2.62	5.35	5.58	5.44

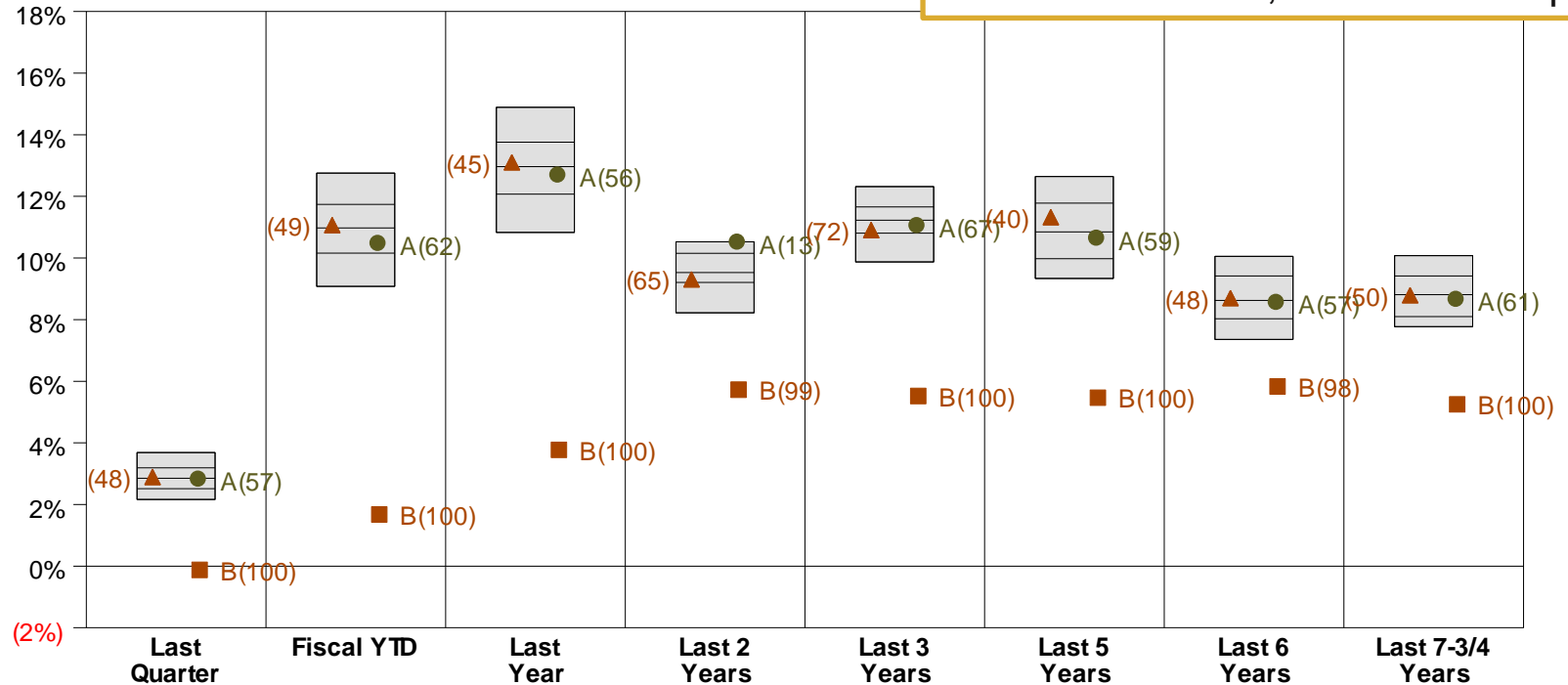
		Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years	Last 16 Years
Mondrian Investment Partners	● A	(3.51)	(0.46)	(0.12)	4.23	4.26	7.12	7.04	6.69
Citi WGBI Non-US Idx	■ B	(3.82)	(2.35)	(2.16)	3.33	2.28	5.37	5.58	5.41
Mondrian Benchmark	▲	(2.72)	0.98	0.75	4.36	2.89	5.90	5.90	5.61

High Yield Bonds

MackKay Shields

Performance vs CAI High Yield Fixed-Inc Style (Gross)

Strong absolute returns but benchmark like results over 3, 6 & since inception

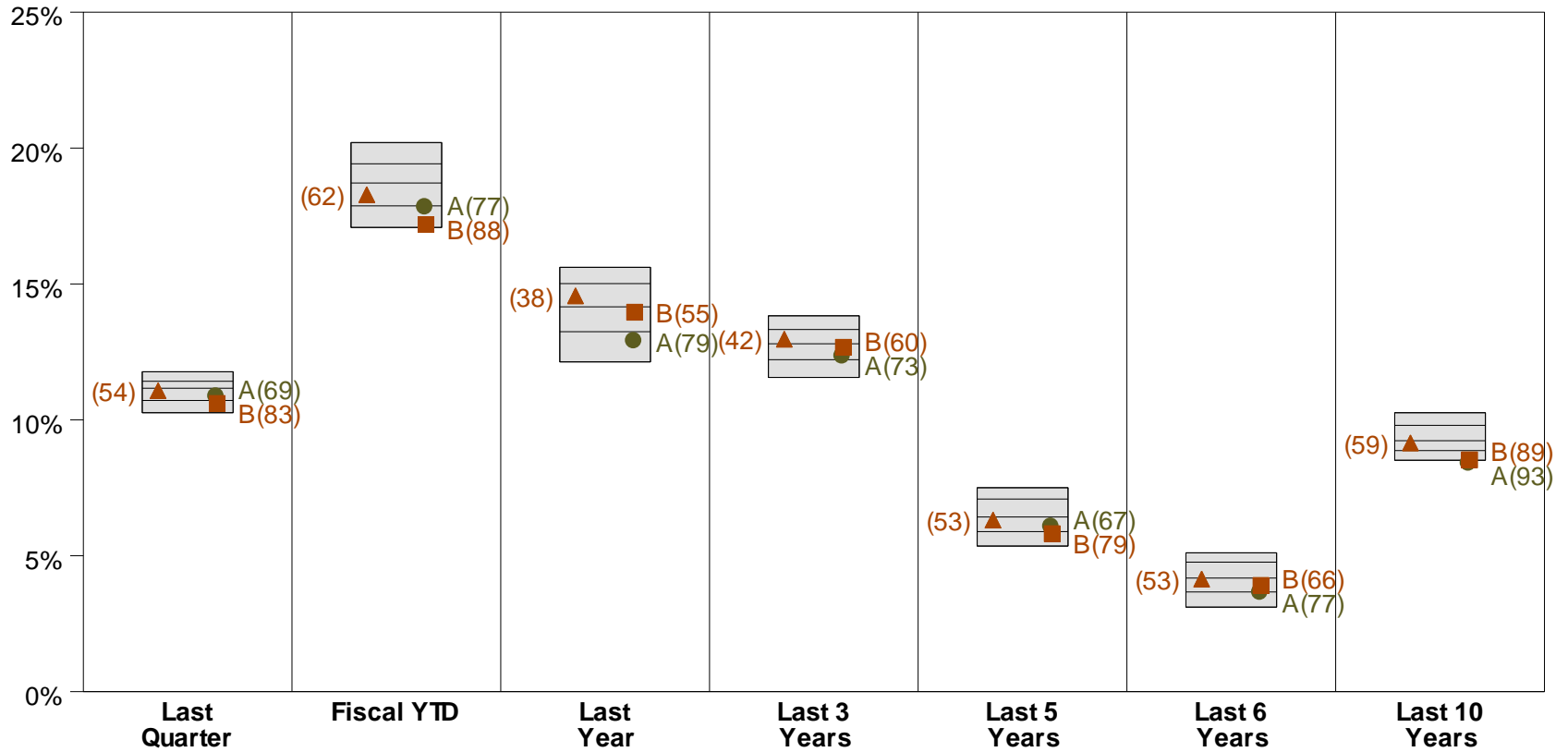


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 7-3/4 Years
10th Percentile	3.68	12.75	14.89	10.53	12.32	12.64	10.05	10.08
25th Percentile	3.19	11.74	13.76	10.15	11.66	11.78	9.42	9.42
Median	2.85	10.97	12.96	9.53	11.23	10.85	8.63	8.81
75th Percentile	2.52	10.16	12.07	9.21	10.80	9.98	8.03	8.10
90th Percentile	2.16	9.08	10.83	8.22	9.87	9.34	7.36	7.77

MackKay Shields	● A	2.78	10.43	12.65	10.47	11.01	10.60	8.52	8.61
BC Aggregate Index	■ B	(0.12)	1.68	3.77	5.73	5.52	5.47	5.83	5.25
High Yield Target	▲	2.89	11.07	13.11	9.31	10.91	11.32	8.70	8.79

Total Domestic Equity

Performance vs Public Fund - Domestic Equity (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	11.77	20.21	15.61	13.83	7.50	5.11	10.26
25th Percentile	11.42	19.42	15.02	13.32	7.09	4.77	9.80
Median	11.16	18.72	14.16	12.80	6.43	4.18	9.23
75th Percentile	10.72	17.87	13.25	12.22	5.89	3.67	8.87
90th Percentile	10.27	17.08	12.13	11.56	5.36	3.11	8.51
Domestic Equity Pool Standard	10.83	17.79	12.87	12.31	6.04	3.61	8.37
& Poor's 500	10.61	17.19	13.96	12.67	5.81	3.91	8.53
Russell 3000 Index	11.07	18.29	14.56	12.97	6.32	4.15	9.15

Domestic Equity Component Returns

Newly adopted policy (effective 7-1-13) will alter cosmetics of “true” traditional active & passive returns

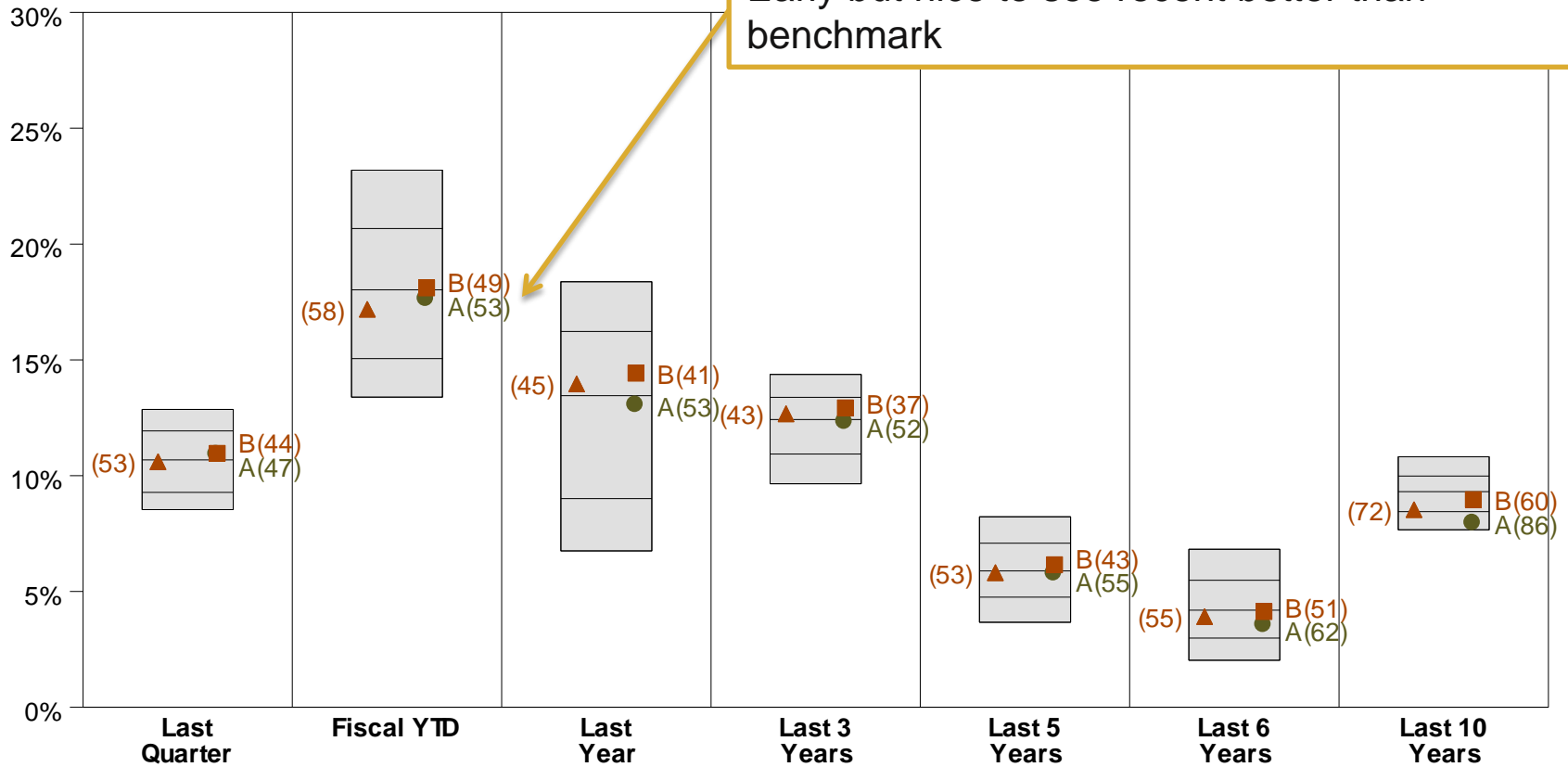
	Last Quarter	Last 3/4 Year	Last Year	Last 3 Years	Last 5 Years
Total Dom Equity Pool	10.83%	17.79%	12.87%	12.31%	6.04%
Russell 3000 Index	11.07%	18.29%	14.56%	12.97%	6.32%
Large Cap Managers	10.90%	17.61%	13.03%	12.30%	5.76%
Large Cap Active	10.81%	16.98%	10.86%	11.72%	5.85%
Large Cap Passive	10.91%	18.00%	14.55%	12.61%	5.60%
Russell 1000 Index	10.96%	18.11%	14.43%	12.93%	6.15%
Small Cap Managers	12.88%	21.94%	14.23%	13.20%	7.40%
Small Cap Active	12.92%	21.98%	14.21%	14.39%	8.00%
Small Cap Passive	12.20%	20.49%	16.61%	11.63%	7.05%
Russell 2000 Index	12.39%	20.49%	16.30%	13.45%	8.24%
Other Equity	3.94%	8.05%	6.67%	8.55%	-

- Other category includes defensive equity oriented portfolios
- New policy will also shift the Relational portfolio to the grouping which will be monitored as a distinct pool.

Large Cap Domestic Equity Pool

Performance vs CAI Large Capitalization Style (Gross)

Early but nice to see recent better than benchmark

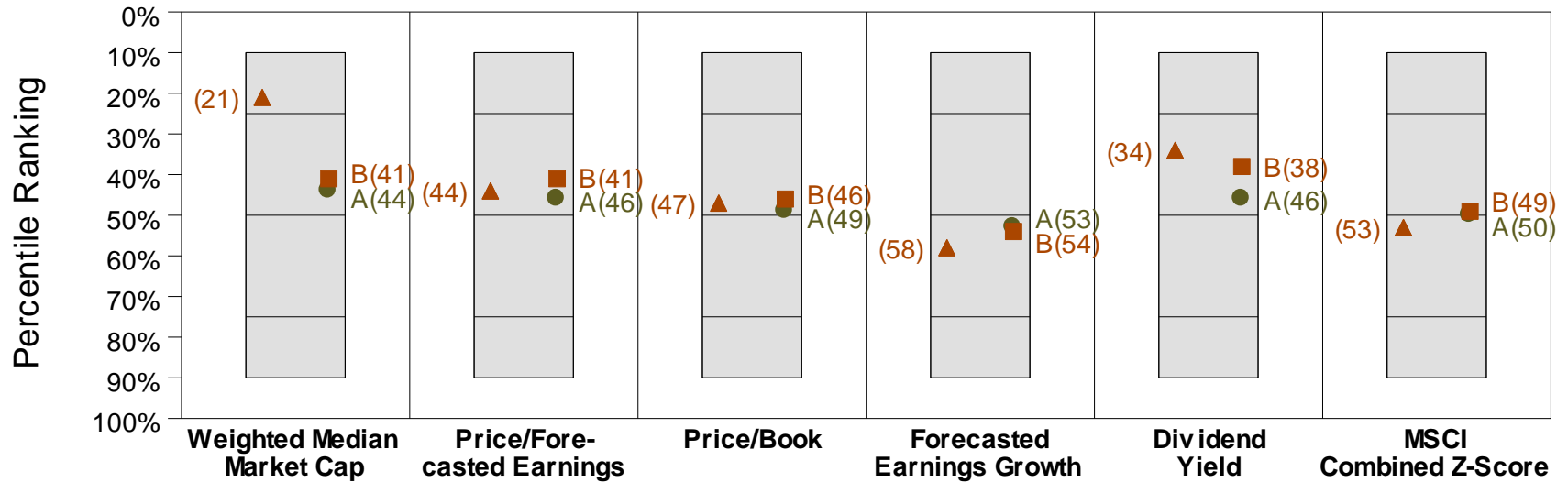


Period	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	Large Cap Pool A	Large Cap Pool B	S&P 500 Index
Last Quarter	8.53	9.28	10.69	11.93	12.86	10.90	10.96	10.61
Fiscal YTD	13.39	15.05	18.02	20.67	23.19	17.61	18.11	17.19
Last Year	6.75	9.01	13.45	16.23	18.38	13.03	14.43	13.96
Last 3 Years	9.65	10.93	12.43	13.38	14.38	12.30	12.93	12.67
Last 5 Years	3.67	4.75	5.89	7.09	8.23	5.76	6.15	5.81
Last 6 Years	2.03	2.99	4.19	5.49	6.82	3.53	4.13	3.91
Last 10 Years	7.66	8.45	9.31	9.98	10.82	7.92	8.97	8.53

Large Cap Total Equity Characteristics

Portfolio Characteristics Percentile Rankings
 Rankings Against CAI Large Capitalization Style
 as of March 31, 2013

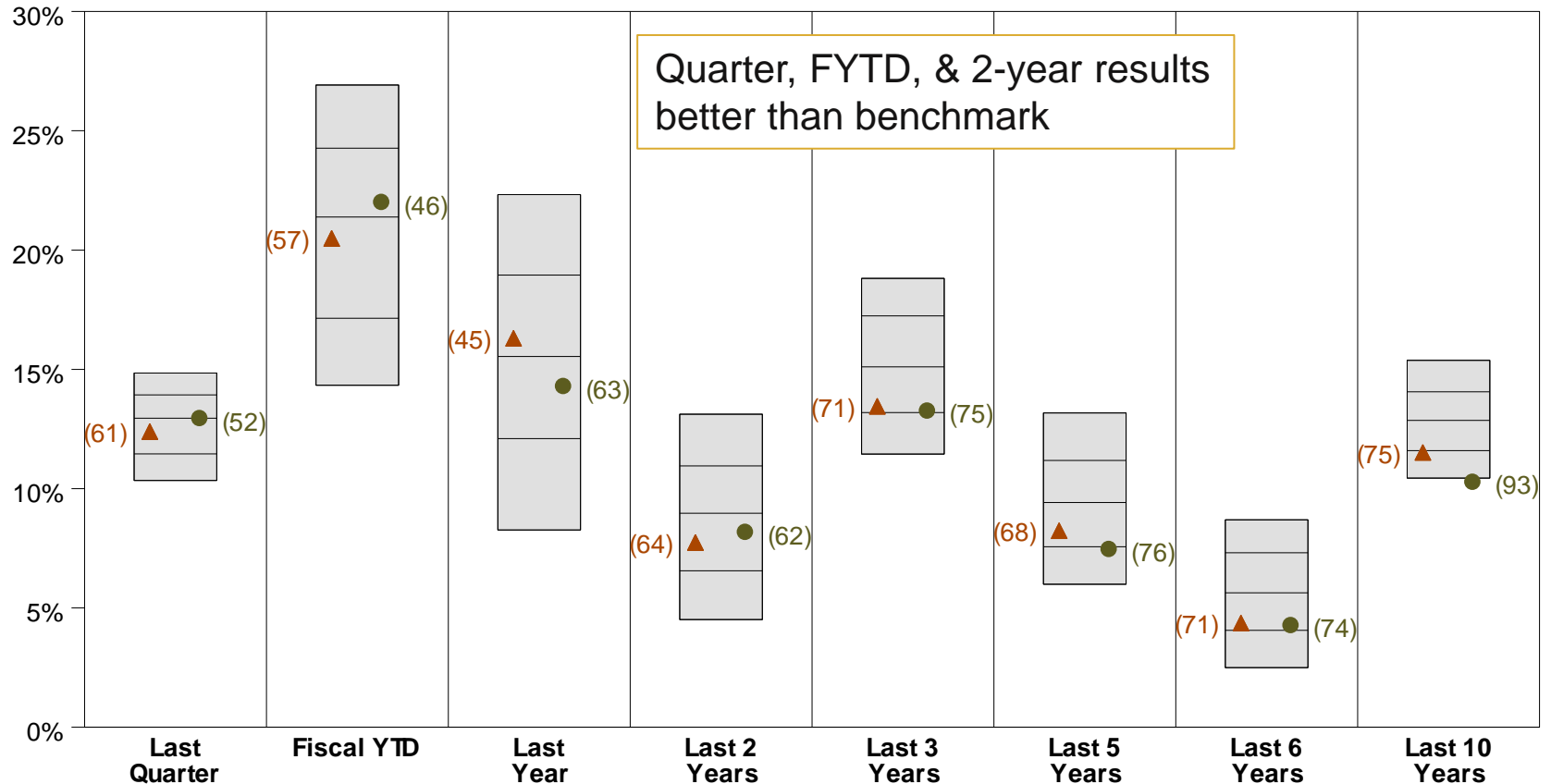
Very similar to Russell 1000
 No apparent style bias



10th Percentile	66.31	17.68	4.09	16.52	2.43	1.47
25th Percentile	53.72	15.72	3.51	14.00	2.23	0.94
Median	43.56	13.33	2.23	11.15	1.91	0.02
75th Percentile	32.12	12.19	1.77	9.06	1.32	(0.57)
90th Percentile	26.74	11.54	1.62	8.28	0.92	(0.81)
Large Cap Pool ● A	45.20	13.64	2.25	10.91	1.95	0.02
Russell 1000 ■ B	45.88	14.14	2.30	10.85	2.05	0.03
S&P 500 Index ▲	58.08	13.75	2.29	10.57	2.13	(0.02)

Small Cap Pool

Performance vs CAI Small Capitalization Style (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	14.85	26.92	22.33	13.12	18.81	13.18	8.69	15.38
25th Percentile	13.93	24.27	18.95	10.96	17.24	11.19	7.32	14.06
Median	12.95	21.39	15.54	8.97	15.10	9.42	5.63	12.86
75th Percentile	11.46	17.14	12.10	6.56	13.19	7.57	4.06	11.59
90th Percentile	10.34	14.33	8.27	4.52	11.45	5.99	2.50	10.44
Small Cap Pool ●	12.88	21.94	14.23	8.11	13.20	7.40	4.21	10.22
Russell 2000 Index ▲	12.39	20.49	16.30	7.75	13.45	8.24	4.37	11.52

Small Cap Performance

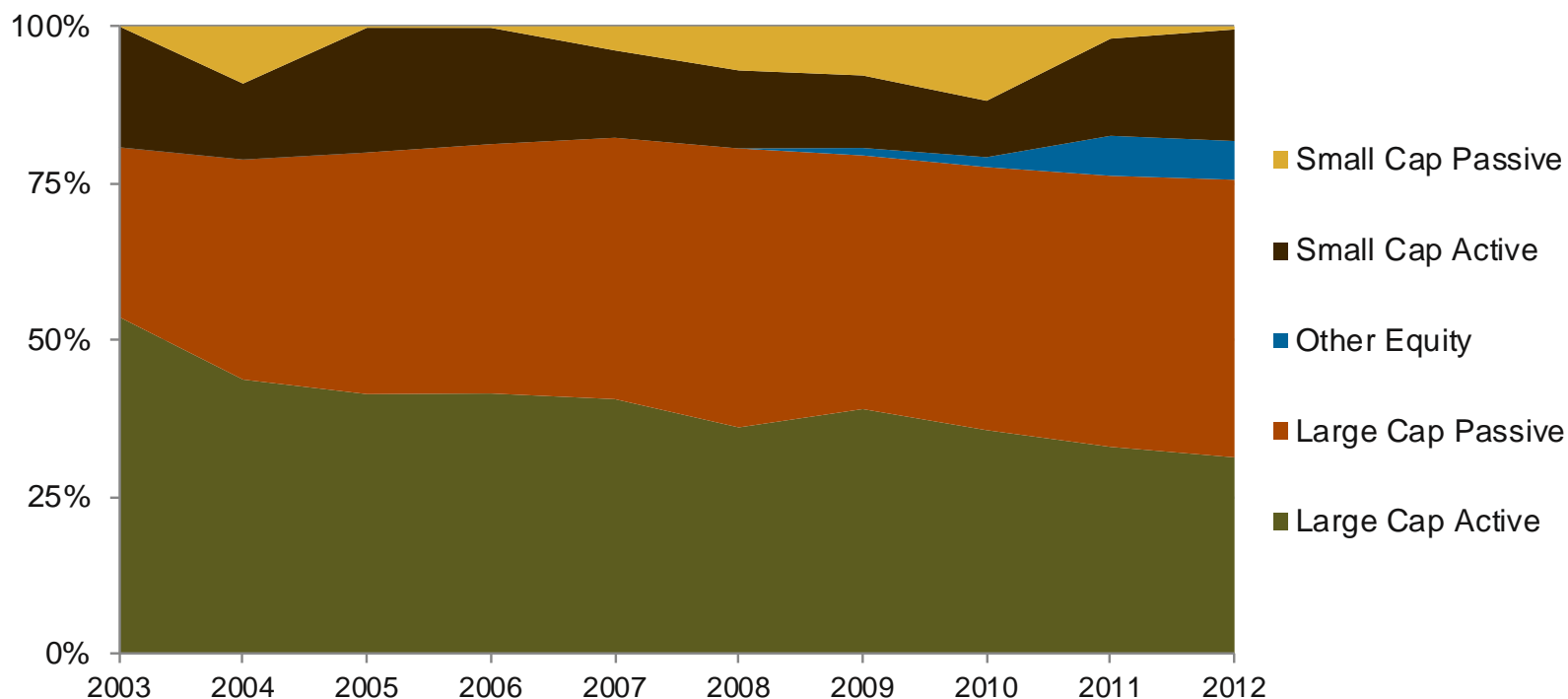
Calendar Periods

Performance vs CAI Small Capitalization Style (Gross)



	12/12- 3/13	2012	2011	2010	2009	2008	2007	2006	2005
10th Percentile	14.85	22.78	5.11	35.54	49.83	(29.58)	20.21	21.82	14.79
25th Percentile	13.93	19.50	1.84	31.53	44.57	(33.03)	10.32	18.62	10.97
Median	12.95	16.38	(1.76)	28.25	33.98	(37.57)	1.39	14.59	7.55
75th Percentile	11.46	13.24	(5.72)	24.99	25.24	(42.30)	(5.47)	11.44	5.55
90th Percentile	10.34	10.51	(8.64)	22.16	18.02	(46.48)	(11.41)	7.07	2.77
Small Cap Pool ●	12.88	15.41	(2.33)	24.35	25.40	(34.97)	2.53	15.24	4.28
Russell 2000 Index ▲	12.39	16.35	(4.18)	26.85	27.17	(33.79)	(1.57)	18.37	4.55

Equity Composite Allocation

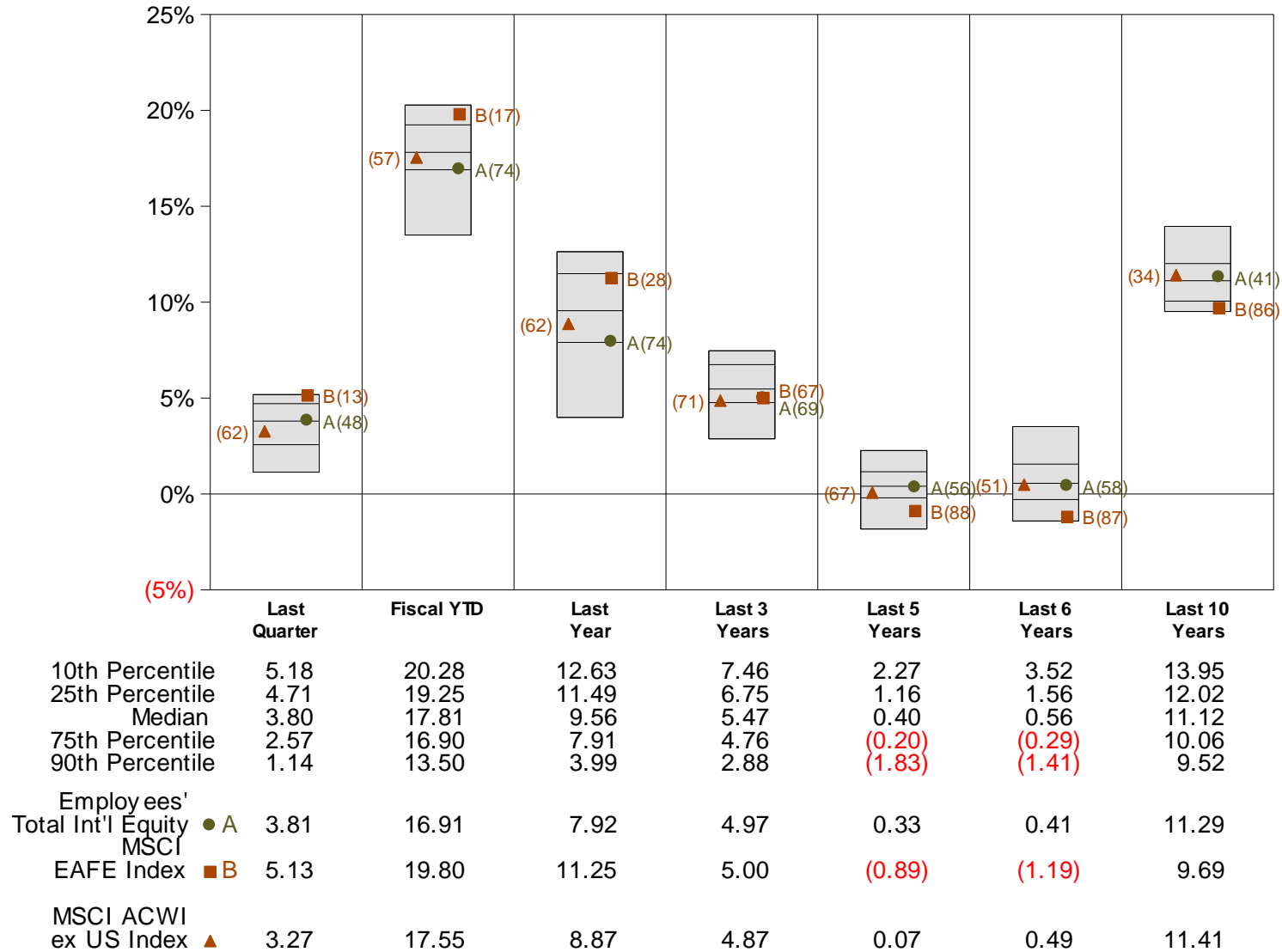


Composite	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Mar-13
Large Cap Active	53.7%	43.7%	41.4%	41.5%	40.6%	36.1%	39.0%	35.6%	33.0%	31.3%	32.6%
Large Cap Passive	27.1%	35.1%	38.5%	39.7%	41.7%	44.5%	40.4%	41.9%	43.2%	44.3%	43.5%
Other Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	1.6%	6.4%	6.2%	5.7%
Small Cap Active	19.3%	12.1%	19.9%	18.5%	13.9%	12.4%	11.6%	9.0%	15.5%	17.8%	16.9%
Small Cap Passive	0.0%	9.1%	0.2%	0.2%	3.8%	7.0%	7.8%	11.9%	2.0%	0.5%	1.3%

International Equity

Compared to Other Public Funds

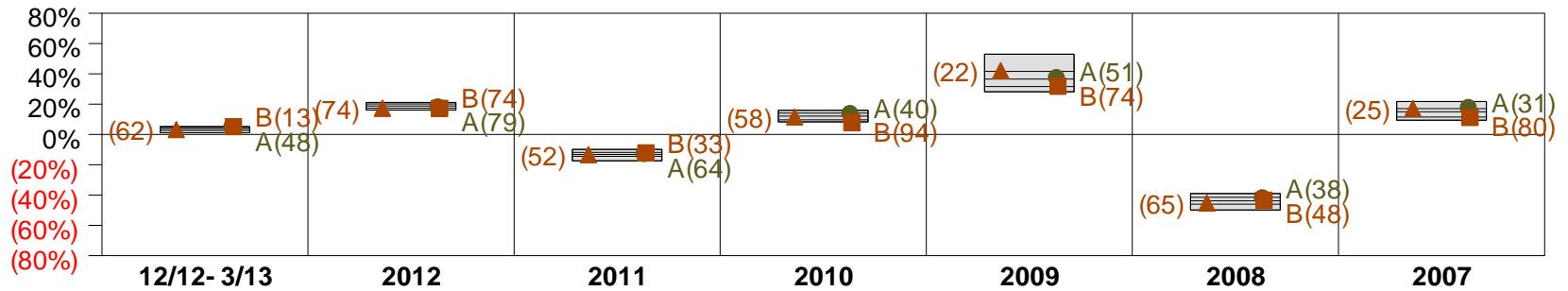
Performance vs Public Fund - International Equity (Gross)



International

Calendar Periods

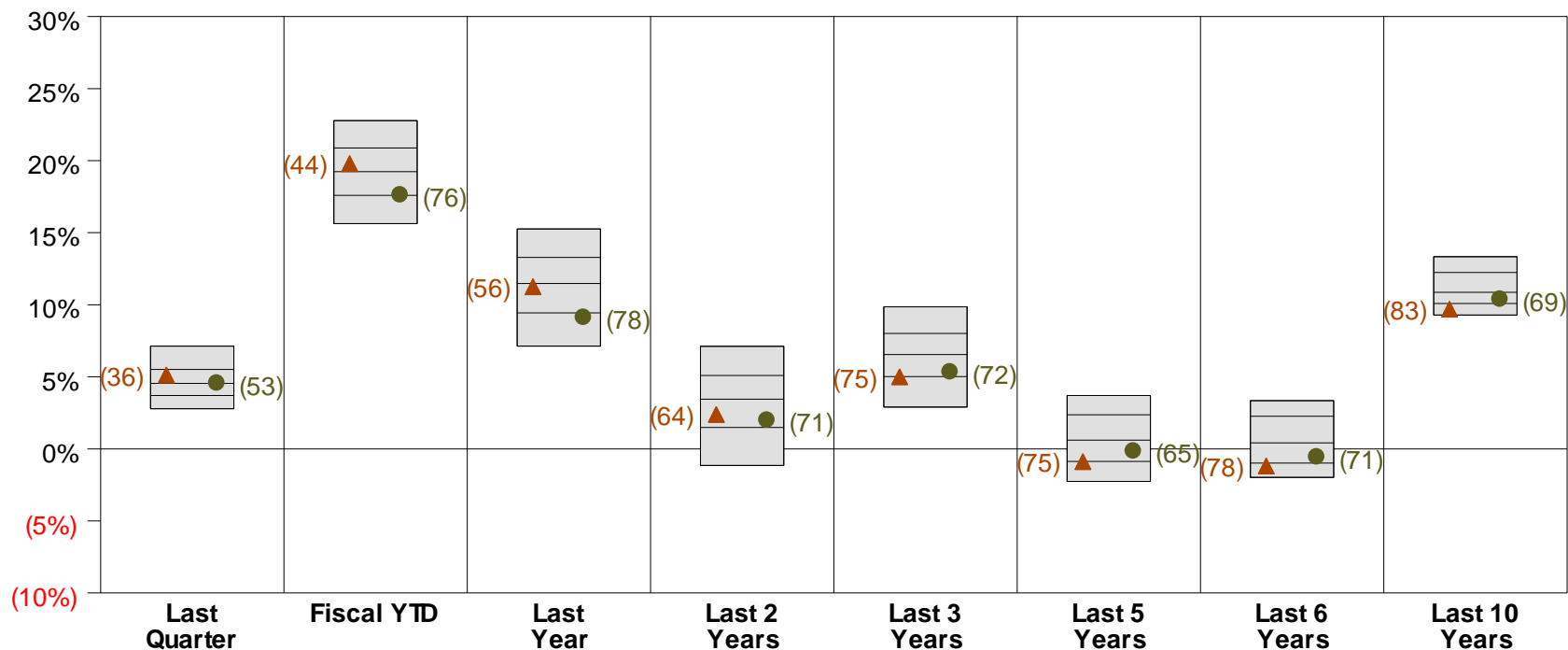
Performance vs Public Fund - International Equity (Gross)



	12/12-3/13	2012	2011	2010	2009	2008	2007
10th Percentile	5.18	21.20	(9.81)	15.99	53.01	(38.96)	21.72
25th Percentile	4.71	20.11	(11.80)	14.13	41.66	(41.41)	17.09
Median	3.80	18.78	(13.12)	12.17	36.53	(43.77)	15.02
75th Percentile	2.57	17.28	(14.45)	9.71	31.59	(46.08)	11.47
90th Percentile	1.14	16.09	(17.37)	8.25	28.16	(49.87)	9.43
Total International Equity	3.81	17.09	(13.95)	12.70	36.35	(43.03)	16.61
MSCI EAFE Index	5.13	17.32	(12.14)	7.75	31.78	(43.38)	11.17
MSCI ACWI ex US Index	3.27	17.39	(13.33)	11.60	42.14	(45.24)	17.12

International ex EM Versus Managers

Performance vs CAI Non-U.S. Equity Style (Gross)

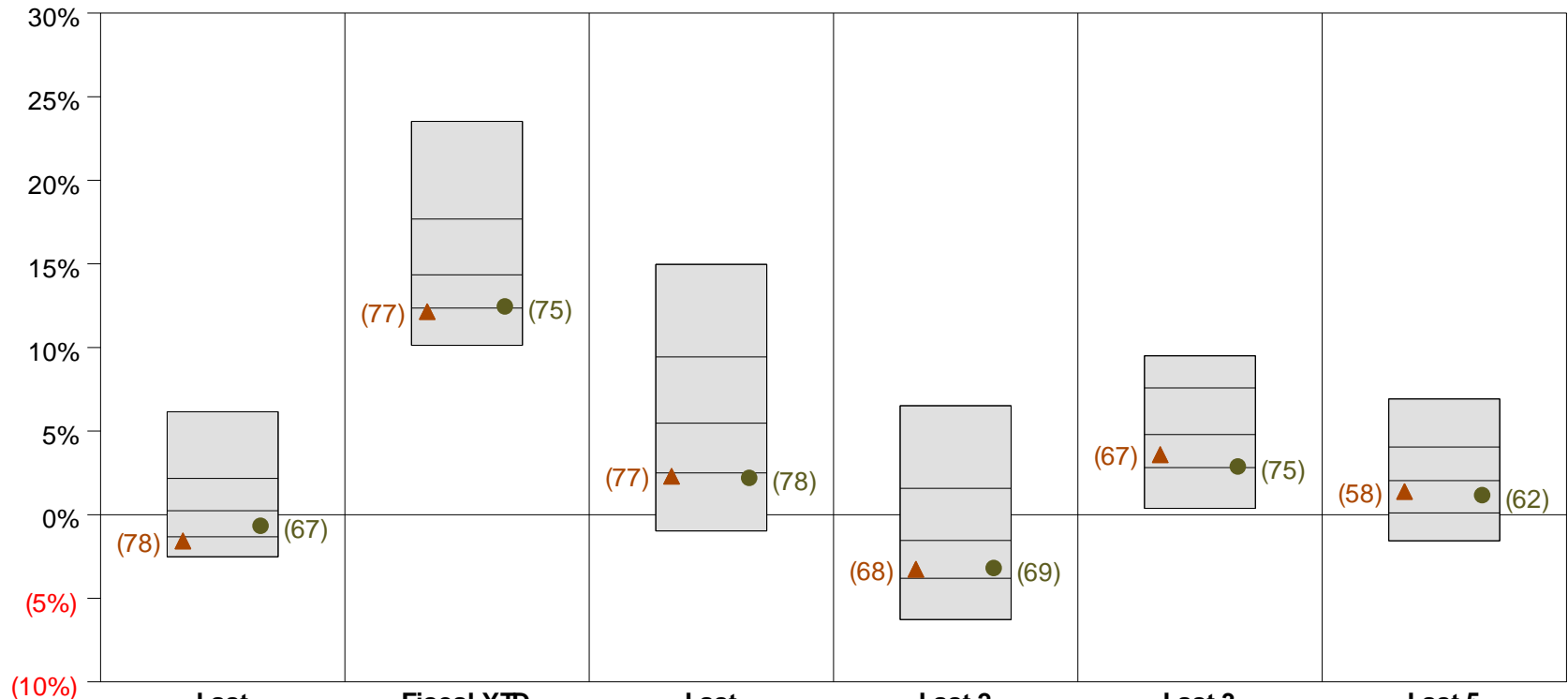


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	7.13	22.78	15.26	7.12	9.86	3.70	3.35	13.33
25th Percentile	5.51	20.87	13.29	5.10	8.02	2.37	2.27	12.24
Median	4.55	19.23	11.47	3.45	6.55	0.61	0.42	10.87
75th Percentile	3.70	17.59	9.44	1.49	5.01	(0.87)	(0.99)	10.09
90th Percentile	2.79	15.63	7.13	(1.16)	2.90	(2.26)	(1.97)	9.28

	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
Int'l Equity Pool (ex Emerging. Mkt) ●	4.48	17.54	9.05	1.91	5.25	(0.23)	(0.64)	10.30
MSCI EAFE Index ▲	5.13	19.80	11.25	2.39	5.00	(0.89)	(1.19)	9.69

Emerging Markets Pool

Performance vs CAI Emerging Markets Equity DB (Gross)

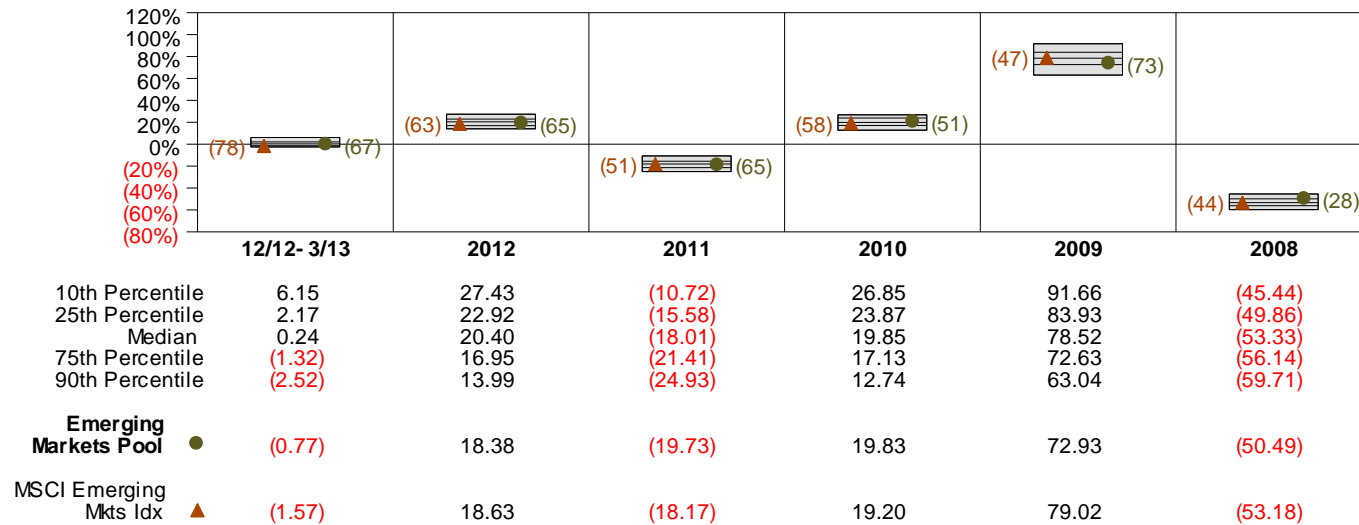


	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years
10th Percentile	6.15	23.52	14.97	6.52	9.50	6.92
25th Percentile	2.17	17.68	9.43	1.58	7.58	4.05
Median	0.24	14.35	5.47	(1.54)	4.79	2.03
75th Percentile	(1.32)	12.36	2.50	(3.81)	2.81	0.11
90th Percentile	(2.52)	10.13	(0.97)	(6.28)	0.38	(1.56)
Emerging Markets Pool ●	(0.77)	12.35	2.09	(3.31)	2.77	1.06
MSCI Emerging Mkts Idx ▲	(1.57)	12.15	2.30	(3.26)	3.59	1.39

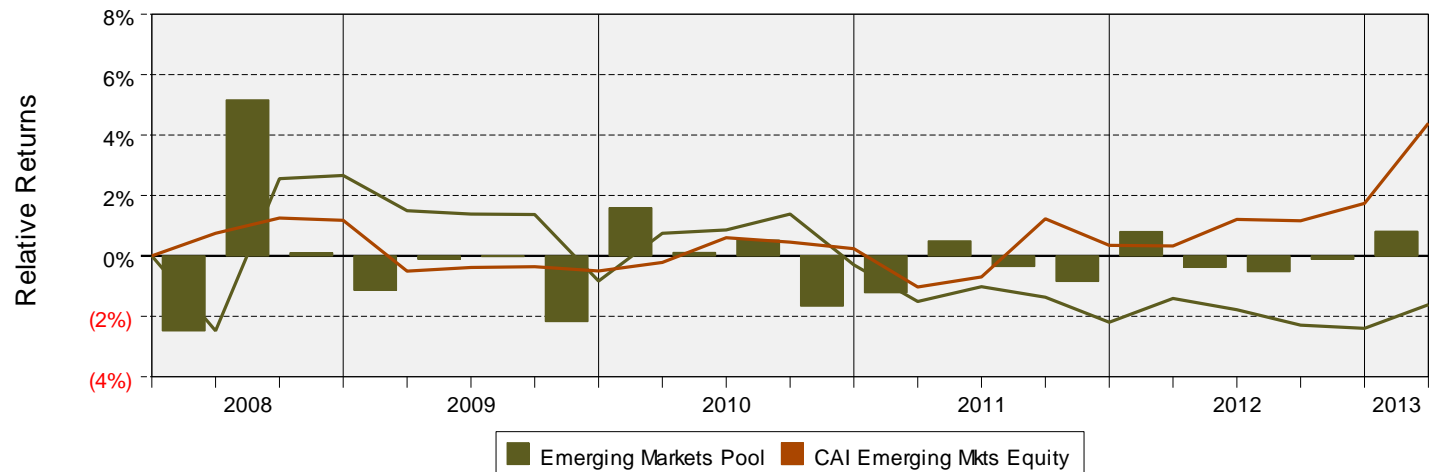
Emerging Markets Pool

Calendar Periods

Performance vs CAI Emerging Markets Equity DB (Gross)



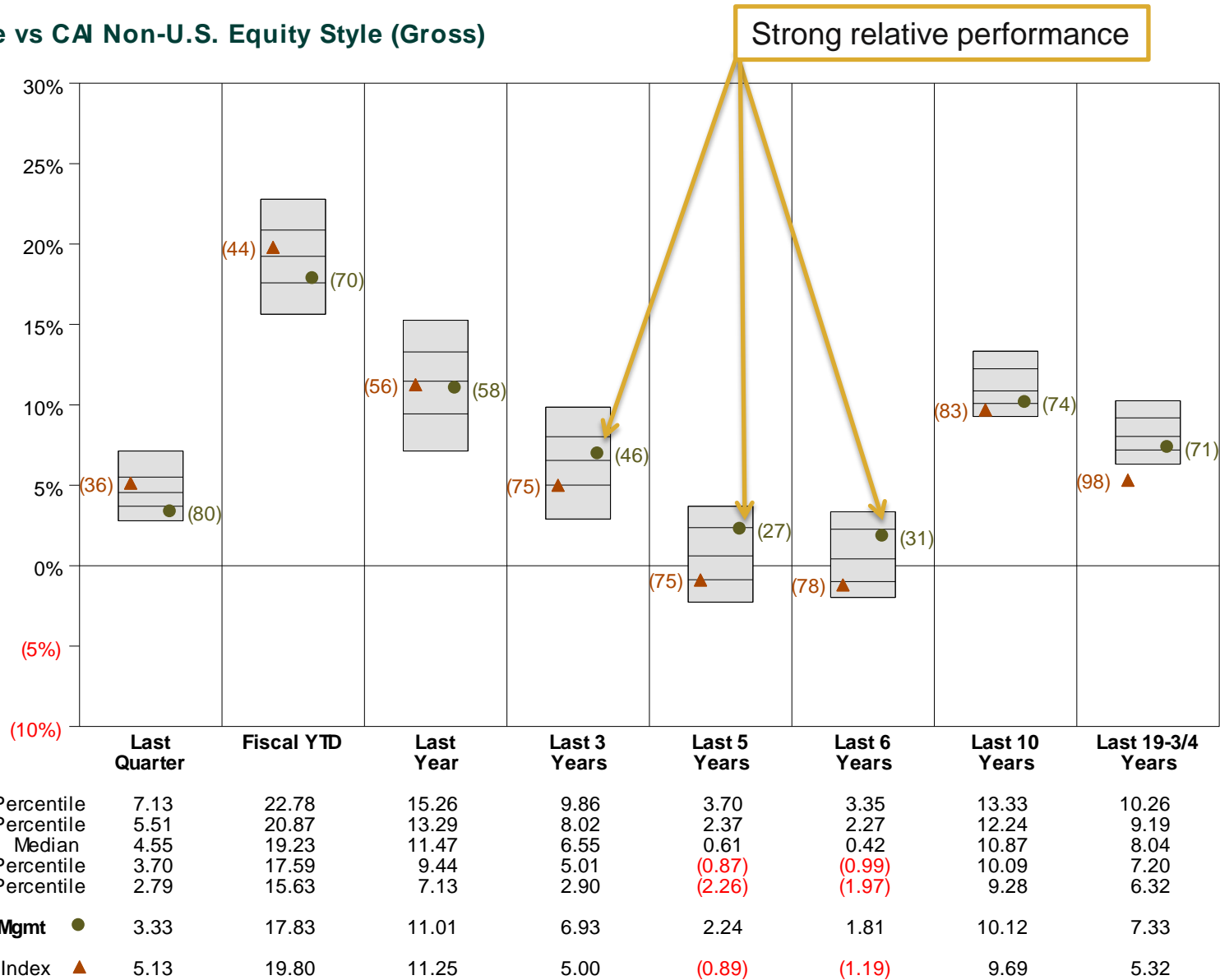
Cumulative and Quarterly Relative Return vs MSCI Emerging Mkts Idx



Global

Lazard

Performance vs CAI Non-U.S. Equity Style (Gross)



Real Assets Category

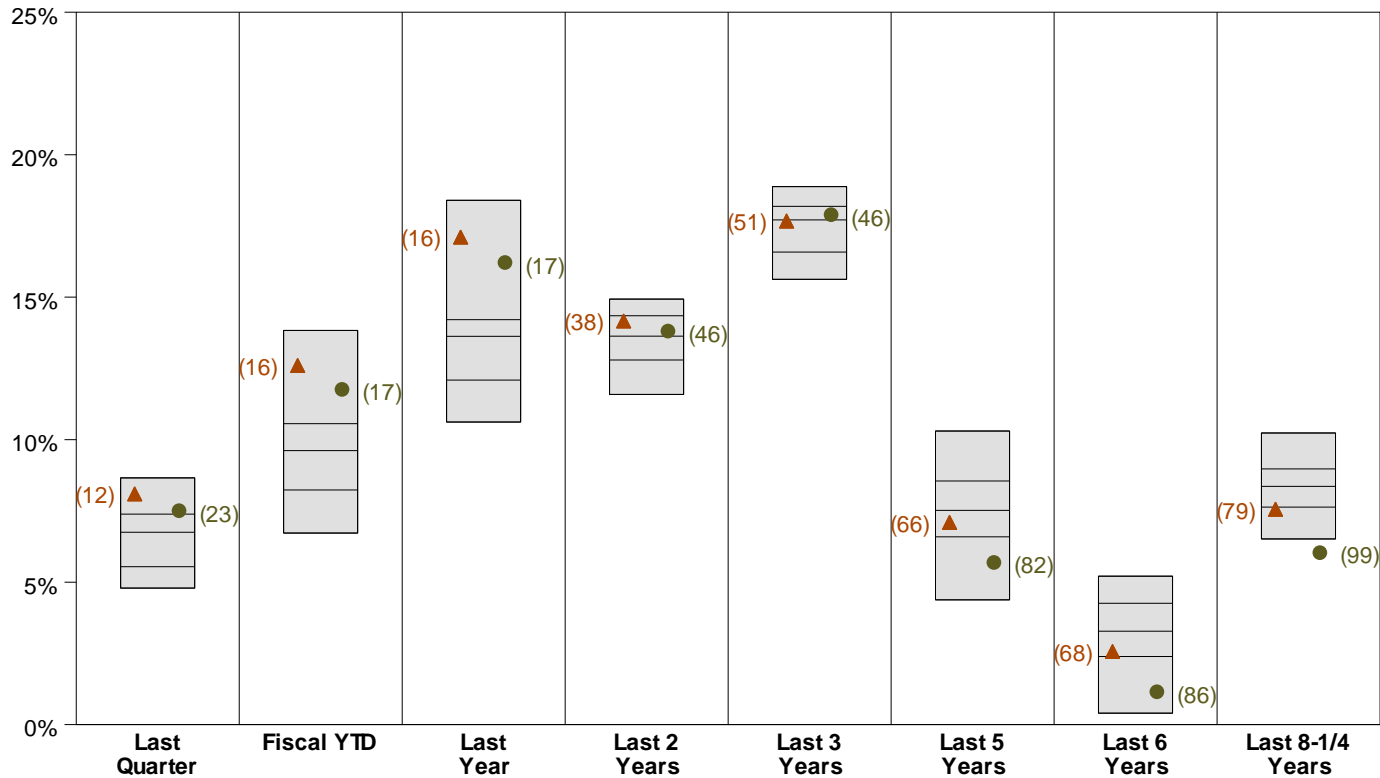
	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	
Real Assets(Prelim)	3.27%	5.89%	7.68%	11.26%	-	
Real Assets Target (1)	2.60%	8.12%	10.86%	11.78%	4.30%	
Real Estate Pool	3.67%	7.35%	9.58%	13.24%	(2.44%)	RE trailed target
Real Estate Target (2)	3.12%	8.14%	11.18%	13.85%	3.30%	
NCREIF Total Index	2.57%	7.63%	10.52%	13.30%	2.32%	
REIT Internal Portfolio	7.45%	11.71%	16.16%	17.84%	5.64%	
NAREIT Equity Index	8.10%	12.61%	17.11%	17.67%	7.10%	
Total Farmland	12.63%	14.59%	15.83%	13.61%	11.80%	
UBS Agrinvest	15.64%	17.59%	19.25%	15.24%	12.66%	
Hancock Agricultural	7.77%	9.77%	10.34%	10.99%	10.96%	
ARMB Farmland Target (3)	6.47%	15.69%	18.72%	14.94%	13.07%	
Total Timber	4.60%	5.90%	5.52%	3.65%	-	Timber trailed target
Timberland Investment Resources	1.95%	4.09%	3.62%	1.29%	-	
Hancock Timber	10.29%	9.90%	9.71%	8.36%	-	
NCREIF Timberland Index	5.92%	13.04%	13.73%	5.09%	2.93%	
TIPS Internal Portfolio	(0.58%)	2.22%	5.74%	8.89%	6.01%	TIPS better than target
BC US TIPS Index	(0.36%)	2.45%	5.68%	8.57%	5.89%	
Total Energy Funds *	0.27%	1.58%	1.25%	6.50%	7.01%	
CPI + 5%	2.69%	5.17%	6.34%	7.41%	6.87%	
MLP Composite	19.76%	-	-	-	-	
Alerian MLP Index	19.74%	25.93%	23.06%	21.49%	18.45%	

Great initial full quarter

*Please note that real estate returns are provided by ARMB's real estate consultant

REIT Portfolio

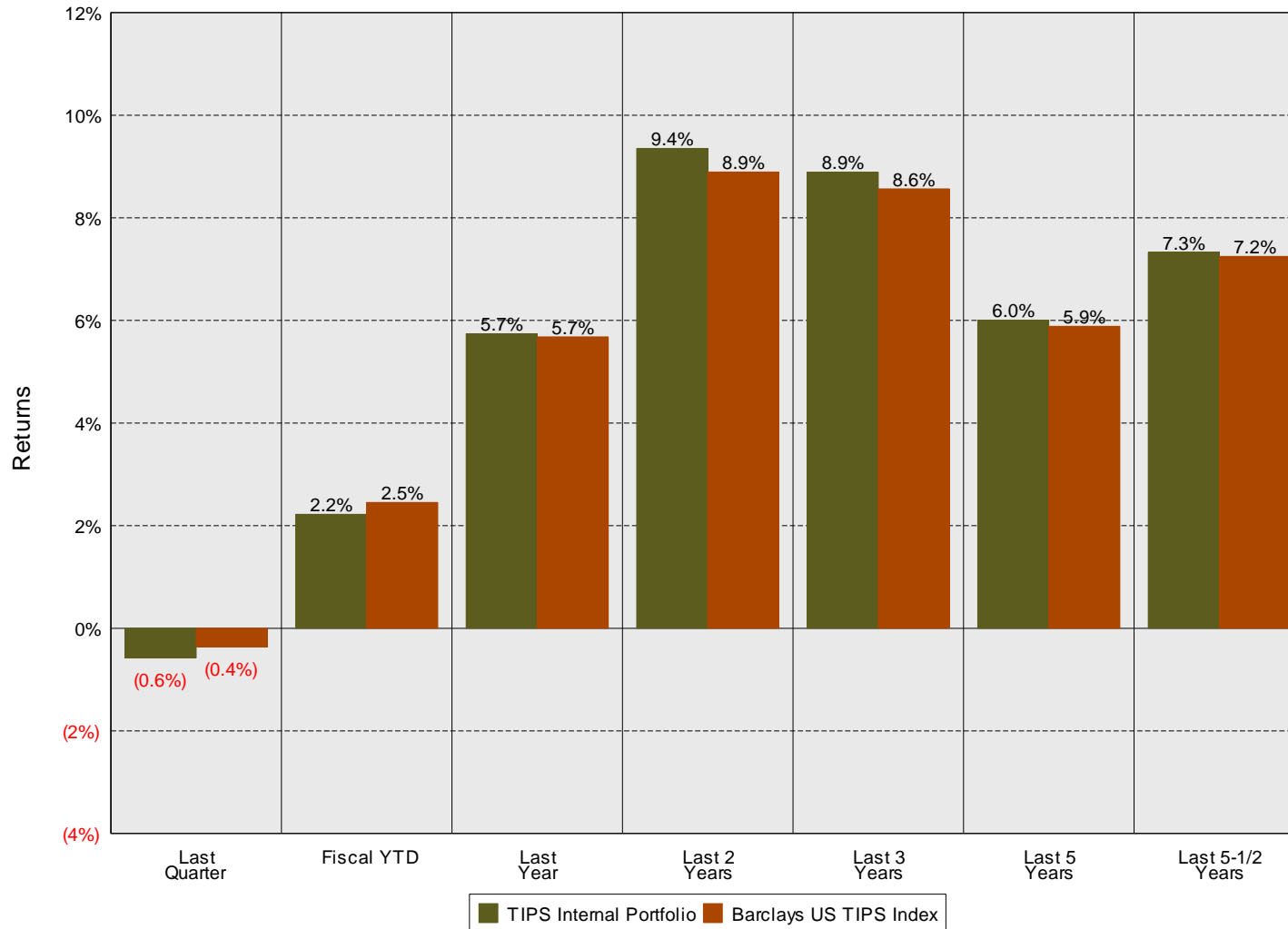
Performance vs CAI Real Estate-REIT DB (Gross)



10th Percentile	8.66	13.83	18.40	14.93	18.88	10.30	5.21	10.24
25th Percentile	7.39	10.56	14.21	14.35	18.19	8.55	4.26	8.98
Median	6.75	9.62	13.63	13.64	17.71	7.52	3.28	8.36
75th Percentile	5.55	8.24	12.09	12.80	16.58	6.59	2.39	7.64
90th Percentile	4.79	6.72	10.62	11.59	15.63	4.38	0.41	6.52
REIT Holdings ●	7.45	11.71	16.16	13.76	17.84	5.64	1.10	5.98
NAREIT All Equity Index ▲	8.10	12.61	17.11	14.17	17.67	7.10	2.57	7.56

- Near index returns in the quarter
- Index like performance over the last 2- and 3-year periods

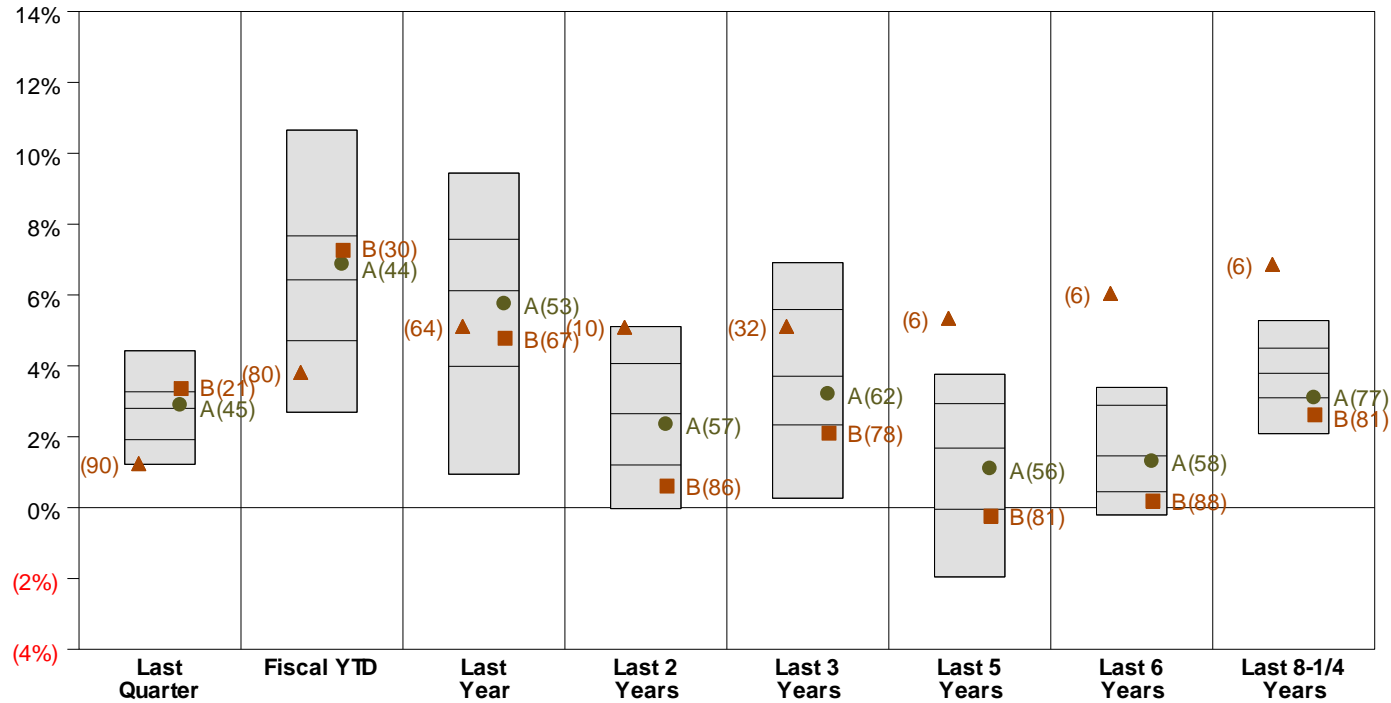
Internally Managed TIPS Portfolio



- Index+ performance over longer-term periods at minimal cost

Absolute Return Composite

Performance vs Absolute Return Hedge FoFs Style (Net)



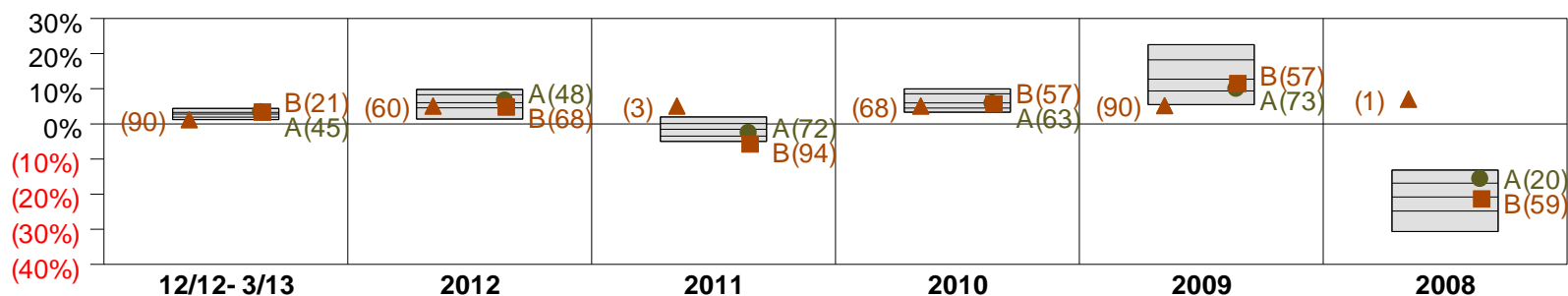
	Last Quarter	Fiscal YTD	Last Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 8-1/4 Years
10th Percentile	4.43	10.65	9.44	5.11	6.91	3.76	3.39	5.28
25th Percentile	3.27	7.67	7.57	4.07	5.59	2.93	2.89	4.50
Median	2.80	6.43	6.12	2.65	3.71	1.68	1.46	3.79
75th Percentile	1.92	4.71	3.99	1.20	2.33	(0.05)	0.45	3.10
90th Percentile	1.22	2.69	0.94	(0.03)	0.27	(1.96)	(0.21)	2.09

	Absolute Return Composite	HFRI Fund of Funds Compos	T-Bills + 5%
● A	2.87	3.36	1.24
■ B	6.84	7.26	3.82
▲	5.73	4.78	5.12
	2.33	0.61	5.09
	3.18	2.10	5.11
	1.07	(0.24)	5.34
	1.28	0.18	6.05
	3.07	2.62	6.87

Reflects March 31 values, while SS data used to calculate total fund is lagged 1-month. Plan returns & accounting use SS numbers.

Absolute Return – Calendar Periods

Performance vs Absolute Return Hedge FoFs Style (Net)



	12/12-3/13	2012	2011	2010	2009	2008
10th Percentile	4.43	9.79	1.95	9.99	22.57	(13.13)
25th Percentile	3.27	8.30	0.10	8.57	18.25	(16.88)
Median	2.80	6.04	(1.51)	5.98	12.75	(20.84)
75th Percentile	1.92	4.58	(3.49)	4.53	9.36	(24.82)
90th Percentile	1.22	1.37	(4.99)	3.33	5.48	(30.63)
Absolute Return Composite	2.87	6.23	(2.93)	5.43	9.55	(16.10)
HFRI Fund of Funds Compos	3.36	4.79	(5.72)	5.70	11.47	(21.37)
T-Bills + 5%	1.24	5.11	5.10	5.13	5.21	7.06

Individual Account Option Performance

Balanced & Target Date 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	\$1,163	3.6 ⁹⁰	7.7 ⁷⁰	8.0 ⁷⁴	5.9 ²⁸	5.9 ¹⁸	8.0 ⁹⁹		0.2 ⁴	0.5 ¹⁰⁰	0.7 ¹
CAI M Fd: Dom Bal Style											
Passive Target		3.3 ⁹¹	7.4 ⁷⁴	7.8 ⁷⁵	5.8 ²⁹	5.8 ²¹	7.6 ⁹⁹				0.7 ¹
Long Term Balanced Fund	\$484	5.9 ⁶⁶	10.1 ⁴⁵	9.4 ⁴²	5.8 ²⁸	5.6 ²³	13.7 ⁸⁷		0.0 ²⁷	0.4 ¹⁰⁰	0.4 ²¹
CAI M Fd: Dom Bal Style											
Passive Target		5.8 ⁶⁶	10.0 ⁴⁷	9.4 ⁴⁵	5.8 ²⁸	5.5 ²³	13.2 ⁹²				0.4 ¹⁹
Target 2010 Trust	\$11	4.9 ¹	8.7 ²²	8.3 ¹⁸						0.2 ¹⁰⁰	
CAI Tgt Date 2010											
Custom Index		4.9 ¹	8.5 ²⁵	8.3 ¹⁷							
Target 2015 Trust	\$108	5.9 ¹	9.8 ⁴	9.1 ²	6.9 ¹	6.5 ¹	11.3 ⁸³		0.5 ¹	0.2 ¹⁰⁰	0.6 ¹
CAI Tgt Date 2015											
Custom Index		5.9 ¹	9.8 ⁴	9.1 ²	6.7 ¹	6.3 ¹	11.4 ⁸³				0.6 ²
Target 2020 Trust	\$61	6.6 ¹	10.7 ⁴	9.7 ⁵	5.4 ¹⁰	5.1 ⁶	15.8 ⁴⁶		0.2 ²	0.3 ¹⁰⁰	0.3 ²²
CAI Tgt Date 2020											
Custom Index		6.7 ¹	10.7 ⁴	9.7 ⁴	5.3 ¹¹	5.0 ¹⁰	15.9 ⁴⁵				0.3 ²³
Target 2025 Trust	\$45	7.3 ¹	11.6 ⁸	10.2 ¹	4.9 ²³	4.4 ²⁶	18.7 ³⁹		0.1 ⁹	0.3 ¹⁰⁰	0.2 ³⁸
CAI Tgt Date 2025											
Custom Index		7.5 ¹	11.6 ⁸	10.3 ¹	4.8 ²⁵	4.4 ²⁷	18.8 ³⁵				0.2 ⁴²
Target 2030 Trust	\$29	7.9 ¹	12.2 ⁸	10.6 ⁷						0.3 ¹⁰⁰	
CAI Tgt Date 2030											
Custom Index		8.1 ¹	12.3 ⁸	10.6 ⁶							
Target 2035 Trust	\$31	8.4 ¹	12.7 ⁶	10.8 ¹						0.3 ¹⁰⁰	
CAI Tgt Date 2035											
Custom Index		8.6 ¹	12.8 ⁵	10.9 ¹							
Target 2040 Trust	\$36	8.7 ²	13.0 ⁶	10.9 ⁶						0.3 ¹⁰⁰	
CAI Tgt Date 2040											
Custom Index		8.9 ¹	13.1 ⁶	11.0 ⁴							
Target 2045 Trust	\$44	8.7 ²	13.1 ⁵	11.0 ⁵						0.3 ¹⁰⁰	
CAI Tgt Date 2040											
Custom Index		8.9 ¹	13.1 ⁶	11.0 ⁴							
Target 2050 Trust	\$49	8.7 ⁴	13.0 ⁶	11.0 ⁵						0.3 ¹⁰⁰	
CAI Tgt Date 2050											
Custom Index		8.9 ³	13.1 ⁶	11.0 ⁴							
Target 2055 Trust	\$18	8.7 ¹	13.0 ¹	11.0 ²						0.3 ¹⁰⁰	
CAI Tgt Date 2055											
Custom Index		8.9 ¹	13.1 ¹	11.0 ²							

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

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 S&P 500 Index	\$264	10.6 ⁶⁷	14.0 ⁴⁶	12.7 ⁴²	5.9 ⁶⁰	5.1 ⁵⁶	21.6 ⁵⁵		0.6 ¹⁰	0.0 ⁹⁹	0.3 ⁵⁶	
		10.6 ⁶⁷	14.0 ⁴⁷	12.7 ⁴²	5.8 ⁶³	5.0 ⁵⁸	21.6 ⁵³				0.3 ⁵⁷	
BlackRock S&P 500 Index Fund (i) CAI Large Cap Core Style S&P 500 Index	\$143	10.6 ⁶⁷	14.0 ⁴⁶	12.7 ⁴²	5.9 ⁵⁹	5.1 ⁵⁴	21.6 ⁵⁴		1.2 ¹	0.0 ⁹⁹	0.3 ⁵⁵	
		10.6 ⁶⁷	14.0 ⁴⁷	12.7 ⁴²	5.8 ⁶³	5.0 ⁵⁸	21.6 ⁵³				0.3 ⁵⁷	
Russell 3000 Index (i) CAI Large Cap Style Russell 3000 Index	\$27	11.1 ⁴²	14.6 ³⁹	13.0 ³⁶						0.1 ¹⁰⁰		
		11.1 ⁴²	14.6 ³⁹	13.0 ³⁷	6.3 ⁴⁰	5.1 ⁴⁹	22.4 ⁴⁹				0.3 ⁴¹	
World Eq Ex-US Index (i) CAI Non-U.S. Equity Style MSCI ACWI x US (Net)	\$22	2.3 ⁹⁶	8.4 ⁸²	4.4 ⁸¹						1.2 ¹⁰⁰		
		3.2 ⁸³	8.4 ⁸²	4.4 ⁸¹	-0.4 ⁶⁶	2.6 ⁵⁵	26.9 ³⁰				-0.0 ⁶⁶	
SSgA Global Balanced (i) CAI Mt Fd: Gl Bal Style Global Balanced Custom Benchmark	\$55	3.3 ⁶⁰	7.6 ⁴¹	7.4 ⁴⁴						0.4 ¹⁰⁰		
		3.5 ⁵⁷	7.3 ⁴³	7.2 ⁴⁶								
Long US Treasury Bond Index (i) CAI Extended Mat FI Style BC Long Treas	\$15	-2.4 ⁹⁴	7.4 ⁹³	12.5 ⁶⁸						0.1 ⁹⁸		
		-2.4 ⁹⁴	7.3 ⁹³	12.5 ⁶⁷	8.3 ⁹¹	8.8 ⁸⁴	17.1 ⁶				0.5 ⁹⁴	
US Treasry Infl Prtcd SEC (i) CAI Real Return BC US TIPS Index	\$24	-0.4 ⁷³	5.6 ⁶⁸	8.4 ⁶⁵						0.0 ⁹⁷		
		-0.4 ⁶⁴	5.7 ⁶¹	8.6 ⁵⁵	5.9 ⁶⁸	7.0 ⁶⁰	4.8 ²²				1.2 ⁶⁴	
World Gov't Bond Ex-US Indx (i) CAI Non-U.S. F-I Style Citi WGBI Non-US Idx	\$7	-3.8 ⁷⁴	-2.0 ⁸⁴	3.3 ⁸⁷						0.1 ⁹⁷		
		-3.8 ⁷⁵	-2.2 ⁸⁴	3.3 ⁸⁷	2.3 ⁹⁵	5.8 ⁸⁶	9.2 ⁸⁴				0.2 ⁹⁴	
US Real Estate Invmnt Trust (i) CAI Real Estate-REITDB US Select REIT Index	\$35	6.9 ³⁵	12.9 ⁶⁵	16.7 ⁷²						0.1 ¹⁰⁰		
		7.0 ³⁴	13.2 ⁵⁸	16.9 ⁶⁵	6.1 ⁸⁰	4.1 ⁸⁴	35.4 ¹⁵				0.2 ⁸¹	
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 Core Bond Mut Fds Barclays Govt/Credit Bd	\$50	-0.2 ⁸⁹	4.4 ⁷¹	5.9 ⁶⁹	5.3 ⁷⁰	5.9 ⁴⁷	4.7 ³⁰		-1.5 ¹⁰⁰	0.0 ¹⁰⁰	1.1 ⁷⁹	
		-0.2 ⁸⁶	4.6 ⁶²	6.1 ⁵⁹	5.5 ⁶¹	6.0 ⁴⁵	4.7 ³¹				1.1 ⁷⁸	
Intermediate Bond Fund (i) CAI Intermediate F-I Mut Barclays Gov Inter	\$15	0.1 ⁵⁶	2.1 ⁶⁰	3.7 ⁵⁶	3.6 ⁷⁸	5.0 ⁵⁵	3.9 ¹⁹		-0.7 ⁹⁵	0.0 ⁹⁸	0.8 ⁹²	
		0.1 ⁴⁵	2.3 ⁵⁶	3.9 ⁵²	3.7 ⁷⁵	5.0 ⁴⁴	3.8 ²⁰				0.9 ⁹⁰	
State Street Inst Trsry MM (i) Money Market Funds 3-Month T-Bills	\$37	0.0 ¹⁰⁰	0.0 ¹⁰⁰	0.0 ¹⁰⁰	0.2 ¹⁰⁰		0.2 ⁹⁵		-1.9 ¹⁰⁰	0.0 ⁸¹	-1.0 ¹⁰⁰	
		0.0 ¹⁰⁰	0.1 ¹⁰⁰	0.1 ¹⁰⁰	0.3 ¹⁰⁰	1.5 ¹⁰⁰	0.3 ⁹²				-0.1 ¹⁰⁰	

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

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 CAI Non-U.S. Equity MF	\$60	4.6 28	6.0 90	2.7 85						3.1 77	
MSCI EAFE Index		5.1 24	11.3 24	5.0 54	-0.9 63	1.6 56	26.1 64				-0.0 63
RCM Soc Resp CAI Core Equity Mut Fds	\$31	11.1 19	10.3 63	9.8 59						4.3 39	
KLD 400 Social Idx		13.1 1	14.7 15	11.5 38	6.6 10	5.1 29	21.2 72				0.3 10
T. Rowe Price Small Cap CAI Sm Cap Broad Mut Fds	\$108	13.1 30	17.9 17	17.5 5	13.1 4	7.4 7	25.7 62		1.4 1	1.0 99	0.5 3
Russell 2000 Index		12.4 45	16.3 22	13.5 39	8.2 51	4.6 53	26.2 55				0.3 47
T. Rowe Price Stable Value Fd CAI Stable Value DB	\$335	0.7 5	2.9 8	3.3 16	3.6 20	3.9 24	0.3 99		3.6 17	0.1 76	12.8 1
5 Yr US Treas Rolling		0.4 62	2.0 59	2.6 47	3.1 46	3.3 64	0.4 75				7.7 36
Def Comp Interest Income Fund CAI Stable Value DB	\$180	1.2 1	2.8 12								
5 Yr US Treas Rolling		0.4 62	2.0 59	2.6 47	3.1 46	3.3 64	0.4 75				7.7 36

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.

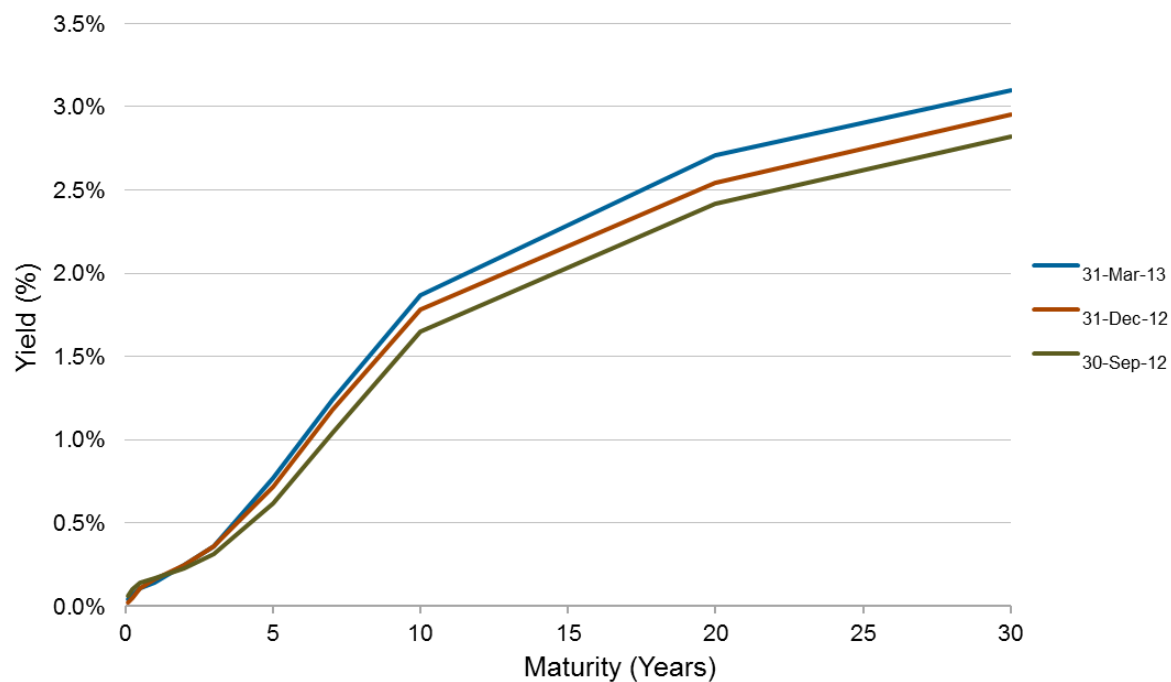
Subsequent Market Results

YTD Through 5/28/13

Index	YTD
Barclays Aggregate	-0.73%
US Treasury	-0.90%
1-3 Year Treasury	0.11%
7-10 Year Treasury	-1.56%
US Credit	-0.38%
High Yield (2% Constr.)	4.93%

Index	YTD
S&P 500	17.41%
Russell 2000	17.98%
MSCI EAFE	9.76%
MSCI Emerging Markets	-1.28%

Treasury Yield Curve



Major Activities

- Major projects for ARMB

- Infrastructure Searches (status – Staff reviewing and conducting due diligence as deemed appropriate)
 - *Listed Infrastructure*
 - *Open-end Private Infrastructure*
 - *Closed-end Vehicles*
- Analysis of Goldman Sachs Collective Trust Retirement Completion Fund Vehicle (status – almost complete)
 - *Review of underlying research*
 - *Detailed review of Goldman's simulation and initial real time returns*

Mondrian Investment Partners

Mandate: International Small Cap

Hired: 2010

Firm Information	Investment Approach	Total ARMB Mandate
<p>Mondrian Investment Partners Limited (“Mondrian”) is 100% owned by an employee partnership.</p> <p>As of 3/31/13, the firm’s total assets under management were \$68 billion.</p> <p>Key Executives: Dr. Ormala Krishnan, <i>Senior Portfolio Manager</i> Todd Rittenhouse, <i>Senior Vice President, Client Services</i></p>	<p>Mondrian’s value driven investment philosophy is based on the belief that investments need to be evaluated in terms of their fundamental long-term value. Mondrian is an active value-oriented defensive manager that evaluates developed markets on a consistent currency adjusted real return basis. In the management of international/global equity assets, Mondrian invests in securities where rigorous dividend discount analysis identifies value in terms of the long-term flow of income. The use of a discounted dividend approach allows Mondrian to compare and select the most attractive investment opportunities across developed markets at the market and security level. Mondrian’s methodology is applied consistently to individual securities across all markets and industries. This distinguishes Mondrian from many of its competitors who use different investment criteria in each equity market and sector.</p> <p>Benchmark: MSCI EAFE Small Cap Index</p>	<p>Assets Under Management: 3/31/13 \$135,708,108</p>

Concerns: None

3/31/2013 Performance

	Last Quarter	1 Year	3 Years Annualized	5 Years Annualized
Manager (gross)	4.97%	15.81%	N/A	N/A
Fee	0.19%	0.77%		
Manager (Net)	4.78%	15.04%		
Benchmark	8.42%	13.28%		

June 21, 2013



Representing Mondrian:

ORMALA KRISHNAN, PhD
(INVESTMENT AND FINANCE)
SENIOR PORTFOLIO MANAGER
MONDRIAN INVESTMENT PARTNERS LIMITED

E. TODD RITTENHOUSE
SENIOR VICE PRESIDENT, CLIENT SERVICES
MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

P R E S E N T A T I O N T O :

**ALASKA RETIREMENT
MANAGEMENT BOARD**

I N T E R N A T I O N A L S M A L L C A P
E Q U I T Y P O R T F O L I O

A G E N D A

- 1 **ORGANIZATION**
 - 2 **INVESTMENT PHILOSOPHY**
 - 3 **IMPLEMENTATION**
 - 4 **PERFORMANCE**
 - 5 **PORTFOLIO**
 - 6 **WHY MONDRIAN?**
- ANY OTHER BUSINESS**

Mondrian Investment Partners Limited
Fifth Floor
10 Gresham Street
London EC2V 7JD
Telephone 020 7477 7000

Mondrian Investment Partners (U.S.), Inc.
Two Commerce Square
2001 Market Street, Suite 3810
Philadelphia, PA 19103
Telephone (215) 825-4500

BIOGRAPHIES

MONDRIAN INVESTMENT PARTNERS

Ormala Krishnan, PhD (Investment and Finance)

SENIOR PORTFOLIO MANAGER
MONDRIAN INVESTMENT PARTNERS LIMITED

LONDON

Dr. Krishnan heads Mondrian's International Small Capitalisation team. Dr. Krishnan started her investment career in 1993 with Singapore based Koeneman Capital Management. Prior to joining Mondrian in 2000 as a portfolio manager, Dr. Krishnan was an investment consultant with William M Mercer. Upon completion of her BSc in Pure and Applied Mathematics from the National University of Singapore, Dr. Krishnan achieved her MSc in Actuarial Science from City University, London. In 2006, Dr. Krishnan completed her Doctoral program in Investment and Finance from Sir John Cass Business School, City of London. Her doctoral thesis was on 'Value versus Growth in the Asian Equity Markets'.

E. Todd Rittenhouse

SENIOR VICE PRESIDENT, CLIENT SERVICES
MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

PHILADELPHIA

Mr. Rittenhouse is a graduate of LaSalle University where he earned a Bachelor of Science degree in Business Administration. He worked at Mondrian's former affiliate from 1992 to 1999, where he was a Vice President in the Client Services Group. Prior to joining Mondrian, he was a Partner in the Client Services Group at Chartwell Investment Partners, where he worked for eight years. In his present position, Mr. Rittenhouse is responsible for client service, consultant relations, and marketing.

Organization



OUR ORGANIZATION

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

A SUCCESSFUL, WELL-MANAGED COMPANY

- Founded in 1990
- Over 20 years of stable, consistent leadership
- Over US\$68 billion under management

AN INDEPENDENT, EMPLOYEE-OWNED COMPANY

- Equity ownership plan designed to attract, retain and motivate highly skilled people
- Mondrian is 100% employee owned
- Approximately 85 employees are owners today, up from 60 in 2004

A PROVEN INVESTMENT PHILOSOPHY AND PROCESS

- All products utilize an income-oriented value discipline
- Successfully applied since the company's founding in 1990
- In-depth global fundamental research

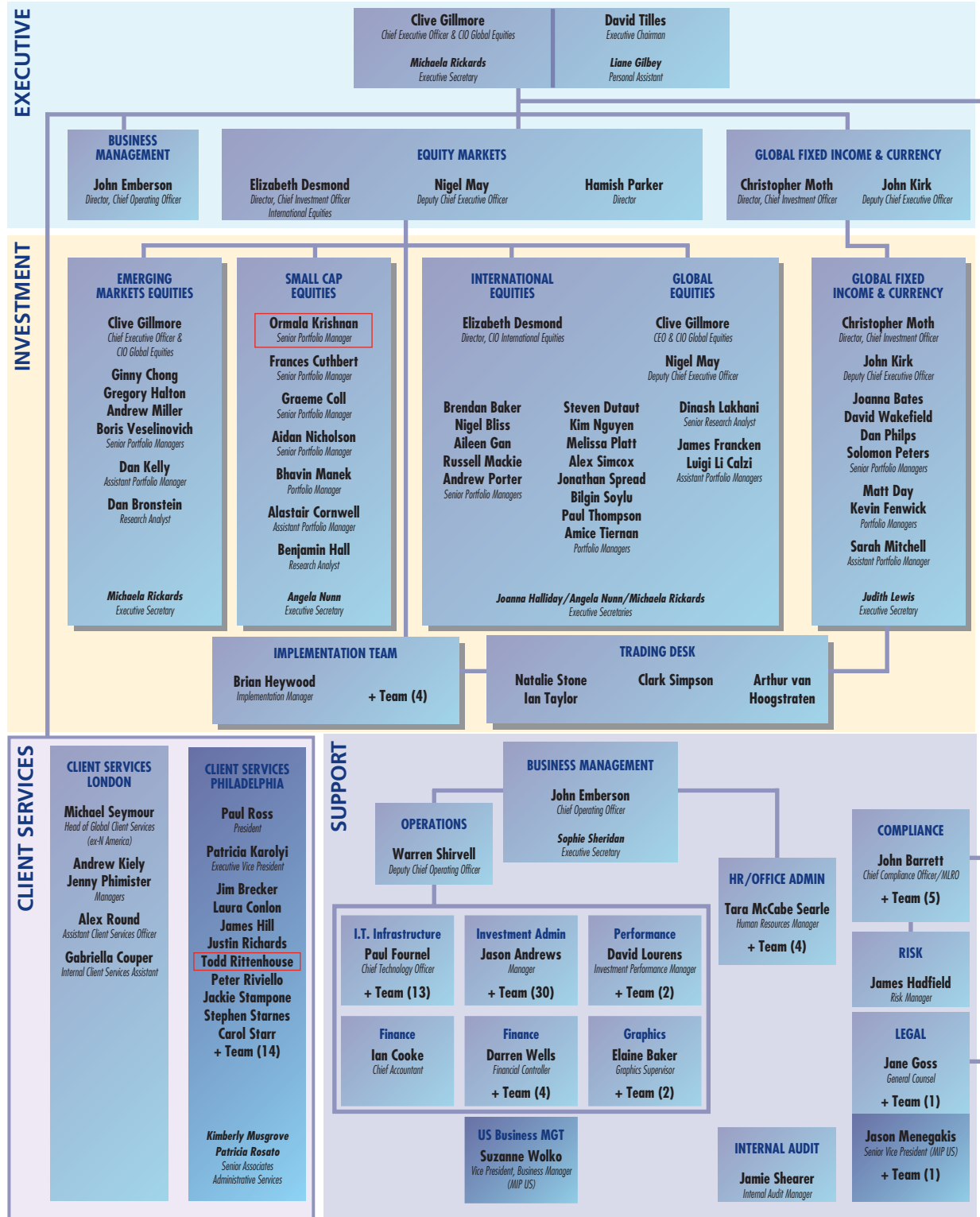
A WELL-RESOURCED TEAM

- Highly experienced team of 54 investment professionals in London
- Low turnover of professional staff
- Strong culture of client service and support

ORGANIZATION

MAY 1, 2013

MONDRIAN INVESTMENT PARTNERS



This chart is designed to indicate the staffing resources and management structure at Mondrian Investment Partners Limited, and Mondrian Investment Partners (U.S.), Inc. The chart does not attempt to show all functions nor reporting and delegation lines, details of which are maintained in separate records. Please note some people may appear on this chart more than once, reflecting various responsibilities.

REPRESENTATIVE CLIENT LIST

NORTH AMERICA

MONDRIAN INVESTMENT PARTNERS

GOVERNMENT AND LABOR

Alameda County Employees' Retirement Association	Oklahoma Public Employees Retirement System	Banner Health System
Alaska Permanent Fund Corporation	Oklahoma State Regents for Higher Education	Bechtel Corporation
Alaska Retirement Management Board	Ontario Power Generation Inc.	BSA-ILA Pension Trust Fund
Baltimore County Employees' Retirement System	Ontario Public Service Employees Union Pension Trust	Burke Rehabilitation Hospital Retirement Plan Trust
California State Teachers' Retirement System	Orange County Employees Retirement System	Care New England
Carpenters Trusts of Western Washington	Parochial Employees' Retirement System of Louisiana	Catholic Health Partners
City of Austin Employees' Retirement System	Pension Plan for Employees at ORNL	Catholic Healthcare West
City of Baltimore Elected Officials' Retirement System	Prince George's County, Maryland	Children's Hospital of Central California
City of Baltimore Employees' Retirement System	Public School Retirement System of Kansas City	Children's Hospital of Los Angeles
City of Baltimore Retiree Benefit Trust	Public School Retirement System of the City of St. Louis	Chrysler LLC
City of Charlotte Employee Benefit Trust	Pueblo County Employees Retirement System	ConAgra Foods, Inc.
City of Cincinnati Retirement System	Sacramento County Employees Retirement System	Cooperative Banks Employees Retirement Association
City of Hartford Municipal Employees' Retirement Fund	San Bernardino County Employees' Retirement Association	Dallas County Hospital District Retirement Income Plan
City of Phoenix Public Employees Retirement Plan	San Francisco City and County Retirement System	Dallas Museum of Art
Colorado PERA	San Mateo County E.R.A.	Dartmouth-Hitchcock Medical Center
Cook County Annuity & Benefit Funds	South Carolina Retirement Systems	Daughters of Charity
Directors Guild of America	Southern California UFCW	Deere & Company
El Paso Firemen & Policemen's Pension Fund	St. Louis County Government	Dominion Resources, Inc.
Equity League Pension & Health Trust Fund	State of Georgia Employees' Retirement System	Dow Chemical Company
ERFC (Fairfax County)	State of Georgia Teachers' Retirement System	Eastman Kodak Company
Florida State Board of Administration	State Universities Retirement System of Illinois	Energen Retirement Income Plan
Fresno County Employees Retirement Association	Teachers' Retirement System of the State of Illinois	Energizer Holdings, Inc.
GCIU Local 119B Pension and Welfare Funds	The Louisiana Clerks of Court Association	Equifax, Inc.
Government Pension Fund of Thailand	UFCW Unions & Employers Pension Atlanta	Group Health Cooperative
Howard County Government	Vermont Pension Investment Committee	Health Care Service Corporation
Idaho Public Employee Retirement System	Washington State Investment Board	Henry Ford Health Systems
Illinois Municipal Retirement Fund	Wichita Retirement Systems	Herbert J. Thomas Memorial Hospital
Indiana Public Retirement System		Hoag Memorial Hospital Presbyterian
Inter-Local Pension Fund		Honeywell International Inc.
Iron Workers District Council of New England		IATSE National Pension Fund
Kent County Employees Retirement System		Integrus Energy Group
LA County Metropolitan Transportation Authority		International Paper Company
Lothian Pension Fund		Les Schwab Tire Centers
Louisiana School Employees' Retirement System		Liberty Mutual
Louisiana State Employees' Retirement System		LyondellBasell Industries
MassPRIM		Martin's Point Health Care, Inc.
Mendocino County Retirement Association		Memorial Sloan-Kettering Cancer Center
Montgomery County Employees' Retirement System		MERCK & Co., Inc.
Municipal Fire & Police Retirement System of Iowa		Ministers and Missionaries Benefit Board
National Railroad Retirement Investment Trust		Montefiore Medical Center
Nebraska State Investment Council		National Grid Investment Management
New York City Deferred Compensation Plan		Nemours Foundation Pension Plan
New York State Common Retirement Fund		New Ships, Inc. Master Pension Trust
Nova Scotia Association of Health Organizations		Northeast Utilities
Oklahoma Law Enforcement Retirement System		Novant Health, Inc.
Oklahoma Police Pension & Retirement System		OhioHealth Corporation

INSURANCE

American Assets Inc.
CIT Group Master Retirement Trust
Highmark Inc.
Nuclear Electric Insurance
State Auto Insurance Companies

CORPORATIONS

AICPA
A.O. Smith Corporation
Air Canada Pension Investments
American College of Physicians, Inc.
American Hospital Association
Aon Hewitt Group Trust
Archdiocese of Los Angeles
Ascension Health
Ash Grove Cement Company
Axel Johnson, Inc.
Bank of America Corporation

It is not known whether the listed clients approve or disapprove of the adviser or the advisory services provided. Please note, the above list includes separately managed accounts and participants in Mondrian commingled vehicles and is NOT a complete list of all Mondrian's clients.

REPRESENTATIVE CLIENT LIST

NORTH AMERICA

MONDRIAN INVESTMENT PARTNERS

CORPORATIONS (CONT.)

OhioHealth Corporation Cash Balance Retirement Plan
 Old Dominion Electric Cooperative
 Orlando Health, Inc.
 Pfizer Inc.
 Pinnacle Health System
 Renown Health
 Ricoh Americas Corporation
 Savings Banks Employees Retirement Association
 SECURA Insurance Companies
 Sisters of Mercy Health System
 Smith & Nephew, Inc.
 Sonoco Products Company
 Southern California Edison
 Southern Company
 St. Marys United Methodist Church
 The Corporation of Gonzaga University
 The Green-Wood Cemetery
 The Green-Wood Cemetery Endowment
 The Pension Boards - United Church of Christ, Inc.
 The Scripps Research Institute
 The William H. Miner Foundation
 TI Group Automotive Systems
 Tribune Company
 Tufts Associated Health Maintenance Organization, Inc
 University of Ottawa
 Verizon Investment Management Corp.
 Wal-Mart Stores, Inc.
 Wells Fargo & Company Cash Balance Plan
 Winifred Masterson Burke Rehabilitation Hospital

SUB-ADVISORY

Bessemer Trust Company
 Brown Brothers Harriman
 Charles Schwab Investment Management, Inc.
 Columbia Management Investment Advisers, LLC
 Delaware Investments
 DIAM Co Ltd
 GuideStone Funds
 ICMA Retirement Corporation
 Lincoln Financial Group
 Lincoln National Life Insurance Co.
 LPL Financial
 MD Physician Services Inc.
 PACE Select Advisors Trust
 The Investment Fund for Foundations

ENDOWMENTS AND FOUNDATIONS

A.A.S.R. Supreme Council, NMJ
 A.I. duPont Testamentary Trust
 Alverno College
 America for Bulgaria Foundation
 American Academy of Ophthalmology
 Ancilla Domini Sisters
 Augustana College
 Baltimore Community Foundation
 Baylor Oral Health Foundation
 Berkshire Taconic Community Foundation
 Carle Defined Benefit Pension Plan
 Community Foundation for Southeast Michigan
 Community Foundation for the Fox Valley Region, Inc.
 Community Foundation of Greater Flint
 Community Foundation of the Holland/Zeeland Area
 Cornell University
 Covenant Ministries of Benevolence
 Detroit Province of the Society of Jesus
 Donald B. & Dorothy L. Stabler Foundation
 F.M. Kirby Foundation, Inc.
 Father Flanagan's Girls' and Boys' Home
 Frederik Meijer Gardens Foundation
 Furman University
 George I. Alden Trust
 Goucher College
 Greater Des Moines Community Foundation
 Greater Worcester Community Foundation, Inc.
 Harvey Mudd College
 Hoag Hospital Foundation
 Home Health Foundation, Inc.
 Indianapolis Symphony Orchestra
 Johnson & Wales University
 Josephine and Louise Crane Foundation
 Kansas State University Foundation
 Le Moyne College
 Leducq Foundation for Cardiovascular Research
 Lenoir-Rhyne University
 Los Angeles County Museum of Art
 Marin Community Foundation
 Mashantucket Pequot Tribal Nation
 Miss Porter's School
 Missouri Botanical Garden
 Morningside College
 Nemours Foundation
 Northwest Health Foundation
 Open Space Conservancy, Inc.
 Phi Beta Kappa Society
 Ranken Technical College
 Regent University
 Richard King Mellon Foundation
 Riverside Healthcare Foundation
 Rollins College
 Roswell Park Alliance Foundation
 Seventh-Day Adventists
 Siena College
 Simpson College
 Springfield Foundation
 St. Louis Symphony Orchestra
 Sunflower Foundation: Health Care for Kansans
 Sunnyside Foundation
 Tabor Academy
 Texas Biomedical Research Institute
 Texas Tech University System
 The Annie E. Casey Foundation, Inc.
 The Batchelor Foundation, Inc.
 The Boston Foundation
 The Butler Family Foundation
 The Carle Foundation
 The Catholic University of America
 The Community Foundation for Greater New Haven
 The Hyams Foundation, Inc.
 The McKnight Foundation
 The Medical College of Georgia Foundation
 The Riverside Church
 The Samuel Roberts Noble Foundation, Inc.
 The Savannah College of Art and Design, Inc.
 The Seattle Foundation
 The Winthrop Rockefeller Foundation
 University of Cincinnati
 University of Houston System
 University of Kentucky
 University of Missouri System
 University of New Orleans Foundation
 University of North Carolina at Greensboro
 University of Vermont
 UNLV Foundation
 W.K. Kellogg Foundation Trust
 Washington State University Foundation
 Wesleyan College
 Western Illinois University
 Westminster Canterbury Corporation
 World Learning

It is not known whether the listed clients approve or disapprove of the adviser or the advisory services provided. Please note, the above list includes separately managed accounts and participants in Mondrian commingled vehicles and is NOT a complete list of all Mondrian's clients.

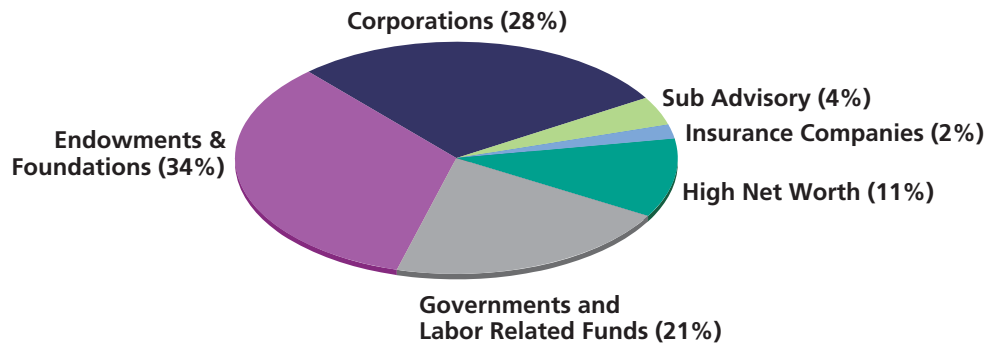
Updated: April 2013

BUSINESS PROFILE

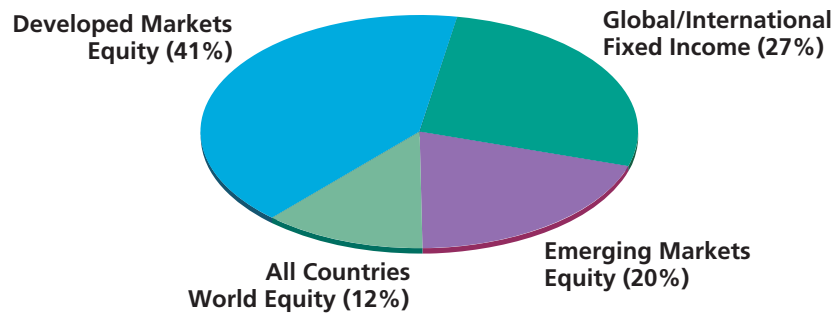
MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

TYPE OF CLIENTS SERVED (Number of Relationships)



TYPE OF ASSETS MANAGED (Assets Under Management)



DIVERSE INVESTMENT PRODUCTS

Equity

- *Non-US Equity*
- *Focused Non-US Equity*
- *Global Equity*
- *All Countries World (ACW) Ex-US Equity*
- *Focused (ACW) Ex-US Equity*
- *Emerging Markets Equity*
- *Focused Emerging Markets Equity*
- *Non-US Small Cap Equity*
- *Emerging Markets Small Cap Equity*
- *Regional/Single Country Equity*

Fixed Income

- *Global Fixed Income*
- *Focused Global Fixed Income*
- *International Fixed Income*
- *Focused International Fixed Income*
- *European Fixed Income*
- *Emerging Markets Local Currency Debt*
- *Global Debt Opportunities*
- *Global Inflation-Linked Bonds*
- *US Aggregate Fixed Income*

A number of vehicles are available in each of the above product areas, including separate accounts, limited partnerships, and registered mutual funds. Please refer to additional information at the end of the book regarding available vehicles and minimum account sizes.

INTERNATIONAL SMALL CAP ORGANIZATION CHART

MAY 1, 2013

MONDRIAN INVESTMENT PARTNERS



Investment Philosophy



EQUITY INVESTMENT PHILOSOPHY

MONDRIAN INVESTMENT PARTNERS

Mondrian Investment Partners is a value-oriented defensive manager.

We invest in stocks where rigorous dividend discount analysis isolates value in terms of the long-term flow of dividends. Dividend yield and future real growth play a central role in our decision making process and over time the dividend component is expected to be a meaningful portion of expected total return.

BENEFITS

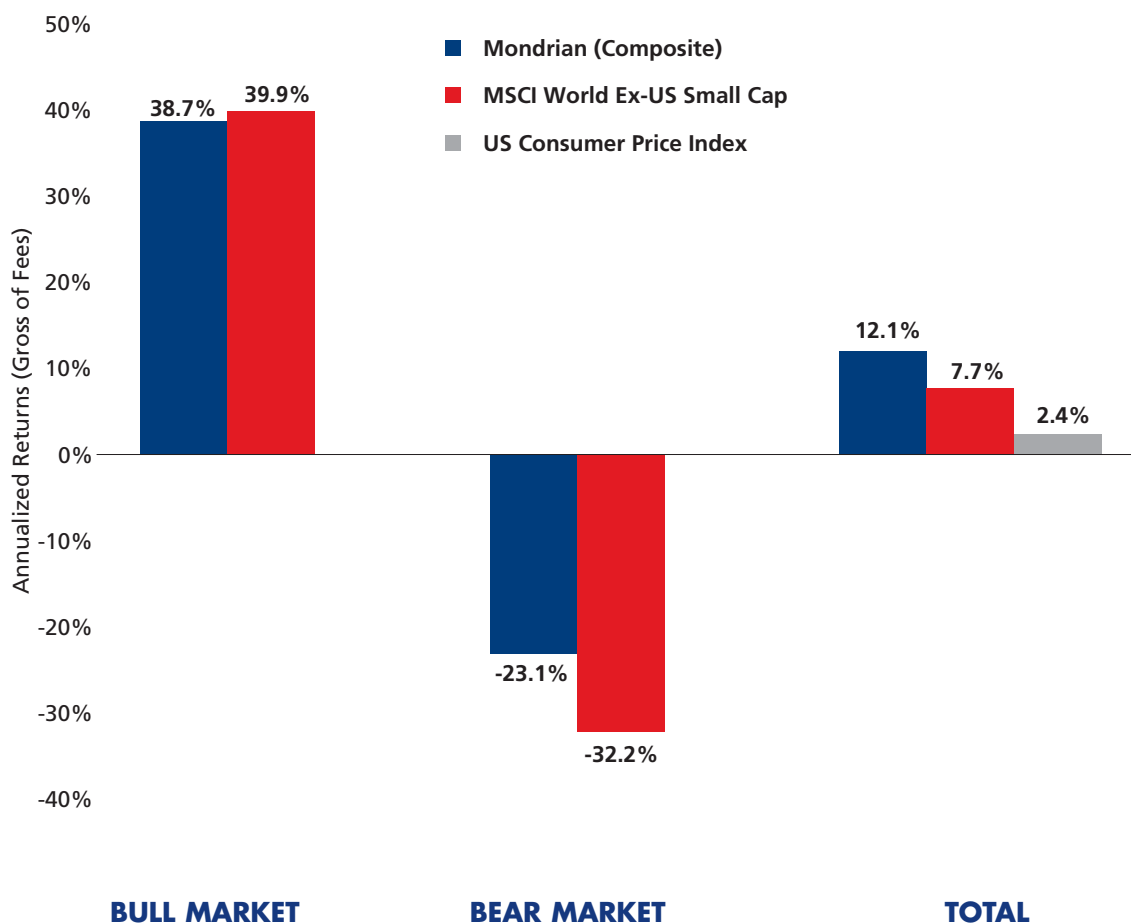
- An approach that focuses on providing a **RATE OF RETURN** meaningfully **GREATER THAN** the client's domestic rate of **INFLATION**.
- Client portfolios that seek to **PRESERVE CAPITAL** during protracted global market declines.
- Portfolio performance that has been **LESS VOLATILE** than the International Small Cap Benchmarks and the performance of most other international small-cap managers.

DEFENSIVE CHARACTERISTICS

MONDRIAN INTERNATIONAL SMALL CAP EQUITY COMPOSITE

JANUARY 1, 1998 TO MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS



	BULL MARKET	BEAR MARKET	TOTAL
NUMBER OF QUARTERS	39	22	61
MONDRIAN (COMPOSITE) AGGREGATE PERFORMANCE	2,322.8%	-76.4%	472.4%
MSCI WORLD EX-US SMALL CAP AGGREGATE PERFORMANCE	2,546.7%	-88.2%	211.3%

Source: Mondrian Investment Partners and MSCI

A Bull Market quarter is defined as one in which the benchmark showed a positive US dollar return, and a Bear Market quarter when the benchmark showed a negative US dollar return.

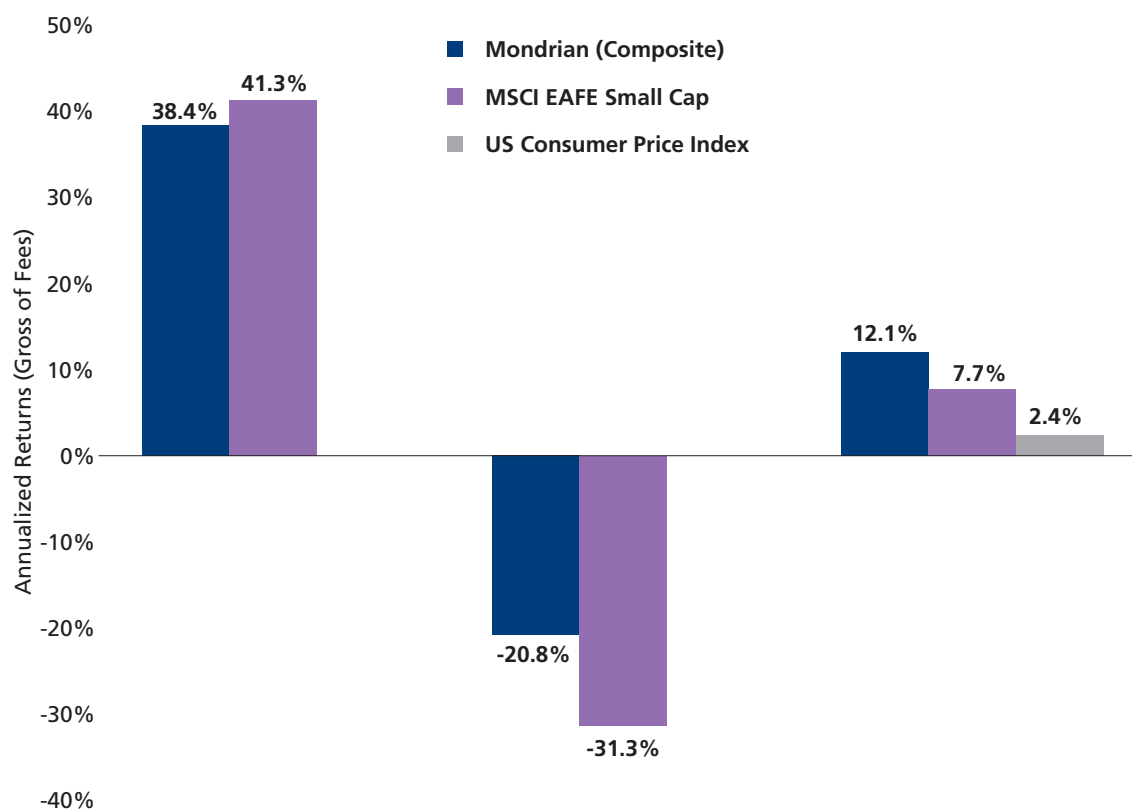
The returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results. Supplemental Information complements the Mondrian International Small Cap Composite disclosure in the appendix.

DEFENSIVE CHARACTERISTICS

MONDRIAN INTERNATIONAL SMALL CAP EQUITY COMPOSITE

JANUARY 1, 1998 TO MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS



	BULL MARKET	BEAR MARKET	TOTAL
NUMBER OF QUARTERS	38	23	61
MONDRIAN (COMPOSITE) AGGREGATE PERFORMANCE	2,095.3%	-73.9%	472.4%
MSCI EAFE SMALL CAP AGGREGATE PERFORMANCE	2,570.6%	-88.4%	209.4%

Source: Mondrian Investment Partners and MSCI

A Bull Market quarter is defined as one in which the benchmark showed a positive US dollar return, and a Bear Market quarter when the benchmark showed a negative US dollar return.

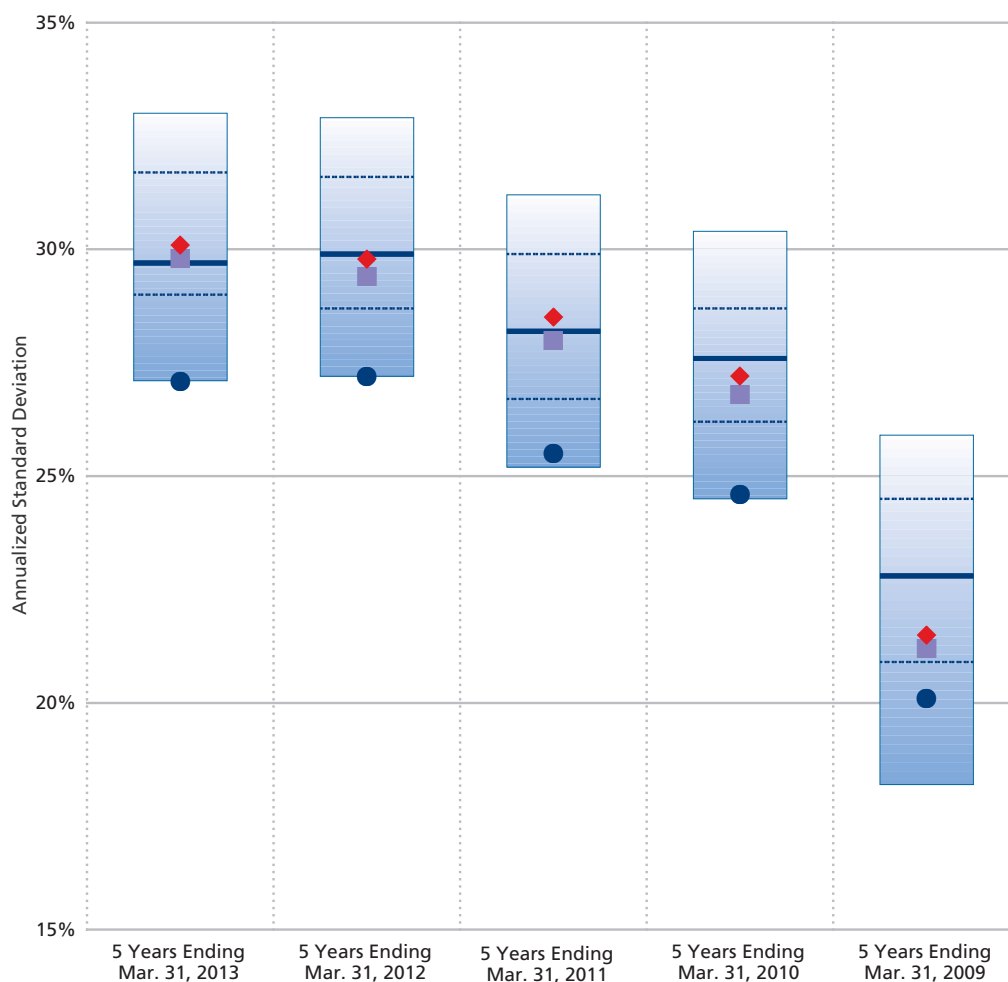
The returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results. Supplemental Information complements the Mondrian International Small Cap Composite disclosure in the appendix.

STANDARD DEVIATION

MONDRIAN INTERNATIONAL SMALL CAP EQUITY COMPOSITE

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS



	5 Years Ending Mar. 31, 2013	5 Years Ending Mar. 31, 2012	5 Years Ending Mar. 31, 2011	5 Years Ending Mar. 31, 2010	5 Years Ending Mar. 31, 2009
10th Percentile	33.0	32.9	31.2	30.4	25.9
25th Percentile	31.7	31.6	29.9	28.7	24.5
Median	29.7	29.9	28.2	27.6	22.8
75th Percentile	29.0	28.7	26.7	26.2	20.9
90th Percentile	27.1	27.2	25.2	24.5	18.2
Member Count	36	39	38	40	39
Mondrian (Composite) ●	27.1	27.2	25.5	24.6	20.1
MSCI World Ex-US Small Cap ◆	30.1	29.8	28.5	27.2	21.5
MSCI EAFE Small Cap ■	29.8	29.4	28.0	26.8	21.2

Source: Mondrian Investment Partners and Recognized Financial and Statistical Reporting Service.

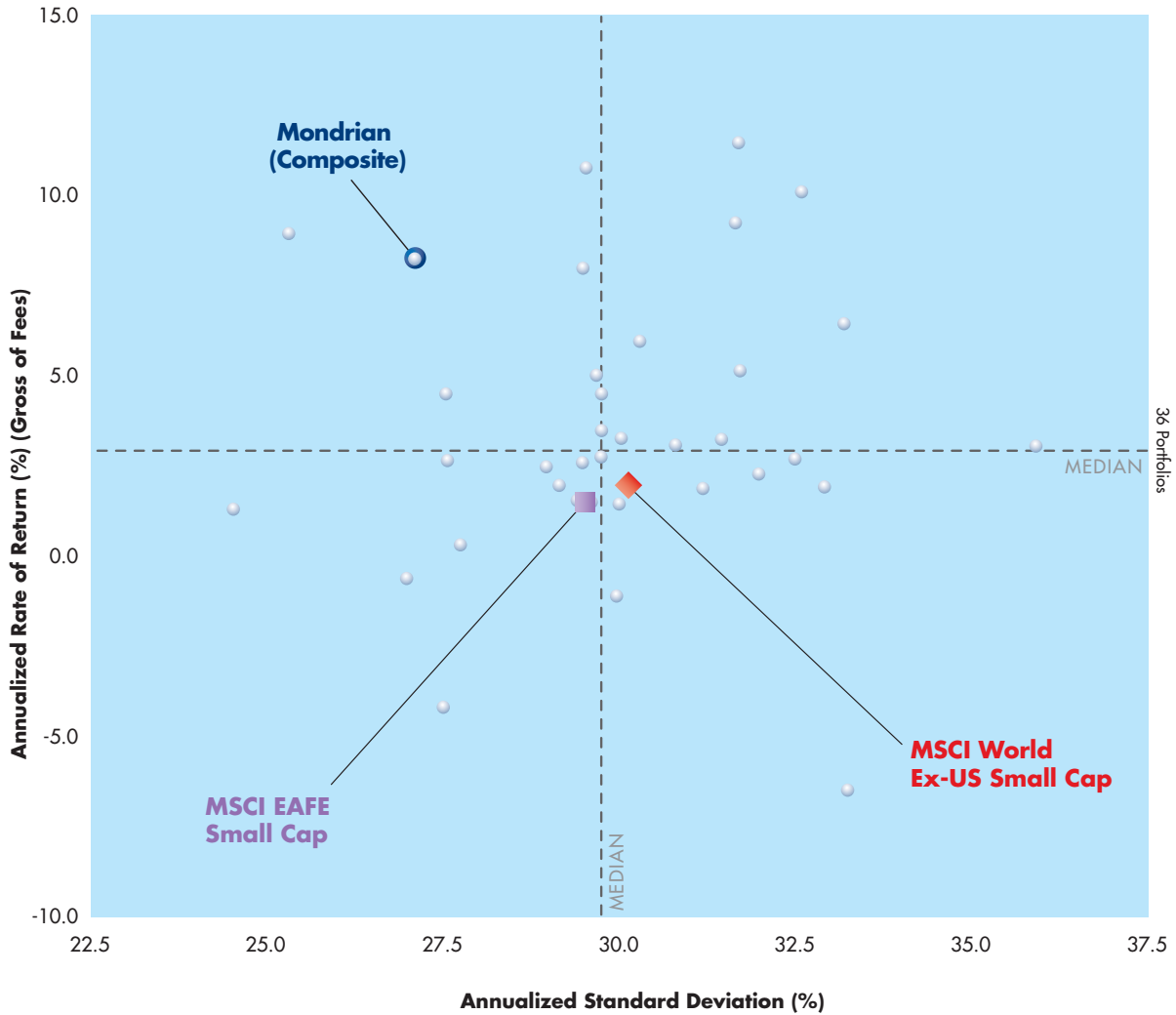
The standard deviation of returns is computed based on returns gross advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results. Supplemental Information complements the Mondrian International Small Cap Composite disclosure in appendix.

RISK/REWARD COMPARISON INTERNATIONAL SMALL CAP PORTFOLIOS

MONDRIAN INTERNATIONAL SMALL CAP EQUITY COMPOSITE

FIVE YEARS ENDED MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS



Source: Mondrian Investment Partners and Recognized Financial and Statistical Reporting Service.

The standard deviation of returns is computed based on returns gross advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results. Supplemental Information complements Mondrian International Small Cap Composite disclosure in appendix.

INVESTMENT PROCESS

MONDRIAN INVESTMENT PARTNERS

STOCKS, MARKETS AND CURRENCIES

- A **VALUE-ORIENTED DIVIDEND DISCOUNT ANALYSIS** at both the individual security and market level isolates value across geographic and industrial borders in a unified manner.
- A long-term oriented **PURCHASING POWER PARITY APPROACH**, supplemented by shorter-term probability assessment.
- Fundamental research is strongly emphasized. An extensive program of **COMPANY AND MARKET VISITS** enhances initial **QUALITATIVE AND QUANTITATIVE DESK RESEARCH**, both prior to the purchase of a stock and after its inclusion in the portfolio.

Implementation



THE INTERNATIONAL SMALL CAP EQUITY FRAMEWORK FOR DECISION MAKING

MONDRIAN INVESTMENT PARTNERS

TOP DOWN



20%

80%



BOTTOM UP

Country Analysis

- Focus on demographics, productivity, debt and politics
- Inputs from bottom-up, security research

Currency Analysis

- Long term purchasing power parity analysis
- Shorter term considerations

Int'l Small Cap Investment Committee

- Checks stock valuation for consistency and quality
- Range based on liquidity/size of country in index
- Risk evaluation of portfolios

CLIENT PORTFOLIO
70-120 holdings

- Balance sheet, income and cash flow analysis
- Industry studies and meetings with management
- Inputs from top-down, country analysis
- Long term forward looking dividend discount model (4 stage)

Security Research

- Maximum market cap at inception: US\$3.0bn
- Interactive based multi-factor quantitative screen
- Cuts universe of over 5,000 stocks to a manageable list
- Utilisation of conferences and research trips

Screening

CURRENCY ANALYSIS

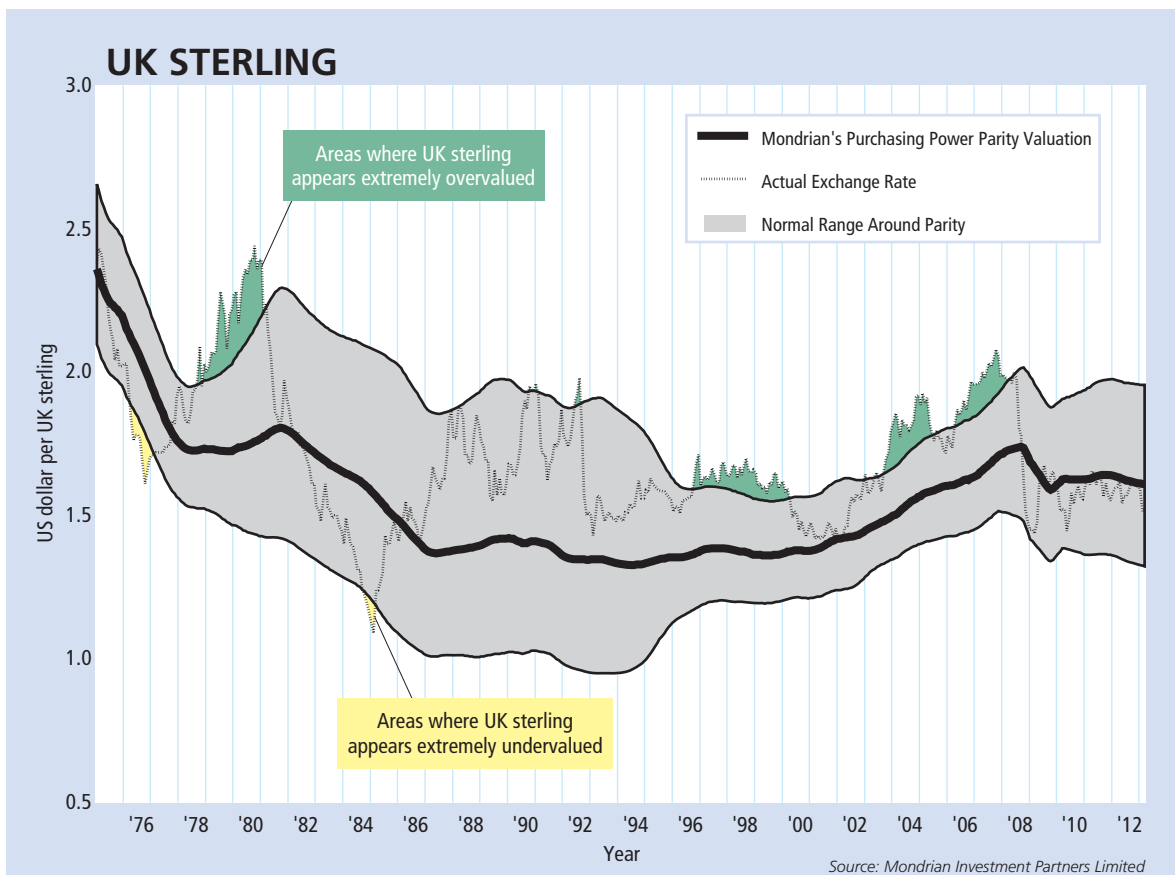
A PURCHASING POWER PARITY APPROACH

MONDRIAN INVESTMENT PARTNERS

- A long-term oriented purchasing power parity approach supplemented by shorter term probability assessment is the cornerstone of on-going currency analysis.

MONDRIAN'S CURRENCY APPROACH

A DEFENSIVE STRATEGY

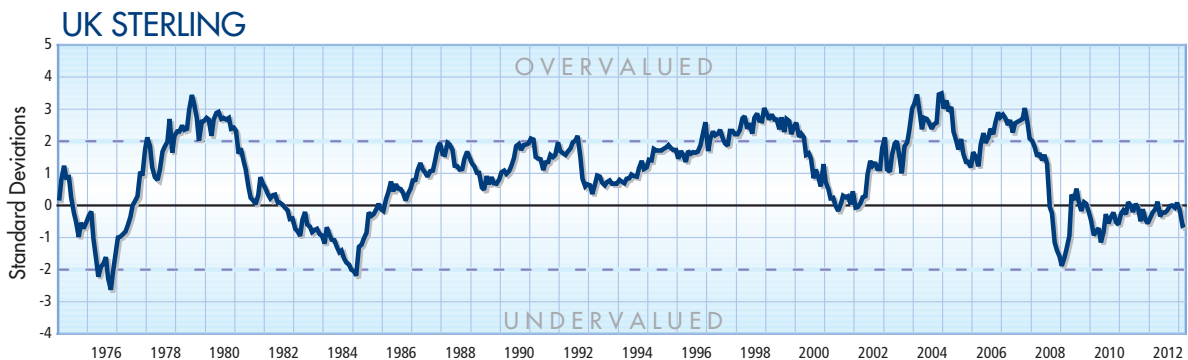
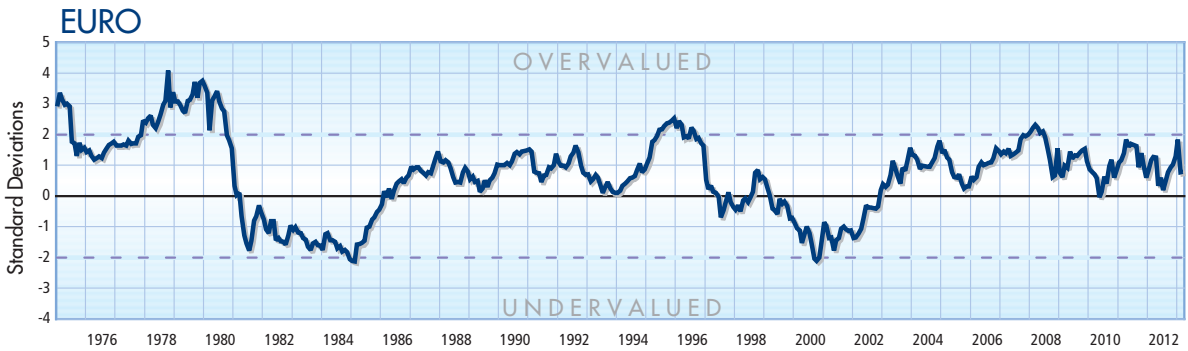


Purchasing power parity (PPP) is a theory which states that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. In the chart above, the black solid line represents our calculation of the fair value of an exchange rate. The dotted line is the actual exchange rate and the gray area represents our calculation of the normal trading range.

PURCHASING POWER PARITY VALUATIONS VERSUS US DOLLAR

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS



SELL DISCIPLINE

MONDRIAN INVESTMENT PARTNERS

STOCKS, MARKETS AND CURRENCIES

- Price appreciation leading to significant overvaluation against a predetermined value level.
- A change in the fundamentals which adversely affects ongoing appraisal of value.
- More attractive alternatives.
- Market capitalization and size of holding significantly in excess of targeted ceiling.

Performance



PERFORMANCE

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

Period	Portfolio %	MSCI World Ex-US Small Cap %	MSCI EAFE Small Cap %
Oct. 1 - Dec. 31, 2010	9.8	12.9	11.8
2011	-8.0	-15.8	-15.9
Quarter 1, 2012	13.9	13.6	14.9
Quarter 2, 2012	-4.8	-9.2	-8.6
Quarter 3, 2012	9.0	8.6	7.9
Quarter 4, 2012	6.5	4.8	6.0
2012	25.8	17.5	20.0
January	3.4	4.8	5.2
February	1.6	0.4	1.1
March	0.0	2.0	1.9
Quarter 1, 2013	5.0	7.2	8.4
1 Year	15.9	10.9	13.3
Composite Inception <small>October 1, 2010 (cumulative)</small>	33.5	19.7	22.3
Composite Inception <small>October 1, 2010 (annualized)</small>	12.2	7.5	8.4

Market Value: US\$135,802,174

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index and MSCI EAFE Small Cap Index

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SMALL CAP EQUITY MARKET RETURNS

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

	QUARTER 1, 2013			2012		
	Local Market Return (%)	Currency Change vs. US\$ (%)	US\$ Return (%)	Local Market Return (%)	Currency Change vs. US\$ (%)	US\$ Return (%)
NORTH AMERICA	11.8	-0.2	11.6	15.8	0.2	16.1
Canada	1.4	-2.0	-0.6	0.2	2.3	2.4
USA	12.8	0.0	12.8	17.5	0.0	17.5
PACIFIC	18.5	-5.1	12.5	16.7	-6.3	9.4
Australia	5.3	0.4	5.7	9.4	1.3	10.8
Hong Kong	9.6	-0.2	9.4	22.9	0.2	23.2
Japan	26.1	-8.0	15.9	16.9	-11.0	4.0
New Zealand	6.4	1.6	8.1	22.3	5.8	29.3
Singapore	8.8	-1.5	7.1	36.8	6.1	45.2
EUROPE & MIDDLE EAST	9.8	-4.0	5.5	25.2	3.2	29.2
Austria	2.2	-2.6	-0.5	27.3	1.6	29.2
Belgium	2.1	-2.6	-0.6	19.3	1.6	21.2
Denmark	20.0	-2.5	17.0	30.1	1.2	31.7
Finland	7.0	-2.6	4.2	15.0	1.6	16.8
France	7.3	-2.6	4.5	27.3	1.6	29.3
Germany	8.7	-2.6	5.9	27.4	1.6	29.4
Greece	-18.8	-2.6	-20.9	32.8	1.6	34.8
Ireland	20.9	-2.6	17.7	52.3	1.6	54.7
Israel	5.4	2.7	8.2	41.9	2.5	45.5
Italy	7.9	-2.6	5.1	16.3	1.6	18.1
Netherlands	-0.1	-2.5	-2.5	15.7	1.5	17.5
Norway	7.1	-4.6	2.2	23.3	7.2	32.3
Portugal	13.6	-2.6	10.7	28.8	1.6	30.8
Spain	3.6	-2.6	0.9	4.7	1.6	6.3
Sweden	12.5	0.1	12.6	12.5	5.4	18.5
Switzerland	8.1	-3.3	4.5	14.0	2.2	16.4
United Kingdom	13.5	-6.6	6.0	30.0	4.6	36.0
WORLD EX USA SC	11.8	-4.1	7.2	18.0	-0.4	17.5
EAFE SMALL CAP	13.4	-4.4	8.4	21.1	-0.9	20.0

PERFORMANCE SUMMARY – QUARTER 1, 2013

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

PERFORMANCE ATTRIBUTION %				
	RELATIVE CURRENCY CONTRIBUTION	RELATIVE MARKET CONTRIBUTION	STOCK SELECTION	RELATIVE RETURN
MSCI WORLD EX-US SC	+0.5	-1.1	-1.5	-2.1
MSCI EAFE SMALL CAP	+0.8	-2.4	-1.6	-3.2

POSITIVE

NEGATIVE

STOCK SELECTION

- France
Boiron
- Hong Kong
AAC Technologies
- Japan
Miraca
- Sweden
AF
- Netherlands
Boskalis Westminster
- Singapore
CapitaMall REIT
- France
Rubis
- Australia
Monadelphous

CURRENCY CONTRIBUTION

- Underweight Japanese yen
- Overweight Singapore dollar
- Overweight UK sterling
- Underweight Canadian dollar

MARKET CONTRIBUTION

- Underweight Canada
- No exposure to Greece
- Underweight Japan
- Overweight Singapore

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index, and MSCI EAFE Small Cap Index

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PERFORMANCE SUMMARY – 2012

ALASKA RETIREMENT MANAGEMENT BOARD

DECEMBER 31, 2012

MONDRIAN INVESTMENT PARTNERS

PERFORMANCE ATTRIBUTION %

	RELATIVE CURRENCY CONTRIBUTION	RELATIVE MARKET CONTRIBUTION	STOCK SELECTION	RELATIVE RETURN
MSCI WORLD EX-US SC	+2.4	+5.3	-0.6	+7.1
MSCI EAFE SMALL CAP	+2.8	+3.5	-1.5	+4.8

POSITIVE

NEGATIVE

STOCK SELECTION

- UK
 - Rotork
 - Spectris
 - Croda
- Singapore
 - SATS
- France
 - Neopost
- Japan
 - Nifco
- UK
 - CPP Group
- Netherlands
 - SBM Offshore

CURRENCY CONTRIBUTION

- Underweight Japanese yen
- Underweight Canadian dollar
- Overweight Singapore dollar
- Underweight Norwegian krone

MARKET CONTRIBUTION

- Underweight Canada
- No exposure to Israel
- Overweight Singapore
- No exposure to Greece

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index, and MSCI EAFE Small Cap Index

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Portfolio



COUNTRY ALLOCATION

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

	1	2	3	4	5	6
	MIN/MAX ALLOCATION (%)	PORTFOLIO ALLOCATION (%)	MSCI WORLD EX-US SMALL CAP (%)	MSCI EAFE SMALL CAP (%)	OVER/UNDERWEIGHT	CURRENCY HEDGE
North America		2.7	12.0	—	-9.3	
Canada	0 – 15	2.7	12.0	—	-9.3	
Asia Pacific		35.1	38.2	43.5	-3.1	✓
Australia	0 – 20	8.0	7.7	8.8	0.3	
Hong Kong/China	0 – 20	3.8	2.7	3.0	1.1	
Japan	0 – 40	8.9	24.6	28.0	-15.7	
New Zealand	0 – 10	2.0	0.7	0.8	1.3	✓
Singapore	0 – 20	12.5	2.6	2.9	9.9	
Europe & Middle East		60.6	49.7	56.5	10.8	
Denmark	0 – 15	2.2	1.6	1.8	0.6	
France	0 – 25	9.1	3.4	3.9	5.7	
Germany	0 – 25	12.4	5.3	6.0	7.1	
Ireland	0 – 15	1.1	1.3	1.4	-0.2	
Italy	0 – 15	—	2.6	3.0	-2.6	
Netherlands	0 – 20	2.9	1.5	1.7	1.3	
Norway	0 – 20	0.4	2.0	2.2	-1.5	
Spain	0 – 15	0.9	1.4	1.5	-0.5	
Sweden	0 – 15	1.2	3.2	3.6	-2.0	
United Kingdom	0 – 45	30.5	19.2	21.9	11.2	

1 A minimum/maximum country allocation policy seeks to allow broad flexibility while guarding against over-or under concentration relative to the Index. If the governing documents for the account contain min/max guidelines, these guidelines are reflected above. If the governing documents for the account do not contain min/max guidelines, the min/max allocations above represent Mondrian's current internal policy and can be changed at any time in Mondrian's discretion.

2 Portfolio Allocation

3 MSCI World Ex-US Small Cap Index Weights

4 MSCI EAFE Small Cap Index Weights

5 Over/Underweight to MSCI World Ex-US Small Cap Index Weights

6 Defensive currency hedges are put into place if appropriate and permissible under client objectives.

PORTFOLIO

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

	HOLDINGS (%)			P/E RATIO			DIVIDEND YIELD (%)		
	Portfolio	MSCI World Ex-US SC	MSCI EAFE SC	Portfolio	MSCI World Ex-US SC	MSCI EAFE SC	Portfolio	MSCI World Ex-US SC	MSCI EAFE SC
NORTH AMERICA	2.7	12.0	-	10.6	24.9	-	4.0	3.1	-
CANADA	2.7	12.0	-	10.6	24.9	-	4.0	3.1	-
Morguard REIT	0.5			5.0			5.4		
Northern Property REIT	0.9			12.3			4.8		
Pason Systems	1.3			16.4			2.9		
ASIA PACIFIC	35.1	38.2	43.5	15.7	20.3	20.3	3.5	2.5	2.5
AUSTRALIA	8.0	7.7	8.8	14.0	32.1	32.1	5.0	3.7	3.7
Commonwealth Property Office REIT	3.2			14.8			5.8		
David Jones	0.2			15.6			5.7		
Monadelphous	2.4			13.0			6.0		
SCA Property Group REIT	1.2			N/A			N/A		
Transfield Services	1.0			N/A			6.6		
HONG KONG/CHINA	3.8	2.7	3.0	14.1	17.0	17.0	2.3	2.9	2.9
AAC Technologies	1.0			29.4			1.1		
AMVIG	0.5			5.9			6.2		
ASM Pacific	0.6			49.4			1.7		
Emperor Watch & Jewellery	0.6			9.0			3.3		
Haitian International	0.3			15.6			2.2		
Pacific Basin	0.8			N/A			1.1		
JAPAN	8.9	24.6	28.0	14.6	19.6	19.6	1.9	1.9	1.9
Ariake	0.7			17.3			2.3		
FCC	1.6			15.5			1.6		
Hogy Medical	1.5			15.7			1.9		
Horiba	0.8			16.5			1.6		
Miraca	1.2			18.8			1.7		
Miura	0.5			16.9			1.7		
Musashi Seimitsu	0.1			25.0			1.9		
Nifco	1.7			17.4			2.1		
Taiyo Ink	0.5			22.1			3.3		
Ushio	0.3			27.3			2.3		
NEW ZEALAND	2.0	0.7	0.8	22.7	18.3	18.3	4.1	4.6	4.6
Auckland International Airport	1.0			25.9			4.0		
Sky City Entertainment	1.0			20.2			4.1		
SINGAPORE	12.5	2.6	2.9	17.3	13.3	13.3	4.0	3.7	3.7
Ascendas REIT	1.7			12.0			5.1		
CapitaMall Trust REIT	2.6			18.1			4.5		
Ezra	1.1			15.3			0.0		
Hyflux	0.8			19.8			2.2		
SATS	1.8			17.9			3.6		
SIA Engineering	2.2			19.3			4.6		
SMRT Corporation	0.5			22.0			4.6		
Starhub	1.7			20.8			4.6		
EUROPE & MIDDLE EAST	60.6	49.7	56.5	17.1	21.7	21.7	2.7	2.8	2.8
DENMARK	2.2	1.6	1.8	29.7	32.9	32.9	1.3	1.2	1.2
Christian Hansen	2.2			29.7			1.3		
FRANCE	9.1	3.4	3.9	14.1	71.0	71.0	3.9	2.9	2.9
Boiron	0.9			16.8			2.2		
Euler Hermes	0.6			10.8			6.1		
Ingenico	1.2			25.0			1.1		
Ipsos	0.9			16.7			2.3		
Medica	0.8			17.1			1.4		
Mersen	0.6			7.6			5.5		
Neopost	1.7			9.5			8.3		
Nexans	1.1			19.1			3.1		
Rubis	1.4			17.4			3.5		

CONTINUED ON NEXT PAGE

Portions of the portfolio's Australian dollar and New Zealand dollar exposure are defensively hedged back into the US dollar.

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index and MSCI EAFE Small Cap Index

COUNTRY ALLOCATION

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

	1	2	3	4	5	6
	MIN/MAX ALLOCATION (%)	PORTFOLIO ALLOCATION (%)	MSCI WORLD EX-US SMALL CAP (%)	MSCI EAFE SMALL CAP (%)	OVER/UNDERWEIGHT	CURRENCY HEDGE
North America		2.7	12.0	—	-9.3	
Canada	0 – 15	2.7	12.0	—	-9.3	
Asia Pacific		35.1	38.2	43.5	-3.1	✓
Australia	0 – 20	8.0	7.7	8.8	0.3	
Hong Kong/China	0 – 20	3.8	2.7	3.0	1.1	
Japan	0 – 40	8.9	24.6	28.0	-15.7	
New Zealand	0 – 10	2.0	0.7	0.8	1.3	✓
Singapore	0 – 20	12.5	2.6	2.9	9.9	
Europe & Middle East		60.6	49.7	56.5	10.8	
Denmark	0 – 15	2.2	1.6	1.8	0.6	
France	0 – 25	9.1	3.4	3.9	5.7	
Germany	0 – 25	12.4	5.3	6.0	7.1	
Ireland	0 – 15	1.1	1.3	1.4	-0.2	
Italy	0 – 15	—	2.6	3.0	-2.6	
Netherlands	0 – 20	2.9	1.5	1.7	1.3	
Norway	0 – 20	0.4	2.0	2.2	-1.5	
Spain	0 – 15	0.9	1.4	1.5	-0.5	
Sweden	0 – 15	1.2	3.2	3.6	-2.0	
United Kingdom	0 – 45	30.5	19.2	21.9	11.2	

1 A minimum/maximum country allocation policy seeks to allow broad flexibility while guarding against over-or under concentration relative to the Index. If the governing documents for the account contain min/max guidelines, these guidelines are reflected above. If the governing documents for the account do not contain min/max guidelines, the min/max allocations above represent Mondrian's current internal policy and can be changed at any time in Mondrian's discretion.

2 Portfolio Allocation

3 MSCI World Ex-US Small Cap Index Weights

4 MSCI EAFE Small Cap Index Weights

5 Over/Underweight to MSCI World Ex-US Small Cap Index Weights

6 Defensive currency hedges are put into place if appropriate and permissible under client objectives.

PORTFOLIO

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

	HOLDINGS (%)			P/E RATIO			DIVIDEND YIELD (%)		
	Portfolio	MSCI World Ex-US SC	MSCI EAFE SC	Portfolio	MSCI World Ex-US SC	MSCI EAFE SC	Portfolio	MSCI World Ex-US SC	MSCI EAFE SC
GERMANY	12.4	5.3	6.0	19.8	27.0	27.0	2.3	2.4	2.4
Bilfinger	1.3			13.0			3.7		
Elringklinger	0.8			17.2			1.9		
Fielmann	1.3			24.5			3.8		
GFK	0.9			25.0			1.7		
Mtu Aero Engines	1.7			18.6			1.8		
NORMA Group	1.3			13.0			2.6		
Qiagen	0.8			37.8			0.0		
Rational	0.8			28.1			2.4		
Symrise	3.5			23.6			2.1		
IRELAND	1.1	1.3	1.4	19.8	59.1	59.1	1.0	1.6	1.6
Glanbia	1.1			19.8			1.0		
NETHERLANDS	2.9	1.5	1.7	13.3	10.4	10.4	4.0	4.5	4.5
Boskalis Westminster	2.9			13.3			4.0		
NORWAY	0.4	2.0	2.2	16.1	22.9	22.9	2.7	2.2	2.2
Farstad Shipping	0.4			16.1			2.7		
SPAIN	0.9	1.4	1.5	15.4	49.3	49.3	1.9	3.5	3.5
Prosegur	0.9			15.4			1.9		
SWEDEN	1.2	3.2	3.6	21.8	15.8	15.8	2.9	3.4	3.4
AF AB	1.2			21.8			2.9		
UNITED KINGDOM	30.5	19.2	21.9	17.0	17.8	17.8	2.5	2.6	2.6
AZ Electronic Materials	1.9			16.3			2.3		
Bodycote	1.0			15.4			2.3		
Cobham	0.8			10.8			3.5		
Croda	3.6			21.4			2.2		
De La Rue	2.0			21.3			4.3		
Diploma	1.2			16.9			2.6		
Domino	1.3			16.9			3.2		
Fenner	0.8			11.0			2.7		
Greene King	1.0			13.2			3.6		
Halma	1.0			21.2			1.9		
Interserve	1.1			10.6			4.1		
Laird Group	1.1			12.0			4.6		
Rexam	1.6			14.8			2.9		
Rotork	3.7			27.6			1.5		
Serco	1.1			14.7			1.6		
Spectris	1.5			17.9			1.6		
Spirax-Sarco Engineering	1.4			22.1			1.9		
TT Electronics	0.6			13.4			2.8		
Ultra Electronics	1.5			13.8			2.3		
Victrex	2.1			19.6			2.3		
CASH	1.7	-	-	-	-	-	0.3	-	-
US dollars	1.3						0.4		
Other currency	0.4								
TOTAL	100.0	100.0	100.0	16.3	21.4	21.0	3.0	2.7	2.7

Portions of the portfolio's Australian dollar and New Zealand dollar exposure are defensively hedged back into the US dollar.

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index and MSCI EAFE Small Cap Index

SUMMARY PORTFOLIO CHARACTERISTICS

ALASKA RETIREMENT MANAGEMENT BOARD

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

Portfolio Turnover

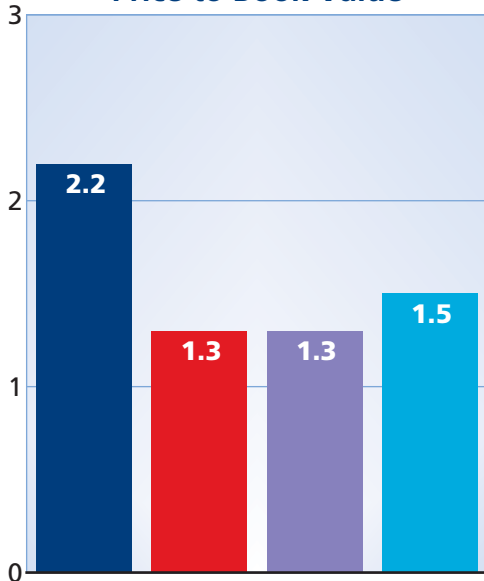
12 months to Mar. 31, 2013: 8.5%
 12 months to Mar. 31, 2012: 13.9%

Market Capitalization

(Weighted Average)

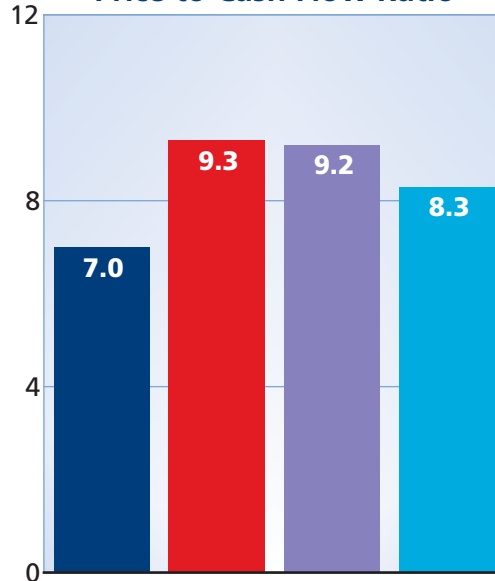
Portfolio: US\$2.9 billion
 MSCI World Ex-US SmCap: US\$1.9 billion
 MSCI EAFE SmCap: US\$1.9 billion

Price to Book Value



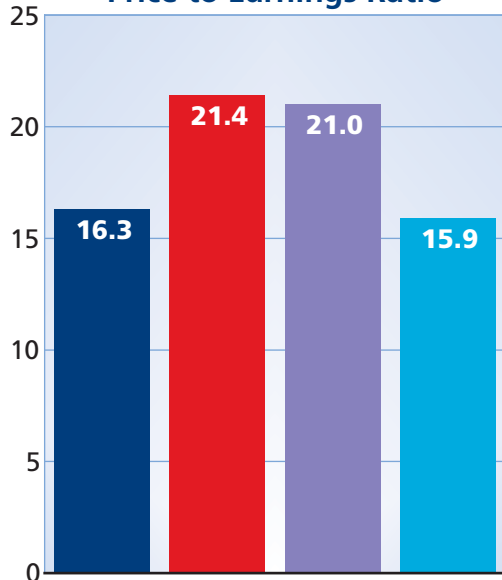
■ Portfolio
 ■ MSCI World Ex-US Small Cap

Price to Cash Flow Ratio

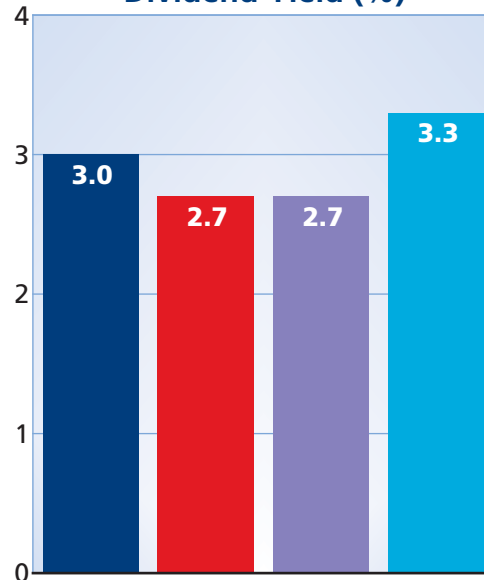


■ MSCI EAFE Small Cap
 ■ MSCI EAFE

Price to Earnings Ratio



Dividend Yield (%)



Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index and MSCI EAFE Small Cap Index

*The above turnover figure is computed from a Mondrian International Small Cap representative account.

WHY MONDRIAN INVESTMENT PARTNERS?

OUR COMPETITIVE ADVANTAGES

MONDRIAN INVESTMENT PARTNERS

EMPLOYEE OWNED

- Long-term stability and continuity
- Attracts, retains and motivates highly skilled personnel

WELL RESOURCED TEAM

- Dedicated and focused team
- Draws on the breadth and depth of research and investment experience within Mondrian's successful equity products
- Team consensus decision making

DISCIPLINED PROCESS

- Consistent investment process across all Mondrian's investment products
- Consistent inflation adjusted dividend discount methodology
- Combination of quantitative and qualitative analysis
- Detailed fundamental 'value' stock analysis

VALUE APPROACH

- Focus on real returns
- Low volatility of returns
- Defensive value characteristics

Appendix

7.2 CASE FOR SMALL CAP

7.5 MONDRIAN INVESTMENT PARTNERS
– *Key Biographies*

7.13 IMPORTANT INFORMATION

THE CASE FOR NON-US SMALL CAP

MONDRIAN INVESTMENT PARTNERS

International Small Cap is an inefficient asset class consisting of a large universe of stocks (>5000) which we believe is under-researched. This creates mispricing which allows alpha generation through stock selection. Moreover it offers diversification benefits. We believe this makes it an appealing asset class with potential for upside return.

Key features of the Small Cap Asset Class are summarized below:

INEFFICIENT ASSET CLASS

The recent move towards consolidation in the stock broking and investment banking sectors has led to a similar consolidation in the number of stocks that are covered by those analysts. This translates into less broker related research into small cap stocks. Public information about smaller companies is often not well disseminated, and not well analysed. This can create inefficient pricing of these stocks and allow for dramatic swings in pricing as events that might normally be discounted occur unexpectedly. Mondrian believes it can benefit from its detailed fundamental research on these companies by carefully evaluating as much public information as possible that might not have been fully discounted by the market.

Moreover, given the nature of their small size and limited liquidity, the small cap stock prices can fluctuate significantly on the basis of liquidity flows. This means that simple market flows may create pricing anomalies within the small cap arena, which can be exploited by an experienced investor, such as Mondrian, who has a specific valuation target based on a company's long term underlying business strength.

CORRELATION

The long term correlation between the MSCI EAFE and the MSCI US is 0.89*, whereas International Small Cap has a relatively lower level of correlation of 0.79* against the MSCI US, offering diversification benefits.

VALUATION

Throughout history, this asset class has typically shown premium returns. However, during the 1990s the asset class suffered a de-rating due to relative deterioration in the companies' underlying operational and financial results. Since then the companies have embarked on a drive to improve profitability and balance sheet utilization. Mondrian seeks to identify undervalued companies that are on the path to improvement through detailed fundamental analysis which includes management visits and modeling the long term prospects of the companies.

*Correlation is calculated using total returns data from calendar years 2001 to 2011.

Source: Mondrian Investment Partners/MSCI

WHAT IS SMALL CAP?

MONDRIAN INVESTMENT PARTNERS

There is clearly no dominant index covering the international small cap equity asset class. Surveys conducted by investment consultants show that the small cap indices commonly used are the S&P/Citigroup EMI Ex-US/EPAC and the MSCI World Ex-US/EAFE Small Cap indices.

The S&P/Citigroup EMI Ex-US Index includes stocks which are ranked at the bottom 20th percentile by available market capitalization in each local market index. This is successful in expressing the smaller companies in each market but creates a universe of companies with extreme market capitalizations that range from huge (several billion USD in Switzerland) to tiny (less than USD 100 million in Singapore or New Zealand). As of October 2008, the S&P/Citigroup EMI Ex-US/EPAC Index has been renamed as the S&P Developed Ex-US/EPAC SmallCap Index to incorporate recent enhancements on the series of global equity indices. The enhanced S&P Developed Ex-US/EPAC SmallCap Index includes stocks which are ranked at approximately the bottom 15th percentile by available market capitalization in each local market index. The new enhanced classification helps limit the dispersion of extreme market capitalizations within the aggregate small cap universe.

The MSCI World Ex-US/EAFE Small Cap Index traditionally defined its universe of small cap stocks based on market capitalization in the range of USD 120 million to USD 2.5 billion. Commencing from June 2008, MSCI has implemented enhancements to its series of global equity indices. The enhanced MSCI Small Cap Index includes stocks which are ranked at approximately the bottom 15th percentile by available market capitalization in each local market index. The enhanced methodology incorporates further requirements such as liquidity, minimum size range and free-float adjusted market capitalization market coverage target. As with the enhanced S&P index, this helps limit the dispersion of extreme market capitalizations within the aggregate small cap universe.

We believe that both these indices represent an appropriate proxy of available opportunity set offering broad exposure to small capitalization securities within the international markets against which to measure performance and risk of international small cap equity products. We therefore do not recommend one over the other.

The Mondrian International Small Cap product defines its universe of small cap stocks based on market capitalization limits. Our 'buy' universe includes stocks with a total market capitalization of up to USD 3.0 billion at purchase across all markets. This level is both small enough to be genuinely small cap and large enough to allow relevant comparison to the available indices.

DISCLOSURE – INTERNATIONAL SMALL CAP EQUITY COMPOSITE

MONDRIAN INVESTMENT PARTNERS

ANNUAL PERFORMANCE

Year	Total Gross US\$ Return	Total Net of Fees US\$ Return	MSCI World ex US Small Cap US\$ Return	Composite Standard Deviation	Benchmark (MSCI) Standard Deviation	Number of Portfolios	Composite Dispersion	Total Composite Assets (US\$ millions)	% of Firm Assets	Total Firm Assets (US\$ millions)
2003	51.37%	50.20%	61.81%	16.69%	17.85%	4	N/A	255.3	1.22	20,899
2004	28.87%	27.88%	29.40%	14.35%	15.12%	3	N/A	332.3	1.06	31,226
2005	15.60%	14.70%	25.04%	11.50%	12.61%	6	N/A	458.1	1.05	43,794
2006	37.18%	36.12%	19.46%	9.86%	12.05%	5	N/A	541.9	1.02	53,102
2007	12.60%	11.73%	3.28%	10.60%	12.77%	8	0.28%	964.3	1.50	64,338
2008	-43.31%	-43.75%	-48.03%	22.05%	22.79%	9	0.38%	666.1	1.38	48,233
2009	57.77%	56.56%	50.82%	25.09%	26.94%	9	0.70%	1,718.8	2.67	64,393
2010	31.04%	30.03%	24.51%	27.06%	29.18%	17	0.79%	4,241.1	6.20	68,386
2011	-8.04%	-8.75%	-15.81%	20.26%	23.08%	23	0.27%	4,958.9	7.53	65,891
2012	25.67%	24.70%	17.48%	17.49%	19.83%	24	0.19%	6,523.7	9.56	68,248
2013 (to Mar 31)	4.92%	4.72%	7.24%	17.30%	19.55%	23	0.13%	6,839.0	10.01	68,348

ACCOMPANYING NOTES CONCERNING PERFORMANCE CALCULATION AND GIPS® COMPLIANCE

- This composite was created in January 1998.
- Past performance is not a guarantee of future results.
- A complete list and description of all firm composites is available on request.

Mondrian Investment Partners Limited ("Mondrian") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the Global Investment Performance Standards (GIPS®). Mondrian has been independently verified for the periods 1 January 1993 to 31 December 2012.

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. Additional third party Performance Examination under GIPS of this composite's results has also been undertaken from 1 January 1998 to 31 December 2012. The verification and performance examination reports are available upon request.

The Firm is defined as all discretionary portfolios managed by Mondrian.

Mondrian is a value-oriented defensive manager seeking to achieve high real returns for its clients. Mondrian invests mainly in securities where rigorous dividend discount analysis identifies value in terms of the long-term flows of income. Mondrian's methodology is applied consistently to markets and individual securities, both bonds and equities.

The International Small Cap Equity Composite includes US dollar based discretionary fee paying portfolios, measured against the Morgan Stanley Capital International World ex US Small Cap Index ("MSCI Index"), or an equivalent Index net of US withholding taxes. The portfolios are invested in non-US based small capitalization equities with the allowance for hedging.

Portfolios are valued on a trade date basis using accrual accounting. Returns are calculated using the modified Dietz method and then weighted by using beginning-of-period market values to calculate the monthly composite returns. Portfolio returns are calculated net of irrecoverable withholding tax on dividend income. New portfolios are included in the first full month of investment in the composite's strategy. Terminated portfolios remain in the composite through the last full month of investment. Additional information regarding the valuing of portfolios, calculating performance, and preparing compliant presentations are available upon request.

Composite and benchmark standard deviation are measured as the rolling 3 year annualised standard deviation of monthly returns. The dispersion of annual returns of portfolios within the composite (Composite Dispersion), is measured by the standard deviation of the equal-weighted returns of portfolios represented within the composite for the full year. Composite Dispersion is not presented if there are less than five portfolios in the composite during the year.

Performance results marked "Gross" do not reflect deduction of investment advisory fees. Investment returns will be reduced accordingly. For example, if a 1.00% advisory fee were deducted quarterly (0.25% each quarter) and the three year gross annual returns were 10.00%, 3.00% and -2.00%, giving an annualized return of 3.55% before deduction of advisory fees, then the deduction of advisory fees would result in three year net annual returns of 8.91%, 1.98% and -2.97% giving an annualized net return of 2.52%.

Performance returns marked "Net" reflect deduction of investment advisory fees and are calculated by deducting a quarterly indicative fee from the quarterly composite return. The indicative fee is defined as being the effective fee rate (or average weighted fee) at the composite's minimum account size as set out below. Actual net composite performance would be higher than the indicative performance shown because some accounts have sliding fee scales and accordingly lower effective fee rates.

Mondrian's investment advisory fees are described in Part II of its Form ADV. A representative United States fee schedule for institutional accounts is provided below, although it is expected that from time to time the fee charged will differ from the below schedule depending on the country in which the client is located and the nature, circumstances and requirements of individual clients. The fees will be charged as follows: the first US\$50m at 0.85%; the next US\$50m at 0.70%; and amounts over US\$100m at 0.65%. Minimum segregated portfolio size of currently US\$100 million (or fees equivalent thereto).

SUMMARY BIOGRAPHIES

MAY 1, 2013

MONDRIAN INVESTMENT PARTNERS

Investment Professionals and Traders	Name	Position/Title	Discipline	Former Employer	Years with MIP	Industry Experience
	David Tilles	Executive Chairman	Strategy	Hill Samuel	22	38
	Clive Gillmore	CEO & CIO, Global Equities	Equities/Emerging & Global	Hill Samuel	22	30
	Elizabeth Desmond	Director, CIO International Equities	Equities/International	Hill Samuel	22	26
	John Kirk	Deputy Chief Executive Officer	Fixed Income & Currency	Royal Bank of Canada	14	28
	Nigel May	Deputy Chief Executive Officer	Equities/Global	Hill Samuel	22	26
	Christopher Math	Director, CIO GFI & Currency	Fixed Income & Currency	Guardian Royal Exchange	20	23
	Hamish Parker	Director	Equities/International	Hill Samuel	22	31
	Brendan Baker	Senior Portfolio Manager	Equities/Global	Lombard Street Research	11	23
	Joanna Bates	Senior Portfolio Manager	Fixed Income & Currency	Hill Samuel	16	30
	Nigel Bliss	Senior Portfolio Manager	Equities/International	Cazenove & Co.	17	19
	Ginny Chong	Senior Portfolio Manager	Equities/Emerging Markets	PricewaterhouseCoopers	12	17
	Graeme Coll	Senior Portfolio Manager	Equities/Small Cap	Ernst & Young	8	14
	Frances Cuthbert	Senior Portfolio Manager	Equities/Small Cap	Deutsche Bank	14	14
	Aileen Gan	Senior Portfolio Manager	Equities/Global	Accenture	7	13
	Gregory Halton	Senior Portfolio Manager	Equities/Emerging Markets	Deutsche Asset Management Ltd	9	12
	Ormalal Krishnan	Senior Portfolio Manager	Equities/Small Cap	Koenean Capital Management	13	20
	Russell Mackie	Senior Portfolio Manager	Equities/International	Hodgson Martin Ltd.	15	18
	Andrew Miller	Senior Portfolio Manager	Equities/Emerging Markets	PricewaterhouseCoopers	13	14
	Aidan Nicholson	Senior Portfolio Manager	Equities/Small Cap	Cazenove & Co.	9	11
	Solomon Peters	Senior Portfolio Manager	Fixed Income & Currency	CEBR	12	16
Dan Philips	Senior Portfolio Manager	Fixed Income & Currency	Dresdner Bank	14	18	
Andrew Porter	Senior Portfolio Manager	Equities/International	Frank Russell	9	13	
Boris Veselinovich	Senior Portfolio Manager	Equities/Emerging Markets	Challenger International	12	14	
David Wakefield	Senior Portfolio Manager	Fixed Income & Currency	Bank of England	11	20	
Matt Day	Portfolio Manager	Fixed Income & Currency	Buck Consultants	5	11	
Steven Dutaut	Portfolio Manager	Equities/International	Baillie Gifford	5	9	
Kevin Fenwick	Portfolio Manager	Fixed Income & Currency	Wilshire Associates	5	9	
Bhavin Manek	Portfolio Manager	Equities/Small Cap	Mercer Investment Consulting	7	9	
Kim Nguyen	Portfolio Manager	Equities/International	Citigroup Asset Management	8	8	
Melissa Platt	Portfolio Manager	Equities/International	FundSource Research	9	15	
Alex Simcox	Portfolio Manager	Equities/International	Ernst & Young LLP	5	9	
Bilgin Soylu	Portfolio Manager	Equities/International	Yapi Kredi Bank	12	13	
Jonathan Spread	Portfolio Manager	Equities/Global	Morley Fund Management	8	13	
Paul Thompson	Portfolio Manager	Equities/Global	Deloitte LLP	3	6	
Amice Tieman	Portfolio Manager	Equities/Global	ING	8	16	
Dinash Lakhani	Senior Research Analyst	Equities/International	Abu Dhabi Investment Authority	12	29	
Alastair Cornwell	Asst. Portfolio Manager	Equities/Small Cap	PricewaterhouseCoopers	5	5	
James Francken	Asst. Portfolio Manager	Equities/Global	Investec Asset Management	4	5	
Dan Kelly	Asst. Portfolio Manager	Equities/Emerging Markets	Deloitte LLP	3	6	
Luigi Li Calzi	Asst. Portfolio Manager	Equities/Strategy	Matterhorn Investments	4	5	
Sarah Mitchell	Asst. Portfolio Manager	Fixed Income & Currency	Royal Bank of Scotland	2	8	
Dan Bronstein	Research Analyst	Equities/Emerging Markets	Goldman Sachs	3	4	
Benjamin Hall	Research Analyst	Equities/Small Cap	None	2	2	
Brian Heywood	Implementation Manager	Equities	Mercury Asset Management	16	18	
Alan Fedarb	Portfolio Managers' Asst.	Equities	Gartmore Fund Managers	16	23	
Vinit Shah	Portfolio Managers' Asst	Equities	State Street Bank	7	15	
Stuart Thomas	Portfolio Managers' Asst	Equities	ABN AMRO Asset Management	4	13	
Mathew Woolaghan	Portfolio Managers' Asst	Equities	Bank of New York	5	7	
Natalie Stone	Senior Trader	Trading Desk	WestAM	8	18	
Ian Taylor	Senior Trader	Trading Desk	Invesco Asset Management Ltd	2	20	
Arthur van Hoogstraten	Trading Technology Specialist	Trading Desk	Banque Paribas	15	25	
Clark Simpson	Trader	Trading Desk	None	11	11	

SUMMARY BIOGRAPHIES

MAY 1, 2013

MONDRIAN INVESTMENT PARTNERS

	Name	Position/Title	Former Employer	Years with MIP	Industry Experience
Client Service Professionals	Michael Seymour	Head of Global Client Services (ex-N America), London	SEI Investments	3	26
	Andrew Kiely	Manager, Client Services, London	Bank of Ireland Asset Management	7	16
	Jenny Phimister	Manager, Client Services, London	Hill Samuel Investment Management	12	23
	Paul Ross	President, MIP (U.S.), Inc., Philadelphia	The Travelers Corporation*	19*	31
	Patricia Karolyi	Executive Vice President, MIP (U.S.), Inc., Philadelphia	Blank, Rome, Comisky & McCauley*	23*	23
	James Brecker	Senior Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	None*	13*	13
	Laura Conlon	Senior Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	Morgan Lewis & Bockius, LLP*	15*	15
	James Hill	Senior Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	PNC Equity Advisors*	15*	22
	Justin Richards	Senior Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	None*	13*	13
	Todd Rittenhouse	Senior Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	Chartwell Investment Partners*	13*	22
	Steve Starnes	Senior Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	1838 Investment Advisers*	10*	32
	Peter Riviello	Asst. Vice President, Client Services, MIP (U.S.), Inc., Philadelphia	None*	10*	10

*Prior to joining Mondrian Investment Partners (U.S.), Inc. in September 2004, these individuals worked with Delaware Investments. Delaware Investments was an affiliate of Mondrian Investment Partners Limited prior to the management buy-out and name change of September 2004. The listing for "Former Employer" denotes the individual's employer prior to joining Delaware Investments. The listing for "Years with MIP" includes both years with Delaware Investments and MIP (U.S.), Inc. Todd Rittenhouse rejoined in 2007 after having worked with Delaware Investments from 1992 – 1999.

SENIOR INVESTMENT STAFF AND SENIOR MANAGEMENT

MONDRIAN INVESTMENT PARTNERS

DAVID G. TILLES

EXECUTIVE CHAIRMAN

Mr. Tilles was educated at the Sorbonne, Warwick University and Heidelberg University. Prior to joining Mondrian in 1990 as founding Managing Director & Chief Investment Officer he spent 16 years with Hill Samuel in London, serving in a number of investment capacities. Mr. Tilles was appointed Executive Chairman in November 2007. Mr. Tilles holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

CLIVE A. GILLMORE

CHIEF EXECUTIVE OFFICER & CIO GLOBAL EQUITIES

Mr. Gillmore is a graduate of the University of Warwick and has completed the Investment Management Program at the London Business School. In 1990, Mr. Gillmore joined Mondrian Investment Partners' predecessor organization as a founding member, having previously worked as a senior portfolio manager for Hill Samuel Investment Advisers Ltd., and a portfolio manager at Legal and General Investment Management. He has over twenty-five years' experience analyzing equity markets and securities around the world and has managed client portfolios with a wide range of mandates. Mr. Gillmore is CEO of Mondrian, CIO of Global Equities and he is a member of Mondrian's Equity Strategy Committee and Chairman of the Emerging Markets Strategy Committee (where his research specialization lies).

ELIZABETH A. DESMOND

DIRECTOR, CHIEF INVESTMENT OFFICER INTERNATIONAL EQUITIES

Ms. Desmond is a graduate of Wellesley College and the Masters Program in East Asian Studies at Stanford University. After working for the Japanese government for two years, she began her investment career as a Pacific Basin investment manager with Shearson Lehman Global Asset Management. Prior to joining Mondrian in 1991, she was a Pacific Basin Equity Analyst and senior portfolio manager at Hill Samuel Investment Advisers Ltd. Ms. Desmond is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of the UK.

JOHN KIRK

DEPUTY CHIEF EXECUTIVE OFFICER

Mr. Kirk is a Math graduate from the University of Wales and has an MA in operations research from Lancaster University. Before joining Mondrian in 1998, Mr. Kirk was at Royal Bank of Canada in London, where he was responsible for European and Asian Fixed Income. Mr. Kirk started his career at Ford Motor Company as a member of their operations research group. Mr. Kirk leads our credit research and heads the Global Credit Valuation Committee.

NIGEL G. MAY

DEPUTY CHIEF EXECUTIVE OFFICER

Mr. May is a graduate of Sidney Sussex College, Cambridge University, where he completed his Masters in Engineering. He joined Mondrian in 1991. Having led the European Team's research effort since 1995, he is now on the investment committee for several of Mondrian's investment products. Mr. May was formerly a senior portfolio manager and analyst with Hill Samuel Investment Advisers Ltd., having joined the Hill Samuel Investment Group in 1986. Mr. May holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

CHRISTOPHER A. MOTH

DIRECTOR, CHIEF INVESTMENT OFFICER GLOBAL FIXED INCOME & CURRENCY

Mr. Moth is an Actuarial graduate from The City University in London, and was later awarded the Certificate in Finance & Investment from the London Institute of Actuaries. He joined Mondrian in 1992, after working for the GRE insurance company where he was responsible for quantitative models and projections. He has made key contributions to the development of Mondrian's fixed income product, and was primarily responsible for the structure of the company's in-house systems to control and facilitate the investment process. Mr. Moth chairs the Global Fixed Income and Currency Committee meeting.

HAMISH O. PARKER

DIRECTOR

Mr. Parker has a degree from St. Johns College, Oxford. He began his investment career in 1981 as a portfolio manager for the Kuwait Investment Office, London, before joining J. Rothschild Holdings. Prior to joining Mondrian in 1990, he was with Hill Samuel Investment Advisers Ltd, which he joined in 1986 as a European Analyst and senior portfolio manager.

JOHN EMBERSON

DIRECTOR, CHIEF OPERATING OFFICER

Mr. Emberson has responsibility for all Mondrian's operating functions and heads a number of Mondrian's committees including business risk and projects oversight. He joined Mondrian in 1991 and has over twenty years' experience in the financial sector. Mr. Emberson is a member of the Institute of Chartered Accountants in England and Wales and has completed an MBA. Prior to joining Mondrian he was head of finance and planning at Touche, Remnant & Co. after beginning his career with Dearden Farrow.

PAUL M. ROSS

PRESIDENT

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Ross is a graduate of the University of Connecticut, where he earned an MBA, and Western Connecticut State University, where he earned a Bachelor of Business Administration degree. Prior to joining Mondrian's former affiliate in 1993, he spent eleven years in the institutional client service, consultant relations and business development group at The Travelers Corporation. In his present position, he is responsible for managing Mondrian's North American client service, consultant relations and marketing activities. Mr. Ross is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of Philadelphia.

PATRICIA M. KAROLYI

EXECUTIVE VICE PRESIDENT

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Ms. Karolyi is a graduate of Villanova University, where she earned an MBA, and Temple University, where she earned a Bachelor of Science degree. She began her investment career at Mondrian's former affiliate in 1989, where she had increasing roles in the marketing and client service areas. In her present position, she is responsible for client service, marketing and consultant relations. Ms. Karolyi is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of Philadelphia.

INVESTMENT STAFF

MONDRIAN INVESTMENT PARTNERS

BRENDAN BAKER

SENIOR PORTFOLIO MANAGER

Mr. Baker has a BSc in History and an MSc in Economics from the University of London. He commenced his career as a financial journalist covering UK markets.

On completing his MSc, Mr. Baker moved to Lombard Street Research, a leading UK economics consultancy.

As a Senior Economist there, he worked on global economic analysis and financial markets strategy. He joined Mondrian in 2001. Mr Baker is a senior portfolio manager with the US Equities Team and is a member of the Global Equity Strategy Committee.

JOANNA BATES

SENIOR PORTFOLIO MANAGER

Ms. Bates is a graduate of London University. She joined Mondrian's Fixed Income Team in 1997, before which she was Associate Director of Fixed Interest at Hill Samuel Investment Management. She has also worked for Fidelity International and Save & Prosper as a fund manager and analyst for global bond markets. At Mondrian, Ms. Bates is a senior portfolio manager with many client relationships including those based in Japan. Her research specialities are emerging market currencies and debt. Ms. Bates holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

NIGEL A. BLISS

SENIOR PORTFOLIO MANAGER

Mr. Bliss has a BA (Hons) Degree in Geography from the University of Manchester. He holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK. He commenced his career at Cazenove & Co. and moved to join Mondrian in 1995. Mr. Bliss is a senior portfolio manager in the Non-US Equity Team. He has had significant experience analyzing securities in the Pacific Basin region and in the global materials, utilities, property and industrial sectors. Mr. Bliss is a member of Mondrian's Non-US Equity Strategy Committee.

GINNY CHONG

SENIOR PORTFOLIO MANAGER

Prior to joining Mondrian in 2000, Ms. Chong worked for PricewaterhouseCoopers in Vancouver, within the Corporate Finance and Investment Banking Division where she qualified as a Canadian Chartered Accountant. Ms. Chong has a degree in Commerce from the University of British Columbia, Vancouver. Ms. Chong is presently a senior portfolio manager within the Emerging Markets Team. Ms. Chong is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

GRAEME R. COLL

SENIOR PORTFOLIO MANAGER

Mr. Coll is a graduate of the University of the Witwatersrand, South Africa where he completed his Bachelor of Commerce with Honours. Prior to joining Mondrian in 2005, Mr. Coll was an Assistant Director at Ernst & Young Corporate Finance in London. Previously, he was employed at Deloitte & Touche in both New York and Johannesburg in their Financial Advisory Services Practice. Mr. Coll is a senior portfolio manager within the Emerging Markets Small Capitalisation Team. Mr. Coll is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

FRANCES M. CUTHBERT

SENIOR PORTFOLIO MANAGER

Ms. Cuthbert is a graduate of the University of Edinburgh where she completed a MA (Hons) degree in Economics. She commenced her career at Deutsche Bank before joining Mondrian in 1999 with responsibilities in the International Small Capitalisation Team. Ms. Cuthbert is a CFA Charterholder, a member of the CFA Institute and a member of the CFA Society of the UK.

AILEEN GAN

SENIOR PORTFOLIO MANAGER

Ms. Gan is a Commerce graduate from the University of Melbourne, Australia and holds a Masters of Commerce degree from the University of New South Wales, Australia. Prior to joining Mondrian in 2005, she was a consultant at Accenture, specialising in the financial services sector, firstly in Singapore and subsequently in the UK. Ms. Gan is a CPA (Australia) and CFA Charterholder. She is also a member of the CPA Australia, the CFA Institute and the CFA Society of the UK.

GREGORY J.P. HALTON

SENIOR PORTFOLIO MANAGER

Having graduated from St Catherine's College, Oxford in 2000 with a MEng (Hons) in Engineering Science, Mr. Halton worked in the global equity division of Deutsche Asset Management before joining Mondrian in 2004. Mr. Halton is a senior portfolio manager within the Emerging Markets Team. Mr. Halton is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

ORMALA KRISHNAN

SENIOR PORTFOLIO MANAGER

Dr. Krishnan heads Mondrian's International and Emerging Markets Small Capitalisation Teams. Dr. Krishnan started her investment career in 1993 with Singapore based Koenerman Capital Management. Prior to joining Mondrian in 2000 as a portfolio manager, Dr. Krishnan was an investment consultant with William M Mercer. Upon completion of her BSc in Pure and Applied Mathematics from the National University of Singapore, Dr. Krishnan achieved her MSc in Actuarial Science from City University, London. In 2006, Dr. Krishnan completed her Doctoral program in Investment and Finance from Sir John Cass Business School, City of London. Her doctoral thesis was on 'Value versus Growth in the Asian Equity Markets'.

RUSSEL J. MACKIE

SENIOR PORTFOLIO MANAGER

A graduate, with Honours in European Studies and French from the University of Dundee and the Université de Grenoble, France. Mr. Mackie joined Mondrian in 1997, previously he was an Investment Analyst for Hodgson Martin Ltd. Prior to that he worked for the European Commission in Brussels. Mr. Mackie holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK. Mr. Mackie is a senior portfolio manager in the Non-US Equity Team. He has had significant experience in analyzing securities in Europe and in global consumer sectors. Mr. Mackie is a member of Mondrian's Non-US Equity Strategy Committee.

ANDREW MILLER

SENIOR PORTFOLIO MANAGER

Mr. Miller is a graduate of the University of Birmingham. Prior to joining Mondrian in 2000, he worked in the Investment Management department of PricewaterhouseCoopers, where he was responsible for the analysis and audit of various investment vehicles. Mr. Miller is presently a senior portfolio manager within the Emerging Markets Team. Mr. Miller holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

AIDAN NICHOLSON

SENIOR PORTFOLIO MANAGER

Having graduated from Pembroke College, Oxford with a Masters in Engineering, Economics & Management, Mr. Nicholson worked at Cazenove & Co. in the UK Smaller Companies Team, before moving to Mondrian in 2003 where he is currently a senior portfolio manager on the International Small Capitalisation Team. Mr. Nicholson is a CFA Charterholder, a member of the CFA Institute and a member of the CFA Society of the UK.

SOLOMON O. PETERS

SENIOR PORTFOLIO MANAGER

Mr. Peters joined Mondrian's Fixed Income Team in 2000. He has a BA in Economics from King's College, Cambridge and an MSc in Economics and Econometrics from Southampton University. After a period with the UK Government Statistical Service, he moved to research consulting at the Centre for Economics and Business Research (CEBR), specializing in econometric forecasting. Mr. Peters has helped to further develop Mondrian's proprietary inflation forecasting models, and also supplies quantitative support to our credit research. Mr. Peters is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

DANIEL G. PHILPS

SENIOR PORTFOLIO MANAGER

Mr. Philps joined Mondrian in 1998. He has a BSc from London University (King's College). Before joining Mondrian, Mr. Philps was a consultant to the derivatives businesses of Dresdner KB, Bankers Trust and Barclays Capital where he specialized in building pricing, risk and value models. At Mondrian he is a senior portfolio manager and had a lead role in building our in-house proprietary credit analysis system. As a member of the Global Fixed Income and Currency Committee Mr. Philps has primary responsibility for credit research. Mr. Philps is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

ANDREW R. PORTER

SENIOR PORTFOLIO MANAGER

Mr. Porter studied at Magdalen College, Oxford University graduating with a first class degree in Chemistry. He also has an MSc in Economics from the University of London. Mr. Porter started his career as a consultant and trainee chartered accountant at Deloitte and Touche. Prior to joining Mondrian in 2003, Mr. Porter worked at Frank Russell, part of the team managing the multi-manager funds in the Asia Pacific region. Mr. Porter is a CFA Charterholder, a member of the CFA Institute and a member of the CFA Society of the UK.

INVESTMENT STAFF (CONTINUED)

MONDRIAN INVESTMENT PARTNERS

BORIS VESELINOVICH

SENIOR PORTFOLIO MANAGER

Mr. Veselinovich is an Economics and Quantitative Finance graduate from the University of Western Australia and holds an MSc in Mathematical Trading and Finance from CASS Business School, London. He commenced his career as an Investment Research Analyst at Challenger International in Australia covering the local equity market. He joined Mondrian in 2001 and has since worked on global equity coverage as well as new product development initiatives. Mr. Veselinovich has the IMC designation, the Securities and Investment Institute Certificate in Derivatives and is a member of the CFA Institute and CFA Society of the UK.

DAVID J. WAKEFIELD

SENIOR PORTFOLIO MANAGER

Mr. Wakefield joined Mondrian in 2001. He took both a BSc and an MSc in Economics from the University of Warwick. Prior to joining Mondrian, Mr. Wakefield was an economic adviser to the Monetary Policy Committee of the Bank of England, and formerly an economic adviser to the UK Treasury Department, specializing in inflation forecasting in both positions. At Mondrian, he is a senior portfolio manager and an active member of the Global Fixed Income and Currency Committee, where he utilizes his extensive inflation forecasting experience. Mr. Wakefield is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

MATT DAY

PORTFOLIO MANAGER

Mr. Day joined the Mondrian Global Fixed Income & Currency Team in 2007. Prior to this, he worked at Buck Consultants in their investment and actuarial divisions, specialising in the development of stochastic asset and liability models for UK pension schemes. At Mondrian, Mr. Day is a quantitative analyst responsible for the continuing development of the company's proprietary inflation and mortgage backed securities models. Mr. Day has a BSc in Economics with Actuarial Studies from the University of Southampton and is a Fellow of the Institute of Actuaries.

STEVEN DUTAUT

PORTFOLIO MANAGER

Mr. Dutaut holds a BA in Business Finance from the University of Durham and a M.Litt. in Management, Economics and International Relations from the University of St. Andrews. After completing his postgraduate degree, Mr. Dutaut worked in Bank of America's investment banking division for one year, followed by two years as an investment analyst for Baillie Gifford. Mr. Dutaut joined Mondrian as an Assistant portfolio manager in the Non-US Equity Team in 2007. Mr. Dutaut is a CFA Charterholder, a member of the CFA Institute and a member of the CFA Society of the UK.

KEVIN FENWICK

PORTFOLIO MANAGER

Mr. Fenwick is an Economics graduate from the University of Cambridge and also holds a Masters degree in Computer Science from the University of Adelaide, Australia. He joined Mondrian in 2008, working in the Performance and Attribution Department, and became a member of the Global Fixed Income and Currency team in 2010. Directly before joining Mondrian, Mr. Fenwick worked for Wilshire Associates in their portfolio analytics division. He started his career at Touche Ross & Co as an auditor and forensic accountant and, for a number of years, was a Professor at the City University of New York, where he taught algorithms and logic. Mr. Fenwick is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

BHAVIN MANEK

PORTFOLIO MANAGER

Mr. Manek is a graduate of the London School of Economics where he achieved a First Class Honours degree in Economics. Mr. Manek started his career at Mercer Investment Consulting where he worked for 3 years as an Investment Analyst, before joining Mondrian in 2006. Mr. Manek is a portfolio manager on the International Small Capitalisation Team. Mr. Manek is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

KIM NGUYEN

PORTFOLIO MANAGER

Ms. Nguyen is a graduate of the University of New South Wales where she completed her Bachelor of Laws and Bachelor of Commerce (Finance). On graduation in 2000, Ms. Nguyen joined Credit Suisse as a Legal and Compliance Analyst. Ms. Nguyen has also worked with Citigroup and Invesco before joining Mondrian in 2004 where she had been working as a Compliance Executive before accepting a position as assistant portfolio manager with the North American Team in 2005. Ms. Nguyen is a CFA Charterholder and a member of the CFA Institute and the CFA Society of the UK.

MELISSA J. A. PLATT

PORTFOLIO MANAGER

Ms. Platt is an Economics and Finance graduate of Massey University, New Zealand. She started her career as a consultant at KPMG Corporate Finance. She then moved to FundSource Research for 3 years as an Investment Analyst and later as Research Manager. Ms. Platt joined Mondrian in 2004 and is a portfolio manager in the Non-US Equity Team. Ms. Platt is a CFA Charterholder, a member of the CFA Institute and a member of the CFA Society of the UK.

ALEX SIMCOX

PORTFOLIO MANAGER

Mr. Simcox graduated from Robinson College, Cambridge with an MA in History. He worked at Ernst and Young LLP for four years, where he qualified as a Chartered Accountant, before joining the Non-US Equity Team at Mondrian in 2007. Mr. Simcox is a CFA Charterholder, and a member of the CFA Institute, the CFA Society of the UK, and the Institute of Chartered Accountants of Scotland.

BILGIN SOYLU

PORTFOLIO MANAGER

Dr. Soylu holds a Science/Engineering PhD from Cambridge University. Following nine years in scientific research and project management at Cambridge University and having gained an MBA, he moved from the academic world to join a consultancy specialising in Telecommunications. Dr. Soylu's most recent position before joining Mondrian in 2000, was as senior telecoms/technology analyst for Yapi Kredi Bank, the largest private bank in Turkey. Dr. Soylu is a portfolio manager in the Non-US Equity Team. Dr. Soylu is a member of the CFA Institute and a member of the CFA Society of the UK.

JONATHAN SPREAD

PORTFOLIO MANAGER

Mr. Spread graduated from Durham University in 1999 with a BSc in Computer Science and joined Morley Fund Management (Aviva Investors) as part of their Pan-European research team. He joined Mondrian in 2005 and focuses on global equity portfolios. Mr. Spread is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

PAUL THOMPSON

PORTFOLIO MANAGER

Mr. Thompson graduated from St. Peter's College, Oxford University, with a BA (Hons) degree in Modern History and Politics in 2006. He spent three years in the Financial Services practice of Deloitte LLP, where he qualified as a Chartered Accountant, before joining the Mondrian US Equity Team in 2009. Mr. Thompson is a CFA Charterholder and is a member of the CFA Institute, the CFA Society of the UK and the Institute of Chartered Accountants in England and Wales.

AMICE TIERNAN

PORTFOLIO MANAGER

Ms. Tiernan graduated from the University of Bristol in 1996 with a BSc in Mathematics. After completing her degree, she worked in the Financial Services department at PricewaterhouseCoopers for 6 years where she qualified as a Chartered Accountant. She then joined ING as an internal auditor, before moving to Mondrian in 2005. Ms. Tiernan is a portfolio manager in the North American Team. Ms. Tiernan is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

DINASH V. LAKHANI

SENIOR RESEARCH ANALYST

Mr. Lakhani holds a joint Honours degree in Chemical Engineering and Management Sciences from Imperial College, London and an MBA from Manchester Business School. After completing his degree in 1983, he joined Fleming Investment Management in London, where he gained wide ranging experience in fund management. Prior to joining Mondrian, in 2000, Mr. Lakhani worked as a Senior Investment Analyst at the Abu Dhabi Investment Authority in Abu Dhabi covering the energy and utility sectors across Europe. Mr. Lakhani is a Senior Research Analyst in the Non-US Equity Team.

INVESTMENT STAFF (CONTINUED)

MONDRIAN INVESTMENT PARTNERS

ALASTAIR CORNWELL

ASSISTANT PORTFOLIO MANAGER

Mr. Cornwell graduated from Imperial College, London with a BSc (Hons) degree in Physics. He started his career at Mondrian as an Investment Administrator in 2008, subsequently joining the International Small Capitalisation Team in 2010. Mr. Cornwell is a CFA Charterholder, a member of the CFA Institute and a member of the CFA Society of the UK.

JAMES FRANCKEN

ASSISTANT PORTFOLIO MANAGER

Mr. Francken is a graduate of Exeter College, Oxford University and Emmanuel College, Cambridge University and holds an MBA in Finance from London Business School. Prior to joining Mondrian in 2009, he worked for Investec Asset Management. Mr. Francken is an assistant portfolio manager in the North American Team.

DAN KELLY

ASSISTANT PORTFOLIO MANAGER

Mr. Kelly graduated from the University of Leeds in 2004, with a BSc (Hons) degree in Mathematics with Philosophy. He subsequently worked in the Financial Services department of Deloitte LLP for three years, where he qualified as a Chartered Accountant. He joined the Mondrian Emerging Markets Equity Team in 2009. Mr. Kelly is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

LUIGI LI CALZI

ASSISTANT PORTFOLIO MANAGER

Mr. Li Calzi holds an MSc in Physics from the University College, London, and an MSc in Quantitative Finance from the Sir John Cass Business School, London. Prior to joining Mondrian in 2008 he worked for Matherhorn Investment Management, a London based fund specialising in emerging markets.

SARAH MITCHELL

ASSISTANT PORTFOLIO MANAGER

Ms. Mitchell joined the Mondrian Global Fixed Income & Currency team in 2011. She has a BSc in Management from UMIST, University of Manchester, and is a qualified Chartered Accountant. Ms. Mitchell started her career at PricewaterhouseCoopers where she was involved in analysing the financial statements of large industrial clients. Prior to joining Mondrian, she worked at the Royal Bank of Scotland as a senior credit analyst, covering mid and large cap UK corporates. Ms. Mitchell is a CFA Charterholder and is a member of the CFA Institute and the CFA Society of the UK.

DAN BRONSTEIN

RESEARCH ANALYST

Mr. Bronstein graduated from the University of Bath with a BSc (Hons) degree in Economics. During his degree course, he spent a year working for Goldman Sachs Asset Management in the Operations division. He joined Mondrian in 2010 as an Investment Administrator, and subsequently worked for Mondrian's Performance team before joining the Emerging Markets team in September 2011. Mr. Bronstein has earned the IMC designation, and is a candidate for Level III of the CFA Program.

BENJAMIN HALL

RESEARCH ANALYST

Mr. Hall is a graduate of Cardiff University where he achieved a First Class Honours degree in Economics. He started his career at Mondrian as an Investment Administrator in 2010, subsequently joining the Emerging Markets Small Capitalisation Team in 2012. Mr. Hall has earned the IMC designation, and is a candidate for Level III of the CFA Program.

BRIAN HEYWOOD

IMPLEMENTATION MANAGER

Mr. Heywood is a graduate of the University of Bournemouth, where he achieved a BA (Hons) degree in Financial Services. He commenced his career at Mercury Asset Management. Mr. Heywood joined the Investment Administration department of Mondrian in 1996, and three years later was promoted to the investment staff. Mr. Heywood holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

ALAN FEDARB

PORTFOLIO MANAGERS' ASSISTANT

Prior to joining Mondrian, Mr. Fedarb spent seven years at Gartmore Investment Management. He joined the Investment Administration department of Mondrian in 1997, and was promoted to the investment staff in 2000. Mr. Fedarb has the IMC designation.

VINIT SHAH

PORTFOLIO MANAGERS' ASSISTANT

Mr. Shah graduated from Leicester University in 1997 with a BSc (Hons) in Mathematics and Computer Science. Prior to joining Mondrian in 2005 Mr. Shah worked for State Street Bank for 5 years in the Client service department. Mr. Shah has the IMC designation and is a CFA candidate.

STUART THOMAS

PORTFOLIO MANAGERS' ASSISTANT

Mr. Thomas graduated from Leicester University in 1997 with a BA (Hons) in Business Economics. Prior to joining Mondrian in 2008 Mr. Thomas worked for ABN AMRO Asset Management for 2 years in the trade reconciliations department. Mr. Thomas has the IMC designation and is a CFA candidate.

MATHEW WOOLAGHAN

PORTFOLIO MANAGERS' ASSISTANT

Mr. Woolaghan graduated from Liverpool University in 2005 with a BA (Hons) in Politics. Prior to joining Mondrian in 2008 Mr. Woolaghan worked for the Bank of New York as an Investment Accountant. Mr. Woolaghan has the IMC designation and is a candidate for Level III of the CFA Program.

NATALIE STONE

SENIOR TRADER

Ms. Stone holds a BSc (Hons) degree in Maths and Physics from Leeds University. She started her career in investment administration at Pictet Asset Management. Ms. Stone then moved to WestLB Asset Management as a dealer and progressed to Head of Dealing, trading all instruments. After nearly 8 years at WestAM, she joined Mondrian in 2004. Ms. Stone has the IMC designation.

IAN TAYLOR

SENIOR TRADER

Prior to joining Mondrian as a Senior Trader in 2010, Mr. Taylor worked at Invesco Asset Management Ltd. since 1995. The first seven years of his career there were spent as a Treasury Dealer specialising in cash management and foreign exchange. A further eight years were spent as a Fixed Income Dealer, and later Senior Fixed Income Dealer, trading a full spectrum of fixed income products. During his tenure at Invesco, Mr. Taylor completed the Investment Administration Qualification and the Investment Management Certificate.

ARTHUR VAN

HOOGSTRATEN

TRADING TECHNOLOGY SPECIALIST

Mr. van Hoogstraten has a degree in Electronics from the HTS Rens & Rens in Hilversum, Netherlands and holds the CFA UK Level 3 Certificate in Investment Management. He has over 22 years experience in Information Technology and before joining Mondrian in 1998, he worked for Siemens, ABN Amro and Banque Paribas in systems development and project management roles.

CLARK SIMPSON

TRADER

Mr. Simpson holds a BA Honours degree in Sociology from the University of Essex. Prior to joining Mondrian's Trading Team in June 2010 Mr. Simpson spent seven years as a Compliance Executive at Mondrian. Mr. Simpson has successfully completed the Investment Administration Qualification and the Investment Management Certificate. Mr. Simpson is a Member of the UK Chartered Institute for Securities & Investment and holds both the diploma in Investment Compliance and the full Securities Institute diploma.

CLIENT SERVICE STAFF – LONDON & PHILADELPHIA

MONDRIAN INVESTMENT PARTNERS

LONDON:

MICHAEL SEYMOUR

HEAD OF GLOBAL CLIENT SERVICES
(EX-N AMERICA)

Mr. Seymour has a BSc in Mechanical Engineering from Cardiff University. Prior to joining Mondrian in early 2010, he was working as a Client Investment Strategist. He has over twenty years in the industry mostly with Deutsche Asset Management and Fidelity. His experience covers both client service and work as an investment specialist in global and emerging market equities. At Mondrian, Mr. Seymour is part of the client service team. He holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

ANDREW KIELY

MANAGER, CLIENT SERVICES

Mr. Kiely has a BA in Economics from University College Dublin and an MSc in Investment & Treasury from Dublin City University. Prior to joining Mondrian in 2006, Mr. Kiely worked for 6 years in client services and marketing for Bank of Ireland Asset Management in the United States. Before this, Mr. Kiely was a junior equity analyst with ABN Amro in Dublin. In his present position, his responsibilities include UK based Consultant liaison and client servicing. Mr. Kiely holds the ASIP designation and is a member of the CFA Institute and the CFA Society of the UK.

JENNY PHIMISTER

MANAGER, CLIENT SERVICES

Ms. Phimister is a graduate of The Open University, and is a holder of the Investment Management Certificate. She joined Mondrian's Client Service Team in 2000 from Hill Samuel Investment Management, where she was a Client Service Manager. Ms. Phimister has many years experience in liaising with international clients particularly in Japan and the Middle East.

PHILADELPHIA:

PAUL M. ROSS

PRESIDENT

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Ross is a graduate of the University of Connecticut, where he earned an MBA, and Western Connecticut State University, where he earned a Bachelor of Business Administration degree. Prior to joining Mondrian's former affiliate in 1993, he spent eleven years in the institutional client service, consultant relations and business development group at The Travelers Corporation. In his present position, he is responsible for managing Mondrian's North American client service, consultant relations and marketing activities. Mr. Ross is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of Philadelphia.

PATRICIA M. KAROLYI

EXECUTIVE VICE PRESIDENT

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Ms. Karolyi is a graduate of Villanova University, where she earned an MBA, and Temple University, where she earned a Bachelor of Science degree. She began her investment career at Mondrian's former affiliate in 1989, where she had increasing roles in the marketing and client service areas. In her present position, she is responsible for client service, consultant relations, and marketing. Ms. Karolyi is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of Philadelphia.

JAMES F. BRECKER III

SENIOR VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Brecker is a Cum Laude graduate of the University of Richmond, where he earned a Bachelor of Science degree in Business Administration. He joined Mondrian's former US affiliate in 2000 and is responsible for client service, consultant relations and marketing, focusing primarily on emerging markets equity strategies. Mr. Brecker is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of Philadelphia.

LAURA A. CONLON

SENIOR VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Ms. Conlon is a Summa Cum Laude graduate of Rosemont College where she earned a Bachelor of Science degree in Business Administration. Ms. Conlon worked at Morgan, Lewis & Bockius, LLP before joining Mondrian's former affiliate in 1997. In her present role, she is responsible for client service, consultant relations, and marketing, focusing primarily on small cap equity strategies. Ms. Conlon is a CFA Charterholder, and a member of the CFA Institute and the CFA Society of Philadelphia.

JAMES H. HILL

SENIOR VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Hill is a graduate of Saint Joseph's University, where he earned a Bachelor of Arts degree in Political Science. He has held positions in marketing and client services for PNC Equity Advisors and Provident Capital Management. Prior to joining Mondrian, he was an Investment Specialist for Growth Equities at Mondrian's former affiliate. In his present position, Mr. Hill is responsible for client service, consultant relations, and marketing.

JUSTIN A. RICHARDS

SENIOR VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Richards is a graduate of Temple University, where he earned an MBA with Honors, and a Cum Laude graduate of Gettysburg College, where he earned a Bachelor of Arts degree in Economics and Japanese Studies. Mr. Richards worked for the Japanese government as a participant in the Japan Exchange Teaching Programme, before joining Mondrian's former affiliate in 2000, where he worked in various client service and marketing roles. In his present position, Mr. Richards is responsible for client service, consultant relations, and marketing, focusing primarily on fixed income strategies.

E. TODD RITTENHOUSE

SENIOR VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Rittenhouse is a graduate of LaSalle University where he earned a Bachelor of Science degree in Business Administration. He worked at Mondrian's former affiliate from 1992 to 1999, where he was a Vice President in the Client Services Group. Prior to joining Mondrian, he was a Partner in the Client Services Group at Chartwell Investment Partners, where he worked for eight years. In his present position, Mr. Rittenhouse is responsible for client service, consultant relations, and marketing.

STEPHEN W. STARNES

SENIOR VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Starnes is a graduate of Hamilton College, where he earned Bachelor of Arts degree in Sociology. He began his investment career at Bache, Halsey, Stuart, Shields (now Wells Fargo) in 1983. After spending 10 years at 1838 Investment Advisors, LLC as a Partner and Director, he joined Mondrian's former affiliate in 2002 as head of Wealth Management and Managed Accounts. Mr. Starnes was seconded in August 2006 to Mondrian's London office where he acted as Senior Manager for European and Australasian clients. In March 2009, he returned to the Mondrian US office. In addition to work with the institutional client base, he acts as the Investment Specialist for International Equity ADR portfolio.

PETER J. RIVIELLO

ASSISTANT VICE PRESIDENT, CLIENT SERVICES

MONDRIAN INVESTMENT PARTNERS (U.S.), INC.

Mr. Riviello is a graduate of Pennsylvania State University, where he earned a Bachelor of Science degree in Finance, and is currently pursuing an MBA in Finance from Drexel University. Mr. Riviello joined Mondrian's former affiliate in 2003, and is responsible for client service, consultant relations, and marketing.

OPERATIONS SENIOR STAFF

MONDRIAN INVESTMENT PARTNERS

JOHN L. BARRETT

CHIEF COMPLIANCE OFFICER

Mr. Barrett is a Fellow of the UK Chartered Institute for Securities & Investment and holds the Securities Institute diploma. Prior to joining Mondrian in 2001, he spent 8 years with Newton Investment Management as Deputy Head of Compliance. Mr. Barrett began his financial services career in 1988 at the Investment Management Regulatory Organisation (IMRO), a UK regulatory body which now forms part of the Financial Services Authority (FSA). At IMRO he held a variety of positions including Team Leader with responsibilities for carrying out regulatory examinations of regulated firms.

PAUL J. FOURNEL

CHIEF TECHNOLOGY OFFICER

Mr. Fournel joined Mondrian in 1995 with 9 years experience within offshore investment management companies, latterly with S.G.Warburg KAG in Frankfurt. He was initially recruited as Investment Administration Manager, which at that time included responsibility for systems. As the Company has expanded, Mr. Fournel has concentrated on the Information Technology development and is now responsible for all IT Management and Projects at Mondrian.

JANE S. GOSS

GENERAL COUNSEL

Ms. Goss is a graduate of Tufts University and the American University - Washington College of Law. Prior to joining Mondrian in 2004, she was the general counsel and compliance officer for GMO Europe Ltd for five years. She began her career in London with Morgan Stanley Asset Management Limited where she was employed for 11 years, latterly as an executive director and head of the legal and compliance department with responsibilities for Europe, Japan, Australia and the Far East.

WARREN D. SHIRVELL

DEPUTY CHIEF OPERATING OFFICER

Mr. Shirvell graduated from Exeter University in 1989 with a Honours degree in Applied Mathematics. He joined Arthur Andersen's Financial Markets Group, working in audit practice but also performing a large number of investment and operations consulting assignments. Before joining Mondrian in 2001, he undertook a number of short term senior consultancy roles at Invesco Asset Management, Hill Samuel Investment Advisers and BNP Paribas Asset Management. At Mondrian, he has responsibility for Operations, Finance, Performance and IT, focusing on improving operational effectiveness and internal control. Mr. Shirvell is an Associate Member of the Institute of Chartered Accountants (ACA), a Fellow of the UK Chartered Institute for Securities & Investment and holds the Securities Institute Diploma.

IAN N. COOKE

CHIEF ACCOUNTANT

Mr. Cooke's first degree was in Electronic Engineering from the University of Surrey. He trained to be a Chartered Accountant at KPMG. After qualification, he worked at National Westminster Bank for four years in the Head Office as an accountant. In 1994, he transferred to NatWest Markets, a newly formed subsidiary, to establish a management reporting function. During this period he undertook a part time MBA at Sir John Cass Business School, City of London. Mr. Cooke joined Ernst & Young in 1997 as a management consultant specialising in finance process improvement and shared service centres. He became a freelance consultant in 2001. In 2004 he implemented a new finance system at Mondrian and later joined the finance function as Chief Accountant.

JAMIE A. SHEARER

INTERNAL AUDIT MANAGER

Ms. Shearer holds a Master of Professional Accounting degree from the University of Saskatchewan and a Bachelor of Arts degree from the University of British Columbia, both in Canada. She subsequently qualified as a Chartered Accountant with KPMG, working in the Vancouver, Canada and London, UK markets. Prior to joining Mondrian in 2010, she worked in Northern Trust's Audit Services department where she led internal audits in their London, Channel Islands, Luxembourg, and Ireland jurisdictions. She also holds a Securities & Investment Institute Level 3 Certificate in Investment Administration Qualification with a focus on Operational Risk and a Level 4 Investment Management Certificate. She passed Level I of the CFA and is currently a Level II Candidate.

IMPORTANT INFORMATION

MONDRIAN INVESTMENT PARTNERS

TERM/ISSUE	DESCRIPTION/DISCLOSURE
Benchmark:	<p>Mondrian benchmarks the International Small Cap Equity product against the MSCI World Ex-US Small Cap Index and the MSCI EAFE SmallCap Index. Surveys conducted by investment consultants show that these are the most commonly used small cap indices. Both these indices include stocks which are ranked at approximately the bottom 15th percentile by available market capitalization in each local market index.</p> <p>Neither MSCI nor any other party involved in or related to compiling, computing or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI data is permitted without MSCI's express written consent.</p>
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Current Views:	<p>Views expressed were current as of the date indicated, are subject to change, and may not reflect current views. Views should not be considered a recommendation to buy, hold or sell any security and should not be relied on as research or investment advice.</p>
Forecast "Real" Annualized Market Returns:	<p>These forecast "real" annualized market returns are used solely as a basis for making judgments about country allocation weightings and are not intended to be indications of expected returns.</p>
Forward-Looking Statements:	<p>This document may include forward-looking statements. All statements other than statements of historical facts are forward-looking statements (including words such as "believe," "estimate," "anticipate," "may," "will," "should," "expect"). Although we believe that the expectations reflected in such forward-looking statements are reasonable, we can give no assurance that such expectations will prove to be correct. Various factors could cause actual results or performance to differ materially from those reflected in such forward-looking statements.</p>
Performance Results:	<p>Performance provided is that of the Mondrian International Small Cap Equity Composite. These performance results do not reflect deduction of investment advisory and other fees and are net of transaction costs and withholding tax. Investment returns will be reduced accordingly. For example, if a 1.00% advisory fee were deducted quarterly (0.25% each quarter) and your annual return was 10% (approximately 2.411% each quarter) before deduction of advisory fees, the deduction of advisory fees would result in an annualized return of approximately 8.904%. Mondrian's investment advisory fees are described in Part II of its Form ADV. A representative US dollar fee schedule for institutional accounts is provided below, although it is expected that from time to time the fee charged will differ from the below schedule depending on the country in which the client is located and the nature, circumstances and requirements of individual clients. The fees will be charged as follows: the first US\$50m at 0.85%; the next US\$50m at 0.70% and amounts thereafter at 0.65%. New accounts are typically subject to a minimum account size of US\$100 million (or fees equivalent thereto).</p> <p>Unless otherwise noted, all returns are in US Dollar.</p>
Purchasing Power Parity Valuations:	<p>Using proprietary Mondrian models. Further information on these models can be provided on request.</p>
Universe Information:	<p>The information provided in the standard deviation chart is from Callan Associates.</p>
US Consumer Price Index:	<p>Data provided through Datastream.</p>

INTERNATIONAL SMALL CAP EQUITY COMPOSITE PERFORMANCE

APRIL 30, 2013

MONDRIAN INVESTMENT PARTNERS

Period	Mondrian (Composite) %	MSCI World Ex-US Small Cap %	MSCI EAFE Small Cap %
1998	7.2	4.3	5.4
1999	25.5	18.4	17.7
2000	-1.2	-8.8	-7.6
2001	-4.8	-10.7	-12.5
2002	-8.6	-7.4	-7.8
2003	51.4	61.8	61.3
2004	28.9	29.4	30.8
2005	15.6	25.0	26.2
2006	37.2	19.5	19.3
2007	12.6	3.3	1.4
2008	-43.3	-48.0	-47.0
2009	57.8	50.8	46.8
2010	31.0	24.5	22.0
Quarter 1, 2011	3.2	3.3	3.0
Quarter 2, 2011	5.2	-0.2	0.8
Quarter 3, 2011	-17.8	-18.9	-18.6
Quarter 4, 2011	3.0	0.7	-0.6
2011	-8.0	-15.8	-15.9
Quarter 1, 2012	13.9	13.6	14.9
Quarter 2, 2012	-4.9	-9.2	-8.6
Quarter 3, 2012	9.0	8.6	7.9
Quarter 4, 2012	6.5	4.8	6.0
2012	25.7	17.5	20.0
Quarter 1, 2013	4.9	7.2	8.4
April	1.7	2.9	3.6
1 Year	16.1	14.7	17.9
3 Years (annualized)	13.9	8.1	9.1
5 Years (annualized)	7.7	2.1	2.3
7 Years (annualized)	9.4	1.8	1.7
10 Years (annualized)	16.8	12.5	12.6
15 Years (annualized)	11.3	6.9	6.9
Composite Inception January 1, 1998 (cumulative)	482.0	220.3	220.6
Composite Inception January 1, 1998 (annualized)	12.2	7.9	7.9

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index and MSCI for EAFE Small Cap Index

The returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results.

INTERNATIONAL SMALL CAP EQUITY COMPOSITE PERFORMANCE

APRIL 30, 2013

MONDRIAN INVESTMENT PARTNERS

Period		Mondrian (Composite) %	MSCI World Ex-US Small Cap Index %	MSCI EAFE Small Cap Index %	US CPI %
Quarter 1	2008	-4.4	-6.4	-6.2	1.6
Quarter 2	2008	-1.2	-3.6	-4.5	2.5
Quarter 3	2008	-18.6	-24.6	-24.0	0.0
Quarter 4	2008	-26.3	-23.6	-22.1	-3.9
Year	2008	-43.3	-48.0	-47.0	0.1
Quarter 1	2009	-7.0	-8.9	-9.6	1.2
Quarter 2	2009	27.3	34.1	34.3	1.4
Quarter 3	2009	24.1	22.9	22.1	0.2
Quarter 4	2009	7.4	0.5	-1.0	0.0
Year	2009	57.8	50.8	46.8	2.7
Quarter 1	2010	3.2	5.4	4.8	0.7
Quarter 2	2010	-2.4	-11.1	-11.3	0.2
Quarter 3	2010	19.0	17.8	17.5	0.3
Quarter 4	2010	9.4	12.9	11.8	0.3
Year	2010	31.0	24.5	22.0	1.4
Quarter 1	2011	3.2	3.3	3.0	2.0
Quarter 2	2011	5.2	-0.2	0.8	1.0
Quarter 3	2011	-17.8	-18.9	-18.6	0.5
Quarter 4	2011	3.0	0.7	-0.6	-0.5
Year	2011	-8.0	-15.8	-15.9	3.0
Quarter 1	2012	13.9	13.6	14.9	1.6
Quarter 2	2012	-4.9	-9.2	-8.6	0.0
Quarter 3	2012	9.0	8.6	7.9	0.9
Quarter 4	2012	6.5	4.8	6.0	-0.8
Year	2012	25.7	17.5	20.0	1.7
January	2013	3.4	4.8	5.2	0.3
February	2013	1.5	0.4	1.1	0.8
March	2013	0.0	2.0	1.9	0.3
Quarter 1	2013	4.9	7.2	8.4	1.4
April	2013	1.7	2.9	3.6	N/A

Source: Mondrian Investment Partners, MSCI for World Ex-US Small Cap Index and MSCI for EAFE Small Cap Index

The returns presented on this page are presented gross of advisory fees and other expenses associated with managing an investment advisory account. Actual returns will be reduced by such fees and expenses. Please carefully review the disclosure in the appendix for more information concerning these gross performance results including an illustration of the negative effect of advisory fees on performance. Past performance is not a guarantee of future results.

TRANSACTION SUMMARY

ALASKA RETIREMENT MANAGEMENT BOARD

2013

MONDRIAN INVESTMENT PARTNERS

BUY

COUNTRY	STOCK	DATE
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HONG KONG	Haitian International	Q1
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JAPAN	Musahsi Seimitsu	Q1
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TRANSACTION SUMMARY

ALASKA RETIREMENT MANAGEMENT BOARD

2012

MONDRIAN INVESTMENT PARTNERS

BUY

COUNTRY	STOCK	DATE
HONG KONG/CHINA	Emperor Watch & Jewellery	Q1
FRANCE	Euler Hermes	Q2
GERMANY	NORMA Group	Q2
UK	Fenner	Q3
AUSTRALIA	SCA Property Group REIT	Q4

SELL

COUNTRY	STOCK	DATE
GERMANY	Wincor Nixdorf	Q1
HONG KONG/CHINA	Arts Optical	Q2
NETHERLANDS	SBM Offshore	Q3
NEW ZEALAND	Fisher & Paykel Healthcare	Q4
UK	CPP Group	Q4

SECTOR ALLOCATION

MONDRIAN INTERNATIONAL SMALL CAP EQUITY REPRESENTATIVE ACCOUNT

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

	REPRESENTATIVE ACCOUNT	MSCI WORLD EX-US SMALL CAP	RELATIVE
CONSUMER DISCRETIONARY	10.2	17.9	-7.7
Automobile & Components	4.4	1.9	2.5
Consumer Durables & Apparel	0.0	4.0	-4.0
Consumer Services	2.0	3.5	-1.5
Media	1.7	3.8	-2.0
Retailing	2.2	4.8	-2.6
CONSUMER STAPLES	1.7	5.6	-3.9
Food & Staples Retailing	0.0	1.5	-1.5
Food & Beverage & Tobacco	1.7	3.5	-1.7
Household & Personal Products	0.0	0.6	-0.6
ENERGY	3.0	7.6	-4.7
FINANCIALS	10.4	20.4	-10.0
Banks	0.0	4.1	-4.1
Diversified Financials	0.0	4.5	-4.5
Insurance	0.6	1.9	-1.4
Real Estate	9.8	9.9	-0.1
HEALTH CARE	5.1	5.2	-0.1
Health Care Equipment & Services	3.4	2.3	1.1
Pharmaceuticals Biotechnology and Life Sciences	1.7	2.8	-1.1
INDUSTRIALS	36.2	19.9	16.3
Capital Goods	22.2	13.0	9.2
Commercial & Professional Services	7.7	3.7	4.0
Transportation	6.2	3.2	3.1
INFORMATION TECHNOLOGY	12.3	8.1	4.1
Semiconductors & Semiconductor Equipment	0.6	3.2	-2.6
Software & Services	0.0	4.0	-4.0
Technology Hardware & Equipment	11.6	1.0	10.7
MATERIALS	15.3	12.0	3.4
TELECOMMUNICATION SERVICES	1.8	1.2	0.6
UTILITIES	2.2	2.1	0.1
CASH	1.9	0.0	1.9

Please note: Each Industry Group is further diversified by industries.

Source: Mondrian Investment Partners and MSCI

MONDRIAN EQUITY PRODUCTS

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

MONDRIAN PRODUCT AND TYPICAL BENCHMARK	VEHICLE			
	SEPARATE ACCOUNT	COMMINGLED FUND US INVESTORS	REGISTERED MUTUAL FUND	COMMINGLED FUND NON-US INVESTORS
Non-US Equity <i>MSCI EAFE</i>	Closed	Open <i>Minimum: \$5 million</i>		
Focused Non-US Equity <i>MSCI EAFE</i>	Open <i>Minimum: \$100 million</i>	Open <i>Minimum: \$5 million</i>	Laudus Mondrian ⁴	Available
Global Equity <i>MSCI World</i>	Open <i>Minimum: \$100 million</i>	Open <i>Minimum: \$2 million</i>		
All Countries World Equity <i>MSCI ACW</i>	Open <i>Minimum: \$300 million¹</i> <i>Minimum: \$100 million²</i>			
All Countries World Ex-US Equity <i>MSCI ACW ex-US</i>	Closed	Open <i>Minimum: \$5 million</i>		
Focused All Countries World Ex-US Equity <i>MSCI ACW ex-US</i>	Open <i>Minimum: \$300 million¹</i> <i>Minimum: \$100 million²</i>			
Emerging Markets Equity <i>MSCI EM</i>	Closed	Closed		
Focused Emerging Markets Equity <i>MSCI EM</i>	Closed	Closed	Laudus Mondrian ⁴	Closed
Non-US Small Cap Equity <i>MSCI World ex-US Small Cap</i>	Closed	Closed		
Emerging Markets Small Cap Equity <i>MSCI EM Small Cap</i>	Open <i>Minimum: \$150 million</i>	Open <i>Minimum: \$5 million</i>		
Regional/Single Country Equity³	Open <i>Minimum: \$100 million</i>	Open		Available

1. Utilizing separate account only
2. Utilizing commingled fund for emerging markets exposure
3. Regional mandates include Japan, UK, Pacific, Europe and US Equity
4. Mondrian serves as sole sub-advisor to a range of registered mutual funds known as the Laudus Mondrian Funds. The Funds are advised by Charles Schwab Investment Management. For additional information on the Laudus Mondrian Funds, please contact your Mondrian client service representative or see www.laudus.com

Mondrian may, from time to time, reduce and/or increase the minimum amounts listed above. The above is for information purposes only and intended solely for the person to whom it has been delivered. It is not an offer or solicitation with respect to the purchase of any securities. Any investment decision in connection with any investment vehicle should be based on the information contained in its written offering materials.

MONDRIAN FIXED INCOME PRODUCTS

MARCH 31, 2013

MONDRIAN INVESTMENT PARTNERS

MONDRIAN PRODUCT AND TYPICAL BENCHMARK	VEHICLE			
	SEPARATE ACCOUNT	COMMINGLED FUND US INVESTORS	REGISTERED MUTUAL FUND	COMMINGLED FUND NON-US INVESTORS
Global Fixed Income <i>Citigroup WGBI</i> <i>Barclays Global Aggregate Bond Index</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>		
International Fixed Income <i>Citigroup WGBI ex-US</i> <i>Barclays Global Aggregate ex-US Bond Index</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>	Laudus Mondrian ¹	
Focused Global Fixed Income <i>JPMorgan Global Government Bond Index</i> <i>Barclays Global Aggregate Bond Index</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>		
Focused International Fixed Income <i>JPMorgan Global Government Bond ex-US Index</i> <i>Barclays Global Aggregate ex-US Bond Index</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>		
Global Inflation-Linked Bonds <i>Barclays World Government Inflation-Linked Bond Index</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>		
US Aggregate Fixed Income <i>Barclays US Aggregate Bond Index</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>		
Global Debt Opportunities <i>80% JPM GGBI/20% JPM GBI-EM BD</i>	Open <i>Minimum: \$100 million</i>	Open <i>Minimum: \$1 million</i>	Laudus Mondrian ¹	
Emerging Markets Debt <i>JP Morgan GBI-EM BD</i>	Open <i>Minimum: \$50 million</i>	Open <i>Minimum: \$1 million</i>		Available

1. Mondrian serves as sole sub-advisor to a range of registered mutual funds known as the Laudus Mondrian Funds. The Funds are advised by Charles Schwab Investment Management. For additional information on the Laudus Mondrian Funds, please contact your Mondrian client service representative or see www.laudus.com

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Schroders Investment Management

Mandate: International Small Cap

Hired: 2010

Firm Information	Investment Approach	Total ARMB Mandate
<p>Schroders Investment Management North America Inc. is an indirect wholly-owned subsidiary of Schroders plc (“Schroders”), a public company and one of the largest asset managers listed on the London Stock Exchange. The firm is based in New York and acts as the SEC-registered investment advisor for Schroders in North America.</p> <p>As of 3/31/13, the firm’s total assets under management were \$359 billion.</p> <p>Key Executives: Matthew Dobbs, <i>Head of Global Small Cap</i> Jamie MacMillan, <i>U.S. Institutional Business Development Director</i></p>	<p>Schroders believes that investing in smaller companies with superior characteristics and that are undervalued in the market will deliver superior investment returns. Schroders seeks to identify quality growth companies by devoting in-house resources to identify the fundamental attractions of each company’s business model, gauging the scope and visibility of growth, the risks to that growth, and the quality and focus of its management. In appraising valuations, Schroders aims to look further out than the market (assessing investments based on a two-to-three-year time frame) and apply a disciplined fair-value methodology.</p> <p>Benchmark: MSCI EAFE Small Cap Index</p>	<p>Assets Under Management: 3/31/13 \$125,784,786</p>

Concerns: None

3/31/2013 Performance

	Last Quarter	1 Year	3 Years Annualized	5 Years Annualized
Manager (gross)	8.49%	8.88%	N/A	N/A
Fee	0.20%	0.79%		
Manager (Net)	8.29%	8.09%		
Benchmark	8.42%	13.28%		

International small companies

Investment presentation

Data as of April 30, 2013 (unless otherwise noted)

Presenting to:

The State of Alaska – Alaska Retirement Management Board

Representing Schroders:

Matthew Dobbs – Head of Global Small Cap Equities, Portfolio Manager

Jamie Macmillan – US Institutional Business Development Director

Schroder Investment Management North America Inc.
875 Third Avenue, New York, NY 10022 – 6225



Schroders

Investment Philosophy & Team



Schroders

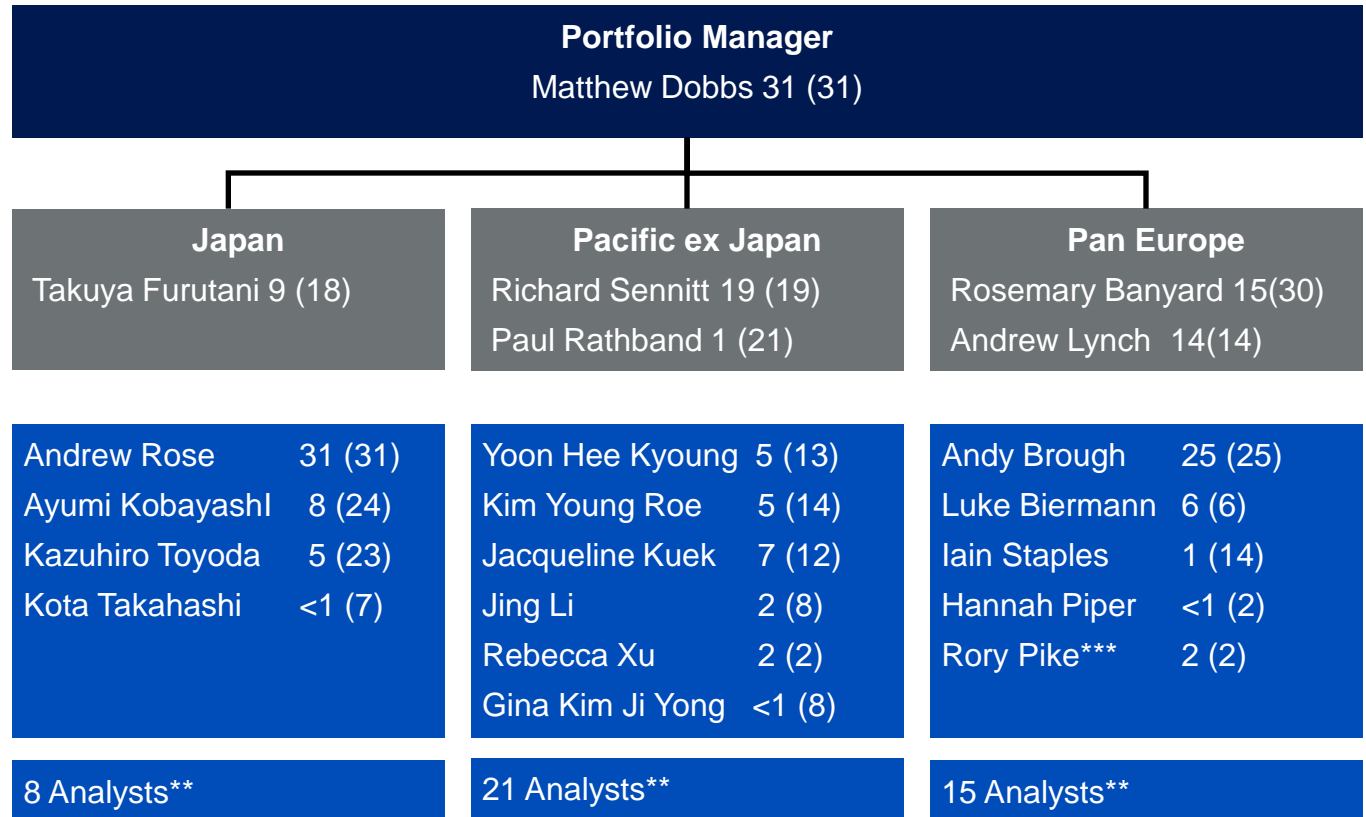
Investment philosophy

- Growth and Quality, but at a reasonable price
- Stock selection primary source of value added
- Long-term time horizon
- Strong risk framework
- A dedicated team

Resources

International smallcap

- 21 specialists in international small company research and investment*
- Regional sector analysts assume coverage where sectoral knowledge offers clear benefits
- Primary research conducted out of Schroder research offices globally
- Cross fertilization of investment ideas between regions



= Number of years with Schroders
 (#) = Numbers of years investment experience
 *Source Schroders as of March 31, 2013
 ** March 31, 2013
 *** Includes other coverage

Performance



Schroders

Investment Environment

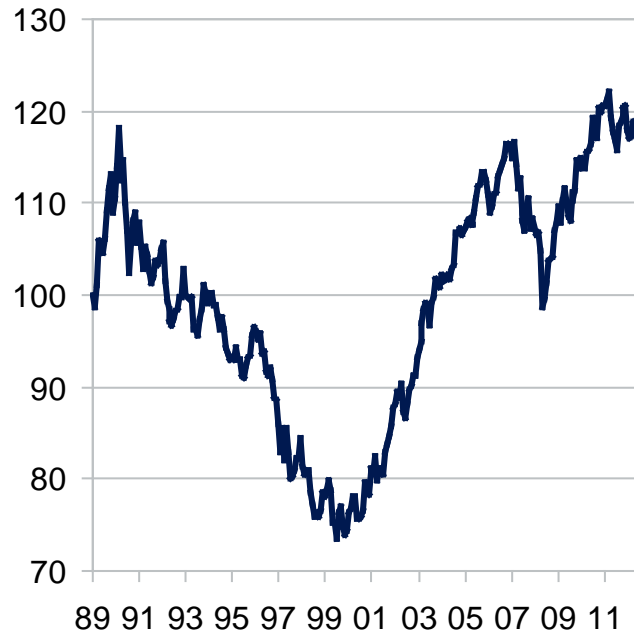
–International smaller companies were up 17.9% in the 12 months to end of April. Smaller companies lagged their large cap peers with the MSCI EAFE Index up 19.4%.

–Smaller companies outperformed in the United Kingdom but these gains were more than offset by relative weakness in Pacific ex Japan and, to a lesser extent, continental Europe and Japan.

–By sector, smaller companies performed strongly in the consumer discretionary and telecoms sectors. Relative weakness in financials, industrials and health care more than offset this.

S&P EPAC SmallCap vs MSCI EAFE

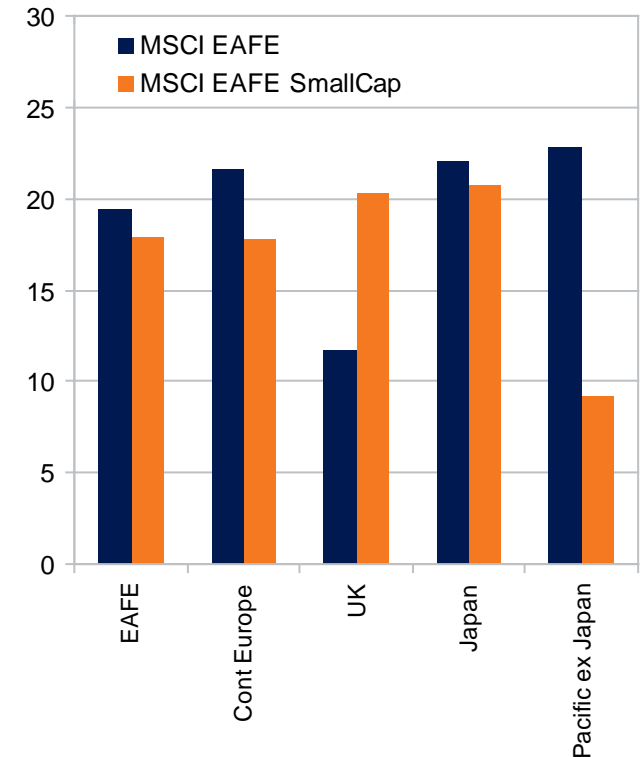
June 1989 = 100



Source: Schroders, S&P, MSCI, April 30, 2013

MSCI EAFE & MSCI EAFE SmallCap Performance in US\$(%)

12 months to April 30, 2013



Source: Schroders, S&P

Performance

State of Alaska

Benchmark:	MSCI EAFE SmallCap Index
Value:	US\$ 129,621,334 as at April 30, 2013
Inception date:	September 30, 2010

Performance to April 30, 2013 (in US\$%)

	3 Months	6 Months	12 Months	2 Years p.a.	Since Inception p.a.
State of Alaska	+5.9	+16.2	+12.4	+0.2	+8.1
MSCI EAFE SmallCap	+6.7	+18.1	+17.9	+2.2	+9.6
Value Added vs EAFE SmallCap	-0.8	-1.9	-5.5	-2.0	-1.5

Performance Attribution against MSCI EAFE SmallCap Index

Contribution from	3 Months	6 Months	12 Months	2 Years p.a.	Since Inception p.a.
Stock Selection	-0.7	-1.2	-4.8	-1.9	-1.1
Regional Allocation	-0.2	-0.7	-0.8	-0.1	-0.4
Timing Residual	+0.1	0.0	+0.1	0.0	0.0
Difference Relative to EAFE SmallCap	-0.8	-1.9	-5.5	-2.0	-1.5

Performance & Performance Attribution

12 months to April 30, 2013

	State of Alaska		MSCI EAFE Small Cap		Total Effect
	End Weight	Total Return	End Weight	Total Return	
UK	18.9	21.5	21.6	20.2	0.2
Continental Europe	32.3	13.8	34.6	18.4	-1.4
Japan	24.0	10.8	28.9	20.7	-2.3
Pacific ex Japan	16.1	3.6	14.9	9.2	-1.5
Emerging Markets	6.7	15.6	-	-	0.0
North America	0.0	-84.2	-	-	-0.3
Cash	2.0	-	-	-	-0.3
Residual	-	-	-	-	0.1
Total	100.0	12.4	100.0	17.9	-5.5

Top 5 Active Contributors

12 months to April 30, 2013

	Return (%)	Contribution (%)
Tokai Tokyo Financial	160.7	0.80
Techtronic Industries	100.6	0.69
Azimut	96.4	0.64
Fletcher Building	55.5	0.41
freenet	58.3	0.38

Top 5 Active Detractors

12 months to April 30, 2013

	Return (%)	Contribution (%)
Iluka Resources	-45.5	-0.67
Kapsch Trafficcom	-44.0	-0.65
gategroup	-42.9	-0.52
Whitehaven Coal	-57.5	-0.47
Unipres Corp.	-28.7	-0.45

Performance & Performance Attribution

Since inception* to April 30, 2013

	State of Alaska		MSCI EAFE Small Cap		Total Effect
	End Weight	Total Return	End Weight	Total Return	
UK	18.9	19.1	21.6	14.8	0.6
Continental Europe	32.3	6.8	34.6	5.6	0.4
Japan	24.0	8.2	28.9	13.1	-1.3
Pacific ex Japan	16.1	1.7	14.9	5.5	-1.0
Emerging Markets	6.7	4.0	-	-	0.2
North America	0.0	-68.8	-	-	-0.3
Cash	2.0	-	-	-	-0.1
Residual	-	-	-	-	0.0
Total	100.0	8.1	100.0	9.6	-1.5

Top 5 Active Contributors

Since inception* to April 30, 2013

	Return (%)	Contribution (%)
Techtronic Industries	86.5	0.54
Hamworthy	88.3	0.42
freenet	43.7	0.39
Tokai Tokyo Financial	52.6	0.32
Ashtead	93.7	0.28

Top 5 Active Detractors

Since inception* to April 30, 2013

	Return (%)	Contribution (%)
EVA Precision Industrial	-55.9	-0.53
Whitehaven Coal	-57.5	-0.46
Ports Design	-44.5	-0.41
Leoch International Technolo	#N/A	-0.41
Dart Energy	-66.8	-0.40

*September 30, 2010

Source: Schroders, MSCI, Factset PA2

Fund risk characteristics

State of Alaska vs MSCI EAFE SmallCap index

prism		Schroders	
Name:	Alaska Small Cos (Inc Cash)	Date:	30 April 2013
Benchmark:	MSCI EAFE SMALL CAP	No. Stocks (ex/inc Funds):	206
Region:	Total Portfolio	Number of Funds/Futures/Index Options:	0
Currency:	USD		
<u>Predicted Risk</u>		<u>Active Risk Decomposition (from BARRA)</u>	
Tracking Error	2.36%	Stock Specific Factor	57.6%
Tracking Error (Schroders)	2.1%	Industrial Sectors	4.8%
Beta	0.93	Countries	22.5%
Benchmark Volatility	14.9%	Risk Indices	8.4%
Absolute Fund Volatility	14.0%	Market risk	6.8%
Figures from Barra unless otherwise stated)			
<u>Supplemental Statistics</u>		Active Money (top 10 Positive)	12.4%
Concentration of risk to 30% of Specific Risk	16	Active Money (top 10 Negative)	-2.9%
Concentration of risk to 50% of Specific Risk	36		
Number of stocks in benchmark	2157	Mean	Median
Active Share	89.6%	Positive active position	0.43%
Benchmark Coverage (common money)	10.4%	Negative active position	-0.04%
Absolute Active Positions	179.14%	No. of positive active positions	208
		No. of negative active positions	2010

Source: Schroders Risk Report, as at April 30, 2013

Fund characteristics

State of Alaska vs MSCI EAFE SmallCap index

As at April 30, 2013

	Schroders*	Index
No of stocks	206	2,157
Free Market Capitalization US\$M		
Minimum	55	9
Maximum	12,388	5,707
Weighted Average	1,661	1,586
Median	850	513

Valuation factors	Schroders*	Index
P/E (12mo trailing)	17.8	18.6
P/CF	9.2	9.1
P/BV	1.5	1.3
Long Term Debt/Equity	41.0	50.4
ROE	13.3	11.7

	Schroders*	Index
Percentage>\$3Bn	17.7%	13.6%
Percentage>\$1Bn<\$3Bn	32.4%	47.8%
Percentage>\$0.5Bn<\$1Bn	23.8%	22.0%
Percentage<\$0.5Bn	26.1%	16.6%
Total	100.0%	100.0%

Valuation factors	Schroders*	Index
3 Year Sales Growth	5.7	4.8
3 Year Dividend Growth	16.7	13.3
3 Year Earnings Growth	29.0	31.8
Dividend Payout Ratio	39.3	34.5
Dividend Yield	2.5	2.4

Investment strategy:

State of Alaska Country weightings

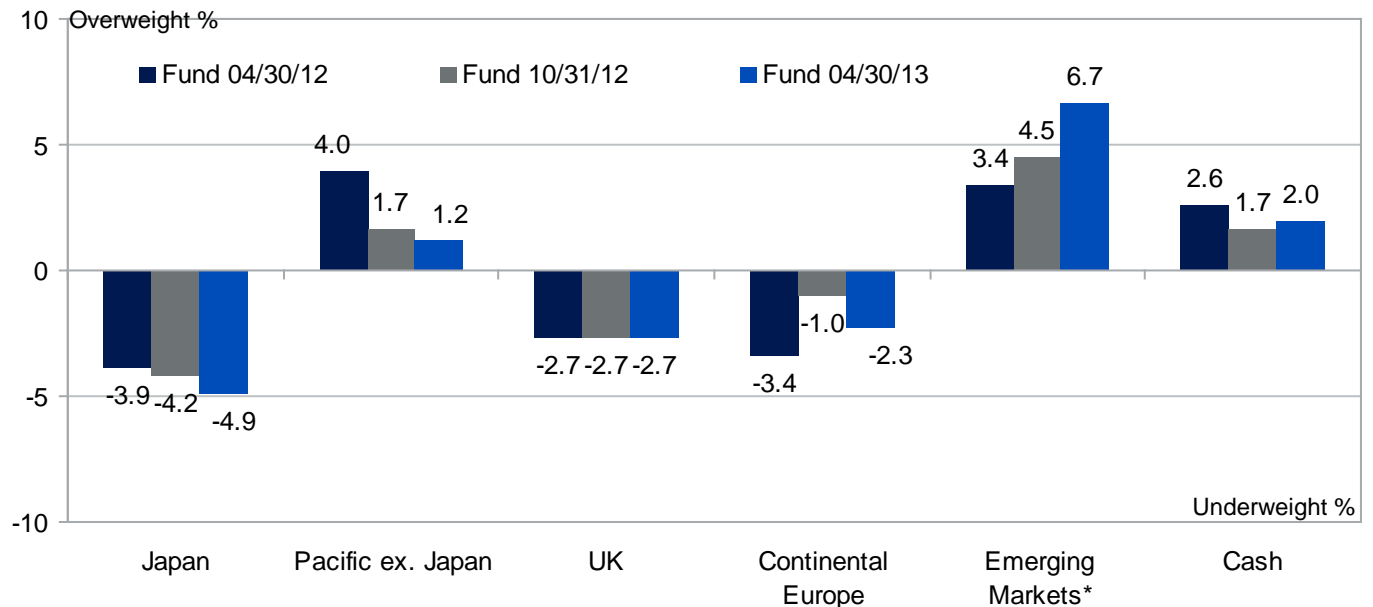
The performance of the equity markets in continental Europe has been intimately linked to peripheral market bond yields, and the sizeable compression of yields has supported sentiment. Although the positive turnaround in current account positions in most of the PIGS is an encouraging sign, it is a reminder of the pressures on economic activity that are unlikely to relax soon. Furthermore, the core European markets, particularly Germany, are facing a greater competitive challenge given the sharp appreciation of the euro versus the Japanese yen and the dollar to a lesser degree. We remain underweight the periphery apart from Italy (although the rally has seen us trim) and Ireland for stock specific reasons. Whilst the overall growth outlook remains tough, valuations in general are still supportive.

We have maintained the underweight to the United Kingdom, reflecting what remains a very challenging economic backdrop. The Bank of England continues to provide ample liquidity (with no indication that will change under incoming Governor Carney) while the two speed economy (South vs North, private sector versus public) continues. The fiscal consolidation commitment remains credible (just) but availability of credit to the private sector is patchy. We continue to focus on well financed businesses. Unsurprisingly sterling has been weak favouring overseas earners.

The environment has not been an easy one for our portfolio in Japan given a sharp rally in financials and deep, mainly domestic, cyclical in response to a weaker yen and promises of aggressive fiscal stimulation. We have seen sharply divergent performance across the portfolio, so have looked to switch as relative valuations dictate.

We remain positive towards Asia ex Japan / Asian Emerging Markets from a longer-term point of view, but take relatively little comfort from the recent developments in China despite the recovery in economic activity (PMIs, exports) as it has been heavily reliant on the traditional levers of exports and credit financed public investment. Scant lip service has been paid to the key issue of structural change that the economy requires. We have reduced our exposure to developed market financials in favour of quality exporters and specific names in ASEAN emerging markets.

Measured against MSCI EAFE SmallCap Index



Fund weight % at 04/30/13

24.0	16.1	18.9	32.3	6.7	2.0
-------------	-------------	-------------	-------------	------------	------------

Index weight % at 04/30/13

28.9	14.9	21.6	34.6	-	-
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* Includes Canadian stocks with predominantly Emerging Markets exposure

Regions are mentioned for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

This slide contains the views of Matthew Dobbs and do not necessarily represent Schroder Investment Management North America Inc.'s house view. Please see full disclosure at the end of the presentation. Source: Schroders, MSCI

Portfolio positioning

Country Sector Matrix

MSCI EAFE SmallCap Index as at April 30, 2013

	Total	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	IT	Materials	Telecoms	Utilities
Cont. Europe	34.6	4.8	2.1	1.8	7.6	2.9	8.0	2.9	3.4	0.6	0.6
EM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Japan	28.9	5.9	2.7	0.1	6.1	1.5	6.3	3.3	3.0	0.0	0.1
Pacific ex Japan	14.9	3.3	0.5	0.8	3.6	0.8	2.6	0.8	1.6	0.4	0.5
UK	21.6	5.6	0.7	1.7	4.2	0.6	4.3	2.1	1.7	0.3	0.5
Total	100.0	19.5	6.0	4.4	21.5	5.7	21.1	9.1	9.7	1.3	1.7

State of Alaska as at April 30, 2013

	Total	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	IT	Materials	Telecoms	Utilities
Cont. Europe	32.3	6.3	0.9	1.0	5.8	2.4	6.2	4.4	3.6	1.5	0.0
EM	6.7	3.5	0.0	0.0	1.5	0.6	0.6	0.0	0.6	0.0	0.0
Japan	24.0	3.6	2.0	0.9	1.9	1.9	6.7	2.7	4.3	0.0	0.0
Pacific ex Japan	16.1	4.2	1.0	0.0	2.1	1.8	2.2	1.3	2.9	0.5	0.0
UK	18.9	3.6	0.8	1.3	1.4	0.6	6.4	2.9	1.6	0.4	0.0
Total**	98.0	21.3	4.6	3.2	12.7	7.3	22.1	11.4	13.0	2.4	0.0

State of Alaska vs MSCI EAFE Small Cap Index

	Total	Consumer Discretionary	Consumer Staples	Energy	Financials	Healthcare	Industrials	IT	Materials	Telecoms	Utilities
Cont. Europe	-2.3	1.5	-1.2	-0.8	-1.8	-0.4	-1.7	1.6	0.2	1.0	-0.6
EM	6.7	3.5	0.0	0.0	1.5	0.6	0.6	0.0	0.6	0.0	0.0
Japan	-4.9	-2.3	-0.7	0.7	-4.2	0.4	0.4	-0.6	1.3	0.0	-0.1
Pacific ex Japan	1.2	1.0	0.4	-0.8	-1.6	1.1	-0.4	0.5	1.3	0.1	-0.5
UK	-2.7	-1.9	0.1	-0.3	-2.7	0.0	2.1	0.8	-0.2	0.0	-0.5
Total***	-2.0	1.8	-1.4	-1.2	-8.8	1.6	1.0	2.3	3.3	1.1	-1.7

* Cash 2.0%

** Difference due to 2.0% cash weighting

Source: Schroders, MSCI

Recent Stock Transactions

State of Alaska

Significant New Buys since October 31, 2012

Security	Country	Weight April 30, 2013 %
Hitachi High-Technologies	Japan	0.7
Halla Visteon Climate Control	Korea	0.6
Minth Group	China	0.6
Kissei Pharmaceutical	Japan	0.5
Bursa Malaysia	Malaysia	0.5
Baoxin Auto	China	0.5
Samsonite International	Hong Kong	0.5
Shenzhou International	China	0.5
Invensys Plc	United Kingdom	0.4
Surya Citra Media	Indonesia	0.4

Significant Complete Sales since October 31, 2012

Security	Country	Weight October 31, 2012 %
Accordia Golf	Japan	0.8
Rheinmetall Ag	Germany	0.7
Dockwise Ltd.	Norway	0.7
Myer Holdings	Australia	0.5
Debenhams Plc	United Kingdom	0.5
Bs Financial	Korea	0.5
Vard Holdings	Singapore	0.5
Sims Metal	Australia	0.5
Ciputra Property	Indonesia	0.5
D'leteren N.V.	Belgium	0.5

State of Alaska

Top ten holdings by region – April 30, 2013

Europe

Country	Security	Weight in fund %	Weight in region %
Germany	Freenet Ag	1.5	4.8
Netherlands	Delta Lloyd	1.2	3.8
Italy	Azimut Holding	1.1	3.3
Ireland	Dcc Plc	1.1	3.3
Switzerland	Helvetia Holding	1.0	3.0
Germany	Tom Tailor	0.9	2.9
Norway	Borregaard Asa	0.9	2.9
Germany	Tipp24 Se	0.9	2.8
Switzerland	Clariant Ag	0.8	2.6
Sweden	Loomis Ab	0.8	2.6
Total		10.2	32.0

Japan

Country	Security	Weight in fund %	Weight in region %
Japan	Tokai Tokyo Financial	1.4	5.8
Japan	Nec Networks	1.1	4.6
Japan	Nitta Corp.	1.1	4.4
Japan	Aica Kogyo	1.1	4.4
Japan	Nihon Parkerizing	1.0	4.2
Japan	Unipres Corp.	0.9	3.9
Japan	Glory Ltd.	0.9	3.7
Japan	Nichi-Iko Pharmaceutical	0.9	3.7
Japan	Arcs Co.	0.8	3.4
Japan	Musashi Seimitsu	0.8	3.3
Total		10.0	41.4

UK

Country	Security	Weight in fund %	Weight in region %
UK	Ashtead Group	0.7	3.7
UK	Berkeley Group	0.7	3.4
UK	Dechra Pharmaceuticals	0.6	3.0
UK	Taylor Wimpey	0.6	2.9
UK	Elementis Plc	0.6	2.9
UK	Ws Atkins	0.5	2.9
UK	Travis Perkins	0.5	2.7
UK	Diploma Plc	0.5	2.5
UK	Csr Plc	0.5	2.5
UK	William Hill	0.5	2.4
Total		5.7	28.9

Asia ex. Japan, Emerging Markets

Country	Security	Weight in fund %	Weight in region %
Australia	Ansell Ltd.	1.3	5.9
Hong Kong	Techtronic Industries	1.3	5.8
Australia	Computershare Ltd.	1.1	4.7
Australia	Mirvac Group	1.0	4.2
Australia	Ancor Ltd.	1.0	4.2
Korea	Hankook Tire	0.9	3.9
Australia	Iluka Resources	0.8	3.6
Hong Kong	Johnson Electric	0.8	3.4
Korea	Halla Climate Control	0.6	2.8
New Zealand	Fletcher Building	0.6	2.8
Total		9.4	41.3

Investment Outlook & Strategy

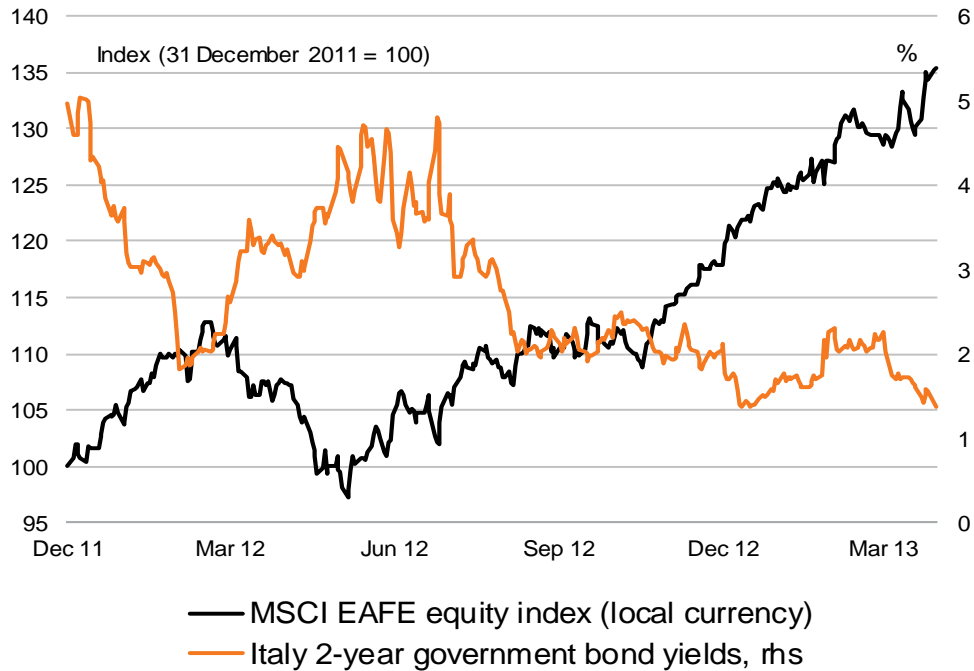


Schroders

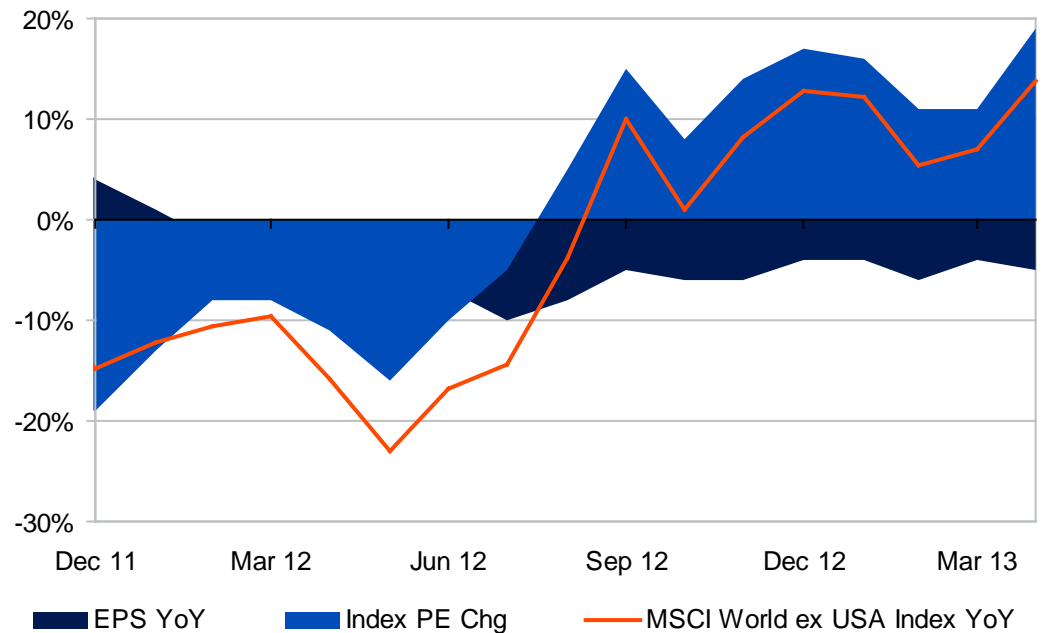
Overview

Markets have moved up as concern over "macro risk" has fallen

Markets in 2012 have moved in lockstep with perception of "tail risk"¹



Markets have rerated up despite earnings falling²



Source:

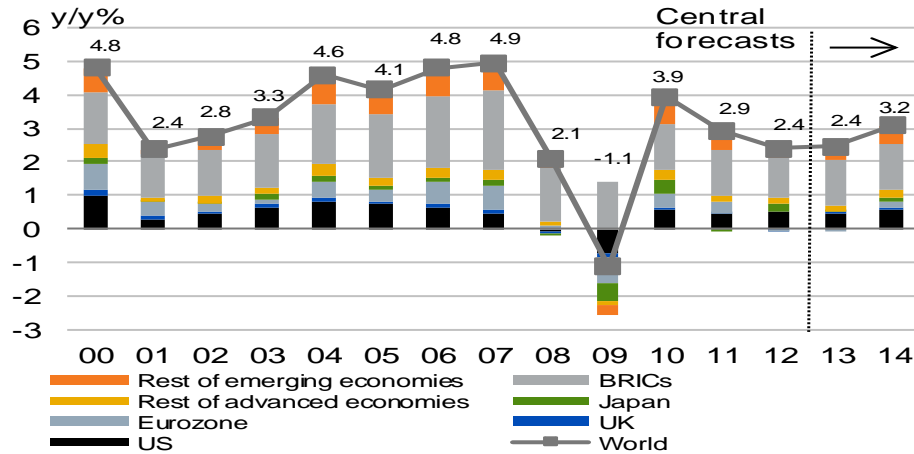
¹ Thomson Datastream, Schroders. April 30, 2013

² Merrill Lynch, Pierce, Fenner & Smith Incorporated. April 30, 2013

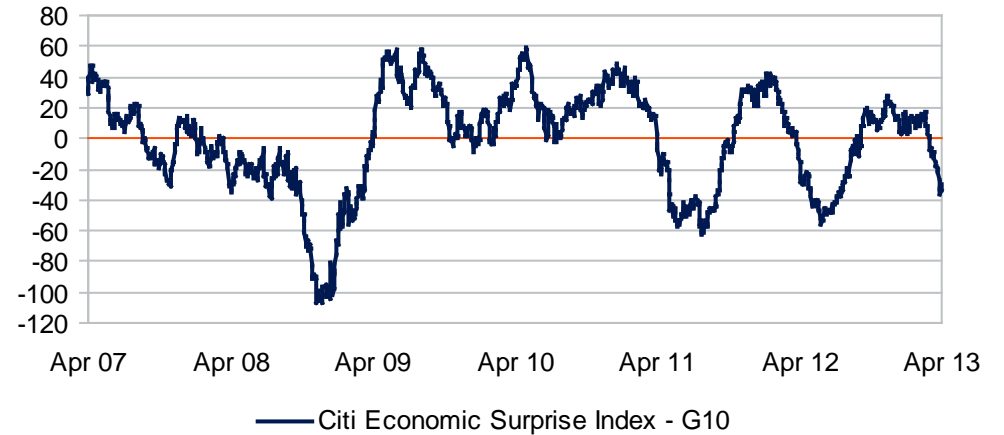
Overview

Earnings the key

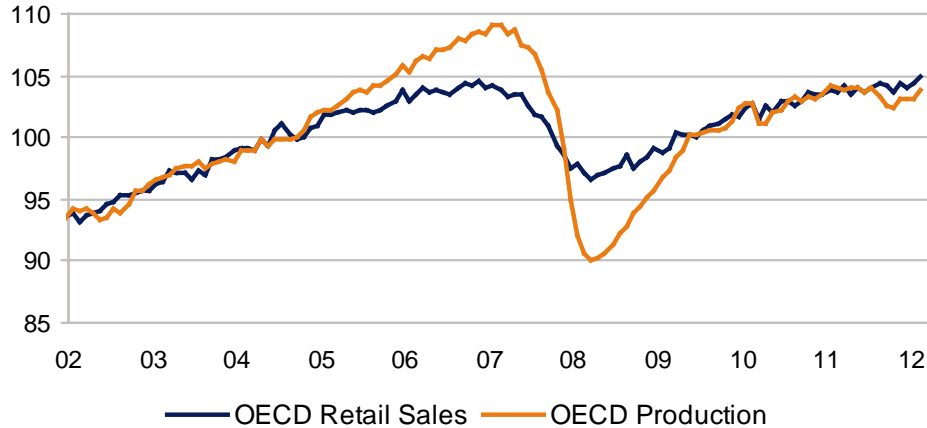
Global growth forecast¹



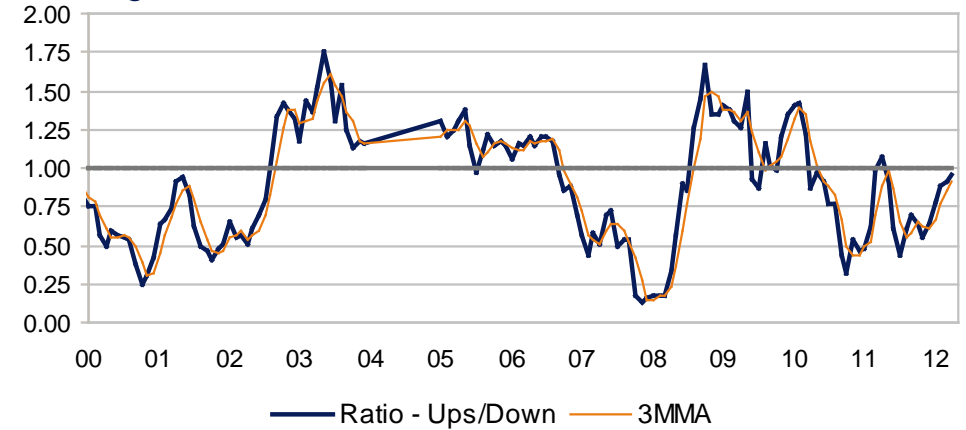
Global economic data upside surprises recover¹



Inventories not excessive²



Earnings revisions³



Source:

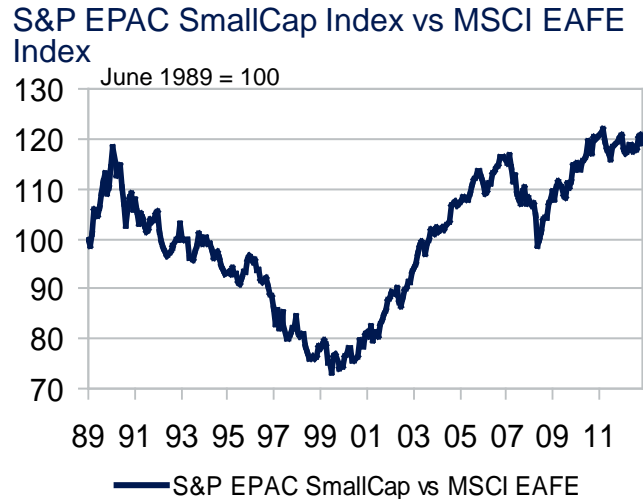
¹ Thomson Datastream, Schroders. April 30, 2013

² Thomson Datastream. Updated May 2013

³ Factset MSCI. April 30, 2013

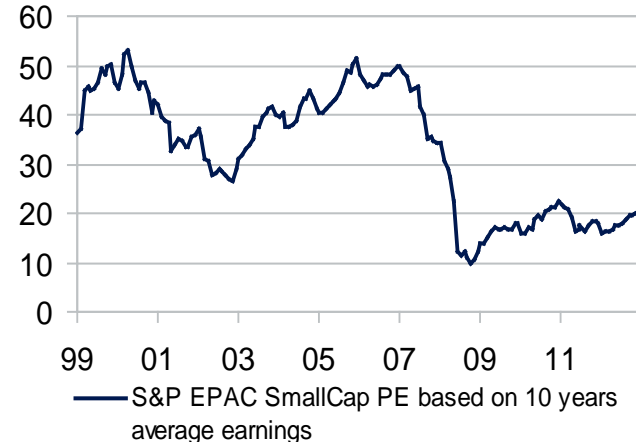
Small Cap Valuations

- Small caps offer good value by historic standards based on cyclically adjusted PERs and Price to book value
- Compared to large cap peers, valuations are reasonable, but not particularly attractive
- Within European small cap, size and performance have been positively correlated over the last two years. If sentiment remains supportive, there is scope for this to reverse

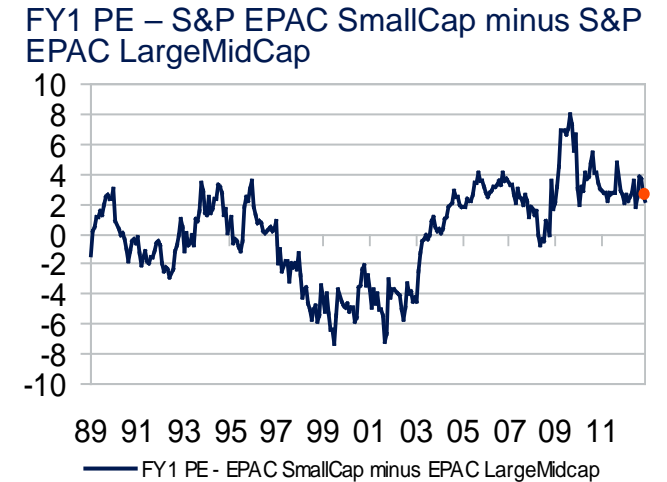


Source: Schroders, S&P, MSCI, April 30, 2013

Still attractive on cyclically adjusted basis



Source: Schroders, S&P, April 30, 2013



Source: Schroders, Factset PA2, S&P, April 30, 2013

and not extended on Price/Book Value



Source: Schroders, S&P, April 30, 2013

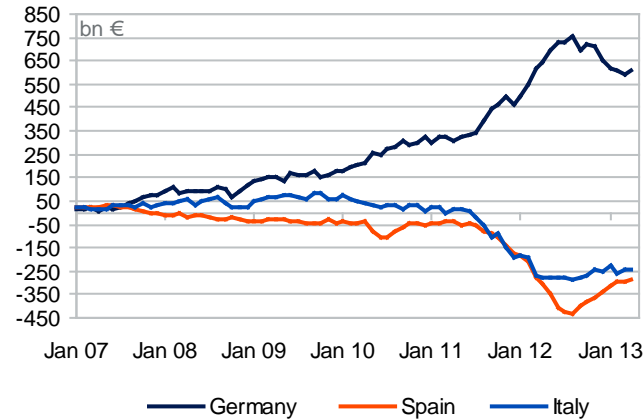
Performance shown is past performance. Past performance is not necessarily a guide to future performance. The value of investment can go down as well as up and is not guaranteed.

Investment Outlook

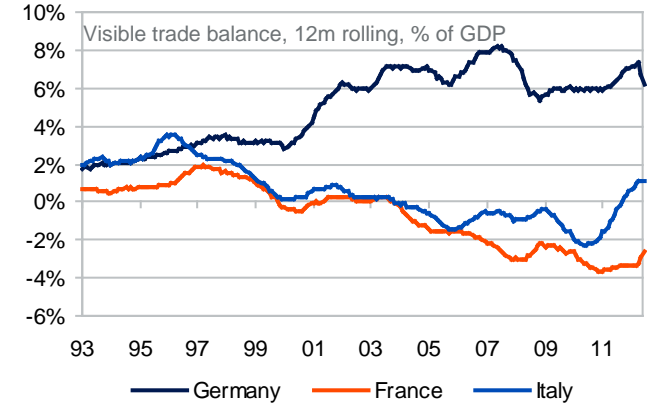
Continental Europe

- Market consensus is that ECB has done enough to stabilize the euro, and in short-term peripheral yields are being compressed
- Internal trade balances are moving in right direction for periphery, but symptomatic of sharply slower economic activity
- Europe still offers pockets of real value at a stock level conditioning only a modest underweighting

Net Balance with the Eurosystem / Target¹



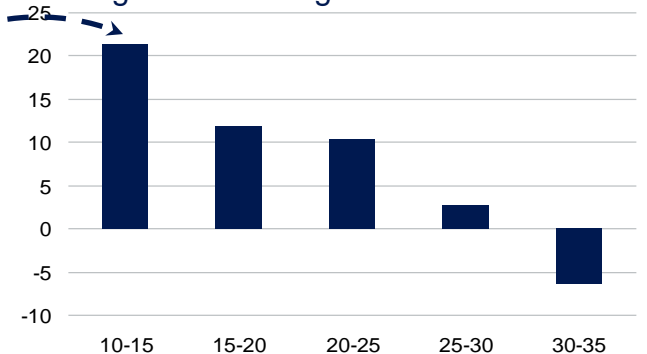
Current Accounts – Trade deficits²



Graham & Dodd P/E MSCI Europe³



MSCI Europe 1 year average returns by starting G&D PE range 1980-2010⁴



Source:

¹ Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University. April 30, 2013

² Credit Suisse Research April 30, 2013

³ Thomson Datastream as at 28 February 2013, Schroders

⁴ Thomson Datastream as at 28 February 2013, Schroders

Investment Outlook

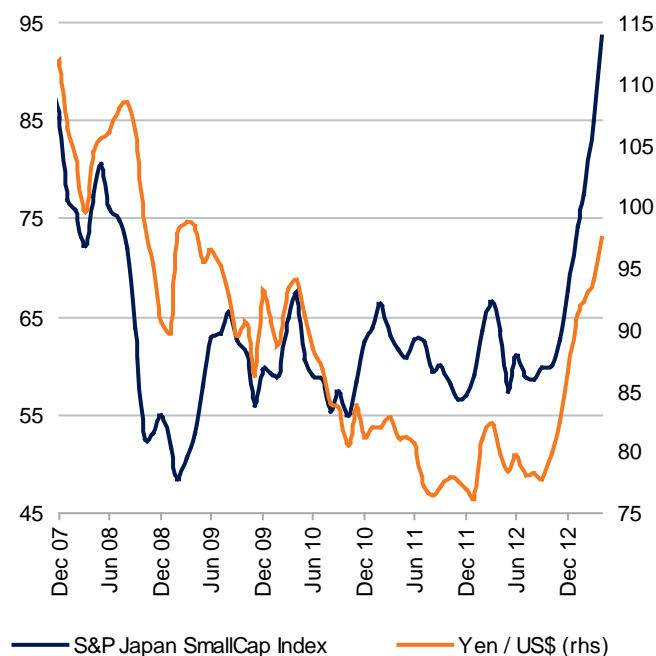
Continental Europe - The bottom-up case

Company Classification		Examples		
High Quality Growth	Azimut Holding	1.1%	Mayr-Melnhof Karton	0.5%
	Borregaard	0.9%	Schibsted	0.4%
	Tipp24	0.9%	Cancom	0.4%
	Amplifon	0.8%	Stratec Biomedical	0.2%
	Medica	0.6%	Draegerwerk	0.2%
	Kinepolis	0.5%		
Periphery Misnomers	Grafton	0.7%	Irish Continental Grp	0.5%
	Smurfit Kappa	0.7%	IFG Group	0.3%
	Prysmian	0.5%		
“Rare” Assets	Xing	0.8%	Lectra	0.5%
	Kapsch Trafficcom	0.8%	RIB Software	0.3%
	Rosenbauer Int	0.7%	PSI	0.3%
	Groupe Eurotunnel	0.6%		
Compelling Value	Freenet	1.5%	Ten Cate	0.5%
	Delta Lloyd	1.2%	Orior	0.5%
	Helvetia	1.0%	gategroup	0.4%
	Kuoni Reisen	0.7%	Prime Office REIT	0.3%
	StoreBrand	0.7%	Inside Secure	0.2%

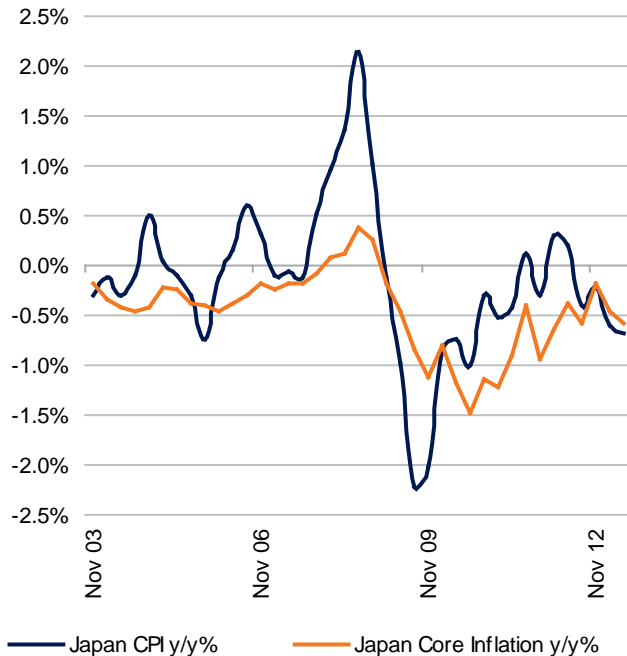
Investment Outlook

Japan

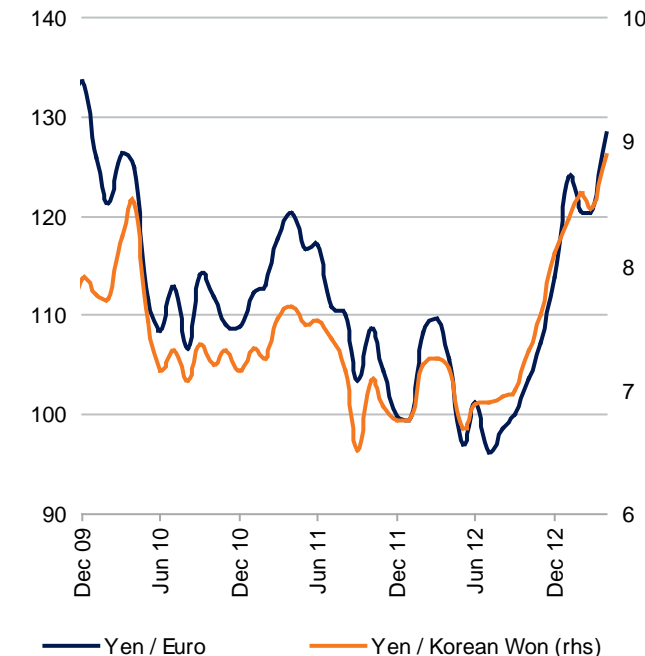
“Abenomics” has seen the Yen weaken and market rally¹



Tough domestic environment to grow profits¹



Exporters increased competitiveness¹



Source:

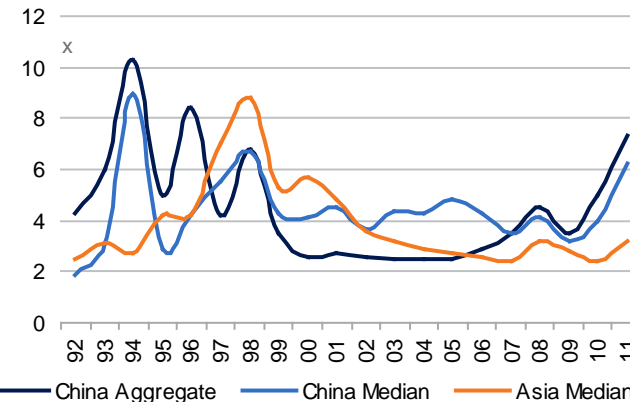
¹ Thomson Datastream. April 30, 2013

Investment Outlook

Asia ex Japan – How critical is China?

- China remains the biggest domestic uncertainty for Asia, and indeed Emerging Markets generally – especially those very commodity based
- Key area of stress is in non-consumer credit to GDP, and yet more credit growth is not the answer
- Rest of Asia has nothing like same level of stress. Low levels of consumer and corporate indebtedness along with scope for productive investment

Corporate debt to operating cash flow – an amber light¹



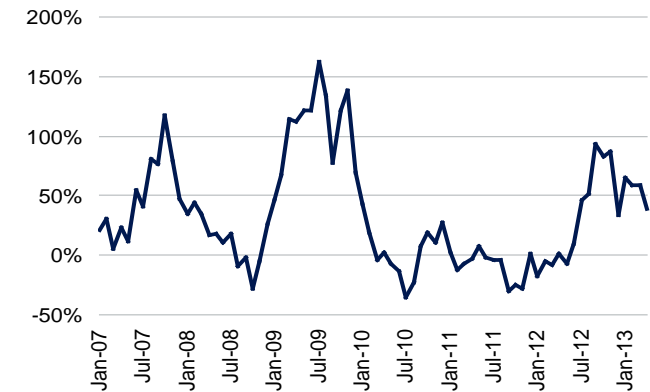
China Industrial Sales and Inventory³



2011 credit to GDP by country²

(%)	Credit to GDP	Consumer credit to GDP	Non-consumer credit to GDP
HK	270	61	210
China*	170	19	151
Taiwan	161	66	95
Australia	143	95	48
Singapore	126	54	73
Malaysia	117	64	52
Japan	88	25	64
Thailand	88	21	67
Korea	86	37	49
India	46	8	37
Philippines	32	6	26
Indonesia	29	9	20

China Social Financing Y/Y% Change⁴



Source:

¹ Company accounts, Bloomberg, Forensic Asia. November 2012

² CEIC, CLSA Asia Pacific Markets, Sept 2011 data

³ Nomura, April 30, 2013

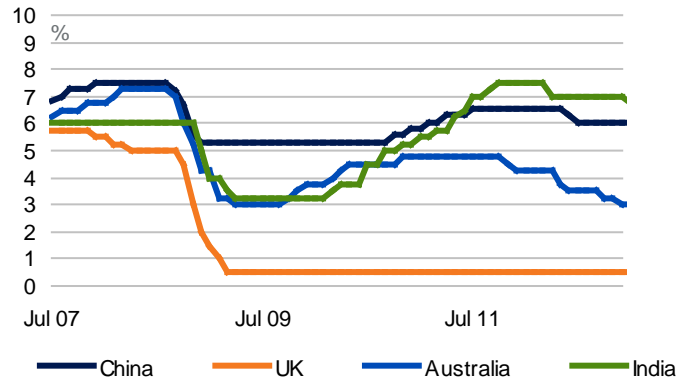
⁴ Thomson Datastream, April 30, 2013

Investment Outlook

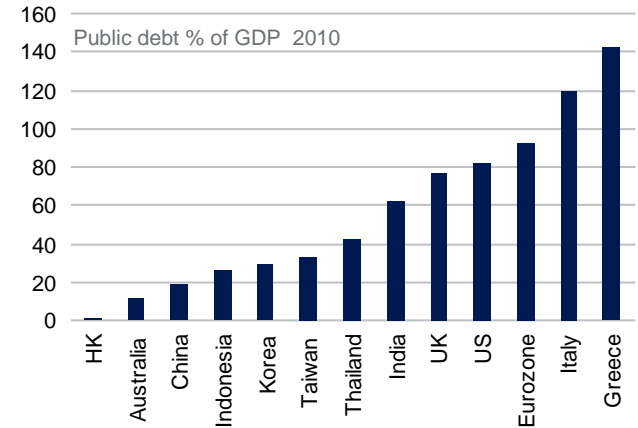
Asia ex Japan

- Long-term growth drivers remain very supportive
- Fiscal and monetary policy flexibility is there, but authorities will be cautious in exploiting it
- Valuations attractive, and we remain overweight the region
- Balance required between exporters and beneficiaries of domestic demand

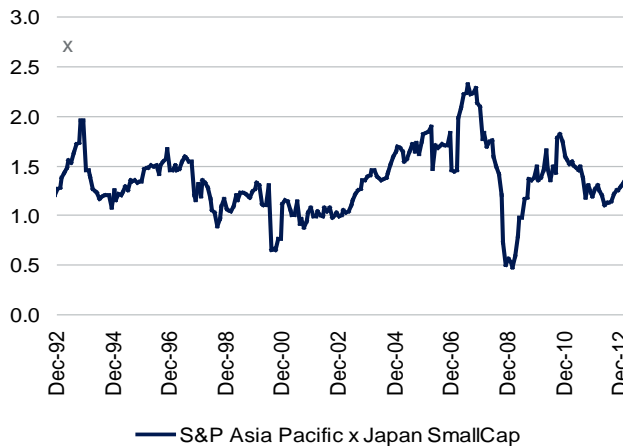
Room to loosen¹



Fiscal room²



Price to book value³



Asia still manufacturer to the world⁴



Source:

¹ Bloomberg, March 31, 2013

² Merrill Lynch, November 2011

³ S&P, April 30, 2013

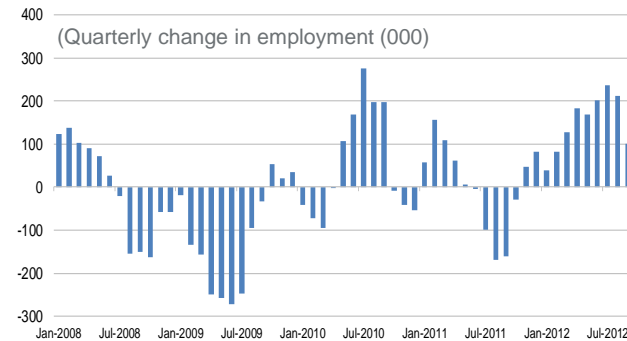
⁴ Thomson Datastream, April 30, 2013

Investment Outlook

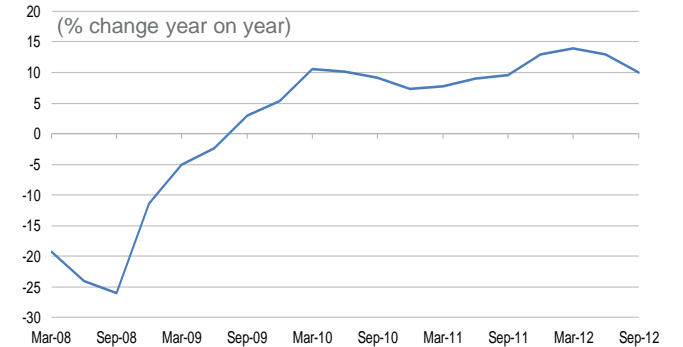
United Kingdom

- Small cap performance has been remarkable over the last twelve months
- Signs of economic healing in terms of new business formation, private sector job creation and manufacturing orders
- Economic expectations previously have remained very volatile given conflicting pressures within the economy
- Bottom up becoming more difficult to find compelling value so remaining underweight

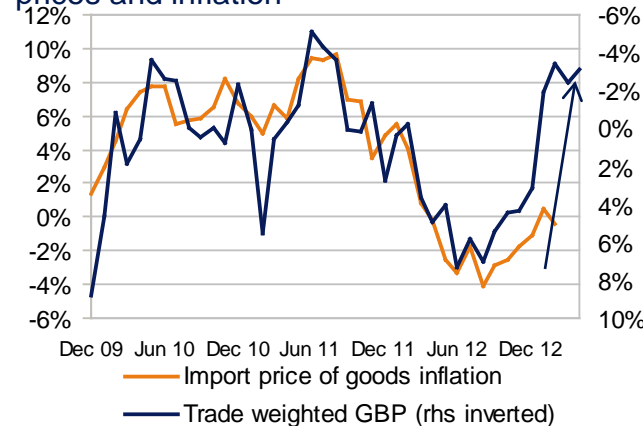
Private sector continues to create jobs¹



Net new business formation strong²



Impact of GBP depreciation on imported prices and inflation³



UK PMI Manufacturing new orders⁴



Source:

¹ Oriel Securities, National Statistics to 30 September 2012

² Collins Stewart, March 2008 – September 2012; ONS

³ Thomson Datastream, Schroders. April 30, 2013

⁴ Credit Suisse Research April 30, 2013

Appendix



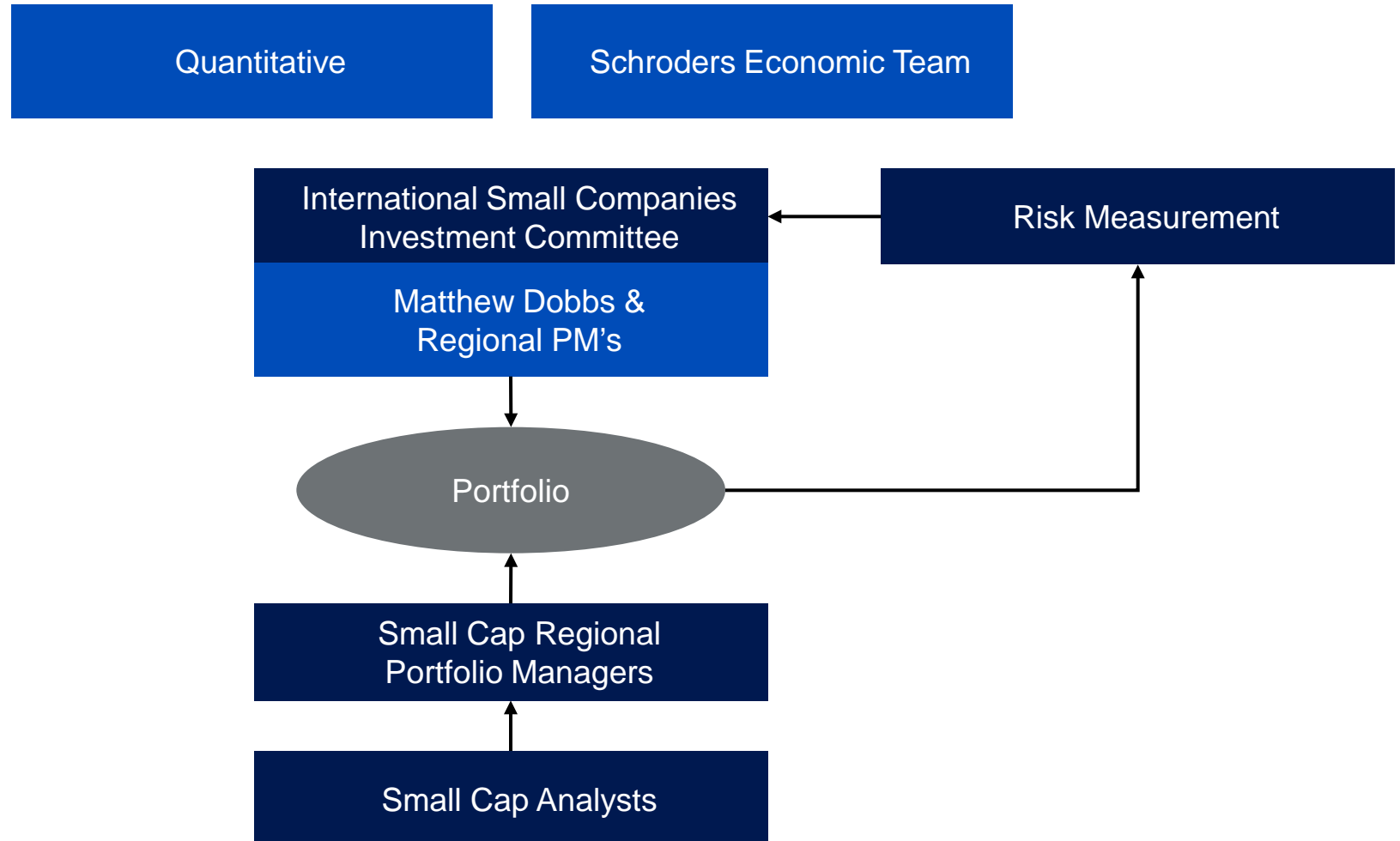
Schroders

Investment process

Overview

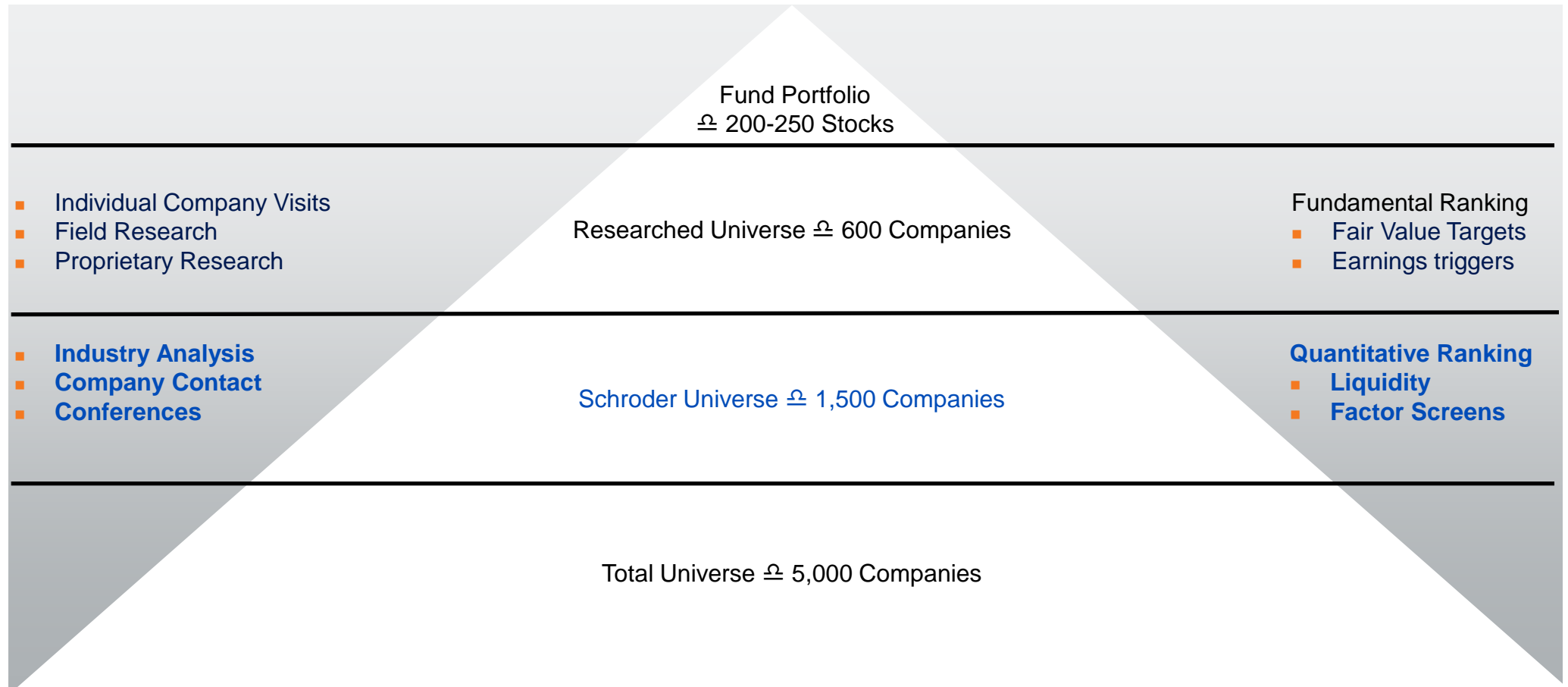
- Regional Allocation
- Risk Management

- Stock Selection



Investment process

Stock selection



Investment process

Factor screens help define Schroder universe

- Concentrate investments in quintiles 1 and 2
- Source new ideas
- Challenge views on stocks held in quintiles 4 and 5

The equally weighted metrics underlying each criterion are:

Criterion	Metrics
Growth	EPS revisions Revisions ratio
Quality	ROE ROA Change in ROE (year on year)
Value	Earnings yield

Pan Europe - December 31, 2011				VALUE				QUALITY				EARNINGS										
Company Symbol	Company Name	SEDOL Number	Country	% Rank COMBINED (OVERALL)	COMBINED SCORE (1-4)	Market Cap (Euros, Millions)	Price (Euros)	% Rank VALUE (OVERALL)	PE Ratio (FY1 earnings)	% Rank Earnings Yld (=1/PE)	% Rank QUALITY (OVERALL)	ROE (%) (trailing earnings)	% Rank ROE	Return on Total Assets (%)	% Rank ROA	Change in ROE (%) (per annum)	% Rank Change in ROE	% Rank EARNINGS (OVERALL)	EPS Revisions	EPS Revisions	Revisions Ratio (%)	Revisions Ratio (%)
423358	BE SEMICONDUCTOR	423358	NETHERLANDS	1	1	208	5.2	17	7.8	17	3	19.0	26	15.1	7	8.0	9	16	6.3	13		38
B5KKT9	CABLE & WIRE COMM	B5KKT9	UNITED KINGDOM	1	1	1,094	0.4	21	8.4	22	3	50.5	4	5.5	38	69.1	2	6	10.0	9	5.6	20
573040	CORP FINANC ALBA	573040	SPAIN	1	1	1,852	31.2	4	4.6	4	10	14.6	37	11.4	13	2.0	27	17	-0.3	46	22.2	7
B3CTJS	ELECNOR SA	B3CTJS	SPAIN	1	1	870	10.0	15	7.5	15	7	25.9	14	4.7	44	6.4	11	5	3.2	19	50.0	2
537095	IBERPAPEL GESTION	537095	SPAIN	1	1	143	12.7	10	6.5	10	15	12.6	43	8.2	23	2.1	27	3	9.8	9	25.0	6
494351	INDUS HOLDING AG	494351	GERMANY	1	1	446	20.1	10	6.4	10	9	22.4	19	5.4	38	4.0	18	3	5.4	15	66.7	1
468172	INFICON HOLDING AG	468172	SWITZERLAND	1	1	273	127.4	29	9.3	29	5	18.4	27	12.3	12	3.4	20	4	6.2	13	25.0	6
B09LSH	INMARSAT	B09LSH	UNITED KINGDOM	1	1	2,258	5.0	20	8.1	20	4	25.4	15	8.4	22	6.0	12	12	1.8	24	5.3	20
458435	METKA SA	458435	GREECE	1	1	301	5.8	2	3.6	2	3	38.4	7	10.8	15	3.0	21	3	10.3	8	18.2	9
B079W5	MICRO FOCUS	B079W5	UNITED KINGDOM	1	1	886	4.8	29	9.3	30	1	43.0	6	17.6	5	14.4	5	2	18.7	5	20.0	8

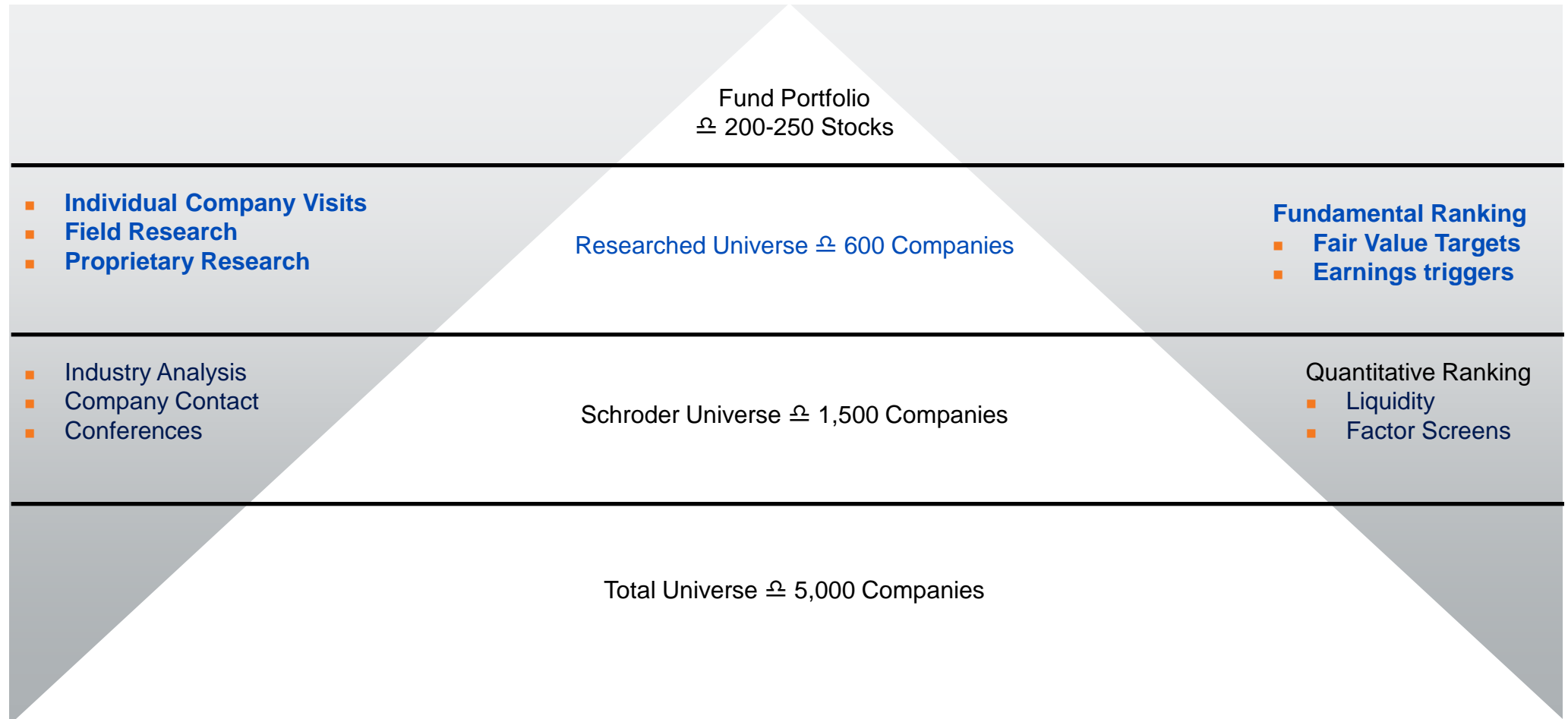
Source: Schroders

The security information shown is for illustrative purposes, is subject to change, and is not a recommendation to buy/sell. Past performance is no guarantee of future results

The value of an investment can go down as well as up and is not guaranteed

Investment process

Stock selection



Investment process

What we look for in investments

Quantitative

Sustainable Growth

- High real EPS growth
- Visibility of earnings
 - Strong product or service franchise
 - Strong market share
 - Beneficiary of structural change
- Limited financing risk

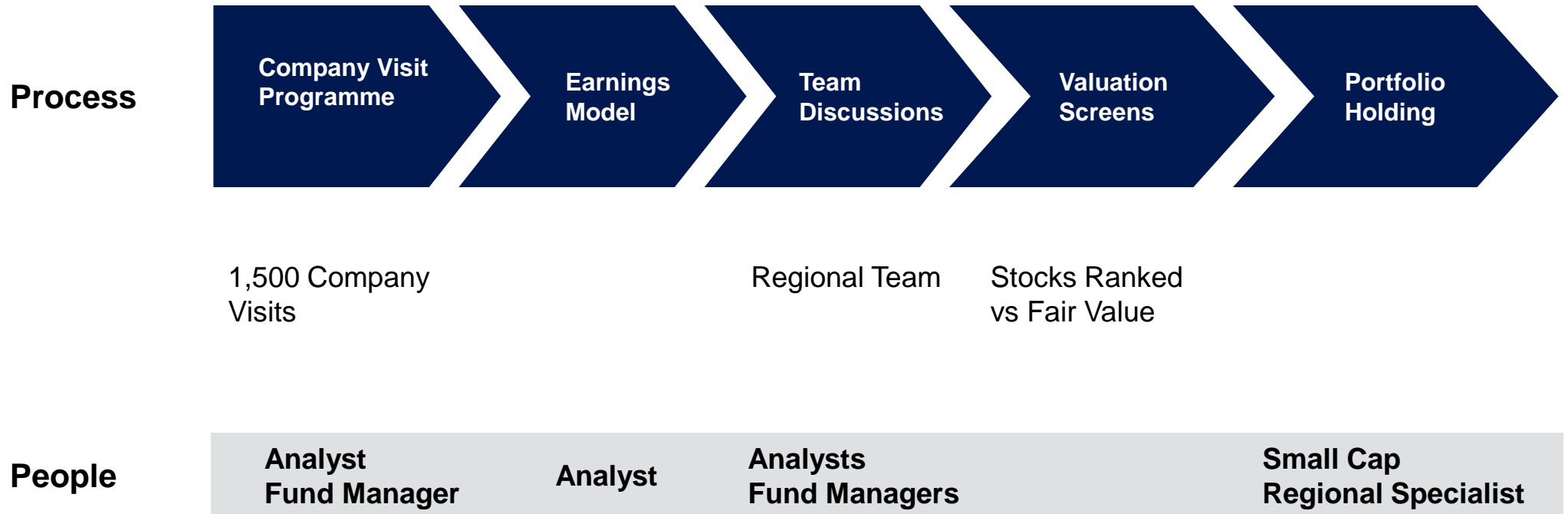
Qualitative

Management Assessment

- Interest in shareholder value
- Focused strategy
- Sound business practices
- Historic record of success
- Length of time with company

Investment process

Building stock portfolios



Investment process

Sell discipline

Our methodology allows us to identify holdings that offer poor relative potential and in which conviction is low

The decision to sell a position may be based on:

- Position reaches fair value target price
- Opportunity cost perceived in comparison to alternative investment
- Fundamental deterioration makes original target price no longer appropriate

Investment process

Portfolio construction – Overview

- Smallcap regional portfolio managers have primary responsibility for regional portfolio construction
- Regional and Sectoral weightings are reviewed by smallcap team to ensure compliance of overall portfolio with
 - Regional Allocation targets
 - Risk/Return expectations
 - Avoidance of unintended biases (i.e. sector over-concentration)
- Supplemented by ongoing monitoring of overall portfolio by Matthew Dobbs

Investment process

Portfolio construction - Regional allocation



* Source Schroders as of March 31, 2013

Investment process

Controlling portfolio risk

PRISM brings together alternative risk measurement and management tools into a single report

- Online
- Interactive

PRISM integrates both internal and external tools

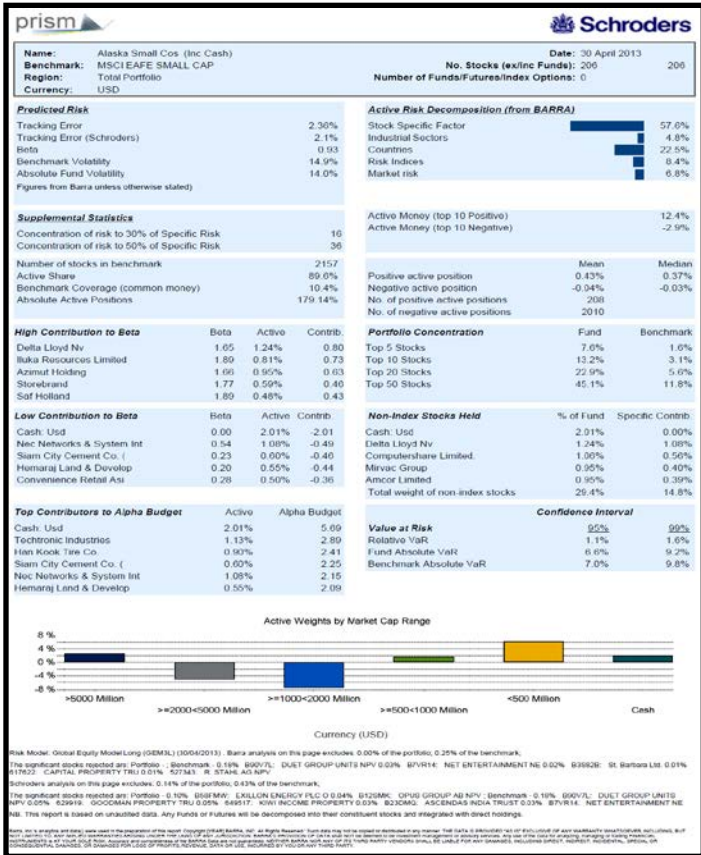
- Risk analysis
- Characteristics analysis
- Other statistical measures

The PRISM Risk Report identifies active risk and the sources of risk by decomposing active portfolio positions into Stock Specific/Sector and Style factors

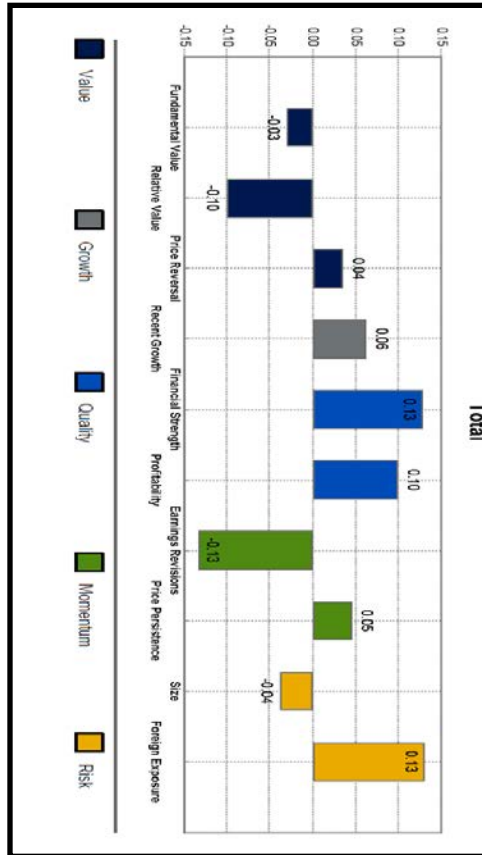
Investment process

Portfolio risk investment strategy manager – overview

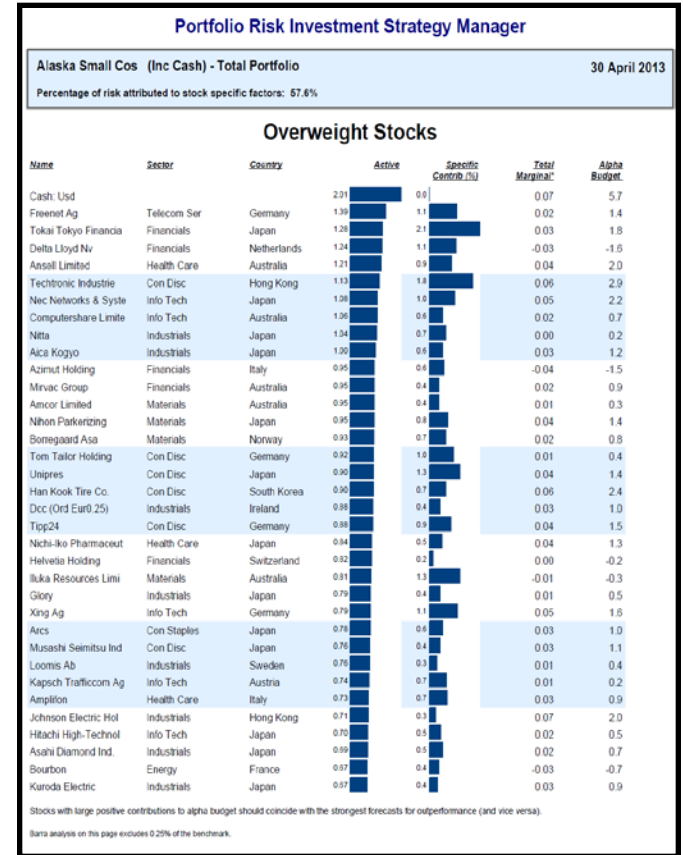
Overview



Characteristics



Stock Detail



The security and portfolio information shown is for a representative account within the Schroder US International Small Cap Fund Composite. The information is intended to illustrate the risk management process and should not be viewed as a recommendation to buy/sell. See the Composite Disclosure and Performance information at the end of this presentation

Risk management

Risk management guidelines

- Cash not to exceed 5% of the value of the fund
- Stock weights: No formal limits, but generally between +/- 2% relative to the benchmark
- Sector weights: No formal limits, but generally between +/- 7% relative to benchmark
- Country weights: No formal limits, but generally between +/- 7% relative to the benchmark
- Derivatives: Not used

Biographies

Portfolio Manager

Matthew Dobbs joined Schroders in 1981. Following 4 years in Research, Matthew has been involved in both global and specialised Pacific Basin portfolio management. He took overall responsibility for international and global SmallCap in 2000 having been, prior to that, Pacific ex Japan SmallCap specialist, and has held a SmallCap role since 1996

Europe

Rosemary Banyard graduated from Cambridge University in 1979 with an Honours Degree in Classics. She joined James Capel as a graduate trainee, spent two years advising non-discretionary private clients on their investments, and then moved into equity research, specialising in the textiles sector. In 1995 she completed an MBA at London Business School and joined John Govett where she managed the UK Small Companies Unit Trust. She joined Schroders in November 1997 as a member of the SmallCap Team

Andrew Lynch is a Pan-European SmallCap specialist. He joined Schroders in 1998 having completed internships within the Schroder Group. He manages a mixture of institutional funds and unit trusts. Andy has a degree in Politics, Philosophy and Economics from Balliol College, Oxford

Andy Brough graduated from Manchester University with a Degree in Economics before joining Price Waterhouse where he qualified as a Chartered Accountant. He joined Schroders in 1987. He is Head of our UK Smaller Companies Fund Management Team. Andy has specialised in SmallCap since 1987

Luke Biermann graduated from Bath University with a 1st Class Honours BSc degree in Computer Science. He joined Schroders in October 2006, and has joined the SmallCap team as an analyst

Iain Staples joined Schroders in January 2012 as a UK SmallCap analyst. He joined with thirteen years of prior experience as a UK equity analyst covering a wide range of sectors, and prior to that four years as a management consultant. He holds an MA degree in mathematics from Cambridge University, and a BSc from UMIST in Theoretical Physics

Hannah Piper joined Schroders in July 2012 as a Pan-European SmallCap Analyst. After graduating from Durham University with a BSc degree in Natural Sciences she joined Price Waterhouse Coppers where she qualified as a Chartered Accountant. Hannah joins us with 2 years investment experience most recently at UBS Securities where she was a top rated chemicals analyst.

Rory Pike joined Schroders in 2010 starting with the Corporate Responsibility Team. He transferred to the Small Cap team in April 2012. He is a graduate of Trinity College, Dublin

Biographies

Japan

Takuya Furutani joined Schroders as a smallcap analyst in November 2003. He was formerly with Lombard Odier Darier Hentsch, and prior to that Commerz International Capital Management. His investment career commenced in 1994. He has a degree in Business Administration from Northeastern University, Boston

Andrew Rose is a graduate in Japanese and Politics, University of Sheffield and spent a year on a Japanese Government Scholarship to Kobe University to study International Economics. He joined Schroders in 1981 as an analyst, moving to Tokyo in 1984 for three years. Returning to London in 1987, he was responsible for Japanese equity investments for SIM UK and continental European clients. He was seconded to SIM (Japan) as Senior Investment Officer in 1996 with responsibility for Schroders' Japanese equity and SmallCap policy. He has held his SmallCap responsibilities for 16 years

Ayumi Kobayashi joined Schroders in July 2004. She was previously an equity analyst with Yasuda Asset Management, and started her investment career in April 1990. Ayumi has a degree in law from Sophia University, an MBA from Insead and is a CMA

Kazuhiro Toyoda joined our Japanese smallcap team as an analyst on 1st April 2008. Mr Toyoda 10 years investment experience with Nippon Life, the largest life insurance company in Japan, and most latterly worked in a JV between Nippon Life and Hermes, the UK based fund manager. He is a graduate of Tokyo University, has an MBA from Niigata University, and is both a CFA and a CMA

Kota Takahashi joined Schroders as a Japanese smallcap analyst in February 2013. His investment career commenced upon joining Goldman Sachs Asset Management in 2006 as a Japanese equity small cap portfolio manager, as well as covering machinery, and the Internet and Game sector as a sector analyst from 2008. Kota is a graduate of Keio University and is a CFA charterholder

Biographies

Pacific ex. Japan

Paul Rathband joined Schroders in August 2011 as an Asian SmallCap analyst based in Singapore. His investment career commenced in 1991 in Hong Kong with W.I. Carr Securities, covering Hong Kong, Singapore and Malaysian markets. He joined Schroders from RBS Asia Securities in Singapore, where he was Managing Director and responsible for Asia ex Japan research sales. Prior to RBS, Paul was at Arab Malaysian Securities based in Kuala Lumpur

Richard Sennitt joined Schroders in October 1993 as a Japanese analyst, and has managed specialist Asian equities since 1997. He joined the small cap team in December 2007. He is a member of the International Small Cap Investment Committee and Co-manager of Global Small Cap Funds. Richard is a graduate of Oxford University, an Associate Member of UKSIP and is a member of the CFA Institute

Yoon Hee Kyoung joined Schroders in 2007 as an analyst covering smallcap consumer and service stocks in Korea. She has had experience working in both securities and asset management companies in a research capacity. She holds a degree in Arts and Economics from the State University of New York

Kim Young Roe joined Schroders in April 2008 as an analyst covering construction, shipbuilding and infrastructure stocks in Korea. His investment analytical career started in 1999, and he has since held appointments in both domestic and foreign-owned securities companies. He has a BA degree from Seoul University

Jacqueline Kuek joined Schroders in December 2005 as an equity analyst with the Asia ex Japan team with responsibility for Singapore stocks. She became a member of the Global Smallcap team in June 2009. Her investment career commenced upon joining Morgan Stanley as a research analyst in 2000. She holds a degree in Accountancy from Nanyang Technological University, and is both a CFA Charterholder and a Certified Public Accountant

Jing Li joined Schroders in November 2010 as an analyst based in Hong Kong covering Hong Kong and Chinese smallcap stocks. She was formerly with a small Hong Kong based private equity company, and prior to that Morgan Stanley where her investment career commenced in 2004. She has a BA in Economics/Computer Science from Smith College

Rebecca Xu joined Schroders in June 2010 before transferring to Hong Kong in August 2011 to work as an equity analyst responsible for Chinese equity research. Her investment career commenced in 2009 with RBS where she was an investment banking analyst. She has a MPhil in Management from the University of Cambridge and a BA in Journalism and Communication from Tsinghua University. Rebecca joined the SmallCap Team as an analyst in September 2012

Gina Kim Ji Yong joined Schroders in Singapore in September 2012 as a SmallCap analyst. Gina has eight years of experience as a stock analyst, with four years of consulting prior to that. She is a graduate of Cambridge University, and a CFA charterholder

Important Information

Risks associated with International Small Companies: All investments involve risks including the risk of possible loss of principal. The market value of a fund's portfolio may decline as a result of a number of factors, including adverse economic and market conditions, prospects of stocks in the portfolio, changing interest rates, and real or perceived adverse competitive industry conditions. Investing in foreign securities, may magnify risks due to changes in foreign exchange rates and the possibility of substantial volatility due to political and economic uncertainties in foreign countries. Investments in small capitalization companies generally carry greater risk than is customarily associated with larger capitalization companies, which may include, for example, less public information, more limited financial resources and product lines, greater volatility, higher risk of failure than larger companies, and less liquidity.

The views and forecasts contained herein are those of the International Small Cap team and are subject to change. The information and opinions contained in this document have been obtained from sources we consider to be reliable. No responsibility can be accepted for errors of facts obtained from third parties. Reliance should not be placed on the views and information in the document when taking individual investment and/or strategic decisions.

The opinions stated in this presentation include some forecasted views. We believe that we are basing our expectations and beliefs on reasonable assumptions within the bounds of what we currently know. However, there is no guarantee that any forecasts or opinions will be realized.

Past performance is no guarantee of future results. The value of an investment can go down as well as up and is not guaranteed.

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The returns presented represent past performance and are not necessarily representative of future returns which may vary. The value of investments can fall as well as rise as a result of market or currency movements. Exchange rates may cause the value of overseas investments and the income from them to rise or fall. Funds that invest in smaller companies that may be less liquid than in larger companies and price swings may therefore be greater than in larger companies funds

Performance Figures

Performance figures are presented on a "gross basis" not reflecting the deduction of investment advisory fees.

Index Benchmark Comparison

Performance is compared to the MSCI EAFE SmallCap Index, a widely accepted benchmark for International equity accounts. This index is unmanaged and does not reflect the deduction of any fees or expenses.

Past Performance

The returns presented represent past performance and are not necessarily representative of future returns which may vary. The value of investments can fall as well as rise as a result of market or currency movements

Opinions

Schroders has expressed its own views and opinions in this presentation and these may change

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June 2013

Equity Yield Strategy

June 2013

Significant Events

- **April 2012 – ARMB authorizes a \$100 million investment in an internally managed dividend portfolio benchmarked against the Dow Jones U.S. Dividend 100 Index.**
- **February 2013 - Initial funding and investment of \$100 million into Equity Yield Strategy.**
- **March 2013 – Index Reconstitution / Portfolio Rebalance**
- **April 2013 – Dividend Reinvestment**
- **May 2013 – Dividend Reinvestment**
- **June 2013 – Dividend Reinvestment**

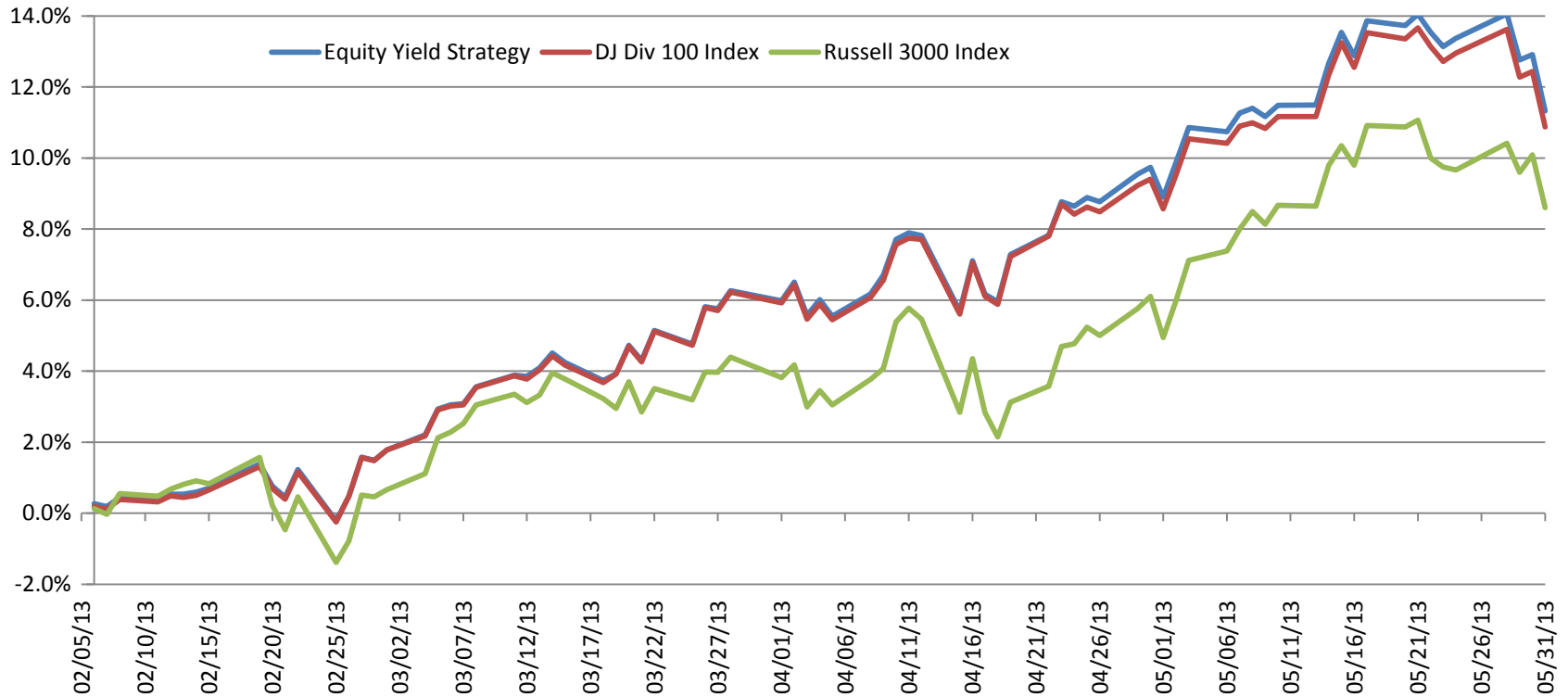
Constraints

- **Universe: Dividend paying stocks in the Dow Jones U.S. Broad Market Index.**
- **Stocks listed in the Dow Jones U.S. Dividend 100 Index may not have a weight of +/- 0.5% of the index at the time of purchase.**
- **A stock not in the Dow Jones U.S. Dividend 100 Index may not have a portfolio weight of greater than 0.5% at the time of purchase.**
- **All stocks will have a minimum market capitalization of USD \$500 million and an average daily trading volume of \$2 million.**
- **At least 90% of the market value of the portfolio will be invested in constituents of the Dow Jones U.S. Dividend 100 Index.**

Process

- **Investment Screen**
 - Filters universe on portfolio constraints
 - Ranks securities on comparable metrics based on sector
 - Price/EBITDA, Free Cash Flow Yield, Book/Price
 - Price/3 Month Moving Average
 - Operating Cash Flow, Net Income, Return on Assets, Quality of Earnings, Long Term Debt/Assets, Current Ratio, Shares Outstanding, Gross Margin, Asset Turnover
 - CF/Total Debt, Return on Equity, Dividend Yield, Dividend Growth Rate
- **Analyst Selection**
 - Portfolio staff analyze top ranked companies according to their assigned sectors and make weighting recommendations relative to the index
- **Monitoring**
 - Portfolio securities are monitored by staff on a daily basis through headlines, company releases, and earnings calls
- **Rebalancing**
 - Portfolio is rebalanced quarterly with monthly dividend reinvestment

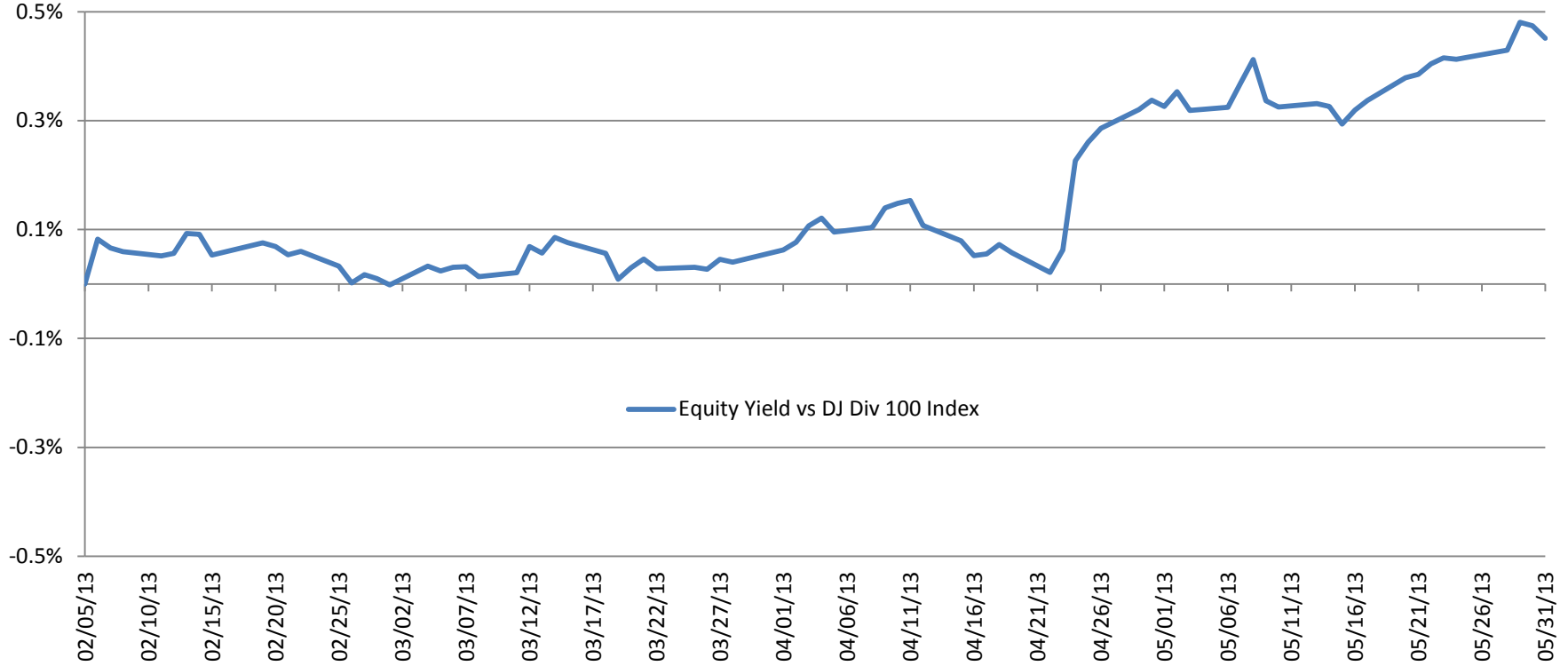
Performance



	<u>Equity Yield Strategy</u>	<u>DJ Dividend 100 Index</u>	<u>Russell 3000 Index</u>
2/6/2013 to end of February	1.49%	1.48%	0.46%
March	4.70%	4.67%	3.92%
April	3.27%	2.99%	1.64%
May	1.45%	1.35%	2.36%
ITD	11.33%	10.88%	8.61%
Standard Deviation	0.62%	0.62%	0.74%

Index Data from Bloomberg

Cumulative Performance Relative to Benchmark



Relative Return

2/6/2013 to end of February	0.01%
March	0.03%
April	0.28%
May	0.10%
ITD	0.45%

Index Data from Bloomberg

Portfolio Characteristics

Top 10 Holdings as of 5/31/2013

<u>Company</u>	<u>Ticker</u>	<u>Rank</u>	<u>Portfolio Weight</u>
Microsoft Corporation	MSFT	1	5.2%
Chevron Corporation	CVX	2	4.3%
Procter & Gamble Company	PG	3	4.2%
Johnson & Johnson	JNJ	4	4.1%
Wal-Mart Stores, Inc.	WMT	5	3.9%
The Coca-Cola Co.	KO	6	3.9%
PepsiCo, Inc.	PEP	7	3.9%
Exxon Mobil Corporation	XOM	8	3.8%
Intel Corporation	INTC	9	3.7%
The Home Depot, Inc.	HD	10	3.7%

Active Share vs. Dow Jones Dividend 100 Index 8.3%

Number of Security Holdings – Portfolio 99

Number of Security Holdings – Index 100

Out of Index Holdings 19

Index Securities Not in Portfolio 20

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: EIG Fund XVI Commitment

ACTION: X

DATE: June 21, 2013

INFORMATION: _____

BACKGROUND:

The Alaska Retirement Management Board (ARMB) has a series of investments with EIG Global Energy Partners (EIG). EIG is a leading institutional energy investor with \$10.3 billion in assets under management and a successful 31-year track record. EIG is active across the energy value chain with investments in upstream exploration and production, infrastructure, midstream, power, transportation, and renewables.

The ARMB has committed \$230 million to EIG funds, including \$80 million to Fund X, \$100 million to Fund XIV, and \$50 million to Fund XV. Internal rates of return (IRR's) through March 31, 2013 for the ARMB's investments are as follows:

<u>Fund IRR's 3/31/13</u>	<u>Gross</u>	<u>Net</u>
Energy Fund X (2004)	13%	11%
Energy Fund XIV (2006)	17%	11%
Energy Fund XV (2010)	37%	23%

Compared to many energy investment groups, EIG generally invests higher in the capital structure using hybrid debt and structured equity investments backed by significant assets. Their investments generally have a high current yield, some equity-like upside participation, and significant downside protection. Due to this structure, EIG's investments are less exposed to potentially volatile energy markets and have significant protection in the event of default. Historically, EIG has had a 15% default rate, but has made money on defaulted investments overall, recovering 141% of their capital for a 5% IRR.

EIG spun out of TCW Asset Management in 2011 and the transition to an independent organization is now complete. EIG has 67 employees, including 35 investment professionals, in offices in Washington D.C., Houston, Hong Kong, London, Sydney, Seoul and Rio de Janeiro. EIG is a registered investment advisor with the SEC and is also regulated by the United Kingdom, Australia, and Hong Kong.

ARMB staff is in frequent contact with EIG and EIG has presented to the ARMB regularly since the first investment in 2004. Blair Thomas, CEO of EIG, last presented to the ARMB on December 7, 2012.

STATUS:

EIG is in the process of raising Fund XVI with a target size of \$4.25 billion. The fund's size and terms are largely the same as the prior fund and are generally limited partner friendly.

ARMB staff met with EIG at their offices in Houston, Texas, on May 30, 2013, as part of the ongoing monitoring process for alternative investments and to explore the Fund XVI opportunity. Staff met with most of EIG's Houston investment professionals and discussed investment opportunities, the current investment portfolio, and EIG's organization.

ARMB staff is comfortable with the EIG organization and their investment opportunities and recommends that the ARMB commit \$80 million to EIG Fund XVI.

RECOMMENDATION:

That the Alaska Retirement Management Board direct staff to commit \$80 million to EIG Fund XVI subject to the satisfactory completion of due diligence.



PRESENTATION TO
THE ALASKA RETIREMENT MANAGEMENT BOARD

TOTAL PLAN RISK ANALYSIS

JUNE 21, 2013

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WORKING DEFINITION OF RISK

RISK
IS....

• The likelihood and magnitude of the difference between a *desired outcome* and an *actual outcome*.

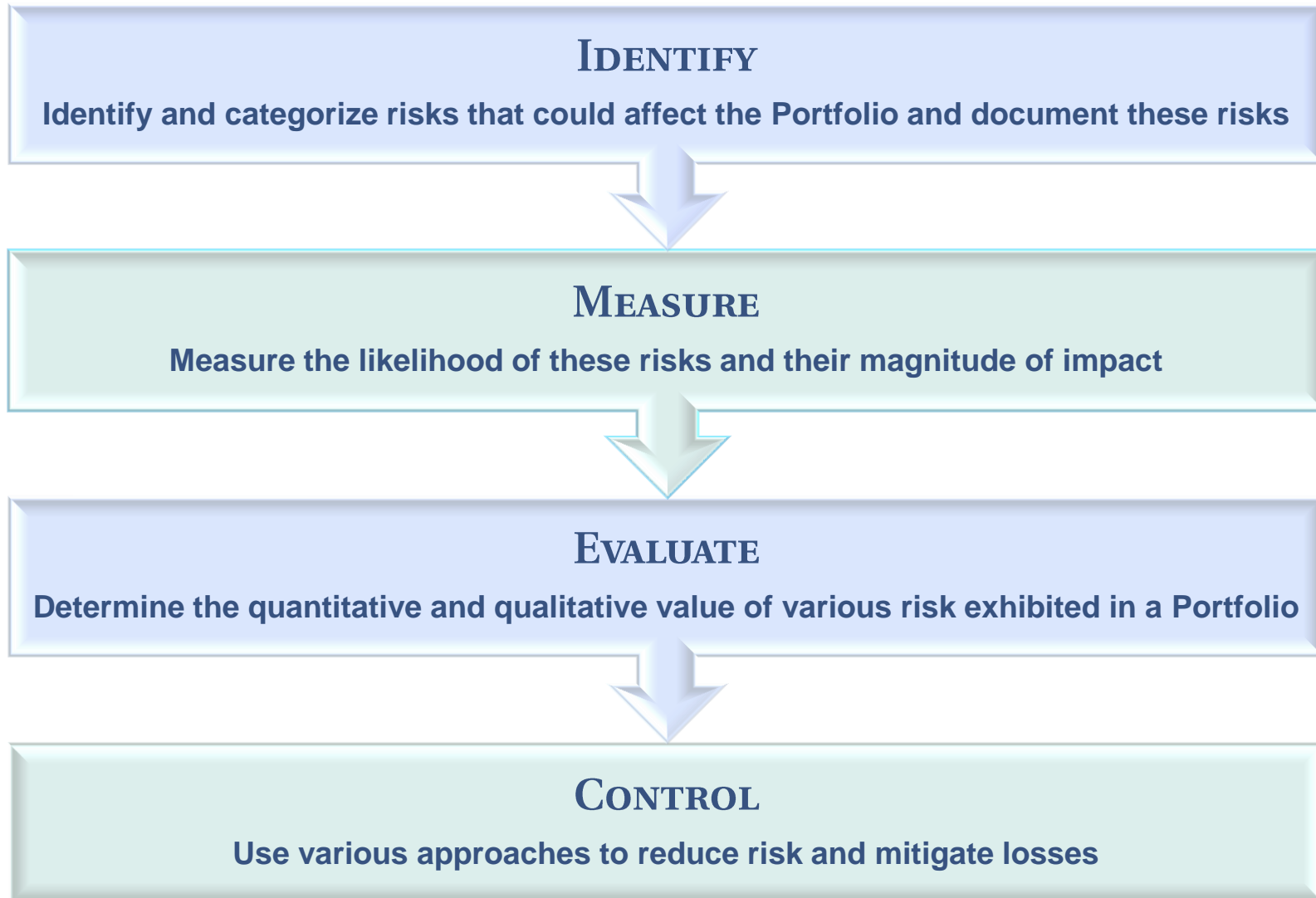
SIMPLER
WAY....

• Risk means potential *loss*, which may be controlled & mitigated by systematic methods.

- Market Risk
- Liquidity Risk
- Inflation Risk
- Credit Risk
- Leverage Risk
- Counterparty Risk

WHAT IS RISK MANAGEMENT?

A process for identifying, measuring, evaluating and controlling risks of different kinds to avoid or minimize potential loss.



WHY DO YOU NEED RISK MANAGEMENT?

AVOID CONCENTRATION RISKS:

- Use Portfolio position-level analysis to make ensure managers do not have concentrated exposure to any one single position or sector.
- For example, it would detect if all managers were holding a sizeable position in Lehman Brothers, Bear Stearns or Financials.

PROTECT YOUR PORTFOLIO FROM DOWNSIDE RISKS:

- Capital preservation is a key to success.
- For example, the Portfolio down 50% needs to be up 100% to break even.

PREVENT CRISIS:

- Identify and correct hazards and substandard Portfolio management practices before losses happen.
- For example, use risk management to proactively re-position the portfolio prior to events, such as the 2008 crisis.

MAP's RISK ADVISORY

POSITION LEVEL ANALYSIS:

Provide line by line position-level analysis in an accurate and timely manner – scrub data, upload Portfolio and typically review reports with Clients monthly to identify any potential risk related issues

CUTTING-EDGE MODELS:

Apply best in class risk systems, tools and methodologies to calculate risk using a combination of proprietary internal and external models

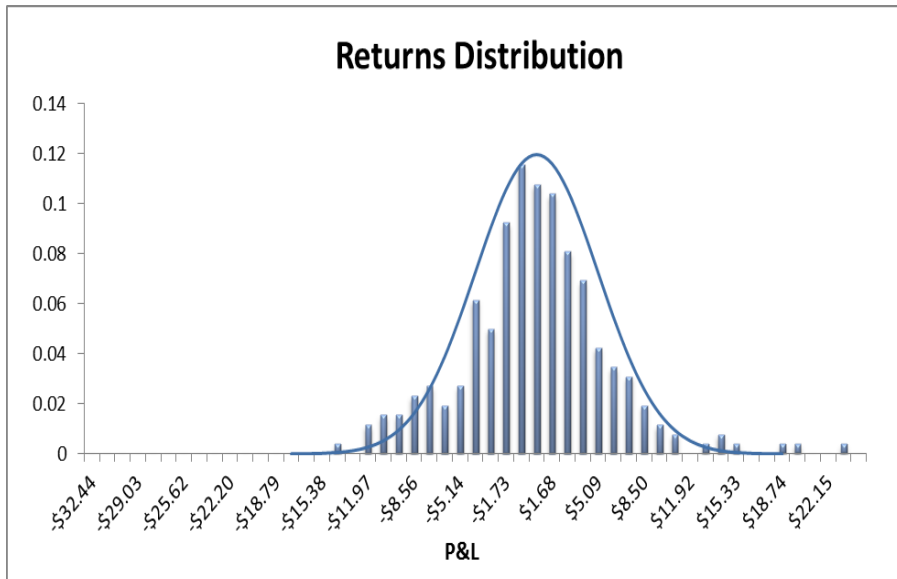
OVERALL PORTFOLIO ANALYSIS:

Summarize Total Portfolio, Asset Class, Sub-Asset Class and Position-level risks in a concise and complete manner – thorough analysis on a Portfolio overview level

RISK MITIGATION STRATEGIES:

Use our team's years of trading floor and derivatives experience, to advise on appropriate actions to mitigate and manage risks on an ongoing basis

VALUE AT RISK (VaR)



HISTORICAL VAR METHOD

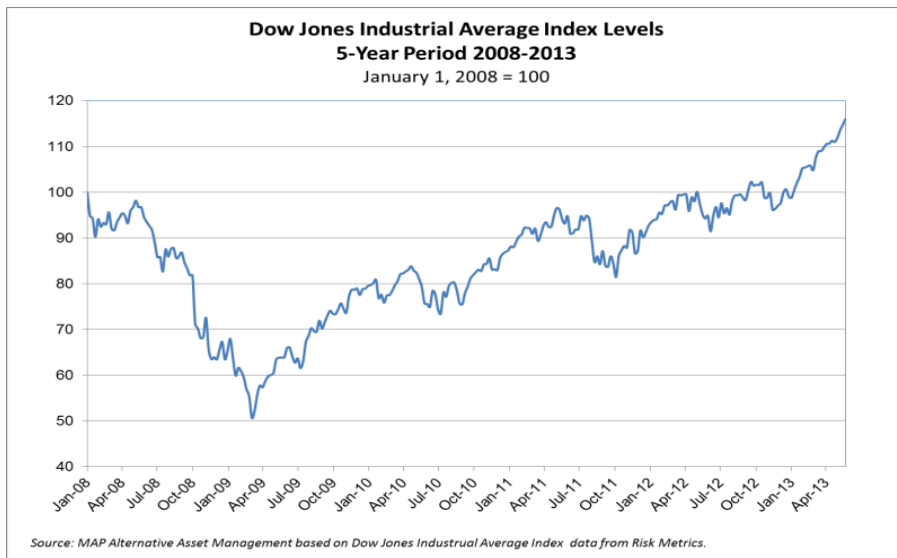
- Generates Profit and Loss scenarios by applying risk factor moves (Equities, Commodities, Currencies, Interest Rates, Volatilities).
- Observes historical period's risk factor changes and applies those changes to today's risk factor levels.
- Re-prices each individual security using the new risk factor levels.
- The advantage of Historical VaR is that it accommodates non-normal distributions to capture periods of extreme losses such as large left-tail events (large losses), i.e.: 2008, Russian Devaluation, Tech Bubble.

MONTE CARLO VAR METHOD

- VaR is computed by simulating risk factor scenarios.
- Then revalues all positions for each trial.
- The disadvantage to this method is that it assumes normal return distributions of underlying risk factors and thus does not capture fat-tail events.

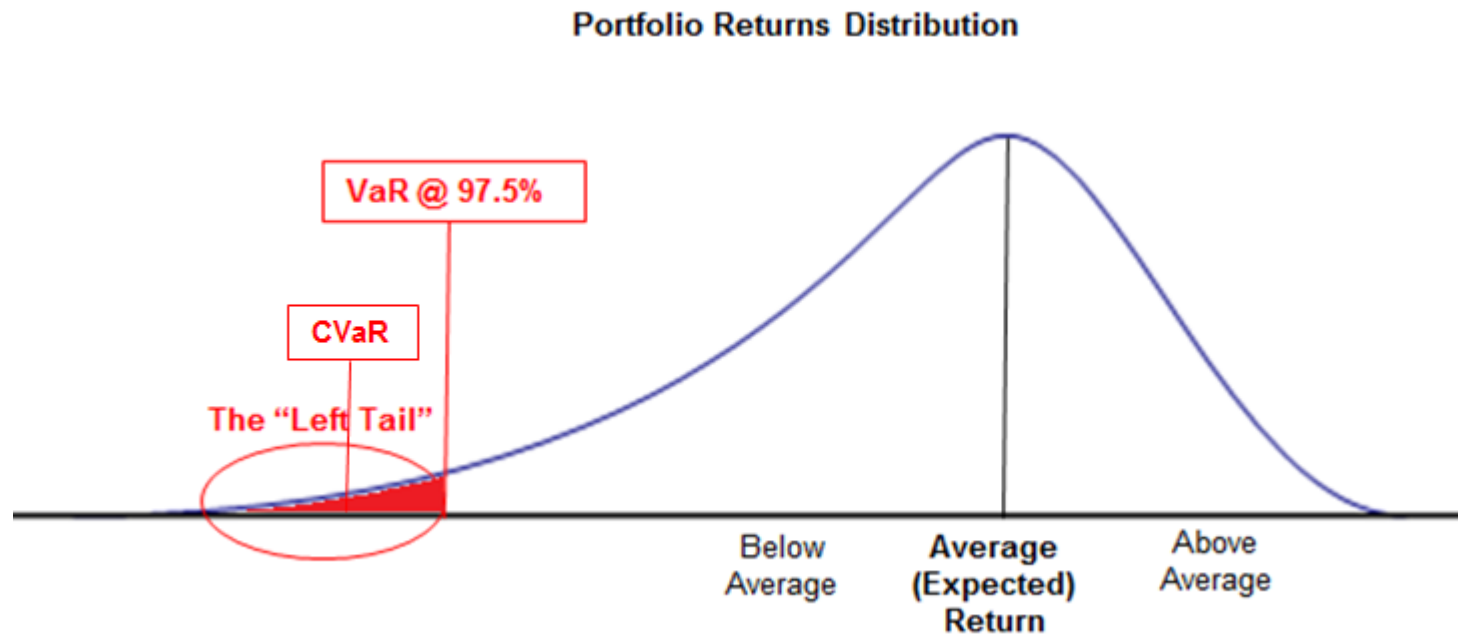
PARAMETRIC METHOD

- Estimates VaR directly from the Standard Deviation of portfolio returns.
- Its shortcoming is that this method assumes that the distribution of risk factor returns and portfolio returns are normal.
- Similar to the Monte Carlo VaR method, this does not capture fat-tail events.



VALUE AT RISK (VaR)

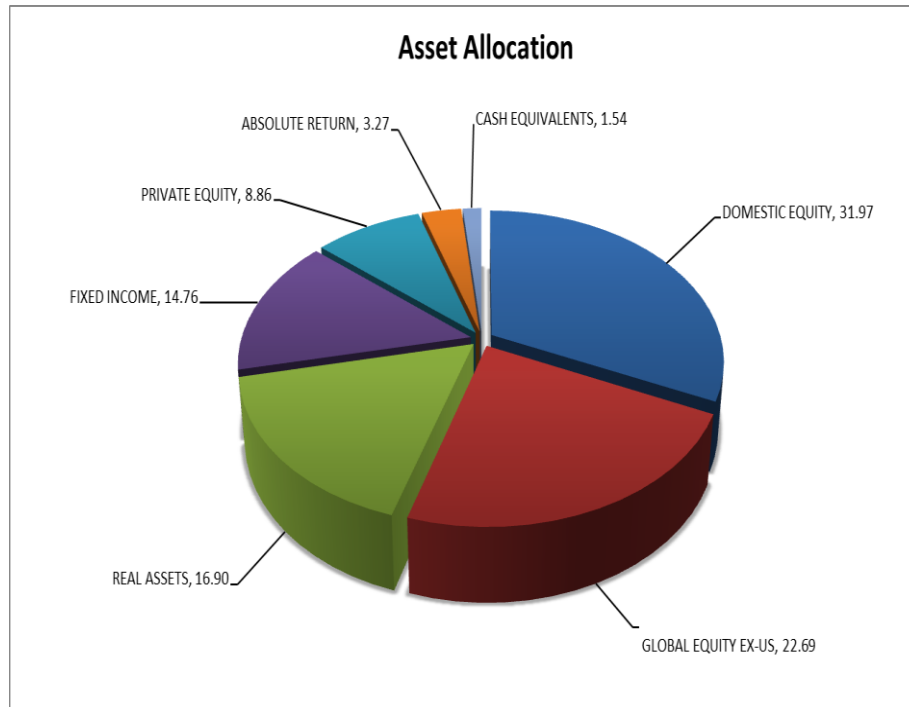
VALUE AT RISK (VaR) – is the maximum value of losses that can be expected during a specified time period at a given level of probability (i.e. over a 1-month time horizon with 97.5% confidence interval).



- The VaR number itself provides no information on potential losses beyond this maximum amount.
- For example, when the VaR is exceeded, how large is the potential exposure?
- Additionally, one must consider when the VaR is exceeded, how large is the projected maximum loss?
- Therefore, one must look at Conditional VaR and utilize additional statistical methods, comprehensive stress-testing and historical scenario analyses to identify risks contained in the Portfolio that are not captured by VaR.

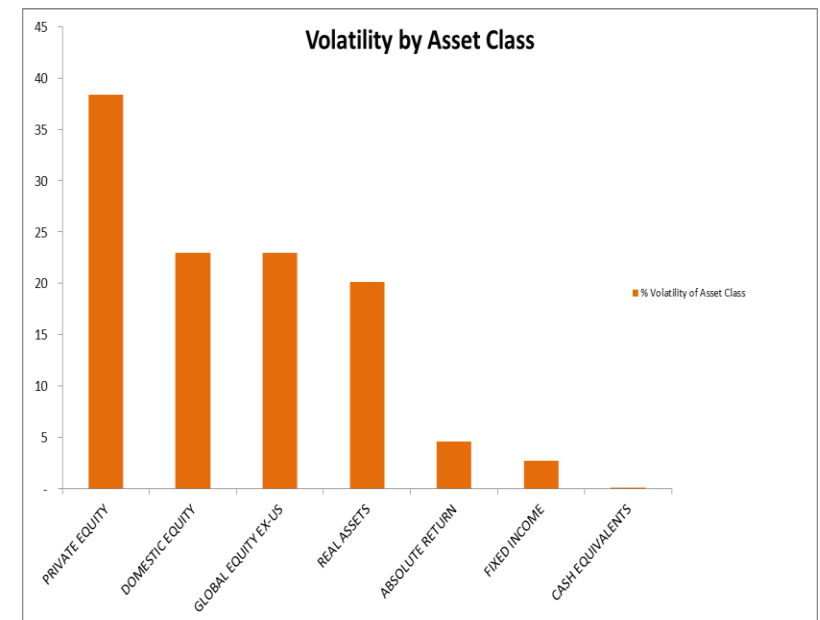
CONDITIONAL VALUE AT RISK (CVAR) – is calculated by taking the simple average of the losses exceeding the VaR threshold. CVaR indicates how large the average potential loss is if VaR is exceeded.

SUMMARY RISK REPORT: ASSET CLASS ALLOCATION

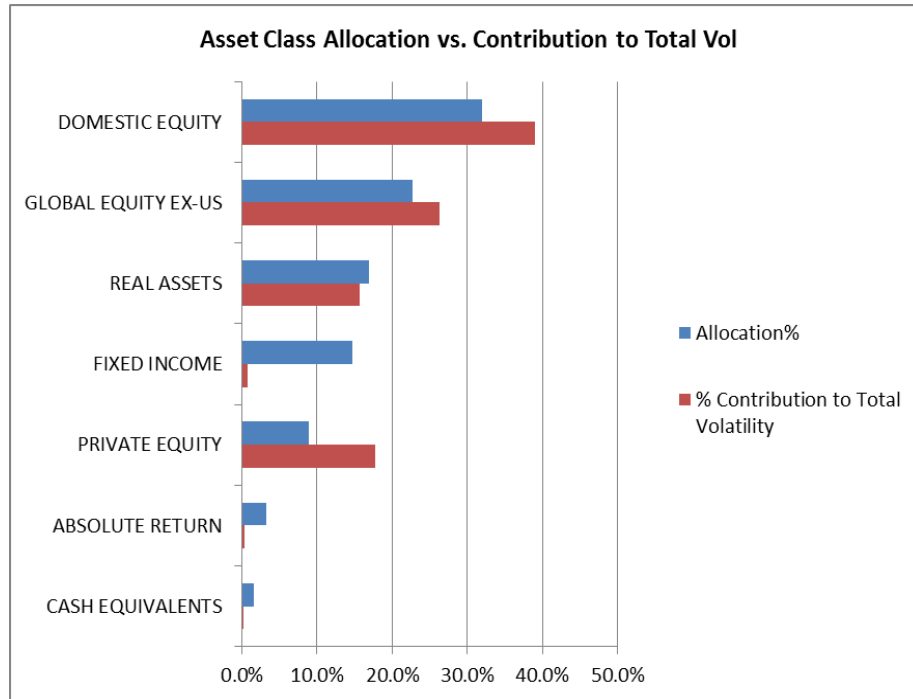


- Total Market Value is \$18.0Bn. Total Plan Volatility is projected to be 18.50% Annualized. The Volatility column looks at the individual Volatility of each Asset Class.
- Domestic Equity and Global Equity each have a Volatility of 23%.
- Private Equity has the highest Volatility of the seven Asset Classes at 38%.
- Fixed Income has the second lowest Volatility of the Asset Classes at only 3% Volatility followed by Absolute Return with a 5% Volatility.

Asset Class	Market Value	Allocation%	% Volatility of Asset Class	% Total Value-at-Risk
Total	17,951,610,409	100.00%	18.50	11.95
DOMESTIC EQUITY	5,739,718,317	31.97%	22.98	4.52
GLOBAL EQUITY EX-US	4,074,092,974	22.69%	22.97	3.37
REAL ASSETS	3,033,860,774	16.90%	20.15	2.41
FIXED INCOME	2,650,541,199	14.76%	2.76	0.24
PRIVATE EQUITY	1,590,335,090	8.86%	38.38	2.23
ABSOLUTE RETURN	586,395,018	3.27%	4.63	0.10
CASH EQUIVALENTS	276,667,037	1.54%	0.12	0.00



SUMMARY RISK REPORT: TOTAL PLAN BY ASSET CLASS

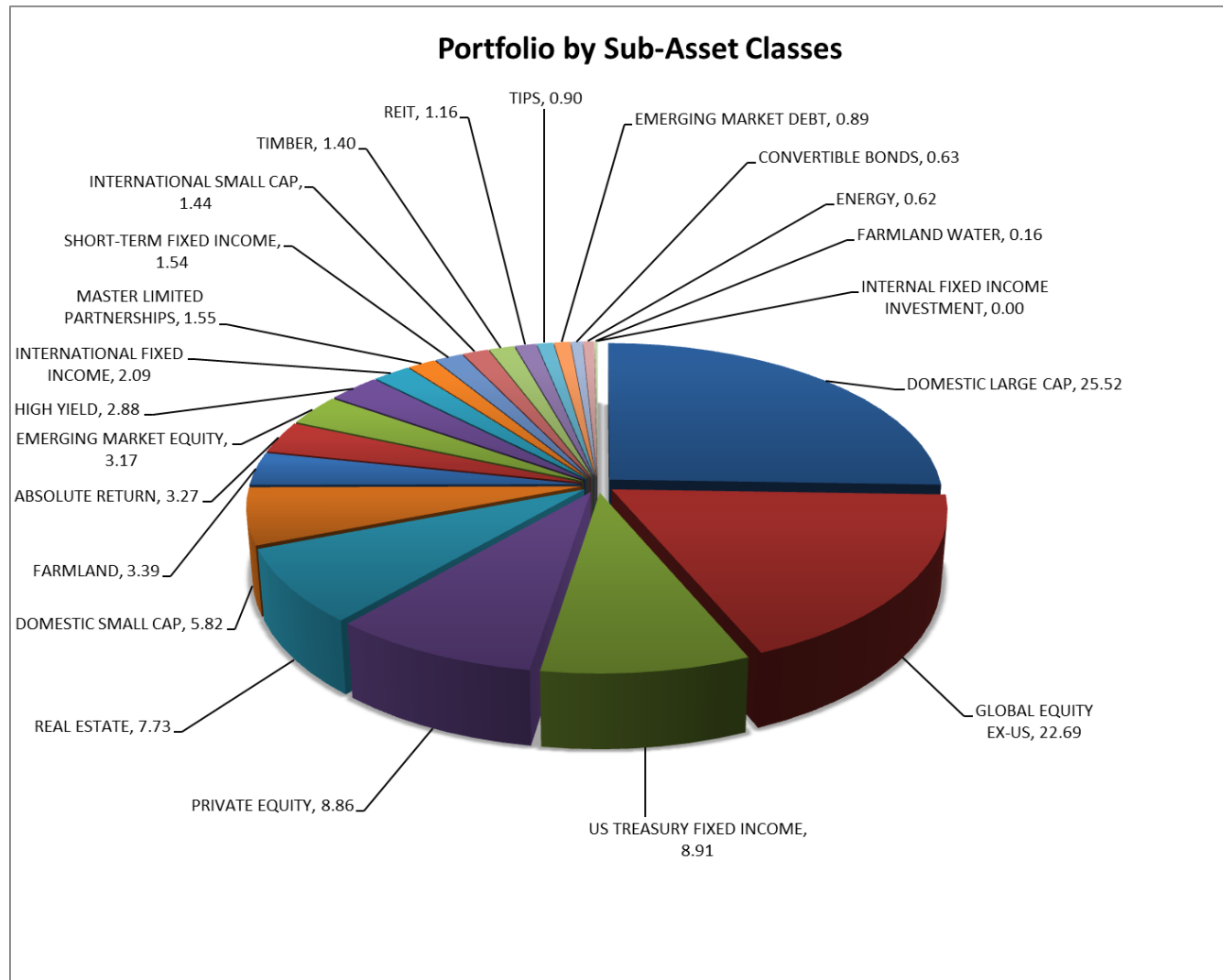


- Domestic Equities with 32% of holdings provide 39% Contribution to Total Plan Volatility. Combined Domestic and Global Equities Ex-US comprise 55% of holdings and provide 65% Contribution to Total Volatility.
- Private Equities with a 9% allocation provides 18% Contribution to Total Volatility.
- Real Assets at 17% of the Portfolio has a Contribution to Total Volatility of 16%.
- Fixed Income with 15% of holdings provides less than 1% Contribution to Total Volatility.
- Absolute Return with 3% of holdings comprises only 0.37% Contribution to Total Volatility.

Asset Class	Market Value	Allocation%	Annualized Standard Deviation	% Contribution to Total Volatility
Total	17,951,610,409	100.00%	18.50	100.00%
DOMESTIC EQUITY	5,739,718,317	31.97%	7.35	39.08%
GLOBAL EQUITY EX-US	4,074,092,974	22.69%	5.21	26.37%
REAL ASSETS	3,033,860,774	16.90%	3.41	15.72%
FIXED INCOME	2,650,541,199	14.76%	0.41	0.75%
PRIVATE EQUITY	1,590,335,090	8.86%	3.40	17.72%
ABSOLUTE RETURN	586,395,018	3.27%	0.15	0.37%
CASH EQUIVALENTS	276,667,037	1.54%	0.00	0.00%

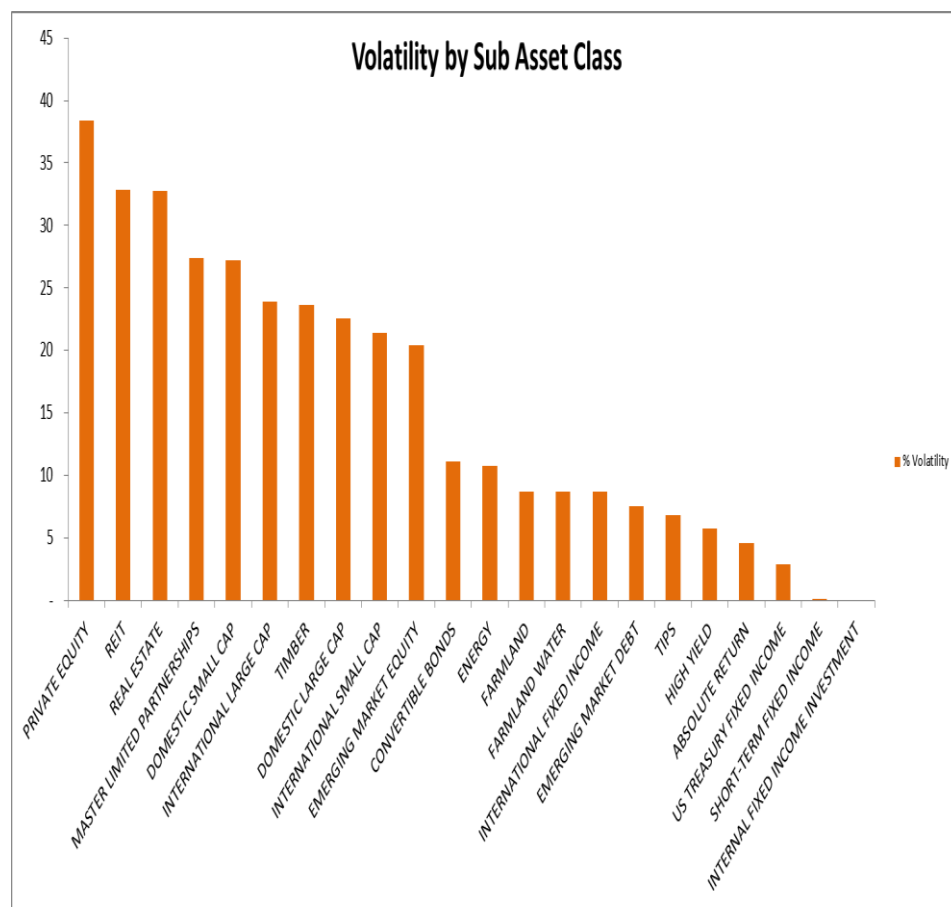
PORTFOLIO OVERVIEW BY SUB-ASSET CLASS

- There are 10,972 individual positions across 22 Sub-Asset Classes.
- The Top 10 Holdings represent 5.83% of the Portfolio, which are entirely comprised of US Treasuries. Cash Equivalents (Short Term Investments) represent 1.54% of the Portfolio.



VOLATILITY BY SUB-ASSET CLASS

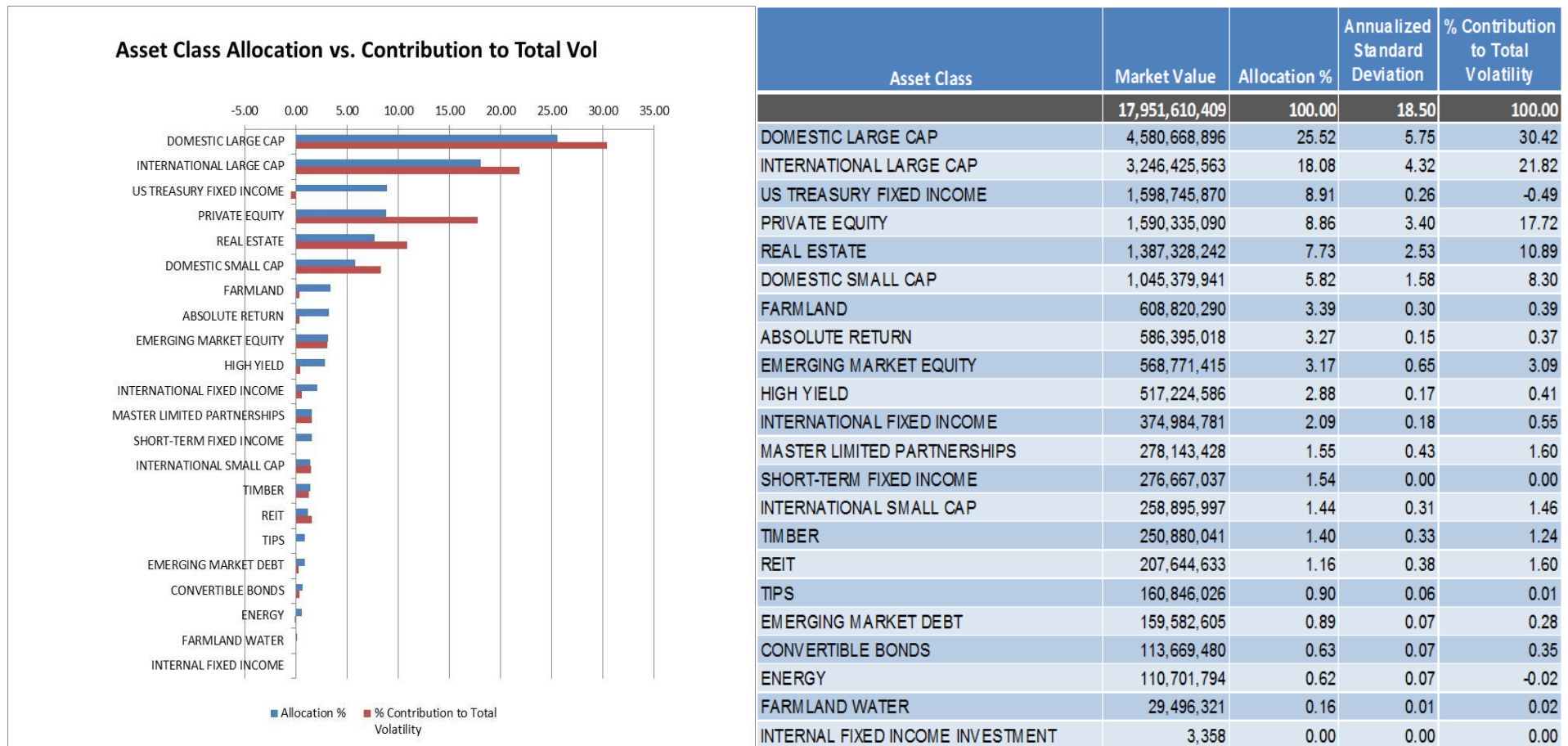
- Total Plan Volatility is projected to be 18.50% annualized. The Volatility column looks at the Volatility for each individual Sub-Asset Class.
- The Private Equity Sub-Asset Class has the highest Annualized Volatility of 38.38%, yet only has a Portfolio allocation of 8.86%.
- The REIT Sub-Asset Class has the second highest Volatility of 32.86% but represents only 1.16% of the Portfolio.
- Domestic Large Cap Equity has a Volatility of 22.54% and is the largest Sub-Asset Class allocation at 25.52% of holdings.
- Short-Term Fixed Income, US Treasury Fixed Income and Absolute Return have the three lowest Sub-Asset Class Volatilities of 0.12%, 2.90% and 4.63% respectively.



	Market Value	Allocation %	% Volatility of Sub Asset Class	% Total Value-at-Risk
	17,951,610,409	100.00	18.50	11.95
PRIVATE EQUITY	1,590,335,090	8.86	38.38	2.23
REIT	207,644,633	1.16	32.86	0.30
REAL ESTATE	1,387,328,242	7.73	32.74	1.91
MASTER LIMITED PARTNERSHIPS	278,143,428	1.55	27.43	0.24
DOMESTIC SMALL CAP	1,045,379,941	5.82	27.18	1.01
INTERNATIONAL LARGE CAP	3,246,425,563	18.08	23.87	2.81
TIMBER	250,880,041	1.40	23.60	0.19
DOMESTIC LARGE CAP	4,580,668,896	25.52	22.54	3.51
INTERNATIONAL SMALL CAP	258,895,997	1.44	21.38	0.20
EMERGING MARKET EQUITY	568,771,415	3.17	20.42	0.39
CONVERTIBLE BONDS	113,669,480	0.63	11.09	0.03
ENERGY	110,701,794	0.62	10.79	0.03
FARMLAND	608,820,290	3.39	8.73	0.17
FARMLAND WATER	29,496,321	0.16	8.73	0.01
INTERNATIONAL FIXED INCOME	374,984,781	2.09	8.68	0.12
EMERGING MARKET DEBT	159,582,605	0.89	7.55	0.05
TIPS	160,846,026	0.90	6.80	0.03
HIGH YIELD	517,224,586	2.88	5.78	0.11
ABSOLUTE RETURN	586,395,018	3.27	4.63	0.10
US TREASURY FIXED INCOME	1,598,745,870	8.91	2.90	0.16
SHORT-TERM FIXED INCOME	276,667,037	1.54	0.12	0.00
INTERNAL FIXED INCOME INVESTMENT	3,358	0.00	-	-

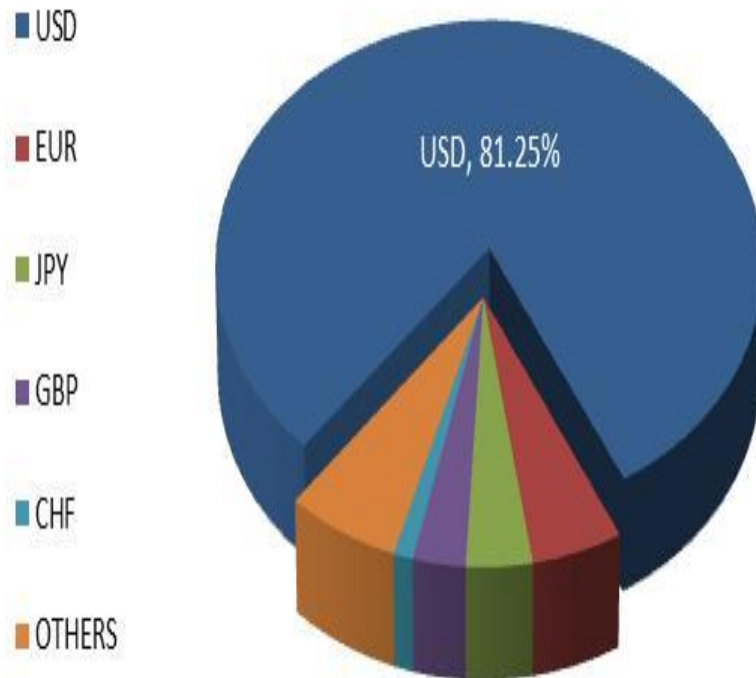
SUMMARY RISK REPORT: SUB-ASSET CLASS ALLOCATION

- Here we can graphically see the Allocations vs. Contribution to Total Volatility by Sub-Asset Class.
- Domestic Large Cap has the largest allocation in the Total Portfolio at 25.52% and accounts for 30.42% of the Total Volatility.
- US Treasury Fixed Income has the third largest allocation at 8.91% and actually reduces the Total Volatility by 0.49%.
- Private Equity (8.86% allocation) accounts for 17.72% of the Total Volatility, which is the third highest among all the Sub-Asset Classes.
- Farmland has an allocation of 3.39% and contributes only 0.39% to the Total Volatility.
- Energy has an allocation of 0.62% and reduces the Total Volatility by 0.02%.



CURRENCY EXPOSURE

Portfolio Currency Exposure

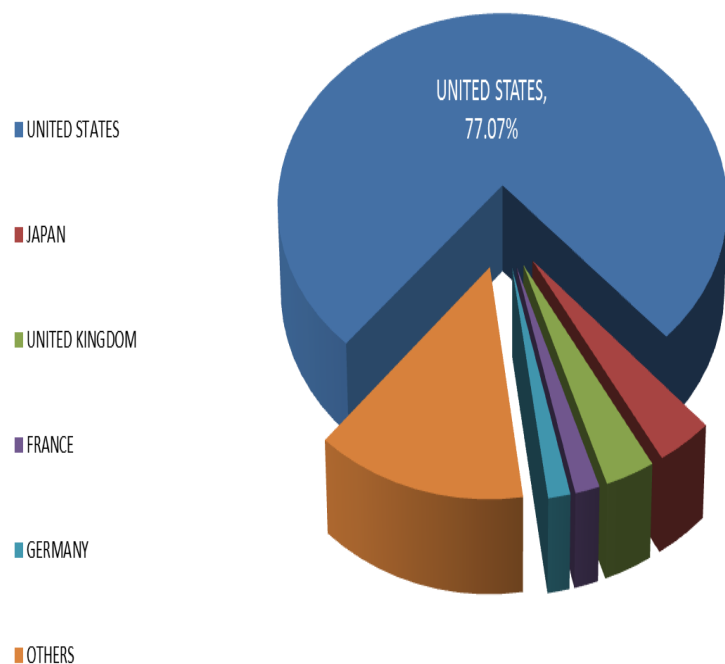


- 81.25% of the Portfolio is invested in US Dollar denominated securities, which represents 80.22% of the Total Volatility.
- The Euro, Japanese Yen, British Pound, and Swiss Franc have significant Total Volatilities of 7.38%, 3.10%, 4.49%, and 1.55%, respectively.
- Outside of the top 5 currency exposures, 55 different currencies each have less than a 0.76% allocation and combined represent 9.95% of the Total Volatility.
- The Historical VaR is 11.95% of the Total Portfolio's Market Value, which is calculated using a 97.5% Confidence Level, 1-Month Horizon, 5-year look back, and no decay factor.

Currency	Market Value	% Allocation	% Total Volatility	% Value-At-Risk
Total	17,951,610,409	100.00%	100.00	11.95%
USD	14,585,182,387	81.25%	80.22	10.02%
EUR	892,105,740	4.97%	7.38	0.75%
JPY	649,568,080	3.62%	3.10	0.35%
GBP	515,860,030	2.87%	4.49	0.57%
CHF	190,637,867	1.06%	1.55	0.17%
OTHERS	1,118,256,305	6.23%	9.95	1.06%

COUNTRY OF RISK EXPOSURE

Portfolio Country Exposure

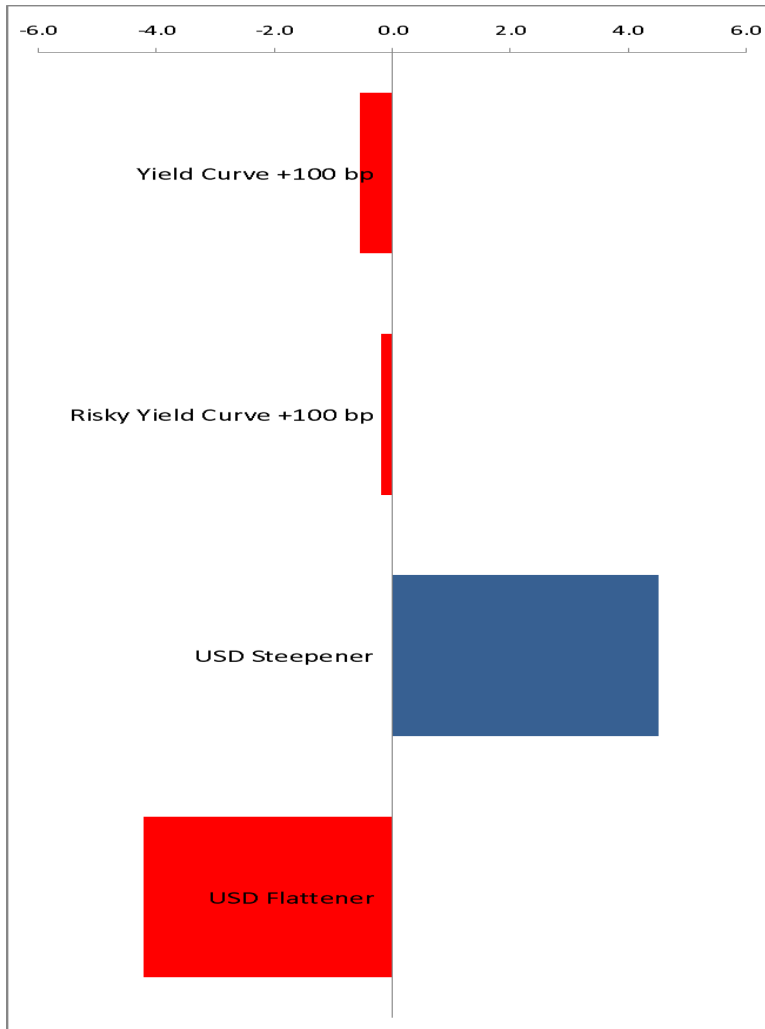


- Country of Risk specifies the location (by Country) which represents the largest share of the issuing entity's underlying operations.
- The Portfolio is primarily focused in the United States with 77.07% of holdings allocated to domestic issuers, which represents 76.58% of the Total Volatility.
- Japan represents 3.63% of the Portfolio holdings and 3.10% of the Total Volatility.
- United Kingdom, France, and Germany round out the Top 5 allocations with percentages of Total Volatility of 4.70%, 2.69%, and 1.81%, respectively.
- Outside of the Top 5 Country allocations, 86 additional countries are represented in the Portfolio with a Total Volatility of 18.83%.
- Key European exposure is minimal, with allocations to Portugal, Italy, Ireland, Greece, and Spain of 0.04%, 0.40%, 0.57%, 0.01%, and 0.21%, respectively.

Country	Market Value	% Allocation	% Total Volatility	% Value-At-Risk
Total	17,951,610,409	100.00%	100.00	11.95%
UNITED STATES	13,834,469,744	77.07%	76.58	9.61%
JAPAN	651,280,247	3.63%	3.10	0.35%
UNITED KINGDOM	563,077,876	3.14%	4.70	0.59%
FRANCE	276,873,500	1.54%	2.69	0.26%
GERMANY	249,115,318	1.39%	1.81	0.23%
OTHERS	2,376,793,723	13.24%	18.83	2.04%

YIELD CURVE RISK

- A Yield Curve +100 bp shift results in a projected loss of 0.56%.
- A Steepening or Flattening results in a 4.46% gain or a 4.17% loss, respectively.
- A Steepener is defined as a Predictive shock of -15 bp at the 2yr and +15 bp at the 10yr.



	Yield Curve +100 bp		Risky Yield Curve +100 bp	
	\$ Change in PV	% Change in PV	\$ Change in PV	% Change in PV
Yield Curve Shifts	\$ (100,177,099)	-0.56	\$ (37,979,642)	-0.21

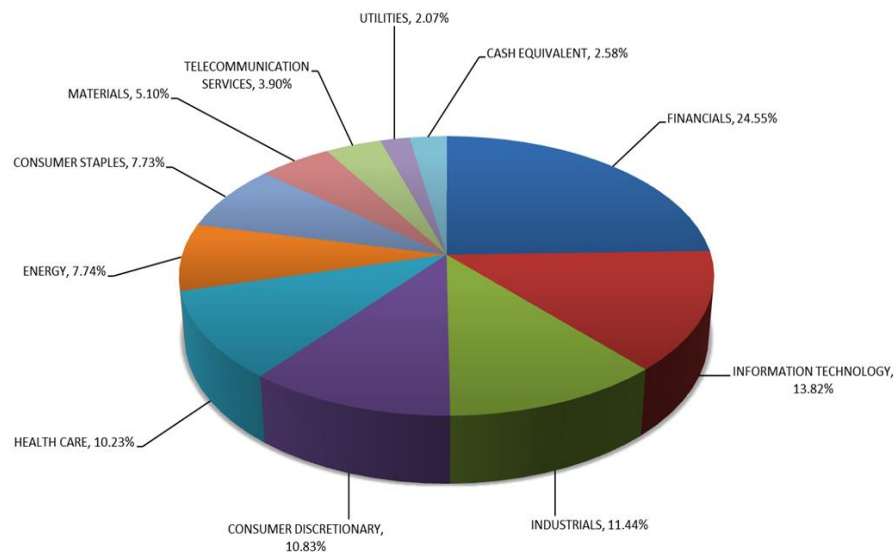
	USD Steepener		USD Flattener	
	\$ Change in PV	% Change in PV	\$ Change in PV	% Change in PV
Yield Curve Twists	\$ 799,085,353	4.46	\$ (747,895,593)	-4.17

SECTOR ANALYSIS FOR PUBLIC EQUITIES

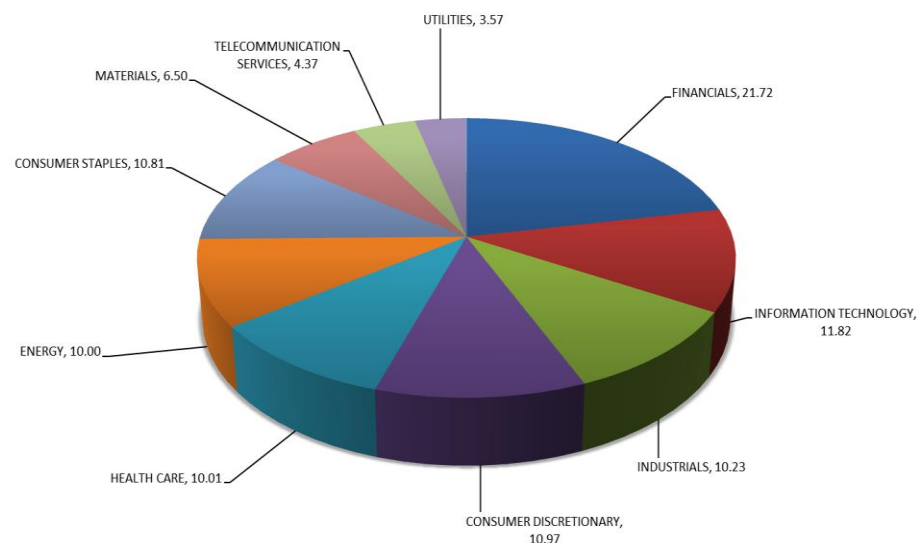
Asset Class	Allocation%	% Total Volatility	MSCI ACWI Index Weight (%)	ARMB vs ACWI Weight
Total	100.00%	100.00%	100.00	
FINANCIALS	24.55%	28.80%	21.72%	2.83%
INFORMATION TECHNOLOGY	13.82%	12.77%	11.82%	2.00%
INDUSTRIALS	11.44%	12.77%	10.23%	1.21%
CONSUMER DISCRETIONARY	10.83%	11.67%	10.97%	-0.14%
HEALTH CARE	10.23%	7.61%	10.01%	0.22%
ENERGY	7.74%	9.80%	10.00%	-2.26%
CONSUMER STAPLES	7.73%	5.09%	10.81%	-3.08%
MATERIALS	5.10%	6.30%	6.50%	-1.40%
TELECOMMUNICATION SERVICES	3.90%	3.18%	4.37%	-0.47%
UTILITIES	2.07%	1.74%	3.57%	-1.50%
CASH EQUIVALENT	2.58%	0.27%	-	-

- Financials, the largest Sector allocation at 24.55%, provides a 28.80% Contribution to Total Volatility. Financials have a 2.83% greater weight in the ARMB Portfolio than in the ACWI Index.
- Information Technology, the second largest Sector, accounts for 13.82% of the Portfolio, and has a 12.77% Contribution to Total Volatility.
- Industrials, the third largest Sector allocation with 11.44% of the Portfolio, provides 12.77% Contribution to Total Volatility.
- Consumer Discretionary accounts for 10.83% of the Portfolio and has an 11.67% Contribution to Total Volatility.

Portfolio Composition

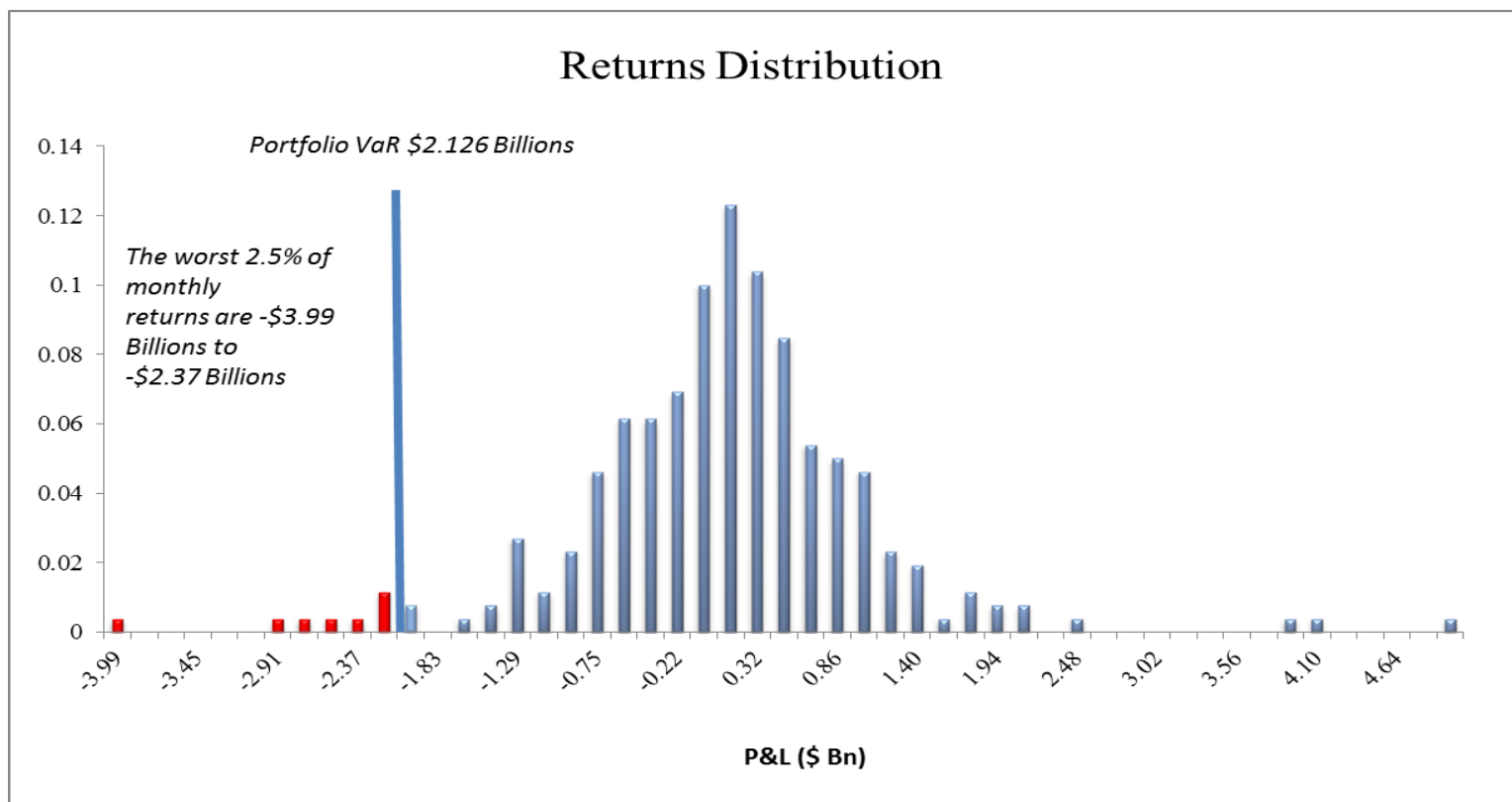


MSCI ACWI Index



HISTORICAL VaR ANALYSIS

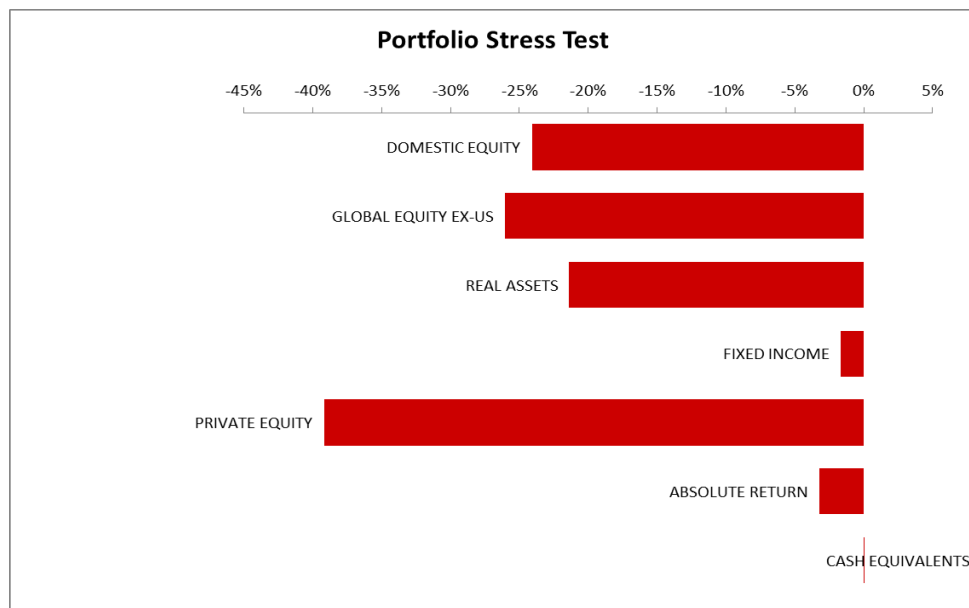
- The Portfolio has a VaR* of \$2.13Bn and a Conditional VaR of \$2.75Bn.
- The largest loss occurs at \$3.99Bn.
- The VaR would be \$164MM (or 0.91%) higher if the Portfolio had less diversification.



Historical	VaR	Conditional VaR	VaR Diversification
Portfolio	\$ 2,126,049,218	\$ 2,747,509,386	\$ 163,541,619
in % of Market Value	11.84%	15.31%	0.91%

*Utilizing a 5 year historical VaR calculation, assuming a 1-month horizon and 97.5% confidence interval with no decay factor.

HISTORICAL SCENARIO ANALYSIS



- A G8 Equity 1M Worst 1997-2005 scenario analysis produces a projected loss in the Portfolio of 21.05%, due to large projected Dollar losses in Domestic Equity of \$1.4Bn (-24.08%), Global Equity Ex-US \$1.1Bn (or -26.07%).
- Private Equity is projected to lose 39.18% which is the largest decline in percentage terms. Real Assets are projected to decline 21.38%.
- Fixed Income experiences a 1.65% projected loss while Absolute Return experiences a 3.21% projected loss.

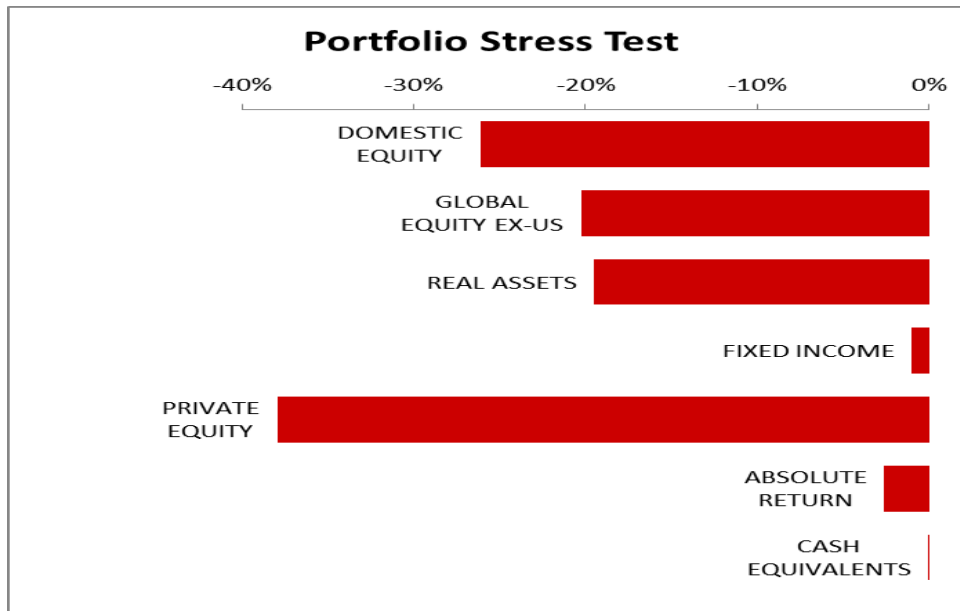
	Initial Market Value	G8 Equity 1M Worst 1997-2005	
		Change in Market Value	P&L
Total	17,951,610,409	(3,778,740,690)	-21.05%
DOMESTIC EQUITY	5,739,718,317	(1,382,299,244)	-24.08%
GLOBAL EQUITY EX-US	4,074,092,974	(1,062,189,788)	-26.07%
REAL ASSETS	3,033,860,774	(648,657,135)	-21.38%
FIXED INCOME	2,650,541,199	(43,739,911)	-1.65%
PRIVATE EQUITY	1,590,335,090	(623,058,526)	-39.18%
ABSOLUTE RETURN	586,395,018	(18,811,290)	-3.21%
CASH EQUIVALENTS	276,667,037	15,204	0.01%

Nominal changes in Key Risk Factors for the G8 Equity 1M Worst 1997-2005. This scenario specifically looks at each G8 Country's Worst 1 month Equity market Performance over the time period from 1997 until 2005.

Equity Markets

- U.S. – DJIA Index decreased by 20%
- Germany – DAX decreased by 28%
- Japan – Nikkei 225 decreased by 23%
- U.K. – FTSE 100 decreased by 18%
- Canada – SP/TSE 60 Index decreased by 24%
- Italy – FTSE MIB Index decreased by 32%
- France – CAC 40 decreased by 24%
- Russian – RTS decreased by 58%

HISTORICAL SCENARIO ANALYSIS



- A Black Monday (1987) stress test would result in a projected loss of 19.84%, due to large projected losses in Domestic Equity (\$1.5Bn or 26.14%), Global Equity (\$826MM or 20.27%), Private Equity (\$603MM or 37.92%), and Real Assets (\$591MM or 19.47%).
- Fixed Income is projected to lose only 1.00% while Absolute Return is projected to lose only 2.62%.

Nominal changes in Key Risk Factors for the Black Monday (1987) Scenario:

Equity Markets

- U.S. – S&P 500 decreased by 26%
- Germany – DAX decreased by 24%
- Japan – Nikkei 225 decreased by 15%
- U.K. – FTSE 100 decreased by 29%

USD Treasury Curve Yields

- 2, 5 and 10-Year yields relative 15% decline

Currencies

- British Pound strengthened by 3.5%
- Japanese Yen strengthened by 2.6%

	Initial Market Value	Black Monday (1987)	
		Change in Market Value	P&L
Total	17,951,610,409	(3,562,232,313)	-19.84%
DOMESTIC EQUITY	5,739,718,317	(1,500,491,582)	-26.14%
GLOBAL EQUITY EX-US	4,074,092,974	(825,834,014)	-20.27%
REAL ASSETS	3,033,860,774	(590,801,926)	-19.47%
FIXED INCOME	2,650,541,199	(26,582,109)	-1.00%
PRIVATE EQUITY	1,590,335,090	(603,096,537)	-37.92%
ABSOLUTE RETURN	586,395,018	(15,374,046)	-2.62%
CASH EQUIVALENTS	276,667,037	(52,100)	-0.02%

MAP ALTERNATIVE ASSET MANAGEMENT COMPANY

QUESTIONS & ANSWERS:



DISCLOSURE

All information enclosed herein is believed to be reliable, although MAP Alternative Asset Management Company, LLC makes no representation or warranty as to its accuracy. The valuations are based upon models and there can be no assurances that the forecasts or valuations will be achieved. This information should not be deemed as investment advice.

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Many assumptions were made some detailed below (additional assumptions were made and are available upon request):

- 1) MAP relied upon the information provided by ARMB staff, the Custodian and Managers as of March 31, 2013.
- 2) MAP incorporated proxies for the Private Equity, Real Assets and Absolute Return Managers for this presentation which may differ significantly from the actual holdings and thus actual analysis and results may change, significantly. Complete details for proxies are available upon request.
- 3) MAP utilized a combination of external analytics, internal tools and calculations to generate these reports. Many assumptions were made, which may not necessarily be accurate. Changes in assumptions can significantly alter the results and one should consult their own advisors prior to making any investment based upon this analysis.
- 4) Historical VaR numbers assume a 1-mo horizon, 5-day sampling, 97.5% confidence interval, 5-year look back and no decay factor.

MAP ALTERNATIVE ASSET MANAGEMENT

FOR ANY ADDITIONAL QUESTIONS PLEASE FEEL FREE TO CONTACT:

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ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Investment Advisory Council Member
Contract Expiration

ACTION: _____

INFORMATION: X

DATE: June 21, 2013

BACKGROUND:

AS 37.10.270 provides that the Alaska Retirement Management Board (Board) may appoint an investment advisory council (IAC) composed of at least three and not more than five members. Members shall possess experience and expertise in financial investments and management of investment portfolios for public, corporate, or union pension benefit funds, foundations or endowments. The contract for IAC member George Wilson expires June 30, 2013. On April 19, 2013, the Board authorized staff to advertise for the position, noting that Mr. Wilson be encouraged to provide an application.

STATUS:

Staff advertised the Investment Advisory Council position in Pension & Investments, the State of Alaska on-line directory and on the ARMB website. Chair Gail Schubert appointed Trustees Trivette, Erchinger and Harbo as the Evaluation Committee for applicants. A number of qualified applications were received by the stated deadline, and the committee met June 11, 2013 to discuss the qualifications and scoring for those applicants. George Wilson submitted an application, but specifically requested that unless the specified contractual fees were increased, his application not be considered.

After extensive review and discussion of the remaining applicants, including reference checks, the Committee is recommending four semi-finalists to the Board for final selection: Gary Dokes, Robert Storer, Jeffrey Sharpe and Robert Shaw.

Alaska Retirement Management Board
2013 Meeting Calendar

February 12-13 Tuesday-Wednesday	*Review Capital Market Assumptions *Manager Presentations
February 28, 2013	Legislative Committee Meeting
March 15, 2013	Special Board Meeting
April 17 - Wednesday	Legislative Committee
April 18-19 Thursday-Friday Juneau	*Adopt Asset Allocation *Performance Measurement - 4 th Quarter *Buck Consulting Actuary Report *GRS Actuary Certification *Review Private Equity Annual Plan Pathway Capital Management *Manager Presentations
June 19	Committee Meetings: Audit Legislative Defined Contribution RFP Evaluation Committee
June 20-21 Thursday-Friday Anchorage	*Final Actuary Report/Adopt Valuation/Contribution Rates *Performance Measurement - 1 st Quarter *Manager Presentations
September 18	Committee Meetings: Audit Budget Legislative
September 19-20 Thursday-Friday Fairbanks	*Audit Results/Assets - KPMG *Approve Budget *Performance Measurement - 2 nd Quarter *Real Estate Annual Plan *Real Estate Evaluation - Townsend Group *Manager Presentations
October 3-4	Education Conference - New York City
December 4	Committee Meetings: Audit
December 5-6 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement - 3 rd Quarter Manager Review (Questionnaire) Private Equity Review Economic Round Table *Manager Presentations

Alaska Retirement Management Board
2014 Proposed Meeting Calendar

February 5 – Wednesday	Committee Meetings: Audit Legislative
February 6-7 Thursday-Friday Juneau	*Review Capital Market Assumptions *Manager Presentations
April 23 – Wednesday	Committee Meetings: Legislative
April 24-25 Thursday-Friday Anchorage	*Adopt Asset Allocation *Performance Measurement – 4 th Quarter *Buck Consulting Actuary Report *GRS Actuary Certification *Review Private Equity Annual Plan *Manager Presentations
June 25 – Wednesday	Committee Meetings: Audit
June 26-27 Thursday-Friday Anchorage	*Final Actuary Report/Adopt Valuation/Contribution Rates *Performance Measurement – 1 st Quarter *Manager Presentations
September 17 – Wednesday	Committee Meetings: Audit Budget Legislative
September 18-19 Thursday-Friday Fairbanks	*Audit Results/Assets – KPMG *Approve Budget *Performance Measurement – 2 nd Quarter *Real Estate Annual Plan *Real Estate Evaluation – Townsend Group *Manager Presentations
October ____	Education Conference
December 3 – Wednesday	Committee Meetings: Audit
December 4-5 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement – 3 rd Quarter Manager Review (Questionnaire) Private Equity Review *Manager Presentations

**ALASKA RETIREMENT MANAGEMENT BOARD
M E M O R A N D U M**

To: ARMB Trustees
From: Judy Hall
Date: June 11, 2013
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	6/3/2013 6/3/2013
Martin Pihl	Trustee	Equities	5/9/2013 5/9/2013
Bob Mitchell	Investment Officer	Equities	5/17/2013