ALASKA RETIREMENT MANAGEMENT BOARD

BOARD OF TRUSTEES MEETING

September 19-20, 2013

Fairbanks Westmark Hotel
813 Noble Street
Fairbanks, Alaska
907 455-
907 455- fax

Teleconference 1 800 315-6338 Code 2760#

Thursday, September 19, 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 – June 20-21, 2013

VII. 9:05 Reports

1. Chair Report, *Gail Schubert*
2. Committee Reports
   - A. Audit Committee, *Martin Pihl, Chair*
   - B. Salary Review Committee, *Martin Pihl, Chair*
   - C. Budget Committee, *Gail Schubert, Chair*
   - D. Legislative Committee, *Gail Schubert Chair*
   - E. Real Assets Committee, *Kris Erchinger, Chair*

3. Retirement & Benefits Division Report
   - A. Membership Statistics (informational)
   - B. Buck Consulting Invoices (informational)

   Director Jim Puckett

4. Treasury Division Report
   - A. FY 15 Budget – Action

   Pam Leary, Comptroller

5. CIO Report, *Gary Bader*

6. Fund Financial Report with Cash Flow Update
   Pamela Leary, Comptroller, Dept of Revenue
   Jim Puckett, Division of Retirement & Benefits

9:45-10:15 7. Trust Fund Liquidity
   Gary Bader, Chief Investment Officer

10:15-11:00 8. A. Real Assets FY14 Annual Plan
Real Estate Guidelines Policies and Procedures
Steve Sikes, State Investment Officer

11:00 – Break
15 Minutes

11:15-11:45 B. Consultant Evaluation of Real Estate Plan: Diversification, Compliance, & Performance Measurement
Micolyn Magee, Townsend Group

11:45-12:00 C. Adoption: Real Assets FY 14 Plan & Policies
Board Discussion
Action: Real Assets FY14 Annual Plan
Res. 2013-15
Action: Real Estate Policies and Procedures
Res. 2013-16

Lunch – 12:00 – 1:15 pm

Thursday Afternoon

1:15-1:35	9.	Hancock Agricultural Investment Group *Oliver Williams*
1:40-2:00	10.	Hancock Timber Resource Group *Tom Sarno*
2:05-2:25	11.	Sentinel Real Estate Corporation *David Weiner and David Stenger*
2:30-2:50	12.	Cornerstone Real Estate Advisors *Michael Gately and Denise Stake*

2:50 – Break
10 Minutes

3:00-3:15	13.	Manager Search – Infrastructure *Gary Bader, Chief Investment Officer* *Mike O'Leary, Callan Associates Inc.*
3:15-3:45	A.	Industry Funds Management
3:50-4:20	B.	JP Morgan Asset Management
4:25-4:55	C.	Board Discussion and Selection

End of Meeting Day

Friday, September 20, 2013

9:00		Call to Order
9:00-9:15	14.	Review of Active Domestic Asset Management *Gary Bader, Chief Investment Officer*
9:15-10:15	15.	Performance Measurement – 2nd Quarter *Michael O'Leary and Paul Erlendson, Callan Associates, Inc.*

10:15 – Break
10 Minutes

10:25-10:55	16.	Investment Actions A. Global Ex-US Manager Search B. Benchmark Change Allianz RCM ESG Fund C. Investment Guidelines: Municipal Taxable Bond Funds Resolution 2013-17 D. Information-Medical Office Separate Accounts *Gary Bader, Chief Investment Officer*
11:00	17.	Recap – August 8 Trustee Workshop

IX.	Unfinished Business 1. Disclosure Report, *Judy Hall, Liaison Officer* 2. Calendar, *Judy Hall, Liaison Officer* 3. Legal Report, *Rob Johnson, Legal Counsel*
X.	New Business
XI.	Other Matters to Properly Come Before the Board
XII.	Public/Member Comments
XIII.	Investment Advisory Council Comments
XIV.	Trustee Comments
XV.	Future Agenda Items
XVI.	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:
Anchorage Marriott Hotel
820 West Seventh Street
Anchorage, Alaska

MINUTES OF
June 20-21, 2013

Thursday, June 20, 2013

CALL TO ORDER

CHAIR GAIL SCHUBERT called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:07 a.m.

ROLL CALL

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

Board Members Present
Gail Schubert, *Chair*
Sam Trivette, *Vice Chair*
Gayle Harbo, *Secretary*
Kristin Erchinger
Commissioner Bryan Butcher
Commissioner Becky Hultberg-phone
Tom Brice
Sandi Ryan

Board Members Absent
Martin Pihl

Investment Advisory Council Members Present
Dr. William Jennings
George Wilson

Investment Advisory Council Members Absent
Dr. Jerrold Mitchell

Department of Revenue Staff Present
Angela Rodell, Deputy Commissioner
Gary M. Bader, Chief Investment Officer

Zachary Hanna, State Investment Officer
Scott Jones, Assistant State Comptroller
Pamela Leary, State Comptroller
Judy Hall, Board Liaison
Allison Campbell
Shane Carson (sp), Manager of Public Equity

Department of Administration Staff Present
Lee Hullinger, CFO, Division of Retirement & Benefits
Mike Barnhill, Deputy Commissioner

Consultants, Invited Participants, and Others Present
Robert Johnson, ARMB Legal Counsel
Michael O'Leary, Callan Associates, Inc.
Kim Nicholl, The Segal Group
Matthew Strom, The Segal Group
Thaddeus Gray, Abbott Capital Management
Tim Maloney, Abbott Capital Management
Jim Chambliss, Pathway Capital Management
Canyon Lew, Pathway Capital Management
Leslie Thompson, Gabriel Roeder Smith
Dave Slishinsky, Buck Consultants
Christopher Hulla, Buck Consultants

PUBLIC MEETING NOTICE

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

APPROVAL OF AGENDA

MS. HARBO moved to approve the agenda. MS. RYAN seconded the motion. CHAIR SCHUBERT noted the new business could probably fit under Item 10 as a work session discussion. With that note, the agenda was approved.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES

None.

APPROVAL OF MINUTES

MS. HARBO moved to approve the minutes of the April 18-19, 2013 meeting. MR. TRIVETTE seconded the motion.

MR. TRIVETTE made note of two corrections:

Page 5, third paragraph: should have said "Commissioner Hultberg stated that the Parnell Administration," and cross out ARMB.

Page 5, fourth paragraph: should have said "school districts would be required to have their employees as part of the Alaska Care plan," and cross out ARMB plan.

MR. O'LEARY made note of one correction:

Page 21, fifth paragraph beginning with "Mr. O'Leary stated that the IAC considered a range of possibilities, and decided on" should have said "Mr. O'Leary stated that the IAC considered a range of possibilities for all the programs and suggested those that are proposed in Resolutions 2013-04, 05 and 06."

The minutes were approved as revised.

REPORTS

1. CHAIR REPORT

CHAIR SCHUBERT did not have anything to report.

2. COMMITTEE REPORTS

A. Audit Committee

MS. ERCHINGER reported the Audit Committee met on June 19 and reviewed the KPMG's independent audit plan. KPMG gave a presentation on the audit plan. The Audit Committee had a good discussion on the upcoming GASB 67 and 68 pronouncements and their impact on the financial presentation for the state. MS. ERCHINGER believes the state will be presenting to the ARMB at the meeting in September regarding the allocation of the unfunded liability among employers. MS. ERCHINGER noted Director Jim Puckett and auditor Kay Gouyton provided results of their study of public pension plans, finding that 61% of the plans were not actually performing employee audits. She thanked Mr. Puckett and Ms. Gouyton for their hard work in setting the best standards for employer plan audits for pension plans.

B. DC Plan Committee

MR. TRIVETTE reported the DC Plan Committee met on June 19 discussing two primary objectives. Staff has been talking with T. Rowe Price about making modifications to the target-date funds and some of the other funds. He stated the discussion is ongoing. MR. TRIVETTE expects to hear from staff about some possible changes within the next six months or so.

MR. TRIVETTE reported Goldman Sachs gave a presentation on their newly established fund. He said it was an interesting presentation, but not ready to be considered by the Board.

The staff will continue working with Goldman Sachs and it may be brought to the Board for further review in the future.

C. IAC Evaluation Committee

MR. TRIVETTE reported the IAC Evaluation Committee, consisting of himself, Ms. Erchinger and Ms. Harbo, met last week. The Committee reviewed 21 very qualified applications and narrowed it down to four applicants, who will be interviewed during the Board meeting tomorrow under Item 19. Investment Advisory Council Finalists. MR. BADER noted he will provide the Board with questions he believes may be useful to ask the applicants.

MR. TRIVETTE next discussed the RFP secondary actuary selection. The RFP Committee, consisting of the himself, Ms. Erchinger and Ms. Harbo, held a meeting on June 19 discussing the three submitted proposals. MR. BADER noted the Board will take action today under Item 14. B. Review Actuary. MR. TRIVETTE thanked the Committee for all their hard work in preparing the recommendation.

D. Legislative Committee

CHAIR SCHUBERT stated the Legislative Committee met June 19 and recommends Mr. Johnson give a short presentation to the Board at an upcoming meeting regarding Board duties and responsibilities, with particular focus on the role the Board played in the last session about the additional appropriation request. The next item discussed was scheduling a work session in August with stakeholders to formulate strategies, priorities and perhaps a white paper around the issues of unfunded liability and appropriation requests. The stakeholders invited could include, but not limited to, the NEA, members of the Legislature and RPEA. MS. HARBO commented the Legislative Committee meeting was good.

CHAIR SCHUBERT stated Ms. Erchinger gave a report of a meeting she and Mr. Trivette had with Representative Munoz and her staff. MR. TRIVETTEE informed the Board the purpose of the meeting was to open the dialog and do a better job communicating with the Legislature on the Board's position on various issues. The House Finance Committee is planning on meeting throughout the summer/fall and this could be a good opportunity to meet with them.

MS. ERCHINGER commented that Mr. Pihl worked with the actuaries to provide the scenarios that would include the resolution requesting a $2 billion appropriation between FY14 and FY17. She stated the new data came out at the end of May and her big take-away of the outcome was it saves the state on-behalf contributions of $1.7 billion between now and 2032. This has a result of reducing the state's contributions by about 300 million dollars per year over what they would be contributing under the status quo. If the state is required to pay the status quo, the payment will be in excess of $1 billion for nearly a decade, which is unsustainable and could pit stakeholder groups against one another in the future. MS. ERCHINGER said she believes the solution of injecting $2 billion early on will have the

impact of reducing the state's future required contributions and have a downward trend in the contributions, which would match the expected downward trend of oil production.

2. RETIREMENT & BENEFITS DIVISION REPORT

A. Buck Consulting Invoices

Deputy Commissioner MIKE BARNHILL stated Mr. Puckett is at the Health Care Commission meeting this morning and he will present in his stead. He stated the Division has prepared quarterly summaries through March 31st and a fiscal year summary shown in the presentation. MR. BARNHILL noted the lion's share of the $475,000 total is incurred in actuarial valuations.

MS. HARBO asked if this is the only reporting the actuary will provide in terms of the health care design work cost. MR. BARNHILL responded the work on Plan B and the DCR Plan is ongoing and additional policy decisions regarding the design of those plans have to be made, so more reporting will be provided. MS. ERCHINGER did not recall the request of a 60-year projection scenario and requested eliminating the words "60-year projection" so it begins with "scenario of additional state appropriation." MR. BARNHILL responded that Mr. Pihl requested the 60-year projection, but he is not present today. MR. BARNHILL commented Mr. Slishinsky was nodding his head in confirmation. MR. BARNHILL stated the request for a wording change can be made.

CHAIR SCHUBERT asked for clarification on the billings report because it appeared to encompass more than one fiscal year. MR. BARNHILL explained the report covers work incurred through the three quarters of FY13 ending March 31st. He stated it is possible there is work that was incurred, but not yet billed.

B. Membership Statistics

MR. BARNHILL reported on membership statistics for three quarters in FY13 ending March 31st. He noted there was one retiree reflected in the PERS DC Plan, which does not exist yet. MS. HARBO believes Mr. Puckett explained the one person is a survivor and not a retiree. MR. BARNHILL noted there are just over 38,000 retirees between PERS and TRS.

C. DRB Update

MR. BARNHILL stated he will report on the completion of the third-party administrator RFP this afternoon.

4. TREASURY DIVISION REPORT

Department of Revenue Deputy Commissioner ANGELA RODELL reported she attended the annual meeting of the Government Finance Officers' Association in San Francisco last month from which she brought back a guide to the new pension accounting rules, which will hopefully provide clarity to the intentions of GASB 67 and GASB 68. MS. RODELL

announced the new Treasury Division website will be unveiled by July 1st. The Board will have its own page and its own activity. She welcomes any feedback regarding the website.

5. CHIEF INVESTMENT OFFICER REPORT

Chief Investment Officer GARY BADER introduced two staff members. Alyson Campbell works for Bob Mitchell and Mr. Bader, and also is a back-up for Judy Hall. The new Manager of Public Equities and the Defined Contribution Plans is Shane Carson, who has worked with Department of Revenue for five years. Mr. Carson has a Master's Degree in Capital Markets from University of Alaska, Fairbanks.

MR. BADER stated the first item in his report is the communication from Michael Cerne with a response from Mr. Carson. Mr. Cerne asked the Board to consider adding a total bond fund as an option. MR. BADER reported this request to the Defined Contribution Committee yesterday and recommended not adding another option in the fixed income area. Currently, the options include a World Government Bond Fund, Long-Term Treasury Bond Fund, TIPS Fund, Intermediate Bond Fund, Stable Value Fund, and Treasury Money Market Fund.

MR. BADER reported the next item is a communication from Bernard Landeis with a response from Mr. Carson. MR. BADER noted this is included to demonstrate to the Board the technical types of engagement the staff is having with participants. MR. BADER noted there were two rebalances of Defined Benefit plans included in his report. Item 4 is the transfer of $6 million from State Street Index Fund to Analytical Investors for the covered call account. MR. BADER explained Items 6 through 11 are the transactions that attempt to equalize the amount of assets between the active equity managers and at the same time, bring the equity exposure to indexing in large cap up to 65%.

MR. BADER stated Item 12 is a transfer of $150 million out of the Treasury Inflation Protected Securities portfolio to buy more Master Limited Partnerships, both to Tourtoise and FAMCO. He reminded the Board they approved this investment at the September meeting last year and the investment was made on November 1st. MR. BADER noted since that time, the index has gone up 19.1% and the managers have returned 13.9%, which is approximately $40 million dollars.

MR. BADER reported a transfer of $119 million from Lord Abbott small cap to the Small Cap Growth Fund, which was discussed with the Board at the last meeting. A transfer of $100 million was made to each of the absolute return managers, GAM and Prisma. MR. BADER informed the Board that at the end of May, GAM had an 11.6% fiscal year-to-date return and Prisma had returned 13.9% fiscal year-to-date. He commented the Board's patience has finally been rewarded.

MR. BADER added that manager RCM, who has been struggling and is slightly below the index now, has decided to lower their fees from 29 basis points to 22 basis points from now until the end of the fourth quarter 2014. He noted that will result in a savings of investment fees of approximately a half-million dollars and expressed his appreciation to RCM.

MR. BADER reported that several years ago, the Board approved staff's investment in futures to equitize the frictional cash money managers are holding. He stated the equitization program is run internally and the cash is invested in a large cap futures index and a small cap futures index. The cumulative earning to date of the equitization program is over $11 million and doesn't get reported on much. MR. BADER wanted to bring this to the Board's attention because he anticipates at the next Board meeting, he and Mr. Mitchell will be presenting a strategy for trying to offset duration or to balance duration using futures. This is a derivative. MR. BADER made it clear the Board has authorized using futures for over five years now and staff will be looking to expand that program.

MR. TRIVETTE expressed his gratitude to MR. BADER and his staff for their appropriate communication with members regarding their concerns. MR. TRIVETTE stated he expressed his thanks to them at the Committee meeting yesterday and wanted to thank the staff again in front of the Board.

6. FUND FINANCIAL PRESENTATION

Comptroller PAMELA LEARY went over the fund financial report for the 10-month period ending April 30, 2013. Ending invested assets for PERS were at $13.1 billion; TRS, $5.4 billion; Judicial Retirement system, $142 million; and National Guard/Naval Militia, $35 million. For participant-directed plans, the Supplemental Annuity Plan was at $2.9 billion, and the Deferred Compensation Plan was a $691 million at the end of April. For the 11 months ended May 31, 2013, the total for all the DB and DC plans is $22.4 billion.

MS. LEARY noted page 2 of the report shows the one-month change for April, which resulted in change of invested assets of 1.45% and a higher change for investment income of 1.64%. Page 3 of the report is a graphical depiction of what is happening with the PERS retirement plan, all the numbers were well within the targets. Short-term fixed income was at the low side of the target, domestic equity allocation was on the high side, and the absolute return was on the low side, a trend that goes through all of the different plans. The rebalancing memos MR. BADER just spoke of will have the effect of bringing all of the targets closer to their median.

MS. LEARY stated that pages 10 through 14 show the one-month change for the month of April by asset class and manager. She noted pages 15 through 22 show the participant directed plans.

LEE HULLINGER, the Chief Financial Officer for the Division of Retirement and Benefits, presented a supplemental cash flow report. The DRB report presented by MR. HULLINGER breaks out the column in the Treasury's report, labeled "Net Contributions/Withdrawals," into contributions and expenditures. Page 1 of Mr. Hullinger's report reveals that during the 10 months ending April 30th, 2013, the fund has received over $829 million in contributions from employers and members. With legislative relief and other income, this comes to over $1.45 billion in total contributions so far this fiscal year.

MR. HULLINGER explained that "other income" of $13.8 million for the various healthcare trust funds is primarily Medicare reimbursements received from the retiree drug subsidy program. He noted that of the $1.2 billion paid out in benefits so far this year, 68 percent is defined benefit pension payments to retirees, while 32 percent was spent to provide medical care for those retirees and their dependents. MR. HULLINGER stated that total administrative expenses during the 10 months ending April 30th, 2013, come to $59.2 million, about 11 percent more than last year. He noted a driver within these higher costs includes the upgrading of the information systems, which includes transitioning to a new operative platform in Oracle and the development of a disaster recovery system.

MR. HULLINGER stated that page 2 shows over $101 million in contributions received during the month of April and $115 million in benefits paid out; they also processed over $21 million in refunds and disbursements during April.

MS. ERCHINGER asked if the interest expense on the unfunded liability gets recorded anywhere as an actuarial exercise rather than an accounting exercise; MR. HULLINGER replied he will bring a concise summary report on that very issue at the upcoming meeting in September. He stated the accountants and actuaries will work together as one unified reporting entity to address that issue as well as other issues regarding GASB 67 and 68. MS. ERCHINGER commented she would like to talk about this in the future because it is such an enormous number and is not reflected in the financial statements.

7. ACTUARIAL AUDIT REPORT

MR. BADER commented there are three actuarial firms represented in the room today. He explained when Senate Bill 141 was passed, the Legislature was justifiably concerned the information that was used for decision-making should be thoroughly vetted. So the Legislature determined that not only should there be a primary actuary, but there should be a reviewing actuary that looked at their work product before it was presented to the Board, and then in an abundance of caution, there should be a third review the comes every four years. The Board has selected The Segal Group to perform the four-year review. MR. BADER introduced Kim Nicholl and Matthew Strom from The Segal Group. He noted that he and Ms. Hall have been working closely with The Segal Group over the last few months, and Buck and GRS have also cooperated with The Segal Group in providing data and additional interpretations and explanations of data and assumptions.

MS. NICHOLL provided a formal actuarial report and gave a presentation on the full scope replication audit used to determine whether or not the June 30, 2011 actuarial evaluation for the large plans from Buck were complete, accurate and followed actuarial standards. MS. NICHOLL assured the Board they found the work was accurate and met all actuarial standards. She stated there are some comments to present to the Board.

MS. NICHOLL explained Segal set up its programs and performed the valuation results independently from what Buck had done. The two main tasks were the peer review of the experience study as of June 30, 2009, which covered PERS, TRS and DCR, and the second task was the replication of the June 30, 2011 actuarial valuations for PERS, TRS, DCR and

the June 30, 2010 valuations for JRS and NGNMRS. MS. NICHOLL expressed her appreciation to the ARMB staff for their assistance and to Buck for their cooperation.

MR. STROM stated the experience study replication was an independent analysis for the four years' worth of experience and primarily reached a lot of the same conclusions as Buck, but will note the differences and suggestions for alternative approaches. MR. STROM reported Buck used the count-weighted mortality assumption and he recommends using the benefit-weighted mortality assumption. MR. TRIVETTE asked if using the benefit-weighted assumption would be more accurate in reflecting the liability; MR. STROM answered yes.

MR. STROM further explained Buck used static post-termination mortality tables with projections, and even though this is a fine approach, Segal recommends an alternative approach using tables with no margin and applying a generational adjustment that reflects projected improvements in mortality in each future year. MR. STROM stated there may only be a slight increase in the liability numbers for the PERS groups using this method.

MR. STROM stated Buck counts the turnover experience based on gross turnover, not adjusted for former vested terminated members who are rehired. He commented there is conservatism built in, but doesn't account for the entire number of rehires. Segal recommends using a net turnover assumption, which reduces turnover count by rehires, those members that move from terminated vested status to active status. MS. ERCHINGER inquired if the rehires reentering the system are buying back their benefits. MR. STROM replied people cannot buy back in. MS. ERCHINGER asked if the impact of the rehires relates only to this particular assumption and not to the overall system; MR. STROM and MS. NICHOLL answered that was correct.

MR. STROM noted Buck used an uncommon approach of counting all non-death/disability exits from active status as retirements, if they were eligible for retirement, and counting all non-death/disability exits from active status as terminated vested, if they were not eligible for retirement, thus ignoring the actual status. MR. STROM commented it is unusual to have a significant number of members terminate while eligible for retirement and not commence their unreduced benefits. MS. HARBO inquired if those members could be waiting to receive complete health care coverage. MS. NICHOLL doesn't believe that is the case because collecting a retirement benefit does not prohibit a member from getting the retiree health care when they are eligible. MS. HARBO commented the member is paying out-of-pocket for health care costs and that would be a significant consideration. MS. NICHOLL asked if the member left active service, do they have to pay for retire health care in some way.

MS. ERCHINGER believes this issue deserves a closer look and it is important for the Board to dig a little deeper. She thanked MS. NICHOLL for her observation. VICE-CHAIR TRIVETTE added part of the explanation could be many people are working at another job where they get health care. He stated it would be good to see the numbers and thanked MS. NICHOLL for raising the issue. MR. BARNHILL commented that normal retirement is permitted at age 55 and a lot of these folks have kids in high school and college and have to keep working somewhere else. MR. STROM noted that one in six people in TRS and one in

10 people for PERS Others were eligible for unreduced benefits, but not taking them. He recommended the Board study this further.

MR. STROM recommended extending the 100% retirement to age 75 for PERS and TRS, but no change to PERS Peace Officer/Firefighter 100% retirement age of 65. MR. STROM stated the assumptions Buck set up work out mathematically, but it is unusual to see a 100% retirement age of 90.

The next recommendation from Segal was for Buck to study retirement experience separate for Tier 1 and Tiers 2 and 3 since these groups have different retirement eligibility criteria.

MR. STROM reported Segal did not match the numbers from Buck regarding PERS refunds, which are the portion of terminated members who elect a refund of contributions instead of a deferred benefit. For PERS Others, Segal reported 18% had elected a refund and Buck reported 11%. For the other PERS group, Segal reported 40% had elected a refund and Buck reported 22%. For TRS, Segal reported 3.5% had elected a refund and Buck reported 2%. Segal recommends an additional review of the data and revision to the assumption, if warranted.

MS. HARBO stated the use of "terminating members" in Segal's report is confusing because it is different than the definition the DRB uses. She believes the wording needs to be consistent. MR. STROM agreed and stated it is referring to people who get a full refund of their contributions. MS. HARBO commented the previous term used was "withdrawn" and now it is called "full disbursement."

MR. STROM went through the economic assumptions of the report and stated Buck generally followed the building block approach, though their report leads with the investment return assumption. Segal would have preferred that Buck lead with the inflation assumption and build onto that. MR. STROM stated the 3.12% inflation assumption was reasonable. He showed the analysis where Segal recommended lowering the investment return assumption from 8.25% to 7.5%. Buck's recommendation was to lower to either 8% or 7.75%, and the 8% assumption was adopted. MR. STROM noted with the rosier outlook of today, Segal would probably recommend 7.75% return assumption, but would definitely have a discussion about the current 8% assumption.

The salary scale approach matched Buck's recommendation, but MR. STROM noted they recommend setting the rates midway between actual salary increase experience and expected increase. There continue to be losses for salaries in the valuation subsequent to the experience study.

MS. NICHOLL went through the retiree healthcare assumptions of the experience study. She noted agreement with Buck's analysis and recommendation for the base claim cost rate and health care trend rate. She recommends the valuation report describe the plan inputs for more clarity. The morbidity rates and participation rates assumption were found to be reasonable and appropriate.

MS. NICHOLL agreed it is reasonable to use the same assumptions from the PERS/TRS study for the DCR retirement rates. She noted an inconsistency with the maximum retirement age Buck allows teachers in the TRS DB to work as late as age 85, while the TRS DCR assumption stops at age 70. MS. NICHOLL commented as more experience is developed with this plan, the experience study could be more explicit. Segal recommends the handbook that describes the plan provide more information about the factors that are being used and also describe how the substantive plan is being valued. Once the actual experience of the DCR population emerges, the actual claims will improve accuracy.

MS. NICHOLL commented the data was sufficient to perform the study and in most cases, the analysis was very similar to Buck. The three recommendations Segal suggested for improvement in the report format were:

* Include the number of exposures in the report tables so people could assess the current and the proposed rates
* Show total counts, in addition to just male and female separately
* In the economic section of the report, the inflation assumption should be analyzed first, followed by the investment return and other related assumptions.

MS. NICHOLL stated the census data files were comprehensive and reasonable. She noted an inconsistency between the "Tier" and "Plan" designators as to date of hire and recommended a cross-section study of these inconsistencies to make sure the codes are correct in the data. MS. NICHOLL reported the valuation costs, including pension and retiree healthcare liabilities, were reasonably matched with Buck. She noted an inconsistency for those in TRS who terminate due to non-occupational death, retiree health benefits are reduced by 10%, but this assumption is not applied to pension benefit or occupational deaths. MS. HARBO asked MS. NICHOLL to explain who is getting the benefit. MS. NICHOLL said this is a spouse coverage of the survival benefits and apologized for it not being clearer.

MS. NICHOLL commented for DCR, the premiums do not anticipate any Medicare Part D reimbursements, but if it is factored in, the projected retiree contributions would be lower and the projected retiree health obligation would be higher. MS. NICHOLL stated Buck is using retiree premiums based on individual rates, but the report stated they are using retiree premiums based on a composite rate. Segal recommends modifying the report language to describe the individual rates approach. MS. NICHOLL stated the format of the reports was ideal and Segal only has minor recommendations to include:

* For PERS and TRS, show the DB and DCR payroll separately
* Define maturity ratio and liquidity factor on the pages where they are shown and trend analysis information would be useful
* Modify the increase in total member population for the PERS and TRS projections using 1% for "Best Case," 0% for "Optimistic" and -1% for "Pessimistic."

MS. NICHOLL stated Segal was able to duplicate the results of the valuation within a reasonable range and none of the suggestions for improvement needed immediate attention, but rather could be studied and reflected in the next experience study by Buck.

CHAIR SCHUBERT recessed the meeting from 10:40 a.m. to 10:58 a.m.

8. ABBOTT CAPITAL MANAGEMENT

THADDEUS GRAY of Abbott Capital Management thanked the Board for their support and confidence over that last 15 years of working together. He stated the highlight for venture capital and growth equity is a continuing consolidation of the market with steady levels of fund raising since roughly 2000. MR. GRAY commented the buoyant debt markets have produced probably the strongest seller's market in six or seven years, which has led to a significant increase in the distributions received since the second half of 2010. The accelerating distributions were seen in 2012 and the first quarter of 2013.

MR. GRAY explained venture capital and growth equity is the category that includes both early stage partnerships, as well as more established, often profitable companies. This comprises 1/3 of the portfolio. The risk/reward characteristics of these subsegments are monitored constantly, which weeds outs a number of the early stage groups and maintains a very healthy exposure to balanced and growth equity groups. There are no clean tech focus funds in the portfolio, which is fortunate because this segment experienced almost a complete implosion. Social media has also struggled, as evidence by the disappointing performance of a number of companies in the public market. The new areas emerging are more attractive and have sustainable business models. These include cloud computing and big data applications. MR. GRAY believes the IPO market for venture capital and growth equity will continue the trend of large number of groups struggling to raise capital, while a small handful of sought after groups consolidate the market for raising capital.

MR. GRAY explained the buyouts and special situations segment comprises 2/3 of the portfolio. Buyouts refer to control-oriented transactions with established companies with varying amounts of leverage that over time, with the success of these companies, the cash flow is used to pay down the leverage and normalize the balance sheets. Special situations refer to transactions that are neither buyout transactions nor venture transactions, a category which captures groups who do a variety of different things. The fund raising for buyouts and special situations is better than it is for venture capital and growth equity. MR. GRAY stated even though the sale and distribution activity in this segment picked up significantly in the last year, because of the price in the market, the new deal activity has somewhat moderated. It is a seller's market and people are being very slow and cautious about deploying new capital. There is a growing gap between the capital calls in the account and the distributions, which is positive if you want to get cash back, but we have to be patient in deploying new commitments.

MR. GRAY reviewed several important developments for Abbott Capital in terms of promotions and additions to the team over the course of the last year. He noted there have been no departures, other than Ray Held's retirement, on the partnership team above the analyst level since 1998. MR. GRAY introduced Managing Director TIM MALONEY who discussed the commitment activity in 2012/2013, the pipeline of opportunities for the rest of the year, the performance metrics and gave a current status of the active portfolio.

MR. MALONEY reviewed a graphic showing 450 opportunities reviewed, which turned into nine new primary commitments in 2012. In 2013, four commitments have been made and a few more are anticipated. He presented a graphical listing the pipeline of potential investment for 2013. MR. MALONEY noted the portfolio remains constructed in a manner that is consistent with the guidelines of the ARMB tactical plan and consistent with the overall investment strategy. This is a mature portfolio reflected by the recent cash flows and the average age of an underlying company investment, which is 4.5 years. The portfolio has continued to appreciate in value over the last few years and as of the first quarter of 2013, the net IRR to the portfolio was 9.1%, which represents a premium of about 500 basis points to the S&P and a premium of about 450 basis points to the Russell 3000. MR. MALONEY described a graphic showing the ARMB cash flow activity. In 2012, the liquidity received back into the plan increased to $178 million. Year-to-date, it is about $75 million. MR. MALONEY discussed a graphic representing the diversification of the portfolio.

MR. MALONEY commended the Board and staff for their patience and discipline in yearly allocations, which allowed the portfolio to take advantage of buoyant capital markets and achieve this level of recent liquidity. MR. GRAY noted he looks forward to seeing the Board in October in New York for the education session. A speaker from New Enterprise Associates will be presenting.

MR. TRIVETTE expressed his gratitude for the commitment Abbott Capital Management gives in training their new people and expressed his appreciation for their results.

9. PATHWAY CAPITAL MANAGEMENT

MR. BADER introduced Managing Director JIM CHAMBLISS and Director CANYON LEW of Pathway Capital Management. MR. CHAMBLISS gave a brief update on Pathway. Their assets under management have increased from $24.2 billion to $25.9 billion. They have 36 investment professionals and have opened a fourth office, which is in Hong Kong. MR. CHAMBLISS reviewed the organizational chart.

MR. CHAMBLISS continued his presentation discussing three main topics, 1) where the private equity world has been over the last 12 months and where it might be going in the near-term, 2) what their concerns are for the near-term in the asset class, and 3) how interest rates might impact what goes on in the private equity world. MR. CHAMBLISS stated private equity has been characterized by a very strong exit environment in 2012 and into 2013, which is driven primarily through strong accommodative debt markets and the M&A markets. He believes they will continue to see a slower investment pace over the next six months and fund raising will remain moderate.

MR. CHAMBLISS stated, aside from the global concerns everyone worries about, they are concerned with the ever-increasing competitive nature of the private equity asset class. He believes private equity will continue to outperform the public markets on a relative basis and by a significant margin if done well. On an absolute basis, MR. CHAMBLISS believes there will be pressure on returns going forward.

MR. CHAMBLISS explained how private equity benefitted from the low interest rate environment by providing companies with cheap debt, which resulted in reduced interest expense, higher leverage and higher return expectations. The search for high yield in this low interest rate environment led to significant realizations and distributions back to the private equity companies. MR. CHAMBLISS expressed there is room for an increase in rates with a limited impact in private equity, assuming those rates come back for the right reasons; return of growth in the overall environment.

MR. CHAMBLISS stated over the last 12 months, 300 opportunities were reviewed and about 4% of those deals were added to the portfolio. The performance has been solid at a gain of almost $100 million, with a net return of 12.4%. There were record distributions in 2012 and into 2013. MR. CHAMBLISS explained the importance of managing the underlying portfolio and showed a graphical representation of 55 one-on-one meetings with underlying partners and a Senior Investment Professional attending 120 annual meetings or advisory board meetings for funds in the portfolio during the year. He noted Pathway has weekly and monthly communications with MR. HANNA and MR. SIKES and have been to Juneau two times in the last 12 months for face-to-face meetings.

MR. LEW gave a detailed presentation on the portfolio. Page 15 of the presentation shows the commitment activity in 2013, which is on target relative to the plan. Page 16 provides a snapshot of performance from the portfolio's inception in March of 2002 through March 31, 2013. The contributions have grown to $1.57 billion in total value and generated a net return of 12.7%. Approximately half of the total value has been realized, equaling $786 million. Page 17 shows the investment strategy diversification at the partnership level and the portfolio remains comfortably with all of the long-term targets. It is currently 47% in buyout funds, 27% in venture capital and 26% in special situations, with sub-diversification within each core strategy. Only 15% of the portfolio is in partnerships that focus outside the U.S. and the exposure to the more problematic areas of Europe remains relatively low.

MS. RODELL inquired if Pathway is starting to see future opportunities for the fund as Europe is "bottoming out." MR. LEW responded they always observe and allow the best opportunities to come out of troubled situations. MR. O'LEARY noted the markets have not been tranquil the last couple of days and there seems to be real concern about potentially serious consequences in Asia. He asked for a comment regarding their exposure to Asia, particularly China and the emerging market of Brazil. MR. CHAMBLISS responded he believes the best way to manage this portion of the portfolio is by giving the general partners, who operate globally, an opportunity to occasionally invest in those markets. The non-U.S. bucket is 1/4 the overall portfolio and of that bucket, 2% is in China, 3% is in Brazil and 4% is in India. He believes these small percentages are the right portion of the overall portfolio, but time will tell over the long-term how these companies perform.

MR. LEW continued the presentation noting that page 19 highlights the portfolio's contribution and distribution activity. 2012 was a record year for distributions with $185 million distributed, driven largely by very strong activity in the buyout funds. He noted 2012 was the second consecutive year of positive net cash flow where distributions exceeded

contributions and this trend has held in 2013 by a ratio of more than two to one thus far. Page 20 shows the year-over-year change in performance between March 31, 2012 and March 31, 2013, generating $92 million in gains for a one-year net return of 12.4%. Page 23 reflects a graphic of the portfolio versus Thomson Reuters benchmarks. It has generated above-median performance compared with the private equity industry, with and average ranking in the upper quartile on both a net IRR and DPI basis. The portfolio is outperforming the private equity benchmark by 340 basis points and outperforming the public benchmark, which includes a 350 basis-point premium, by more than 200 basis points.

CHAIR SCHUBERT recessed the meeting from 11:59 a.m. to 1:14 p.m.

10. ACTUARIAL REVIEW

A. Judicial Retirement System/National Guard Naval Militia Retirement Systems/Certification of Actuarial Valuation Review - FY12

MR. BADER introduced LESLIE THOMPSON of Gabriel Roeder Smith, who is the actuary reviewing the actuarial valuation prepared by Buck Consultants as required by statute.

MS. THOMPSON stated the review of Buck's actuarial report of the Judicial Retirement System generated no findings and no concerns.

MS. THOMPSON stated the review of Buck's actuarial report of the National Guard Naval Militia Retirement Systems match almost to the penny, but there are two areas for future review. She recommended that there be more clarity pertaining to the actuarial value of assets and which investment expenses or administrative expenses are being used in the projection. It was not clear when rolling forward and measuring gains and losses which piece was an investment expense and which piece was an administrative expense. This could be provided as an additional disclosure.

MS. THOMPSON commented the economic hurdles of 2008 have raised the question in her mind of what creates long-term resiliency for a plan during times of market volatility. She framed the question for the Board and Buck Consultants: if they really want to have the recommended contribution be normal cost minus this piece of surplus, because the plan is over 100% funded. MS. THOMPSON encouraged that the Board and Buck consider the minimum plan contribution to be made is at least the normal cost, which is the cost of benefits that accrue during the year.

MS. ERCHINGER suggested to staff it would be nice to have an update on what progress has been made with the employers who contribute into this plan in providing timely and accurate data. MS. ERCHINGER appreciated Ms. Thompson’s observation regarding fully funding at least normal costs. MS. THOMPSON commented taking the credit and not paying the full normal cost is an established standard and there is nothing wrong with this approach. She noted it is worthwhile to take a different look, given the market history we have all come through.

B. Actuarial Valuation - FY12/Judicial Retirement System/ National Guard Naval Militia System

CHAIR SCHUBERT invited DAVE SLISHINSKY, a consulting actuary, and CHRIS HULLA, a healthcare consultant, from Buck Consultants to present actuarial valuation results on the Judicial Retirement System and National Guard Naval Militia System. MR. SLISHINSKY expressed his gratitude to Ms. Nicholl and Mr. Strom from Segal and Ms. Thompson from GRS for their reviews and presentations this morning. He stated every other year, on the even years, Buck performs a roll-forward valuation for the JRS and NGNMRS where the liabilities are measured. This was performed in 2012 and those are the results being presented today.

MR. SLISHINSKY addressed points GRS raised in April regarding Buck's valuation methodology and a mismatch between the eligibility and the benefit amount calculated to approximate a middle of the year decrement timing. He explained it may have been the result of approximating the middle of the year, but Buck is actually performing a slightly different calculation, which takes a measurement of the benefit amount at the beginning of the year and takes a measurement of the benefit amount at the end of the year and determines the average benefit paid.

MR. SLISHINSKY commented on the recommendation from GRS regarding calculating benefits at the middle of the year. He stated this comment was also made regarding healthcare benefits. MR. SLISHINSKY explained the differences in the methodologies used and he stated the results are going to be very, very close, with only minor differences. He appreciated that GRS included in their audit a comment that there are always differences in the actuarial process. MR. SLISHINSKY noted actuaries attempt to measure the value of payments into the future that they think are going to be made. The actuarial standards of practice that are followed gives the actuary the ability to provide their opinion and exercise professional judgement when making these measurements, as long as it is reasonable standard of practice and does not deviate significantly.

MS. ERCHINGER asked for an explanation of the logic behind the midyear method. MR. SLISHINSKY replied that both methodologies are the mathematical measurement of the continuous nature of decrements, including retirement, termination or death, for a one-year period at a time. All of the assumptions will be used to determine the chance of the member being active during that one-year period and if they leave during that one-year period, what value of benefit do they get based on their age and other factors. He stated both methodologies are reasonable and acceptable standards of practice.

MR. SLISHINSKY reported there have been no changes to the benefit provisions and actuarial assumptions for the JRS. There have been no changes in the asset method, funding method or the health care based claim rate methodology. There were changes made in April to the assumptions of the health care valuations, which were the same changes made to PERS and TRS. The Medicare Part B information was updated, which resulted in gains because it recognized a lower cost for members who had Medicare Part B.

MR. SLISHINSKY showed a graphic on page 9 of the report, which is the development of the actuarial value of assets. He explained the methodology is a smoothing of the market value over a five-year period. The difference between the expected investment return and the actual investment return is the asset gain or loss. That gain or loss is then recognized over five years. For the fiscal year ending June 30, 2012, there was an investment loss of almost $10.2 million.

MS. ERCHINGER requested an explanation regarding the issue of smoothing the gains or losses attributable to the unfunded liability. MR. SLISHINSKY explained there is double smoothing happening. The accrued liability equals the actuarial value of assets plus the unfunded. There is interest charged on both the accrued liability and the actuarial value of assets. If all the future benefit payments are discounted at a rate the assets are expected to grow, and the assets do grow at that rate, then the cost of the accruing benefits and normal costs are being paid and also the interest charges and a piece of the unfunded liability is being paid. At some point in time at the end of that amortization period, the system is 100% funded.

MS. RODELL asked for an explanation regarding amortization over 25 years. MR. SLISHINSKY explained the amortization methodology layers the unfunded amount. A new base is created each year, which is then amortized over 25 years. The base is the measurement of difference between the expected unfunded for the next year and the actual unfunded. The previous base is being amortized separately, so it is a layered structure of pieces of the unfunded liability. This is not a closed period method that amortizes and ratchets down each year. It is a layered approach. MS. RODELL expressed her thanks for the explanation of the layered amortization. She believes there is a lot of confusion around when the liability will be paid off.

MR. BADER asked when the fund would be fully paid off, if every actuarial assumption was met right on the nose. MR. SLISHINSKY stated that projected year is stated in the report, but believes it is 2032 for PERS. He explained the projection is based on all the assumptions being met, including investment return, longevity and retirement patterns, and salary increases. MR. BADER wanted to establish it is not going to keep rolling forward if every assumption is met. MR. BARNHILL commented the layering amortization is shown on page 25 of the draft PERS valuation, which was presented at the Board's last meeting.

MR. SLISHINSKY reviewed the graphic on page 10 of the history of the accrued liability and the assets. The financial crisis and loss of the assets in FY09 has really dampened the growth of the assets, which increases the accrued liability, and thus increases the unfunded liability. There was an increase in the unfunded liability from about $58 million to $65 million. The funded ratio dropped from 70% to about 67%. The employer normal cost increased from about $9.2 million last year to about $9.5 million. Most of the normal cost of the JRS is in the retirement benefit, which he noted is a valuable benefit.

MR. BARNHILL asked how many other states have a normal retirement cost rate for judges in the range of 40%. MR. SLISHINSKY found that Maryland's system was the closest to that of Alaska.

MR. SLISHINSKY reported the 2012 expected unfunded liability is about $62 million and the actual unfunded liability is about $65 million. MS. ERCHINGER commented it is logical to take the unfunded liability and add back the gain on the non-health care side when the plan is fully funded, but it is illogical to do that when there is unfunded liability accruing interest.

MR. SLISHINSKY reviewed the NGNMRS report results. The actual rate of return for the five-year period was 2.3%. This system has a funded ratio of over 100%. It has more assets than liabilities. He stated the recommendations MS. THOMPSON made about how to maintain the overfunded status can be discussed for this plan. MR. SLISHINSKY stated the expenses on the NGNMRS are determined separately and added into the employer contribution.

MR. SLISHINSKY reported the Board adopted the level dollar amortization method last year for the summary of employer contribution rates shown in a graphic on page 22. The rates are: PERS 39.85%, TRS 66.31%, JRS 79.06%, and National Guard is about $627,000. The additional contribution or state assistance contribution for PERS was about $519 million and for TRS was $456 million.

MS. ERCHINGER stated one of the observations made in the actuarial review process was that salaries were being underestimated in PERS. The Legislature will be asked to pay a particular dollar amount that was actuarially calculated. She asked if there was going to be a lag between those numbers. MR. SLISHINSKY explained there would be a difference. MS. ERCHINGER commented that the Board does not have a mechanism for having a conversation of what to do with the information from the actuarial valuation and reviews after it has been presented. She requested Buck separate the tiers and look at them individually for the employees who have been with the system for five years or less, because that is where the bulk of the salary losses are. She commented it is possible higher salaries have to be paid to attract people because there is no longer a DB plan available.

COMMISSIONER HULTBERG commented there are a complex array of variables that go into the decision an employee makes within the first five years. She is not attributing retention data to the plan. It may be the experience of some employers, but it does not appear from the statistics to be the experience with the State of Alaska. MS. ERCHINGER stated she is referring to the valuation of the salaries in that initial five years is significantly higher. COMMISSIONER HULTBERG suggested looking at the pay plan, because the state provides regular pay increments. MS. HARBO believed the most recent PERS valuation report showed approximately 12,900 DC employees hired since 2006, and of that number, there were approximately 830 that have stayed for five years of more, indicating quite a turnover.

MS. ERCHINGER expressed her appreciation to MR. SLISHINSKY for all of his hard work on running the scenarios for the Board for their resolution and for his graciousness of having the valuations being publicly audited twice in one day. MR. SLISHINSKY recommended the Board have some kind of planning session to discuss the different methods of amortization and how they really look.

C. Board Discussion/Questions

MR. BRICE moved to formally accept the review and certification of the actuarial reports by Gabriel Roeder Smith and Company, and that staff coordinate with the Division of Retirement and Benefits and Buck Consultants to discuss and implement the suggestions and recommendations of the reviewing actuary where considered appropriate; the motion was seconded by MR. TRIVETTE.

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

MS. RYAN moved to accept the actuarial valuation reports prepared by Buck Consultants for the Public Employees, Teacher, Public Employees Defined Contribution for occupational benefits and disability and retiree medical benefits and Teacher's Defined Contribution for occupational benefits and disability and retiree medical benefits, retirement systems as of June 30th, 2012, in order to set the actuarially determined contribution rates attributable to employers; the motion was seconded by MS. HARBO.

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

MS. HARBO moved to accept the actuarial valuation report prepared by Buck Consultants for the National Guard and Naval Militia Retirement System as of June 30th, 2012, in order to set the actuarially determined contribution amount; the motion was seconded by MR. BRICE.

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

CHAIR SCHUBERT recessed meeting from 2:34 p.m. to 2:53 p.m.

11. CONTRIBUTION RATES FOR FY2015

CHAIR SCHUBERT called the meeting back to order and noted the action item adopting contribution rates for FY2015 will be moved to this point in the agenda.

MS. HARBO moved to adopt Resolution 2013-09; the motion was seconded by MS. ERCHINGER.

MS. ERCHINGER expressed concerns about this being a fairly large relative increase from prior years and asked if this was due to having a new plan. MR. BARNHILL responded this issue was discussed at the last meeting and it was recommended this be a shared approach between the employer, employee and the retiree.

MR. TRIVETTE reminded the Board that GRS said they could not valuate this because there was no written plan. He is in favor of adopting a rate now and moving forward.

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

MS. HARBO moved to adopt Resolution 2013-10; the motion was seconded by MS. RYAN.

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

MR. BRICE moved to adopt Resolution 2013-08; the motion was seconded by MS. HARBO.

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

MS. HARBO moved to adopt Resolution 2013-12; the motion was seconded by MS. RYAN.

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

MS. HARBO moved to adopt Resolution 2013-13; the motion was seconded by MS. RYAN.

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

MS. HARBO moved to adopt Resolution 2013-11; the motion was seconded by MS. RYAN.

MS. ERCHINGER commented when a rate on salaries reaches nearly 71%, she wished there was a better way of associating the cost of retirement with the employees related to the unfunded liability. She believes it adds to the poor perception of public employees and makes her think about pension obligation bonds as a way of looking at this differently.

MR. TRIVETTE concurred with MS. ERCHINGER and stated he would have done some things differently in 2005 had he known what he knows now. Trying to explain this situation to the general public is extremely difficult and he will work harder to resolve this issue as soon as possible.

MR. JOHNSON stated when the legislation was first passed to include medical benefits as part of the employment package it was not known the Alaska Supreme Court would take the position it did on never diminishing benefits, starting from the day that an employee was first hired. It was also not known that medical benefits would escalate the way they have.

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

MR. BRICE moved to adopt Resolution 2013-14; the motion was seconded by MS. HARBO.

MS. ERCHINGER commented she will support the resolution, but would hope in the future that before a contribution rate is set, there could be a conversation about whether it makes sense to reduce the required contribution rate for a portion of the rate that has a gain when there is an unfunded liability accruing interest.

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

MR. BARNHILL reported the Commissioner of Administration, by statute, sets the JRS rates. The recommended JRS contribution rate of 79.06% is pending adoption.

12. HEALTH PLAN UPDATE

MR. BARNHILL gave an update on the third-party administrator RFP and stated Aetna won the proposal for the medical TPA. Aetna won the proposal for the pharmacy benefit manager. Aetna won the proposal for the health care manager. Oregon Dental Service won the proposal for the first ever dental network. MR. BARNHILL presented highlights of each manager and the Aetna network by far delivered the most discounts. The next step is addressing the contract and strategy for possible plan design changes, which would be incremental and brought to the Board. The active plan and retiree plan are calendar year plans and Aetna will start work as the TPA on January 1, 2014, thus giving them six months in transition time. Open enrollment will be later this fall.

MR. BARNHILL requested the Board continue to think about steerage in the retiree plan, which provides a true PPO plan where in network receives a reimbursement of a certain rate and out of network receives reimbursement of a lesser rate. He believes this would help in managing the health care spending proactively. Other cost issues to consider in the retiree plan include the two-million-dollar lifetime maximum. He stated one person in the active plan reached two million dollars' worth of spend in one year. MR. BARNHILL stated the $150 deductible is unique and is not suggesting to radically change it, but wants to think carefully about the cost structure and how responsive it is to members' needs right now.

MR. BARNHILL gave an update on the discussions with various stakeholders on the defined contribution retirement plan and what is called Plan B, which would provide added enhancements the retiree plan currently does not have, like an uncapped lifetime maximum, preventative care, and coverage to age 26. In an attempt to be responsive to the concerns of the stakeholders, Plan B would have a cost structure that could adjust over time and is reflective of medical expense and inflation in order to keep it sustainable.

MR. BARNHILL expressed his concern about the discussions with stakeholders wanting to add or force benefits to the existing plan with no ability to change the cost. He gave the specific example of a discussion with the American Cancer Society and their lobby for colorectal screening into the existing plan and if it is not placed in the existing plan, they will lobby the Legislature for a mandate. MR. BARNHILL wants to continue these discussions to see if a Plan B approach would actually accomplish the goals set out, because it can't just be adding benefits that cause the plan to have higher expenses, particularly with the current high unfunded health liability.

MR. BARNHILL updated the Board on the long-term care self-funded insurance policy, which is an add-on coverage, a new retiree can elect at the date of retirement. There are concerns about the lack of home health care in the plan. A liaison has been added at the DRB to help facilitate folks through the long-term care claims process. The premiums have not increased since 1989. He would like to see this plan be responsive to members' needs and also be sustainable from a cost structure. The mantra is high quality care for our state employees and our retirees at a reasonable cost.

COMMISSIONER HULTBERG commented the RFP process has been incredibly time-consuming and complex. That process is now over and there is stability going forward for the next five years. She believes these issues and initiatives will begin to move more rapidly.

13. EQUITY YIELD STRATEGY

MR. BADER stated in April 2012, the Board authorized an equity yield strategy to be operated by staff, funding $100 million for an internally managed dividend portfolio benchmarked against the Dow Jones 100 Dividend Index. The investment funds are divided among five internal staff, who are responsible for certain sectors. Staff monitor the selections on a daily basis and rebalance the portfolio periodically using the reversion to mean approach. At the end of May, the portfolio was up 11.33%, outperforming its benchmark by 45 basis points.

MR. O'LEARY inquired who has the authority to permit investment in and out of index issues; MR. BADER replied he has the authority, but the investment has to meet list specific constraints. MR. O'LEARY asked if there was a targeted tracking error estimate. MR. BADER answered they don't have a targeted tracking error estimate at this point, but the tracking error will be small because the active share is only 8.9%. MS. HARBO asked if one of the conditions was the companies in the index had to be paying a dividend continuously for four years. MR. BADER said he did not believe that to be the case.

14. INVESTMENT ACTIONS

A. EIG Fund XVI

MS. HARBO moved to commit 80 million dollars to EIG Fund XVI, subject to satisfactory completion of due diligence; the motion was seconded by MS. ERCHINGER.

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

B. Review Actuary

MR. TRIVETTE moved to hire Gabriel Roeder Smith as the reviewing actuary, subsequent to the expiration of a 10-day protest period, for a term of one-year, with three options to renew, subject to successful contract negotiations; the motion was seconded by MR. BRICE.

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

MS. HARBO moved to designate MR. BADER procurement officer for the reviewing actuary contract; the motion was seconded by MR. BRICE.

The motion carried unanimously.

RECESS FOR THE DAY

CHAIR SCHUBERT recessed the meeting at 3:44 p.m.

Friday, June 21, 2013

CALL BACK TO ORDER

VICE-CHAIR TRIVETTE reconvened the meeting at 9:00 a.m. Trustees Harbo, Erchinger, Hultberg, Brice, Ryan, and Butcher were present.

15. PERFORMANCE MEASUREMENT - 1ST QUARTER

MICHAEL O'LEARY from Callan Associates reviewed the graph on page 3 of the presentation, showing the poor environment for bond investors at 3.8% for last year. He discussed investment returns in international and U.S. markets in the past and present for different asset classes. He characterized the economy during the first quarter as positive. MR. O'LEARY reviewed the new targets for the fiscal year, starting July 1st, are domestic equity 26%, global equity ex US 25%, fixed income 12%, real assets 17%, private equity 9%, absolute return 5%, and cash returns 3%. The policy for the year has not significantly changed from last year. The equity representation of the portfolio is becoming more global.

MR. O'LEARY stated the three-year return is just under 9% annualized, with a slight underperformance in domestic equity, with private equity the best performing single asset category. Both plans have had strong cumulative performance relative to their targets during the quarter. Page 24 shows the actual performance has been very close to the target over time. Total bond performance has been above the fixed income target, which is comprised of intermediate treasuries, high yield bonds, and a non-dollar fixed income. Non-dollar bonds hurt returns and trailed the benchmark for the last year. The total domestic equity pool, for the fiscal YTD, performed better than the S&P 500, but below the Russell 3000.

MR. WILSON commented that this total domestic equity chart on page 29 is one of the first pages he looks at upon receiving all the materials, because it represents 30% of the portfolio. He apologized for missing the last meeting and the discussion regarding active versus passive investing. MR. WILSON noted this was his last meeting with the ARMB. He stated over the last seven years, it has concerned him the portfolio continues to underperform the Russell 3000. MR. WILSON urged the Board to take a close look at their managers to determine if they have an edge that is repeatable. He recommended if the managers can't demonstrate they can beat the index benchmark, then the Board should index.

MR. O'LEARY agreed with MR. WILSON's point. He explained the Domestic Equity Component Returns table on page 30, which shows the greatest area of underperformance is attributable to the Other Equity category. He stated the new asset allocation will give a clearer picture of what have been the major contributors to the inferior equity performance of Other Equity.

The large cap portion of the portfolio has been raised to 65% passive. MS. ERCHINGER asked what the previous indexing percentage was; MR. BADER stated it was around 59% in the large cap. MS. ERCHINGER stated she did not remember discussing what the mix should be between active and passive and was curious if there was going to be a follow-up on

that at some point in the future. MR. BADER stated equal weighting of the managers resulted in superior returns and moving toward a 65% weighting was discussed at the last meeting and also mentioned in his opening comments yesterday. He commented there is debate about what mix is right and he will try to do more in figuring out a way to approach that issue.

MR. O'LEARY discussed the individual account plans, stating that relative to their targets, he was pleased with the performance, except that Brandes International has not done well in three years. MR. O'LEARY gave an update on the infrastructure search requested by the Board at the December meeting noting that Mr. Bader and Mr. Sikes will visit the candidates put forth by Callan in late July and early August with the intent to bring finalists to the Board for review and approval at the September meeting.

MR. O'LEARY noted Goldman Sachs gave an interesting presentation to the Defined Contribution Committee Wednesday on their Collective Trust Retirement Completion Fund and analysis is still ongoing. MR. O'LEARY expressed happiness that interest rates are higher, because it shows evidence of recovery. He believes it also encourages more rational behavior on the part of investors.

MS. HARBO asked what exposure the plan has to health care sector funds, other than in the new equity yield strategy. MR. BADER responded there is a medical fund in the private real estate ventures that is coming nearing the end of its life. The disposition of the assets is being discussed with the various stakeholders, but it has had great success.

16. MONDRIAN INVESTMENT PARTNERS

Senior Vice President TODD RITTENHOUSE, with Mondrian Investment Partners, introduced Senior Portfolio Manager ORMALA KRISHNAN, who is the lead portfolio manager on the International Small Cap Strategy. MR. RITTENHOUSE gave an update on Mondrian and reviewed their organization chart, noting all of the investment professionals are based in London.

MS. KRISHNAN discussed the members of the International Small Cap Team. She stated at the heart of their value-oriented investment approach lies the use of the inflation-adjusted dividend discount methodology, which is used for all companies across all sectors. The graph on page 2.3 shows the emphasis on upside performance while providing downside protection. They outperform during bear market periods and are not expected to outperform during bull market periods, but are able to capture 90% of that upside.

MS. KRISHNAN reviewed the composite performance since 2003, highlighting capital preservation in 2011. The fund has underperformed the benchmark YTD by about 2.2%. Their outlook for the global economy remains cautious, even as markets have staged robust performance in 2012 and into 2013. The sources of market risk include fiscal consolidation in the U.S., fiscal austerity in the eurozone economies, and the scope of monetary easing. MS. KRISHNAN explained the reason for their continued underweight position in Japan. She stated the strategy is very defensively positioned and remains unchanged since the end of 2007.

MR. O'LEARY requested an overview on the Asia Pacific area, particularly China. MS. KRISHNAN sees China as a policy-driven market completely on the back of urbanization. She believes a 7% growth rate is sustainable, but by 2035, it will have declined to 3.5 to 4.5%. The concern for China is much of the credit growth has gone into speculated assets.

CHAIR SCHUBERT asked why the fund underperformed the benchmark by about 350 basis points last quarter. MS. KRISHNAN stated the underperformance is primarily from the underweight position in Japan.

CHAIR SCHUBERT recessed the meeting from 10:29 a.m. to 10:44 a.m.

17. SCHRODERS INVESTMENT MANAGEMENT

JAMES MACMILLAN, U.S. Institutional Business Development Director, from Schroders Investment Management, introduced MATTHEW DOBBS, Head of Global Small Cap, who is based in London. MR. MACMILLAN reviewed Schroders' firm information and noted the international small cap funds has assets of about $3.2 billion, which is made up of 8 clients, including the states of New Mexico and Connecticut.

MR. DOBBS explained their investment philosophy is growth and quality at the right price, with their management approach being more growth than value. He stated stock selection is the primary source of added value and also the primary source of portfolio risk, but this approach has yielded good returns over time. In the last 12 months, the fund is up 12.4%, the index is up 17.9%, which is a 5.5% shortfall. MR. DOBBS stated the biggest single issue for the shortfall has been from Japan. He feels the small cap market has been tough, but they should be doing better in Asia. MR. DOBBS noted their response to this was making a change to the small cap specialist for Pacific ex Japan. Staff was made aware in September that Paul Rathband has taken over leadership of that team. Two other people have also been added to that team. There has been more activity in the portfolio than would usually expect, but it has already started to show improvements. Schroders has also added an additional person for oversight in the IT services and software sectors in Japan.

MR. BADER requested comments regarding quantitative easing in the U.S. and how that may affect internation small cap stocks. MR. DOBBS stated the knee-jerk reaction is for small caps to underperform large caps in periods when people are concerned about liquidity and risk conditions. Their style is looking for companies based on fundamentals, sustainable return and good business management and not liquidity moves into low quality stocks. He believes the QE injects a bit of sense into areas like the high yield bond markets, and a bit of moral hazard into some emerging markets.

MR. BADER asked what sector Schroders is being pointed to right now. MR. DOBBS replied they don't manage by sectors, but stated they want to make sure there is some provision for emerging markets. He believes that since the most dynamic, interesting and fastest growing small cap universe is happening in Asia and has underperformed so badly

over the last 12 months, it is a signal that they should focus on Asian domestic and industrial types of stocks.

18. PORTFOLIO RISK ANALYSIS

MR. BADER stated at the September meeting, the Board approved the hire of MAP Alternative Asset Management to do risk analytics for the investment portfolio. They will give two presentations a year. MR. BADER introduced KIMBERLY MOUNTS, who is the founder and CEO of MAP, along with her colleague MARCO RICCIARDULLY. MS. MOUNTS described several types of investment risks; market, liquidity, inflation, credit, leverage and counterparty risks. Risk management is a process to avoid or minimize potential losses from concentration risks, downside risks, and crisis prevention.

MAP provides line-by-line position level analysis to identify any potential risk-related issues and advises on appropriate actions to mitigate and manage risks. MAP measures risk using the VaR, Value at Risk, method. VaR is the maximum value of losses that can be expected during a specified time period at a given level of probability. The Board staff and MAP recommended using the historical VaR, primarily because it accommodates non-normal distributions to capture periods of extreme losses, left-tail events, such as what happened in 2008. Also used to identify the risks within the portfolio are conditional VaR, comprehensive stress testing and historical scenario analysis.

DR. JENNINGS asked if the time period of the 2.5% left-tail shown in the graphical on page 7 is for one month out of 40 months; MR. RICCIARDULLY agreed. DR. JENNINGS requested comments on the hindsight bias of the historical VaR approach. MS. MOUNTS responded historical VaR is being used because Board staff wanted to take into consideration what happened in 2008, and by using a five-year lookback period with no decay, each day has an equal weighting in the results. MR. BADER added this method was also recommended by staff because it is used widely in the industry and has been used by other risk managers they talked to.

MS. MOUNTS discussed the total plan volatility is projected to be 18.5% annualized and the asset class with the highest volatility is private equity at 38%. MR. O'LEARY asked for an explanation of how those numbers are determined. MS. MOUNTS said proxies are used for the illiquid assets and will provide the extensive list of proxies developed after the meeting. From page 9, she reviewed the plan asset class allocation versus their contribution to total volatility. The highest is domestic equities with 32% of holdings, contributing 39% to total plan volatility contrasted with fixed income, which is 15% of holdings, contributing less than 1% of total volatility. DR. JENNINGS commented it is important to remember equity risk is the dominant risk in the portfolio.

MS. MOUNTS stated the portfolio has a VaR of $2.13 billion and showed illustrations of two historical scenario analyses of the G8 countries. The Black Monday, October 19, 1987, historical scenario analysis showed the portfolio was projected to lose 20%. DR. JENNINGS requested a peak-to-trough analysis that would highlight what the order of magnitude of the series of really bad events might be. MS. MOUNTS responded they have 87 different

historical scenario analyses they can provide and they can also perform stress tests by equities, currencies, commodities, interest rates and volatilities. DR. JENNINGS asked what MAP can provide in terms of managing liability risk and the risk of active management. MS. MOUNTS stated the liability risk can certainly be modeled. As far as the risk of active managers, they can run a benchmark analysis and compare the manager's performance and risk versus a benchmark.

MR. BRICE requested an additional column be added to the tables shown on pages 11 and 12, which compares the volatility of each asset class with the returns that were received from each asset class. MS. MOUNTS replied they have that capability and is happy to provide it. MR. BRICE asked what approach or strategic questions MAP would use to interact with asset managers to bring the portfolio their greatest return. MS. MOUNTS stated part of the reason a third-party independent risk assessment is vital to the portfolio is to keep the managers honest. MAP's role is to report what the manager is doing compared to what the manager says they are doing.

CHAIR SCHUBERT stated that similar to what MR. BRICE requested for the tables on pages 11 and 12, and in trying to understand the practical aspects of those tables, she requested they show whether or not the portfolio was rewarded by the types of risks taken in the various asset classes and if there is something that happened that might have increased the risk factor that is an anomaly. MS. MOUNTS responded this analysis has not incorporated the specific manager returns, but they do have that capability. CHAIR SCHUBERT commented she was more interested in sector-specific, as opposed to manager-specific.

MR. BADER stated the primary focus of this first presentation was to keep it understandable. He believes the requests raised by Chair Schubert and Mr. Brice are valid and will be sure to have those metrics the next time MAP presents to the Board.

MR. TRIVETTE commented it is important to note the staff has found this to be useful and with some tweaks, the trustees may find it more useful too. He expressed his appreciation for the work that has been done.

CHAIR SCHUBERT recessed the meeting from 11:56 a.m. to 1:19 p.m.

19. INVESTMENT ADVISORY COUNCIL FINALISTS

MR. BADER stated the Board authorized an advertising for the position of IAC member that is currently held by George Wilson, which expires at the end of the month. There were 21 applications and Mr. Wilson submitted a letter on his application asking not to be considered, unless there was an increase in the stipend and remuneration. The committee, appointed by Chair Schubert, consisted of Trustees Trivette, Erchinger and Harbo. It was decided there was significant attraction at the current advertised salaries and narrowed the applications down to four applicants, who are present today to be interviewed. MR. BADER stated staff has prepared a list of questions as a benefit to the Board, but are by no means intended to limit the questions for the applicants. CHAIR SCHUBERT stated in fairness to all of the applicants, the 30-minute time limit will be adhered to strictly.

A. Gary Dokes

CHAIR SCHUBERT welcomed MR. DOKES and asked him tell about himself, why he applied for the position and what he would contribute to the Board. MR. DOKES stated he put together a welcome packet that he will leave with the Board, which includes information about himself and the Arizona State Retirement System. He has been the CIO of the Arizona State Retirement System since 2003. He began with the ASRS as a manager of the fixed income portfolio and ended up managing about a third of their stocks and bond funds internally. MR. DOKES expounded on his background and experience. He believes in the prudent management of public retirement systems.

MR. BRICE asked for a description of some of the difficulties or advantages ASRS has had with their DC plan. MR. DOKES stated the DC plan is not for state employees, but for some state entities. It has the line up of different asset classes, offering active and passive choices, and they have chosen risk funds versus target funds.

MS. HARBO inquired about his availability to attend all the ARM Board meetings, including the annual Ed Conference, and secondly, what emphasis is placed on strategic planning in his system. MR. DOKES stated he has already talked to his boss regarding this opportunity and his number one objective would be to attend, but he periodically would participate by video conference. MR. DOKES explained the importance of strategic planning, with one of the main focusses being the long-term objectives of an 8% return.

MS. ERCHINGER asked for a comparison of the role as an advisor to the ARM Board versus the role as a CIO. MR. DOKES stated his role as an advisor would be stepping back and bringing different perspectives to the table on issues such as risk reporting and market conditions.

MR. TRIVETTE stated there are 5 regular Board meetings a year, plus the Ed Conference, plus as many as 3 other special meetings, and sometimes committee meetings the week before the regular Board meetings and asked how this would fit with his schedule. MR. DOKES noted he looked at the requirements and saw no problems, but if the meeting schedule has now doubled to 14 meetings, then he would have to take that into consideration because he would not be able to attend them all in person and would have to participate by teleconference or video conference.

MR. TRIVETTE asked what asset class he feels particularly as an expert. MR. DOKES noted fixed income, emerging market, real estate, private equity and his job is to touch upon all of those.

COMMISSIONER BUTCHER asked MR. DOKES, since he has been CIO of ASRS, what their performance has been compared to the benchmarks and have they achieved their targets. MR. DOKES answered 8% is their target and the 1-yr 10.8%, 3-yr 10.1%, 5-yr 5.7%, 10-yr 8.7%, and inception to date 9.9%.

B. Jeffrey Sharpe

CHAIR SCHUBERT welcomed MR. SHARPE and asked him tell about himself, why he applied for the position and what he would contribute to the Board. MR. SHARPE expounded on his background and experience, beginning his career as an employee benefits executive compensation lawyer advising investment committees on different plans. He moved to become general council of investment management at Lockheed Martin and went on to run their private equity portfolio. He stated he was attracted to the job opportunity because he has a passion for working with the types of issues the Board is facing. He believes his experience with addressing these same sorts of issues is a benefit and also his years as a lawyer are a benefit.

MR. BRICE asked what he sees as the greatest opportunities for growth in the world of public pensions, taking into account risk and reward. MR. SHARPE answered he would start by not losing the assets and if he said he knew, then he probably should not be hired. MR. BRICE asked in which asset class he has the most background. MR. SHARPE stated private equity. MS. HARBO requested comments regarding the structure of Alaska's investment program and asset allocation. MR. SHARPE replied he was pleasantly surprised by the degree of diversification and would need a better understanding of the liability structure, funded status and risk profile to comment further.

MS. ERCHINGER asked what experience he has had with creating investment policies. MR. SHARPE stated he has experience in both drafting and redrafting all of the policies at Lockheed Martin, because they are living documents and he has learned more from his mistakes than his successes. MR. TRIVETTE inquired if he has a tilt toward growth or value as an equity investor. MR. SHARPE replied his tilt is toward value, but as a CIO he tried to remain neutral and defer to the advice of his team.

MR. BRICE asked for his reaction to an equity investment manager that is holding onto large cash amount for long periods of time. MR. SHARPE explained the easy way out would be to say, "I'd need to know more," but if the manager is consistently beating his benchmark, then he does not have any problem with that. He has dealt with that issue previously and they treated it as an equity allocation. MS. ERCHINGER asked what his bias is relating to active versus passive investing. MR. SHARPE believes it is cyclical in terms of the degree to which managers can add value through active management. He is in favor of having some active management in the portfolio, as long as they are adding value consistently over rolling five-year periods or reducing risk.

MR. TRIVETTE asked how many clients he advises in his current position. MR. SHARPE stated Gallup is a single client, advisory board whose role is still being developed. They advise on many things including policies and procedures, risk management, and marketing materials. MR. BRICE inquired regarding the flexibility of his schedule in terms of providing advice and meeting with the IAC above and beyond the stated 5 meetings a year. MR. SHARPE replied his schedule is busy, but flexible and the more notice he has, the better it is, because he is on the east coast.

C. Robert Shaw

CHAIR SCHUBERT welcomed MR. SHAW and asked him tell about himself, why he applied for the position and what he would contribute to the Board. MR. SHAW was born and raised in Juneau and has dreamed of this type of opportunity. He has been in the institutional market on almost every single asset class for the last 20 years and is currently acting/interim CIO for the city and county of San Francisco.

MS. HARBO asked if he anticipates being able to attend all of the ARM Board meetings and Ed Conference. MR. SHAW has reviewed the prior calendars and there did not appear to be any conflicts, but if the meetings were always on the second Wednesday of the month, then he would have to appear by conference call. MS. HARBO asked what emphasis he places on strategic planning and what experience he has with strategic planning in his current position. MR. SHAW responded he spent a quite of bit of time on that at a very high level while at Callan. His system currently reviews the asset class allocations once a year. He believes the critical aspect of strategic planning is hitting the actuarial return assumption and seeing if it can be done with less risk, rather than an emphasis on beating or replicating the benchmarks.

MR. BRICE asked if he preferred active management over passive management. MR. SHAW replied using the German word jein, which is a combination of yes and no. He explained he is passive in large value because it is really difficult to beat the benchmark with the median managers net of fees, but he is active in areas where there is a stronger propensity over market cycles to beat benchmarks and prefers to take those resources and put them into high value added areas. MR. BRICE asked for comments regarding the transition between his current CIO position and the IAC position. MR. SHAW believes he will benefit from the information gathered as much as he will provide benefit. He views himself as a fiduciary and is trying to find the best way to do things.

MR. TRIVETTE asked if he was familiar with the commission recapture program and what he thought about it. MR. SHAW stated they restructured a program recently and it was not his favorite program, but he goes back to the policy statement and reviews what is directed. MR. TRIVETTE asked for his favorite asset class and for comments on Alaska's allocations. MR. SHAW replied in his current plan, the most exciting area is their fixed income portfolio, because it has all sorts of different types of broadly diversified investment opportunities. He stated from an enjoyment perspective, private markets are always interesting. He commented he is very careful with capital, because it is easy to get enamored with a pitch from a manager and end up making a long-term mistake.

MR. TRIVETTE requested comments on security lending and the risks of security lending. MR. SHAW answered his plan has seriously downgraded the program and is debating whether to continue the program. He is not a fan of it. It takes a lot of staff resources, consultant resources, time and effort, and questions its value to the system. MS. ERCHINGER asked how the balance is decided between bringing investments in-house versus hiring managers at his fund and requested a description of his fund's in-house investments. MR. SHAW stated he avoids active management in the areas where it makes no sense and would prefer to make it internal, as opposed to external, to the degree he can.

Currently, the short-term cash fund is run by the head of fixed income. They pay optimization fees on their S&P 500 and Russell 1000 value, and are in the process of being able to run those optimization models in-house, saving around $500,000 in annual fees.

MS. ERCHINGER inquired if his system invested in real assets and if so, which areas. MR. SHAW responded they currently have an outstanding RFP for a real asset consultant. Real estate is the largest area at 12% of plan assets and there are other areas, including energy-based. He stated they try to be creative in what they do, because replicating benchmarks gets them nowhere.

D. Robert Storer

CHAIR SCHUBERT welcomed MR. STORER and asked him tell about himself, why he applied for the position and what he would contribute to the Board. MR. STORER expounded on his background and experience, stating he began his career at the L.A. County Retirement System, in 2000, became the Executive Director of the Permanent Fund, and since retirement, has served as advisor on a number of boards, including currently with the Idaho Retirement System. He stated he enjoys being on the plan sponsor side of the table and he is member of the Alaska retirement system.

MS. ERCHINGER asked in which asset classes he feels he has the most background or expertise. MR. STORER stated he started out in bonds, has managed bonds and has overseen staff. He has spent a lot of time with publically traded equities and he also started private equity programs in two places. MS. HARBO asked if he was familiar with the new defined contribution program and requested his comments regarding the investment options. MR. STORER replied he has not seen the options and so cannot comment on them, but was familiar with the process.

MR. TRIVETTE asked if he would be able to attend all of the Board's scheduled meetings, including the Ed Conference in New York. MR. STORER does not anticipate any conflicts. Since he was hired first by Idaho, he feels loyalty to them, but reports to the staff, rather than the Board, and the staff have been very flexible. In the rare event, he could participate telephonically. MR. BRICE asked if he tilts toward active investing or passive investing. MR. STORER replied there is a place for passive, but is biased toward active management and believes they provide many sources of value.

MR. TRIVETTE stated that part of the role as an IAC member is providing advice to the Board and asked if that will be an issue with his style, personally. MR. STORER responded he liked this model so much, he recreated it at the Permanent Fund. He believes there is a huge advantage if the Board members know they are getting unfettered information and hearing all sides. He stated he has known MR. BADER for quite some time, respects him and suspects he will disagree with him from time to time and knows his loyalty is to the Board. CHAIR SCHUBERT requested comments regarding equity managers holding large amounts of cash for prolonged periods of time. MR. STORER stated there are exceptions, but they were hired to manage equities and should be, by and large, fully invested.

MS. ERCHINGER requested comments regarding the plan's asset allocation, if he is familiar with it. MR. STORER said he doesn't have any problems or quibbles with the current asset allocation, but has no manager information and cannot comment on that. He guessed the 14% expected volatility is probably the highest it has ever been. MR. TRIVETTE inquired about his views on strategic planning. MR. STORER is a big fan of strategic planning and believes the best managed funds have a well-articulated long-term view.

CHAIR SCHUBERT asked his thoughts on securities lending. MR. STORER stated his diplomatic answer is he loathes it, because it is putting a lot at risk for a little bit of money.

CHAIR SCHUBERT recessed the meeting from 2:57 p.m. to 3:07 p.m.

E. Board Discussion and Appointment - Executive Session

MR. BRICE moved to go into Executive Session to compare and contrast the resumes of the candidates; MR. TRIVETTE seconded the motion.

The motion carried unanimously.

CHAIR SCHUBERT requested MR. BADER, DR. JENNINGS, MS. RODELL, and MR. JOHNSON join the Board in Executive Session. The Board will go off record at 3:08 to 3:24 to go into Executive Session.

CHAIR SCHUBERT noted the Board is out of Executive Session and took no action while in Executive Session.

MS. HARBO moved the Board appoint ROBERT SHAW to the Investment Advisory Council; MS. ERCHINGER seconded the motion.

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

UNFINISHED BUSINESS

1. Calendar

MS. HARBO moved to accept the proposed 2014 meeting calendar; MS. ERCHINGER seconded the motion.

The motion carried unanimously.

2. Disclosure Report

MS. HALL stated that the disclosure report was included in the packet and there was nothing unusual to report.

3. Legal Report

MR. JOHNSON reported he intends to give a presentation at the September meeting regarding the Board's overall roles pursuant to the governing statutes and to bring clarity on the issue respecting the appointment of the actuary language found in SB 141 and in AS 37.10.22.

NEW BUSINESS

None

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

MR. BRICE commented that a recommendation came from the Legislative Committee meeting regarding scheduling a facilitated meeting with stakeholders to address the unfunded liability issues.

CHAIR SCHUBERT believes this is a two-pronged process. First, Mr. Johnson prepares a memo within the next several weeks regarding the ARM Board duties and responsibilities, with a particular focus on the funding issues. She would like this memo before the meeting. CHAIR SCHUBERT stated she feels uncomfortable moving forward as a Board to address the funding issue without having the other stakeholders involved.

COMMISSIONER BUTCHER asked for clarification about what this meeting will try to accomplish and who should be invited. He commented he is excited about the idea of getting more consensus with the stakeholders and educating the Finance Committees about the unfunded liability.

MS. ERCHINGER noted her opinion from the Legislative Committee meeting was the Board wanted to have a collaborative meeting with stakeholders who have an interest in identifying a specific strategy to move forward to address the impacts of the unfunded liability on the state budget, with the primary goal of meeting to seek options to reduce the impact of pending retirement system contributions on the state. The goal is to try to avoid tension by bringing everybody to the table to have a good conversation about the issue and a discussion on the resolution that was passed at the last meeting showing Buck's results of the scenario of injecting $2 billion up front, for example, which would save $1.7 billion in required future contributions. This would also reduce the annual budget impact by $300 million a year and produce a downtrending curve matching the decline in oil revenues.

COMMISSIONER BUTCHER asked if this two-step process would include an educational session with the stakeholders first, and then a session with the Legislature. CHAIR SCHUBERT agreed and recommended providing a work product. She expressed concern over requesting an appropriation which may impact projects for a number of stakeholders. MR. BRICE believes expanding the conversation to a broader group will give the policymakers the political support they will need to take such an action.

CHAIR SCHUBERT commented on using a facilitator for this meeting. COMMISSIONER BUTCHER stated the Permanent Fund has used a facilitator for a few work sessions and Mike Burns would be able to provide the name. CHAIR SCHUBERT requested Ms. Hall follow up regarding that facilitator.

The invitees would include Alaska Municipal League, School Board Association, the Co-Chairs of both the House and Senate Finance Committees, OMB, NEA, RPA, State Chamber. MR. BRICE commented most of the employee organizations invited are represented on the Board by himself, Trustees Trivette, Ryan and Harbo, and that the Administration would be represented by Commissioner Butcher and Commissioner Hultberg. COMMISSIONER BUTCHER stated he and Commissioner Hultberg have a meeting planned with the OMB Director with the point of getting on the Governor's schedule to discuss this issue. He will try to have that meeting before August in order to bring more insight to the collaborative stakeholder meeting.

The date for the collaborative stakeholder meeting is tentatively scheduled for August 8th or 9th. MS. HALL will follow up with the Board members on their availability. The location will be around Anchorage or possibly Girdwood.

PUBLIC/MEMBER COMMENTS

None

INVESTMENT ADVISORY COUNCIL COMMENTS

DR. JENNINGS recommended having a discussion regarding developing an engaging process for selling assets, realizing the gain and moving onto something else. He stated there is a bias toward adding asset classes and getting educated on new things and suggested creating a similar process to get out of asset classes.

TRUSTEE COMMENTS

MR. BRICE thanked Mr. Puckett for answering members' questions in a timely manner. He commented this has been a wonderful two days.

MS. ERCHINGER noted two interesting points from the Segal report; 1) page 41 shows the investment and administration cost of the plan has decreased from 31 basis points in 2006 to 22 basis points in 2009. She stated the actuarial valuation of the plan would have to be shown to determine whether or not this provides a material impact on the plan. The second item of interest was Segal's recent 2013 capital market assumptions that reported a 52% confidence level at an 8% return. She expressed her gratitude to Mr. Wilson for his years of service to the ARM Board as an IAC member. She stated she has learned a lot from his perspective and will miss his input.

MS. HARBO thanked the Legislative Committee for their report and their hard work in setting up the collaborative stakeholder meeting. She thanked Mr. Puckett and Ms. Gouyton for all the research they have done for the Audit Committee.

MR. TRIVETTE commented the committee work takes up a huge amount of time, but needs to be done in order for the Board to complete their work. He expressed his gratitude to everyone who sat in on committees this week. At the planning meeting later this year, he requested developing something like an action list, where people are held accountable for information they agree to provide. He stated he is proud to be working with all the people on the Board and especially thanked Commissioner Hultberg and Commissioner Butcher for their willingness to work on issues.

COMMISSIONER BUTCHER thanked the Department of Revenue, Department of Administration and all of the committees for their tremendous amount of work.

CHAIR SCHUBERT expressed her appreciation to Mr. Wilson for his service as a member of the IAC. She requested Ms. Hall draft a letter that she would sign thanking him for his service on the committee.

FUTURE AGENDA ITEMS

CHAIR SCHUBERT requested a presentation regarding the issue Dr. Jennings addressed about the process of selling assets.

ADJOURNMENT

There being no objection and no further business to come before the Board, the meeting was adjourned at 4:02 p.m. on June 21, 2013, on a motion by made MS. HARBO and seconded by MR. BRICE.

Chair of the Board of Trustees
Alaska Retirement Management Board

ATTEST:

_____
Corporate Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Retirement System Membership Activity as of June 30, 2013

ACTION: _____

DATE: September 19, 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 June 30, 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

Prepared by Nicole Evans, Accountant IV
Division of Retirement and Benefits

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	0	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

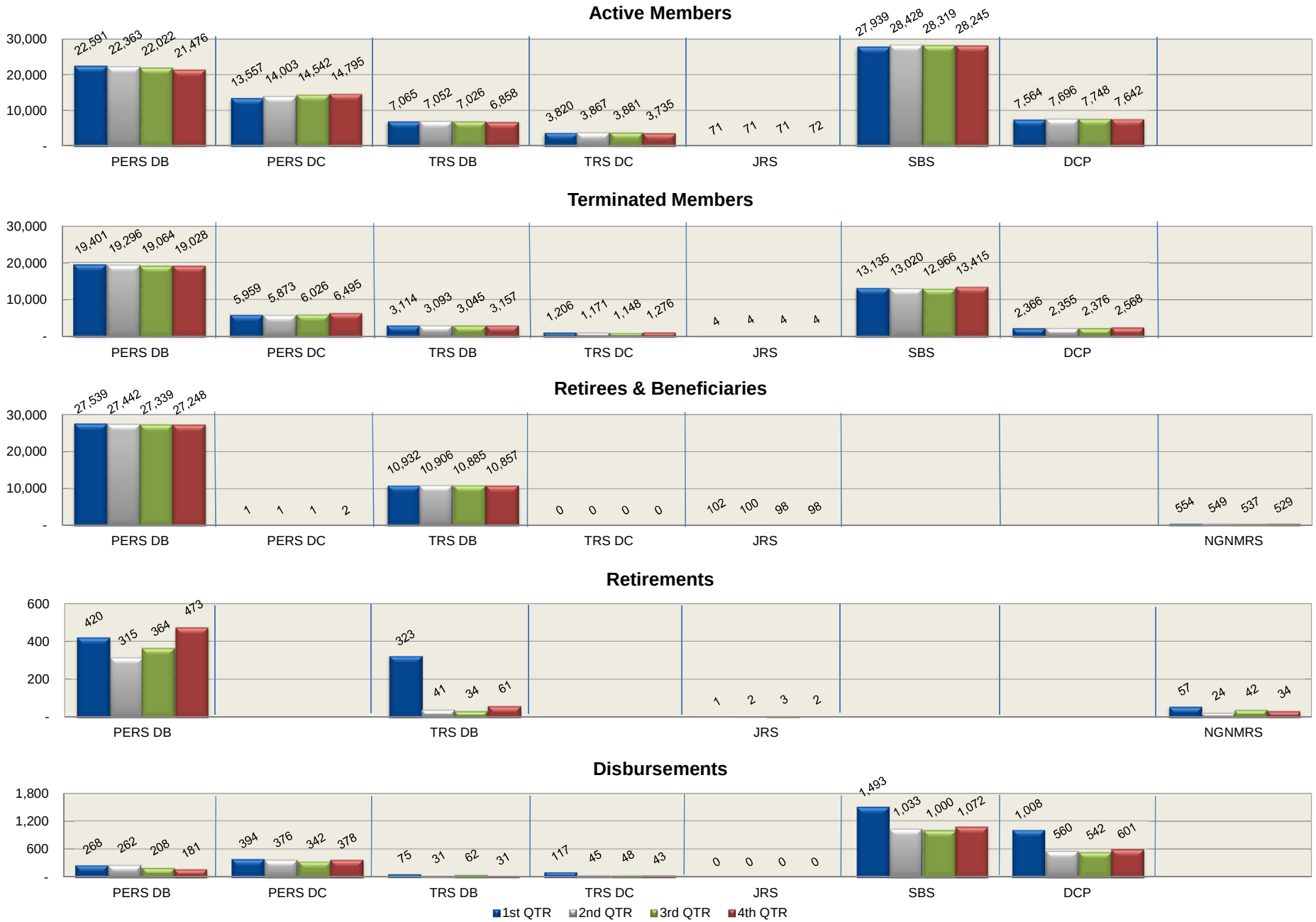
MEMBERSHIP STATISTICS AS OF JUNE 30, 2013

	PERS					TRS				JRS	NG	SBS	DCP
	DB			DC		DB		DC					
	Tier I	Tier II	Tier III	Tier IV	TOTAL	Tier I	Tier II	Tier III	TOTAL				
Active Members	3,313	5,864	12,299	14,795	36,271	1,197	5,661	3,735	10,593	72	n/a	28,245	7,642
Terminated Members	2,417	5,274	11,337	6,495	25,523	542	2,615	1,276	4,433	4	n/a	13,415	2,568
Retirees & Beneficiaries	21,744	4,388	1,116	2	27,249	10,008	849	-	10,857	98	529	n/a	n/a
Managed Accounts	n/a	n/a	n/a	6,748	6,748	n/a	n/a	1,783	1,783	n/a	n/a	900	834
Retirements - 4th QTR FY13	254	125	94	n/a	473	40	21	n/a	61	2	34	n/a	n/a
Full Disbursements - 4th QTR FY13	38	26	117	350	531	7	24	39	70	0	n/a	639	154
Partial Disbursements - 4th QTR FY13	n/a	n/a	n/a	28	28	n/a	n/a	4	4	n/a	n/a	433	447

Alaska Division of Retirement and Benefits

FY 2013 QUARTERLY REPORT OF MEMBERSHIP STATISTICS

as of June 30, 2013



Prepared by Nicole Evans, Accountant IV
Division of Retirement and Benefits

LEGEND

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

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Invoices & Summary of Billings - Buck Consultants, a Xerox Company	ACTION:	
DATE:	September 19, 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 fiscal year ended June 30, 2013.

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

	PERS	TRS	JRS	NG	EPORS	AHF	RHF	TOTAL
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

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	TOTAL
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

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	TOTAL
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 Three Months Ended June 30, 2013

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	TOTAL
Actuarial Valuations	$ 24,696	19,896	6,944	20,692	1,060	-	-	$ 73,288
Actuarial Study to assist in the matter involving the Aleutian Region SD - PERS	51,312	-	-	-	-	-	-	51,312
SB 125 infor for ARMB resolution	3,184	2,902	-	-	-	-	-	6,086
Actuarial assumptions for purchasing add'l eligibility	3,324	-	-	-	-	-	-	3,324
Revised three- year projections FY 14-17 for $250 million appropriation	4,352	3,785	-	-	-	-	-	8,137
Research regarding JRS benefits level cost and survey info.	-	-	1,566	-	-	-	-	1,566
Misc emails and phone calls	2,498	968	-	-	-	-	-	3,466
TOTAL	$ 89,366	27,551	8,510	20,692	1,060	-	-	$ 147,179

Buck Consultants
Billing Summary
Through the Twelve Months Ended June 30, 2013

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	TOTAL
Actuarial Valuations	$ 201,415	153,437	38,505	31,667	7,607	-	7,185	$ 439,816
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
Actuarial Study to assist in the matter involving the Aleutian Region SD - PERS	51,312	-	-	-	-	-	-	51,312
SB 125 infor for ARMB resolution	3,184	2,902	-	-	-	-	-	6,086
Actuarial assumptions for purchasing add'l eligibility	3,324	-	-	-	-	-	-	3,324
Revised three- year projections FY 14-17 for $250 million appropriation	4,352	3,785	-	-	-	-	-	8,137
Research regarding JRS benefits level cost and survey info.	-	-	1,566	-	-	-	-	1,566
Misc emails and phone calls	7,003	2,713	-	-	-	-	-	9,716
TOTAL	$ 332,622	202,604	40,767	31,764	7,607	-	7,185	$ 622,549

CIO REPORT

September 19, 2013

- In conformance with Board policy, on July 23, 2013, notified Board Chair of intention to commit $50 million to Neuberger Berman Secondary Opportunities Fund III.
- Rebalance ARMB fund allocations August 16, 2013.
- Rebalance ARMB fund allocations August 20, 2013.
- Rebalance ARMB fund allocations August 23, 2013.
- Transfer $25 million from Short-term Fixed Income to TIPS.
- Rebalance ARMB fund allocations August 30, 2013.
- Watch List Recommendations:
    - Remove Lord Abbett small cap.
    - Add Relational Investors
- _____
- _____

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

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

August 16, 2013

Ms. Mary Ellen MacDonald
State Street Corporation
IIS Public Funds
2 Avenue de Lafayette, 6th floor N
Boston, MA 02111-1724

Dear Ms. MacDonald:

Please make the transactions in the attachment on August 16, 2013 to bring the ARMB funds allocations closer to target.

If you have any questions please call me: (907) 465-4399.

Sincerely,

Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, Chair ARMB
Angela Rodell, Acting Commissioner
Bob Mitchell, Manager of Fixed Income Investments
Steve Sikes, Manager of Real Assets Investments
Shane Carson, State Investment Officer
Emily Peyton, Assistant Investment Officer
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Paul Hackenmueller, Assistant Investment Officer

GMB/jnw

	AY21	AY22	AY23	AY24	AYW2	AYW3	AYW4	AYX2	AYX3	AYY2	AYY3	AY6G	AY6H	AY6I
Broad Domestic Equity														
Large Cap Pool (AYQK)	953,884	(320,453)	38,207	71,482	(411,599)	(483,896)	1,941	17,951	(565)	121,305	1,938	6,965	(188)	3,028
Small Cap Pool (AYQC)	256,459	(86,154)	10,271	19,218	(110,662)	(130,099)	522	4,826	(152)	32,614	521	1,872	(50)	814
Alternative Equity Strategies														
Advent Capital Convertible Bond (AY52)	30,281	(9,489)	1,193	-	(12,005)	(14,714)	63	557	(16)	3,761	64	216	(5)	94
Alternative Equity Strategies Pool (AYYK)	138,956	(43,543)	5,480	-	(55,089)	(67,522)	288	2,557	(75)	17,257	293	992	(25)	431
Fixed Income														
Alaska Retirement Fixed Income Pool (AY77)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US Treasury Fixed Income Pool (AY1A)	326,487	(92,814)	12,634	(31,550)	(114,678)	(149,651)	690	5,828	(155)	39,293	724	2,261	(53)	984
Mondrian Inv. Partners Inc (AY63)	85,375	(24,268)	3,304	(8,250)	(29,988)	(39,133)	180	1,524	(41)	10,274	189	591	(14)	257
High Yield Pool (AYPK)	122,588	(34,848)	4,744	(11,846)	(43,059)	(56,190)	259	2,188	(59)	14,753	272	849	(20)	369
Lazard Emerging Income (HY) (AY5M)	36,534	(10,386)	1,414	(3,531)	(12,833)	(16,746)	77	653	(17)	4,397	81	253	(6)	110
Global Equity Ex-US														
International Equity Pool (AYRC)	843,176	(254,298)	33,017	(33,003)	(318,842)	(400,308)	1,760	15,325	(434)	103,403	1,818	5,946	(146)	2,586
International Equity - Small Cap Pool (AYRK)	64,437	(19,433)	2,526	(2,522)	(24,369)	(30,595)	135	1,171	(33)	7,903	139	455	(12)	198
Emerging Markets Pool (AYSC)	126,796	(38,237)	4,965	(4,963)	(47,950)	(60,201)	265	2,305	(65)	15,550	274	894	(22)	389
Private Equity														
Private Equity Pool (AYSK)	366,143	(114,748)	14,455	-	(145,158)	(177,917)	758	6,736	(198)	45,472	774	2,613	(66)	1,136
Real Assets														
Real Estate Pool (AYVK)	264,499	(51,743)	9,614	-	(121,416)	(148,818)	633	5,634	(165)	38,034	648	2,186	(56)	950
JP Morgan Real Estate (AY7A)	41,760	(44,228)	2,468											
REIT Holdings (AY9H)	71,090	(22,277)	2,806	-	(28,184)	(34,544)	147	1,308	(39)	8,829	150	507	(13)	220
Farmland Pool (AYTK)	165,035	(51,718)	6,513	-	(65,428)	(80,194)	341	3,036	(90)	20,496	349	1,178	(30)	512
Farmland Water Pool (AYUC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Timber Pool (AYUK)	58,823	(18,436)	2,322	-	(23,320)	(28,583)	121	1,082	(32)	7,306	125	420	(11)	183
Energy Pool (AYVC)	22,316	(6,995)	881	-	(8,847)	(10,844)	46	411	(12)	2,772	47	159	(4)	70
TIPS Internally Managed (AY6N)	1,910	(598)	75	-	(757)	(928)	4	35	(1)	237	4	14	(1)	6
MLP Pool (AYWK)	82,645	(25,902)	3,262	-	(32,764)	(40,159)	171	1,521	(44)	10,264	175	590	(15)	256
Absolute Return														
Absolute Return Pool (AYTC)	171,038	(53,602)	6,750	-	(67,807)	(83,111)	354	3,146	(93)	21,242	362	1,221	(31)	531
Short-term Fixed Income														
State of AK Short Term Pool (AY70)	(4,230,232)	1,324,170	(166,901)	4,965	1,674,755	2,054,153	(8,755)	(77,794)	2,286	(525,162)	(8,947)	(30,182)	768	(13,124)

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

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

August 20, 2013

Ms. Mary Ellen MacDonald
State Street Corporation
IIS Public Funds
2 Avenue de Lafayette, 6th floor N
Boston, MA 02111-1724

Dear Ms. MacDonald:

Please make the transactions in the attachment on August 20, 2013 to bring the ARMB funds allocations closer to target.

If you have any questions please call me: (907) 465-4399.

Sincerely,

Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, Chair ARMB
Angela Rodell, Acting Commissioner
Bob Mitchell, Manager of Fixed Income Investments
Steve Sikes, Manager of Real Assets Investments
Shane Carson, State Investment Officer
Emily Peyton, Assistant Investment Officer
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Paul Hackenmueller, Assistant Investment Officer

GMB/jnw

	AY21	AY22	AY23	AY24	AYW2	AYW3	AYW4	AYX2	AYX3	AYY2	AYY3	AY6G	AY6H	AY6I
Broad Domestic Equity														
Large Cap Pool (AYQK)	129,307	(12,955)	235	35,909	(96,906)	(59,694)	(23,865)	2,869	104	21,096	508	734	23	2,635
Small Cap Pool (AYQC)	34,750	(3,481)	63	9,650	(26,042)	(16,043)	(6,413)	771	28	5,669	137	197	6	708
Alternative Equity Strategies														
Advent Capital Convertible Bond (AY52)	4,423	(193)	15	-	(2,649)	(1,734)	(740)	90	4	661	17	23	1	82
Alternative Equity Strategies Pool (AYYK)	20,249	(893)	66	-	(12,126)	(7,938)	(3,384)	413	17	3,027	82	107	4	376
Global Equity Ex-US														
International Equity Pool (AYRC)	125,300	(3,607)	462	(9,484)	(69,890)	(46,746)	(20,346)	2,498	107	18,268	510	645	24	2,259
International Equity - Small Cap Pool (AYRK)	9,683	(281)	33	(733)	(5,398)	(3,610)	(1,572)	193	8	1,411	40	50	2	174
Emerging Markets Pool (AYSC)	18,450	(534)	65	(1,396)	(10,288)	(6,881)	(2,996)	368	16	2,689	75	95	4	333
Private Equity														
Private Equity Pool (AYSK)	53,638	(2,361)	172	-	(32,120)	(21,029)	(8,965)	1,095	45	8,020	217	283	10	995
Real Assets														
Real Estate Pool (AYVK)	39,668	1,782	224	-	(25,864)	(17,270)	(7,505)	921	39	6,737	187	238	9	834
JP Morgan Real Estate (AY7A)	4,338	(4,239)	(99)											
REIT Holdings (AY9H)	10,074	(443)	27	-	(6,030)	(3,948)	(1,683)	206	9	1,505	41	53	2	187
Farmland Pool (AYTK)	24,214	(1,066)	74	-	(14,499)	(9,492)	(4,046)	495	21	3,620	98	128	4	449
Farmland Water Pool (AYUC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Timber Pool (AYUK)	8,635	(382)	25	-	(5,168)	(3,383)	(1,442)	176	7	1,290	35	45	2	160
Energy Pool (AYVC)	3,274	(142)	11	-	(1,961)	(1,284)	(547)	66	3	489	13	18	-	60
TIPS Internally Managed (AY6N)	276	(10)	1	-	(166)	(108)	(47)	6	-	41	1	1	-	5
MLP Pool (AYWK)	11,978	(527)	39	-	(7,173)	(4,696)	(2,002)	244	10	1,791	48	63	3	222
Absolute Return														
Absolute Return Pool (AYTC)	25,092	(1,102)	82	-	(15,027)	(9,838)	(4,194)	512	21	3,751	101	132	5	465
Fixed Income														
Alaska Retirement Fixed Income Pool (AY77)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US Treasury Fixed Income Pool (AY1A)	(1,290,028)	(676,504)	(23,772)	3,629,749	(1,195,557)	(403,866)	(12,109)	(3,163)	(1,676)	(14,758)	(6,615)	(1,350)	(498)	147
Mondrian Inv. Partners Inc (AY63)	331,684	160,840	5,771	(868,446)	272,248	87,595	(953)	1,227	421	6,976	1,676	445	124	392
High Yield Pool (AYPK)	748,732	368,465	13,163	(1,987,048)	629,015	204,414	(480)	2,600	954	14,439	3,794	963	281	708
Lazard Emerging Income (HY) (AY5M)	301,373	149,305	5,329	(804,726)	255,849	83,509	115	1,015	384	5,571	1,529	381	113	253
Short-term Fixed Income														
State of AK Short Term Pool (AY70)	(615,110)	28,328	(1,986)	(3,475)	369,752	242,042	103,174	(12,602)	(522)	(92,293)	(2,494)	(3,251)	(119)	(11,444)

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

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

August 23, 2013

Ms. Mary Ellen MacDonald
State Street Corporation
IIS Public Funds
2 Avenue de Lafayette, 6th floor N
Boston, MA 02111-1724

Dear Ms. MacDonald:

Please make the transactions in the attachment on August 23, 2013 to bring the ARMB funds allocations closer to target.

If you have any questions please call me: (907) 465-4399.

Sincerely,

Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, Chair ARMB
Angela Rodell, Acting Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Kelli Barkov, Accounting Technician
Steve Sikes, Manager of Real Assets Investments
Shane Carson, State Investment Officer
Paul Hackenmueller, Assistant Investment Officer
Bob Mitchell, Manager of Fixed Income Investments
Emily Peyton, Assistant Investment Officer

GMB/jnw

	AY21	AY22	AY23	AY24	AYW2	AYW3	AYW4	AYX2	AYX3	AYY2	AYY3	AY6G	AY6H	AY6I
Broad Domestic Equity														
Large Cap Pool (AYQK)	(3,650,439)	(3,663,867)	(65,220)	(106,818)	5,644,588	1,646,363	21,928	28,173	9,544	37,583	80,559	10,107	2,783	4,716
Small Cap Pool (AYQC)	(994,154)	(997,813)	(17,762)	(29,090)	1,537,237	448,368	5,972	7,673	2,599	10,236	21,939	2,753	758	1,284
Alternative Equity Strategies														
Advent Capital Convertible Bond (AY52)	(114,123)	(113,936)	(2,039)	-	173,522	50,570	675	868	293	1,143	2,486	311	85	145
Alternative Equity Strategies Pool (AYYK)	(518,476)	(517,627)	(9,263)	-	788,334	229,747	3,063	3,942	1,334	5,192	11,292	1,413	389	660
Global Equity Ex-US														
International Equity Pool (AYRC)	(3,108,441)	(3,092,236)	(55,539)	61,191	4,672,397	1,360,931	18,156	23,392	7,911	30,535	67,093	8,388	2,307	3,915
International Equity - Small Cap Pool (AYRK)	(240,708)	(239,455)	(4,300)	4,739	361,817	105,386	1,406	1,811	613	2,364	5,195	649	179	304
Emerging Markets Pool (AYSC)	(458,920)	(456,529)	(8,199)	9,034	689,818	200,924	2,681	3,453	1,168	4,509	9,905	1,238	340	578
Private Equity														
Private Equity Pool (AYSK)	(1,374,095)	(1,371,845)	(24,551)	-	2,089,290	608,891	8,118	10,447	3,535	13,759	29,926	3,746	1,031	1,748
Real Assets														
Real Estate Pool (AYVK)	(1,241,628)	(1,047,349)	(22,202)	-	1,743,234	507,621	6,775	8,732	2,952	11,352	25,061	3,130	861	1,461
JP Morgan Real Estate (AY7A)	97,695	(99,458)	1,763											
REIT Holdings (AY9H)	(264,909)	(264,479)	(4,731)	-	402,792	117,387	1,565	2,014	682	2,653	5,769	722	198	337
Farmland Pool (AYTK)	(621,537)	(620,528)	(11,104)	-	945,042	275,418	3,672	4,725	1,599	6,224	13,536	1,695	467	791
Farmland Water Pool (AYUC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Timber Pool (AYUK)	(221,711)	(221,336)	(3,962)	-	337,099	98,242	1,310	1,686	571	2,220	4,828	605	166	282
Energy Pool (AYVC)	(84,048)	(83,912)	(1,502)	-	127,795	37,244	496	639	216	842	1,831	229	63	107
TIPS Internally Managed (AY6N)	(7,098)	(7,086)	(127)	-	10,792	3,145	42	54	18	71	155	19	6	9
MLP Pool (AYWK)	(312,352)	(311,841)	(5,580)	-	474,925	138,410	1,846	2,375	803	3,127	6,803	852	234	398
Absolute Return														
Absolute Return Pool (AYTC)	(644,147)	(643,095)	(11,508)	-	979,414	285,435	3,806	4,898	1,658	6,450	14,029	1,757	484	819
Fixed Income														
Alaska Retirement Fixed Income Pool (AY77)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US Treasury Fixed Income Pool (AY1A)	(1,176,109)	(1,174,594)	(21,013)	(2,258)	1,790,244	521,767	6,955	8,950	3,030	11,799	25,637	3,210	884	1,498
Mondrian Inv. Partners Inc (AY63)	(310,743)	(308,328)	(5,552)	10,489	463,233	134,871	1,800	2,322	784	3,011	6,664	832	229	388
High Yield Pool (AYPK)	(445,657)	(444,968)	(7,962)	(221)	677,809	197,539	2,634	3,389	1,147	4,464	9,708	1,216	334	568
Lazard Emerging Income (HY) (AY5M)	(132,648)	(132,321)	(2,370)	615	201,149	58,614	781	1,006	341	1,323	2,883	360	99	168
Short-term Fixed Income														
State of AK Short Term Pool (AY70)	15,824,248	15,812,603	282,723	52,319	(24,110,531)	(7,026,873)	(93,681)	(120,549)	(40,798)	(158,857)	(345,299)	(43,232)	(11,897)	(20,176)

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

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

August 26, 2013

Ms. Mary Ellen MacDonald
State Street Corporation
IIS Public Funds
2 Avenue de Lafayette, 6th floor N
Boston, MA 02111-1724

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests to have the following cash transfers made as soon as possible on August 27, 2013

Short-term Fixed Income (AY70)	<$25,000,000>
TIPS (AY6N)	$25,000,000

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-AY6I, AYX2-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,

Gary M. Bader

Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, Chair ARMB
Angela Rodell, Acting Commissioner
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Kelli Barkov, Accounting Technician
Bob Mitchell, Manager of Fixed Income Investments
Emily Peyton, Assistant Investment Officer
Steve Sikes, Manager of Real Assets Investments
Shane Carson, State Investment Officer
Paul Hackenmueller, Assistant Investment Officer

GMB/jnw

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

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

August 30, 2013

Ms. Mary Ellen MacDonald
State Street Corporation
IIS Public Funds
2 Avenue de Lafayette, 6th floor N
Boston, MA 02111-1724

Dear Ms. MacDonald:

Please make the transactions in the attachment on August 30, 2013 to bring the ARMB funds allocations closer to target.

If you have any questions please call me: (907) 465-4399.

Sincerely,

Gary M. Bader

Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, Chair ARMB
Angela Rodell, Acting Commissioner
Bob Mitchell, Manager of Fixed Income Investments
Steve Sikes, Manager of Real Assets Investments
Shane Carson, State Investment Officer
Paul Hackenmueller, Assistant Investment Officer
Emily Peyton, Assistant Investment Officer
Pam Leary, State Comptroller
Scott Jones, Assistant State Comptroller
James McKnight, Senior Investment Compliance Officer
Kelli Barkov, Accounting Technician

GMB/jnw

	AY21	AY22	AY23	AY24	AYW2	AYW3	AYW4	AYX2	AYX3	AYY2	AYY3	AY6G	AY6H	AY6I
Broad Domestic Equity														
Large Cap Pool (AYQK)	1,184,577	(519,483)	(19,275)	44,392	(333,376)	(563,333)	(7,926)	27,333	71	169,897	885	9,693	(94)	6,639
Small Cap Pool (AYQC)	322,461	(141,411)	(5,247)	12,084	(90,750)	(153,348)	(2,158)	7,440	19	46,248	241	2,639	(26)	1,808
Alternative Equity Strategies														
Advent Capital Convertible Bond (AY52)	37,385	(15,915)	(591)	-	(9,932)	(17,390)	(245)	852	3	5,297	30	302	(3)	207
Alternative Equity Strategies Pool (AYYK)	169,082	(71,986)	(2,673)	-	(44,919)	(78,649)	(1,109)	3,855	13	23,959	136	1,368	(13)	936
Global Equity Ex-US														
International Equity Pool (AYRC)	989,183	(433,994)	(16,103)	37,658	(278,634)	(470,576)	(6,620)	22,828	59	141,900	738	8,095	(79)	5,545
International Equity - Small Cap Pool (AYRK)	76,388	(33,512)	(1,244)	2,908	(21,518)	(36,340)	(511)	1,763	4	10,958	57	625	(6)	428
Emerging Markets Pool (AYSC)	146,503	(64,276)	(2,385)	5,577	(41,267)	(69,695)	(981)	3,381	8	21,016	110	1,199	(11)	821
Private Equity														
Private Equity Pool (AYSK)	447,417	(190,488)	(7,073)	-	(118,864)	(208,119)	(2,933)	10,202	35	63,398	361	3,619	(32)	2,477
Real Assets														
Real Estate Pool (AYVK)	959,780	219,537	7,623	-	(814,258)	(413,399)	(5,204)	6,226	(1,017)	41,101	(3,865)	2,125	(337)	1,688
JP Morgan Real Estate (AY7A)	62,721	(60,509)	(2,212)											
REIT Holdings (AY9H)	87,160	(37,110)	(1,374)	-	(23,156)	(40,544)	(571)	1,987	6	12,350	70	705	(6)	483
Farmland Pool (AYTK)	125,169	(278,811)	741	-	141,436	(30,967)	(608)	5,382	304	32,780	1,315	1,931	70	1,258
Farmland Water Pool (AYUC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Timber Pool (AYUK)	73,754	(31,404)	(1,162)	-	(19,593)	(34,305)	(484)	1,681	5	10,450	59	596	(5)	408
Energy Pool (AYVC)	27,766	(11,820)	(439)	-	(7,377)	(12,916)	(182)	634	2	3,934	22	224	(2)	154
TIPS Internally Managed (AY6N)	9,528	(4,058)	(159)	-	(2,527)	(4,427)	(61)	217	1	1,350	8	79	(2)	51
MLP Pool (AYWK)	102,341	(43,570)	(1,618)	-	(27,189)	(47,605)	(671)	2,334	8	14,502	82	827	(7)	566
Absolute Return														
Absolute Return Pool (AYTC)	212,514	(90,475)	(3,360)	-	(56,458)	(98,852)	(1,393)	4,845	16	30,113	171	1,718	(16)	1,177
Fixed Income														
Alaska Retirement Fixed Income Pool (AY77)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US Treasury Fixed Income Pool (AY1A)	430,580	(144,241)	(5,389)	(114,499)	(66,225)	(168,514)	(2,407)	8,990	84	55,738	530	3,193	(13)	2,173
Mondrian Inv. Partners Inc (AY63)	102,361	(42,043)	(1,563)	(4,502)	(25,299)	(46,364)	(655)	2,301	10	14,296	90	816	(7)	559
High Yield Pool (AYPK)	150,955	(60,465)	(2,249)	(11,145)	(35,415)	(67,124)	(949)	3,362	16	20,877	139	1,192	(9)	815
Lazard Emerging Income (HY) (AY5M)	43,297	(18,380)	(683)	(160)	(11,434)	(20,094)	(283)	986	3	6,127	35	350	(3)	239
Short-term Fixed Income														
State of AK Short Term Pool (AY70)	(5,760,922)	2,074,414	66,435	27,687	1,886,755	2,582,561	35,951	(116,599)	350	(726,291)	(1,214)	(41,296)	601	(28,432)

Alaska Retirement Management Board
Manager Watch List - September 2013

Manager & Mandate	Reason for Watch	Board Approved	Actions Taken by Staff/Expected Final Disposition
Brandes Investment Partners	Performance DB Mandate	Yes 9/20/12	Formal notification. Continue Monitoring
Coventry Real Estate	Performance	Yes 4/23/2009	Formal Notification. Reviewed 6/22/12; Continue Monitoring
Lehman Real Estate	Performance	Yes 4/23/2009	Formal Notification. Reviewed 6/22/12; Continue Monitoring
Lord Abbett - small cap	Performance	Yes 06/16/2011	Formal Notification; Reviewed 6/22/12; Continue Monitoring
McKinley Capital - large cap and Int'l	Performance	Yes 12/04/09	Formal Notification; reviewed 6/22/12; continue monitoring
RCM (large cap)	Performance	Yes 6/21/12	Formal Notfication - Staff Monitoring 12-18 months

ALASKA RETIREMENT MANAGEMENT BOARD

FINANCIAL REPORT

As of July 31, 2013

ALASKA RETIREMENT MANAGEMENT BOARD
Schedule of Investment Income and Changes in Invested Assets by Fund
For the One Month Ending July 31, 2013

	Beginning Invested Assets	Investment Income (1)	Net Contributions (Withdrawals)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Public Employees' Retirement System (PERS)						
Defined Benefit Plans:						
Retirement Trust	$ 6,682,601,125	$ 200,370,185	$ 150,206,210	$ 7,033,177,520	5.25%	2.97%
Retirement Health Care Trust	5,869,023,791	172,209,521	124,605,281	6,165,838,593	5.06%	2.90%
Total Defined Benefit Plans	12,551,624,916	372,579,706	274,811,491	13,199,016,113	5.16%	2.94%
Defined Contribution Plans:						
Participant Directed Retirement	344,683,147	14,896,067	5,696,067	365,275,281	5.97%	4.29%
Health Reimbursement Arrangement	107,570,946	3,156,449	2,357,049	113,084,444	5.13%	2.90%
Retiree Medical Plan	20,530,927	602,448	350,384	21,483,759	4.64%	2.91%
Defined Benefit Occupational Death and Disability:						
Public Employees	8,033,120	235,324	77,216	8,345,660	3.89%	2.92%
Police and Firefighters	3,497,071	102,664	73,652	3,673,387	5.04%	2.91%
Total Defined Contribution Plans	484,315,211	18,992,952	8,554,368	511,862,531	5.69%	3.89%
Total PERS	**13,035,940,127**	**391,572,658**	**283,365,859**	**13,710,878,644**	5.18%	2.97%
Teachers' Retirement System (TRS)						
Defined Benefit Plans:						
Retirement Trust	3,279,505,294	98,291,195	178,919,839	3,556,716,328	8.45%	2.92%
Retirement Health Care Trust	1,883,677,379	55,207,265	100,507,351	2,039,391,995	8.27%	2.85%
Total Defined Benefit Plans	5,163,182,673	153,498,460	279,427,190	5,596,108,323	8.38%	2.89%
Defined Contribution Plans:						
Participant Directed Retirement	153,359,455	6,614,362	512,621	160,486,438	4.65%	4.31%
Health Reimbursement Arrangement	34,477,528	1,001,221	335,003	35,813,752	3.88%	2.89%
Retiree Medical Plan	8,710,401	253,946	68,418	9,032,765	3.70%	2.90%
Defined Benefit Occupational Death and Disability	2,595,310	76,124	9	2,671,443	2.93%	2.93%
Total Defined Contribution Plans	199,142,694	7,945,653	916,051	208,004,398	4.45%	3.98%
Total TRS	**5,362,325,367**	**161,444,113**	**280,343,241**	**5,804,112,721**	8.24%	2.93%
Judicial Retirement System (JRS)						
Defined Benefit Plan Retirement Trust	118,593,014	3,553,592	3,587,034	125,733,640	6.02%	2.95%
Defined Benefit Retirement Health Care Trust	22,670,718	663,727	74,652	23,409,097	3.26%	2.92%
Total JRS	**141,263,732**	**4,217,319**	**3,661,686**	**149,142,737**	5.58%	2.95%
National Guard/Naval Militia Retirement System (MRS)						
Defined Benefit Plan Retirement Trust	34,141,087	993,912	518,511	35,653,510	4.43%	2.89%
Other Participant Directed Plans						
Supplemental Annuity Plan	2,916,434,215	77,620,431	(2,407,642)	2,991,647,004	2.58%	2.66%
Deferred Compensation Plan	685,406,547	20,753,708	(323,011)	705,837,244	2.98%	3.03%
Total All Funds	**22,175,511,075**	**656,602,141**	**565,158,644**	**23,397,271,860**		
Total Non-Participant Directed	18,075,627,711	536,717,573	561,680,609	19,174,025,893	6.08%	2.92%
Total Participant Directed	4,099,883,364	119,884,568	3,478,035	4,223,245,967	3.01%	2.92%
Total All Funds	**$ 22,175,511,075**	**$ 656,602,141**	**$ 565,158,644**	**$ 23,397,271,860**	**5.51%**	**2.92%**

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 July 31, 2013

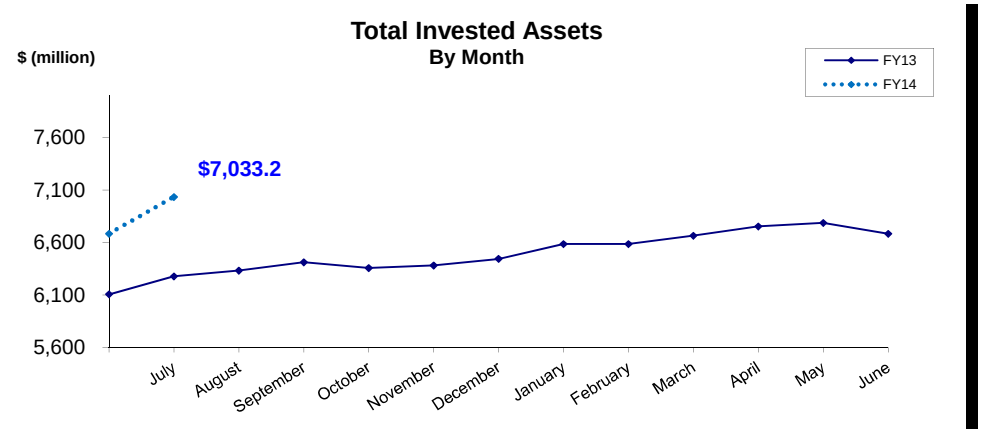
	Beginning Invested Assets	Investment Income (1)	Net Contributions (Withdrawals)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Public Employees' Retirement System (PERS)						
Defined Benefit Plans:						
Retirement Trust	$ 6,682,601,125	$ 200,370,185	$ 150,206,210	$ 7,033,177,520	5.25%	2.97%
Retirement Health Care Trust	5,869,023,791	172,209,521	124,605,281	6,165,838,593	5.06%	2.90%
Total Defined Benefit Plans	12,551,624,916	372,579,706	274,811,491	13,199,016,113	5.16%	2.94%
Defined Contribution Plans:						
Participant Directed Retirement	344,683,147	14,896,067	5,696,067	365,275,281	5.97%	4.29%
Health Reimbursement Arrangement	107,570,946	3,156,449	2,357,049	113,084,444	5.13%	2.90%
Retiree Medical Plan	20,530,927	602,448	350,384	21,483,759	4.64%	2.91%
Defined Benefit Occupational Death and Disability:						
Public Employees	8,033,120	235,324	77,216	8,345,660	3.89%	2.92%
Police and Firefighters	3,497,071	102,664	73,652	3,673,387	5.04%	2.91%
Total Defined Contribution Plans	484,315,211	18,992,952	8,554,368	511,862,531	5.69%	3.89%
Total PERS	**13,035,940,127**	**391,572,658**	**283,365,859**	**13,710,878,644**	5.18%	2.97%
Teachers' Retirement System (TRS)						
Defined Benefit Plans:						
Retirement Trust	3,279,505,294	98,291,195	178,919,839	3,556,716,328	8.45%	2.92%
Retirement Health Care Trust	1,883,677,379	55,207,265	100,507,351	2,039,391,995	8.27%	2.85%
Total Defined Benefit Plans	5,163,182,673	153,498,460	279,427,190	5,596,108,323	8.38%	2.89%
Defined Contribution Plans:						
Participant Directed Retirement	153,359,455	6,614,362	512,621	160,486,438	4.65%	4.31%
Health Reimbursement Arrangement	34,477,528	1,001,221	335,003	35,813,752	3.88%	2.89%
Retiree Medical Plan	8,710,401	253,946	68,418	9,032,765	3.70%	2.90%
Defined Benefit Occupational Death and Disability	2,595,310	76,124	9	2,671,443	2.93%	2.93%
Total Defined Contribution Plans	199,142,694	7,945,653	916,051	208,004,398	4.45%	3.98%
Total TRS	**5,362,325,367**	**161,444,113**	**280,343,241**	**5,804,112,721**	8.24%	2.93%
Judicial Retirement System (JRS)						
Defined Benefit Plan Retirement Trust	118,593,014	3,553,592	3,587,034	125,733,640	6.02%	2.95%
Defined Benefit Retirement Health Care Trust	22,670,718	663,727	74,652	23,409,097	3.26%	2.92%
Total JRS	**141,263,732**	**4,217,319**	**3,661,686**	**149,142,737**	5.58%	2.95%
National Guard/Naval Militia Retirement System (MRS)						
Defined Benefit Plan Retirement Trust	34,141,087	993,912	518,511	35,653,510	4.43%	2.89%
Other Participant Directed Plans						
Supplemental Annuity Plan	2,916,434,215	77,620,431	(2,407,642)	2,991,647,004	2.58%	2.66%
Deferred Compensation Plan	685,406,547	20,753,708	(323,011)	705,837,244	2.98%	3.03%
Total All Funds	**22,175,511,075**	**656,602,141**	**565,158,644**	**23,397,271,860**		
Total Non-Participant Directed	18,075,627,711	536,717,573	561,680,609	19,174,025,893	6.08%	2.92%
Total Participant Directed	4,099,883,364	119,884,568	3,478,035	4,223,245,967	3.01%	2.92%
Total All Funds	**$ 22,175,511,075**	**$ 656,602,141**	**$ 565,158,644**	**$ 23,397,271,860**	**5.51%**	**2.92%**

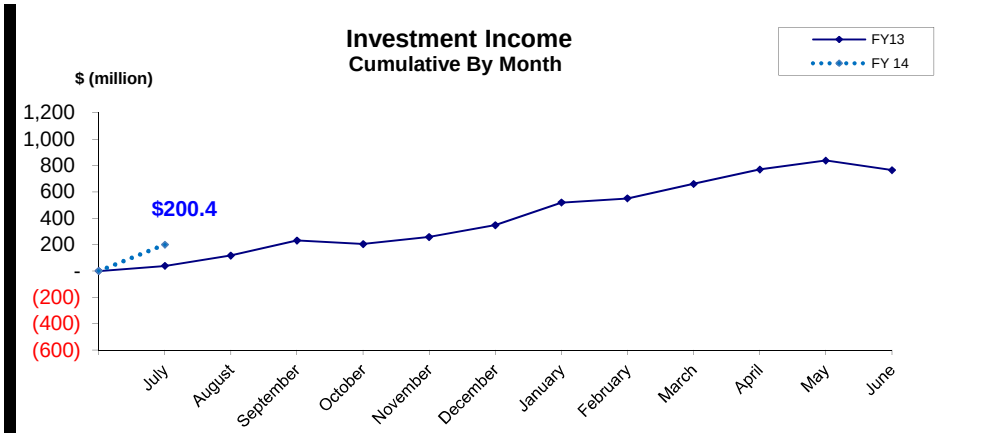
Notes:

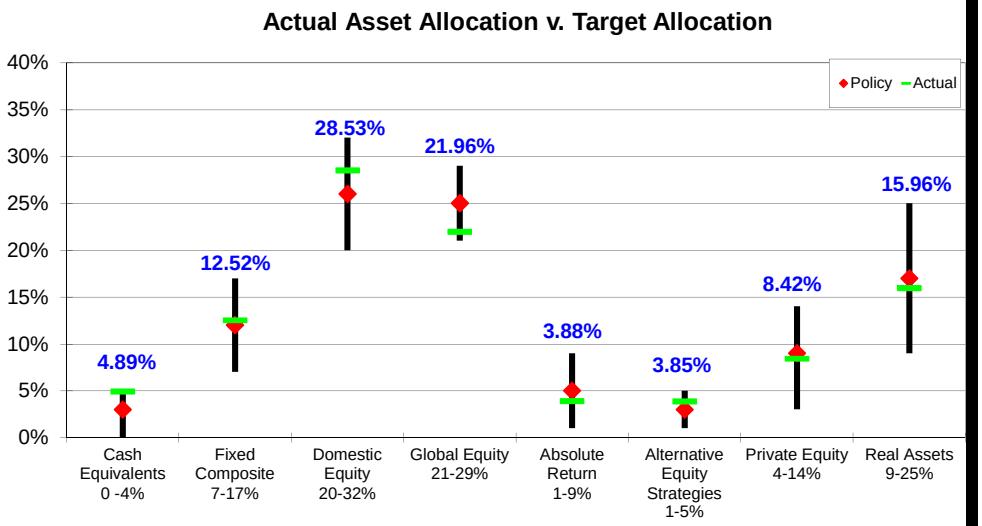
(1) Includes interest, dividends, securities lending, expenses, realized and unrealized gains/losses

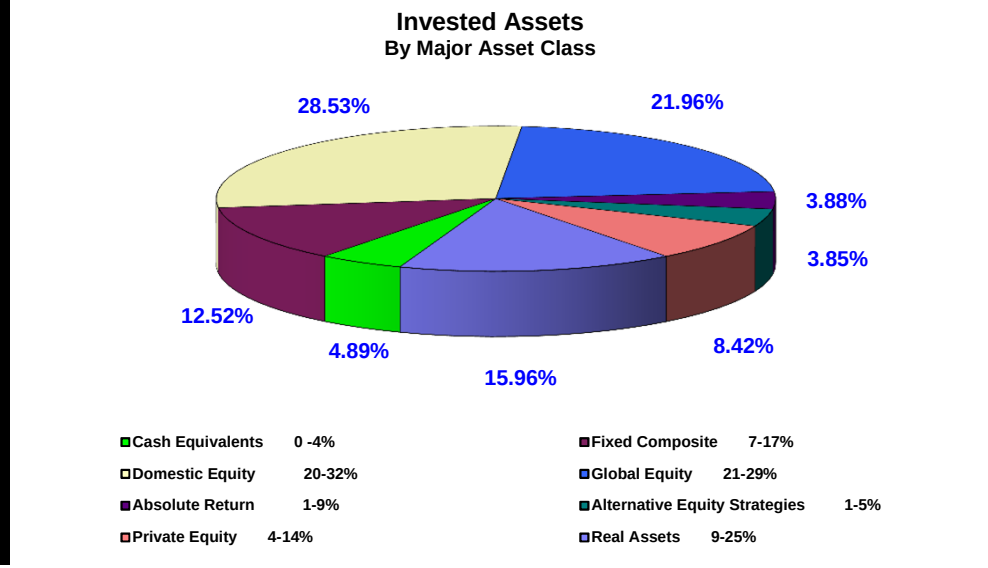
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates and can be found at: http://www.revenue.state.ak.us/treasury/programs/programs/other/armb/investmentresults.aspx

PUBLIC EMPLOYEES' RETIREMENT TRUST FUND
As of July 31, 2013

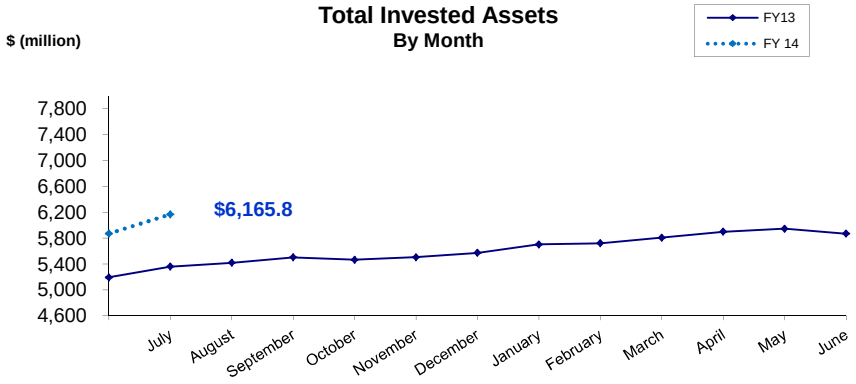


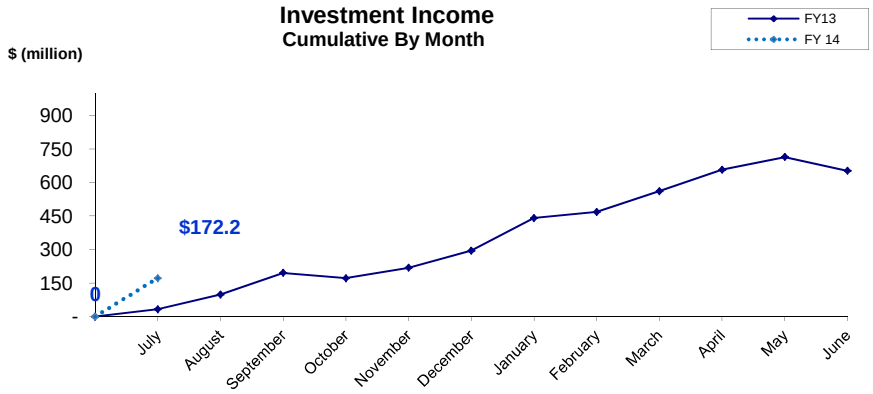


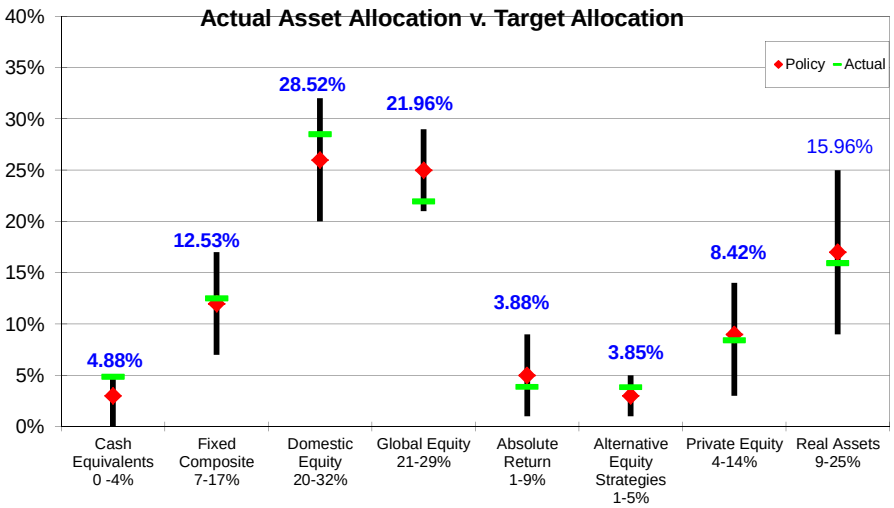


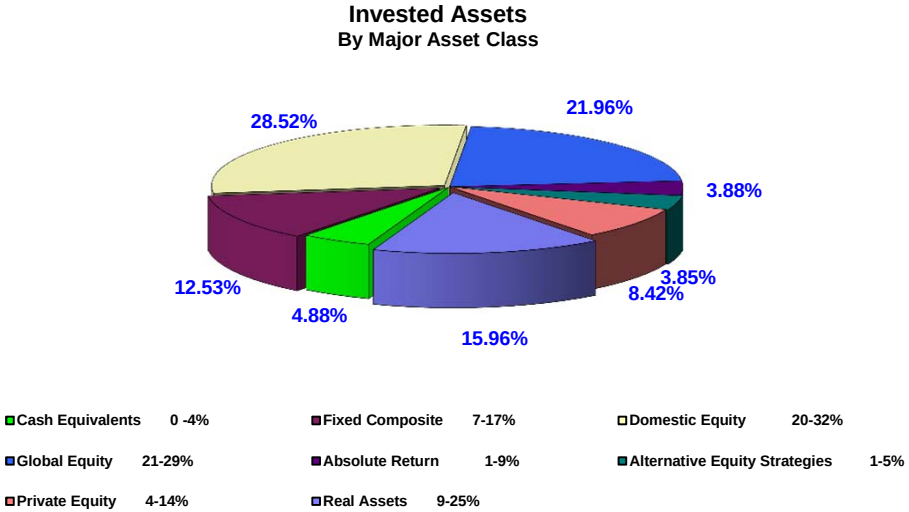


PUBLIC EMPLOYEES' RETIREE HEALTH CARE TRUST FUND
As of July 31, 2013

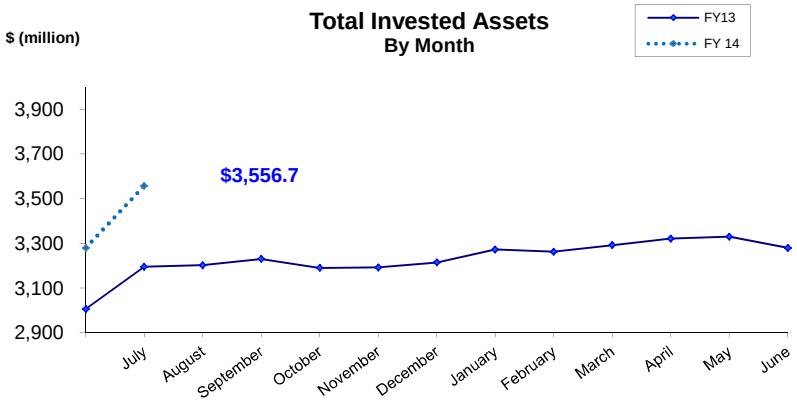


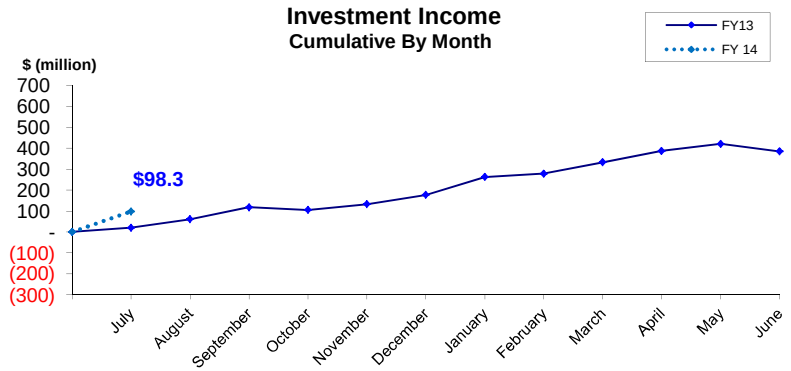


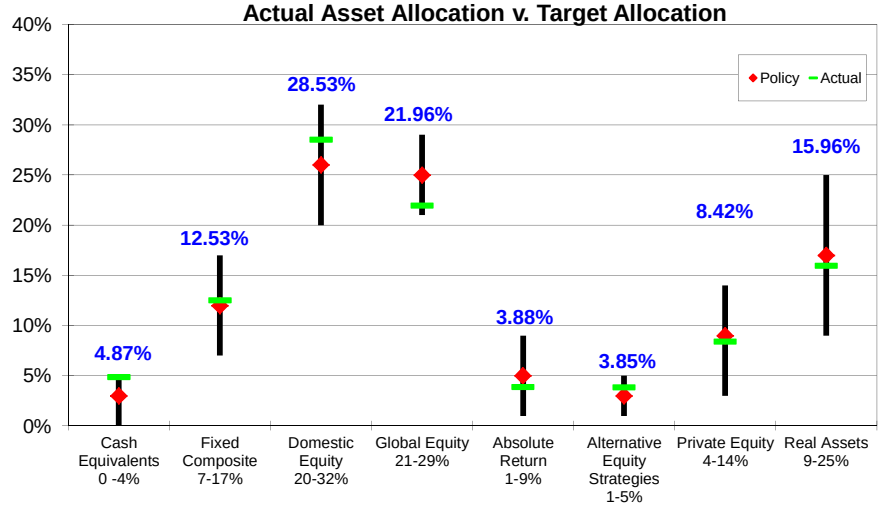


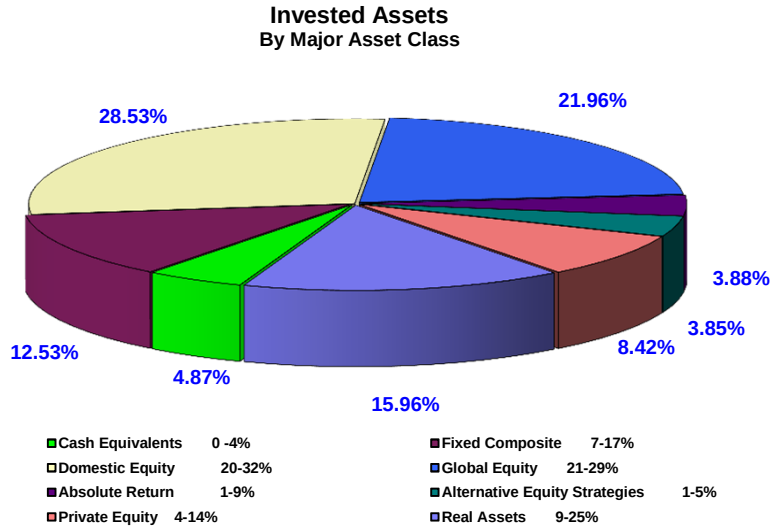


TEACHERS' RETIREMENT TRUST FUND
As of July 31, 2013

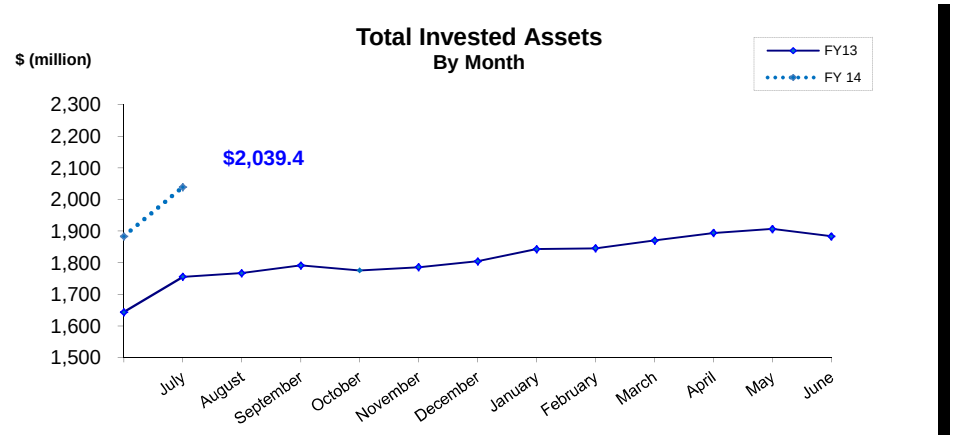


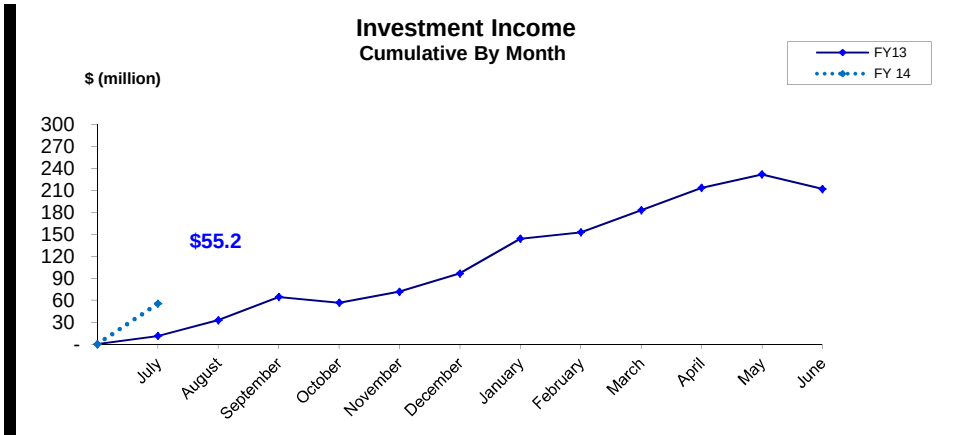


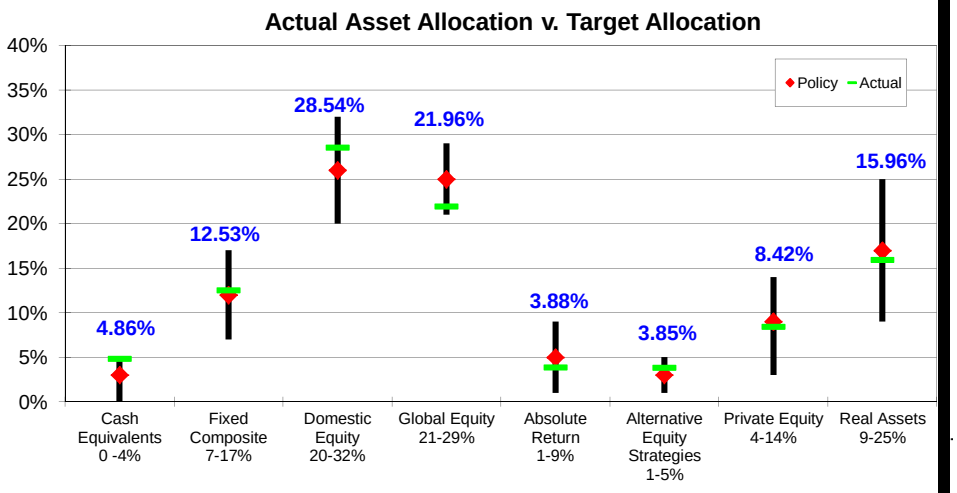


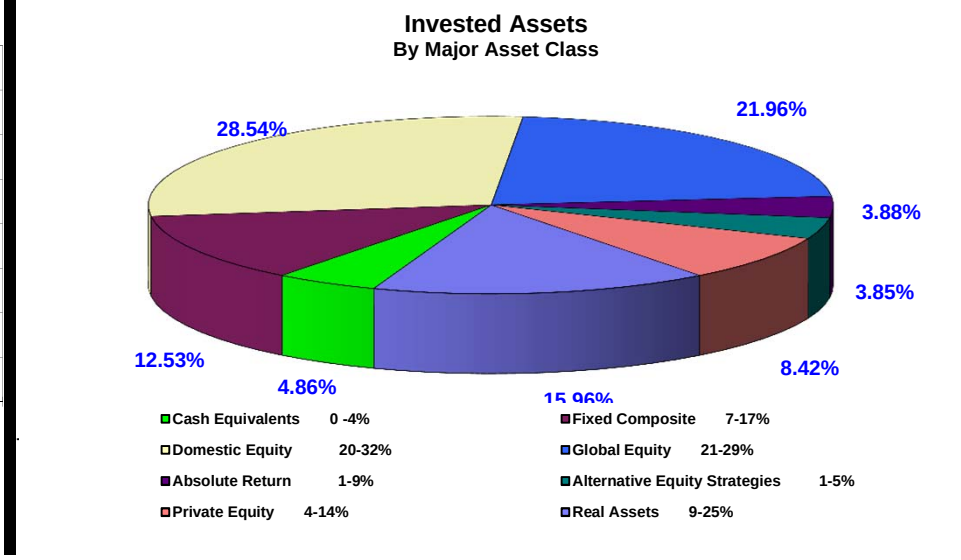


TEACHERS' RETIREE HEALTH CARE TRUST FUND
As of July 31, 2013

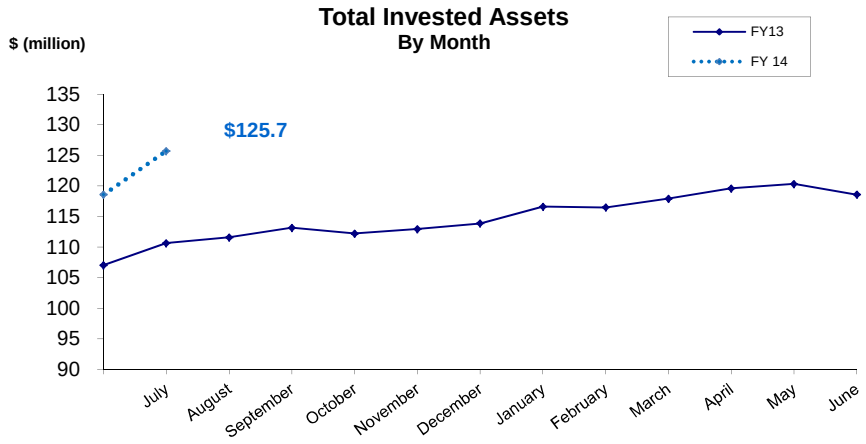


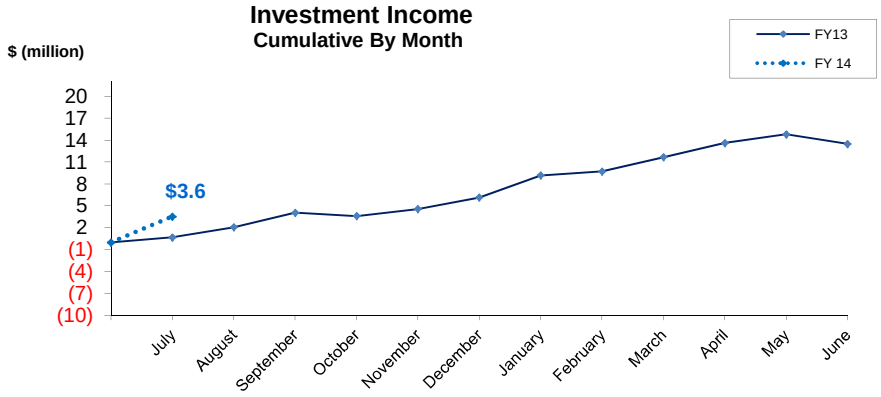


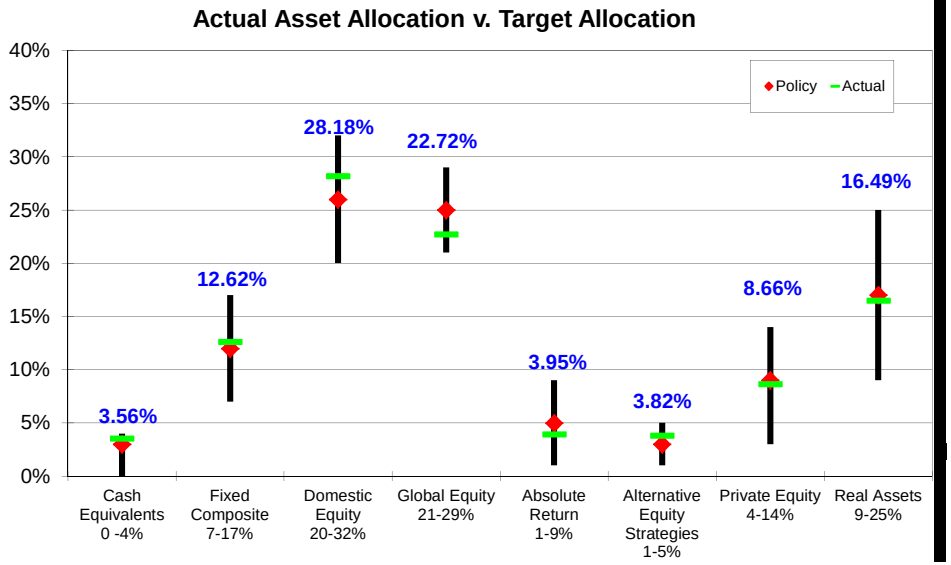


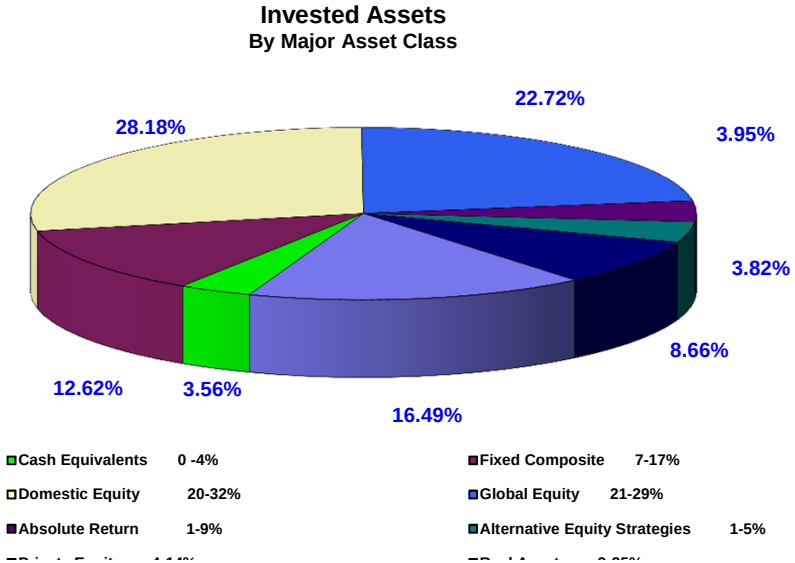


JUDICIAL RETIREMENT TRUST FUND
As of August 31, 2013

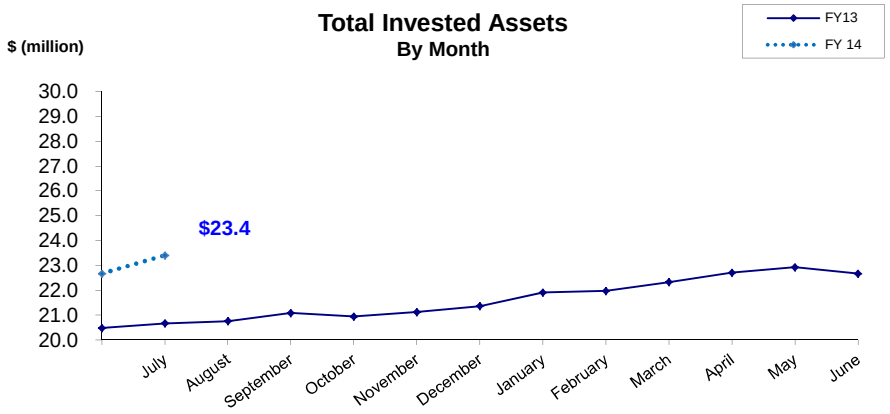


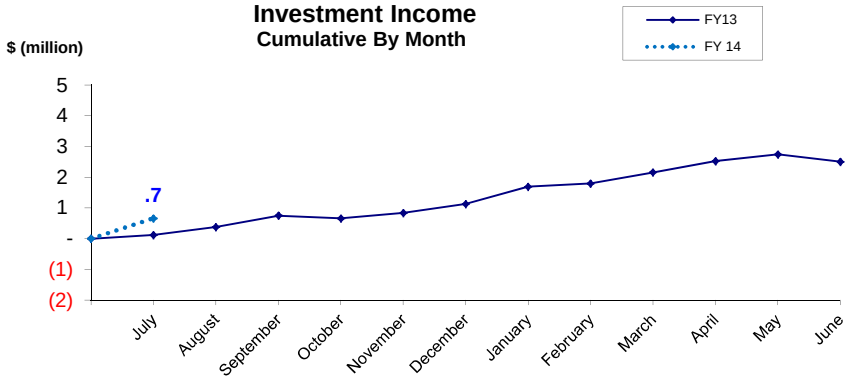


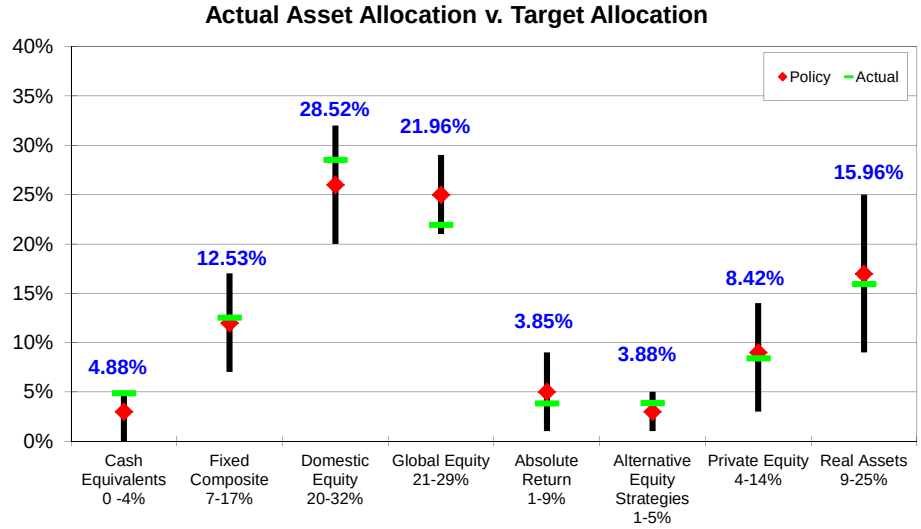


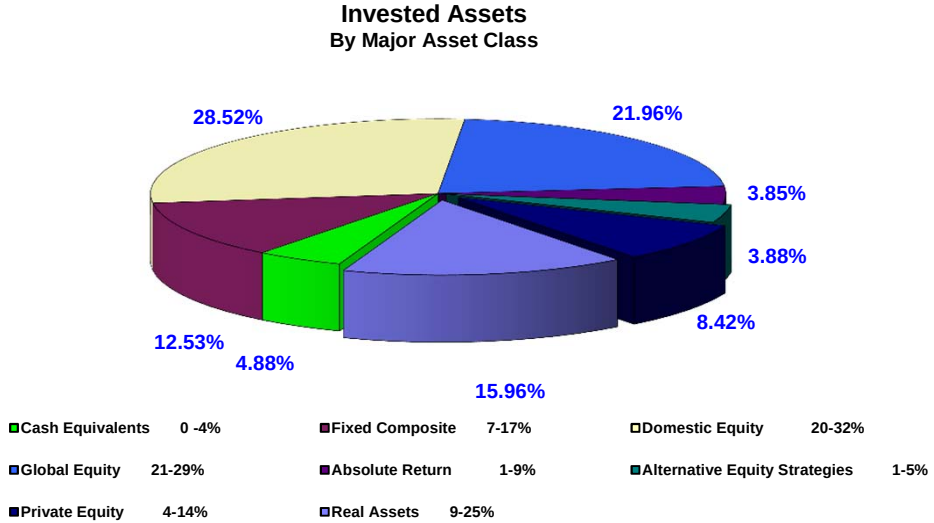


JUDICIAL RETIREE HEALTH CARE TRUST FUND
As of July 31, 2013

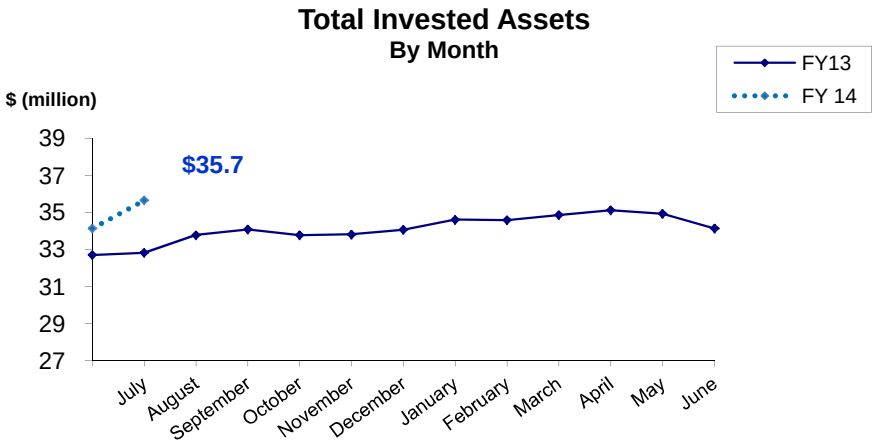


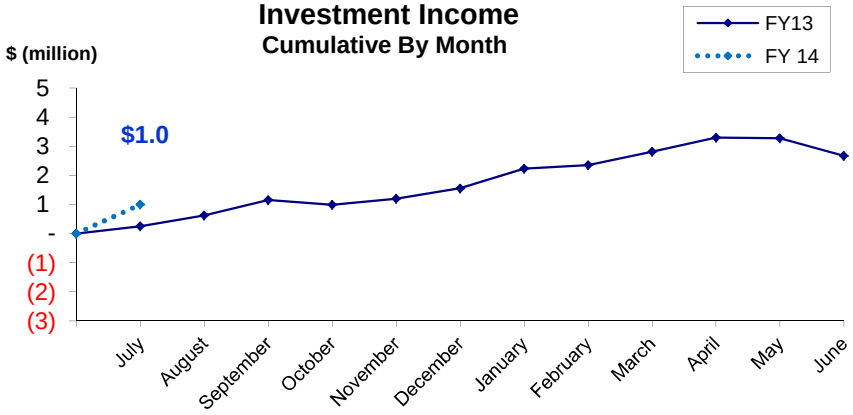


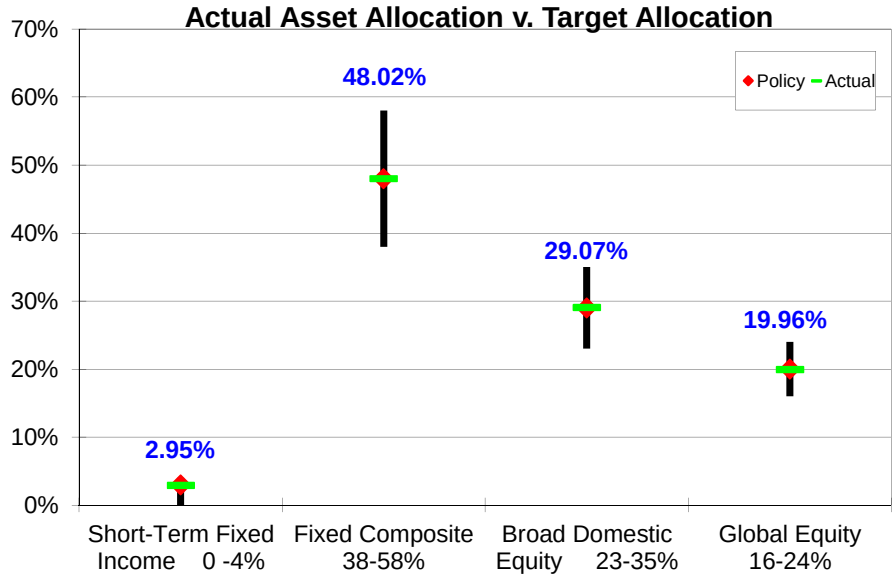


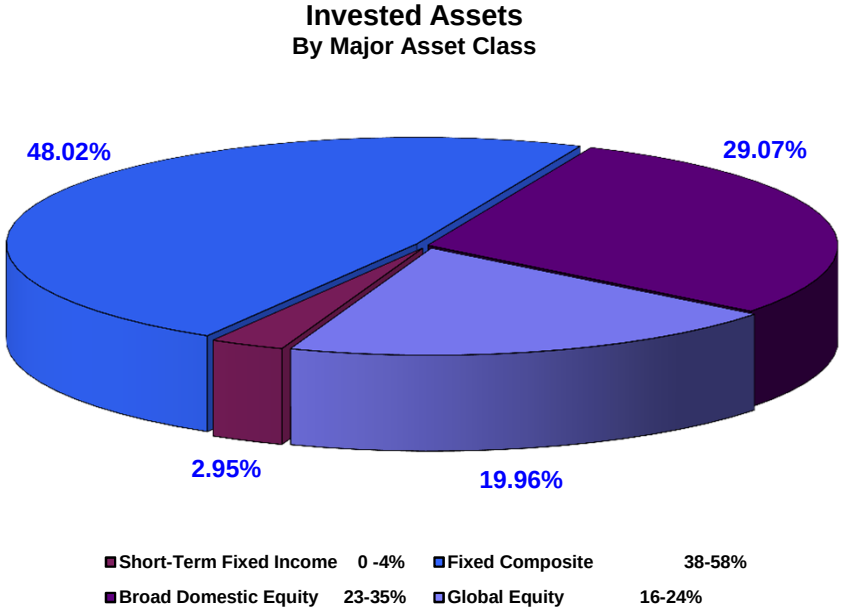


MILITARY RETIREMENT TRUST FUND
As of July 31, 2013









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 July 31, 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**	**260,972,942**	**83,322**	**673,946,019**	**935,002,283**	**258.28%**
	Total Cash	**260,972,942**	**83,322**	**673,946,019**	**935,002,283**	**258.28%**
	Fixed Income					
1A	**US Treasury Fixed Income**	**1,378,661,636**	**1,711,331**	**-**	**1,380,372,967**	**0.12%**
	International Fixed Income Pool					
63	Mondrian Investment Partners	**356,966,290**	**4,920,796**	**-**	**361,887,086**	**1.38%**
	High Yield Pool					
9P	MacKay Shields, LLC	**510,465,564**	**7,777,442**	**-**	**518,243,006**	**1.52%**
	Emerging Debt Pool					
5M	Lazard Emerging Income	**151,950,178**	**1,920,179**	**-**	**153,870,357**	**1.26%**
	Total Fixed Income	**2,398,043,668**	**16,329,748**	**-**	**2,414,373,416**	**0.68%**
	(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 July 31, 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	**14,159,099**	**1,071,822**	**-**	**15,230,921**	**7.57%**
4P	SSgA Russell 2000 Value	**52,894,330**	**3,408,191**	**-**	**56,302,521**	**6.44%**
	Total Passive	**67,053,429**	**4,480,013**	**-**	**71,533,442**	**6.68%**
	Actively Managed					
43	Transition Account	**-**	**-**	**-**	**-**	
4E	DePrince, Race & Zollo Inc.- Micro Cap	**88,396,732**	**3,856,419**	**-**	**92,253,151**	**4.36%**
4F	Luther King Capital Management	**152,474,502**	**8,968,271**	**-**	**161,442,773**	**5.88%**
4G	Jennison Associates, LLC	**158,448,044**	**8,647,734**	**-**	**167,095,778**	**5.46%**
5F	Lord Abbet Small Cap Growth Fund	**124,381,242**	**9,765,661**	**-**	**134,146,903**	**7.85%**
5G	Frontier Capital Mgmt Co.	**150,663,956**	**11,116,875**	**-**	**161,780,831**	**7.38%**
5H	Victory Capital Management	**87,479,581**	**5,417,061**	**-**	**92,896,642**	**6.19%**
6A	SSgA Futures Small Cap	**8,776,354**	**773,236**	**-**	**9,549,590**	**8.81%**
4H	Lord Abbett & Co.	**(117,375)**	**-**	**-**	**(117,375)**	**0.00%**
4Q	Barrow, Haney, Mewhinney & Strauss	**152,031,329**	**10,515,228**	**-**	**162,546,557**	**6.92%**
4Z	Lord Abbett & Co.- Micro Cap	**99,054,701**	**8,754,456**	**-**	**107,809,157**	**8.84%**
	Total Active	**1,021,589,066**	**67,814,941**	**-**	**1,089,404,007**	**6.64%**
	Total Small Cap	**1,088,642,495**	**72,294,954**	**-**	**1,160,937,449**	**6.64%**
	Large Cap Pool					
	Passively Managed					
4L	SSgA Russell 1000 Growth	**1,054,646,956**	**55,981,976**	**-**	**1,110,628,932**	**5.31%**
4M	SSgA Russell 1000 Value	**1,109,180,294**	**59,887,425**	**-**	**1,169,067,719**	**5.40%**
4R	SSgA Russell 200	**471,611,259**	**24,266,889**	**-**	**495,878,148**	**5.15%**
	Total Passive	**2,635,438,509**	**140,136,290**	**-**	**2,775,574,799**	**5.32%**
	Actively Managed					
	Larg Cap Transition Fund	**155,665**	**(19,859)**	**-**	**135,806**	**-12.76%**
47	Lazard Freres	**363,160,421**	**21,416,489**	**-**	**384,576,910**	**5.90%**
48	McKinley Capital Mgmt.	**265,999,103**	**16,215,042**	**-**	**282,214,145**	**6.10%**
4U	Barrow, Haney, Mewhinney & Strauss	**270,052,113**	**16,529,954**	**-**	**286,582,067**	**6.12%**
4V	Quantitative Management Assoc.	**268,264,536**	**15,805,085**	**-**	**284,069,621**	**5.89%**
38	Allianz Global Investors	**269,042,848**	**16,357,107**	**-**	**285,399,955**	**6.08%**
6B	SSgA Futures large cap	**10,892,431**	**555,333**	**-**	**11,447,764**	**5.10%**
	Total Active	**1,447,567,117**	**86,859,151**	**-**	**1,534,426,268**	**6.00%**
	Total Large Cap	**4,083,005,626**	**226,995,441**	**-**	**4,310,001,067**	**5.56%**
	Total Domestic Equity	**5,171,648,121**	**299,290,395**	**-**	**5,470,938,516**	**5.79%**
	(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 July 31, 2013

		Beginning Invested Assets	Total Investment Income	Net Contributions (Withdrawals) & Transfers In (Out)	Ending Invested Assets	% increase (decrease)
	Alternative Equity Strategies					
	AlternativeEquity Strategy Pool					
4J	Relational Investors, LLC	**269,526,368**	**15,681,497**	**582,074**	**285,789,939**	**6.03%**
4W/4X	Analytic Buy Write Account	**119,520,620**	**1,934,912**	**-**	**121,455,532**	**1.62%**
4Y	Allianz Global Investors Buy-Write Account	**81,026,833**	**1,464,677**	**-**	**82,491,510**	**1.81%**
5E	Dow Jones Dividend 100-Index Fund	**110,532,330**	**4,842,287**	**-**	**115,374,617**	**4.38%**
	Total Alternative Equity Strategy Pool	**580,606,151**	**23,923,373**	**582,074**	**605,111,598**	**4.22%**
	Convertible Bond Pool					
52	Advent Capital	**127,990,486**	**3,552,526**	**-**	**131,543,012**	**2.78%**
	Total Alternative Equity Strategies	**708,596,637**	**27,475,899**	**582,074**	**736,654,610**	**3.96%**
	Global Equities Ex US					
	Small Cap Pool					
5B	Mondrian Investment Partners	**131,166,210**	**4,562,446**	**-**	**135,728,656**	**3.48%**
5D	Schroder Investment Management	**125,723,219**	**7,021,618**	**-**	**132,744,837**	**5.58%**
	Total Small Cap	**256,889,429**	**11,584,064**	**-**	**268,473,493**	**4.51%**
	Large Cap Pool					
65	Brandes Investment Partners	**863,994,627**	**42,635,155**	**-**	**906,629,782**	**4.93%**
58	Lazard Freres	**419,298,409**	**20,375,303**	**-**	**439,673,712**	**4.86%**
67	Cap Guardian Trust Co	**681,896,174**	**40,396,058**	**-**	**722,292,232**	**5.92%**
68	State Street Global Advisors	**549,846,313**	**24,366,731**	**-**	**574,213,044**	**4.43%**
69	McKinley Capital Management	**319,396,522**	**11,766,627**	**-**	**331,163,149**	**3.68%**
6U	Blackrock ACWI Ex-US IMI	**409,940,692**	**18,252,081**	**-**	**428,192,773**	**4.45%**
	Total Large Cap	**3,244,372,737**	**157,791,955**	**-**	**3,402,164,692**	**4.86%**
	Emerging Markets Equity Pool A (1)					
6P	Lazard Asset Management	**325,322,241**	**5,819,067**	**-**	**331,141,308**	**1.79%**
6Q	Eaton Vance	**203,900,404**	**3,932,365**	**-**	**207,832,769**	**1.93%**
	Total Emerging Markets Pool A	**529,222,645**	**9,751,432**	**-**	**538,974,077**	**1.84%**
	Total Global Equities	**4,030,484,811**	**179,127,451**	**-**	**4,209,612,262**	**4.44%**
	Private Equity Pool					
7Y	Warburg Pincus Prvt Eqty XI	**5,781,340**	**-**	**-**	**5,781,340**	**0.00%**
7Z	Merit Capital Partners	**11,791,464**	**(4)**	**(194,280)**	**11,597,180**	**-1.65%**
98	Pathway Capital Management LLC	**749,197,900**	**(426,149)**	**1,796,061**	**750,567,812**	**0.18%**
85	Abbott Capital	**726,917,892**	**8,853,935**	**(8,622,198)**	**727,149,629**	**0.03%**
8A	Blum Capital Partners-Strategic	**9,718,454**	**-**	**-**	**9,718,454**	**0.00%**
8P	Lexington Partners	**45,808,772**	**418,546**	**(676,327)**	**45,550,991**	**-0.56%**
8Q	Onex Partnership III	**19,728,386**	**(6)**	**125,079**	**19,853,459**	**0.63%**
8W	Warburg Pincus X	**28,712,946**	**7**	**(248,100)**	**28,464,853**	**-0.86%**
8X	Angelo, Gordon & Co.	**14,093,386**	**(4)**	**(1,624,110)**	**12,469,272**	**-11.52%**
	Total Private Equity	**1,611,750,540**	**8,846,325**	**(9,443,875)**	**1,611,152,990**	**-0.04%**

(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 July 31, 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.	**260,707,515**	**(3,118,495)**	**-**	**257,589,020**	**-1.20%**
8N	Prisma Capital Partners	**264,750,411**	**(4,116,400)**	**-**	**260,634,011**	**-1.55%**
9D	Mariner Investment Group, Inc.	**1,556,201**	**166,985**	**-**	**1,723,186**	**10.73%**
9F	Crestline Investors, Inc.	**266,794,799**	**(783,844)**	**(43,952,025)**	**222,058,930**	**-16.77%**
	Total Absolute Return Investments	**793,808,926**	**(7,851,754)**	**(43,952,025)**	**742,005,147**	**-6.53%**
	Real Assets					
	Farmland Pool A					
9B	UBS Agrivest, LLC	**430,689,980**	**-**	**-**	**430,689,980**	**0.00%**
9G	Hancock Agricultural Investment Group	**249,687,412**	**1**	**-**	**249,687,413**	**0.00%**
	Total Farmland Pool A	**680,377,392**	**1**	**-**	**680,377,393**	**0.00%**
	Farmland Water Pool					
8Y	Hancock Water PPTY	**13,057,323**	**-**	**-**	**13,057,323**	**0.00%**
8Z	UBS Argivest, LLC	**22,530,469**	**-**	**-**	**22,530,469**	**0.00%**
	Total Farmland Water Pool	**35,587,792**	**-**	**-**	**35,587,792**	**0.00%**
	Timber Pool A					
9Q	Timberland INVT Resource LLC	**174,791,525**	**12**	**(6,000,000)**	**168,791,537**	**-3.43%**
9S	Hancock Natural Resourse Group	**86,394,701**	**-**	**-**	**86,394,701**	**0.00%**
	Total Timber Pool A	**261,186,226**	**12**	**(6,000,000)**	**255,186,238**	**-2.30%**
	Energy Pool A					
5Y	EIG Energy Fund XV	**34,376,186**	**923,878**	**-**	**35,300,064**	**2.69%**
9A	EIG Energy Fund XD	**8,389,032**	**25,102**	**(604,301)**	**7,809,833**	**-6.90%**
9Z	EIG Energy Fund XIV-A	**65,012,789**	**(610,434)**	**-**	**64,402,355**	**-0.94%**
	Total Energy Pool A	**107,778,007**	**338,546**	**(604,301)**	**107,512,252**	**-0.25%**
	REIT Pool					
9H	REIT Holdings	**271,027,010**	**2,054,709**	**-**	**273,081,719**	**0.76%**
	Treasury Inflation Proof Securities					
6N	TIPS Internally Managed Account	**8,333,825**	**52,958**	**-**	**8,386,783**	**0.64%**
	Master Limited Partnerships					
1P	FAMCO	**178,805,145**	**1,715,800**	**-**	**180,520,945**	**0.96%**
1Q	Tortoise Capital Advisors	**184,142,321**	**469,985**	**-**	**184,612,306**	**0.26%**
	Total Master Limited Partnerships	**362,947,466**	**2,185,785**	**-**	**365,133,251**	**0.60%**

(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 July 31, 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	**190,102,247**	**6,016,167**	**(2,242,299)**	**193,876,115**	**1.99%**
7B	UBS Trumbull Property Fund	**77,936,845**	**2,405,435**	**(587,965)**	**79,754,315**	**2.33%**
	Total Core Commingled	**268,039,092**	**8,421,602**	**(2,830,264)**	**273,630,430**	**2.09%**
	Core Separate Accounts					
7D	Cornerstone Real Estate Advisers Inc.	**96,426,729**	**305**	**781,049**	**97,208,083**	**0.81%**
7E	LaSalle Investment Management	**217,575,131**	**(28)**	**(26,468,951)**	**191,106,152**	**-12.17%**
7F	Sentinel Separate Account	**151,140,478**	**48**	**(533,605)**	**150,606,921**	**-0.35%**
7G	UBS Realty	**273,620,395**	**(75)**	**(959,237)**	**272,661,083**	**-0.35%**
	Total Core Separate	**738,762,733**	**250**	**(27,180,744)**	**711,582,239**	**-3.68%**
	Non-Core Commingled Accounts					
7H	Coventry	**13,987,631**	**-**	**-**	**13,987,631**	**0.00%**
7J	Lowe Hospitality Partners	**2,845,708**	**1**	**-**	**2,845,709**	**0.00%**
7N	ING Clarion Development Ventures II	**5,085,522**	**-**	**-**	**5,085,522**	**0.00%**
7P	Silverpeak Legacy Pension Partners II, L.P. (3)	**70,235,674**	**-**	**-**	**70,235,674**	**0.00%**
7Q	Almanac Realty Securities IV (5)	**37,028,188**	**(3)**	**(17,392,166)**	**19,636,019**	**-46.97%**
7R	Tishman Speyer Real Estate Venture VI	**62,107,375**	**-**	**-**	**62,107,375**	**0.00%**
7X	Tishman Speyer Real Estate Venture VII	**17,862,362**	**-**	**-**	**17,862,362**	**0.00%**
7S	Almanac Realty Securities V (6)	**28,812,312**	**(8)**	**547,868**	**29,360,172**	**1.90%**
7V	ING Clarion Development Ventures III	**25,885,679**	**-**	**-**	**25,885,679**	**0.00%**
7W	Silverpeak Legacy Pension Partners III, L.P. (4)	**8,731,402**	**-**	**-**	**8,731,402**	**0.00%**
8R	BlackRock Diamond Property Fund	**26,449,289**	**362,335**	**(22,245)**	**26,789,379**	**1.29%**
8S	Colony Investors VIII, L.P.	**21,275,160**	**-**	**-**	**21,275,160**	**0.00%**
8U	LaSalle Medical Office Fund II	**19,053,335**	**3**	**(247,510)**	**18,805,828**	**-1.30%**
8V	Cornerstone Apartment Venture III	**26,922,886**	**(4)**	**(5,722,222)**	**21,200,660**	**-21.25%**
	Total Non-Core Commingled	**366,282,523**	**362,324**	**(22,836,275)**	**343,808,572**	**-6.14%**
	Total Real Estate	**1,373,084,348**	**8,784,176**	**(52,847,283)**	**1,329,021,241**	**-3.21%**
	Total Real Assets	**3,100,322,066**	**13,416,187**	**(59,451,584)**	**3,054,286,669**	**-1.48%**
	Totals	**18,075,627,711**	**536,717,573**	**561,680,609**	**19,174,025,893**	**6.08%**

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 Reality Securities V
(6) Previously titled Rothschild Five Arrows Reality 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
July 31, 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	$ 6,983,930	$ 1,434	$ (21,885)	$ -	$ 6,963,479	-0.29%	0.02%
Participant Options [2]							
T. Rowe Price							
Stable Value Fund	340,042,432	622,296	(3,202,010)	4,700,392	342,163,110	0.62%	0.18%
Small-Cap Stock Fund	110,973,738	7,292,450	(183,816)	1,788,935	119,871,307	8.02%	6.52%
Alaska Balanced Fund	1,126,777,527	22,617,463	(1,787,801)	(2,069,899)	1,145,537,290	1.66%	2.01%
Long Term Balanced Fund	433,261,951	14,408,463	1,936,135	(2,432,137)	447,174,412	3.21%	3.33%
AK Target Date 2010 Trust	7,289,466	196,566	30,860	(281,747)	7,235,145	-0.75%	2.74%
AK Target Date 2015 Trust	96,132,474	3,082,195	(41,638)	(1,209,239)	97,963,792	1.90%	3.23%
AK Target Date 2020 Trust	45,023,588	1,652,445	288,057	1,597,387	48,561,477	7.86%	3.59%
AK Target Date 2025 Trust	27,679,949	1,146,073	495,952	910,279	30,232,253	9.22%	4.04%
AK Target Date 2030 Trust	13,778,987	619,270	262,742	185,992	14,846,991	7.75%	4.42%
AK Target Date 2035 Trust	13,214,078	628,799	295,817	280,708	14,419,402	9.12%	4.66%
AK Target Date 2040 Trust	14,613,686	713,039	306,094	39,979	15,672,798	7.25%	4.82%
AK Target Date 2045 Trust	14,561,916	713,750	364,503	415,075	16,055,244	10.26%	4.77%
AK Target Date 2050 Trust	14,908,092	734,447	505,326	99,758	16,247,623	8.99%	4.83%
AK Target Date 2055 Trust	8,478,329	413,453	402,977	176,385	9,471,144	11.71%	4.72%
Total Investments with T. Rowe Price	2,266,736,213	54,840,709	(326,802)	4,201,868	2,325,451,988		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	38,139,484	2	(325,598)	(1,383,388)	36,430,500	-4.48%	0.00%
S&P 500 Stock Index Fund Series A	271,724,167	13,810,209	(52,843)	(1,444,814)	284,036,719	4.53%	5.10%
Russell 3000 Index	29,971,044	1,670,186	(34,459)	1,771,130	33,377,901	11.37%	5.42%
US Real Estate Investment Trust Index	33,126,968	208,092	45,310	867,772	34,248,142	3.38%	0.62%
World Equity Ex-US Index	22,721,971	1,005,499	(91,603)	223,788	23,859,655	5.01%	4.41%
Long US Treasury Bond Index	10,100,674	(192,141)	(190,920)	(180,272)	9,537,341	-5.58%	-1.94%
US Treasury Inflation Protected Securities Index	19,510,852	131,806	(79,575)	(1,585,473)	17,977,610	-7.86%	0.71%
World Government Bond Ex-US Index	7,204,796	138,457	(168,468)	7,720	7,182,505	-0.31%	1.94%
Global Balanced Fund	53,897,503	1,671,285	(280,742)	(504,476)	54,783,570	1.64%	3.12%
Total Investments with SSGA	486,397,459	18,443,395	(1,178,898)	(2,228,013)	501,433,943		
BlackRock							
Government Bond Fund	46,967,118	86,983	(978,152)	(719,611)	45,356,338	-3.43%	0.19%
Intermediate Bond Fund	15,556,366	14,369	28,633	(439,532)	15,159,836	-2.55%	0.09%
Total Investments with BlackRock	62,523,484	101,352	(949,519)	(1,159,143)	60,516,174		
Brandes Institutional							
International Equity Fund Fee	61,517,682	3,014,692	(8,214)	(414,771)	64,109,389	4.21%	4.92%
RCM							
Sustainable Opportunities Fund	32,275,447	1,218,849	77,676	(399,941)	33,172,031	2.78%	3.80%
Total Externally Managed Funds	2,909,450,285	77,618,997	(2,385,757)	-	2,984,683,525		
Total All Funds	$ 2,916,434,215	$ 77,620,431	$ (2,407,642)	$ -	$ 2,991,647,004	2.58%	2.66%

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
July 31, 2013
$ (Thousands)

Invested Assets (At Fair Value)		**July**
Investments with Treasury Division		
Cash and cash equivalents	$	6,963
Investments with T. Rowe Price		
Stable Value Fund		342,164
Small-Cap Stock Fund		119,871
Alaska Balanced Fund		1,145,537
Long Term Balanced Fund		447,174
AK Target Date 2010 Trust		7,235
AK Target Date 2015 Trust		97,964
AK Target Date 2020 Trust		48,562
AK Target Date 2025 Trust		30,232
AK Target Date 2030 Trust		14,847
AK Target Date 2035 Trust		14,419
AK Target Date 2040 Trust		15,673
AK Target Date 2045 Trust		16,055
AK Target Date 2050 Trust		16,248
AK Target Date 2055 Trust		9,471
Investments with State Street Global Advisors		
State Street Treasury Money Market Fund - Inst.		36,430
S&P 500 Stock Index Fund Series A		284,037
Russell 3000 Index		33,378
US Real Estate Investment Trust Index		34,248
World Equity Ex-US Index		23,860
Long US Treasury Bond Index		9,537
US Treasury Inflation Protected Securities Index		17,978
World Govt Bond Ex-US Index		7,183
Global Balanced Fund		54,784
Investments with BlackRock		
Government Bond Fund		45,356
Intermediate Bond Fund		15,160
Investments with Brandes Investment Partners		
International Equity Fund Fee		64,109
Investments with RCM		
Sustainable Opportunities Fund		33,172
Total Invested Assets	**$**	**2,991,647**

Change in Invested Assets		
Beginning Assets	$	2,916,434
Investment Earnings		77,621
Net Contributions (Withdrawals)		(2,408)
Ending Invested Assets	**$**	**2,991,647**

Source data provided by the record keeper, Great West Life

Deferred Compensation Plan
Schedule of Invested Assets and Changes in Invested Assets
for the Month Ended
July 31, 2013

Participant Options	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (3)
T. Rowe Price							
Interest Income Fund	$ 180,753,766	$ 388,837	$ (1,210,255)	$ 1,146,125	$ 181,078,473	0.18%	0.22%
Small Cap Stock Fund	83,699,116	5,486,825	83,672	400,452	89,670,065	7.13%	6.54%
Long Term Balanced Fund	42,136,018	1,399,587	27,090	(27,114)	43,535,581	3.32%	3.32%
Alaska Balanced Trust	11,937,189	241,136	1,477	(233,986)	11,945,816	0.07%	2.04%
AK Target Date 2010 Trust	2,266,719	61,177	(341)	(100,310)	2,227,245	-1.74%	2.76%
AK Target Date 2015 Trust	6,783,033	218,167	164,008	(250,916)	6,914,292	1.94%	3.24%
AK Target Date 2020 Trust	7,835,448	300,871	211,847	1,203,800	9,551,966	21.91%	3.52%
AK Target Date 2025 Trust	3,848,674	157,929	99,189	128,881	4,234,673	10.03%	3.99%
AK Target Date 2030 Trust	2,523,286	113,678	75,906	147,937	2,860,807	13.38%	4.31%
AK Target Date 2035 Trust	1,764,670	83,794	47,822	21,084	1,917,370	8.65%	4.66%
AK Target Date 2040 Trust	1,575,966	77,650	59,341	133,692	1,846,649	17.18%	4.64%
AK Target Date 2045 Trust	972,536	48,708	50,567	95,464	1,167,275	20.02%	4.66%
AK Target Date 2050 Trust	549,452	30,508	34,758	81,563	696,281	26.72%	5.02%
AK Target Date 2055 Trust	799,163	40,221	24,481	93,295	957,160	19.77%	4.69%
Total Investments with T. Rowe Price	347,445,036	8,649,088	(330,438)	2,839,967	358,603,653		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	11,565,600	1	66,202	(613,356)	11,018,447	-4.73%	0.00%
Russell 3000 Index	10,392,468	585,524	101,548	544,011	11,623,551	11.85%	5.46%
US Real Estate Investment Trust Index	11,264,123	70,850	84,876	496,101	11,915,950	5.79%	0.61%
World Equity Ex-US Index	7,385,188	324,430	41,430	222,798	7,973,846	7.97%	4.32%
Long US Treasury Bond Index	3,122,654	(57,312)	(4,112)	(282,081)	2,779,149	-11.00%	-1.92%
US Treasury Inflation Protected Securities Index	9,373,086	59,900	12,725	(1,198,710)	8,247,001	-12.01%	0.68%
World Government Bond Ex-US Index	2,658,717	50,933	(20,695)	(37,978)	2,650,977	-0.29%	1.94%
Global Balanced Fund	37,989,671	1,177,669	(21,698)	(282,321)	38,863,321	2.30%	3.11%
Total Investments with SSGA	93,751,507	2,211,995	260,276	(1,151,536)	95,072,242		
BlackRock							
S&P 500 Index Fund	145,636,054	7,429,391	(22,349)	(12,966)	153,030,130	5.08%	5.10%
Government/Credit Bond Fund	30,969,683	55,180	(382,971)	(908,144)	29,733,748	-3.99%	0.18%
Intermediate Bond Fund	15,717,646	13,538	(82,916)	(127,670)	15,520,598	-1.25%	0.09%
Total Investments with Barclays Global Investors	192,323,383	7,498,109	(488,236)	(1,048,780)	198,284,476		
Brandes Institutional							
International Equity Fund Fee	38,608,907	1,890,111	136,069	(429,807)	40,205,280	4.13%	4.91%
RCM							
Sustainable Core Opportunities Fund	13,277,714	504,405	99,318	(209,844)	13,671,593	2.97%	3.81%
Total All Funds	$ 685,406,547	$ 20,753,708	$ (323,011)	$ -	$ 705,837,244	2.98%	3.03%

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
July 31, 2013
$ (Thousands)

Invested Assets (at fair value)		**July**
Investments with T. Rowe Price		
Interest Income Fund		
Cash and cash equivalents	$	11,345
Synthetic Investment Contracts		169,734
Small Cap Stock Fund		89,670
Long Term Balanced Fund		43,536
Alaska Balanced Trust		11,946
AK Target Date 2010 Trust		2,227
AK Target Date 2015 Trust		6,914
AK Target Date 2020 Trust		9,552
AK Target Date 2025 Trust		4,235
AK Target Date 2030 Trust		2,861
AK Target Date 2035 Trust		1,917
AK Target Date 2040 Trust		1,847
AK Target Date 2045 Trust		1,167
AK Target Date 2050 Trust		696
AK Target Date 2055 Trust		957
State Street Global Advisors		
State Street Treasury Money Market Fund - Inst.		11,018
Russell 3000 Index		11,623
US Real Estate Investment Trust Index		11,916
World Equity Ex-US Index		7,974
Long US Treasury Bond Index		2,779
US Treasury Inflation Protected Securities Index		8,247
World Government Bond Ex-US Index		2,651
Global Balanced Fund		38,863
Investments with BlackRock		
S&P 500 Index Fund		153,030
Government/Credit Bond Fund		29,734
Intermediate Bond Fund		15,521
Investments with Brandes Institutional		
International Equity Fund Fee		40,205
Investments with RCM		
Sustainable Opportunities Fund		13,672
Total Invested Assets	**$**	**705,837**

Change in Invested Assets		
Beginning Assets	$	685,407
Investment Earnings		20,753
Net Contributions (Withdrawals)		(323)
Ending Invested Assets	**$**	**705,837**

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

Defined Contribution Retirement - Participant Directed PERS
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
July 31, 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	$ 6,375,787	$ 1,930	$ 131,386	$ -	$ 6,509,103	2.09%	0.03%
Participant Options [2]							
T. Rowe Price							
Alaska Money Market	4,038,389	73	35,183	(266,907)	3,806,738	-5.74%	0.00%
Small-Cap Stock Fund	41,387,511	2,693,549	232,669	(527,772)	43,785,957	5.80%	6.53%
Long Term Balanced Fund	9,596,464	315,142	(64,284)	(271,059)	9,576,263	-0.21%	3.34%
Alaska Balanced Fund	1,147,613	23,261	33,478	7	1,204,359	4.94%	2.00%
AK Target Date 2010 Trust	1,089,235	29,527	35,662	-	1,154,424	5.98%	2.67%
AK Target Date 2015 Trust	4,305,228	139,564	143,219	(52,586)	4,535,425	5.35%	3.21%
AK Target Date 2020 Trust	8,512,198	314,124	296,220	(14,966)	9,107,576	6.99%	3.63%
AK Target Date 2025 Trust	11,889,092	490,506	424,172	68,983	12,872,753	8.27%	4.04%
AK Target Date 2030 Trust	12,084,803	539,703	434,253	(58,836)	12,999,923	7.57%	4.40%
AK Target Date 2035 Trust	13,396,032	636,367	484,129	(36,103)	14,480,425	8.09%	4.67%
AK Target Date 2040 Trust	17,659,379	861,228	514,016	34,471	19,069,094	7.98%	4.80%
AK Target Date 2045 Trust	20,800,027	1,017,755	700,665	(9,065)	22,509,382	8.22%	4.81%
AK Target Date 2050 Trust	23,206,155	1,138,400	910,519	(378)	25,254,696	8.83%	4.81%
AK Target Date 2055 Trust	9,711,572	478,032	535,330	22,843	10,747,777	10.67%	4.78%
Total Investments with T. Rowe Price	178,823,698	8,677,231	4,715,231	(1,111,368)	191,104,792		
State Street Global Advisors							
Money Market	1,000,844	-	9,941	112,393	1,123,178	12.22%	0.00%
S&P 500 Stock Index Fund Series A	37,330,974	1,917,255	270,103	1,121,499	40,639,831	8.86%	5.04%
Russell 3000 Index	16,164,942	876,659	105,989	(627,001)	16,520,589	2.20%	5.51%
US Real Estate Investment Trust Index	5,458,575	37,840	62,159	100,791	5,659,365	3.68%	0.68%
World Equity Ex-US Index	27,970,458	1,230,501	136,438	724,672	30,062,069	7.48%	4.33%
Long US Treasury Bond Index	546,623	(10,173)	15,635	(63,500)	488,585	-10.62%	-1.95%
US Treasury Inflation Protected Sec Index	2,041,125	14,221	(23,421)	19,393	2,051,318	0.50%	0.70%
World Government Bond Ex-US Index	3,676,507	72,835	(7,766)	84,125	3,825,701	4.06%	1.96%
Global Balanced Fund	10,128,188	311,466	(19,084)	(315,365)	10,105,205	-0.23%	3.13%
Total Investments with SSGA	104,318,236	4,450,604	549,994	1,157,007	110,475,841		
BlackRock							
Government Bond Fund	18,082,403	34,361	(34,030)	652,721	18,735,455	3.61%	0.19%
Intermediate Bond Fund	389,687	310	8,486	(40,921)	357,562	-8.24%	0.08%
Total Investments with BlackRock	18,472,090	34,671	(25,544)	611,800	19,093,017		
Brandes Institutional							
International Equity Fund Fee	31,378,068	1,522,563	262,395	(1,439,169)	31,723,857	1.10%	4.95%
RCM							
Sustainable Opportunities Fund	5,315,268	209,068	62,605	781,730	6,368,671	19.82%	3.64%
Total Externally Managed Funds	338,307,360	14,894,137	5,564,681	-	358,766,178		
Total All Funds	$ 344,683,147	$ 14,896,067	$ 5,696,067	$ -	$ 365,275,281	5.97%	4.29%

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
July 31, 2013
$ (Thousands)

Invested Assets (At Fair Value)		**July**
Investments with Treasury Division		
Cash and cash equivalents	$	6,509
Investments with T. Rowe Price		
Alaska Money Market		3,807
Small-Cap Stock Fund		43,786
Long Term Balanced Fund		9,576
Alaska Balanced Fund		1,204
AK Target Date 2010 Trust		1,154
AK Target Date 2015 Trust		4,535
AK Target Date 2020 Trust		9,108
AK Target Date 2025 Trust		12,873
AK Target Date 2030 Trust		13,000
AK Target Date 2035 Trust		14,480
AK Target Date 2040 Trust		19,069
AK Target Date 2045 Trust		22,509
AK Target Date 2050 Trust		25,255
AK Target Date 2055 Trust		10,748
Investments with State Street Global Advisors		
Money Market		1,123
S&P 500 Stock Index Fund Series A		40,640
Russell 3000 Index		16,521
US Real Estate Investment Trust Index		5,659
World Equity Ex-US Index		30,062
Long US Treasury Bond Index		489
US Treasury Inflation Protected Sec Index		2,051
World Government Bond Ex-US Index		3,826
Global Balanced Fund		10,105
Investments with BlackRock		
Government Bond Fund		18,735
Intermediate Bond Fund		358
Investments with Brandes Investment Partners		
International Equity Fund Fee		31,724
Investments with RCM		
Sustainable Opportunities Fund		6,369
Total Invested Assets	**$**	**365,275**

Change in Invested Assets		
Beginning Assets	$	344,683
Investment Earnings		14,896
Net Contributions (Withdrawals)		5,696
Ending Invested Assets	**$**	**365,275**

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

Defined Contribution Retirement - Participant Directed TRS
Schedule of Investment Income and Changes in Invested Assets
for the Month Ended
July 31, 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	$ 2,508,517	$ 702	$ (227,337)	$ -	$ 2,281,882	-9.03%	0.03%
Participant Options [2]							
T. Rowe Price							
Alaska Money Market	1,859,833	34	(58,451)	(94,375)	1,707,041	-8.22%	0.00%
Small-Cap Stock Fund	16,974,347	1,106,349	36,908	(268,252)	17,849,352	5.15%	6.56%
Long Term Balanced Fund	5,506,122	181,386	(32,793)	(258,837)	5,395,878	-2.00%	3.38%
Alaska Balanced Fund	195,440	3,943	2,921	3,951	206,255	5.53%	1.98%
AK Target Date 2010 Trust	348,018	9,447	11,595	-	369,060	6.05%	2.67%
AK Target Date 2015 Trust	1,408,709	45,741	37,899	-	1,492,349	5.94%	3.20%
AK Target Date 2020 Trust	2,909,316	107,487	74,317	(3,111)	3,088,009	6.14%	3.65%
AK Target Date 2025 Trust	3,929,253	160,967	42,831	-	4,133,051	5.19%	4.07%
AK Target Date 2030 Trust	4,182,392	187,025	48,207	(1,876)	4,415,748	5.58%	4.45%
AK Target Date 2035 Trust	6,691,938	316,481	7,712	1,295	7,017,426	4.86%	4.73%
AK Target Date 2040 Trust	7,281,011	354,595	(40,303)	(11,881)	7,583,422	4.15%	4.89%
AK Target Date 2045 Trust	12,987,206	632,455	78,782	-	13,698,443	5.48%	4.86%
AK Target Date 2050 Trust	17,226,396	835,653	251,701	(45,323)	18,268,427	6.05%	4.82%
AK Target Date 2055 Trust	2,168,025	105,872	110,528	(1,465)	2,382,960	9.91%	4.76%
Total Investments with T. Rowe Price	83,668,006	4,047,435	571,854	(679,874)	87,607,421		
State Street Global Advisors							
Money Market	103,387	-	385	2,914	106,686	3.19%	0.00%
S&P 500 Stock Index Fund Series A	14,758,943	757,417	50,288	352,622	15,919,270	7.86%	5.06%
Russell 3000 Index	6,614,240	363,803	25,751	63,479	7,067,273	6.85%	5.46%
US Real Estate Investment Trust Index	1,992,477	13,905	8,002	48,615	2,062,999	3.54%	0.69%
World Equity Ex-US Index	12,277,513	540,432	35,849	311,623	13,165,417	7.23%	4.34%
Long US Treasury Bond Index	98,423	(1,791)	1,702	(5,190)	93,144	-5.36%	-1.85%
US Treasury Inflation Protected Sec Index	836,691	6,017	(5,101)	30,811	868,418	3.79%	0.71%
World Government Bond Ex-US Index	1,808,160	36,285	4,801	52,587	1,901,833	5.18%	1.98%
Global Balanced Fund	6,670,864	206,528	(9,692)	(19,006)	6,848,694	2.67%	3.10%
Total Investments with SSGA	45,160,698	1,922,596	111,985	838,455	48,033,734		
BlackRock							
Government Bond Fund	8,651,453	16,629	(8,187)	456,675	9,116,570	5.38%	0.19%
Intermediate Bond Fund	121,506	106	1,414	(17,924)	105,102	-13.50%	0.09%
Total Investments with BlackRock	8,772,959	16,735	(6,773)	438,751	9,221,672		
Brandes Institutional							
International Equity Fund Fee	11,474,700	557,178	54,703	(778,414)	11,308,167	-1.45%	5.01%
RCM							
Sustainable Opportunities Fund	1,774,575	69,716	8,189	181,082	2,033,562	14.59%	3.73%
Total Externally Managed Funds	150,850,938	6,613,660	739,958	-	158,204,556		
Total All Funds	$ 153,359,455	$ 6,614,362	$ 512,621	$ -	$ 160,486,438	4.65%	4.31%

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
July 31, 2013
$ (Thousands)

Invested Assets (At Fair Value)		**July**
Investments with Treasury Division		
Cash and cash equivalents	$	2,282
Investments with T. Rowe Price		
Alaska Money Market		1,707
Small-Cap Stock Fund		17,849
Long Term Balanced Fund		5,396
Alaska Balanced Fund		206
AK Target Date 2010 Trust		369
AK Target Date 2015 Trust		1,492
AK Target Date 2020 Trust		3,088
AK Target Date 2025 Trust		4,133
AK Target Date 2030 Trust		4,416
AK Target Date 2035 Trust		7,017
AK Target Date 2040 Trust		7,583
AK Target Date 2045 Trust		13,699
AK Target Date 2050 Trust		18,269
AK Target Date 2055 Trust		2,383
Investments with State Street Global Advisors		
Money Market		107
S&P 500 Stock Index Fund Series A		15,919
Russell 3000 Index		7,067
US Real Estate Investment Trust Index		2,063
World Equity Ex-US Index		13,165
Long US Treasury Bond Index		93
US Treasury Inflation Protected Sec Index		868
World Government Bond Ex-US Index		1,902
Global Balanced Fund		6,849
Investments with BlackRock		
Government Bond Fund		9,117
Intermediate Bond Fund		105
Investments with Brandes Investment Partners		
International Equity Fund Fee		11,308
Investments with RCM		
Sustainable Opportunities Fund		2,034
Total Invested Assets	**$**	**160,486**
Change in Invested Assets		
Beginning Assets	$	153,359
Investment Earnings		6,614
Net Contributions (Withdrawals)		513
Ending Invested Assets	**$**	**160,486**

Source data provided by the record keeper, Great West Life

ALASKA RETIREMENT MANAGEMENT BOARD

FINANCIAL REPORT

(Supplement to the Treasury Division Report)

As of July 31, 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 One Month Ending July 31, 2013

		Contributions				Expenditures				Net
		Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	Contributions/ (Withdrawals)
Public Employees' Retirement System (PERS)										
Defined Benefit Plans:										
Retirement Trust		$ 29,691,892	$ 176,793,907	$ 464	$ 206,486,263	$ (51,406,741)	$ (939,425)	$ (3,933,887)	$ (56,280,053)	$ 150,206,210
Retirement Health Care Trust		20,694,763	135,679,045	1,238	156,375,046	(31,179,100)	-	(590,665)	(31,769,765)	124,605,281
Total Defined Benefit Plans		50,386,655	312,472,952	1,702	362,861,309	(82,585,841)	(939,425)	(4,524,552)	(88,049,818)	274,811,491
Defined Contribution Plans:										
Participant Directed Retirement		8,771,169	-	-	8,771,169	-	(3,054,834)	(20,268)	(3,075,102)	5,696,067
Health Reimbursement Arrangement	(a)	2,357,049	-	-	2,357,049	-	-	-	-	2,357,049
Retiree Medical Plan	(a)	350,384	-	-	350,384	-	-	-	-	350,384
Occupational Death and Disability:	(a)									
Public Employees		82,549	-	-	82,549	(5,333)	-	-	(5,333)	77,216
Police and Firefighters		77,598	-	-	77,598	(3,946)	-	-	(3,946)	73,652
Total Defined Contribution Plans		11,638,749	-	-	11,638,749	(9,279)	(3,054,834)	(20,268)	(3,084,381)	8,554,368
Total PERS		**62,025,404**	**312,472,952**	**1,702**	**374,500,058**	**(82,595,120)**	**(3,994,259)**	**(4,544,820)**	**(91,134,199)**	**283,365,859**
Teachers' Retirement System (TRS)										
Defined Benefit Plans:										
Retirement Trust		936,701	208,890,798	525	209,828,024	(29,237,882)	(364,273)	(1,306,030)	(30,908,185)	178,919,839
Retirement Health Care Trust		2,703,840	107,956,493	404	110,660,737	(9,943,350)	-	(210,036)	(10,153,386)	100,507,351
Total Defined Benefit Plans		3,640,541	316,847,291	929	320,488,761	(39,181,232)	(364,273)	(1,516,066)	(41,061,571)	279,427,190
Defined Contribution Plans:										
Participant Directed Retirement		1,944,777	-	-	1,944,777	-	(1,426,408)	(5,748)	(1,432,156)	512,621
Health Reimbursement Arrangement	(a)	335,003	-	-	335,003	-	-	-	-	335,003
Retiree Medical Plan	(a)	68,418	-	-	68,418	-	-	-	-	68,418
Occupational Death and Disability:	(a)	9	-	-	9	-	-	-	-	9
Total Defined Contribution Plans		2,348,207	-	-	2,348,207	-	(1,426,408)	(5,748)	(1,432,156)	916,051
Total TRS		**5,988,748**	**316,847,291**	**929**	**322,836,968**	**(39,181,232)**	**(1,790,681)**	**(1,521,814)**	**(42,493,727)**	**280,343,241**
Judicial Retirement System (JRS)										
Defined Benefit Plan Retirement Trust		217,664	4,282,876	-	4,500,540	(871,637)	-	(41,869)	(913,506)	3,587,034
Defined Benefit Retirement Health Care Trust		30,497	177,445	3	207,945	(131,772)	-	(1,521)	(133,293)	74,652
Total JRS		**248,161**	**4,460,321**	**3**	**4,708,485**	**(1,003,409)**	**-**	**(43,390)**	**(1,046,799)**	**3,661,686**
National Guard/Naval Militia Retirement System (NGNMRS)										
Defined Benefit Plan Retirement Trust	(a)	740,100	-	-	740,100	(205,897)	-	(15,692)	(221,589)	518,511
Other Participant Directed Plans										
Supplemental Annuity Plan		14,524,498	-	-	14,524,498	-	(16,892,794)	(39,346)	(16,932,140)	(2,407,642)
Deferred Compensation Plan		5,073,009	-	-	5,073,009	-	(5,356,567)	(39,453)	(5,396,020)	(323,011)
Total All Funds		**88,599,920**	**633,780,564**	**2,634**	**722,383,118**	**(122,985,658)**	**(28,034,301)**	**(6,204,515)**	**(157,224,474)**	**565,158,644**
Total Non-Participant Directed		58,286,467	633,780,564	2,634	692,069,665	(122,985,658)	(1,303,698)	(6,099,700)	(130,389,056)	561,680,609
Total Participant Directed		30,313,453	-	-	30,313,453	-	(26,730,603)	(104,815)	(26,835,418)	3,478,035
Total All Funds		**$ 88,599,920**	**$ 633,780,564**	**$ 2,634**	**$ 722,383,118**	**$ (122,985,658)**	**$ (28,034,301)**	**$ (6,204,515)**	**$ (157,224,474)**	**$ 565,158,644**

(a) Employer only contributions.

ALASKA RETIREMENT MANAGEMENT BOARD
SCHEDULE OF NON-INVESTMENT CHANGES BY FUND
(Supplement to the Treasury Division Report)
For the Month Ended July 31, 2013

		Contributions				Expenditures				Net
		Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	Contributions/ (Withdrawals)
Public Employees' Retirement System (PERS)										
Defined Benefit Plans:										
Retirement Trust		$ 29,691,892	$ 176,793,907	$ 464	$ 206,486,263	$ (51,406,741)	$ (939,425)	$ (3,933,887)	$ (56,280,053)	$ 150,206,210
Retirement Health Care Trust		20,694,763	135,679,045	1,238	156,375,046	(31,179,100)	-	(590,665)	(31,769,765)	124,605,281
Total Defined Benefit Plans		50,386,655	312,472,952	1,702	362,861,309	(82,585,841)	(939,425)	(4,524,552)	(88,049,818)	274,811,491
Defined Contribution Plans:										
Participant Directed Retirement		8,771,169	-	-	8,771,169	-	(3,054,834)	(20,268)	(3,075,102)	5,696,067
Health Reimbursement Arrangement	(a)	2,357,049	-	-	2,357,049	-	-	-	-	2,357,049
Retiree Medical Plan	(a)	350,384	-	-	350,384	-	-	-	-	350,384
Occupational Death and Disability:	(a)									
Public Employees		82,549	-	-	82,549	(5,333)	-	-	(5,333)	77,216
Police and Firefighters		77,598	-	-	77,598	(3,946)	-	-	(3,946)	73,652
Total Defined Contribution Plans		11,638,749	-	-	11,638,749	(9,279)	(3,054,834)	(20,268)	(3,084,381)	8,554,368
Total PERS		**62,025,404**	**312,472,952**	**1,702**	**374,500,058**	**(82,595,120)**	**(3,994,259)**	**(4,544,820)**	**(91,134,199)**	**283,365,859**
Teachers' Retirement System (TRS)										
Defined Benefit Plans:										
Retirement Trust		936,701	208,890,798	525	209,828,024	(29,237,882)	(364,273)	(1,306,030)	(30,908,185)	178,919,839
Retirement Health Care Trust		2,703,840	107,956,493	404	110,660,737	(9,943,350)	-	(210,036)	(10,153,386)	100,507,351
Total Defined Benefit Plans		3,640,541	316,847,291	929	320,488,761	(39,181,232)	(364,273)	(1,516,066)	(41,061,571)	279,427,190
Defined Contribution Plans:										
Participant Directed Retirement		1,944,777	-	-	1,944,777	-	(1,426,408)	(5,748)	(1,432,156)	512,621
Health Reimbursement Arrangement	(a)	335,003	-	-	335,003	-	-	-	-	335,003
Retiree Medical Plan	(a)	68,418	-	-	68,418	-	-	-	-	68,418
Occupational Death and Disability:	(a)	9	-	-	9	-	-	-	-	9
Total Defined Contribution Plans		2,348,207	-	-	2,348,207	-	(1,426,408)	(5,748)	(1,432,156)	916,051
Total TRS		**5,988,748**	**316,847,291**	**929**	**322,836,968**	**(39,181,232)**	**(1,790,681)**	**(1,521,814)**	**(42,493,727)**	**280,343,241**
Judicial Retirement System (JRS)										
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Defined Benefit Retirement Health Care Trust		30,497	177,445	3	207,945	(131,772)	-	(1,521)	(133,293)	74,652
Total JRS		**248,161**	**4,460,321**	**3**	**4,708,485**	**(1,003,409)**	**-**	**(43,390)**	**(1,046,799)**	**3,661,686**
National Guard/Naval Militia Retirement System (NGNMRS)										
Defined Benefit Plan Retirement Trust	(a)	740,100	-	-	740,100	(205,897)	-	(15,692)	(221,589)	518,511
Other Participant Directed Plans										
Supplemental Annuity Plan		14,524,498	-	-	14,524,498	-	(16,892,794)	(39,346)	(16,932,140)	(2,407,642)
Deferred Compensation Plan		5,073,009	-	-	5,073,009	-	(5,356,567)	(39,453)	(5,396,020)	(323,011)
Total All Funds		**88,599,920**	**633,780,564**	**2,634**	**722,383,118**	**(122,985,658)**	**(28,034,301)**	**(6,204,515)**	**(157,224,474)**	**565,158,644**
Total Non-Participant Directed		58,286,467	633,780,564	2,634	692,069,665	(122,985,658)	(1,303,698)	(6,099,700)	(130,389,056)	561,680,609
Total Participant Directed		30,313,453	-	-	30,313,453	-	(26,730,603)	(104,815)	(26,835,418)	3,478,035
Total All Funds		**$ 88,599,920**	**$ 633,780,564**	**$ 2,634**	**$ 722,383,118**	**$ (122,985,658)**	**$ (28,034,301)**	**$ (6,204,515)**	**$ (157,224,474)**	**$ 565,158,644**

(a) Employer only contributions.

Liquidity Analysis

Alaska Retirement Management Board

Liquidity - Normal Environment

Target Asset Allocations:		<1yr	1-3yrs	3-5yrs	5-7yrs	>7yrs
Broad Domestic Equity	26%	100%				
Global Equity Ex-US	25%	100%				
Private Equity	9%	0%	7%	22%	27%	44%
Real Assets	17%	68%	22%	4%	4%	2%
Absolute Return	5%	77%	17%	6%	0%	0%
Fixed Income	12%	100%				
Alt Equity Strategies	3%	100%				
Short-term Fixed Income	3%	100%				
Portfolio		85%	4%	3%	3%	5%

Liquidity - Stressed Environment

Target Asset Allocations:		<1yr	1-3yrs	3-5yrs	5-7yrs	>7yrs
Broad Domestic Equity	26%	100%				
Global Equity Ex-US	25%	100%				
Private Equity	9%	0%	-8%	16%	31%	61%
Real Assets	17%	0%	24%	62%	4%	10%
Absolute Return	5%	68%	19%	10%	3%	0%
Fixed Income	12%	100%				
Alt Equity Strategies	3%	100%				
Short-term Fixed Income	3%	100%				
Portfolio		73%	4%	12%	3%	8%

Fixed Income Cash Generation

	ASSETS	YIELD	ESTIMATED ANNUAL CASH FLOW
Intermediate Treasury Pool	1,378,264,901	1.35%	18,606,576
International Fixed Income	359,417,452	2.96%	10,638,757
High Yield	513,305,367	5.94%	30,490,339
Short-term Emerging Market	153,080,875	2.87%	4,393,421
Short-term pool	284,735,870	0.24%	683,366
	2,688,804,465		64,812,459

Public Equity Cash Generation

	ASSETS	YIELD	ESTIMATED ANNUAL CASH FLOW
Domestic Equity large Cap	4,610,147,866	2.01%	92,663,972
Domestic Equity Small Cap	1,038,768,150	1.04%	10,803,189
Non-US Equity	4,097,062,076	3.43%	140,529,229
	9,745,978,092		243,996,390

Real Assets Cash Generation

	ASSETS	YIELD	ESTIMATED ANNUAL CASH FLOW
Private Real Estate	1,373,084,623	2.54%	34,876,349
Public Real Estate	271,027,192	3.28%	8,889,692
Farmland	715,965,185	1.71%	12,243,005
Timberland	261,186,226	0.76%	1,985,015
Energy	470,729,003	4.80%	22,594,992
TIPS	8,333,959	2.53%	210,849
	3,100,326,188		80,799,903

Private Equity and Absolute Return Cash Generation

	ASSETS	YIELD	ESTIMATED ANNUAL CASH FLOW
Private Equity	1,610,699,722	-	0
Absolute Return	793,808,927	-	0

Annual Cash Yield DB Plans

	ASSETS	YIELD	ESTIMATED ANNUAL CASH FLOW
Fixed Income	2,688,804,465		64,812,459
Public Equity	9,745,978,092		243,996,390
Real Assets	3,100,326,188		80,799,903
Private Equity and Absolute Return	2,404,508,649		0
Total	17,939,617,394		389,608,751
Estimate Annual Cash Yield		2.17%	

PERS Liquidity Projection

Fiscal Year End	Actuarial Assets (in thousands)	Net Contributions*	Cash Earned on Assets**	Difference
2014	12,088,182	(194,096)	$262,314	$68,218
2015	12,943,523	(86,824)	$280,874	$194,050
2016	13,937,354	(126,647)	$302,441	$175,794
2017	14,724,838	(206,928)	$319,529	$112,601
2018	15,683,423	(299,369)	$340,330	$40,961
2019	16,622,375	(374,762)	$360,706	($14,056)
2020	17,557,839	(473,808)	$381,005	($92,803)
2025	21,762,442	(963,026)	$472,245	($490,781)
2030	25,166,229	(1,658,381)	$546,107	($1,112,274)
2033	25,231,530	(2,351,956)	$547,524	($1,804,432)

***Contributions minus benefits paid.**
****Assuming 2.17% Yield**

TRS Liquidity Projection

Fiscal Year End	Actuarial Assets (in thousands)	Net Contributions*	Cash Earned on Assets**	Difference
2014	4,898,818	(120,289)	$106,304	($13,985)
2015	5,210,575	(15,366)	$113,069	$97,703
2016	5,635,270	(18,601)	$122,285	$103,684
2017	5,985,403	(42,054)	$129,883	$87,829
2018	6,418,367	(73,563)	$139,279	$65,716
2019	6,853,131	(100,986)	$148,713	$47,727
2020	7,294,080	(141,212)	$158,282	$17,070
2025	9,438,293	(315,559)	$204,811	($110,748)
2030	11,523,578	(692,137)	$250,062	($442,075)
2033	11,672,603	(1,066,992)	$253,295	($813,697)

***Contributions minus benefits paid.**
****Assuming 2.17% Yield**

PERS DCR Liquidity Projection

Fiscal Year End	Actuarial Assets (in thousands)	Net Contributions*	Cash Earned on Assets**	Difference
2014	$136,123	$23,254	$2,954	$26,208
2015	$171,153	$26,901	$3,714	$30,616
2016	$212,768	$24,740	$4,617	$29,357
2017	$255,451	$23,225	$5,543	$28,768
2018	$299,961	$21,743	$6,509	$28,253
2019	$346,478	$20,103	$7,519	$27,622
2020	$394,997	$18,291	$8,571	$26,863
2025	$668,485	$8,157	$14,506	$22,664
2030	$1,004,752	($3,779)	$21,803	$18,024
2033	$1,243,418	($11,829)	$26,982	$15,154

***Contributions minus benefits paid.**
****Assuming 2.17% Yield**

TRS DCR Liquidity Projection

Fiscal Year End	Actuarial Assets (in thousands)	Net Contributions*	Cash Earned on Assets**	Difference
2014	$43,039	$5,829	$934	$6,763
2015	$52,531	$8,315	$1,140	$9,455
2016	$65,364	$8,219	$1,418	$9,637
2017	$79,119	$8,206	$1,717	$9,923
2018	$93,958	$8,027	$2,039	$10,066
2019	$109,794	$7,713	$2,383	$10,095
2020	$126,564	$7,303	$2,746	$10,049
2025	$225,411	$5,032	$4,891	$9,924
2030	$354,536	$1,601	$7,693	$9,294
2033	$448,899	($935)	$9,741	$8,806

***Contributions minus benefits paid.**
****Assuming 2.17% Yield**

ARMB Liquidity Projection

Fiscal Year End	Actuarial Assets (in thousands)	Net Contributions*	Cash Earned on Assets**	Difference
2014	$17,166,162	($285,301)	$372,506	$87,204
2015	$18,377,782	($66,974)	$398,798	$331,824
2016	$19,850,755	($112,289)	$430,761	$318,472
2017	$21,044,812	($217,551)	$456,672	$239,121
2018	$22,495,709	($343,161)	$488,157	$144,996
2019	$23,931,778	($447,932)	$519,320	$71,388
2020	$25,373,480	($589,426)	$550,605	($38,821)
2025	$32,094,630	($1,265,395)	$696,453	($568,942)
2030	$38,049,095	($2,352,697)	$825,665	($1,527,031)
2033	$38,596,450	($3,431,712)	$837,543	($2,594,169)

***Contributions minus benefits paid.**
****Assuming 2.17% Yield**

Yield Required to Generate $1,265,000,000 in 2025:

3.94%

Targeting Yield

- **Current portfolio yield of 2.17%**

- **By 2025, to meet the shortfall in net contributions the required yield and/or return of capital will be 3.94%**

Targeting Yield

Risk and Return Assumptions

	Total Return	Standard Deviation	Yield
Broad Domestic Equity	9.15%	18.95%	2.00%
Large Cap	8.90%	18.30%	2.20%
Small/Mid Cap	10.15%	22.90%	1.20%
International Equity	9.25%	20.10%	2.00%
Emerging Markets Equity	11.45%	27.75%	-
Global ex-US Equity	9.80%	21.25%	1.50%
Defensive	2.30%	2.25%	2.30%
Interm Treasuries	2.40%	3.60%	2.40%
Domestic Fixed	2.55%	3.75%	2.55%
TIPS	2.40%	5.00%	2.40%
High Yield	5.70%	12.60%	5.70%
Non-US Fixed	2.65%	9.40%	2.55%
Emerging Mkt Debt	4.75%	10.60%	4.75%
Real Estate	7.55%	17.50%	5.00%
Private Equity	13.00%	30.90%	-
Hedge Funds	5.50%	10.20%	-
Commodities	4.25%	17.90%	2.75%
Timber	7.05%	16.60%	5.00%
Farmland	7.85%	18.10%	5.00%
Cash Equivalents	2.00%	0.90%	2.00%

Source: Callan Associates

ARMB FY2014 Asset Allocation

Asset Class	Allocation
Broad Domestic Equity	26.00%
Global Equity Ex-US	25.00%
Private Equity	9.00%
Real Assets	17.00%
Absolute Return	5.00%
Fixed Composite	12.00%
Alternative Equity Strategies	3.00%
Cash Equivalents	3.00%
Projected Arithmetic Return	8.00%
Expected Return - 5-Year Geometric Mean	7.16%
Projected Standard Deviation	14.81%

Targeting Yield

- **Using the staff asset allocation model to target the required 3.94% yield:**

Arithmetic Return	4.33%
Projected 10 Year Return	4.30%
Projected Standard Deviation	5.14%
Sharpe Ratio	0.45
Projected 10 Year Real Return	1.80%
Projected Income/Yield	3.94%
Projected Capital Gain	0.36%

Asset Classes	
Broad Domestic Equity	-
Large Cap	-
Small/Mid Cap	-
International Equity	-
Emerging Markets Equity	-
Global ex-US Equity	-
Defensive	13.20%
Interm Treasuries	-
Domestic Fixed	32.53%
TIPS	2.97%
High Yield	27.09%
Non-US Fixed	-
Emerging Mkt Debt	7.26%
Real Estate	-
Private Equity	-
Hedge Funds	-
Commodities	-
Timber	11.26%
Farmland	5.69%
Cash Equivalents	-

- **There is a tradeoff between yield and total return.**

Implications

- ARMB will need to consider investments where current yield is a larger component of annual returns
- ARMB may need to tilt away from higher earning illiquid assets
- ARMB may have to lower its earnings assumptions because of the tilt away from illiquid investments
- Selling liquid assets to pay benefits will increase the overall risk of the portfolio
- Changing the asset allocation of the defined benefit plans to accommodate a benefit payout requirement may force a decoupling with the DCR plans which would further exacerbate the liquidity of the Defined Benefit plans

Next Steps

- **Staff will evaluate strategies and report to board at December meeting**

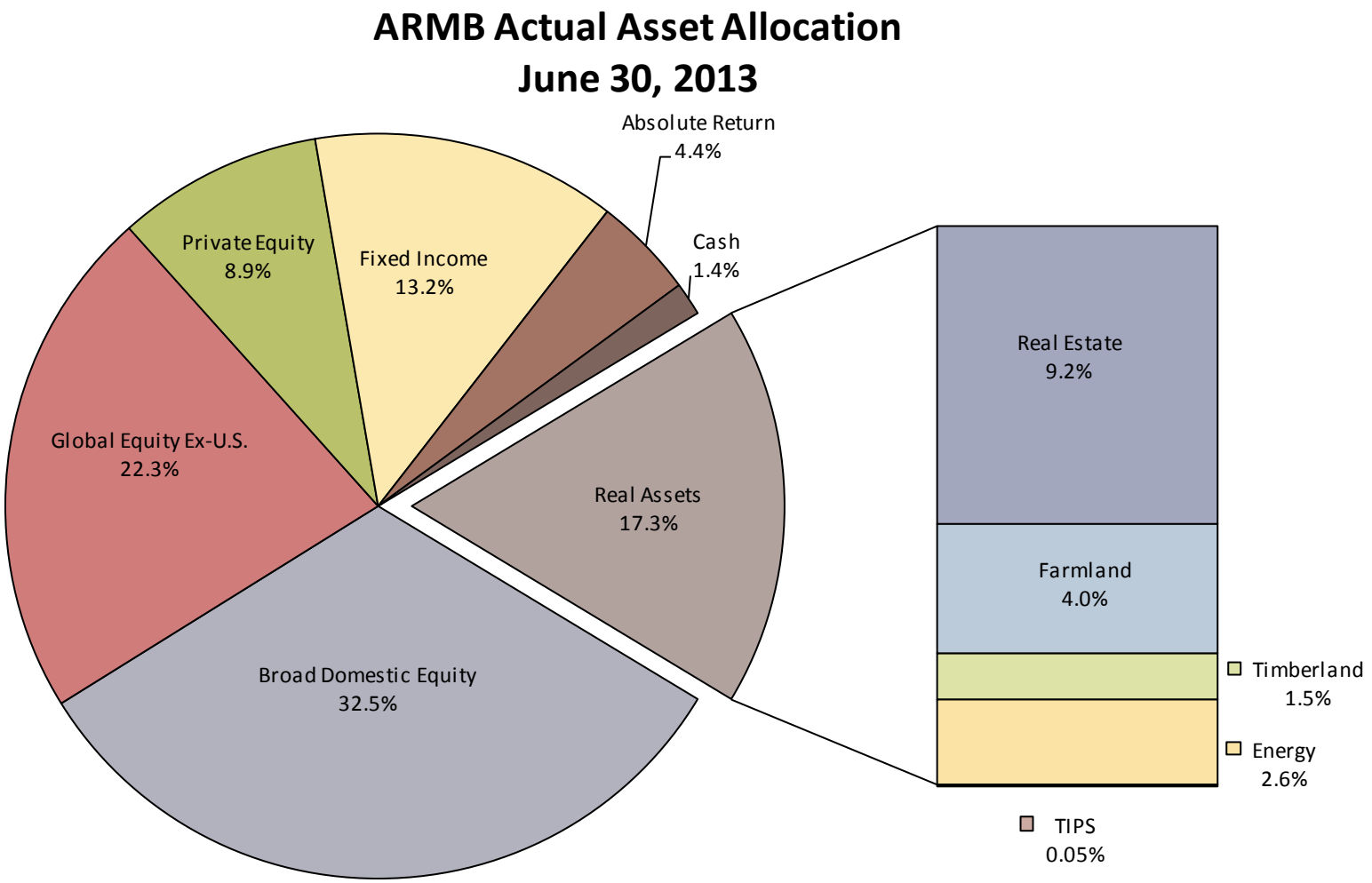
Alaska Retirement Management Board

Real Assets
Fiscal Year 2014 Investment Plan

September 2013

Steve Sikes, Manager of Real Assets Investments

Real Assets Plan Level Allocation



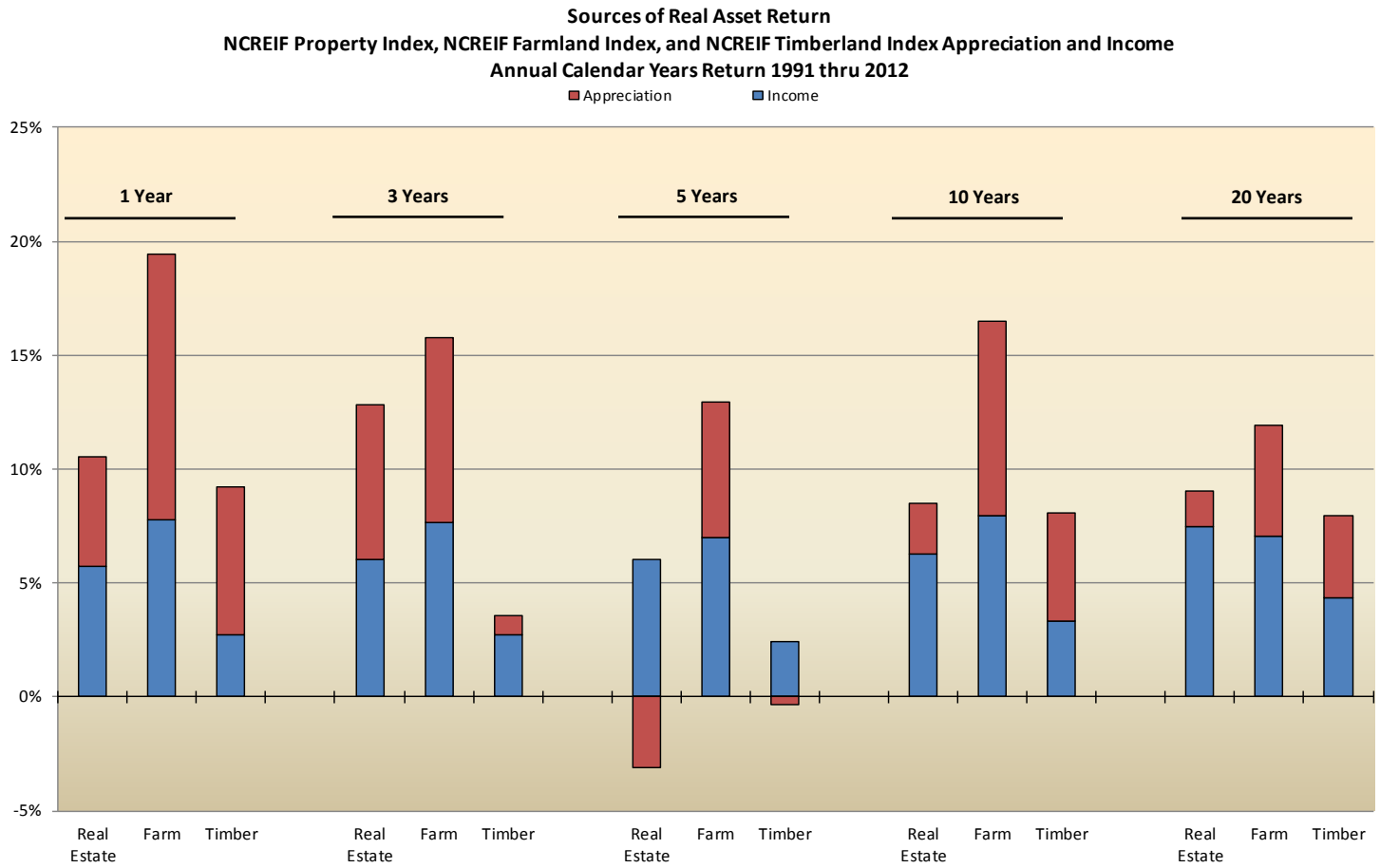
Source: State Street Bank and Trust Company and The Townsend Group. Percentages reflect combined PERS , TRS, and JRS pension and health care portfolios as of June 30, 2013.

Real Assets Portfolio Approach

- Portfolio Role: The primary role of the Real Assets portfolio is to generate attractive returns in assets which provide portfolio diversification and inflation hedging to ARMB's total portfolio. Many of the asset sectors in Real Assets have historically exhibited lower volatility and a high income component of total return.
- Strategy: Lower risk, lower return approach. Conservative strategy employing low leverage and focusing on higher quality assets producing stable returns.
- Return Expectations: Long-term performance expectations for Real Estate, Farmland, and Timberland are to exceed a 5% net real return over rolling 5-year periods. Custom benchmarks are also used to evaluate performance compared to market.
- Benchmark: At the asset class level, a custom benchmark of 60% NCREIF Property Index, 10% NCREIF Farmland Index, 10% NCREIF Timberland Index, and 20% Barclays Capital US TIPS Index is employed.
- Structure: Except for the REIT, TIPS, and MLP investments, the Real Assets portfolio is a collection of private, illiquid assets requiring long-term holding periods. Limited liability structures are utilized to hold the private assets.
- Implementation: Management of the portfolio is delegated among staff. Real Estate, Farmland, and Timberland are managed by the real assets group. TIPS are managed by fixed income staff as this is an internally managed portfolio. Energy is managed by private equity staff. Discretionary authority is given to external managers to select and manage the investments.

Role of Real Assets

- Diversification – Low correlations with stocks and bonds
- Inflation Hedge – Relatively high correlation with CPI
- Stable and meaningful income return

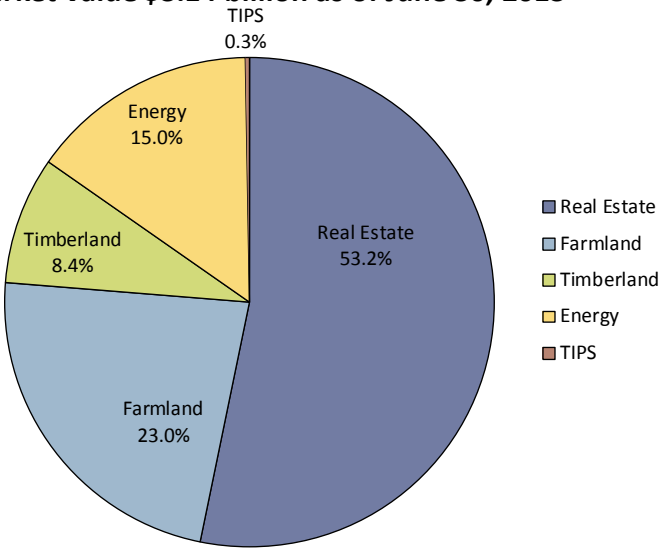


Source: NCREIF

Real Assets Portfolio Sector Allocation

- The Fiscal Year 2014 asset allocation target for Real Assets is 17% +/- 8% which is a 1% increase from Fiscal Year 2013.
- The current mix of assets is primarily a function of the historical evolution of each component category, the practical restrictions of investment pacing, and the overall limitations of ARMB's asset allocation.
- The allocation to Energy experienced a large increase during Fiscal Year 2013 (from 4.3% to 15%) as a result of ARMB's decision to invest in Master Limited Partnerships. Additionally, the allocation to TIPS was reduced to almost 0% due to the relatively unattractive yields offered by TIPS investments. Real Estate, Farmland, and Timberland actual allocations are relatively unchanged from June 30, 2012.

ARMB Real Assets Portfolio
Total Market Value $3.14 billion as of June 30, 2013



ARMB Actual Sector Allocation Compared to Target Allocation as of June 30, 2013

Sector Allocation	Actual %	Target %	Target Band	Actual % (-) Target %
Real Assets				
Real Estate	53.2%	35%	+40%/-35%	18.2%
Farmland	23.0%	25%	+30%/-25%	-2.0%
Timberland	8.4%	25%	+30%/-25%	-16.6%
TIPS	0.3%	10%	+/-10%	-9.7%
Energy	15.0%	5%	+10%/-5%	10.0%

Real Assets Performance

Returns for Periods Ended June 30, 2013

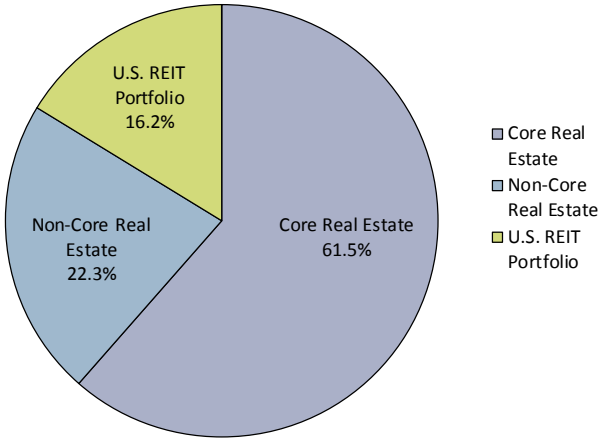
	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years
Real Assets(Prelim)	**1.13%**	**10.19%**	**11.83%**	**1.83%**
Real Assets Target (1)	0.60%	8.30%	10.77%	4.17%
Real Estate Pool	1.50%	8.67%	12.75%	(2.11%)
Real Estate Target (2)	2.37%	10.70%	13.78%	3.78%
Private Real Estate	2.02%	8.57%	12.28%	(2.65%)
NCREIF Total Index	2.87%	10.72%	13.14%	2.79%
REIT Internal Portfolio	(1.95%)	9.53%	18.65%	6.36%
NAREIT Equity Index	(2.13%)	10.21%	18.46%	7.72%
Total Farmland	0.85%	15.56%	13.54%	10.33%
UBS Agrivest	1.07%	18.84%	15.27%	10.81%
Hancock Agricultural	0.46%	10.27%	10.75%	9.74%
ARMB Farmland Target (3)	1.75%	17.72%	15.23%	12.41%
Total Timber	1.20%	7.17%	5.62%	-
Timberland Investment Resources	1.70%	5.86%	3.93%	-
Hancock Timber	0.20%	10.12%	8.62%	-
NCREIF Timberland Index	0.93%	9.37%	3.59%	2.05%
TIPS Internal Portfolio	(6.69%)	(4.61%)	5.00%	4.66%
BC US TIPS Index	(7.05%)	(4.78%)	4.63%	4.41%
Total Energy Funds *	3.97%	5.61%	6.26%	5.41%
CPI + 5%	1.51%	6.76%	7.46%	6.35%
MLP Composite	2.84%	-	-	-
Alerian MLP Index	1.94%	28.38%	20.98%	18.17%

Source: Callan Associates June 30, 2013 Performance Report

Real Estate Portfolio

- Core portfolio returned 9.6% net for the fiscal year. The core portfolio underperformed the NCREIF Property Index benchmark return of 10.7%. Separate account activity reflected sales of an apartment property by Sentinel and an office building by LaSalle subsequent to Fiscal Year end. Acquisitions reflect the purchase of an apartment property by Sentinel.
- Non-core portfolio returned 6% net during the fiscal year. Most investments are at or near the end of their investment period. A significant amount of capital is expected to be distributed from investment managers over the next three years.
- U.S. REIT portfolio returned 9.5% compared to FTSE NAREIT All Equity REITs Index of 10.2%.
- Portfolio is well diversified compared to the NCREIF Property Index based on property type and geographic location.

ARMB Real Estate Portfolio
Strategy Weights as of June 30, 2013



Source: NCREIF, Townsend June 30, 2013 Performance Report

Real Estate Portfolio Profile

- Net Asset Value: $1.67 billion
- Number of Properties: 23 + commingled fund interests
- Core Structure: 4 separate accounts, 2 open-end funds
- Non-Core Structure: 14 commingled funds
- Remaining Separate Account Allocation: $138 million

Diversification by Property Type			
	ARMB Portfolio	NPI	Difference
Apartment	24.7%	25.2%	-0.5%
Office	34.1%	35.2%	-1.1%
Industrial	15.0%	14.2%	0.8%
Retail	16.7%	22.8%	-6.1%
Hotel	4.2%	2.6%	1.6%
Other	5.3%	0.0%	5.3%
Diversification by Geographic Region			
	ARMB Portfolio	NPI	Difference
North East	19.1%	20.0%	-0.9%
Mid East	10.7%	14.2%	-3.5%
East North Central	4.0%	7.7%	-3.7%
West North Central	2.0%	1.7%	0.3%
South East	12.3%	10.3%	2.0%
South West	6.2%	10.9%	-4.7%
Mountain	8.3%	5.7%	2.6%
Pacific	34.5%	29.5%	5.0%
Ex-US	2.9%	0.0%	2.9%

Farmland Portfolio

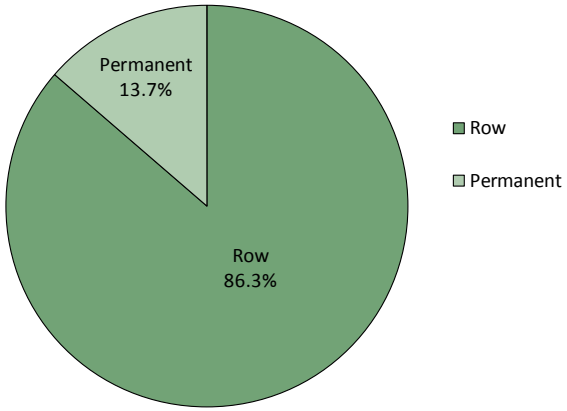
- Farmland portfolio returned 15.6% net for the fiscal year. The farmland portfolio underperformed the ARMB Farmland Target benchmark return of 17.7%. Separate account activity reflects the sale of four properties during the year. No acquisitions were made.
- The Farmland portfolio is within the row/permanent crop-type mix targets of 80%/20% +/- 10% and is well diversified based on location and crop type. The portfolio grows a wide variety of crops, the largest of which is corn at approximately 20%. Permanent crops include pistachios, almonds, apples, oranges, and wine grapes.
- The Farmland markets continue to be a challenging market to find acquisitions that fit the ARMB 3-year minimum going-in yield guidelines of 5% for the portfolio and 4% for individual properties. Land prices have appreciated faster than rent growth which has compressed current yields. Land owners have been reluctant to sell due to attractive commodity prices and the lack of more attractive alternatives for their capital.

Farmland Portfolio Profile

- Net Asset Value: $722 million
- Number of Properties: 88
- Total Acres: 159,625
- Structure: 2 separate accounts
- Remaining Separate Account Allocation: $90 million

Investment Location - Top 5 States		
	ARMB Portfolio	Properties
California	20.1%	11
Idaho	17.5%	15
Texas	12.9%	11
Illinois	12.4%	7
Mississippi	9.2%	8

ARMB Farmland Portfolio
Strategy Weights as of June 30, 2013



Diversification by Geographic Region			
	ARMB Portfolio	NFI	Difference
Mountain States	26.0%	7.3%	18.7%
Pacific West	20.1%	34.0%	-13.9%
Delta States	18.2%	16.3%	2.0%
Corn Belt	14.1%	17.2%	-3.1%
Southern Plains	12.9%	5.9%	7.0%
Pacific Northwest	5.1%	9.9%	-4.8%
Southeast	2.6%	4.1%	-1.5%
Northern Plains	0.8%	0.0%	0.8%
Lake States	0.3%	5.4%	-5.1%

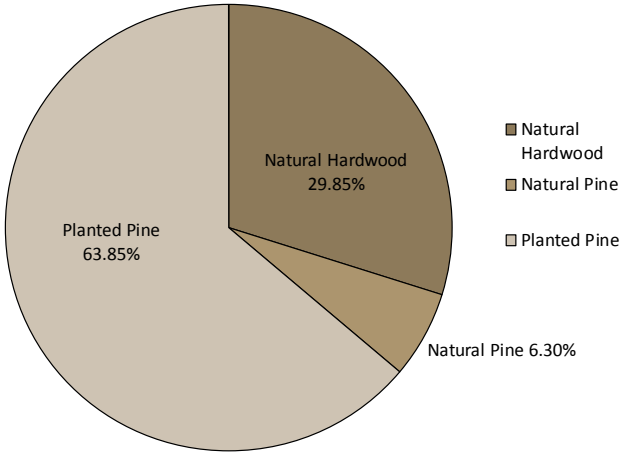
Timberland Portfolio

- Timberland portfolio returned 7.2% net for the fiscal year. The timberland portfolio underperformed the NCREIF Timberland Index benchmark return of 9.4%. Separate account activity reflects one acquisition by Timberland Investment Resources, LLC.
- A significant amount of allocation is not invested. As this capital is deployed, the Timberland portfolio diversification will continue to improve.
- Transaction volume continues to increase but good opportunities remain relatively scarce and highly competitive. Current land owners anticipate a recovery in sawtimber prices and therefore are reluctant to sell.

Timberland Portfolio Profile

- Net Asset Value: $264 million
- Number of Properties: 12
- Total Acres: 137,749
- Structure: 2 separate accounts
- Remaining Separate Account Allocation: $237 million

ARMB Timberland Portfolio
Portfolio Weights by Species as of June 30, 2013



ARMB Portfolio by State and Age Class					
	0-10	11-20	21-30	>30	Total
Alabama	6.6%	11.2%	5.1%	6.8%	29.8%
Georgia	6.6%	8.8%	5.1%	8.9%	29.5%
Louisiana	0.6%	0.4%	2.6%	2.0%	5.6%
Mississippi	0.5%	1.0%	3.7%	0.9%	6.0%
North Carolina	0.5%	1.9%	1.4%	1.3%	5.3%
Oregon	0.4%	0.4%	1.2%	0.5%	2.5%
Washington	2.1%	1.3%	0.7%	2.3%	6.3%
New York	0.0%	0.0%	0.0%	7.3%	7.3%
Wisconsin	0.0%	0.0%	0.0%	3.7%	3.7%
South Carolina	0.6%	2.2%	0.6%	0.7%	4.0%
Total	**17.9%**	**27.3%**	**20.5%**	**34.4%**	**100.0%**

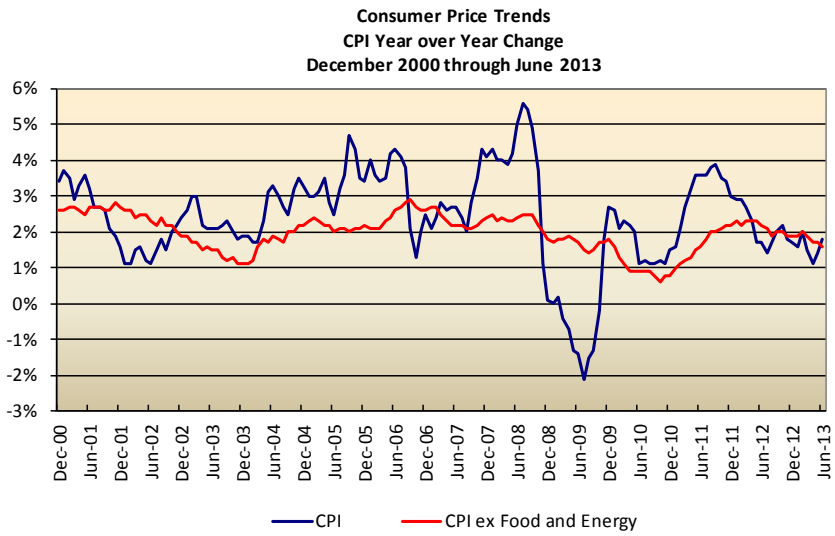
Diversification by Geographic Region			
	ARMB Portfolio	**NTI**	**Difference**
South	76.8%	62.7%	14.1%
Pacific Northwest	19.3%	31.1%	-11.8%
Northeast	3.9%	4.4%	-0.5%
Lake States	0.0%	1.8%	-1.8%

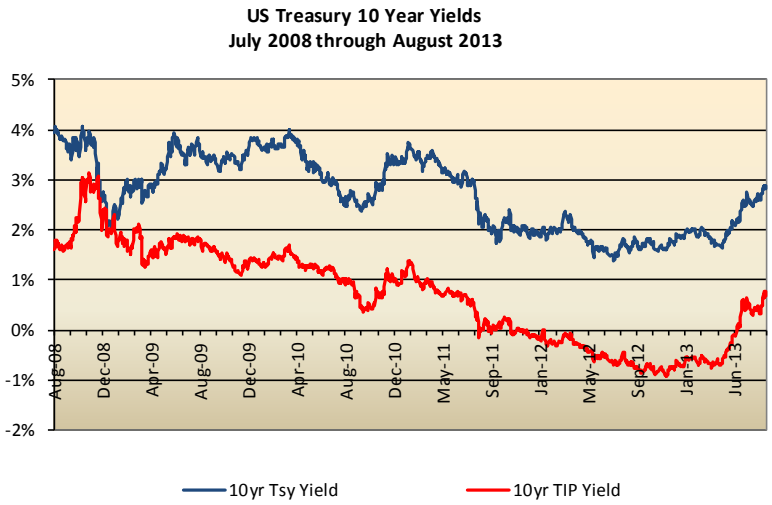
Infrastructure Portfolio

- ARMB directed Callan Associates to perform a manager search, including both private and public strategies, at the February 2013 ARMB Meeting.
- Callan conducted search during Summer of 2013 and presented results to staff. Staff conducted further due diligence and has invited two open-end private investment fund managers to present at the September ARMB Meeting.
- Additional due diligence will be conducted on the public strategies and brought before ARMB at the December meeting. Infrastructure investment guidelines will also be presented to the ARMB at the December meeting including benchmark and other program requirements and constraints.
- Target allocation to Infrastructure proposed at 12.5% (2.125% of Total Plan Assets). Size of allocation driven by practical capacity considerations within the 17% Real Assets allocation target and desire to achieve meaningful investment portfolio.
- Target infrastructure allocation reflects objective of committing $450 million to Infrastructure investments with $300 million committed to private open-end funds and $150 million to publicly traded strategies.
- Private investment capital expected to take 9 to 18 months to invest. Public investment capital can be invested immediately.
- Liquidity, current yield, and diversification were the primary decision variables in determining the best investment strategy for ARMB. Closed-end funds were dismissed due to illiquidity and very long lock-up periods.
- Due to the nascent stage of the U.S. private infrastructure market, a global strategy is recommended for both private and public portfolio strategies. Portfolios will be US Dollar based but unhedged as it relates to international investment positions due to the long term nature of the holdings.
- Expected total returns are 10-12% net over the long term with a current yield of 5-7%. Infrastructure is expected to provide an attractive current yield, portfolio diversification through its stable and predictable cash flows, and inflation protection over time.

Energy and TIPS Portfolios

- The Energy portfolio increased significantly during Fiscal Year 2013 with ARMB's investments in Master Limited Partnerships (MLPs). The portfolio is now composed of two public MLP mandates totaling $363 million and three private closed-end commingled funds representing follow-on investments with EIG Global Energy Partners totaling $108 million. As of June 30, 2013, the total Energy portfolio investments were valued at $471 million. The ARMB has additional energy investments across the broad public equity portfolio and within the traditional private equity portfolio.
- The TIPS portfolio reflects an internally managed portfolio of Treasury Inflation Protected Securities. As of June 30, 2013, the portfolio was valued at $8 million. The size of the TIPS portfolio was reduced during FY13 due to the low level of yield offered by those securities. The market currently expects approximately 2.15% inflation over the next 10 years as implied by the difference between U.S. Treasury nominal yields (2.81%) and US TIPS real yield (0.66%). Current inflation remains below the Federal Reserve's 2% inflation objective.

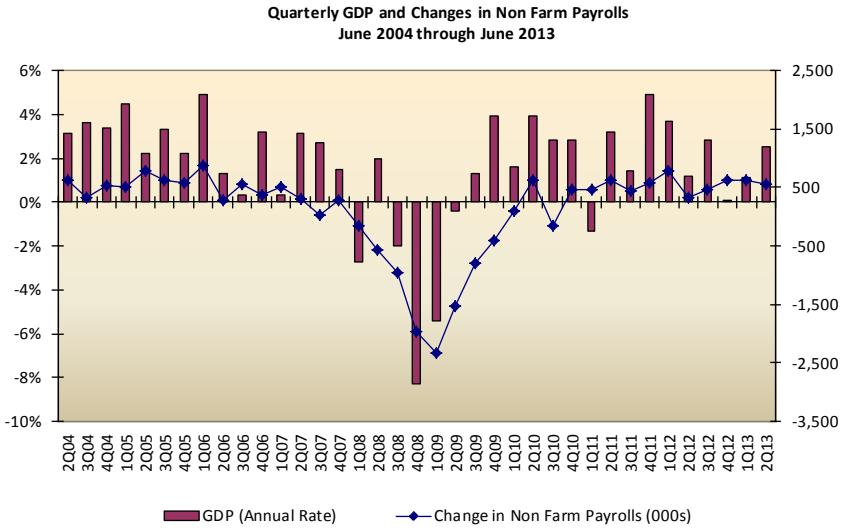


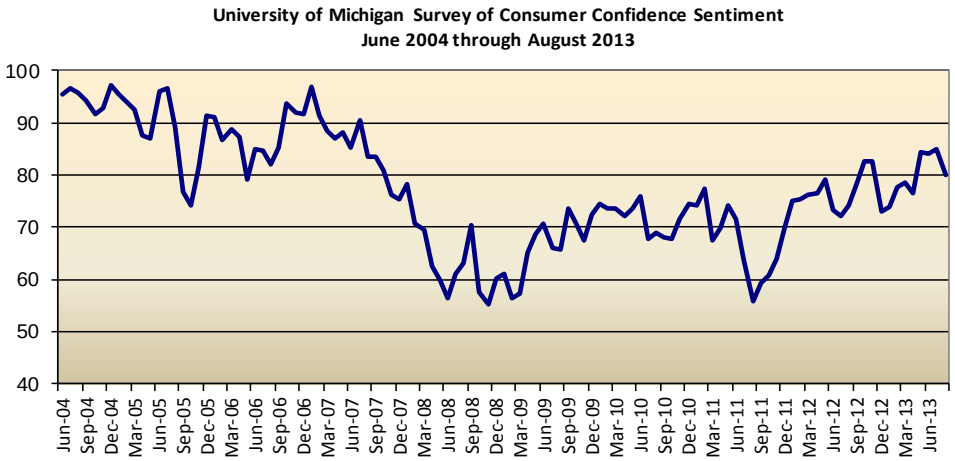


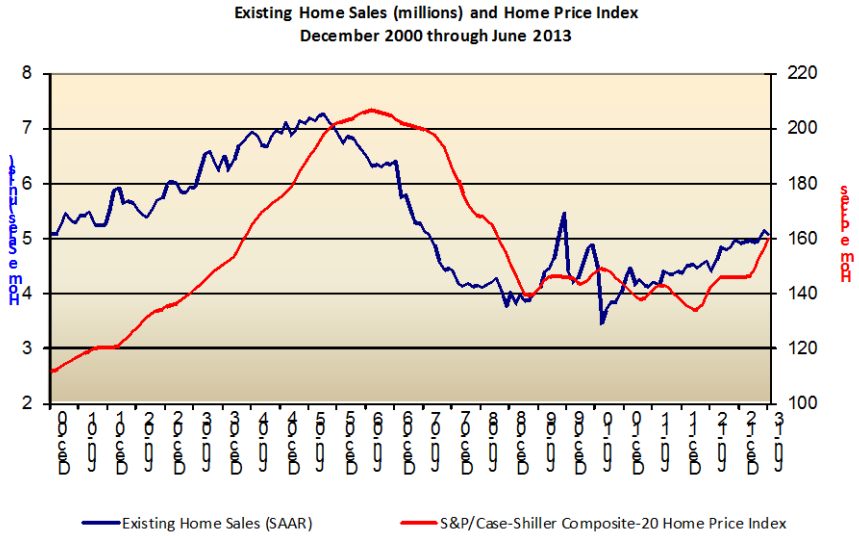
Source: Bloomberg

U.S. Economy

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



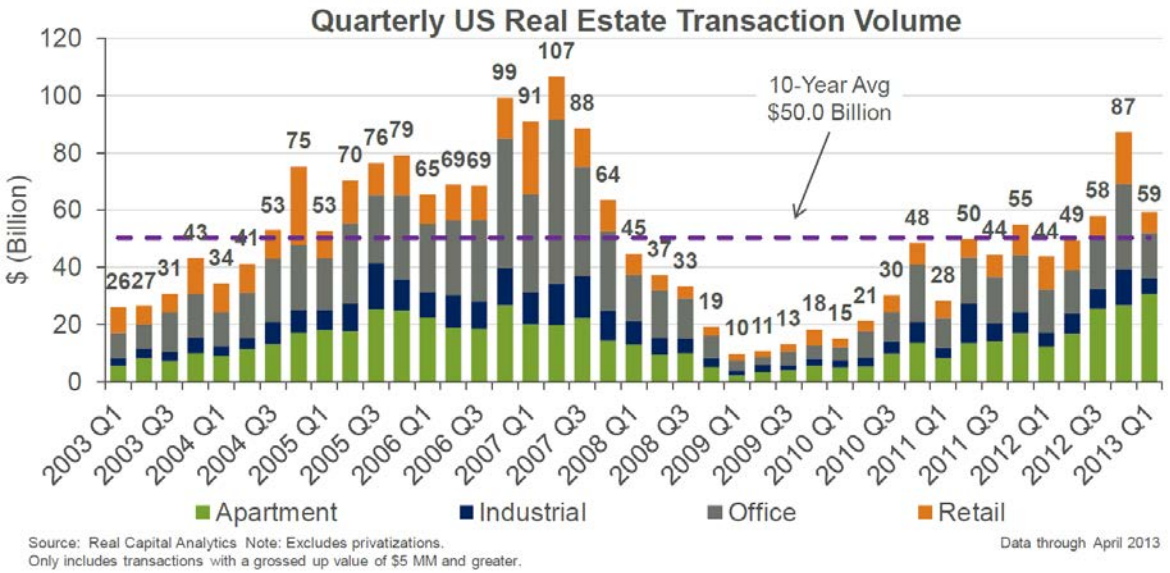


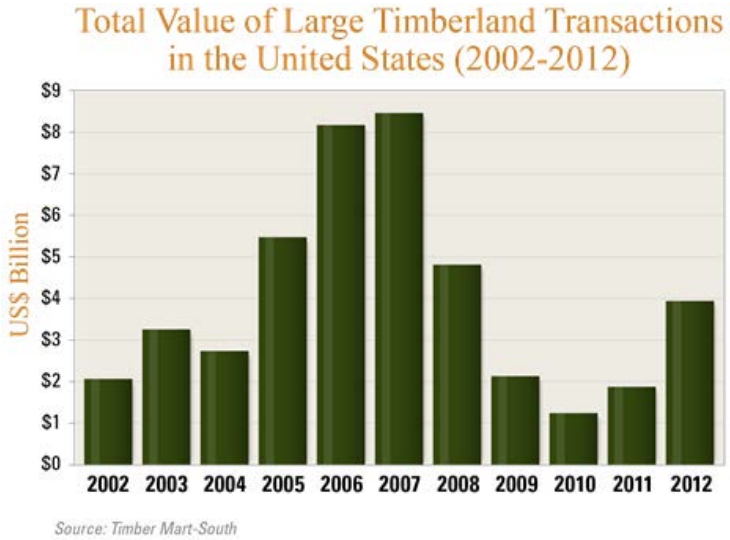


Source: Bloomberg

Capital Markets

- Real Estate transaction volume is healthy and continues to operate at highly liquid levels, particularly in highly desirable core barrier markets. Cheap debt, relatively attractive yields, and economic optimism have benefited real estate holdings. High quality transactions are very competitive.
- The Timberland transaction market continues to improve but transaction volume is still relatively muted as timber markets wait for timber price improvement from growth in the housing construction market. High quality transactions are very competitive.
- Farmland markets are healthy but attractive properties at acceptable prices are difficult to find. Farmland markets continue to benefit from good fundamentals, capital structure, and growing investor interest.

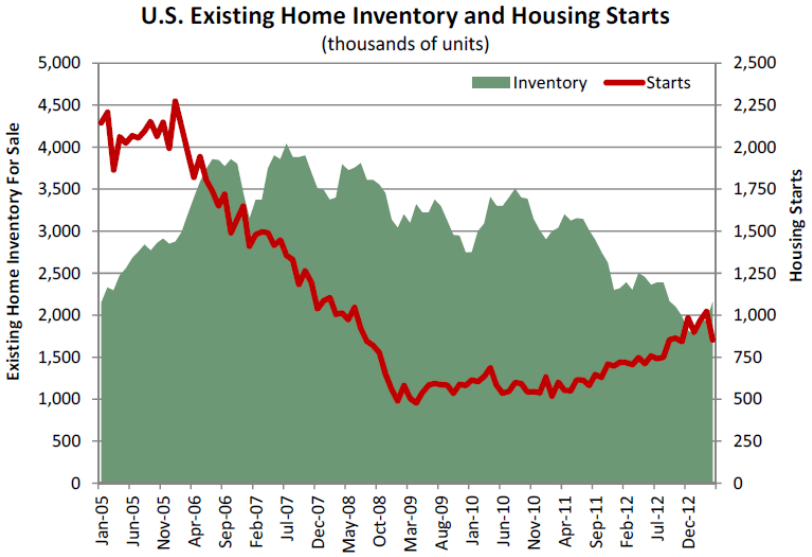


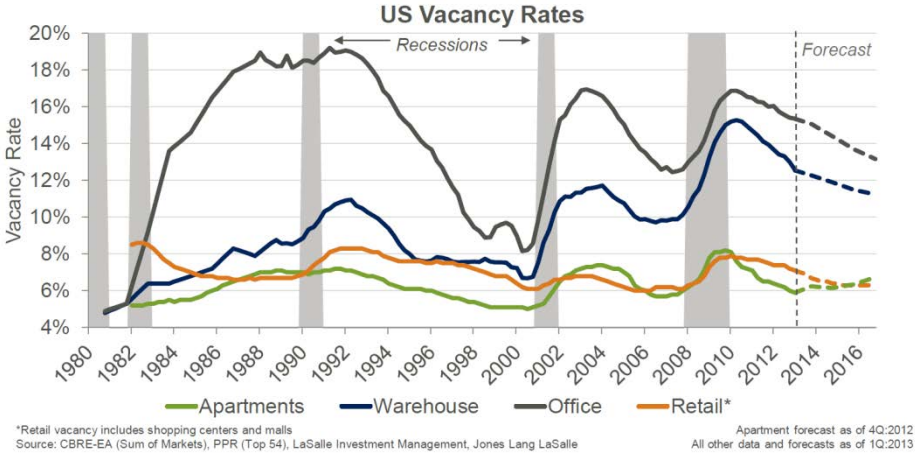


Source: Timberland Investment Resources LLC

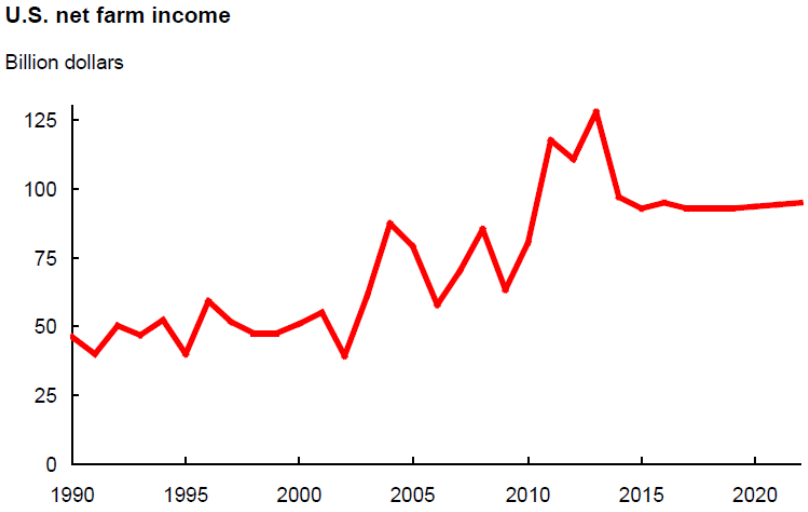
Fundamentals

- Real estate fundamentals continue their slow recovery with vacancy rates still elevated compared to prerecession levels except for apartments which have experienced a strong recovery. Continued improvement in real estate fundamentals is expected as a result of economic growth and limited new supply.
- Timberland fundamentals have improved with a recovery of the housing market and continued strong demand from Asia which helps support the Pacific Northwest submarket. The Southeast sawtimber market, primarily dependent on domestic new home construction, is expected to experience improvement as current housing inventory is at historically low levels and new home construction increases.
- U.S. net farm income and U.S. agricultural exports are expected to set records in 2013 but moderate going forward as commodity prices revert from very high levels and higher expense erode income. Global food demand continues to be an important economic driver for the U.S. Farmland market.





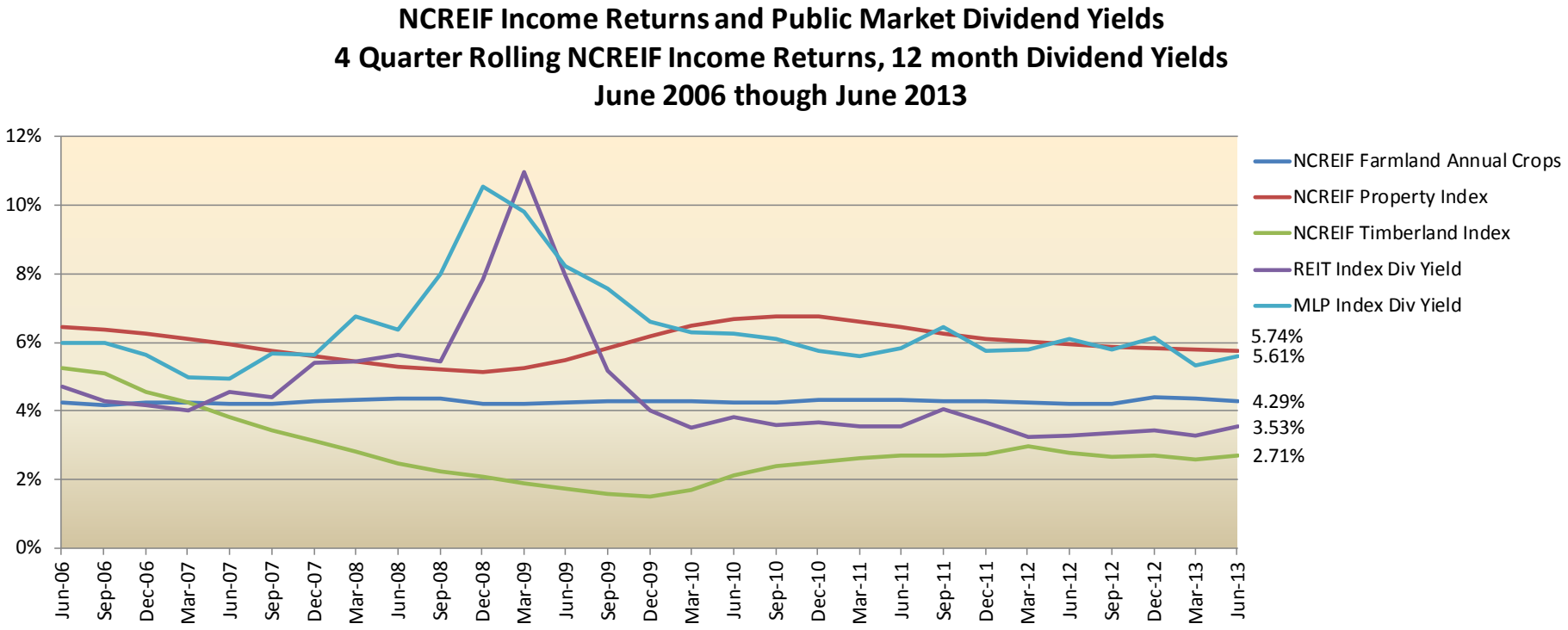
Source: LaSalle Investment Management



Source: US Department of Agriculture

Current Market Opportunity

- NCREIF Property Index income returns are still relatively attractive compared to U.S. Treasury yields. NCREIF Annual Farmland income returns are also attractive and demonstrate growth in light of strong appreciation during this period.
- NCREIF Timberland Income returns appear low but reflect lower volume as a result of market slowdown. Income is expected to improve significantly with improving lumber market from increased construction demand.
- Public market dividend yields reflect higher volatility of the public market but currently offer relatively attractive income compared to alternatives.



Source: NCREIF, Bloomberg

Projected Real Assets Allocation

The Real Assets portfolio currently approximates its target allocation and is forecasted to fluctuate around the 17% target over the next five years. The schedule below reflects proposed changes to the target weights and bands to accommodate the new allocation to infrastructure. The Timberland target is reduced from 25% to 15%. The TIPS target is reduced from 10% to 0% due to unattractive yields. Energy allocation increased from 5% to 12.5% as a reflection of the MLP investments ARMB approved in 2012. The Core/Non-Core target is changed from 75%/25% to 100%/0% with bands to reflect the move away from high return closed-end real estate funds. Certain non-core opportunities at the CIO's discretion may still be considered within the bands.

Actual Portfolio Weights as of June 30, 2013					Proposed New	Proposed New	Five Year Forecast				
Sector Allocation	**Actual %**	**Target %**	**Over/Under%**	**Band**	**Target**	**Band**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Real Assets Allocation	17.3%	17%	0.3%	+/-8%			17.7%	18.2%	17.6%	17.0%	16.5%
Real Assets Sector Allocation											
Real Estate	53.2%	35%	18.2%	+40%/-35%	35.0%	+40%/-35%	46.6%	41.3%	39.2%	38.0%	37.7%
Farmland	23.0%	25%	-2.0%	+30%/-25%	25.0%	+30%/-25%	23.3%	22.4%	23.2%	23.3%	23.2%
Timberland	8.4%	25%	-16.6%	+30%/-25%	15.0%	+30%/-15%	10.1%	12.6%	13.6%	14.1%	14.1%
Infrastructure	0.0%				12.5%	+10%/-12.5%	8.1%	12.5%	12.5%	12.5%	12.4%
Energy	15.0%	5%	10.0%	+10%/-5%	12.5%	+10%/-5%	11.7%	10.8%	11.3%	11.9%	12.4%
TIPS	0.3%	10%	-9.7%	+/-10%	0.0%	+20%	0.3%	0.2%	0.2%	0.3%	0.3%
Private Real Estate Strategy Allocation											
Core	73.4%	75%	-1.6%	+/-25%	100.0%	-25%	80%	90%	95%	99%	100%
Non-Core	26.6%	25%	1.6%	+/-25%	0.0%	+25%	20%	10%	5%	1%	0%
Private/Public Real Estate Allocation											
Private	83.8%	90%	-6%	+/-10%	90.0%	+/-10%	88%	88%	87%	87%	86%
Public	16.2%	10%	6%	+/-10%	10.0%	+/-10%	12%	12%	13%	13%	14%

- Total pension fund assets based on projections in June 30, 2012 Actuarial Valuation.
- Cash flow expectations based on manager and staff estimates.
- Projections include no future new allocations or commitments.
- Schedule includes changes in real estate market value based on expected returns.

Fiscal Year 2014 Investment Recommendations

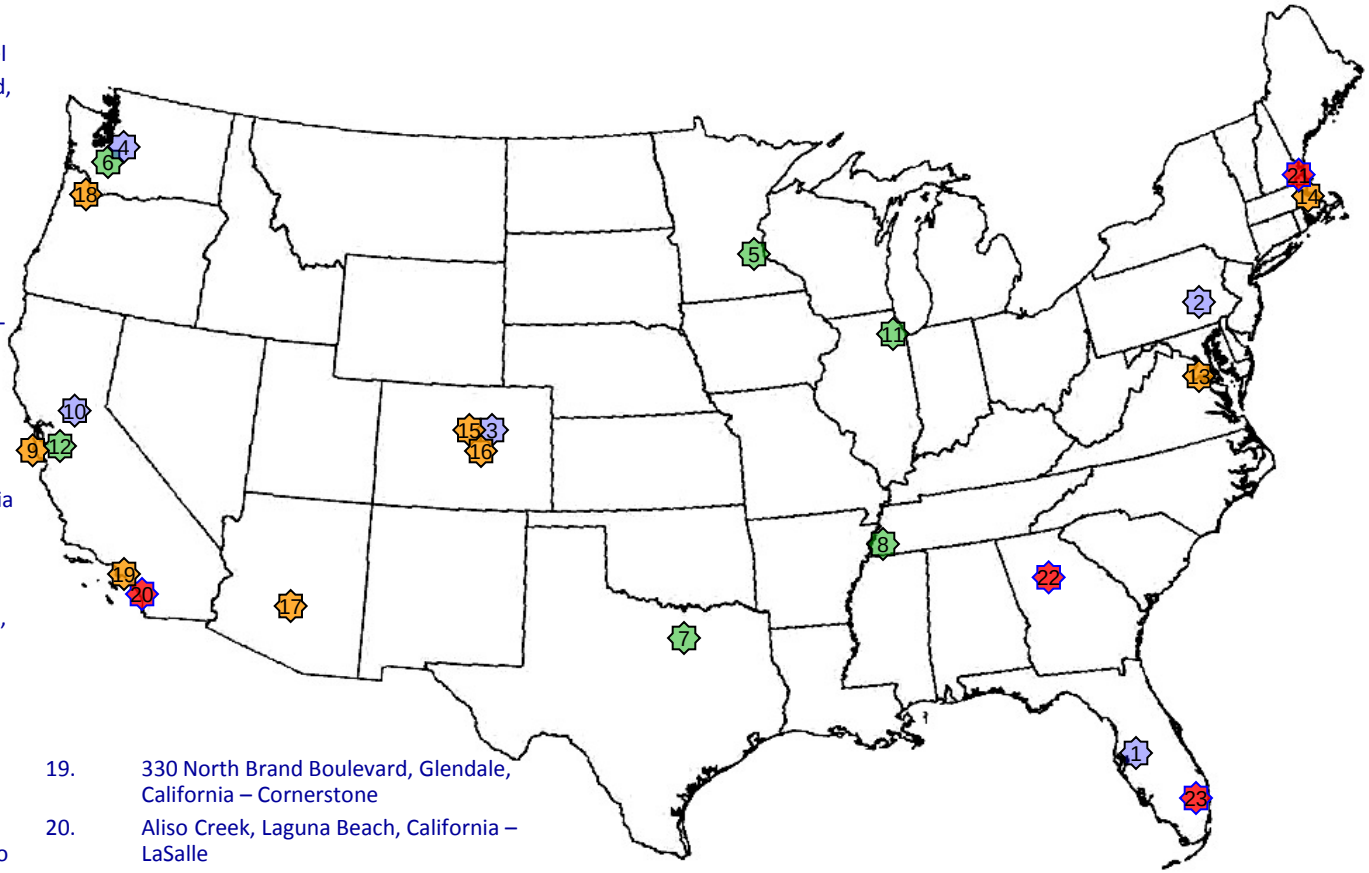
Category	Recommendation
Real Assets	Infrastructure component added at 12.5% target weight of Real Assets (2.125% of Total Plan Assets).
Real Estate	No new allocations for current core separate account strategies or commitments to open-end funds. Core separate account advisors should continue to manage existing portfolios and allocations toward core assets located in markets with high barriers to entry. Separate account advisors should continue to take advantage of opportunities to sell non-strategic assets at attractive prices and improve the quality and income stability of the portfolio. Under CIO discretion, staff plans to explore establishing one or more separate account mandates with existing core separate account managers focused on the medical office sector. ARMB has had an investment in a medical office closed-end fund which is winding down. This investment has provided a very stable and relatively high income return stream to ARMB. The Core/Non-Core private real estate target mix is changed from 75%/25% to 100%/0% with bands to reflect the move away from high return closed-end real estate funds. CIO discretion permits continued consideration of opportunities should they present.
Farmland	No recommended changes to strategy or separate account manager allocations.
Timberland	No recommended changes to strategy. Target weight reduced from 25% to 15% as a reflection of the slow pace of capital deployment related to existing allocation and desire to create infrastructure allocation.
TIPS and Energy	No recommended changes to strategy. TIPS allocation reduced from 10% to 0% with a +20% band as a reflection of unattractive yields. Energy allocation raised from 5% to 12.5% to accommodate MLP strategy.

Appendix

Appendix A: Separate Account Real Estate Properties

Property List

1. Versant Place, Brandon, Florida - Sentinel
2. Valleybrook at Chadds Ford, Chadds Ford, Pennsylvania – Sentinel
3. Remington at Lone Tree, Denver, Colorado – UBS
4. Springbrook Apartments, Renton, Washington – UBS
5. Arden Hills Distribution Complex, Arden Hills, Minnesota – Cornerstone
6. Rainier Industrial, Sumner, Washington – LaSalle
7. Gateway Distribution Center, Roanoke, Texas – UBS
8. Memphis Industrial Park, Memphis, Tennessee – UBS
9. 1195 West Fremont, Sunnyvale, California – LaSalle
10. Glacier/Preserve Blue Ravine Inc., Folsom, CA – Sentinel
11. West 55th Street Industrial Park, McCook, Illinois – UBS
12. Winton Industrial Center, Hayward, California – UBS
13. Virginia Square, Arlington, Virginia – LaSalle
14. 400 Crown Colony, Quincy, Massachusetts - UBS
15. One Maroon Circle, Englewood, Colorado – UBS
16. Two Maroon Circle, Englewood, Colorado – UBS
17. Broadway 101, Tempe, Arizona – LaSalle
18. Amber Glen, Hillsboro, Oregon – LaSalle
19. 330 North Brand Boulevard, Glendale, California – Cornerstone
20. Aliso Creek, Laguna Beach, California – LaSalle
21. Westford Valley Marketplace, Westford, Massachusetts – UBS
22. Shallowford Corners, Roswell, Georgia – LaSalle
23. Winston Park Shopping Center, Coconut Creek Florida - UBS



Legend

Apartments	Blue	
Industrial	Green	
Office	Orange	
Retail	Red	

Appendix B: Glossary of Terms

Allocation	The total amount of investments a Separate Account Manager is authorized to make on behalf of the ARMB.
Barrier to Entry	Broad term used to describe a market environment that is supply constrained due to one or more factors such as zoning, lack of developable real estate, geography, etc.
Cap Rate	Capitalization Rate. One measure of expected return determined by dividing the first year expected annual net operating income from the property by the purchase price.
Closed-End Fund	A commingled fund that has a finite life. Investors ability to invest is limited to a certain time period at the inception of the fund. An investor's ability to sell the fund is often limited. Structures include limited partnerships, limited liability companies, and REITs.
Core Real Estate	Substantially leased, multi-tenant properties, greater than $5 million in size, in major metropolitan areas, with little or no mortgage debt. Makes up the largest share of most pension fund portfolios.
Commitment	The total amount of investment a commingled fund is authorized to make on behalf of the ARMB.
NCREIF Property Index - NPI	National Council of Real Estate Investment Fiduciaries - NCREIF Property Index. The NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment. As of June 30, 2013: 7,099 properties valued at over $336 billion.
NCREIF Farmland Index – NFI	The NCREIF Farmland Index is a quarterly time series composite return measure of investment performance of a large pool of individual agricultural properties acquired in the private market for investment purposes only. All properties in the Farmland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment. As of June 30, 2013: 547 properties valued at over $4.1 billion.
NCREIF Timberland Index – NTI	The NCREIF Timberland Index is a quarterly time series composite return measure of investment performance of a large pool of individual timber properties acquired in the private market for investment purposes only. All properties in the Timberland Index have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment. As of June 30, 2013: 442 properties valued at over $24.7 billion.
Net Asset Value	Total asset value – total liabilities = net asset value. In the context of REITs, net asset value is the value of real estate owned by the company less all debt owed by the company.
Non-Core Real Estate	Value-add or opportunistic real estate strategies involving higher risk than core investing. Investment strategies include relatively substantial redevelopment or releasing, buying distressed assets, new property development, and high leverage.
Open-End Fund	A commingled fund that has an infinite life. An investor may buy and sell shares of the fund. Similar to a mutual fund.
REIT	Real Estate Investment Trust – A company that owns and operates income producing real estate such as apartments, shopping centers, offices, hotels, and warehouses. A REIT must distribute at least 90% of taxable income to its shareholders annually. A REIT is a creation of the Internal Revenue Code which allows companies, who elect and meet stringent requirements, to avoid paying taxes on income passed through to shareholders.
Separate Account	An account with an investment manager that is invested exclusively for the ARMB and is not commingled with other client funds. Investments are made at the discretion of the Separate Account manager within the policy parameters approved by ARMB.

Alaska Retirement Management Board
Portfolio and Manager Performance Report

Second Quarter 2013

The Townsend Group

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ARMB REAL ESTATE PORTFOLIO

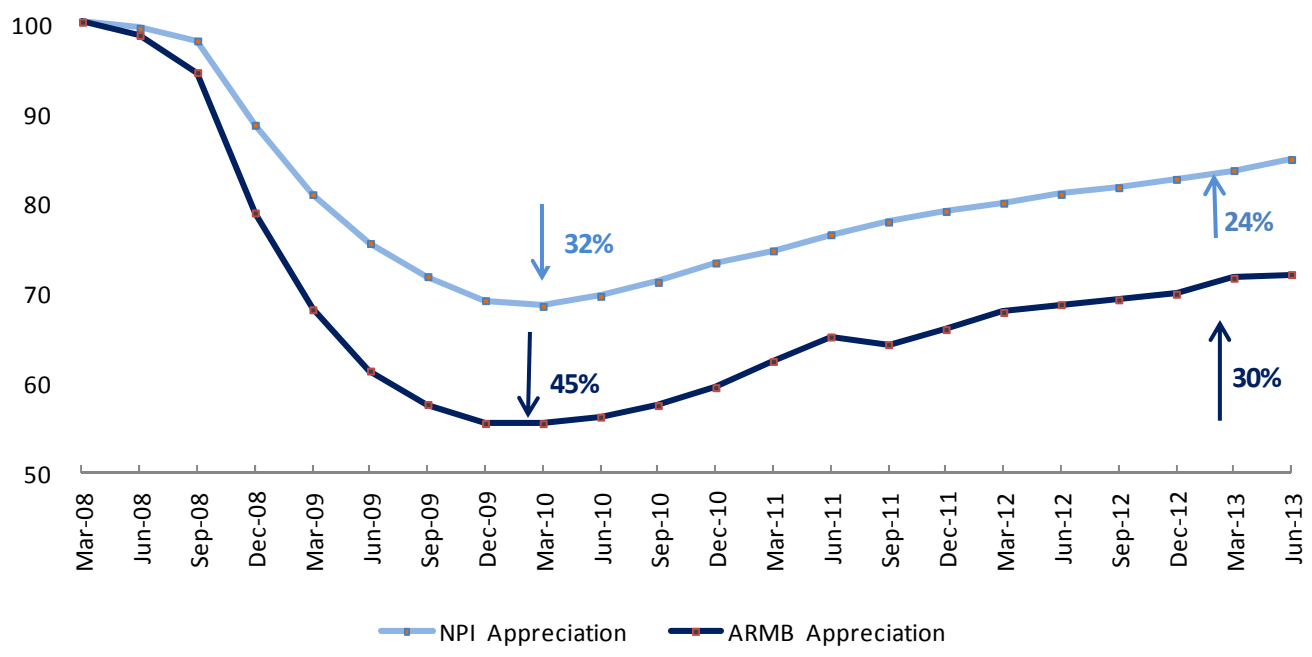
Second Quarter 2013

The Townsend Group

Introduction

The ARMB portfolio peaked in March 2008 followed by a significant decline during the Global Financial Crisis. The portfolio began to reflect its recovery in March 2010. From its 2008 peak to the market trough, the portfolio experienced a decline of -45%. From the trough of March 2010 through June 2013, the portfolio has recovered 30%. Performance reflects a greater than market decline as well as greater than market recovery due primarily to the use of leverage within the ARMB portfolio compared to an unleveraged market benchmark (NPI).

Peak to Trough ARMB Capital Returns vs. NPI
1Q08 through 2Q13



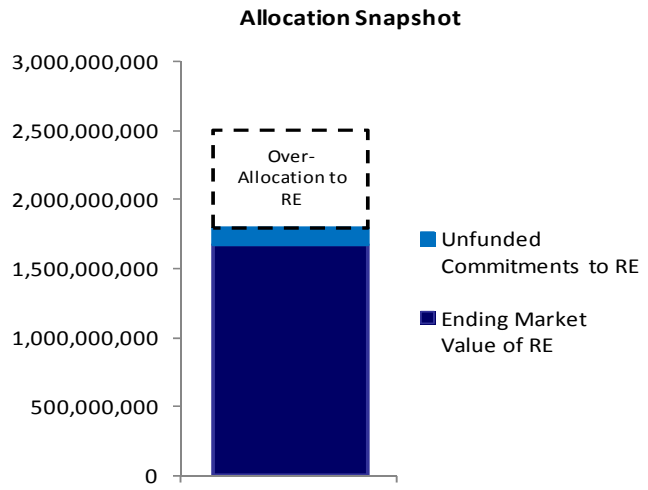
Allocation Snapshot

As of June 30, 2013, ARMB had approximately $1.7 billion invested across 4 separate accounts and 16 commingled funds. The real estate portfolio represents 9.2% of the total ARMB Portfolio.

A 2012 change in the allocation to portfolio structure made real estate a part of the Real Assets Portfolio thereby reducing the overall exposure to real estate. The current real estate portfolio represents 53% of Real Assets compared to a target of 35% real estate within the real assets portfolio.

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

Based on the expectation for a declining exposure to real estate, and in order to ensure reasonable expectations going forward, Townsend recommends that Staff and Townsend review the role of real estate and present any recommended program changes to the Board in 2014.



Portfolio Overview

Second Quarter 2013

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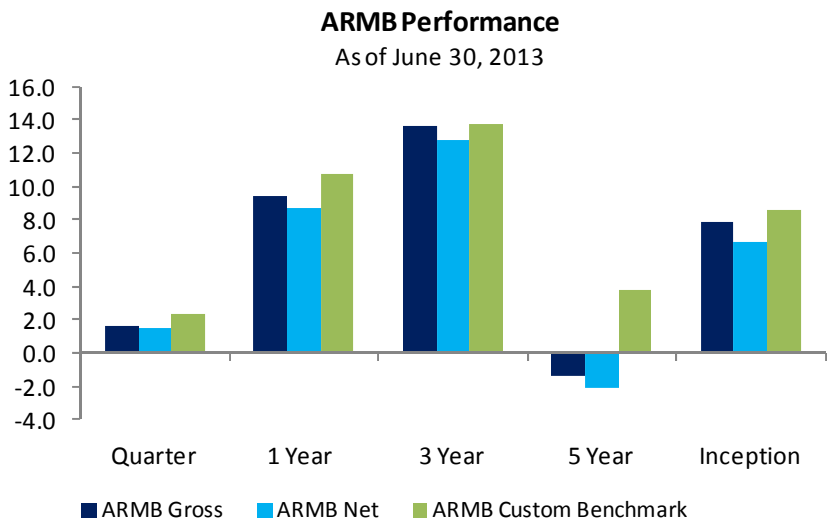
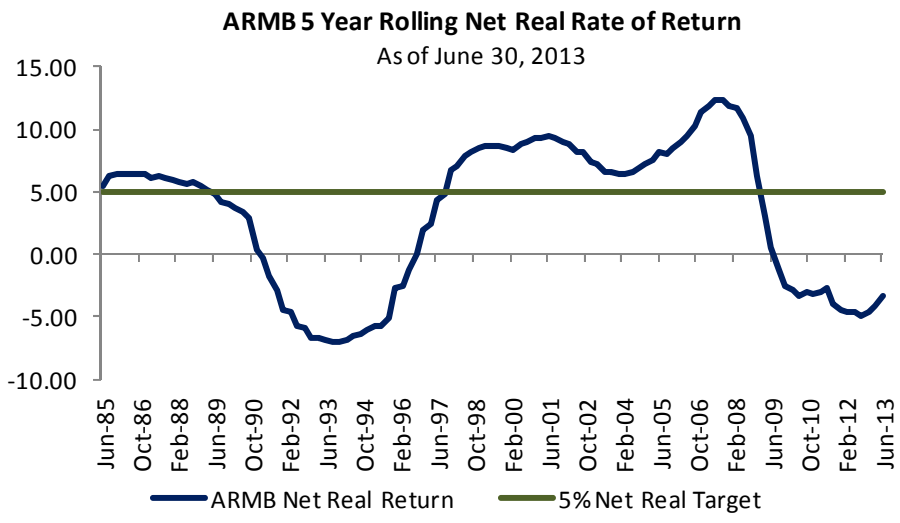
Portfolio Overview: Performance Objectives

As of June 30, 2013, the ARMB the portfolio lagged its blended benchmark on a gross and net basis. The non-core portfolio, coupled with the lack of new investments during the recovery period, continue to drag down total portfolio returns.

The ARMB rolling five year Real Rate of Return is -3.4% and remains below the 5% target return. However, performance is trending upward and should begin to achieve real rate of return targets as the Global Financial Crisis quarters roll off, and market recovery quarters are additive.

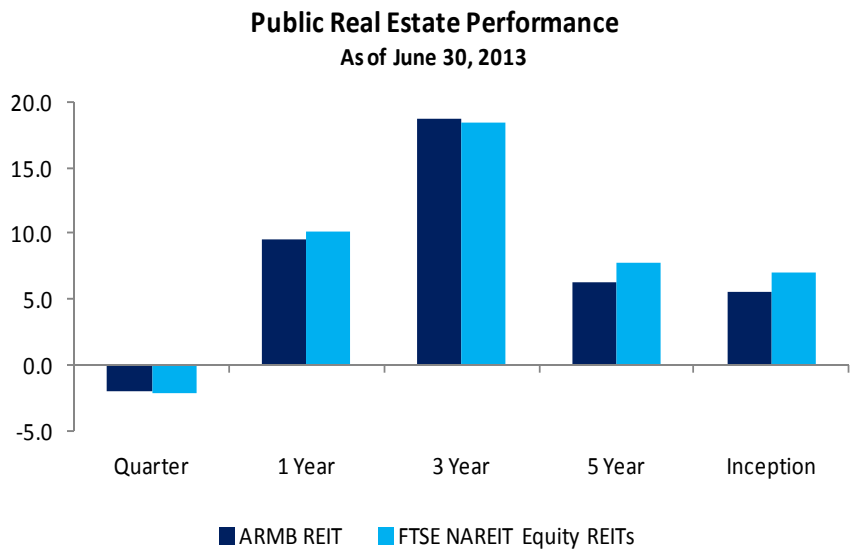


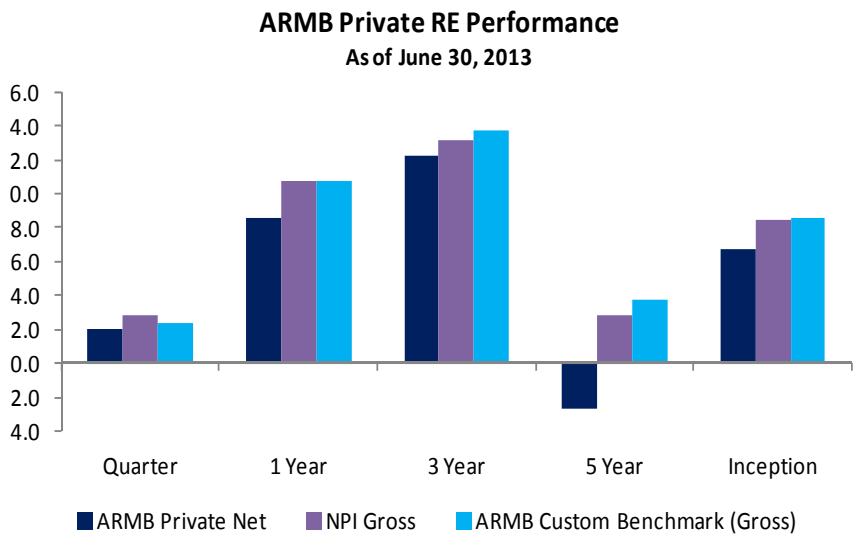


Portfolio Overview: Real Estate Performance

As of June 30, 2013, the Private Real Estate portfolio lagged its benchmark posting returns of 1.8% and 8.6% for the Quarter and one year periods respectively.

The REIT portfolio continues to show competitive returns, however it lags its benchmark for all but the three year period.





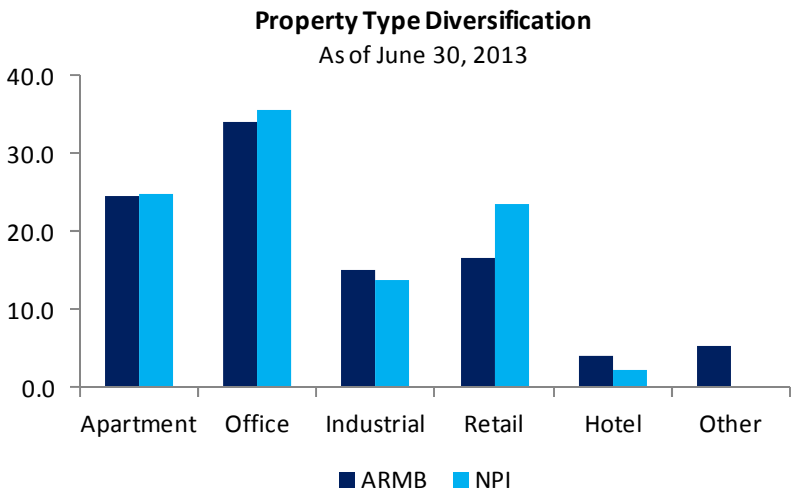
Portfolio Overview: Strategic Objectives

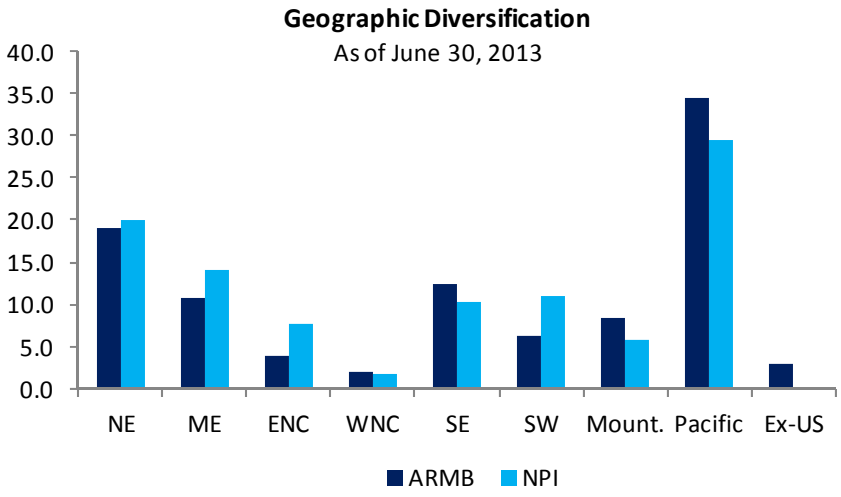
Objective	Status
1. Core Portfolio: Consider additional commitments under CIO discretionary authority if capacity and opportunity presents	No new commitments have been made to the Core Portfolio.
2. Non-Core Portfolio: Consider commitments under CIO discretionary authority and closely monitor existing investments	No new Commitments have been made to the Non-Core Portfolio.

Townsend continues to recommend that ARMB consider new investments to take advantage of the current vintage years which are expected to be strong performers. As always, prudence and a selective approach should be used when making new investments.

Portfolio Overview: Diversification

As of June 30, 2013, ARMB was diversified both with respect to geography and property type and in compliance with its targeted exposure.





Core Portfolio

Second Quarter 2013

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Core Portfolio: Performance

Five year returns for Core portfolio continue to show the impact of the Global Financial Crisis and the use of leverage in significant portfolio positions (JP Morgan, UBS Trumbull).

The one and three year returns reflect recovery. On a three year basis, ARMB outperforms the NPI on a gross basis, but underperforms on a net basis. NPI is a before fee index.

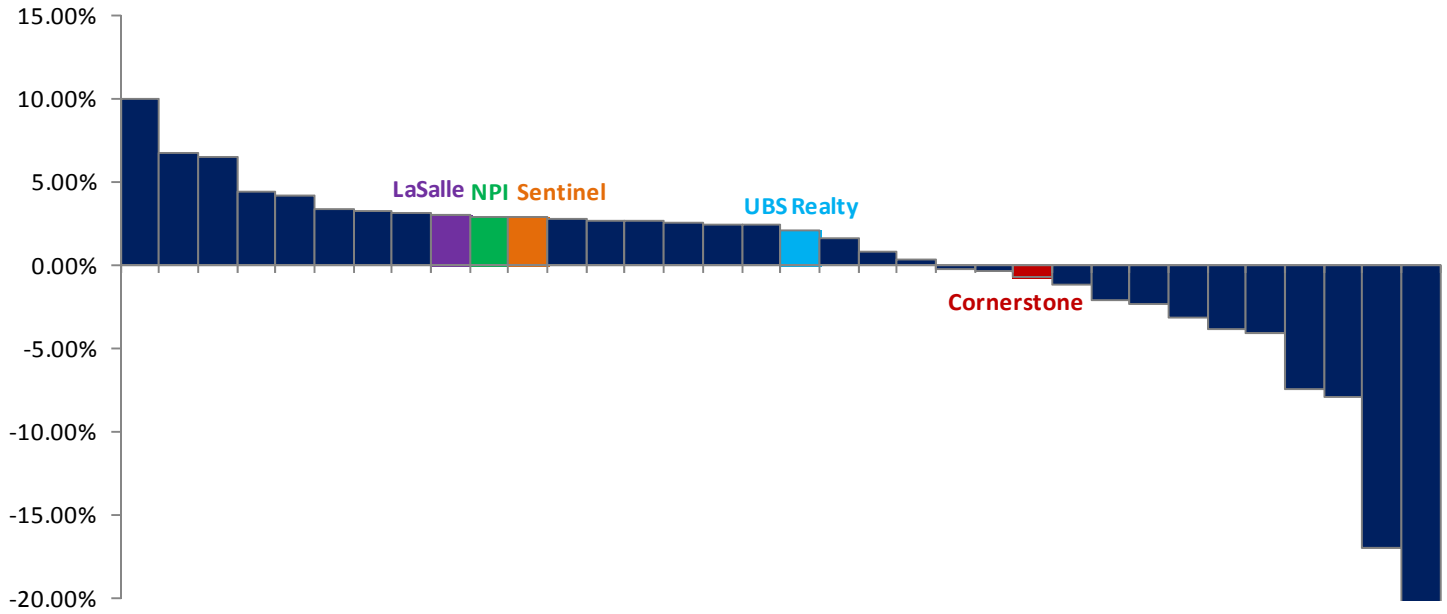
ARMB Core Real Estate Portfolio
As of June 30, 2013

Returns (%)	Quarter		Variance to NPI	1 Year		Variance to NPI	3 Year		Variance to NPI	5 Year		Variance to NPI	Inception		Variance to NPI
	TGRS	TNET		TGRS	TNET		TGRS	TNET		TGRS	TNET		TGRS	TNET	
Core Portfolio															
Cornerstone I.M.A.	2.2	2.0	-0.7	7.6	7.3	-3.1	10.2	9.5	-3.0	-0.1	-0.8	-2.9	7.2	6.5	-1.3
JP Morgan Strategic Property Fund	3.8	3.6	1.0	14.3	13.4	3.6	15.0	14.0	1.9	1.1	0.2	-1.7	9.2	8.3	0.8
LaSalle I.M.A.	2.0	1.9	-0.8	9.8	9.0	-0.9	15.5	14.6	2.3	3.8	3.0	1.0	8.4	7.6	0.0
Sentinel I.M.A.	0.2	0.1	-2.7	8.5	7.9	-2.3	14.3	13.7	1.2	3.4	2.8	0.6	9.9	9.2	1.4
UBS Realty I.M.A. - ARMB 1997	2.7	2.6	-0.2	10.8	10.1	0.1	13.1	12.3	-0.1	2.7	2.0	-0.1	8.8	8.1	0.4
UBS Trumbull Property Fund ("UBS-TPF")	3.3	3.1	0.5	9.8	8.6	-0.9	12.6	11.5	-0.5	1.7	0.8	-1.0	8.5	7.5	0.1
Core Portfolio	**2.4**	**2.2**	-0.5	**10.4**	**9.6**	-0.4	**13.6**	**12.8**	0.4	**2.2**	**1.4**	-0.6	**8.3**	**7.2**	-0.1
NCREIF Property Index	2.9			10.7			13.1			2.8			8.4		

Core Portfolio: ARMB Core IMA Performance vs. TTG Universe

For the five year period ending June 30, 2013, the LaSalle IMA exceeded the NPI by 20bps and Sentinel IMA matched the NPI at 2.8%. The UBS Realty IMA and Cornerstone IMA underperformed the NPI by 10 bps and 290 bps respectively.

ARMB 5 Year Return vs. TTG Core IMA Universe
As of June 30, 2013

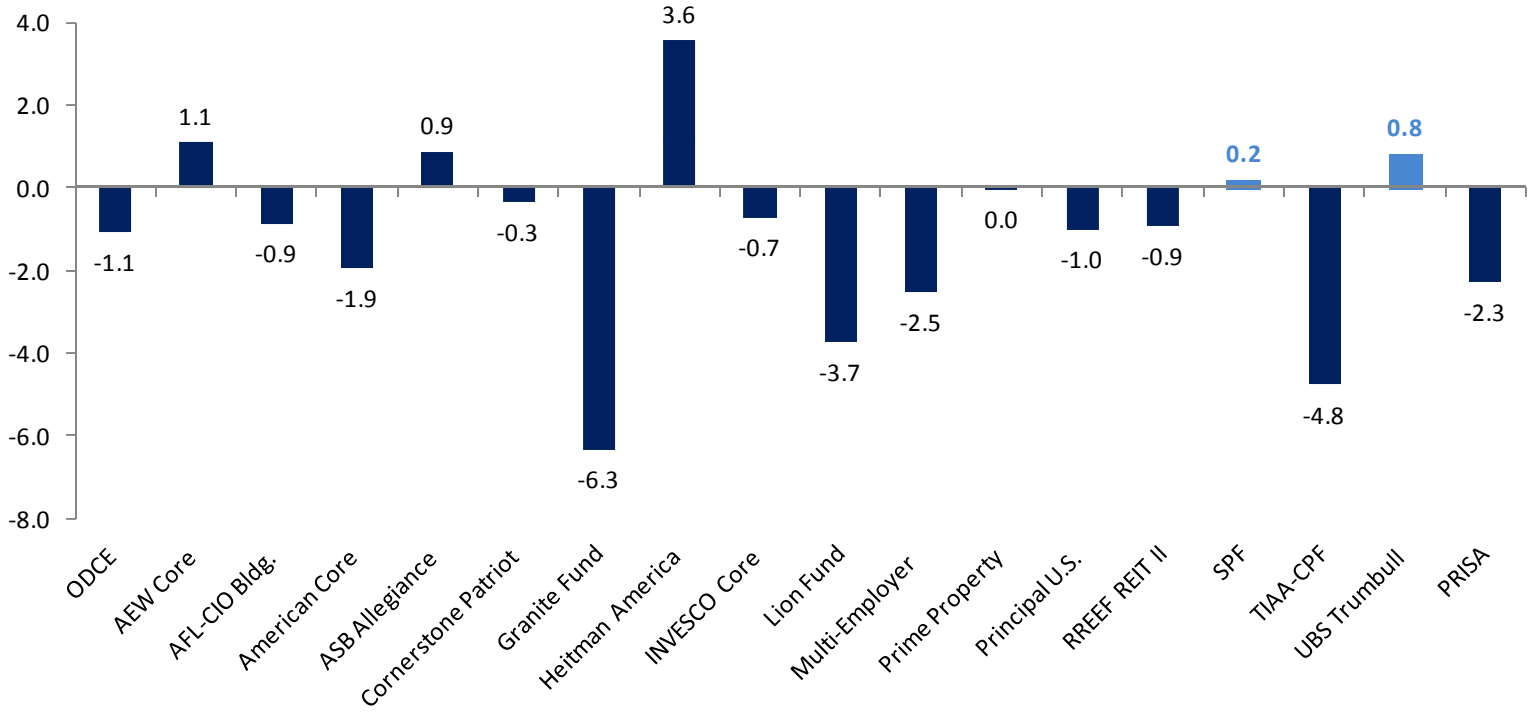


*The IMA Universe is not Risk Adjusted. All ARMB IMAs remain unlevered, consistent with the NPI.

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

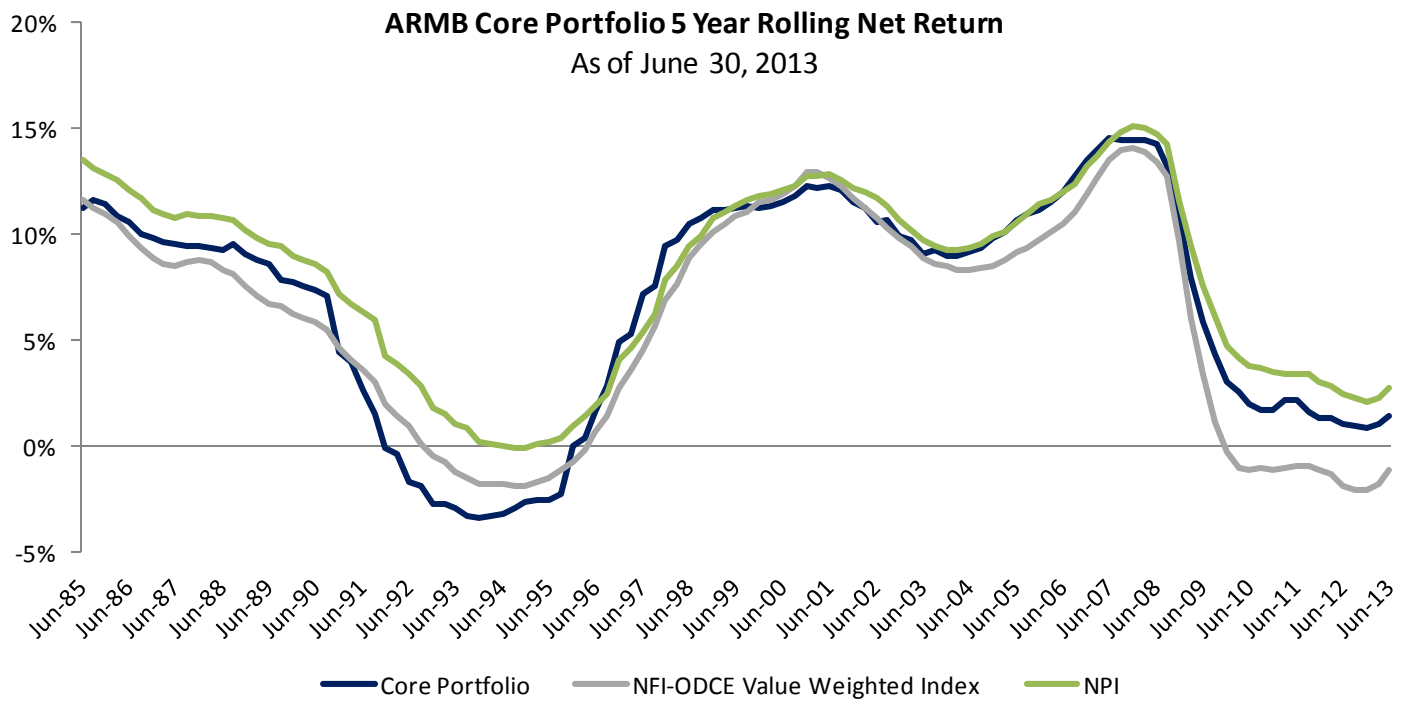
For the five year period ending June 30, 2013 ARMB's two open-end core fund managers were among the best performers relative to all peers and the aggregate ODCE ("Open-end Diversified Core Equity").

ODCE 5 Year Net Performance



Core Portfolio: 5 Yr Rolling Net Return

On a rolling 5 year basis, the ARMB Core portfolio has underperformed the NPI over most rolling five year periods. The ODCE benchmark is provided to demonstrate the pattern of a leveraged portfolio. The ARMB Core portfolio has a 6.9% LTV as of June 30, 2013.



Non-Core Portfolio

Second Quarter 2013

The Townsend Group

Non-Core Portfolio: Performance

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

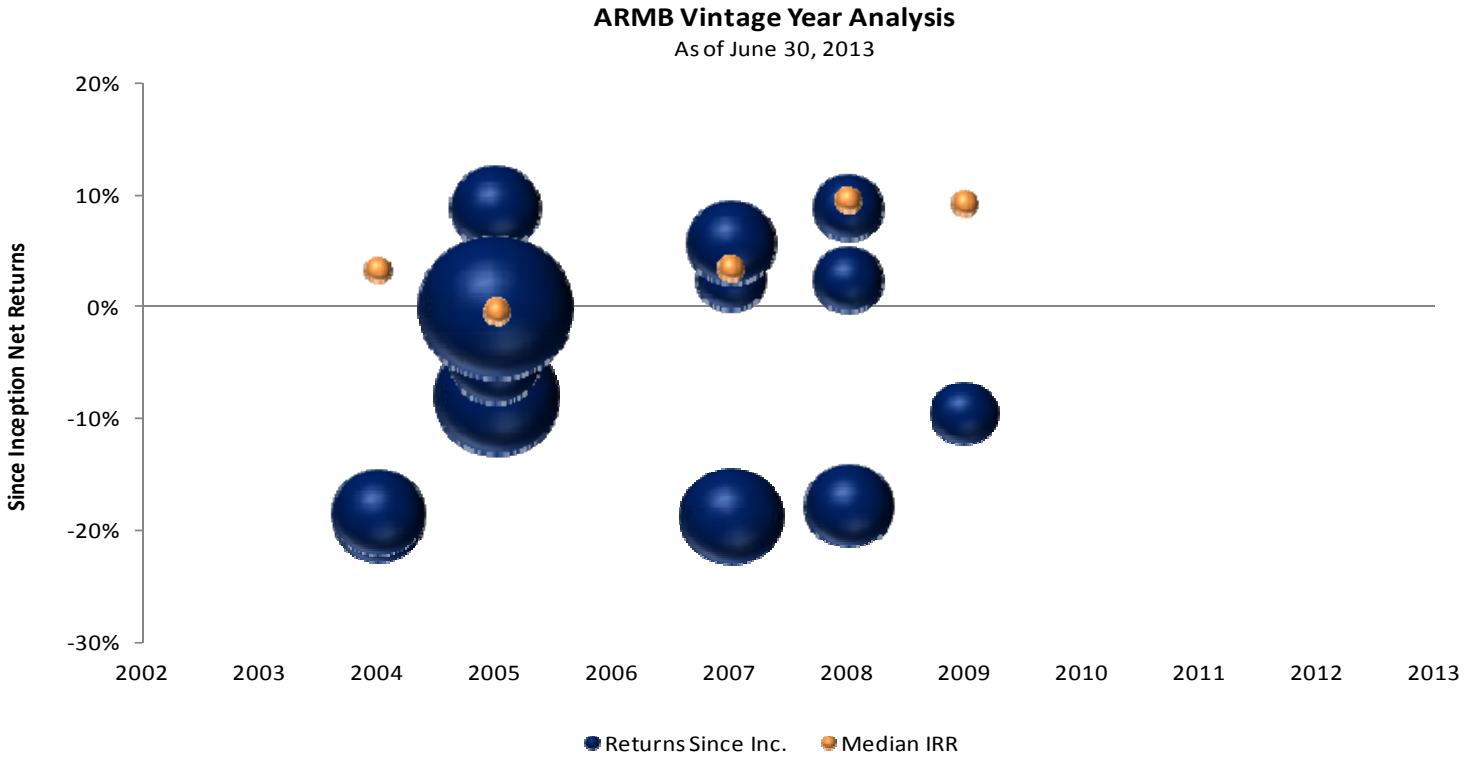
As of June 30, 2013

Returns (%)	Quarter		NPI Under-performance	1 Year		NPI Under-performance	3 Year		NPI Under-performance	5 Year		NPI Under-performance
	TGRS	TNET		TGRS	TNET		TGRS	TNET		TGRS	TNET	
Non-Core Portfolio												
Almanac Realty Securities IV, LP	0.5	0.3	-2.4	7.7	6.6	-3.0	6.8	6.3	-6.4	6.8	6.6	4.0
Almanac Realty Securities V, LP	2.3	2.0	-0.6	14.9	11.0	4.2	11.7	10.0	-1.4	12.4	7.4	9.6
BlackRock Diamond Property Fund	1.7	1.4	-1.2	11.0	9.5	0.2	16.2	14.7	3.0	-17.8	-19.0	-20.6
Clarion Development Ventures II	-1.5	-1.8	-4.4	-8.5	-9.5	-19.3	4.4	2.9	-8.7	-17.1	-18.4	-19.9
Clarion Development Ventures III	2.3	1.9	-0.6	6.3	4.5	-4.5	-1.5	-4.1	-14.7			-2.8
Colony Investors VIII	0.6	-0.1	-2.2	14.6	11.4	3.9	1.9	-0.9	-11.2	-19.8	-23.4	-22.6
Cornerstone Apartment Venture III	3.0	2.8	0.1	13.2	12.3	2.5	20.8	19.5	7.6	2.3	0.8	-0.5
Coventry Real Estate Fund II	0.9	0.3	-2.0	-18.1	-19.9	-28.9			-13.1			-2.8
Lowe Hospitality Investment	-2.9	-3.3	-5.8	26.6	25.2	15.9	39.7	37.3	26.6	-28.4	-31.3	-31.2
LaSalle Medical Office Fund II	4.0	3.6	1.1	15.6	13.8	4.8	7.2	5.5	-5.9	3.5	1.0	0.7
Silverpeak Legacy II (Lehman)	2.1	2.1	-0.8	6.5	5.8	-4.2	10.2	9.1	-2.9	-7.4	-8.6	-10.2
Silverpeak Legacy III (Lehman)	0.8	0.8	-2.1	-2.5	-3.5	-13.2	-4.9	-6.5	-18.1	-22.8	-25.8	-25.6
Tishman Speyer VI	1.4	1.2	-1.5	2.5	1.6	-8.2	21.6	20.1	8.4	-20.5	-18.3	-23.3
Tishman Speyer VII	3.5	3.1	0.6	14.4	12.9	3.7	21.5	18.3	8.3	-35.8	-42.9	-38.6
Non-Core Portfolio	**1.8**	**1.5**	**-1.1**	**7.3**	**5.9**	**-3.4**	**12.8**	**11.3**	**-0.3**	**-13.3**	**-14.2**	**-16.1**
NPI	2.9			10.7			13.1			2.8		

Non-Core Vintage Year Analysis

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

ARMB's non-core fund commitments are concentrated in peak vintage years . However, the peak vintages are still early in their life cycle and some of the funds will recover a significant portion of unrealized losses.



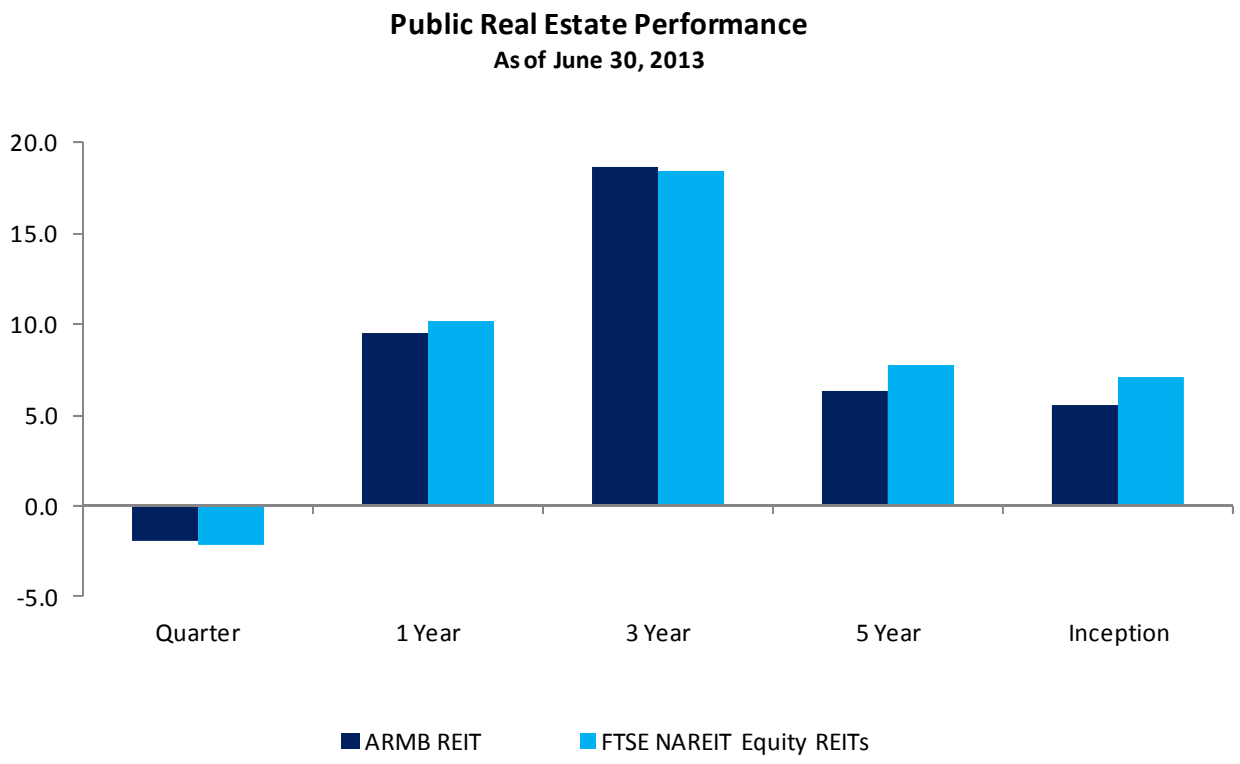
Public Portfolio

Second Quarter 2013

The Townsend Group

Public Portfolio: Performance

As of June 30, 2013, the ARMB REIT portfolio lagged NAREIT for all time periods except the three year period. On a three year basis, ARMB exceeded the NAREIT index by 20bps. However, on a five year basis, ARMB underperformed the NAREIT index by 130bps.



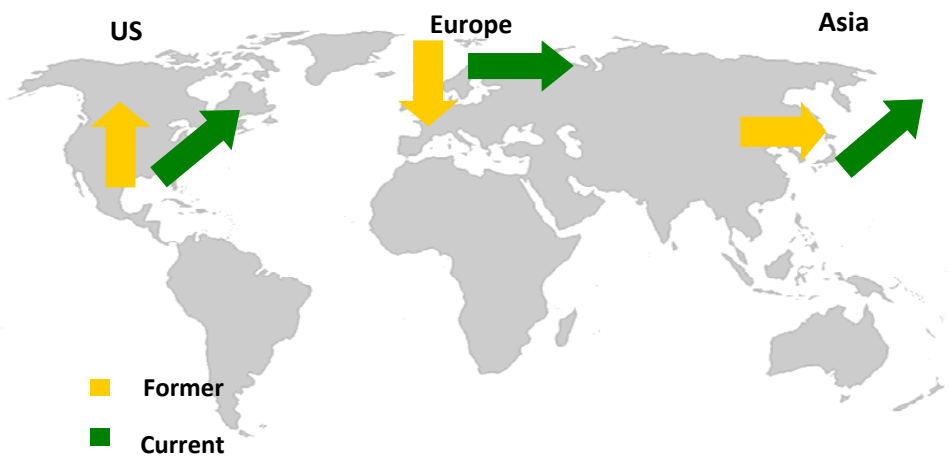
View Of The World

2013

The Townsend Group

We remain selective investors

Townsend Investment Sentiment



General Themes

- Continue to adopt a granular approach. Acquisition discipline is essential
- Continue to focus on income and invest with managers who can drive net operating income in their local markets through effective asset management
- Take an open mind about how to invest. In certain markets debt may offer better value than equity
- Consider the co-investment route as it offers good value benefits for the investor in a capital starved environment

United States

- Market remains healthy and attractive with fundamentals improving slowly
- Spread to debt both Treasuries and Baa is attractive
- Pricing in many cases still below replacement cost
- We expect further capital to be allocated to the sector

Europe

- Austerity and deleveraging apparent in all markets
- Lack of debt likely to influence pricing negatively
- Flight to safety and quality still very apparent and, in some cases, we believe risk is being mispriced
- Primary focus remains on northern markets but watch for fall in southern European markets as pricing corrects

Asia Pacific

- For Core, we continue to favor Australia
- Prefer China over India and focus on retail and logistics as opposed to residential
- Japan NPLs still offer value. Lack of logistics will likely offer opportunity.

Townsend Key Investment Themes in US

- We are continued buyers of the core markets although with selectivity on assets. Some life cycle risk will be appropriate in majors markets
- We support investment in the industrial space which as a sector has lagged the general market recovery
- Multi- family remains attractive particularly build-to-core but have a clear exit route in mind for 2014/15 when oversupply may start to occur
- We like the premiums that are available in the non–core space such as selectively renovating b/b+ assets in gateway markets. We are also focused on senior housing but have not really chased the family housing market for fear of a suitable exit route
- Our NPL and REO strategy focuses on small and medium sized properties that escape the attention of the larger players. We have passed on the larger NPL deals where multiples look unattractive compared to the risk

Townsend Key Investment Themes in Europe

- Exploit distress and overleveraged capital structures – many are held by banks where relationships will be important
- Exploit lack of debt finance by participating in the loan market – debt can offer a better return than equity
- Exploit the fear of vacancy or short leases, where risk is being mispriced
- We are not prepared to underwrite growth at this time
- We are generally focused on northern markets, although will begin to further research Spain as pricing should become more realistic

Townsend Key Investment Themes in Asia Pacific

- Despite the high currency Australia remains attractive. Core yields remain attractive on a global basis
- Conservative outlook on financing standards in Australia will offer opportunities in the mezzanine space
- China logistics and retail both support current Govt. Plan for domestic growth but important to understand the barrier to entry in each market
- Japan NPL's are still positive but 'Abenomics' is improving real asset pricing thereby reducing the opportunity
- Japan logistics still significantly under supplied

Disclosures and Definitions

Disclosure

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There can be no assurance that any account will achieve results comparable to those presented. Past performance is not indicative of future results.

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

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

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Fiscal Year 2014 Real Assets Annual Investment Plan	ACTION:	X
DATE:	September 19, 2013	INFORMATION:	

BACKGROUND

The Real Assets Committee met on September 18, 2013 to review and recommend approval of the Real Assets Annual Investment Plan for Fiscal Year 2014.

STATUS

Staff, with the assistance of The Townsend Group, Callan, and ARMB's real assets advisors, has developed the Real Assets Annual Investment Plan for Fiscal Year 2014.

The Real Assets Annual Investment Plan includes a presentation of historical performance, investment background, and a review of the current market for each sector followed with a Fiscal Year 2014 investment strategy.

Infrastructure

Infrastructure component is being added in Fiscal Year 2014 at a 12.5% target weight of Real Assets (2.125% of Total Plan Assets). Manager selection for private infrastructure strategies will be considered by ARMB separately at the September 19, 2013 meeting. Public infrastructure strategies and investment guidelines will be brought before ARMB at the December 2013 board meeting.

Real Estate

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

Under CIO discretion, staff plans to explore establishing one or more separate account mandates with existing core separate account managers focused on the medical office sector. ARMB has had an investment in a medical office closed-end fund which is winding down. This investment has provided a very stable and relatively high income return stream to ARMB.

The Core/Non-Core private real estate target mix is changed from 75%/25% to 100%/0% with bands to reflect the move away from high return closed-end real estate funds. CIO discretion permits continued consideration of opportunities should they present.

Farmland

No recommended changes to strategy or separate account manager allocations.

Timberland

No recommended changes to strategy. Target weight reduced from 25% to 15% as a reflection of the slow pace of capital deployment related to existing allocation and desire to create infrastructure allocation.

TIPS and Energy

No recommended changes to strategy. TIPS allocation reduced from 10% to 0% with a +20% band as a reflection of unattractive yields. Energy allocation raised from 5% to 12.5% to accommodate MLP strategy.

RECOMMENDATION

The ARMB approve Resolution 2013-15 which adopts the Real Assets Annual Investment Plan for Fiscal Year 2014.

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

Resolution 2013-15

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

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

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

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

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

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

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

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopt the Real Assets Annual Investment Plan for Fiscal Year 2014, attached hereto and made a part hereof.

DATED at Fairbanks, Alaska this ___ day of September, 2013.

_____
Chair

ATTEST:

_____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Real Estate Investment Policies, Procedures and Guidelines	ACTION:	X
DATE:	September 19, 2013	INFORMATION:	

BACKGROUND

The ARMB Real Estate Investment Policies, Procedures and Guidelines (Guidelines) were most recently revised and adopted by the Board on September 20, 2012. As part of the annual planning process for real estate, proposed changes to the Guidelines are recommended by staff and ARMB's real estate consultant (The Townsend Group) for approval by the Board.

STATUS

No changes are being proposed to the Guidelines other than updating investment manager contact information.

RECOMMENDATION

The ARMB approve Resolution 2013-16 which adopts the revised Real Estate Investment Policies, Procedures and Guidelines.

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

Resolution 2013-16

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

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

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

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

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

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

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

NOW THEREFORE, BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopts the revised **Real Estate Investment Policies, Procedures and Guidelines**, attached hereto and made a part hereof. This resolution replaces Resolution 2012-31, which is hereby repealed.

DATED at Fairbanks, Alaska this _____ day of September, 2013

_____
Chair

ATTEST:

_____
Secretary

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

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ATTACHMENTS

Attachment 1 – Delegation of Responsibilities

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

I. INVESTMENT OBJECTIVES

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

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

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

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

B. Asset Allocation

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

C. Portfolio Return Objective

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

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

3. **Index**

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

II. PROGRAM RISK MANAGEMENT AND IMPLEMENTATION

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

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

A. Institutional Quality

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

B. Diversification

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

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

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

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

Single Manager Limit: *(value of both Separate Account and Commingled Fund combined, if applicable)*	35 %

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

Geographic:

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

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

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

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

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

Contingent Allocation – The authority of the CIO to exercise discretion in allocating funds within investment bands shall include authority to add funds to the allocation of real estate Separate Account Investment Managers. Exercise of this discretion shall be for:

(i) acquisition of a particular real estate asset which is, in the opinion of the CIO, attractive and the acquisition of which is constrained by the allocation to the investment Separate Account Investment Manager;

(ii) not exceed $150 MM for acquisitions in high barrier markets and not exceed the single property investment limit (Section IIB) for acquisitions in other markets. High barrier markets exhibit constraints (i.e. physical, political, financial) on supply growth that restrict new construction and therefore create an environment conducive to real rent growth in response to increasing space demand. High barrier markets tend to be located in both coasts of the United States. Low barrier markets lack supply constraints and are typically prone to over supply as developers can quickly react to anticipated demand growth. Low barrier markets dominate in the Midwest, South, and Mountain states.

(iii) not exceed $150 MM in any fiscal year period.

The CIO may also exercise the following discretion pertaining to real estate investments:

(i) Commit to investments up to $100 million with existing managers, and former managers in good standing;

(ii) Commit to investments related to co-investment opportunities, up to $100 million, with existing managers; and,

(iii) Commit to investments with new managers up to $75 million, with the concurrence of ARMB's real estate consultant.

The CIO will provide prior notification to the chairs of the ARMB and Real Estate Committee 7 days before committing to any real estate investments under this authority.

Definitions

Core Investments

Primary Characteristics:

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

Core-plus Investments

Primary Characteristics:

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

Non-Core Investments

Value-Added Investments

Primary Characteristics:

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

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

Primary Characteristics:

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

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

C. Implementation Approach

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

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

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

D. Prudent Leverage

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

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

E. Lease Structure

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

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

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

G. Fee Structure

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

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

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

I. Reporting System

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

J. Distribution of Current Income

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

K. Lines of Responsibility

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

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

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

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

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

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

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

III. CONFLICTS OF INTEREST

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

A. Property Valuation

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

B. Property Management

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

IV. INSURANCE COVERAGE

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

V. UNRELATED BUSINESS INCOME TAX

Prior to entering into any transaction, the Manager will assess whether income generated from the property under consideration could qualify as unrelated business taxable income. If this risk exists, the Manager will provide ARMB with an opinion of counsel satisfactory to ARMB that the transaction will not generate unrelated business taxable income under the

federal income tax law or any other tax provisions that could affect ARMB's tax-exempt status existing at the time. The Manager shall investigate as to whether ARMB shall be entitled to any property tax exemptions. Managers will provide letters of opinion on UBIT and property tax exemptions to Staff.

VI. ENVIRONMENTAL EVALUATIONS

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

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

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

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

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

VII. PROCEDURES FOR INVESTMENT

A. Delegation of Responsibilities

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

1. ARMB

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

investment of ARMB assets; retain qualified investment managers and real estate consultants; and set investment limits.

2. Real Estate Committee

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

3. Staff

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

4. Real Estate Consultant

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

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

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

5. Managers

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

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

B. Investment Procedure

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

1. Separate Accounts:

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

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

2. Commingled Funds:

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

VIII. DELEGATION OF AUTHORITY

ARMB shall delegate authority to Staff to approve the following:

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

IX. CONFIDENTIALITY

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

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

X. REVISIONS

This document replaces and consolidates the policies, procedures, and guidelines as of September 20, 2012~~April 19, 2012~~.This document is to be reviewed no less than annually and revised as appropriate.

XI. REAL ESTATE SEPARATE ACCOUNT INVESTMENT MANAGERS

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

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

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

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

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

XII. REAL ESTATE COMMINGLED ACCOUNT INVESTMENT MANAGERS

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

J.P. Morgan Asset Management
Contact: Ann Cole, Managing Director Portfolio Manager; Kimberly Adams, Managing Director Portfolio Manager~~Anne S. Pfeiffer, VP & Portfolio Manager~~, Strategic Property Fund
270 Park Avenue, 7th Floor
New York, NY 10017
Telephone: (AC) 212-648-2152
Telephone: (KA) 312-732-6366~~837-1240~~

Facsimile: 917-464-7449~~212-837-1696~~

~~*anne.pfeiffer@jpmorganfleming.com*~~*ann.e.cole@jpmorgan.com*
kimberly.a.adams@jpmorgan.com

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

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

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

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

Almanac Realty Investors, LLC
Contact: Matt Kaplan, Managing Partner
~~John Ryan, Director~~
1140 Avenue of the Americas, 17th Floor
New York, NY 10036~~600 Abbey Court~~
~~Alpharetta, GA 30004~~
Telephone: 212-403-3522~~770-442-8020~~
Facsimile: 212-403-3520~~770-442-8034~~
E-mail:
matthew.kaplan@almanacrealty.com~~john.ryan@almanacrealty.com~~

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

ColonyCapital, LLC
Contact: Andrea Nicholas~~Brent Elkins~~
-2450 Broadway, 6th Floor
Santa Monica, CA 90404~~Two International Place~~
~~Suite 2500~~
~~Boston, MA 02110~~
Telephone: 310-552-7191~~617-235-6310~~
Facsimile: 310-407-7391~~617-235-6999~~
E-mail:
ANicholas@colonyinc.com~~belkins@colonyinc.com~~

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

LaSalle Investment Management
Contact: Steve Bolen, President
100 East Pratt Street, 20th Floor

Lowe Hospitality Investment Partners, LLC
Contact: Bleecker P. Seaman, Executive VP
11777 San Vicente Boulevard, Suite 900

Baltimore, MD 21202
Telephone: 410-347-0660
Facsimile: 410-347-0612 fax
E-mail: steve.bolen@lasalle.com

P.O. Box 49021
Los Angeles, CA 90049-6615
Telephone: 310-571-4263
Facsimile: 310-207-1132
bseaman@loweenterprises.com

Attachment 1

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

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

Hancock Agricultural Investment Group

Mandate: **Farmland Separate Account** **Hired:** **2004**

Firm Information	Investment Approach	Total ARMB Mandate
The Hancock Agricultural Investment Group (HAIG) is an operating division of the Hancock Natural Resource Group, an indirect, wholly-owned subsidiary of Manulife Financial Corporation. Manulife is a leading financial services group headquartered in Toronto, Canada and operates in the United States primarily under the brand name "John Hancock." As of 6/30/2013, HAIG's total assets under management were $1.9 billion. **Key Executives:** ***Oliver Williams***, President ***Coleen Greenwood,*** Director of Financial Accounting and Client Reporting ***Melanie Arnold,*** Senior Portfolio Analyst	Investment decisions are made as a team and in conjunction with property managers in the field. Investments are modeled after initial due diligence to determine possible purchase price and quality of the asset. The process is a collaborative effort between portfolio management, acquisitions and asset management and includes vetting the initial investment to see if the property is an attractive asset based on soil type, water availability, yield history, location, commodity type and return potential. The investment is then evaluated for portfolio requirements: diversification, size, return hurdles, and risk/reward profiles. Fundamental and quantitative commodity research underlies the investment decision – both top-down and bottom-up approaches are used. The two most important criteria are soil quality and water supply – if these criteria are not met, the property is not considered. Due diligence includes extensive research on the property, seller, and all aspects of the transaction including external environmental audits. The type of crop grown, location and size are also central components of the purchase decision. **Benchmark:** Leased only properties in the NCREIF Farmland Index weighted 80% row and 20% permanent crop.	Assets Under Management: 06/30/13: $263,972,113

Concerns: HAIG has experienced turnover in both the Director of Acquisitions and Director of Asset Management positions. HAIG is currently recruiting for these positions and adding staff to the acquisition and asset management teams. Manager has underperformed the benchmark.

6/30/2013 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	0.67%	11.14%	11.64%	10.68%
Fee	0.21%	0.87%	0.89%	0.94%
Manager (net)	0.46%	10.27%	10.75%	9.74%
Benchmark	1.75%	17.72%	15.23%	12.41%

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

Combined Northern Agriculture Portfolio Review

Prepared for :

Alaska Retirement Management Board

September 19, 2013

Oliver S. Williams, IV, CFA
President
Hancock Agricultural Investment Group
(617) 747-1645
owilliams@hnrg.com

Presentation Overview

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

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I.	HAIG Update	3
II.	Northern Agriculture Farmland Portfolio	5
	▪ Farmland Investment Primer	
	▪ Portfolio Overview	
	▪ Investment Performance as of June 30, 2013	
	▪ Regional Comparative Analysis	
III.	Market Outlook	13
IV.	Summary	14

Appendix: Investment Performance Calculations, Notes and Disclosures
Biographies

I. Hancock Agricultural Investment Group Update

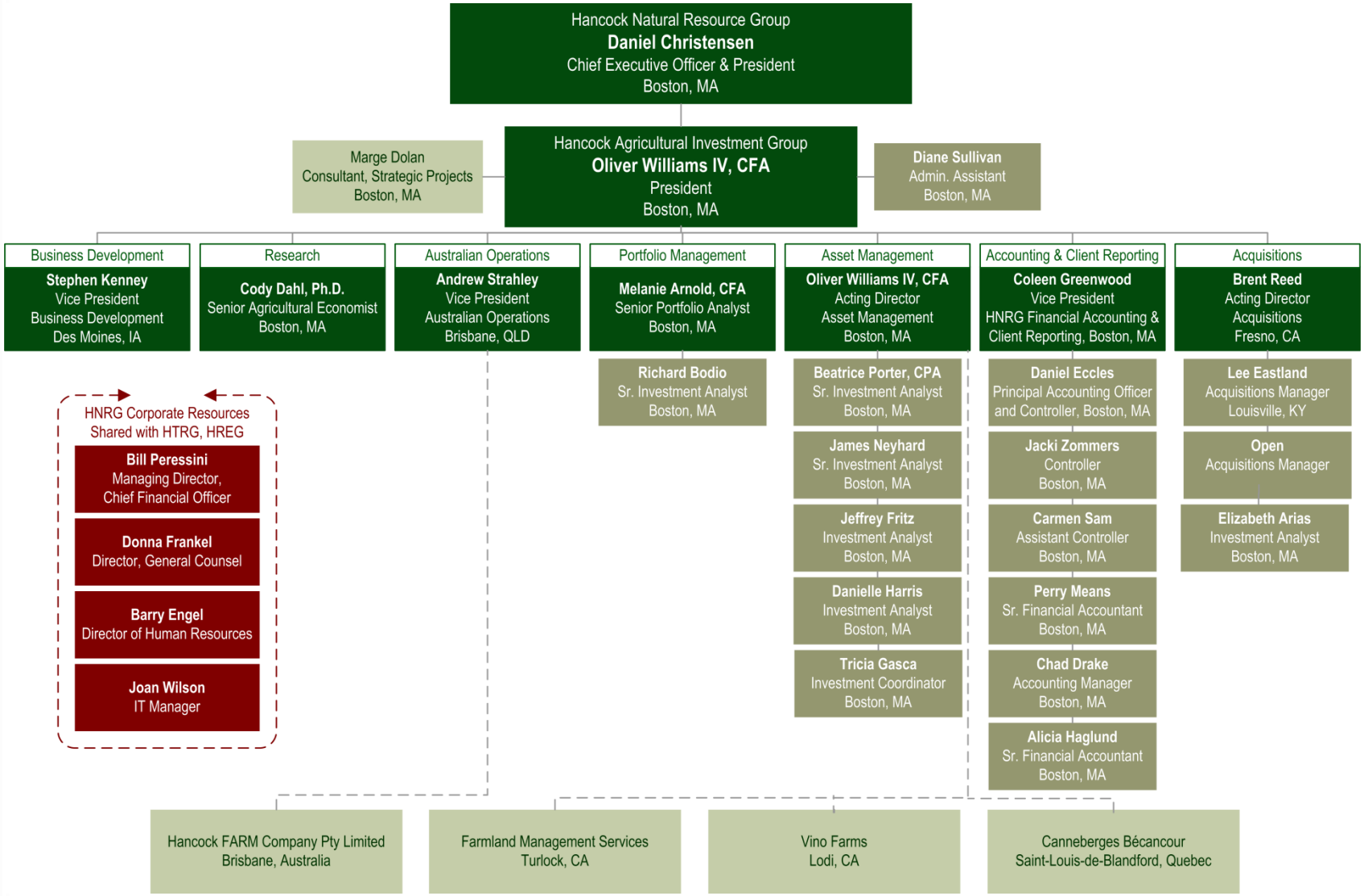
Hancock Agricultural Investment Group®
A Manulife Asset Management Company

- Hancock Agricultural Investment Group (HAIG)
  - A division of Hancock Natural Resource Group, Inc., a wholly-owned indirect subsidiary of Manulife Financial Corporation
  - Total AUM of $1.9B as of June 30, 2013
  - Currently managing over 290,000 acres of U.S. farmland, and 6,000 acres of farmland in Australia and 1,000 acres of farmland in Canada

- 2013 organization changes:
  - Search underway for new Director of Acquisitions and Chief Investment Officer
  - Expect search to provide candidates for Director of Asset Management
  - Adding staff to acquisitions and asset management
  - Melanie Arnold promoted to Senior Portfolio Analyst
  - Rick Bodio promoted to Senior Investment Analyst and moves to portfolio management group

I. Hancock Agricultural Investment Group Update

Hancock Agricultural Investment Group®
A Manulife Asset Management Company



II. Northern Agriculture Farmland Portfolio

Farmland Investment Primer

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

Farmland Investments

Annual (Row) Crops

- Fee simple investment
- Leased to local operators in multi-year contracts
- Appraised annually by certified, third-party appraiser
- Land value appreciation
- Lower volatility

Leased Permanent Crops

- Fee simple investments
- Mature or developmental properties
- Lease to operator
- Appraised annually by certified, third-party appraiser
- Higher risk/return profile than row

II. Northern Agriculture Farmland Portfolio

Portfolio Overview

Hancock Agricultural Investment Group®
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- Established January 2005
- Account aims to achieve portfolio diversification and attain optimum return, consistent with the assumption of prudent risk and safety of principal. Investments will generate current income while being sensitive to inflation.
- 80% Leased Row Crops / 20% Leased Permanent Crops
- Total allocation of $245.25 million
  - Current investment commitments (invested capital plus planned capex) total $211 million
  - Funds available for investment of approximately $34 million
- Six operating entities
  - Northern Agriculture LLC
  - Northern Agriculture II LLC
  - Northern Agriculture III LLC
  - Northern Agriculture IV LLC
  - Northern Agriculture V LLC
  - Northern Agriculture Nebraska LLC

II. Northern Agriculture Farmland Portfolio

Portfolio Overview

Hancock Agricultural Investment Group®
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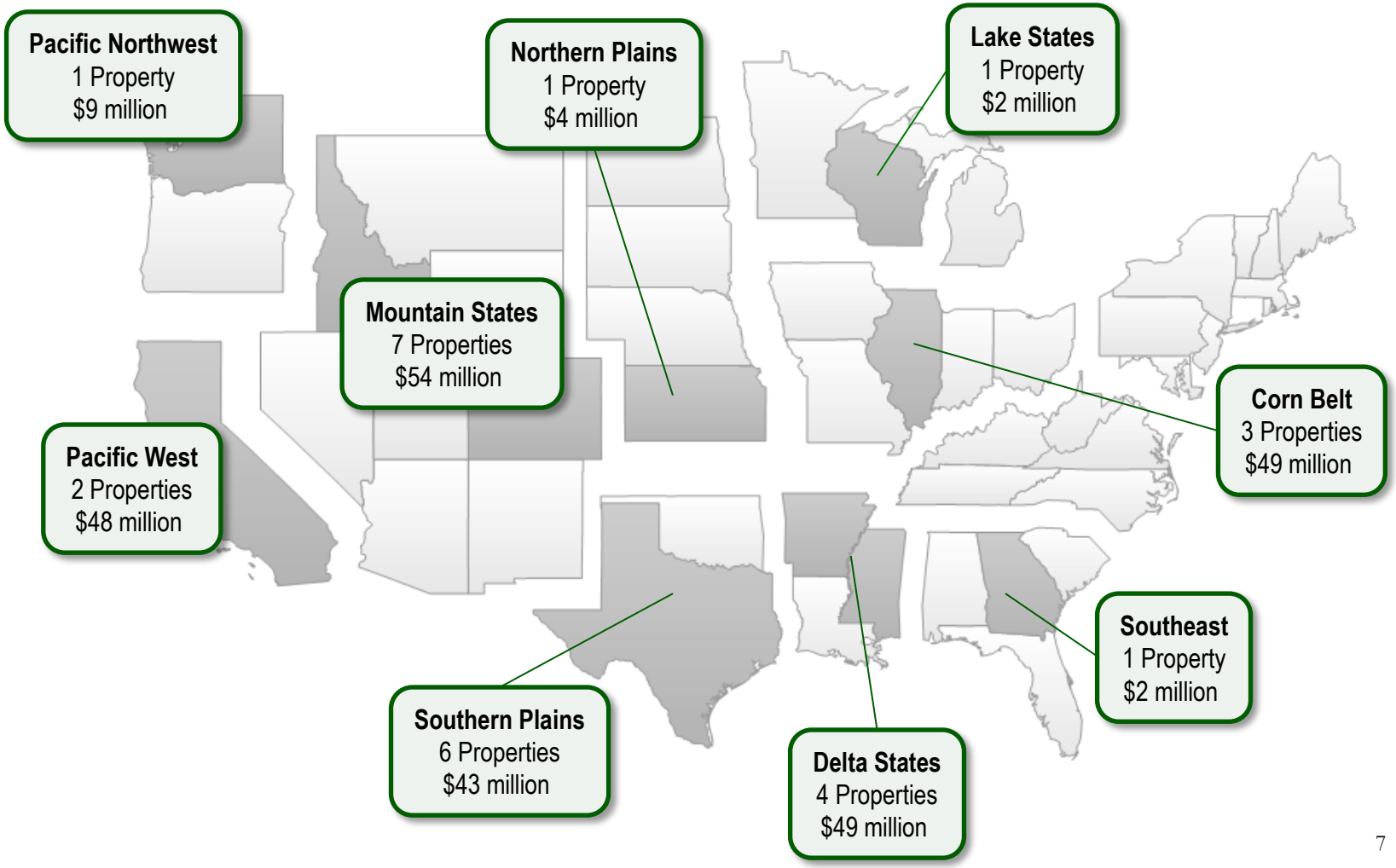
$261 MM* farmland portfolio composed of **26** properties in **9** NCREIF regions



*Real estate market value as 6/30/2013.

II. Northern Agriculture Farmland Portfolio

Portfolio Overview

Hancock Agricultural Investment Group®
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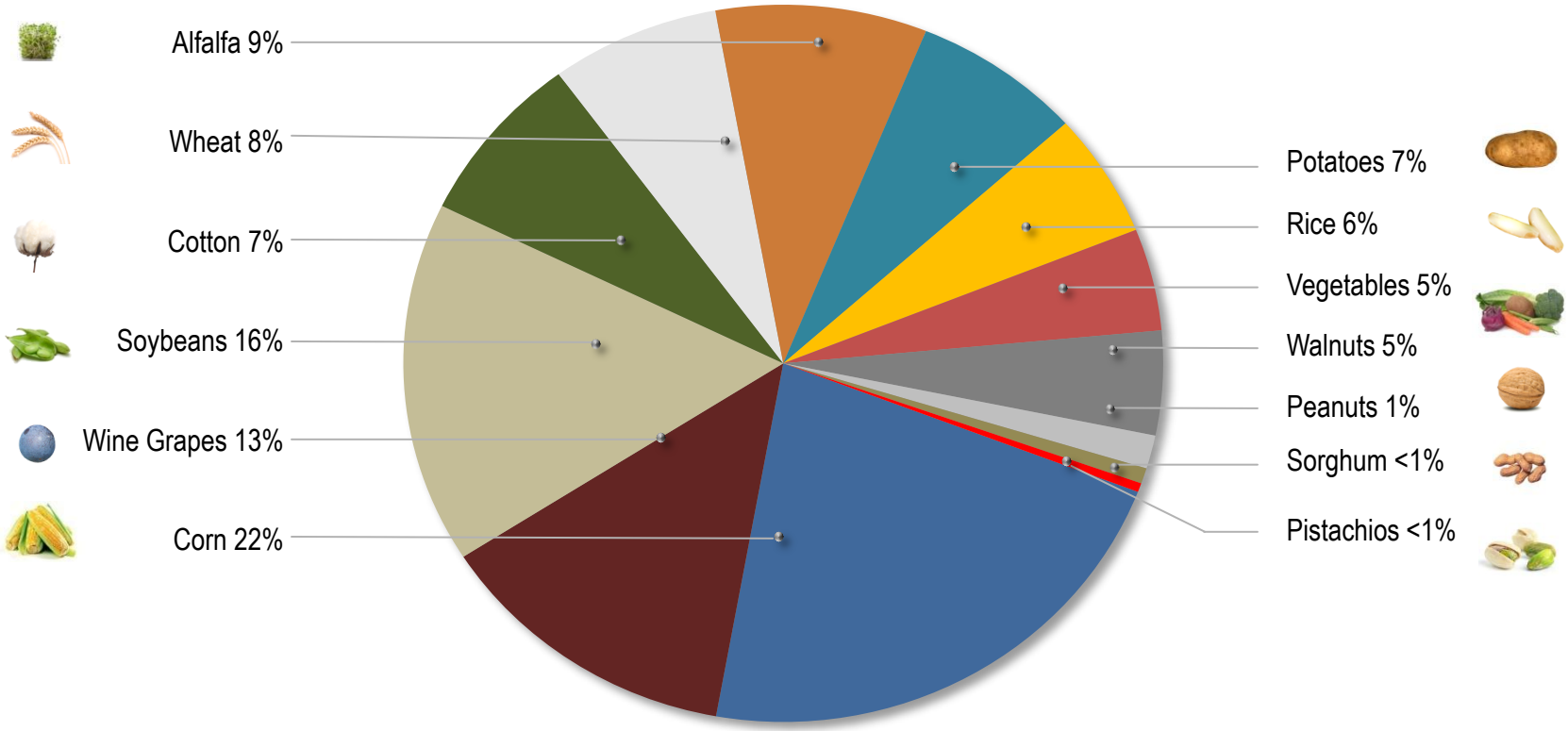
Combined Northern Agriculture $261MM Farmland Portfolio

Commodity diversification by market value as of 6/30/2013



81% Row Crops : 19% Permanent Crops

II. Northern Agriculture Farmland Portfolio

Investment Performance as of June 30, 2013

Hancock Agricultural Investment Group®
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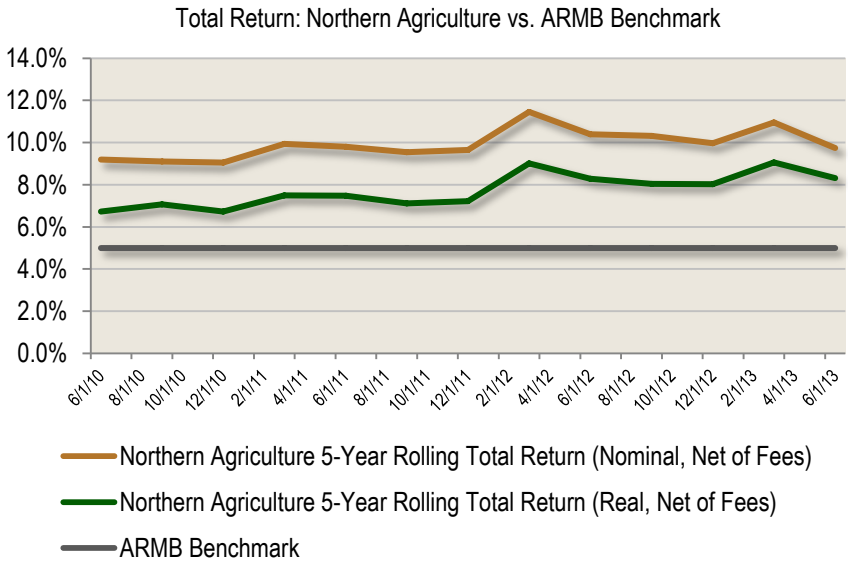
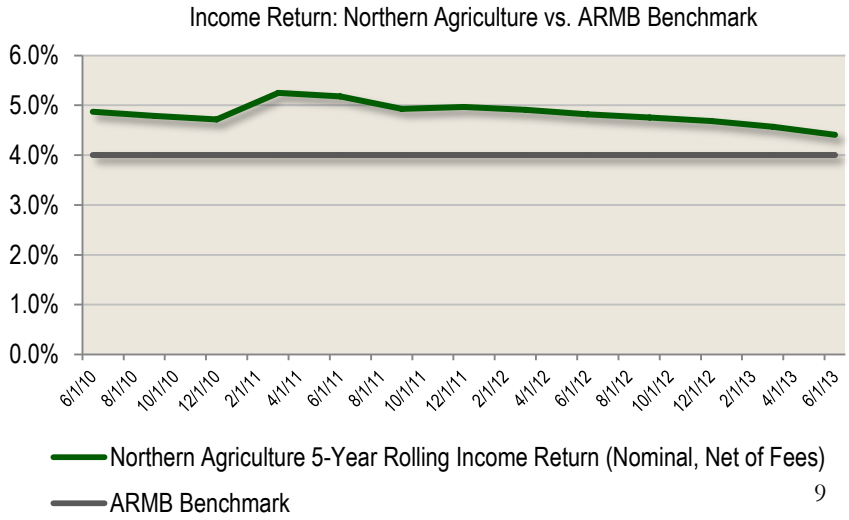
Portfolio Return Objectives

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

2. Income Return
Income, which is defined as cash distributed to ARMB, is expected to produce 4.0% returns over rolling five-year periods with a minimum of 3.0% distributed income for individual properties after fees and projected capital expenditures.

3. Minimum Going-In Yields
The investment manager's initial three-year period projection will equal or exceed 5.0% income before fees for the entire portfolio, but individual properties may have a projected current income as low as 4.0%.



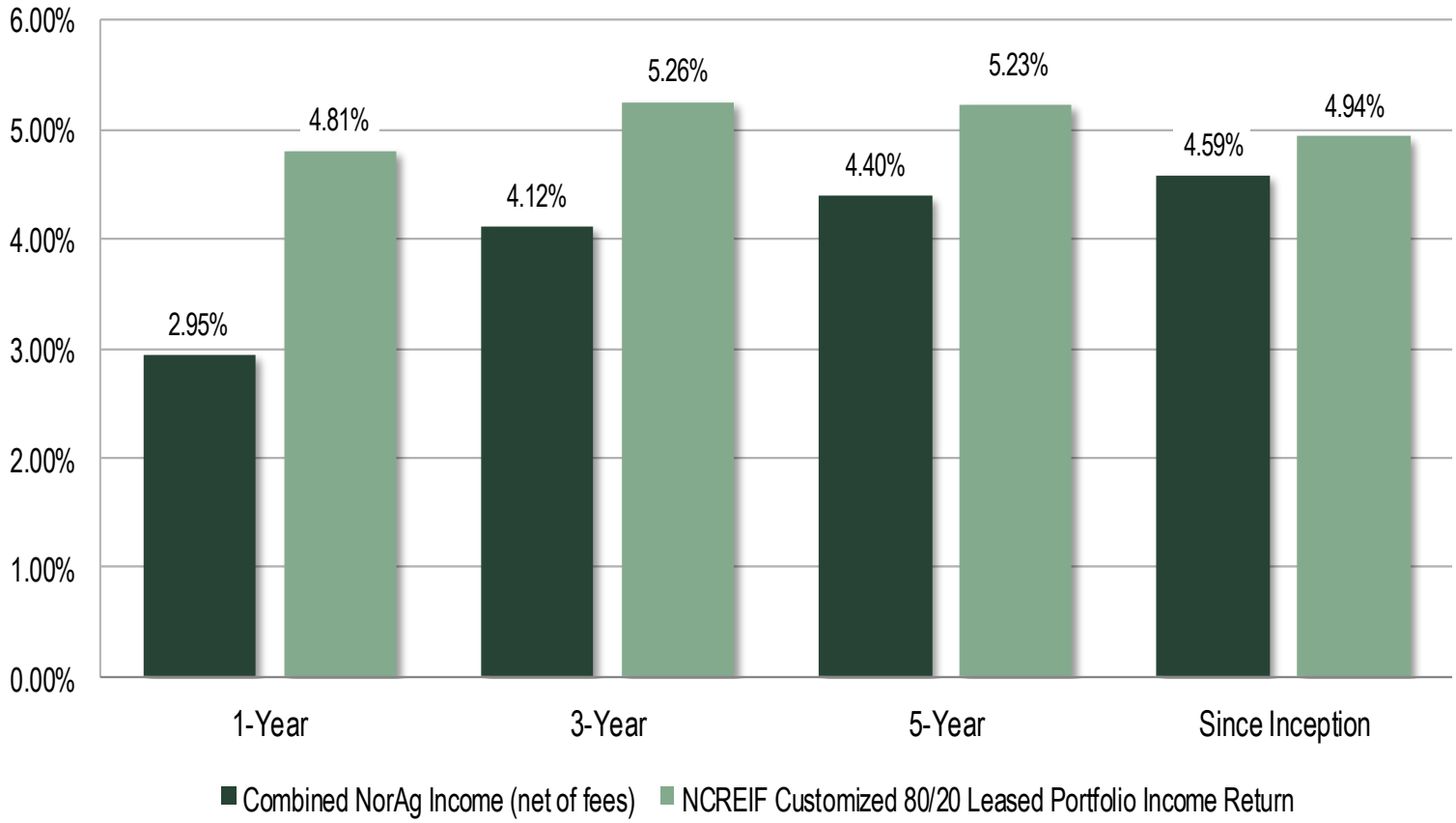


II. Northern Agriculture Farmland Portfolio

Investment Performance as of June 30, 2013

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

Combined NorAg Income[1] (net of fees) vs. NCREIF Farmland Index Income Return[2] (gross of fees)



1. All returns are calculated at portfolio level on NAV after deducting investment management fees. Please refer to fee addendum in the appendix for a further description of investment performance calculations and fees. Past performance is no guarantee of future results. Potential for profit as well as loss exists. Fund since inception period as of July 1, 2005.

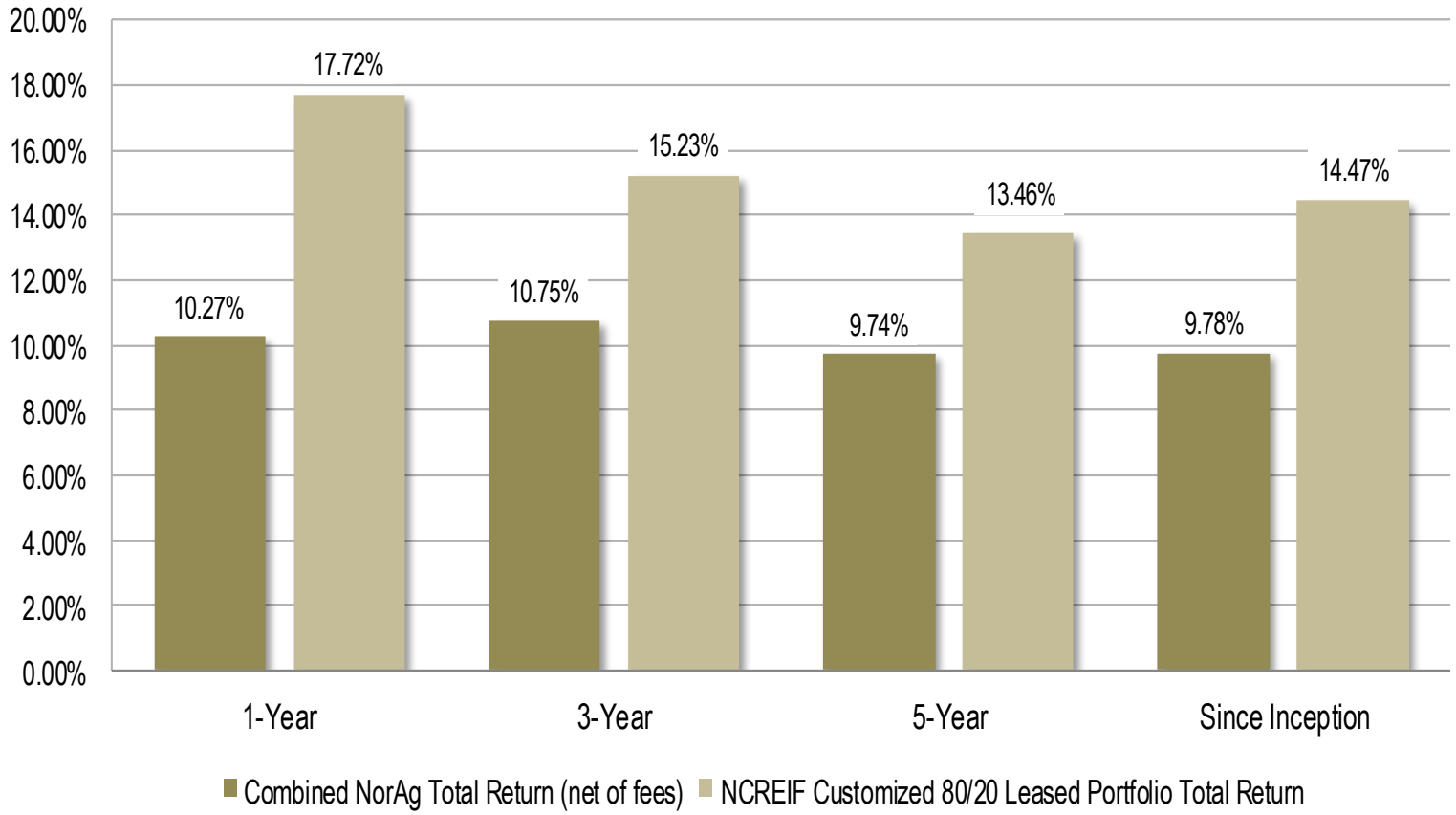
2. The NCREIF Farmland Index is a property- level index that does not reflect the impact of debt, fund-level expenses or investment management fees. NCREIF returns presented above are customized for NorAg to depict a portfolio composed of 20% permanent and 80% row crop holdings that are 100% leased under fixed and variable rent. Benchmark re-weighted from 90% row crops / 10% lease permanent crops effective 1/1/2008.

II. Northern Agriculture Farmland Portfolio

Investment Performance as of June 30, 2013

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

Combined NorAg Total Return[1] (net of fees) vs. NCREIF Farmland Index Total Return[2] (gross of fees)



1. All returns are calculated at portfolio level on NAV after deducting investment management fees. Please refer to fee addendum in the appendix for a further description of investment performance calculations and fees. Past performance is no guarantee of future results. Potential for profit as well as loss exists. Fund since inception period as of July 1, 2005.

2. The NCREIF Farmland Index is a property- level index that does not reflect the impact of debt, fund-level expenses or investment management fees. NCREIF returns presented above are customized for NorAg to depict a portfolio composed of 20% permanent and 80% row crop holdings that are 100% leased under fixed and variable rent. Benchmark re-weighted from 90% row crops / 10% lease permanent crops effective 1/1/2008.

II. Northern Agriculture Farmland Portfolio

Regional Comparative Analysis

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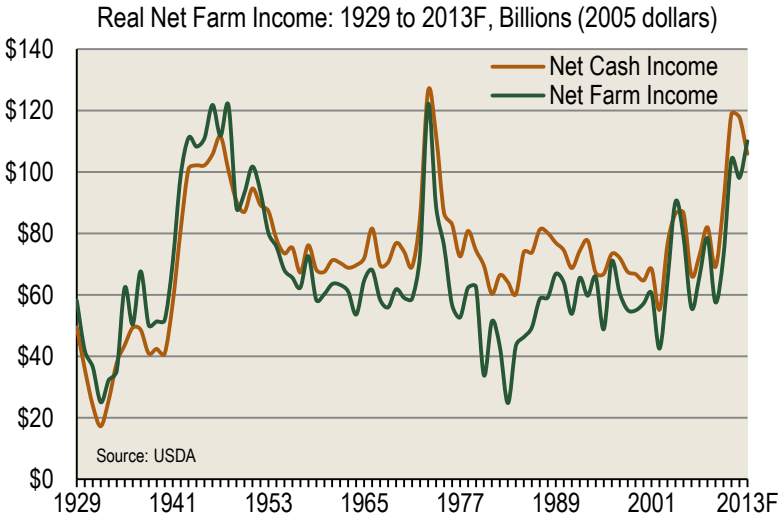
Crop Type	Region		Weight (% MV)	Income Return	Appreciation	Total Return
Leased Row Crop	Corn Belt	Northern Agriculture	19%	3.2%	0.4%	3.6%
		NCREIF	21%	4.0%	15.9%	20.4%
	Delta	Northern Agriculture	19%	3.4%	13.3%	17.1%
		NCREIF	20%	3.9%	15.8%	20.2%
	Lake States	Northern Agriculture	<1%	3.5%	22.9%	27.0%
		NCREIF	4%	5.1%	19.1%	24.9%
	Mountain	Northern Agriculture	21%	5.5%	23.1%	29.5%
		NCREIF	9%	4.8%	17.2%	22.6%
	Northern Plains	Northern Agriculture	2%	3.3%	24.5%	28.4%
		NCREIF	0%			
	Pacific Northwest	Northern Agriculture	3%	5.1%	10.7%	16.2%
		NCREIF	5%	4.9%	17.2%	27.7%
	Pacific West	Northern Agriculture	0%			
		NCREIF	12%	3.8%	11.1%	15.2%
	Southeast	Northern Agriculture	1%	3.8%	2.4%	6.3%
		NCREIF	3%	4.0%	8.4%	12.7%
	Southern Plains	Northern Agriculture	16%	5.6%	-7.1%	-1.8%
		NCREIF	7%	5.8%	6.4%	12.5%
	ALL ROW	Northern Agriculture	81%	4.4%	7.7%	12.3%
		NCREIF	80%	4.3%	14.4%	19.3%
Leased Permanent Crop	Pacific West	Northern Agriculture	19%	1.5%	5.8%	7.4%
		NCREIF	9%	7.5%	8.3%	16.2%
	Pacific Northwest	Northern Agriculture	0%	-	-	-
		NCREIF	11%	7.2%	5.0%	12.6%
	ALL PERMANENT	Northern Agriculture	19%	1.5%	5.8%	7.4%
		NCREIF	20%	6.8%	5.9%	13.1%
Total Portfolio		**Northern Agriculture**	**100%**	3.9%	7.3%	11.4%
		NCREIF	**100%**	4.8%	12.5%	17.7%

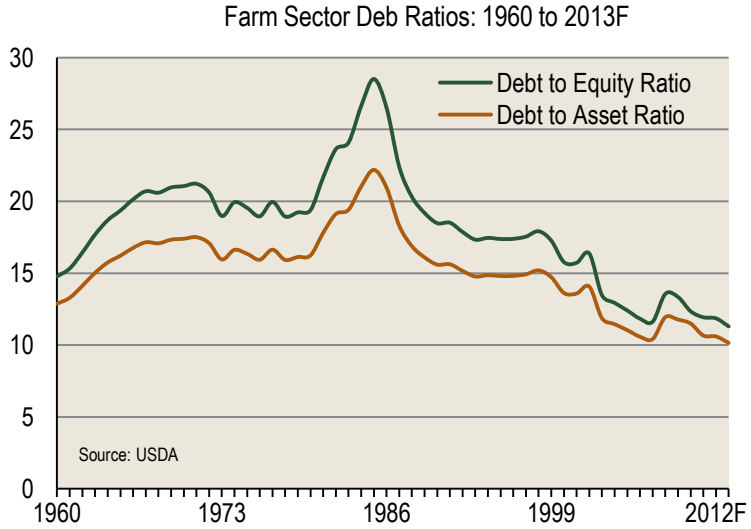
Returns reflect the one-year period ended 6/302013. All returns calculated at the property level using NCREIF methodology. The NCREIF Farmland Index is a property index that does not reflect the impact of debt, fund-level expenses or investment management fees. NCREIF weights represent a portfolio composed of 20% permanent and 80% row crop holdings that are all 100% leased under fixed and variable rent.

III. Market Outlook

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

- U.S. farm sector remains strong
  - Net income near record high levels, though stabilizing as grain prices moderate
  - U.S. continues to be top farm product seller to world
- Farm balance sheets healthy and debt levels near historic lows
- Low interest rate environment continues to spur valuations
- Transaction volume that meets HAIG/ARMB return expectations low





IV. Summary

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

- Combined NorAg portfolio is well-diversified and properties are performing as expected
- Combined NorAg portfolio returns 3.0% income and 10.3% total return for FY2013 (net of fees)
- Farmland market fundamentals remain strong and marketplace for properties is competitive
- HAIG continues to evaluate opportunities to place remaining $34 million

Appendix: Investment Performance Calculations

Notes and Disclosures

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

Hancock Agricultural Investment Group is a division of Hancock Natural Resource Group, Inc., a registered investment advisor and wholly-owned subsidiary of Manulife Financial Corporation.

Projected Performance

Projected performance figures are based on a model containing certain assumptions, including but not limited to assumptions as to appreciation of farmland, increases in cash rental rates, increases in production costs. They should not be construed as guarantees of future returns, nor should they be interpreted as implications of future profitability. Potential for profit as well as for loss exists. The impact of future economic, market and weather factors may adversely affect model results. Performance objectives and projections are based on information available to us at this time and are not meant to be interpreted as guarantees or commitments to future results. The economic outlook is developed by HAIG's professionals. Our outlook is based on the information available to us at this time and our analysis of same. While we are confident in our projections, one should not interpret them as a guarantee of performance.

Before Fees Performance

Performance figures do not reflect the deduction of investment advisory fees. The client's return will be reduced by advisory fees and any other expenses it may incur in the management of its investment advisory account. Investment advisory fees of Hancock Natural Resource Group are described in Part II of Advisors Form ADV.

Effect of Advisory Fees Over 10-Year Period

If, for example, the gross total annualized return of a $10 million investment over a 10-year period were 9.5% nominal, deducting an annual investment management fee of 100 basis points on the invested capital over a 10-year period would produce a total value of $25.8 million after fees, versus $26.8 million before fees.

Representative Example of Compounded Effect of Investment Advisory Fee

A representative 1.00% management fee deducted from a portfolio quarterly (0.25%/quarter) would result in the following cumulative compound reduction of the portfolio time-weighted rate of return.

Years	Cumulative Fee	Years	Cumulative Fee
1	1.004%	6	6.176%
2	2.018%	7	7.241%
3	3.042%	8	8.318%
4	4.076%	9	9.405%
5	5.121%	10	10.503%

Appendix: Biographies

Hancock Agricultural Investment Group®
A Manulife Asset Management Company

Oliver S. Williams IV, CFA, President

Mr. Williams is President of the Hancock Agricultural Investment Group, directs the institutional farmland investment program and serves on the Investment Committee of the Hancock Natural Resource Group (HNRG). Mr. Williams is in his fifteenth year with HAIG. Prior to joining HAIG, he spent five years with the First Pioneer Farm Credit, ACA, one of the largest farm credit associations in the country. At Farm Credit, he was responsible for evaluating and appraising farmland and farm businesses for potential loans. He also managed a farm loan portfolio, which included both row and permanent cropland. He is a member of the American Society of Farm Managers and Rural Appraisers, the Association for Investment Management and Research and the Boston Security Analysts Society. He earned a B.S. in Agricultural Economics, with a concentration in finance, from Cornell University. Mr. Williams grew up on a poultry and grain farm in western New York.

Hancock Timber Resource Group

Mandate: **Timberland Separate Account** **Hired:** **2008**

Firm Information

Hancock Timber Resource Group (HTRG) was founded in 1985 and is based in Boston, Massachusetts, USA. HTRG develops and manages globally diversified timberland portfolios for public and corporate pension plans, high net-worth individuals, and foundations and endowments. As of June 2013, assets under management totaled $11.1 billion/6.5 million acres. These assets are located in the United States, Canada, Australia, New Zealand, and Brazil. HTRG is a division of Hancock Natural Resource Group, Inc., a registered investment adviser and wholly owned subsidiary of Manulife Financial Corporation. Hancock Forest Management, Inc., is a subsidiary of Hancock Natural Resource Group, Inc.

Key Executives:
Tom Sarno, Senior Portfolio Manager
Corbitt Simmons, Senior Portfolio Analyst

Investment Approach

HTRG mandate for ARMB is to construct a diversified portfolio of core domestic timberland investments with a focus on current income. HTRG's strategy seeks to acquire large tracts of timberland at wholesale pricing and then add value through intensive forest management and timely timber sales. HTRG also performs its own property management services, as opposed to using a third party. This enables HTRG to achieve economies of scale cost advantages for clients and better control the quality of service.

Benchmark: NCREIF Timberland Index

Total ARMB Mandate

Assets Under Management:
06/30/13: $86,569,533

Concerns: None

6/30/2013 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	0.39%	11.01%	9.55%	N/A
Fee	0.19%	0.89%	0.93%	N/A
Manager (net)	0.20%	10.12%	8.62%	N/A
Benchmark	0.93%	9.36%	3.59%	2.05%

Alaska Retirement Management Board

Timberland Portfolio Overview

September 19, 2013

Tom Sarno

Senior Portfolio Manager

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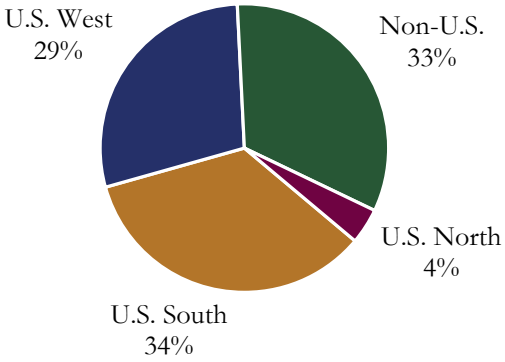
View of Willapa Bay from the Elk River property in Washington

I. Hancock Timber Resource Group

Firm Overview

- Founded in 1985, independent subsidiary of Manulife Financial Corp.
- As of June 30, 2013, HTRG global portfolio: US$11.1 billion / 6.5 million acres
- Recent HTRG Acquisitions
  - 2011 total US$195 million (81,097 acres)
  - 2012 total US$1.65 billion (1,372,202 acres)

HTRG Composite Investment Regions
By Market Value
as of June 30, 2013



HTRG Composite Before-Fee Performance as of 6/30/2013	
1 Year	9.4%
3 Year	7.4%
5 Year	2.6%
10 Year	8.4%
20 Year	8.5%
Since Inception (1985)	12.5%

Hancock Timber Resource Group®
A Manulife Asset Management Company

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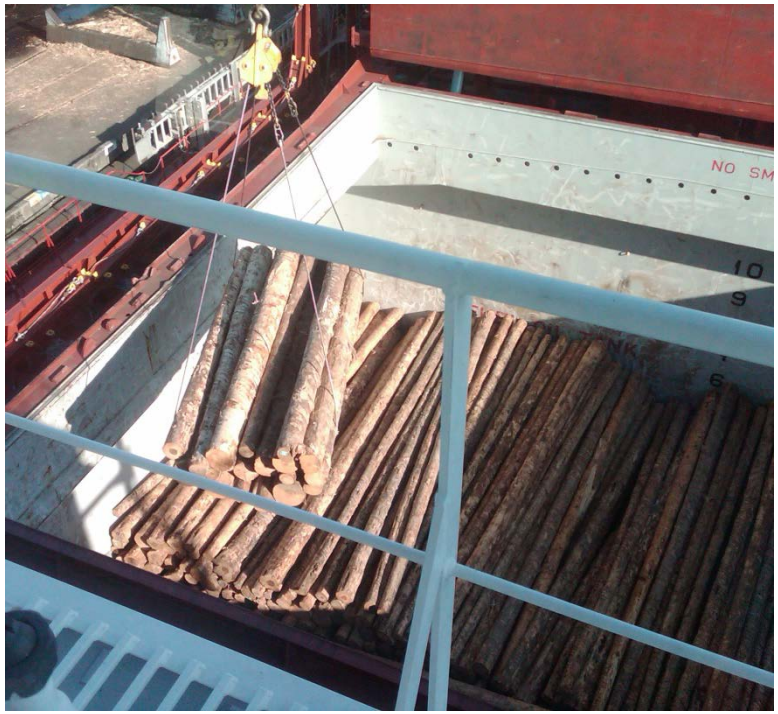
Douglas-fir log ready for export – each log is individually bar coded and tracked



Vessel bound for China being loaded at port of Longview

II. Portfolio Overview

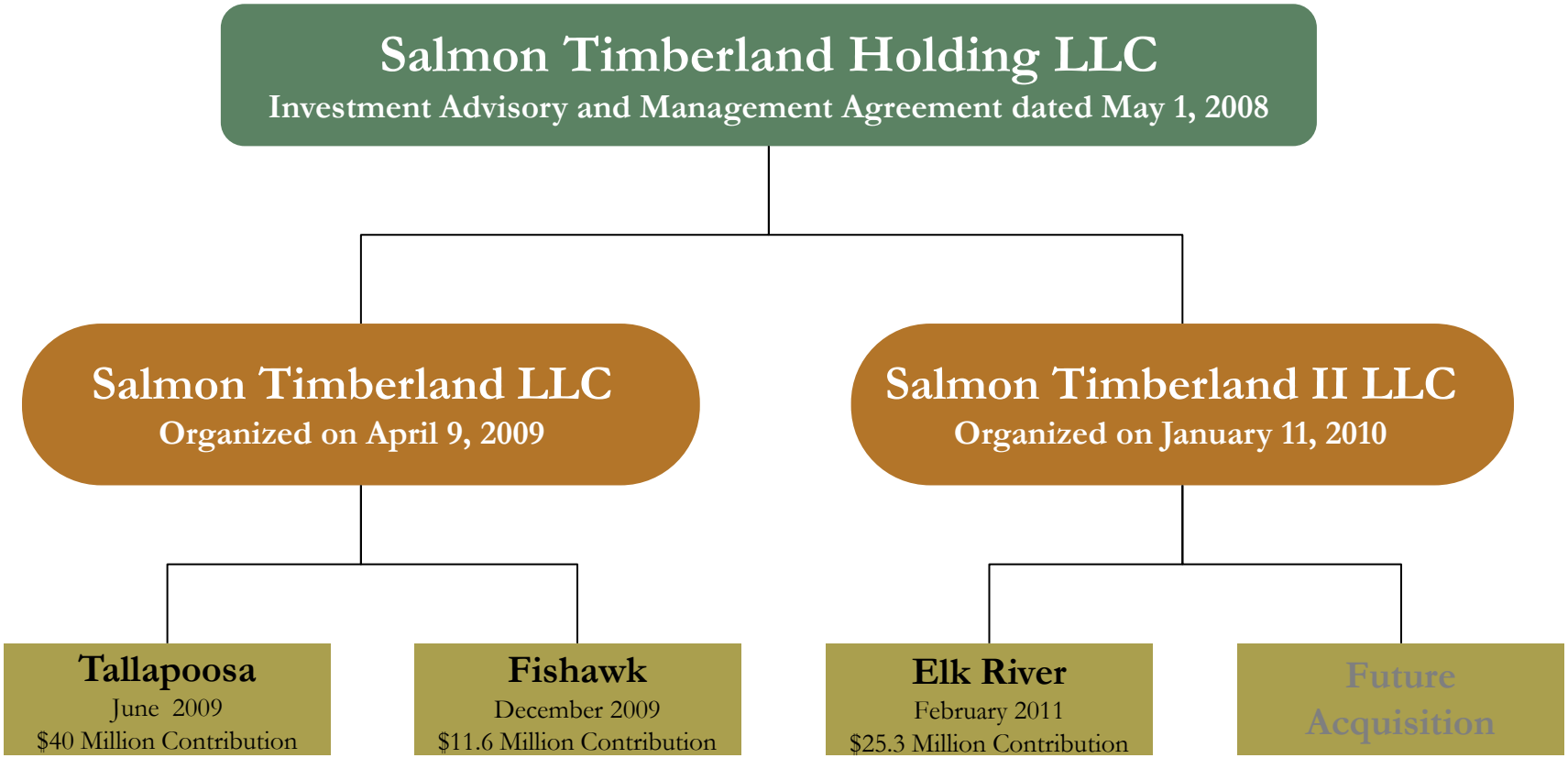
Investment Strategy

Total Return

- Objective: To achieve long-term capital appreciation and moderate cash income through an actively managed, diversified timber portfolio
- Performance Guidelines:
  - The portfolio will seek to produce a minimum 5% net real total rate of return over rolling five-year periods
- Portfolio Diversification:
  - Timberland asset investments inside the United States
  - Portfolio should be diversified by geography, tree species/product and maturity/merchantability

II. Portfolio Overview

Structure and Activity



Hancock Timber Resource Group®
A Manulife Asset Management Company

II. Portfolio Overview

Capital Summary as of June 30, 2013

Salmon Timberland LLC		
Inception Date		April 2009
Term		Open-ended
Committed Capital	April 2009	$100.0 million
	March 2011	$20.0 million
	October 2012	$124.0 million
	Total	$244.0 million
Contributed Capital		$76.9 million
Outstanding Commitment		$167.1 million
Distributions (Since Inception)		$7.8 million
Net Asset Value		$86.6 million

Hancock Timber Resource Group®

A Manulife Asset Management Company

II. Portfolio Overview

Historical Performance as of June 30, 2013

Salmon Timberland LLC (After-fee)		
Time-Weighted Rates of Return		
2013 Fiscal Year (non-annualized)		
Income	-0.1%	
Appreciation	10.3%	
Total	10.1%	
Distributions	$1,700,000	
Cash Yield[1]	2.1%	
Annualized Total Return		NCREIF[2]
1 year	10.1%	9.4%
3 year	8.6%	3.6%
5 year	n/a	2.1%
Since-Inception	5.7%	1.8%
Dollar-Weighted Internal Rates of Return		
Nominal	5.8%	
Real	3.5%	

[1] Based on beginning FY 2013 NAV

[2] NCREIF benchmark is calculated on a before fee basis

Hancock Timber Resource Group®

A Manulife Asset Management Company

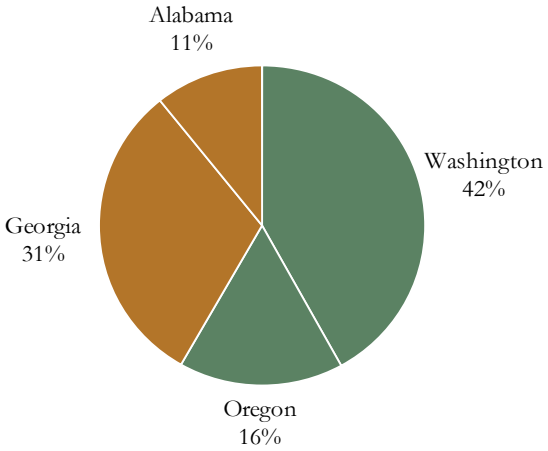
II. Portfolio Overview

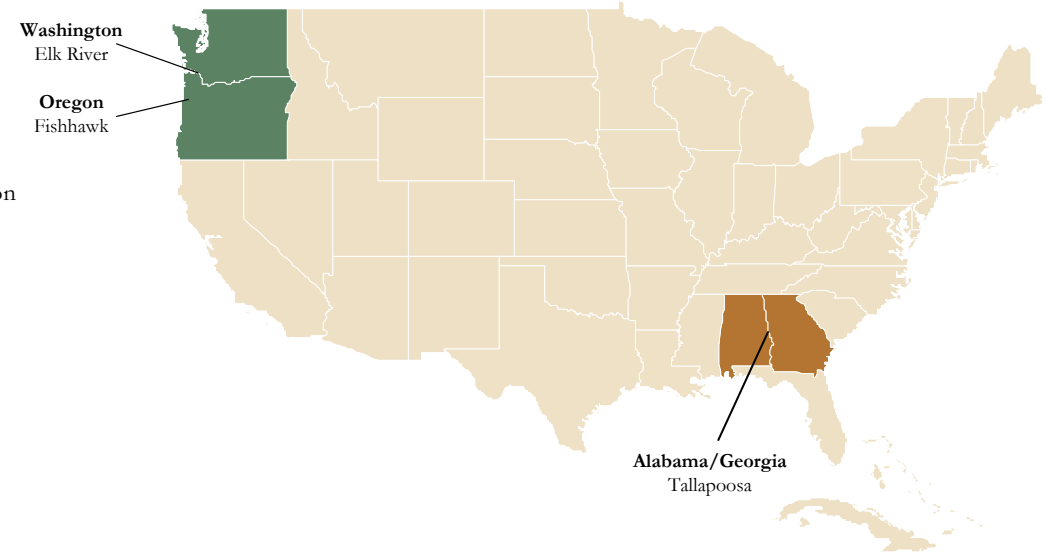
Geographic Diversification as of June 30, 2013

Region	Investment	State	Inception	Ownership Interest	Area (acres)	Net Market Value[1] (USD million)
U.S. Northwest	Fishhawk	OR	Dec-09	100%	3,760	13.9
U.S. Northwest	Elk River	WA	Feb-11	100%	10,644	35.7
U.S. South	Tallapoosa	AL/GA	Jun-09	100%	21,713	35.5
Total					36,117	85.1

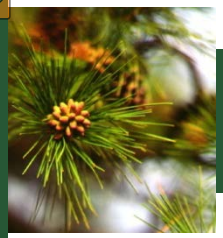
[1] Includes value of timber inventory held by Salmon Cutco Inc. and Salmon II Cutco Inc.

Geographic Diversification
(By Net Market Value)





Hancock Timber Resource Group®
A Manulife Asset Management Company



II. Portfolio Overview

Property Profile as of June 30, 2013 – Fishhawk

Summary

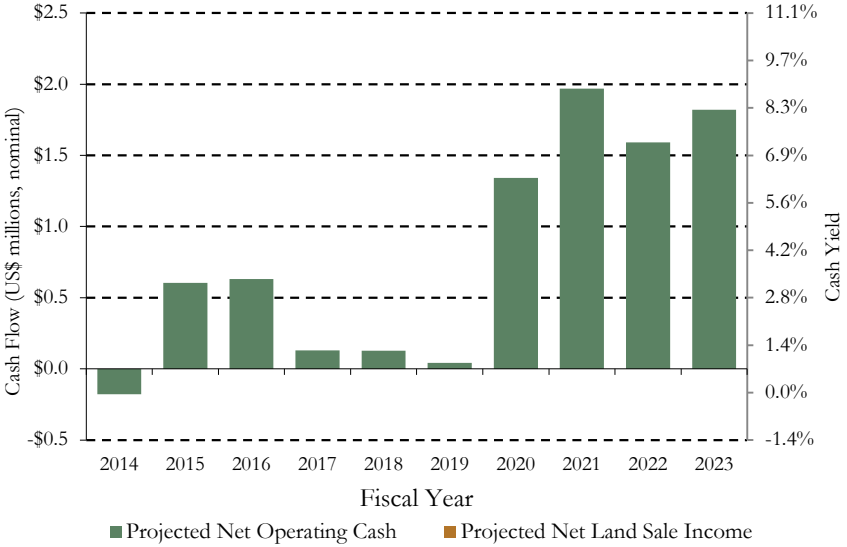
- **Location:** Oregon
- **Acquisition Date:** December 2009
- **Acquisition Value:** $11.4 million
- **Current Market Value:** $13.9 million
- **Current Area:** 3,760 acres
- **Timber Type:** Douglas-fir, Hemlock, Red Alder
- **Markets:** Domestic sawtimber and pulpwood, export logs

Property Returns

	Nominal	Real
IRR – Since Inception[1]	9.2%	7.3%
IRR – Projected[2]	10.7%	8.0%

[1] Before fee, assumes exit at Hypothetical Liquidation Value (net asset value less estimated closing costs), as of 6/30/13
[2] IRR of projected cash flows on 6/30/13 market value, before fee; nominal IRR assumes 2.5% annual inflation

Young Douglas-fir and hemlock plantations interspersed with stands of natural Alder



Notes:
Cash yield represents total net cash over 6/30/13 market value
Cash flows are based on 2013 long-term plans, adjusted by Q2 2013 forward look

Hancock Timber Resource Group®
A Manulife Asset Management Company

II. Portfolio Overview

Property Profile as of June 30, 2013 – Elk River

Summary

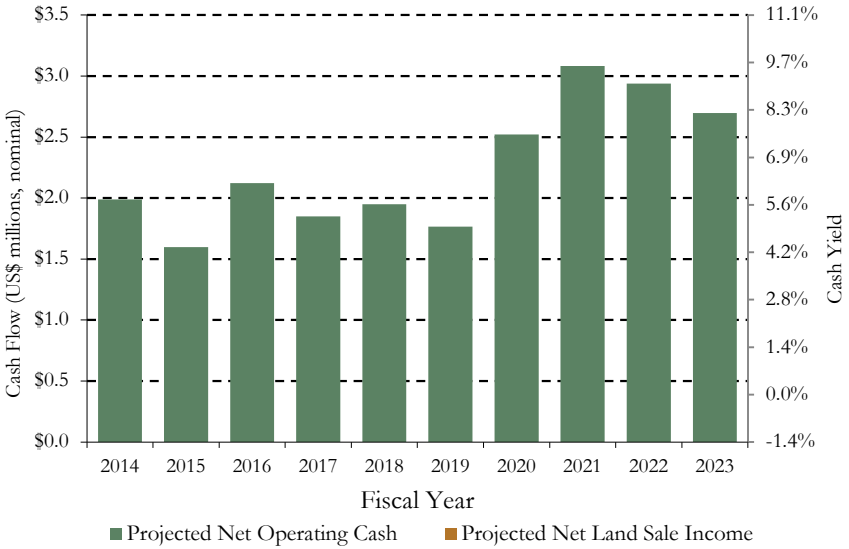
- **Location:** Washington
- **Acquisition Date:** February 2011
- **Acquisition Value:** $24.9 million
- **Current Market Value:** $34.9 million
- **Current Area:** 10,644 acres
- **Timber Type:** Douglas-fir, Hemlock, Red Alder
- **Markets:** Domestic sawtimber and pulpwood, export logs

Property Returns

	Nominal	Real
IRR – Since Inception[1]	19.0%	16.9%
IRR – Projected[2]	8.0%	5.4%

[1] Before fee, assumes exit at Hypothetical Liquidation Value (net asset value less estimated closing costs), as of 6/30/13
[2] IRR of projected cash flows on 6/30/13 market value, before fee; nominal IRR assumes 2.5% annual inflation

Mature Douglas-fir and hemlock plantation



Notes:
Cash yield represents total net cash over 6/30/13 market value
Cash flows are based on 2013 long-term plans, adjusted by Q2 2013 forward look

Hancock Timber Resource Group®
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II. Portfolio Overview

Property Profile as of June 30, 2013 – Tallapoosa

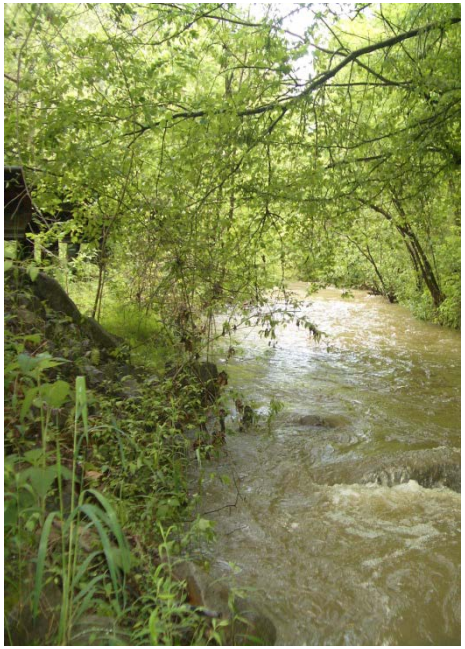
Summary

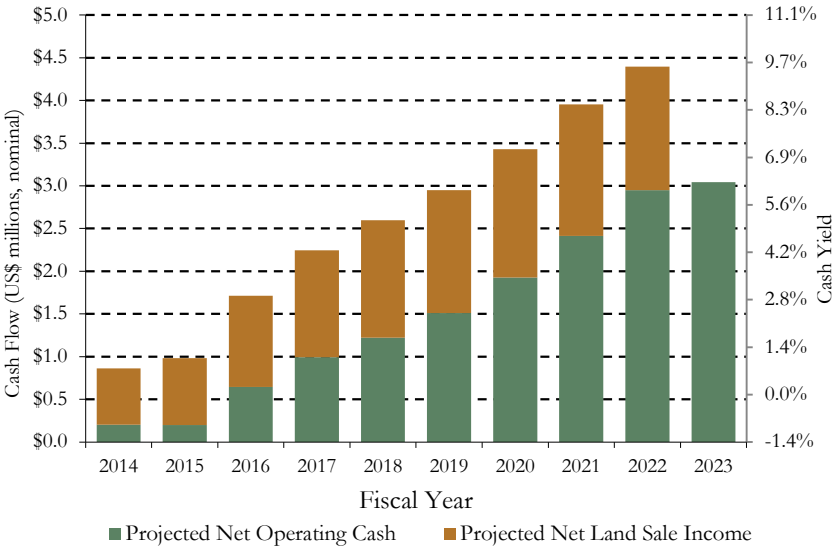
- **Location:** Alabama and Georgia
- **Acquisition Date:** June, 2009
- **Acquisition Value:** $38.6 million
- **Current Appraised Value:** $35.5 million
- **Current Area:** 21,713 acres
- **Timber Type:** Loblolly pine plantations
- **Markets:** Domestic sawtimber and pulpwood

Property Returns

	Nominal	Real
IRR – Since Inception[1]	0.5%	-1.3%
IRR – Projected[2]	8.1%	5.5%

[1] Before fee, assumes exit at Hypothetical Liquidation Value (net asset value less estimated closing costs), as of 6/30/13
[2] IRR of projected cash flows on 6/30/13 market value, before fee; nominal IRR assumes 2.5% annual inflation





Notes:
Cash yield represents total net cash over 6/30/13 market value
Cash flows are based on 2013 long-term plans, adjusted by Q2 2013 forward look

Hancock Timber Resource Group®
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Mid-term real-estate value opportunities coupled with long-term timberland investment

II. Portfolio Overview

Disposition History as of June 30, 2013

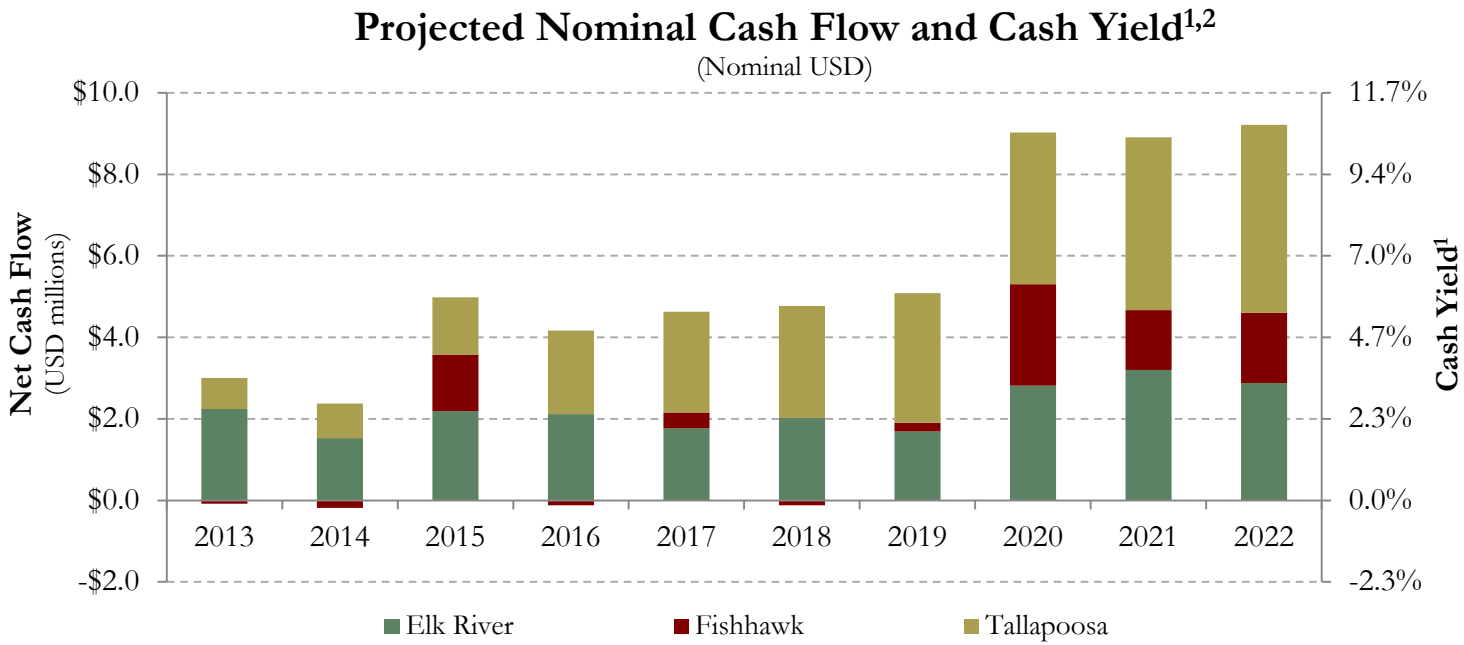
Salmon Timberland LLC (since inception)						
Property	**# Dispositions**	**Acres**	**Gross Revenue ($ millions)**	**Allocated Market Value ($ millions)**	**Gross Revenue/Acre**	**Premium on Allocated Market value**
Elk River	1	1	$0.0	$0.0	$12,000	598%
Fishhawk	1	351	$1.7	$1.1	$4,929	60%
Tallapoosa	7	2,759	$5.1	$3.3	$1,830	52%
Total	**9**	**3,111**	**$6.8**	**$4.4**	**$2,182**	**54%**

Note: The Elk River sale generated $7,200 for a 0.6 acre sale

II. Portfolio Overview

Projected Portfolio Performance

	Portfolio	Elk River	Fishhawk	Tallapoosa
Projected Nominal IRR[1,2]	**8.6**	8.0	10.7	8.1



[1] Based on 6/30/13 market value
[2] Assumes annual inflation of 2.5%
Note: All projections before Account Management Fees

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A Manulife Asset Management Company

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Hancock foresters and ARMB investment staff touring active harvesting operation

III. Timberland Market Outlook

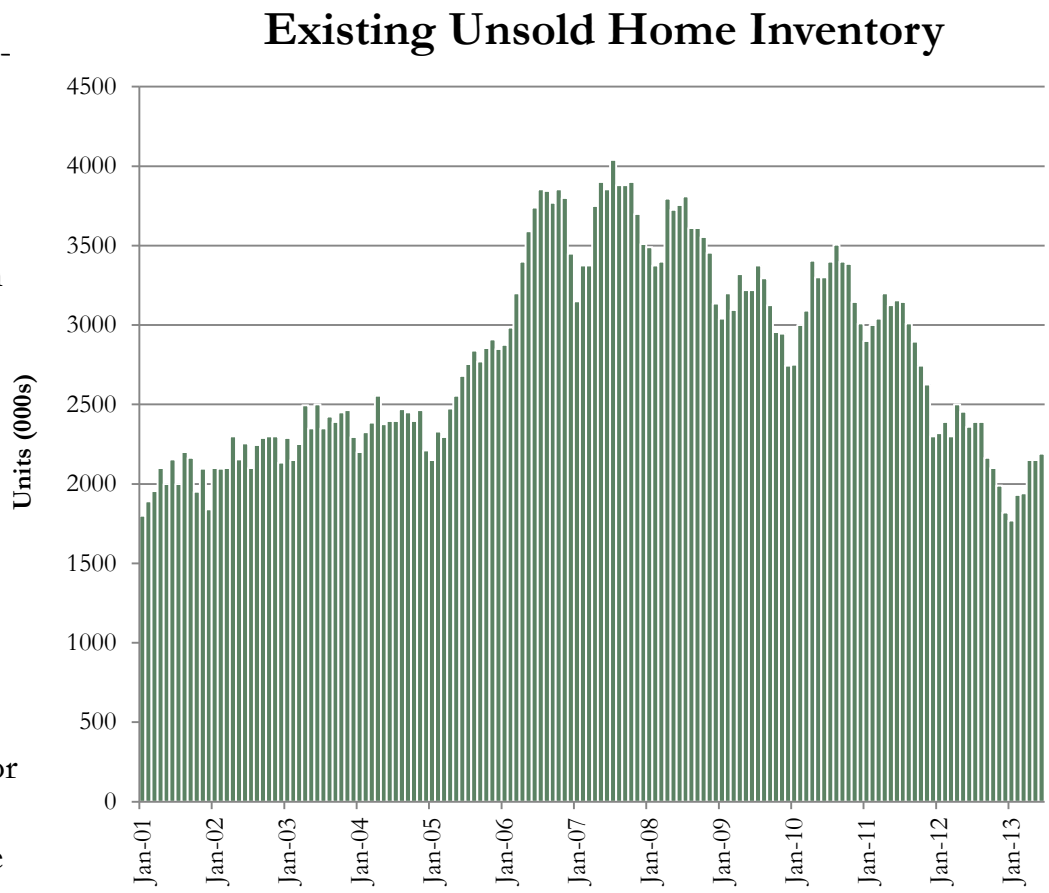
Summary Comments

- Timber markets in regions with exposure to China—the US Pacific Northwest and New Zealand—remained relatively strong during 2012.
  - Demand strengthened during the first half of 2013 with added tension from the US domestic market
- Markets for timberland properties in all regions strengthened during 2012 and into 2013.
  - In the US, appraisers lowered discount rates by 25 to 50 basis points relative to year-ago levels, and timber price outlooks generally improved
- Housing starts in the US in 2012 were up 28 percent year-over-year, supported by improvements in employment and consumer confidence, record levels of affordability and significant pent-up demand for housing.
- China continues to have a strong appetite for imported lumber and logs despite some macro economic weakening.

III. Timberland Market Outlook

US Existing Home Inventories

- Inventory of unsold existing homes fell to pre-bubble levels in late 2012
- Inventory of unsold homes has risen through the first half of 2013, off a low of 1.8 million units at the first of the year to over 2.1 million units by June
- Home prices have also risen as a result of improving demand and lower home inventory for sale
  - Months of supply has hovered around 4.1 during the first half of 2013
- The backlog of "distressed properties" is shrinking as delinquencies trend lower and banks bundle foreclosed properties for investor groups and are more open to short sales.
  - Overall, delinquency and home foreclosure rates continue to fall



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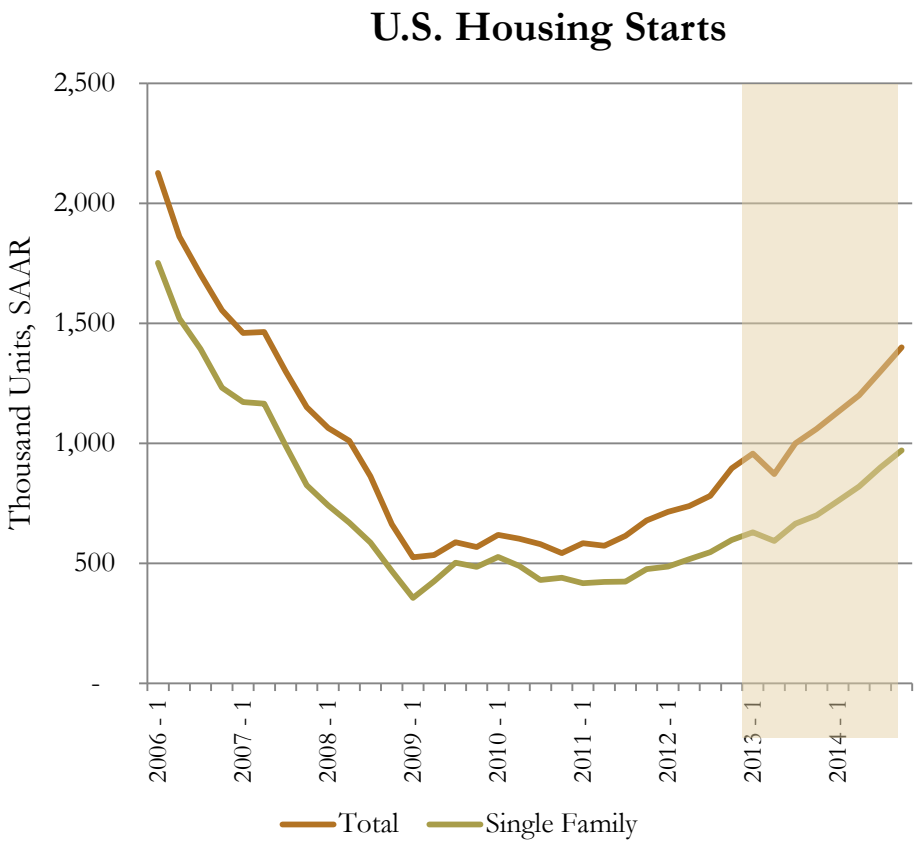
A Manulife Asset Management Company

III. Timberland Market Outlook

US Housing Starts Gain Traction

- Total housing starts reached 1,005,000 units in March, 97 percent above 2009:Q1 level
- Building blocks for a housing recovery are falling into place
  - Pent-up demand , affordability, reduced inventories, household balance sheets
- But, headwinds will moderate the rebound in 2013
  - More rigorous lending standards, still high unemployment rates, particularly for new entrants to housing market
- Multi-family construction powered gains in construction activity early in the year as the single-family share of residential construction slipped to 63 percent of total starts at the end of 2012.
  - Historically, single-family home starts have been approximately 80 percent of total starts
- Single-family starts have remained stable during Q2 and increased to approximately 71 percent of total starts in June



Forecast: FEA March 2013

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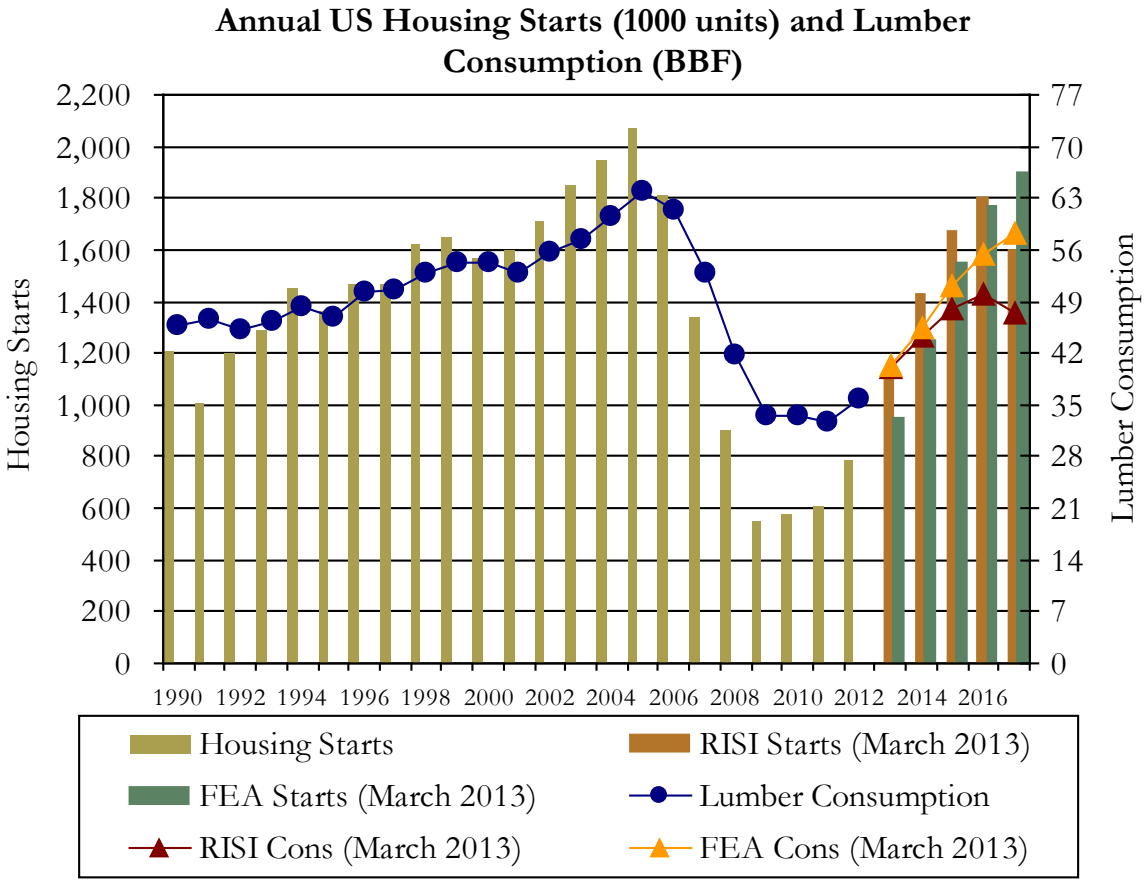
A Manulife Asset Management Company

III. Timberland Market Outlook

US Housing Starts and Lumber Consumption

Outlook for North America timber markets set by timing and strength of US residential construction recovery

- Lumber demand will continue to gain forward momentum, fueled by a recovery in new home construction.
- By 2014, both RISI and FEA expect housing starts to exceed 1.2 million units.
- Future lumber consumption will depend upon the mix of single and multi-family housing units, home size, lumber demand from the industrial and non-residential construction sectors



Sources: RISI (March 2013), FEA (March 2013)

Hancock Timber Resource Group®
A Manulife Asset Management Company

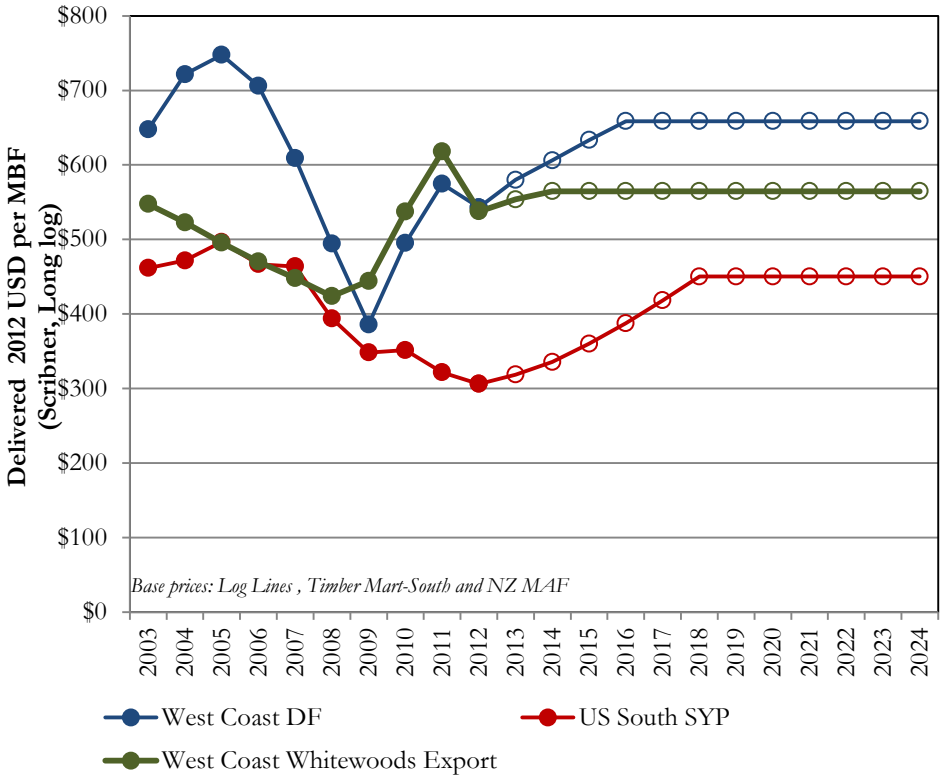
III. Timberland Market Outlook

US Timber Prices

U.S. timber prices recover to long-term trend values, supported by recovering housing markets

- PNW domestic log prices have been buoyed over the last two years by strong export markets, with prices approaching pre-financial crisis levels.
  - Over the longer term, domestic prices are expected to be supported by a rebound in US housing construction, and are projected to settle at levels that persisted during the period 2001-2007.
- Southern pine sawtimber prices are expected to recover significantly in concert with a rebound in US housing construction.
  - Prices are projected to return to levels that persisted during 2001 to 2007.
  - These timber price levels are supported by likely future levels of lumber prices.

Select US Sawlog Price History and Forecast



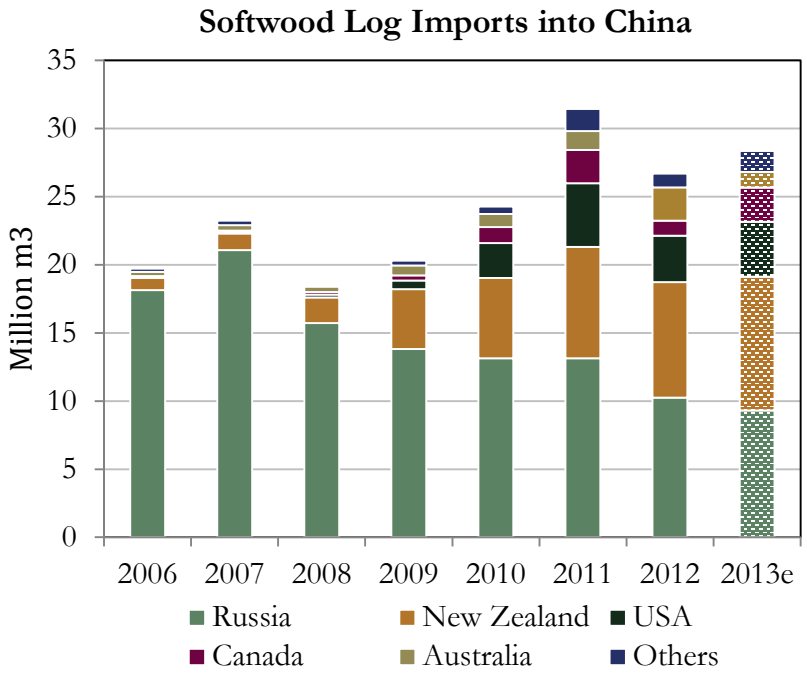
Note: US SYP delivered calculated with RISI 2012 log/haul flat in real terms

Hancock Timber Resource Group®
A Manulife Asset Management Company

III. Timberland Market Outlook

Chinese Demand for Softwood Logs and Lumber

- Heading into 2012, China imposed tighter controls on credit and building activity to avoid bubbles in the economy and housing, resulting in reduced demand for wood products and timber during the first half 2012
- China economy and wood product markets edged higher in 2012:H2, possibly indicating a "soft landing" and better prospects for 2013-2014
- China's new leadership publically acknowledges the need to "rebalance" the economy (move from exports and investment to consumption and economic reform) and that the process will be accompanied by lower growth. GDP targets have been reduced to under 8%, with downside risk.



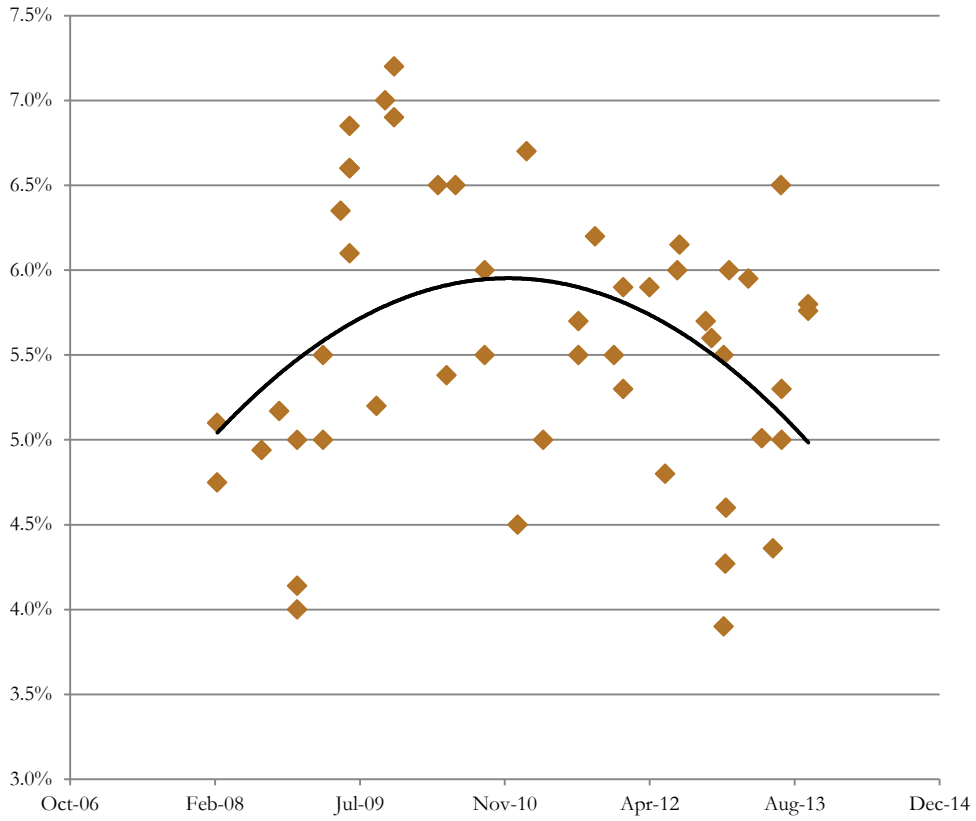
Source: Wood Markets International

III. Timberland Market Outlook

US Timberland Market

- Real discount rates used by timberland buyers compressed to about 5% during the years 2007 and 2008, consistent with similar conditions in markets for other real assets such as commercial properties
- The global financial crisis caused discount rates for real assets to expand during 2009 as required investor returns increased.
  - Although price discovery in US timberland markets was hampered by low transaction activity, real discount rates were in the 6.5 to 7.0 percent range.
- Recent transactions indicate that discount rates have begun to recompress to levels below 6.0 percent for some transactions

Implied Real Discount Rates for US Timberland Transactions, 2008 through Q2 2013



Sources: HTRG Research

Hancock Timber Resource Group®
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Questions

Hancock Timber Resource Group®

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IV. Appendix

Appraisal Summary

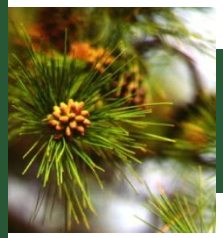
Salmon Timberland LLC (USD millions)	Ownership Interest	2011 Appraisal[3]	Net Land Sales[2]	Current Appraisal[3]	Change[4] ($)	Change[4] (%)
Elk River	100%	30.7	0.0	35.3	4.6	15.0%
Fishhawk	100%	12.6	0.0	13.9	1.3	10.3%
Tallapoosa	100%	36.5	0.6	36.0	0.1	0.3%
Total		**79.8**	**0.6**	**85.2**	**6.0**	**7.5%**

[1] Prior appraisal dates: Fishhawk & Tallapoosa as of 3/31/2012; Elk River as of 12/31/2011

[2] Between Appraisals

[3] Current appraisals are as of 3/31/2013

[4] Indudes land sales



IV. Appendix

Biographies

Thomas Sarno, Senior Portfolio Manager

Tom is responsible for account management and portfolio development for both individually managed accounts and pooled investment vehicles. In this role, he evaluates portfolio performance, acquisition and disposition opportunities, develops and implements investment strategies, and manages client relationships. Tom has served in the capacities of General Manager, Southern Division as well as Mid Atlantic Region Manager for Hancock Forest Management. In those roles, he was responsible for the leadership and direction of a team of professionals who provide acquisition and disposition services to Hancock Timber Resource Group clients, forest management, timber marketing, asset management, stewardship direction and fiduciary oversight for HTRG assets in the US South and Northeast. Prior to joining the firm in 2004, Tom was a Procurement Manager for International Paper's Pensacola paper mill and McDavid sawmill enterprise. He has served as Forest Operations Manager as well as Forest Analyst for Champion International Corporation. Tom earned a Bachelor of Science, with honors, in Forest Resources and Conservation from the University of Florida.

IV. Appendix

Notes and Disclosures

Hancock Timber Resource Group is a division of Hancock Natural Resource Group, Inc., a registered investment adviser and wholly owned subsidiary of Manulife Financial Corporation.

Projected Performance
Projected performance figures are based on a model containing certain assumptions, including but not limited to assumptions as to growth rates, harvest levels, timber prices, production costs and liquidity. They should not be construed as guarantees of future returns, nor should they be interpreted as implications of future profitability. Potential for profit as well as for loss exists. The impact of future economic, market and weather factors may adversely affect model results. Performance objectives and projections are based on information available to us at this time and are not meant to be interpreted as guarantees or commitments to future results. The economic outlook is developed by HTRG's economic and asset class professionals. Our outlook is based on the information available to us at this time and our analysis of same. While we are confident in our projections, one should not interpret them as a guarantee of performance.

Before Fees Performance
Performance figures do not reflect the deduction of investment advisory fees. The client's return will be reduced by advisory fees and any other expenses it may incur in the management of its investment advisory account. Investment advisory fees of Hancock Natural Resource Group are described in Part II of Advisors Form ADV.

Effect of Advisory Fees Over 10-Year Period
If, for example, the gross total annualized return of a $10 million investment over a 10-year period were 8% real (net of inflation), deducting an annual investment management fee of 95 basis points on the invested capital over a 10-year period would produce a total value of $20.5 million after fees, versus $21.6 million before fees.

Sentinel Real Estate Advisors Corporation

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

Firm Information	Investment Approach	Total ARMB Mandate
Sentinel is an independent, privately held real estate investment manager headquartered in New York, NY. Sentinel and its affiliates comprise a fully integrated organization that provides real estate investment management services to institutional and qualified private investors in the United States and abroad. Sentinel manages pooled and separate accounts holding diversified portfolios of real estate properties valued at $4.5 billion. These portfolios include over 157 properties in 28 states, with many types of income-producing properties represented, from multifamily rental properties to office buildings, industrial facilities and shopping centers. **Key Executives:** ***David Weiner***, Vice Chairman/Co-Portfolio Manager ***David Stenger***, Vice President/Co-Portfolio Manager	Sentinel's mandate is unique among ARMB's real estate separate accounts focusing specifically on multifamily investments. Sentinel's organization structure is vertically integrated so virtually all professionals working on an investment property are Sentinel employees. The strategy for ARMB is to construct a portfolio of core multifamily properties in markets with high barriers to entry with a focus on income and long term appreciation. Once a property is acquired, Sentinel seeks to add value to that investment. Sentinel's asset and property management teams take an active role in maximizing the property's potential through aggressive leasing strategies, continuous maintenance and capital improvement programs and cost controls. **Benchmark:** NCREIF Apartment Subindex	Assets Under Management: 06/30/13: $151,274,889

Concerns: Manager is currently underperforming the benchmark.

6/30/2013 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	0.22%	8.48%	14.34%	3.38%
Fee	0.14%	0.59%	0.66%	0.62%
Manager (net)	0.08%	7.89%	13.68%	2.76%
Benchmark	2.50%	10.71%	15.02%	3.75%

Sentinel

Presentation for:
Alaska Retirement Management Board (ARMB)

By:
SENTINEL REALTY ADVISORS CORPORATION

September 19, 2013

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

Sentinel

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- ARMB Separate Account Review
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  Folsom, California
- Valleybrook at Chadds Ford
  Chadds Ford, Pennsylvania
- Versant Place
  Brandon (Tampa), Florida

Sentinel

SENTINEL PROFILE

- Established in 1969
- AUM as of June 30, 2013: $4.6 billion
- Stable and experienced senior management team that averages 20 years with the firm
- Nearly 1,000 employees including on-site property management
- Sentinel's relationship with ARMB dates to 1984
- Wide range of multifamily and commercial investment strategies
- Assets geographically diversified across the US
  - 31,000 apartment units
  - 8,100,000 square feet of commercial real estate

Sentinel

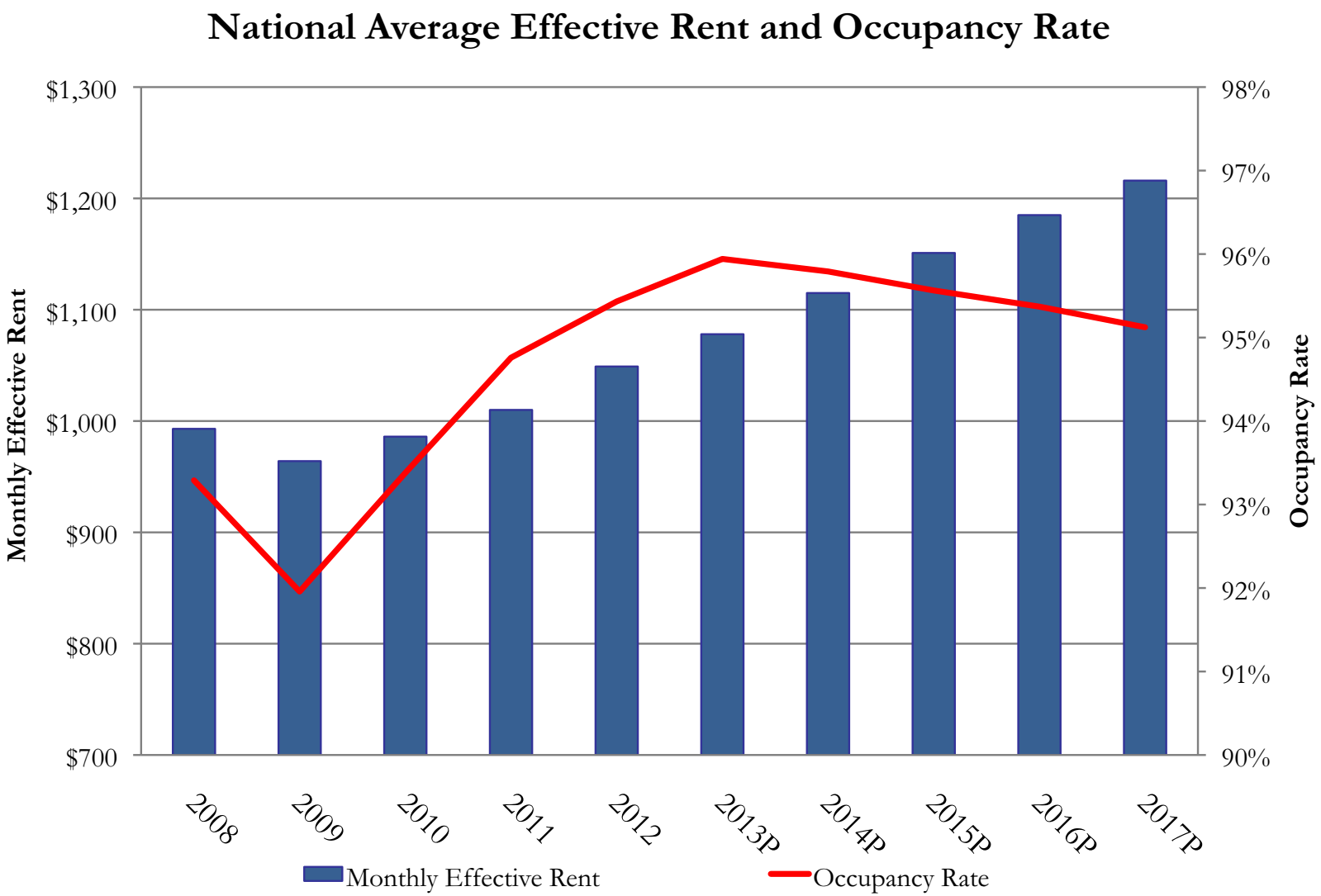
US APARTMENT MARKET OVERVIEW

- Rents are projected to continue to rise through 2017.
  - Effective rents increased by annual average of 1.5% from 2008 to 2012.
  - Projections call for effective rents to grow by 3.0% annually from 2013 to 2017.
  - Projections call for a high average occupancy rate in excess of 95% through 2017.

Source: REIS, Inc.

Sentinel

US APARTMENT MARKET OVERVIEW



Source: REIS, Inc.

Sentinel

US APARTMENT MARKET OVERVIEW

- A favorable balance between demand and supply is projected for the next 3-4 years.
  - The US multifamily inventory is expected to grow by 1.2% annually through the end of 2017.
  - New construction is projected to peak in 2014 at roughly 170,000 units or 1.7% of the total inventory, and then fall sharply to 1.0% by 2017.

Source: REIS, Inc.

Sentinel

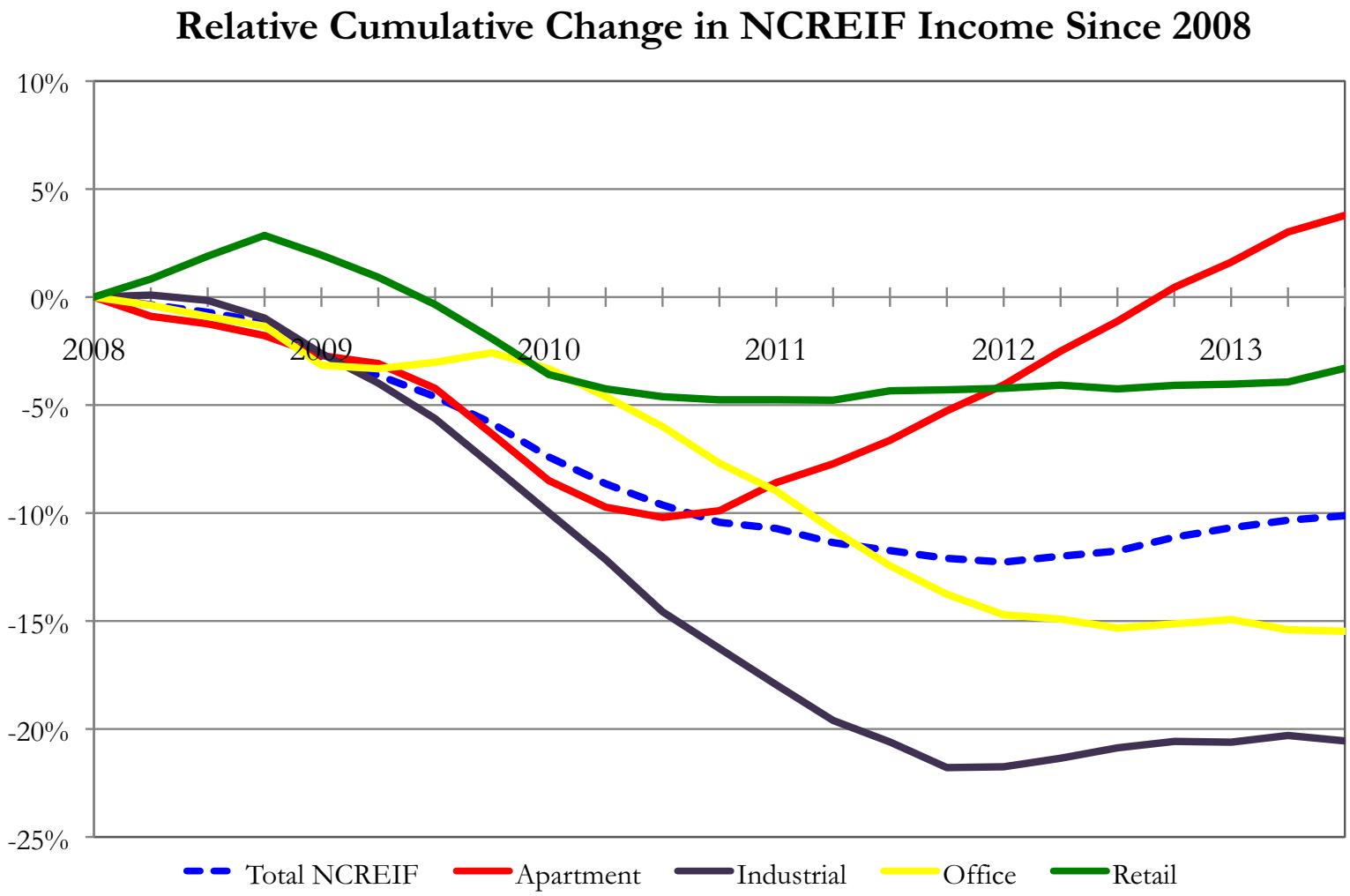
US APARTMENT MARKET OVERVIEW

- Employment growth is a significant driver of multifamily demand
  - More than 8.7 million jobs were lost from the start of 2008 to early 2010. The economy has gained 6.7 million jobs since that time.
  - Jobs are now being created at a steady rate approximating 200,000 jobs per month.
- Job growth has unlocked pent-up apartment demand, making that sector the best performing property type in terms of income growth.

Source: US Department of Labor

Sentinel

US APARTMENT MARKET OVERVIEW



Source: NCREIF

Sentinel

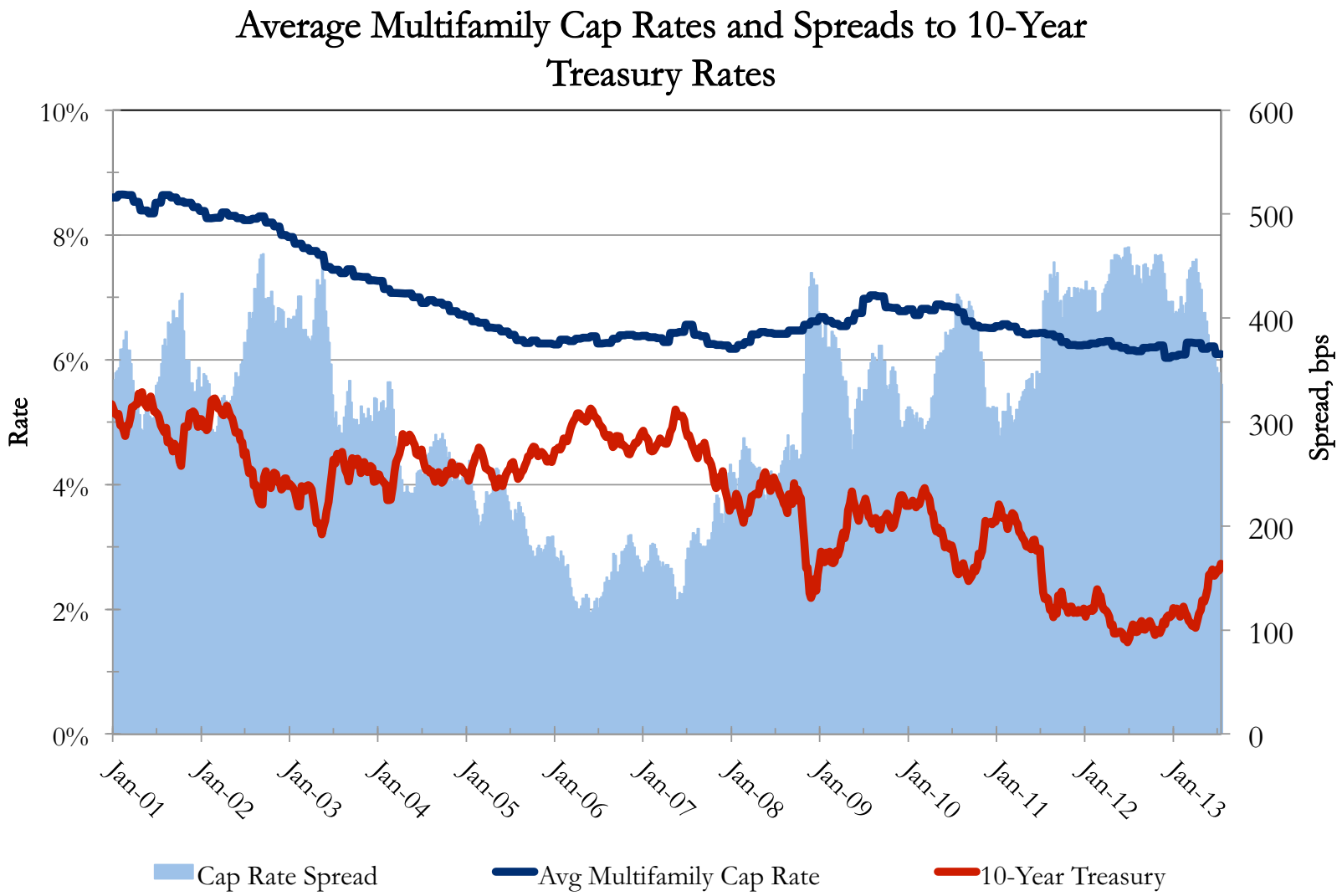
US APARTMENT MARKET OVERVIEW

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

Source: Real Capital Analytics, US Federal Reserve

Sentinel

US APARTMENT MARKET OVERVIEW



Source: Real Capital Analytics, US Federal Reserve

Sentinel

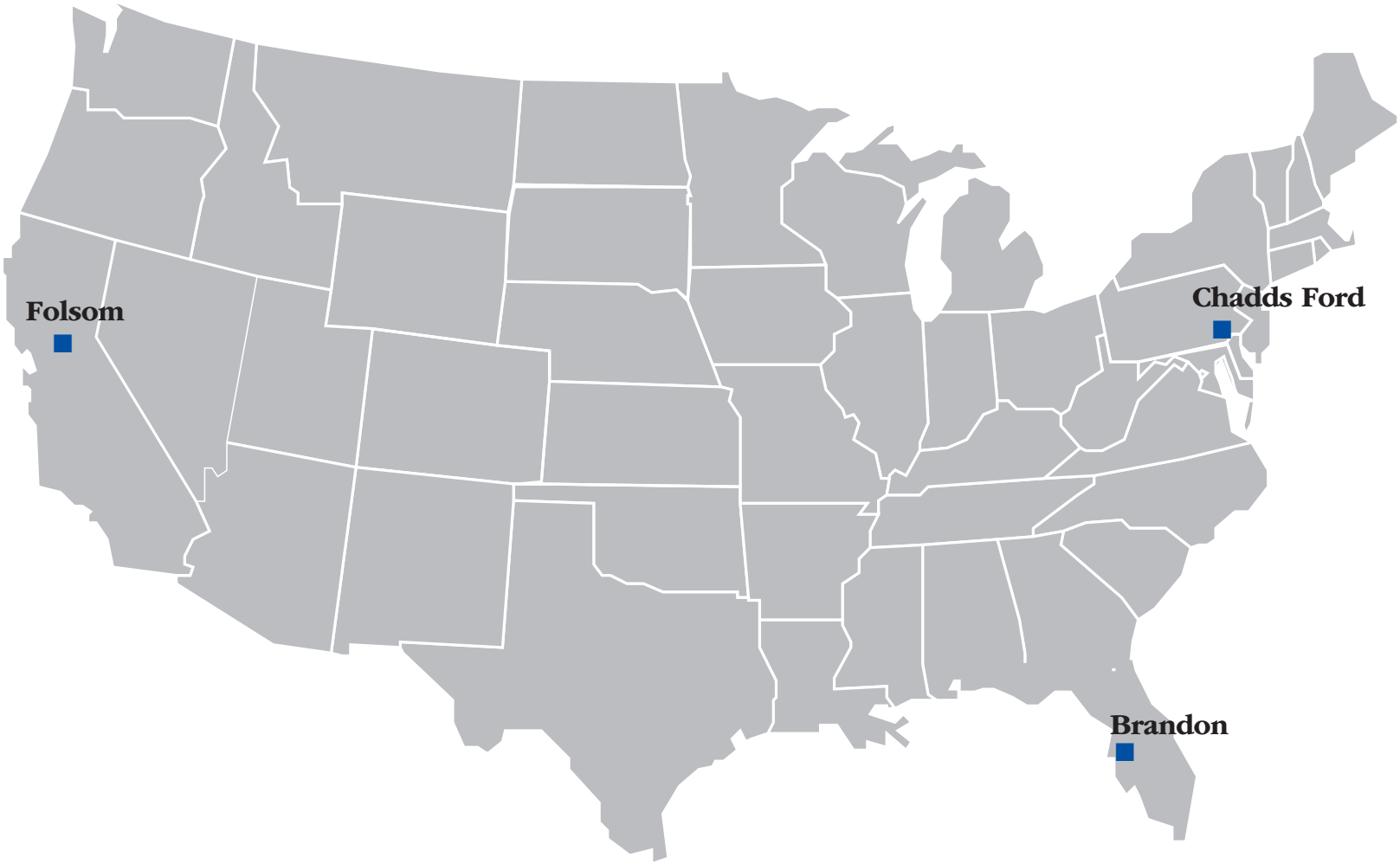
ARMB SEPARATE ACCOUNT REVIEW

- Three core multifamily properties totaling 996 units
  - Preserve at Blue Ravine Apartments, Folsom, CA (260 units)
  - Valleybrook at Chadds Ford Apartments, Chadds Ford, PA (352 units)
  - Versant Place Apartments, Tampa, FL (384 units)
- Total fair market value of $150.8 million as of 6/30/13
- On 4/23/13 Vintage at the Lakes Apartments in Las Vegas, NV was sold for $35,250,000. IRR for holding period was 8.34%.

Sentinel

ARMB SEPARATE ACCOUNT REVIEW

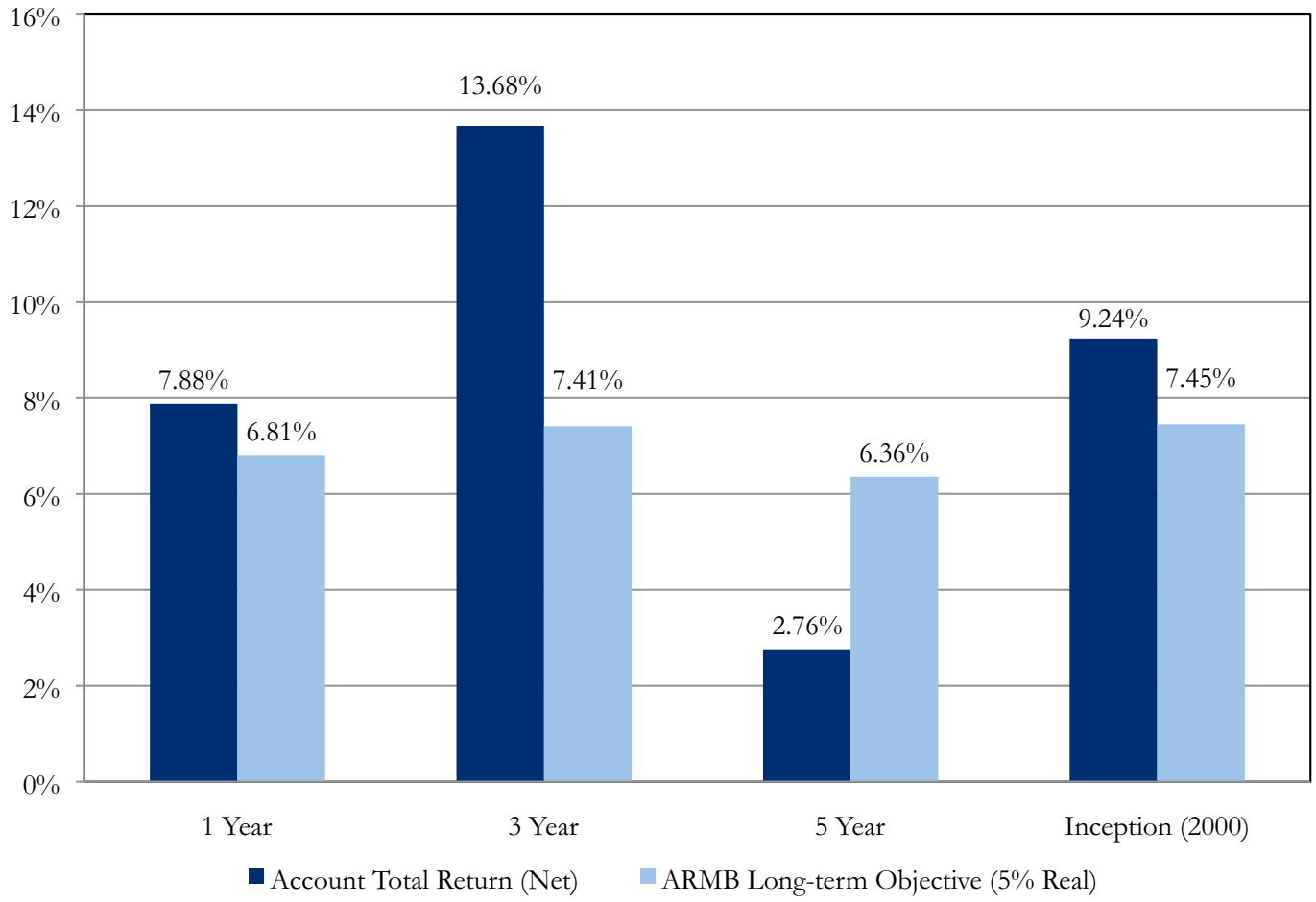
Portfolio Diversification



Sentinel

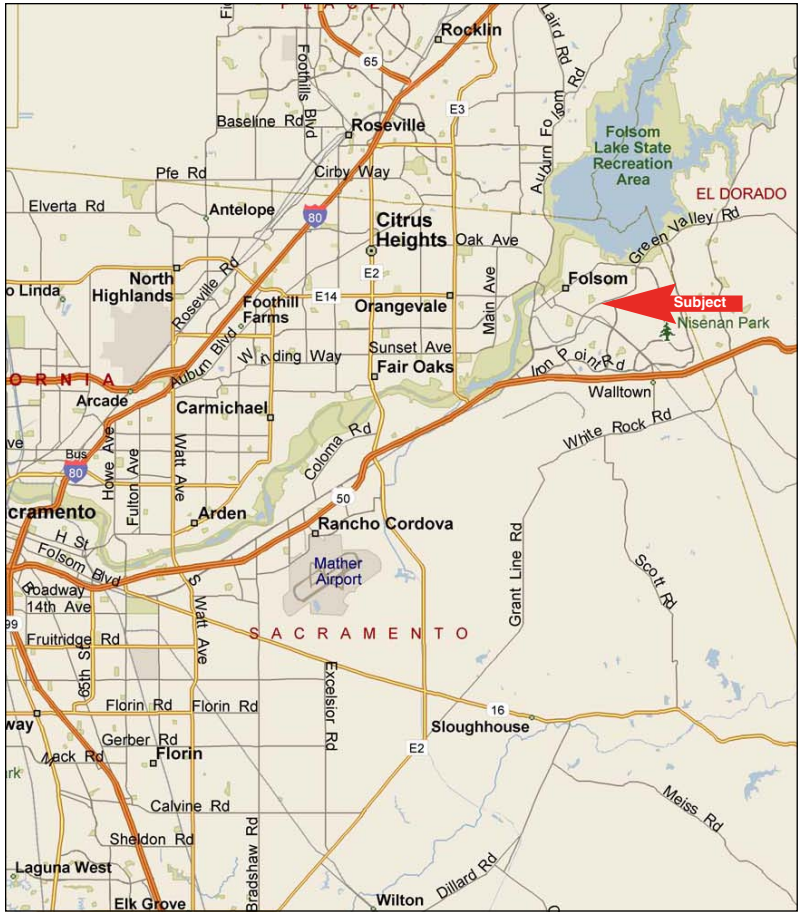
ARMB SEPARATE ACCOUNT REVIEW

Portfolio Returns



Sentinel

PRESERVE AT BLUE RAVINE
Folsom, California



Sentinel

PRESERVE AT BLUE RAVINE
Folsom, California

Property Description

- Completed in 2000
- 260 Units
- One-, two- and three-bedroom apartments
- Percentage leased (8/26/13): 98.8%

Financial Information

- Date Acquired: 7/17/08
- Purchase Price: $40,570,000 ($156,038 per unit)
- Valuation (6/30/13): $46,000,000 ($176,923 per unit)

Sentinel

PRESERVE AT BLUE RAVINE
Folsom, California

Market Information

- Employment in the Sacramento area grew by 1.7% year-over-year.
- The area's population grew by 1.6% annually since 2003 and is projected to grow by 1.2% annually through 2016.
- Average rental rates in the market grew by 1.5% year-over-year.

Key Market Factors

- Folsom is a highly desirable Sacramento suburb with excellent schools.
- Constrained supply - very low level of new construction in the submarket.
- Home affordability is temporarily affecting leasing for larger units, but prices have been rising and interest rates.

Sentinel

PRESERVE AT BLUE RAVINE
Folsom, California

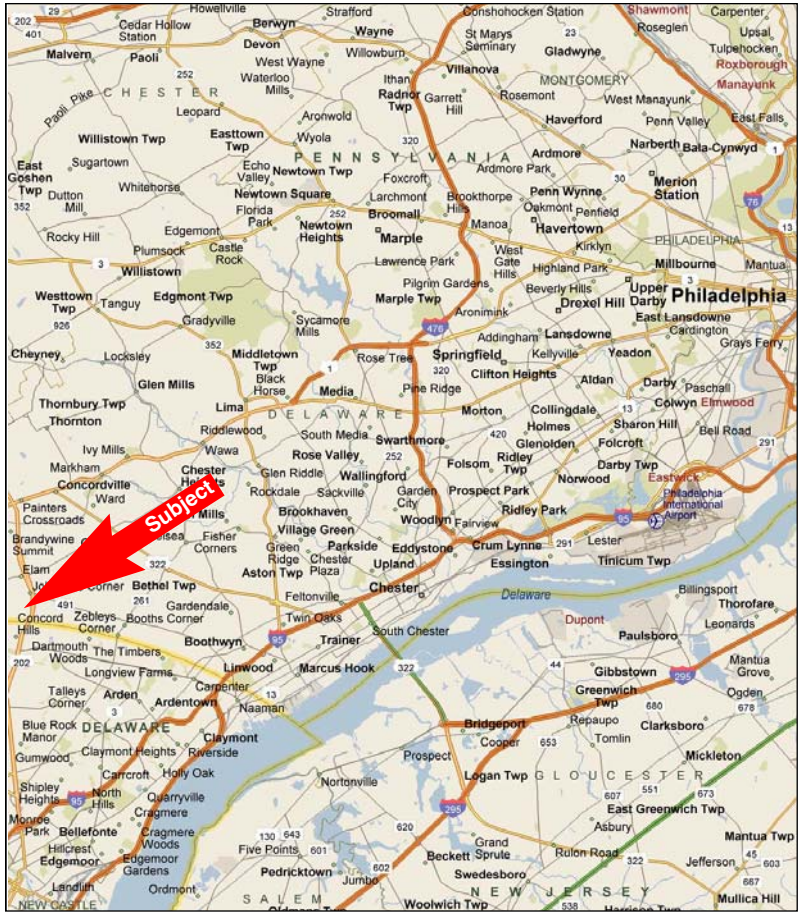
Investment Thesis

- Anticipated holding period of seven to ten years based upon:
  - Desirability of the Folsom area as a long-term demand driver
  - Projections for above-average job and population growth
  - Constrained supply
  - Property's excellent location within Folsom and proximity to school and outdoor recreational facilties
- Preserve at Blue Ravine was acquired, in part, based upon its potential for accretive unit upgrades. Upgrades should conclude in 2014.
- The property features competitive amenities and unit finishes that will continue to appeal to the upper end of the rental market.

Sentinel

VALLEYBROOK AT CHADDS FORD

Chadds Ford, Pennsylvania



Sentinel

VALLEYBROOK AT CHADDS FORD
Chadds Ford, Pennsylvania

Property Description

- Completed in 2002
- 352 Units
- One-, two- and three-bedroom apartments
- Percentage leased (8/26/13): 90.9%

Financial Information

- Date Acquired: 11/30/12
- Purchase Price: $65,175,000 ($185,156 per unit)
- Valuation (6/30/13): $65,000,000 ($184,659 per unit)

Sentinel

VALLEYBROOK AT CHADDS FORD
Chadds Ford, Pennsylvania

Market Information

- Employment in the Philadelphia area grew by 0.5% year-over-year.
- The area's population grew by 0.4% annually since 2003 and is projected to grow by 0.2% annually through 2017.
- Average rental rates in the market grew by 2.4% year-over-year.

Key Market Factors

- High barriers to entry serve to limit new multifamily supply.
- Excellent schools and prime location drive rental demand.
- High single-family home prices.

Sentinel

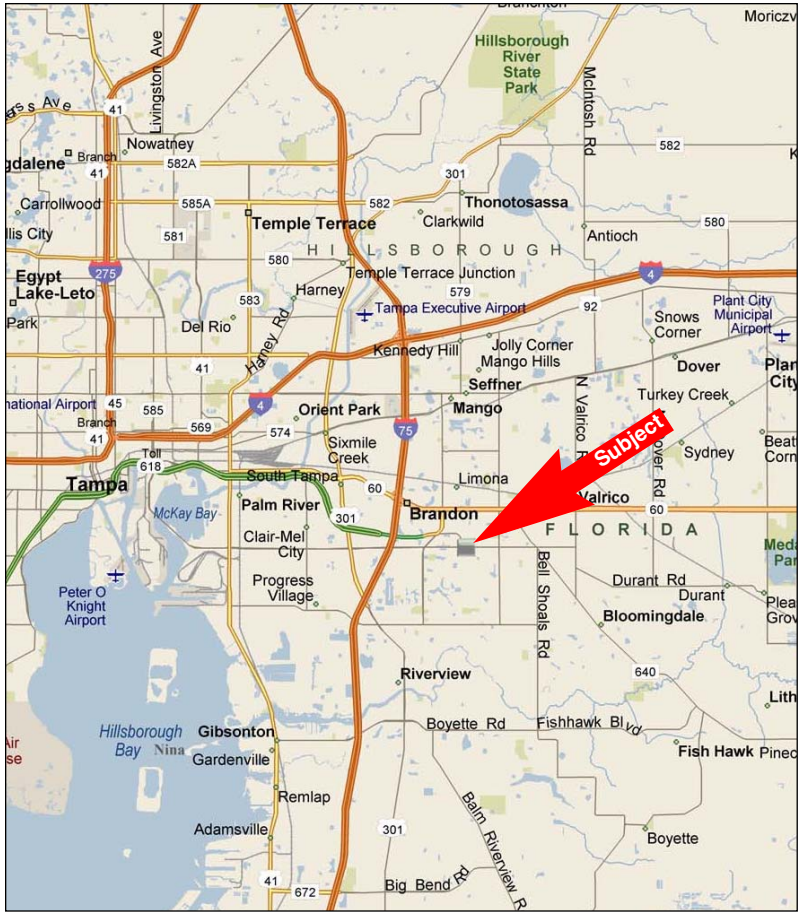
VALLEYBROOK AT CHADDS FORD
Chadds Ford, Pennsylvania

Investment Thesis

- Planned ownership period of seven to ten years.
- Since acquisition Sentinel has been successful in implementing monthly rental rate increases of approximately $100 per unit.
- Numerous improvements were made to the community to enhance its appeal to prospective and current residents.
- FY 2014 budget will explore community's value-add potential with a test of a cosmetic upgrade program in five units.
- With no new supply planned for the area, Valleybrook should benefit from a growing pool of renters over time.

Sentinel

VERSANT PLACE
Brandon (Tampa), Florida



Sentinel

VERSANT PLACE
Brandon (Tampa), Florida

Property Description

- Completed in 2000
- 384 Units
- One-, two- and three-bedroom apartments
- Percentage leased (8/26/13): 91.0%

Financial Information

- Date Acquired: 9/14/00
- Purchase Price: $27,437,930 ($71,453 per unit)
- Valuation (6/30/13): $39,800,000 ($103,646 per unit)

Sentinel

VERSANT PLACE
Brandon (Tampa), Florida

Market Information

- Employment in the Tampa area grew by 3.1% year-over-year.
- The area's population grew by 1.4% annually since 2003 and is projected to grow by 1.4% annually through 2017.
- Average rental rates in the market grew by 1.7% year-over-year.

Key Market Factors

- Brandon offers an excellent commute to downtown Tampa and employment areas to the north and south via I-75.
- There are modest supply additions in the area, but new communities have a higher price point allowing Versant Place to compete effectively. Home affordability is affecting leasing for larger units.

Sentinel

VERSANT PLACE
Brandon (Tampa), Florida

Investment Thesis

- Planned intermediate-term holding period of two to four years.
- Strategy at acquisition was focused on making the property more competitive compared to its peers to capture higher rents.
  - All unit interiors upgraded over the past several years.
  - Clubhouse and fitness center upgrades.
  - Addition of gated 24-hour access, screened in patios.
  - Budgeted installation of washers and dryers in fiscal 2014.
- Competitive enhancement of the property is nearly complete with a contemplated sale as the recovery in Tampa progresses.

Cornerstone Real Estate Advisers LLC

Mandate: **Real Estate Separate Account** **Hired:** **2003**

Firm Information	Investment Approach	Total ARMB Mandate
Organized in 1994, Cornerstone Real Estate Advisers LLC (Cornerstone) manages public and private equity real estate portfolios for institutional clients. Cornerstone is a wholly-owned subsidiary of Babson Capital Management LLC, a wholly-owned subsidiary of MM Asset Management Holding LLC, a wholly-owned subsidiary of MassMutual Holding LLC. Cornerstone is headquartered in Hartford, Connecticut with offices in the U.S., Europe, and Japan. As of March 31, 2013 Cornerstone and its subsidiaries manage or service over $40.7 billion of real estate equity and debt in the private and public markets. **Key Executives:** ***Denise Stake***, Portfolio Manager	Cornerstone's mandate for ARMB is to invest in core real estate properties in high barrier to entry markets across the major property types (office, retail, industrial, apartments). Research drives the investment process by providing fundamental analysis for prospective investments and developing diversification parameters to seek appropriate risk-adjusted returns. **Benchmark:** NCREIF Property Index	Assets Under Management: 06/30/13: $97,343,054

Concerns: Manager is currently underperforming the benchmark.

6/30/2013 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	2.16%	7.64%	10.19%	-0.11%
Fee	0.16%	0.34%	0.66%	0.65%
Manager (net)	2.00%	7.30%	9.53%	-0.76%
Benchmark	2.87%	10.73%	13.14%	2.79%

CORNERSTONE

Company Overview

Presentation for:

Alaska Retirement Management Board

September 19, 2013

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Section II
ARMB Individually Managed Portfolio

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Section I

U.S. Economy and Real Estate Market Update

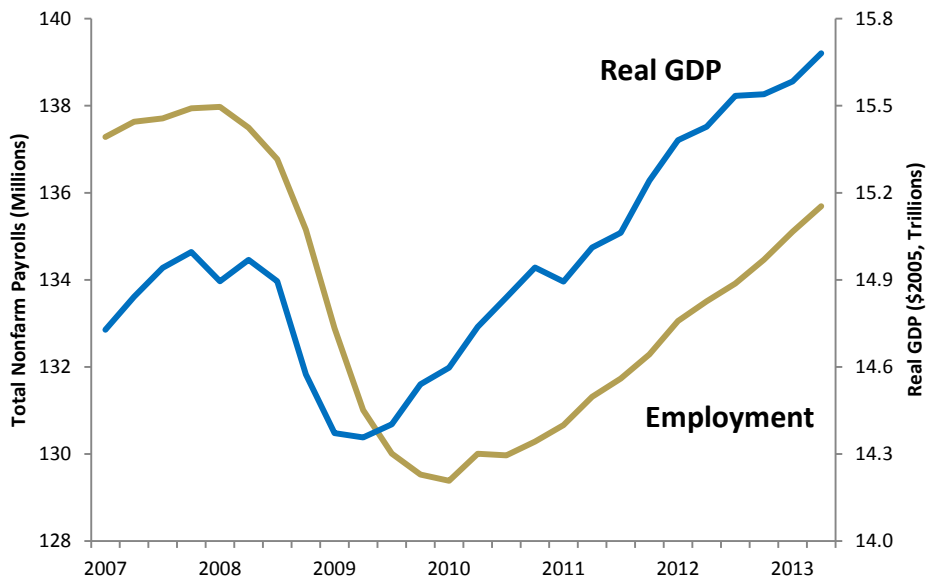
Research Summary

- **U.S. recovery continues on a slow trajectory**
  - Private sector resilience outweighs public sector drags
  - Fed tapering and fiscal debate are near term challenges, heightened tail risk from overseas events
  - Greater clarity on European outlook, and slower growth in Asia, have improved the U.S.' relative standing
- **Real estate equity markets continue upswing**
  - Commercial Property Price Index continues steady recovery
  - Transaction volume up 14% in Q2 2013 over Q2 2012, up 26% y-t-d per Real Capital Analytics data
  - International capital flows into U.S. real estate are increasing for core, value add and debt
  - Fed tapering and improving economy fuel interest rate rise, cap rates hold steady
- **Investors seeking yields shift further out on the risk spectrum**
  - Stabilized core properties in all markets are very competitively priced
  - Apartments everywhere, and CBD office in some markets, have fully recovered to pre-recession peak pricing
  - More investors consider core-plus and value added assets, and secondary markets
- **Real estate fundamentals continue to improve**
  - Broader private sector job growth lifts occupancies across all sectors and major markets
  - Supply growth is ramping up, particularly in apartments and limited service hotels
  - Supply growth will remain in the 1% to 2% range through 2014 in all property sectors
- **Improved debt market, led by robust CMBS issuance year-to-date, and a resurgence in bank lending**

Source: Cornerstone Research, August 29, 2013

U.S. Recovery – Our Baseline Forecast

Levels of Total Employment and Real Gross Domestic Product



Real GDP – Fiscal headwinds and European recession restrain first half GDP. Domestic growth engines housing and autos are re-engaging, but faster second half growth are challenged by fiscal policy and overseas events adding to uncertainty.

Employment – Surprisingly resilient with monthly job gains above 200,000 in the first half. Improving in breadth and depth, beyond the tech, energy, and health care sectors. Government and defense are drags on growth, construction hiring will accelerate.

Real Estate Fundamentals – Improving occupancies, favorable supply/demand trends, and active capital markets. Uneven pace of recovery across markets.

Positives: Housing recovery, steady private sector job gains and retail sales, auto sector strengthens

Challenges: Fiscal policy uncertainty, Europe, slowdown in Asia, Middle East, Fed tapering… *uncertainty*

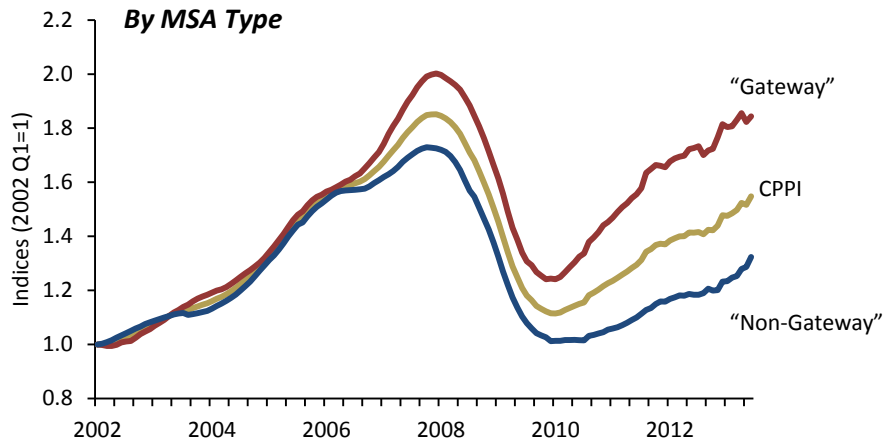
	2010	2011	2012	2013f	2014f
U.S. GDP Growth & Forecast	**2.5%**	**1.8%**	**2.8%**	**1.8%**	**2.4%**
Employment Growth & Forecast	**-0.7%**	**1.2%**	**1.7%**	**1.6%**	**1.9%**

Sources: Bureau of Labor Statistics, Bureau of Economic Analysis, Cornerstone (August 29, 2013)

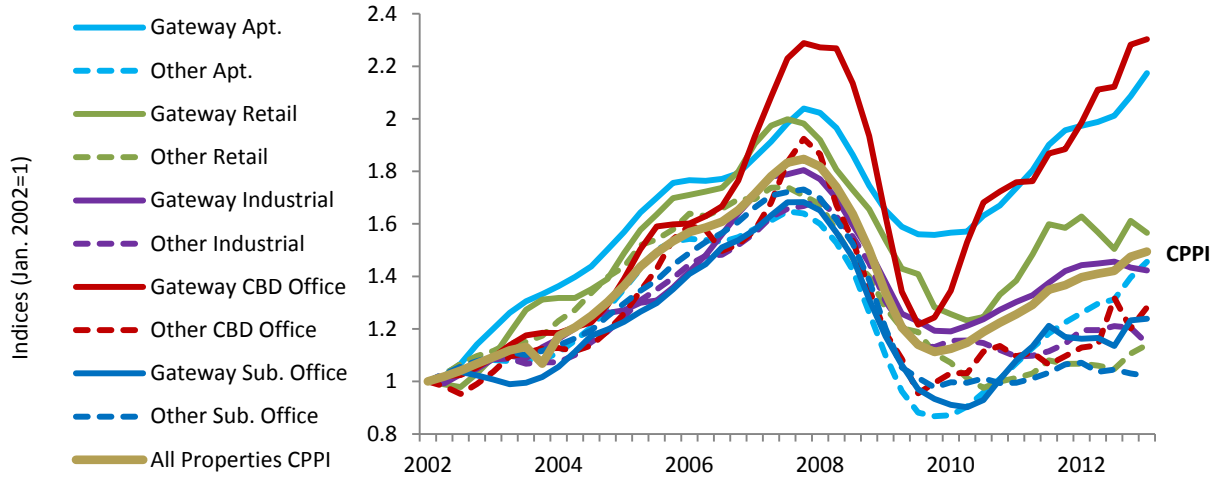
CORNERSTONE

Commercial Property Price Recovery

Aggregate indices mask divergent pricing dynamics (Moody's/RCA national all properties index and sub-indices)



- The aggregate CPPI masks wide variation in recovery timing and speed across different metro and property sector segments.
- Well leased, high quality properties in "Gateway" markets (San Francisco, New York, Washington D.C., Boston, Los Angeles and Chicago) saw an earlier and stronger recovery, with LA and Chicago lagging the others
- Price recovery has been particularly robust for prime apartment and CBD office in "Gateway," coastal metros. Investor demand for quality cash flows in the face of economic uncertainty, low bond yields and lack of product offered for sale have led to aggressive bidding for well leased trophy properties.
- Recovery is broadening, fueled by both slow but steady improvement in the economy and leasing markets and improving financing conditions.



CBD office, apartment and retail sectors in six "Gateway" metros have recovered ahead of national all properties index (CPPI). Gateway industrial has recovered with the CPPI.

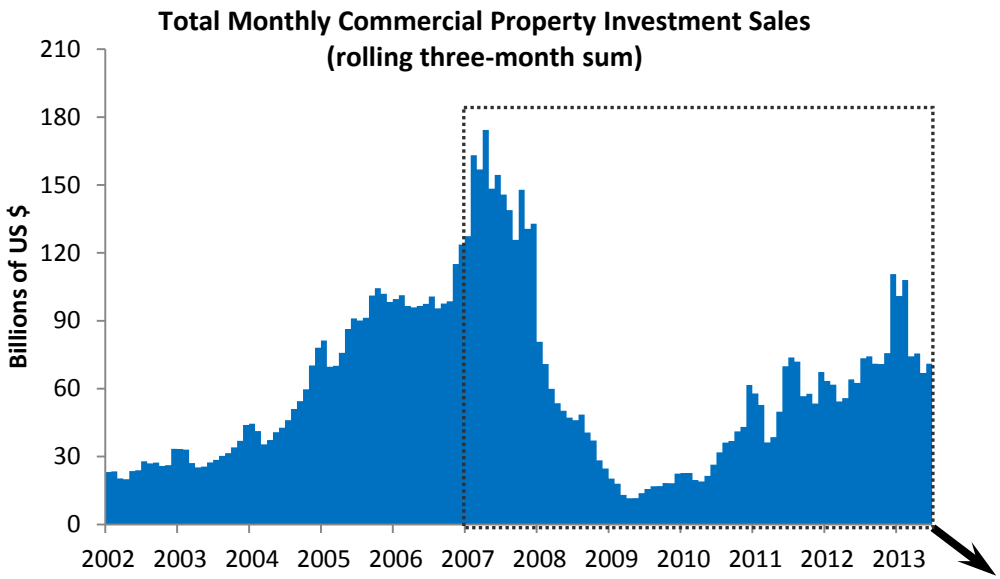
Property price recovery in all "other" metros, as well as Gateway suburban office, has lagged behind the CPPI.

Top chart shows monthly data through June 2013. Bottom chart shows quarterly data through 2Q13.
Sources: Moody's Investor Services, Real Capital Analytics (RCA), Cornerstone Research (August 20, 2013).

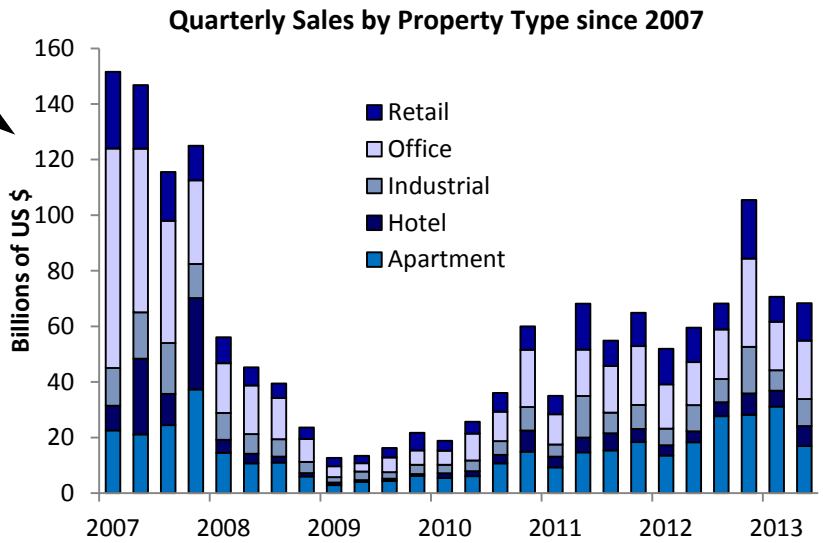
CORNERSTONE

Transactions Volume Continues to Improve and Evolve

A modest but improving economic recovery, low yields in other asset classes fuel investor appetite for Real Estate



- Property transaction markets remain competitive with investor interest focused on both coastal Gateway and (increasingly) secondary markets as well as assets with leasing opportunities.
- Sales activity totaled more than $145 billion in the first half of 2013, an increase of 24% over the first half of 2012.
- Transaction activity in the second quarter of 2013 was down 4% from the first quarter due to weaker activity in the apartment sector as investor interest broadened to other property sectors, and the apartment development cycle continued to evolve.



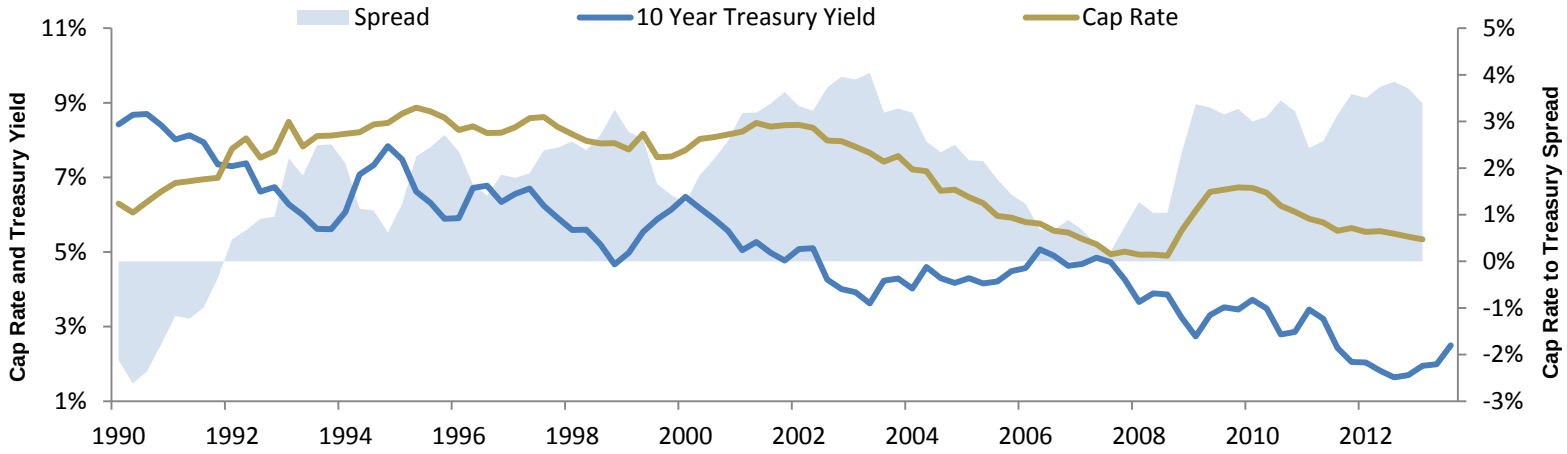
- Pricing and sales activity in secondary and tertiary markets is improving and expected to accelerate over the next couple of years as the economic recovery strengthens and the mortgage financing environment continues to improve with limited new supply in most metros.
- The share of property sales classified as distressed continues to decline as both fundamentals and liquidity in secondary markets improves.

Transaction of properties selling for $2.5 million and above. Data through Q2/June 2013
Source: Cornerstone, Real Capital Analytics, July 25, 2013

CORNERSTONE

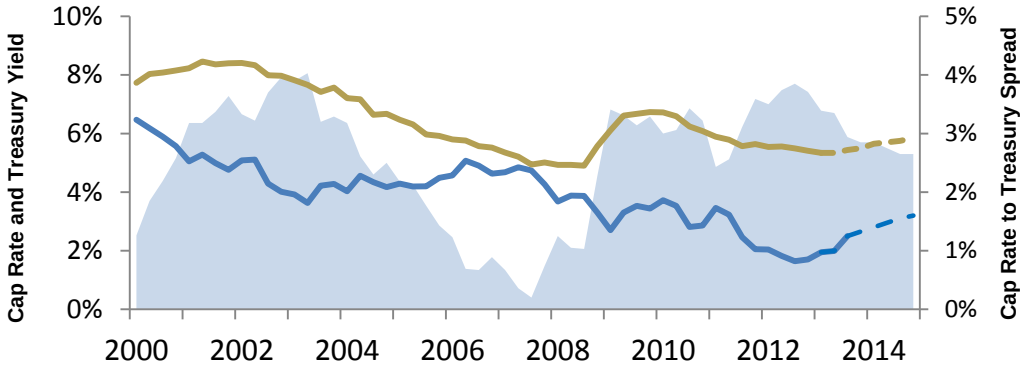
Core Real Estate Priced Favorably on a Relative Basis

Average NCREIF Property Index (NPI) cap rate spread to 10 year Treasury yield well above historical average



Source: Federal Reserve Board, NCREIF.

And expected to remain relatively high over the next couple of years



Cap rate is value weighted average of cap rates inferred from appraisals of properties held in the NPI. Treasury yield is average of end of week values during each quarter. Quarterly data with cap rates through 2013 Q1 and Treasury yields through 2013 Q3 as of July 18. Dashed lines are base case forecasts as of July 18, 2013.

Sources: Cornerstone Research, NCREIF, Federal Reserve.

CORNERSTONE

U.S. Property Sector Fundamentals 2013 Q2

Improvement across all property types

- **Apartment: Fully recovered, 4.6% vacancy, strong demand persists**
  - Broad based recovery continues even as single family housing markets recover
  - Annualized rent growth climbs to 3.1%
  - Supply pipeline still lags demand
  - Competitive pricing for stabilized assets in major markets
- **Office: Steady improvement is uneven across markets**
  - Vacancy improves to 15.2%, led by downtown submarkets (12.3%)
  - Select tech and energy driven submarkets performing very well
- **Industrial: Recovery accelerates again in Q2**
  - Availability drops another 30bps to 12.0%, reaching a five-year low
  - Improvement in both coastal and interior markets, supply can ramp up quickly
- **Retail: Steady gains in occupancies across most markets**
  - Vacancy declines 30 bps to 12.2%, down from 2011Q2 peak of 13.2%
  - Supply growth remains near historic low levels, with moderate demand
- **Hotel: Room rates are recovering, occupancy is approaching new peak levels**
  - 65.9% average occupancy and 5% RevPAR growth nationally
  - Top 25 markets 75.5% occupancy, 6.9% RevPAR growth
  - Supply growth concentrated in limited service sector

Source: Cornerstone Research (July23, 2013)

Section II

ARMB Individually Managed Portfolio

ARMB/Cornerstone IMA – Portfolio Summary

June 30, 2013

Investment Name	Type	Date Acquired	Current Qtr Leased	Prior Qtr Leased	Square Feet/ Units	Current Qtr Value
330 North Brand Boulevard	Office	12/30/2003	75%	86%	323,467	$74,700,000
Arden Hills I, II & III	Industrial	03/04/2004	97%	97%	374,370	22,700,000
Parallel 41	Apartment	9/4/2013*	99%	N/A	124 Units	45,100,000**

** Scheduled Closing*
*** Price of property at sale*

CORNERSTONE

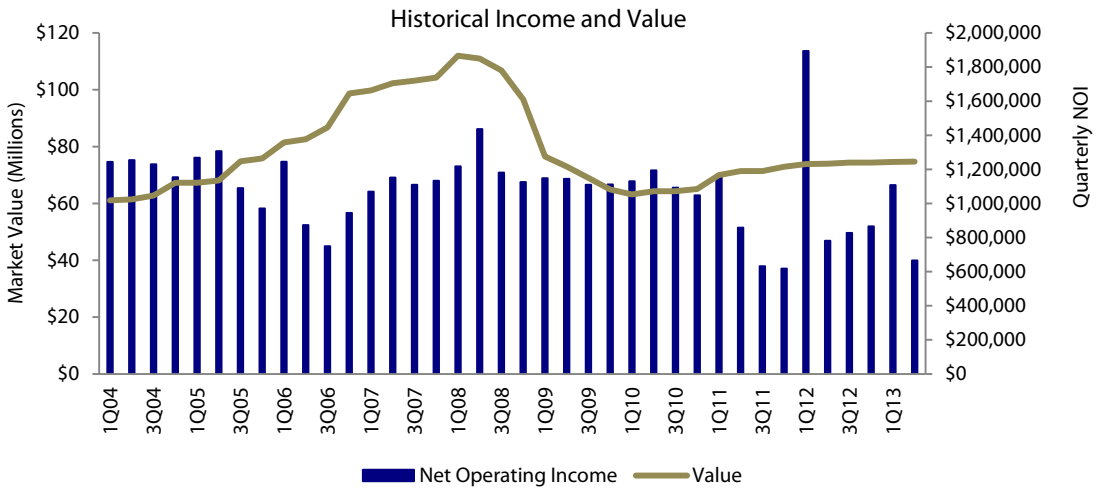
330 North Brand Boulevard

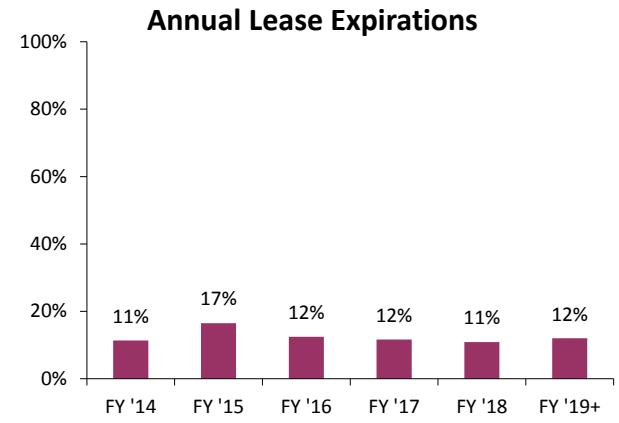
Glendale, California

- 323,467 SF office property
- Acquired 12/30/03
- Total Cost: $74,895,850 ($232/SF)
- Current Market Value: $74,700,000 ($231/sf)
- Leased: 75%
- Leasing activity – over FY 2013
    - New leasing of 20,921 SF
    - Renewals of 16,062 SF
- Focus on leasing for FY 2014
- Hold for 2014, reevaluate as leasing and market conditions improve

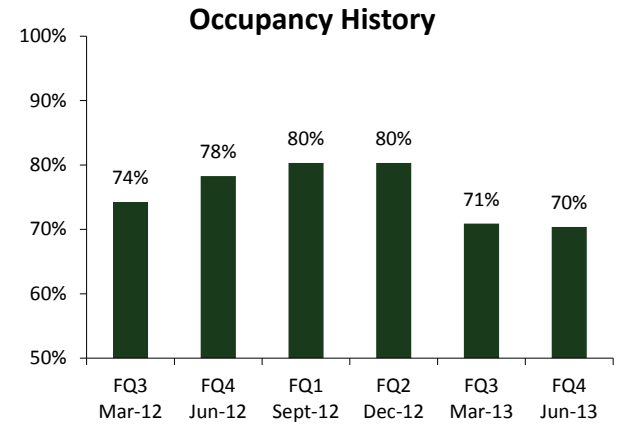
330 North Brand Boulevard

Glendale, California





	330 North Brand	
	Office Occupancy Rate %*	
	Current	Year Ago
U.S.	84.8%	84.2%
Los Angeles Market	82.9%	83.2%
Tri-Cities	81.1%	82.3%
Glendale	78.9%	77.5%



CORNERSTONE

* Source: CBRE-EA
All data as of June 30, 2013

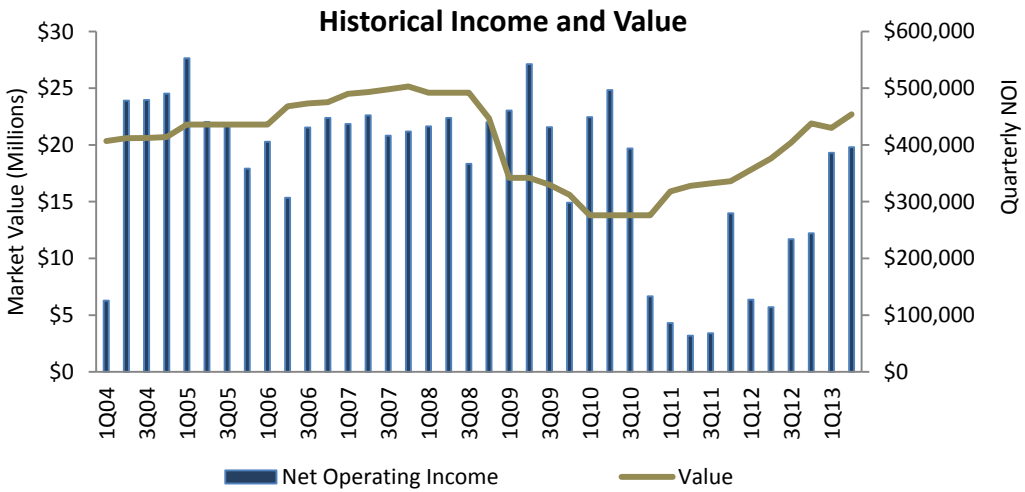
Arden Hills I, II, & III

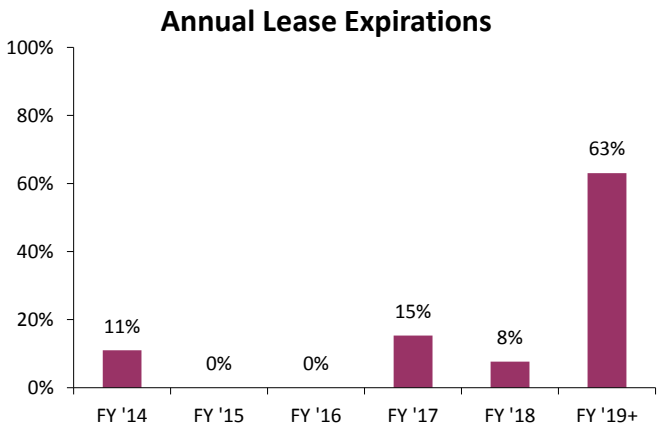
Arden Hills, Minnesota

- 374,370 SF industrial property acquired 03/04/04
- Occupancy: 97%
- Total Cost: $24,263,928 ($65/SF)
- Current Market Value: $22,700,000 ($61/SF)
- Leasing Activity: Recent release of UPS space to a three year contract (18,859 SF)
- Currently marketing for sale
  - Near to full occupancy
  - Interest in Industrial space in the market (cap rates compressing)

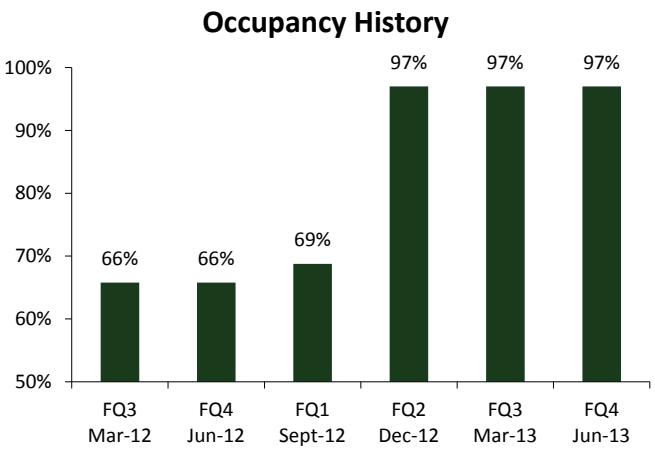
Arden Hills I, II, & III

Arden Hills, Minnesota





	Arden Hills	
	Industrial Occupancy Rate%*	
	Current	Year Ago
U.S.	88.0%	86.9%
Minneapolis	92.1%	89.3%
North Central	93.6%	90.8%



CORNERSTONE

* Source: CBRE-EA
All data as of June 30, 2013

Parallel 41 – Stamford ,Connecticut

Property Type / Size:	Apartment – 124 units (11% affordable)
Location:	1340 Washington Boulevard Stamford, CT (Stamford/Bridgeport MSA) 06902
Year Built:	2012
Acquisition	
Cost:	$45.1 million ($363,710 per unit)
Date:	September 5, 2013 (estimated)
Underwritten Returns:	4.4% Year 1 NOI, 6.3% unleveraged IRR*
Occupancy:	98% occupied/100% leased

Highlights

- Class A new construction, completed in 2012 with high-end amenity package.
- Good location in Stamford, CT near restaurants, night life, several significant employers, University of Connecticut – Stamford
- Short walk to train station with service to New York City
- Barrier to entry market with high single family home prices (median home price in Stamford City is $474,000, Stamford metro $383,000)

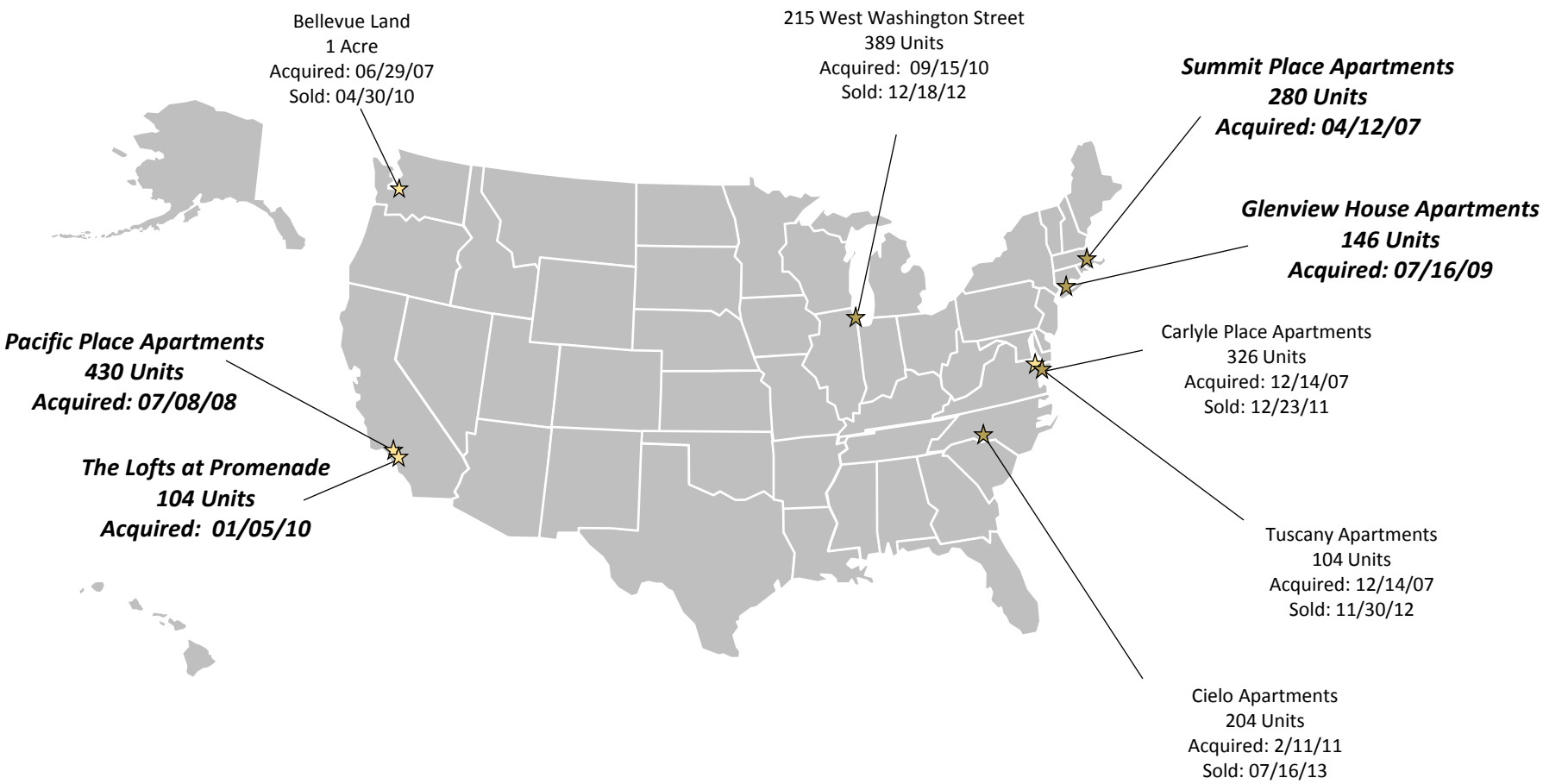
CORNERSTONE

*Projected returns are based on information provided by Cornerstone Research, Regional Offices, Portfolio Management, and other sources. They are based on property level and micro/macro economic assumptions and, as such, are subject to revision and cannot be guaranteed.

Section III

Cornerstone Apartment Venture III

CAV III Investment Overview



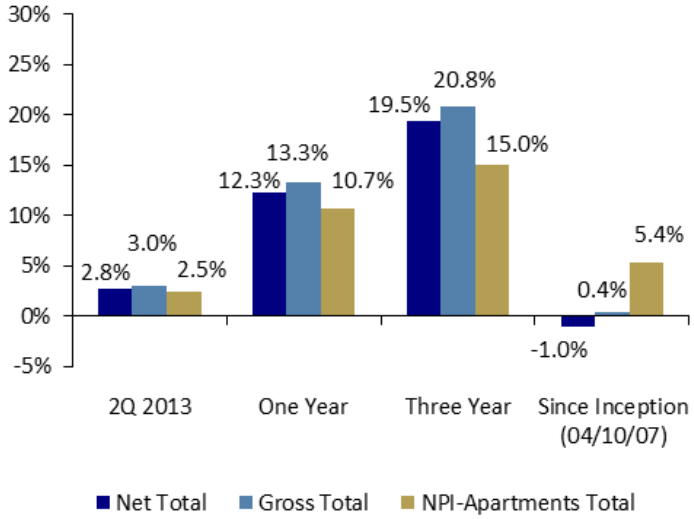
CORNERSTONE

CAV III Review

- **Fund strategy: To invest in to-be-built apartment projects through joint venture partnerships to mitigate construction risk, operate efficiently, and maximize exit price within the Fund's term**
- **Raised $360 million of equity from 10 investors**
  - NLI sold its interest to MM in November 2012
- **Acquisition period expired December 2008**
  - Extended to December 2009, investments required to be acquired by December 2010
  - Fund activity utilized about 64% of committed equity, no additional capital calls anticipated
- **Invested $230 million of equity in nine investments**
  - To date sold five investments, returned $132.6 million ($113.2 million from investment sales)
  - Four remaining investments total $339.1 million gross market value ($157.3 million net) as of June 2013
- **Fund maturity December 2013, two one-year extension options**
  - Plan to sell all remaining investments within first extension period

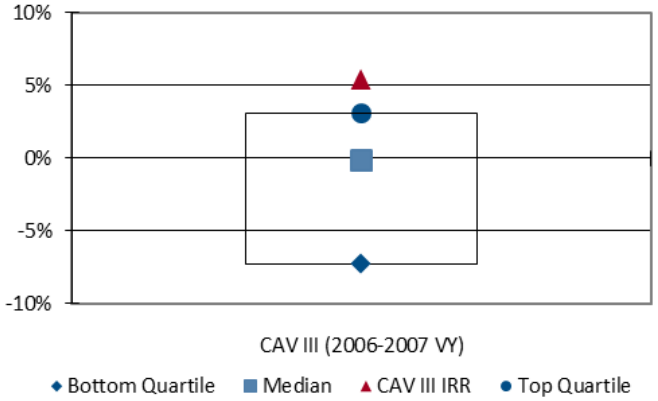
Portfolio Performance

Performance has exceeded core apartment benchmark once investments stabilized



Time-weighted returns as of June 30, 2013

CAV III is a top performer on a since inception basis when compared to other value-add funds with a similar vintage year



Source: NCREIF & Townsend Group First Quarter 2013 Performance Report

Portfolio Forecast Performance (2014 final liquidation):
6.2% (4.7% net) leveraged gross IRR
1.28 (1.22 net) gross equity multiple

CORNERSTONE

Past performance is not a guarantee of future performance.
Estimates are based on property-level and micro/macro economic assumptions and, as such, are subject to revision and cannot be guaranteed.
Portfolio forecast is as of June 30, 2013.

Disclosures

The information provided herein is believed to be obtained from sources deemed to be accurate, timely and reliable. However, no assurance is given in that respect. The reader should not rely on this information in making economic or other decisions.

The analysis contained herein is intended to demonstrate Cornerstone's investment management process, and should not be considered investment advice. Any opinions expressed herein reflect our judgment at this date and are subject to change without notice, as are statements of market conditions and trends.

Certain of the statements contained herein are statements of future expectations and other forward-looking statements that are based on our current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements.

This material contains confidential information, including trade secrets about the Firm's strategy and operations and confidential commercial and financial information which, if disclosed, could cause competitive harm to the Firm. Such confidential information is exempt from disclosure under public records laws applicable to certain investors.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Infrastructure Investment	ACTION:	X
DATE:	September 19, 2013	INFORMATION:	

BACKGROUND:

Infrastructure investments can be characterized by high barriers to entry with inelastic demand as a result of natural monopolies, government regulation and/or contractual protections. Infrastructure investments tend to be long-term with low correlation to traditional investment asset classes, have a lower exposure to business cycles and a predictable cash yield. Combined, this makes infrastructure a potential inflation hedge and facilitates long-term pension liability matching. Some categorical examples of infrastructure investments include transport, utilities, communication, and conventional and renewable energy.

In February 2013 the Alaska Retirement Management Board (ARMB) directed staff to engage Callan Associates to conduct a search for one or more infrastructure investment manager(s) considering both private and public investment strategies.

Callan conducted a search process and presented staff with qualified private and public infrastructure managers. Staff reviewed the search material and selected a number of managers to conduct further due diligence and site visits. As a result, staff is recommending ARMB consider the investment strategy proposed in this action memo.

STATUS:

The infrastructure investments will be included in the Real Assets asset class and complement ARMB's existing investments in real estate, farmland, timberland, energy, and TIPS. The Fiscal Year 2014 asset allocation to Real Assets is 17% +/-8%. The long-term target investment level in infrastructure investments will be 12.5% of the Real Assets portfolio, or 2.125% of ARMB's total plan assets. The sizing of the infrastructure investment strategy was driven by a desire to build a portfolio that would contribute similarly as ARMB's real estate, farmland, and timberland portfolios and the practical realities of the overall Real Assets allocation.

Staff reviewed public strategies and both open-end and closed-end private investment strategies. Infrastructure is characterized by large, long-lived assets, with an expected stable yet growing cash flow stream. This profile compels holding assets for the long-term. While staff found the investment managers and strategies of the private closed-end funds to be compelling, staff concluded the terms of these funds, potentially demanding a 20 year lock-up, as unacceptable given the closed nature of the defined benefit plans. Staff expects infrastructure to be an integral part of the Real Assets portfolio for

the long-term but having liquidity options is important to best manage the ARMB portfolio going forward.

Staff concluded that private open-end funds, as well as public strategies, do offer an opportunity for ARMB to invest in this attractive asset class. Open-end funds, which ARMB also utilizes in real estate investing, offer the ability to invest in illiquid assets while having the ability to redeem interests as may be required over time (i.e. pay benefit payments, rebalance portfolio). The concept of the open-end fund is that a large pool of commingled investors can build a portfolio of assets to hold for the long-term but also satisfy individual liquidity requirements through new investor commitments coming into the Fund as well as income reinvestment of current investors.

The investment strategy proposed by staff is considered low to moderate risk on the infrastructure investing spectrum with an expected return of 10-12% and a current cash yield of 5-7%. The primary elements of the strategy are:

1) A focus on core infrastructure. These are long-lived existing assets which are essential to society and the economy and are expected to generate stable and predictable cash flows which are often linked to inflation.

2) Developed markets global strategy. Most of the infrastructure products in the marketplace are global strategies given the broader opportunity set. The ARMB strategy will follow this approach but will focus on developed countries. Emerging markets are not a targeted component of the proposed strategy due to regulatory and political risk. Additionally, the ARMB strategy is primarily focused on current yield which is inconsistent with the capital appreciation focus of developing market strategies. A limited emerging market infrastructure exposure may be pursued as part of the public infrastructure portfolio.

3) Diversified. While infrastructure assets are often very large. Utilizing open-end funds and public market strategies will allow ARMB to build a well-diversified portfolio.

Staff reviewed two open-end infrastructure managers, J.P. Morgan and Industry Funds Management (IFM), and is recommending investments in both funds.

Industry Funds Management is an independently owned investment management company. The company has been investing in Australian infrastructure since 1994 and began investing in global infrastructure in 2004. The global fund currently holds 8 assets valued at $8 billion on behalf of 85 investors. Leverage of the fund is 46.5% (60% policy maximum). The track record of the global infrastructure fund is 9.1% net annualized since its 2009 inception through June 30, 2013. A quarterly redemption mechanism is available but is subject to liquidity needs of the Fund and availability of capital. The long term target mix of the Fund is 50% North America and 50% Europe. A commitment to the IFM fund is expected to be invested within a 9 to 18 month period.

J.P. Morgan Infrastructure Investments Fund is part of the Global Real Assets group of J.P. Morgan. This group also manages the J.P. Morgan Strategic Property Fund which ARMB is an investor. J.P. Morgan established the infrastructure fund in 2007. The fund currently holds 9 assets valued at $7.5 billion on behalf of 89 investors. Leverage of the fund is 59% (75% policy maximum). The track record of the J.P.

Morgan infrastructure fund is 1.2% annualized net since its inception in 2007 through June 30, 2013 with more recent annualized net returns as follows: 3-year 6.7%; 1-year 6.4%. A semi-annual redemption mechanism is available but is subject to liquidity needs of the Fund and availability of capital. A commitment to the J.P. Morgan fund is expected to be invested within a 12 month period.

Due to more attractive liquidity provisions and fee structure, staff anticipates pursuing a $200 million investment in the IFM fund and a $100 million investment in the J.P. Morgan fund subject to additional negotiation.

Recommendations from the public infrastructure manager search will be brought to ARMB at the December board meeting.

RECOMMENDATION:

That the Alaska Retirement Management Board direct staff to hire IFM and J.P. Morgan to manage up to $300 million in infrastructure investments subject to successful contract and fee negotiations.

INDUSTRY FUNDS MANAGEMENT

September 2013

Strictly Confidential

Contents

Section	Topic	Page
1	Introduction to IFM	5
2	IFM Global Infrastructure Fund	11
	Appendix I: Portfolio Companies	25

Presenter bios

Alec Montgomery – Head of Infrastructure – North America

Alec joined IFM in October 2008 and is responsible for IFM's infrastructure investment business in North America and managing the New York team. He joined IFM after 15 years of banking experience focused on project and infrastructure finance. He is an IFM board director on Duquesne Light Holdings and Essential Power.

Most recently he was the head of the infrastructure finance business at the Royal Bank of Scotland (RBS) in New York. Prior to RBS, he served in senior positions with Credit Agricole Indosuez (New York), Deutsche Bank (New York), and the Union Bank of Switzerland (in New York and Zurich). Prior to this, Alec worked in real estate development and provided econometric consulting services to electric utilities .

He holds a Bachelor of Arts in Economics from Harvard College and a Master of Business Administration with a concentration in International Finance from Babson College.

Rena Pulido – Director Business Development – North America

Ms Pulido joined IFM in April 2012. She previously worked at Ares Management LLC as Principal, Investor Relations, where she was responsible for heading up investor relations for their commercial real estate group. Prior to this, Ms Pulido was Managing Director with Macquarie Capital USA, responsible for the tax structuring of their real estate funds in North America and Europe.

Ms Pulido completed a Graduate Diploma in Applied Finance and Investment from the Securities Institute of Australia and a Bachelor of Business from the University of Wollongong. She is a chartered accountant in Australia.

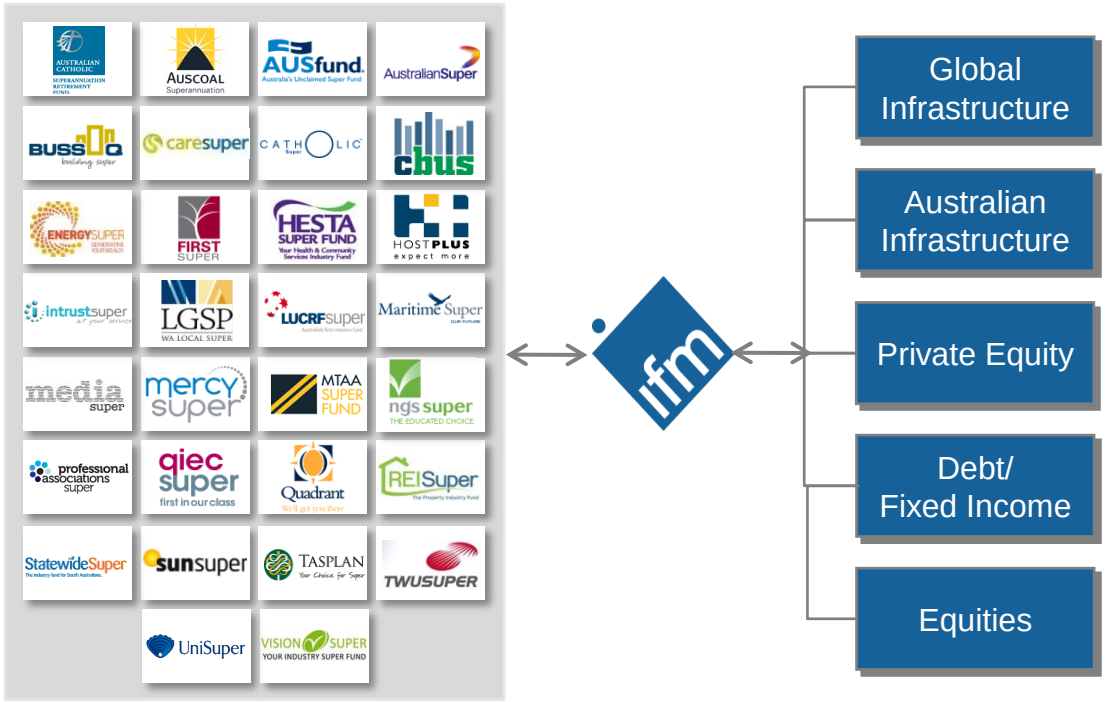
1 INTRODUCTION TO IFM

History, Culture and Alignment, Track Record

About Industry Funds Management (IFM)

INDEPENDENT AND FULLY ALIGNED WITH OUR INVESTORS

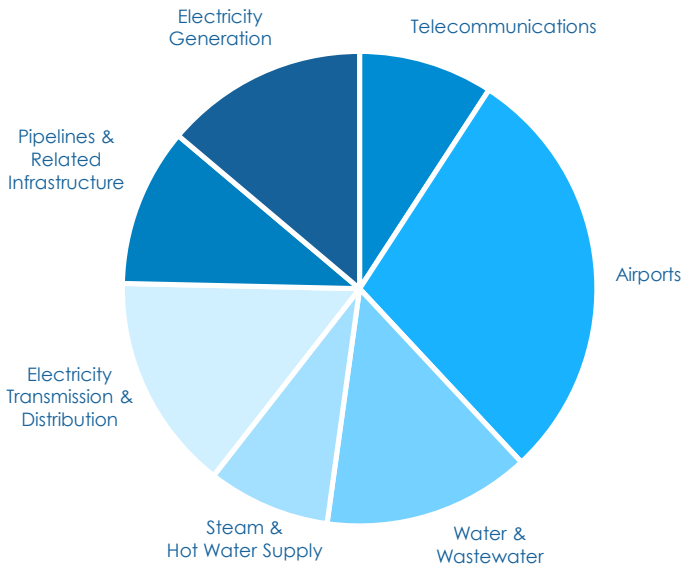
- Global investment management company with offices in New York, London and Melbourne
  - US$42 billion under management across a range of investment products
  - US$14 billion of global infrastructure investments under management
- Independent and fully aligned investment manager
  - Owned by 30 pension funds
  - No conflicts or other lines of business
- Two infrastructure funds – Australian and Global
  - One of the largest international investors in infrastructure
  - Pioneer infrastructure investor with >18 year investment track record



Infrastructure investment portfolio

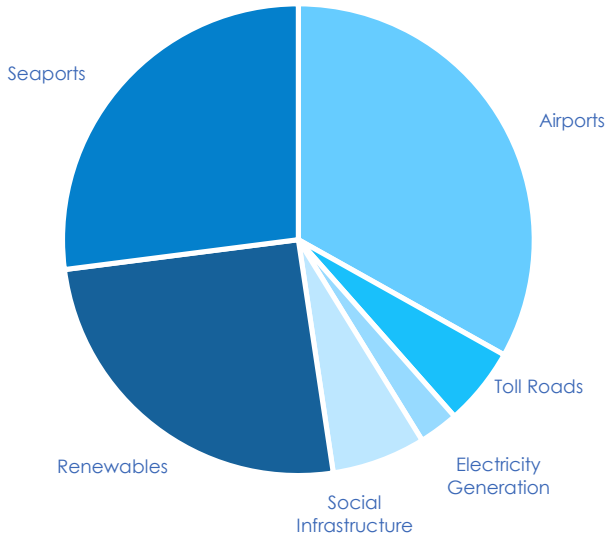
US$14.4 BILLION INFRASTRUCTURE EQUITY UNDER MANAGEMENT; 26 PORTFOLIO COMPANIES; 37 BOARD SEATS

IFM Global Infrastructure Fund



	2004 – Jun 2013
Current Assets	8
Fund Size[1]	US$8.0bn

IFM Australian Infrastructure Fund

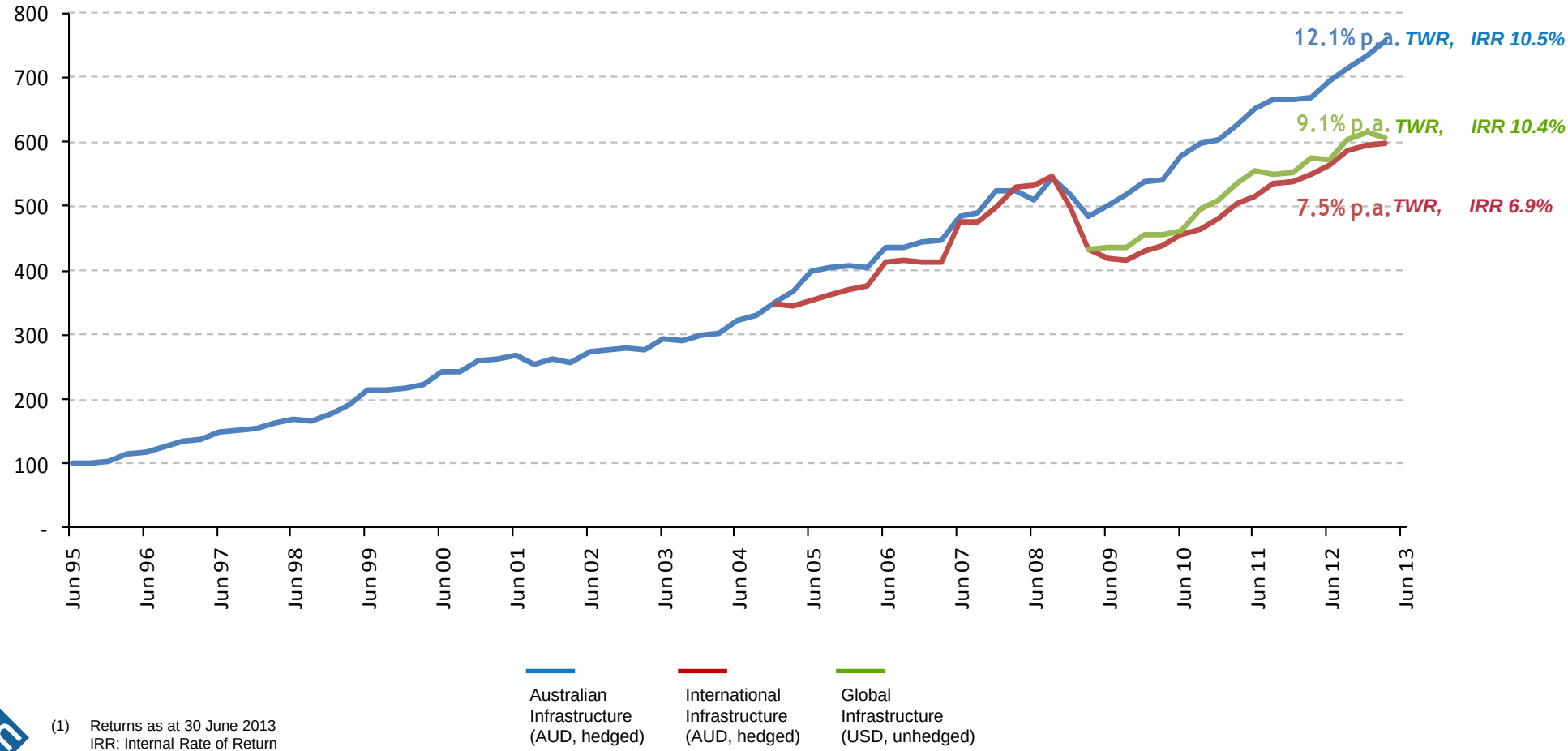


	1994 – Jun 2013
Current Assets	18
Fund Size	US$6.3bn[2]

(1) This represents total size of the Master Fund's assets as at 30 June 2013, including assets' NAV, undrawn investor commitments and Master Fund cash.
(2) Based on A$/US$ FX rate as at 30 June 2013

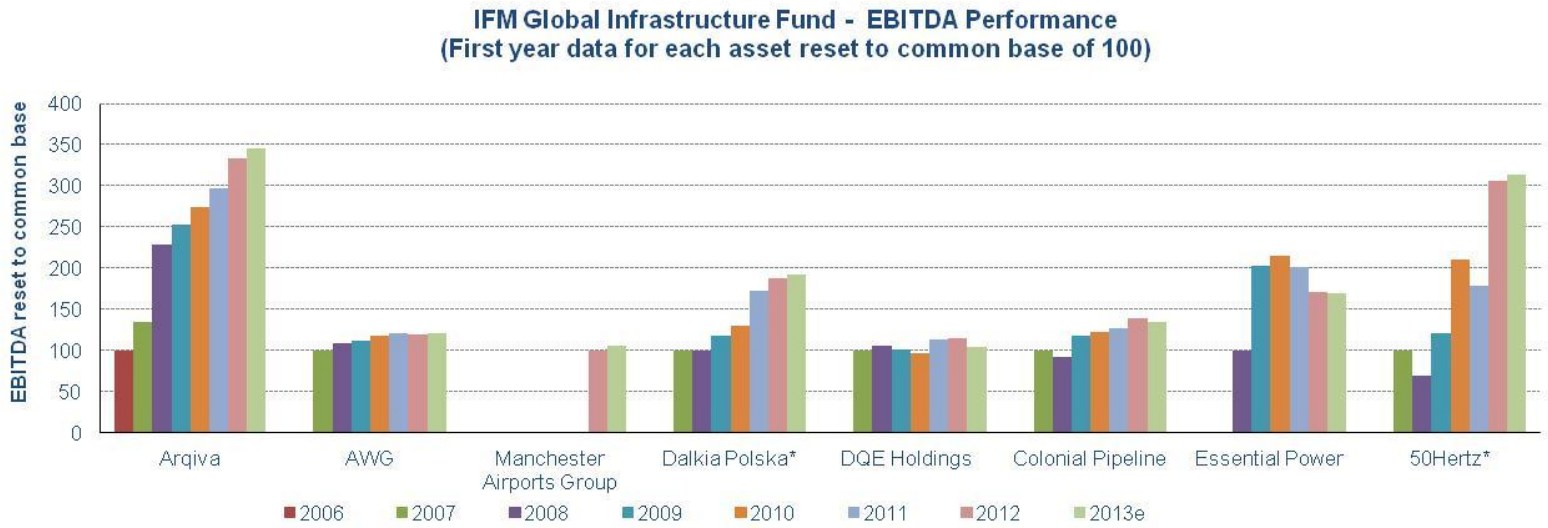
Strong, consistent returns over 18 years of investing in infrastructure

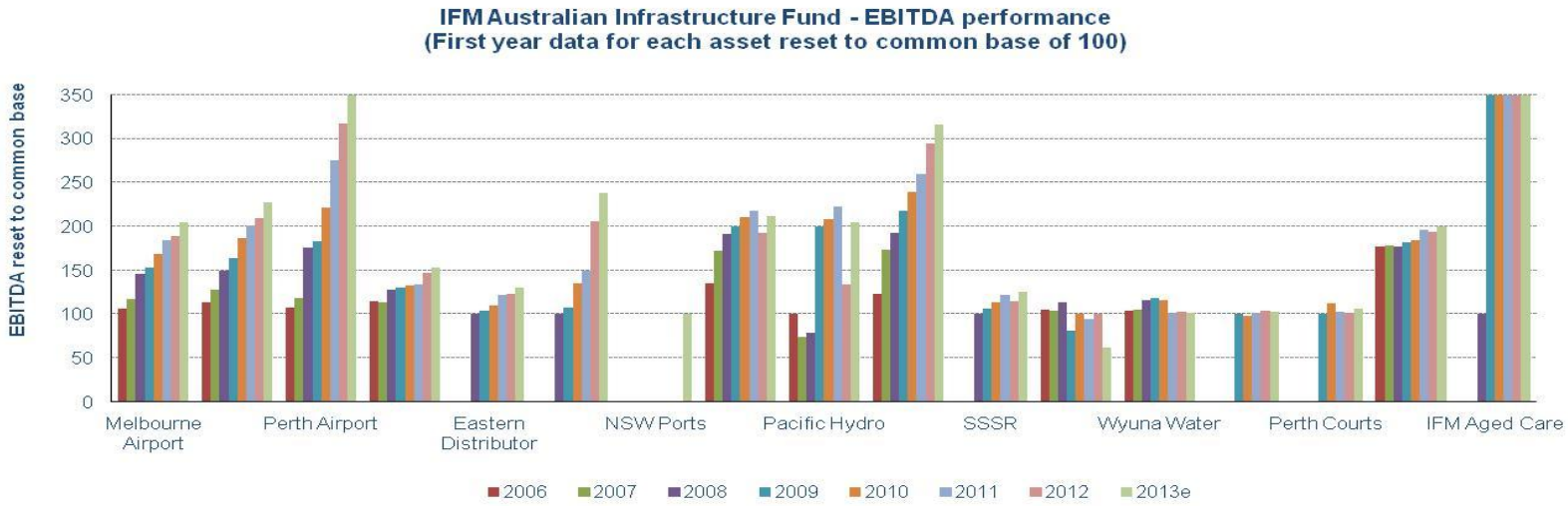
LONG-TERM TRACK RECORD[1]



(1) Returns as at 30 June 2013
IRR: Internal Rate of Return
TWR: Time Weighted Return

Strong operating performance, even through financial crisis





1) IFM originally invested in the subsidiary Dalkia Łódź in 2006, followed by Dalkia Polska in 2010. Historic performance shown includes Dalkia Łódź until 2010 and is for illustrative effect
2) 50Hertz Transmission was acquired in 2010, historic performance is shown for illustrative effect. 50Hertz Transmission's 2011 result mainly due to base year optimisation of expenses and adjustments for one-off items relating to 2010
^ 2013 actual and forecast EBITDA depending on financial year end of the company

Why IFM?

Alignment	▪ Pension fund owned manager ▪ Single minded focus on investor returns ▪ Open-ended fund: patient capital, attractive to strategic partners
Track Record	▪ >18 years in the infrastructure sector ▪ Australian Infrastructure Fund: 10.5% annual net return since 1995 ▪ Global Infrastructure Fund: 10.4% annual net return since 2009
Our Assets	▪ 27 infrastructure assets across Europe, North America and Australia ▪ Real time insight into every infrastructure sub-sector globally
Our Fund	▪ Open-end fund with truly long-term asset ownership and liability matching ▪ Core infrastructure portfolio of 8 assets, immediate diversification and growing ▪ Certainty of returns and cash yield
Our People	▪ 47 investment professionals dedicated to infrastructure ▪ Depth and experience: industry, operational, regulatory, policy-making, finance

2 IFM GLOBAL INFRASTRUCTURE FUND

Portfolio, Investment Strategy, Team, Terms

Infrastructure investments for pension funds

Key objectives for pension funds	IFM Global Infrastructure Fund
Long-lived investments to match increasing liabilities	✓
Protection against inflation	✓
Long-term returns similar to equities with less volatility	✓
Current cash yield	✓
Diversification across sector, geography and vintage	✓
Short J-curve[1]	✓
Aligned manager	✓

IFM aims to capture the underlying characteristics of core infrastructure investments

(1) The J-curve for IFM's open-end infrastructure fund tends to be shorter than closed-end funds due to a quicker investment period, no fees on undrawn commitments and a cash yield from day one

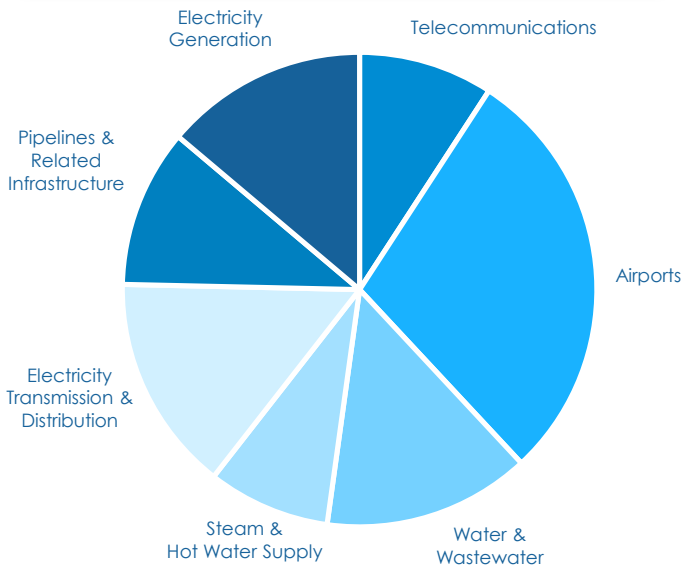
IFM Global Infrastructure Fund

CORE INFRASTRUCTURE FUND WITH 8 PORTFOLIO COMPANIES

- **85 like-minded institutional investors**
- **Transparency:** Investors know the assets from the outset
- **Cash yield[1]:** 4.7% pa since inception

- **Inflation link:** Inherent linkage via revenues, costs, debt and/or valuations
- **Open-end fund:** Long-term hold matches long-lived infrastructure assets; attractive to strategic co-investors and vendors, enabling IFM to win deals
- **Leverage[3]:** 46.5%

IFM Global Infrastructure Fund
8 portfolio companies[2]



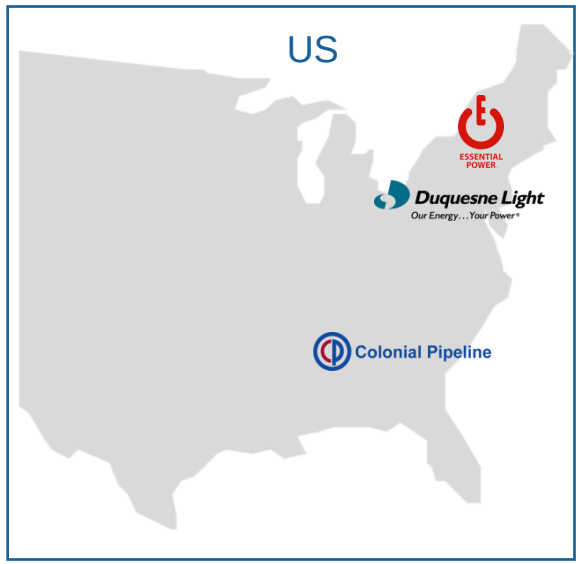
Fund growth

- Seeking new investments diversified across sector, geography and vintage year
- Strong pipeline of investment opportunities over next 12 months
- Long-term target of 50/50 split between North America and Europe

(1) Annualised quarterly cash yield, where cash yield is total cash distributions divided by the sum of the total invested capital (in US$). Correct as at 30 June 2013
(2) Breakdown as of June 30, 2013
(3) Leverage is calculated as the portfolio assets' weighted average net debt divided by total asset Enterprise Value as of 6/30/2013.

IFM Global Infrastructure Fund – current portfolio

DIVERSIFIED PORTFOLIO OF STABLE ASSETS ACROSS EUROPE AND THE US



	Acquired	Regulated
Colonial Pipeline	2007	☑
Essential Power	2008	
Duquesne Light Holdings	2006	☑

	Acquired	Regulated
arqiva	2004	☑
Anglian Water Group	2006	☑
MAG	2013	☑(2)

	Acquired	Regulated
Dalkia Polska	2010(1)	☑
50hertz	2010	☑

Wales&West Utilities: IFM acquired a 15.01% interest in WWU in June 2005 and exited in October 2012 following an approach from CKI. This was an opportunistic sale at a strong premium to IFM's valuation

(1) Dalkia Polska investment was made in 2010 following on from the 2006 acquisition of Dalkia Łódź
(2) Within the Manchester Airports Group portfolio, only Stansted is subject to regulation.

IFM global infrastructure team

IFM INFRASTRUCTURE INVESTMENT SUB-COMMITTEE

Kyle Mangini
Global Head of Infrastructure
- 22 years' infrastructure experience
- Credit Suisse First Boston and SBC Warburg

Michael Hanna
Head of Infrastructure – Australia
- 21 years' infrastructure experience
- Victorian Treasury and Arup

Christian Seymour
Head of Infrastructure – Europe
- 21 years' infrastructure experience
- Duke Energy, BHP Billiton and Bechtel

Alec Montgomery
Head of Infrastructure – North America
- 21 years' infrastructure experience
- RBS - Head of Infrastructure Finance
- Deutsche Bank and UBS

Chief Executive
Brett Himbury

Global Head of Infrastructure
Kyle Mangini

Head of Infrastructure Australia
Michael Hanna
- 3x Executive Directors
- 6x Investment Directors
- 1x Vice President
- 4x Investment Associates
- 5x Investment Analysts
- 1x Business Development Executive Director
- 1x Business Development Director
- 1x Business Development Manager and 1x Associate
- 1x Executive Assistant

Head of Infrastructure Europe
Christian Seymour
- 2x Executive Directors
- 3x Investment Directors
- 2x Vice Presidents
- 4x Investment Associates
- 2x Investment Analysts
- 1x Business Development Executive Director
- 1x Business Development VP
- 1x Bus. Development Associate and 1x Analyst
- 1x Office Manager
- 2x Assistants

Head of Infrastructure North America
Alec Montgomery
- 1x Executive Director
- 3x Investment Directors
- 1x Vice President
- 4x Investment Associates
- 2x Investment Analyst
- 1x Business Development Executive Director
- 1x Business Development Director
- 1x Business Development Vice President
- 1x Business Development Analyst
- 1x Investor Relations Director
- 1x Office Manager

Commercial (legal/tax)
Joshua Lim
- 6x Commercial Directors
- 1x ESG Director
- 3x Commercial Associates
- 2x Compliance staff
- 1x Legal Coordinator
- 2x Executive Assistants

Note: For full biographies of the senior team members, please refer to the Appendix

IFM has a diverse, global team of infrastructure experts …

Kyle Mangini
Global Head of Infrastructure

Europe

Christian Seymour
Head of Infrastructure – Europe

Frederic Michel-Verdier
Executive Director

Manoj Mehta
Executive Director

Werner Kerschl
Investment Director

Jayco Wamsteker
Investment Director

Lars Bespolka
Investment Director

Deepu Chintamaneni
Vice President

Olivier Sueur
Vice President

Tatjana van Vloten
Associate

Peter McCosker
Associate

Victor Mateu
Associate

Ruwantha Vidanaa-rachchi
Associate

Jaime Siles
Analyst

Guillaume Camus
Analyst

Kevin Kaiser
Analyst

Global Business Development

Annabel Wiscarson
Executive Director (Eur)

Brian Clarke
Executive Director (US)

Eddy Schipper
Executive Director (Aus)

Jojo Granoff
Investor Rel.(US)

Anna Demarmels
Bus. Dev. VP (Eur)

Hillary Ripley
Bus. Dev. VP (US)

Rena Pulido
Bus. Dev. Director (US)

Charles Brooks
Director (Aus)

Johanna Stanley
Bus. Dev. Associate (Eur)

David Stirton
Bus. Dev. Analyst (Eur)

Lucy Liu
Bus. Dev. Manager (Aus)

Stuart Place
Bus. Dev. Associate (Aus)

North America

Alec Montgomery
Head of Infrastructure – North America

Tom Osborne
Executive Director

Brooks Kaufman
Investment Director

Jamie Cemm
Investment Director

Anthony Edwards
Investment Director

Wei-Sun Teh
Vice President

Neil Doherty
Associate

Kittredge Murphy
Associate

Avery Brooks
Associate

Acheareus Hart
Associate

Jase Scott
Analyst

David Seelbinder
Analyst

Australia

Michael Hanna
Head of Infrastructure – Australia

Julio Garcia
Executive Director

Michael Thompson
Executive Director

Quentin Law
Executive Director

Michael Landman
Investment Director

Jill Rossouw
Investment Director

Marigold Look
Investment Director

Adrian Croft
Investment Director

Danny Elia
Investment Director

Janice Morris
Investment Director

Manish Rastogi
Vice President

May Soh
Associate

Andrew Dagley
Associate

Timothy May
Associate

Brian Ho
Associate

Antony Tirtaatmadja
Analyst

Christian S. Mackenzie
Analyst

Jeff Lu
Analyst

Catherine Langley
Analyst

Julian Gray
Analyst

Global Legal and Commercial

Joshua Lim
Executive Director

Azhar Abidi
Director, Sustainability & Responsible Investment

Mandeep Mundae
Director

Peter Mordue
Director

Lawrence Wong
Taxation Director

Gabriel Gati
Director

Cara Elsley
Director

Sam Magee
Director

Jin Min Song
Taxation Associate

Josh Crane
Associate

Rose Li
Taxation Associate

Gerard Fullarton
Risk & Compl. Manager

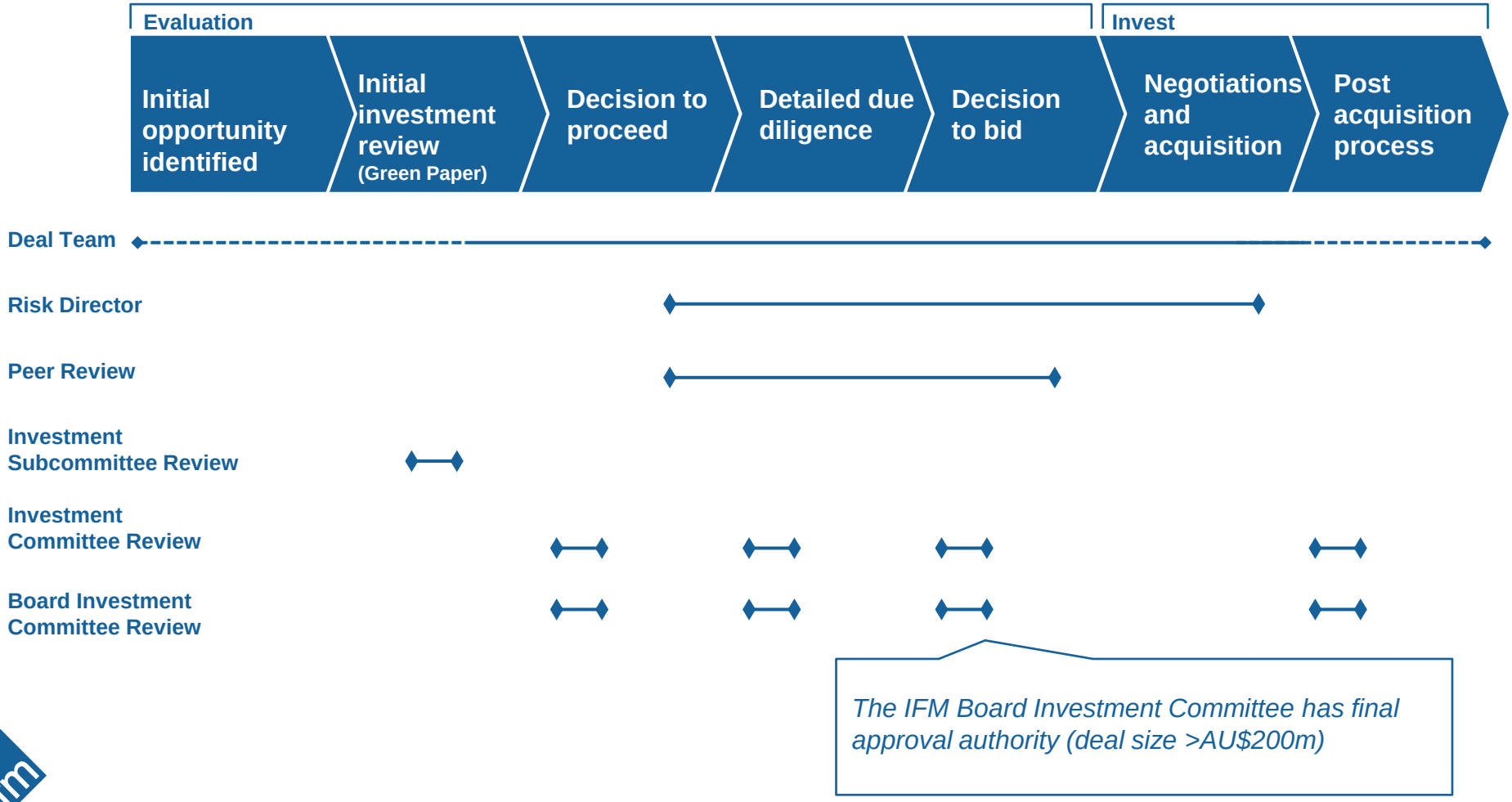
Phi-Lyn Tran
Risk & Compl. Analyst

Clare Glenn
Commercial Analyst

Amanda Brooke
Legal Coordinator

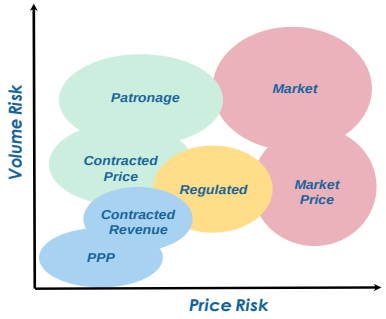
Investment process: we apply a rigorous review and approval framework

OUR DEAL TEAMS ARE SIZED TO ENSURE EXCEPTIONAL DUE DILIGENCE AND ANALYSIS



InFRAME Portfolio Construction for Infrastructure - Overview

Framework:



Portfolio construction is based on a bottoms-up analysis of revenue and risk characteristics of investments rather than by subsector classification – improving asset management and investment decision making.

Tools:

❶ **Risk Matrix**: Characterization of assets by revenue streams, and semi-quantitative assessment of the risk drivers for each revenue stream

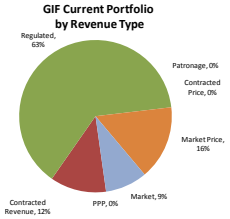
❷ **Scenario Analysis**: How do asset and portfolio returns react to different medium-term macro-economic scenarios?

❸ **Portfolio Optimisation:** What asset / revenue type mixes produce optimal/robust returns?

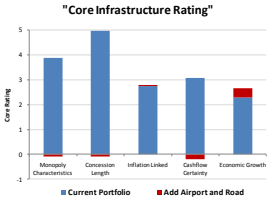
Outputs:

❶

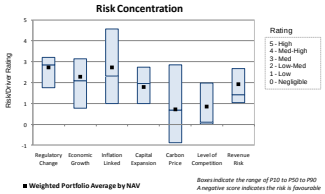
Portfolio Risk Profiling



Revenue Type Analysis



Core Infrastructure Rating



Risk Concentration

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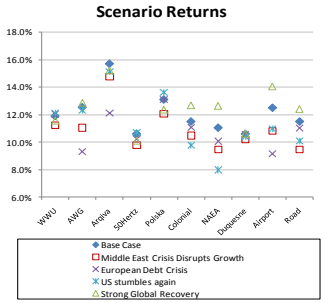
Portfolio Scenario Sensitivities



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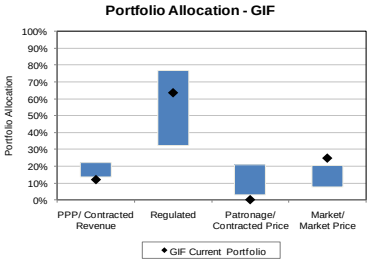
Strategic Asset Allocation by Revenue Type



Potential Risks In Infrastructure Investments

Risk	Description	IFM Approach
Regulatory	• Regulated assets bear the risk that tariffs are set too low to provide adequate equity returns. • Uncertainty relating to future tariffs can also create refinancing risk.	• Primary investment focus on countries with stable and well understood regulatory regimes. • Thorough due diligence pre-acquisition. • Developing a strong cooperative relationship with regulators. • Ongoing scenario analysis and risk planning with the company.
Patronage	• Risk of utilisation/patronage being lower than expected, affecting projected revenues of the asset. • Often linked to GDP in the specific country, but also GDP in other countries linked to the asset.	• Thorough due diligence pre-acquisition, including consultant reports and internal expertise. • Ongoing monitoring of performance. • Strong understanding of macroeconomic drivers.
Contract	• Contract counterparty risk affecting contracted revenue streams or a largely contracted cost base. • Future ability to renew expiring contracts might create uncertainty about future revenues and costs.	• Cooperation with strong creditworthy partners, sometimes government type. • Ensuring appropriate contracts provisions and protection mechanisms are put in place with the counterparty. Only investments in countries with strong rule-of-law.
Construction	• New infrastructure projects bear the risk of not being completed within time or budget or within agreed specifications.	• Ensuring appropriate contracting measures are put in place such as fixed-time, fixed-price, turnkey construction contracts, and the payment of liquidated damages by the contractor to equity and debt providers. • Limited focus on assets with construction risk.
Environmental	• Community and environmental groups may oppose the construction or operation of an infrastructure project due to pollution, noise and other impacts and effects on the environment. • Any unexpected costs to comply with environmental obligations may have an adverse impact on investor returns.	• Undertaking and complying with a formal environmental impact statement. • ESG framework integral to our process and we have a dedicated IFM Director of Responsible Investment who is also Chair of UN PRI Infrastructure committee.
Interest rate	• Interest rates directly impact the cost of debt as well as the discount rate used to calculate the net present value of an investment. • Losses may occur in a rising interest rate environment while gains may occur when interest rates are falling.	• Ensuring that a conservative approach to leverage is adopted at the asset level. • Hedging all or a large proportion of debt. • Considering the potential to hedge against CPI risk.

1: IFM Global Infrastructure Fund: average leverage (net debt/EV) is approx 46.5%; fixed/inflation linked debt (inclusive of hedges) is approx 95.3%

As an infrastructure manager, we are exposed to almost every infrastructure sub-sector so comprehensive ESG is important

1 ***Acquisition (new investments)***

IFM's ESG due diligence checklist identifies relevant and material issues for consideration

- IFM approaches ESG issues in terms of relevance and materiality
- Consideration of these issues is to avoid risk (including reputational) and identify opportunities
- Risk Register
- Peer Review Team
- Independent Technical Due Diligence Reports (Scope includes climate change impacts)
- Key risks identified are captured in the Investments Committee Paper

2 ***Asset Management (existing investments)***

Detailed ESG audit process followed by implementation of ESG initiatives as required

- IFM has a formal ESG Policy approved by the IFM Board
- The IFM Board requires an annual assessment of ESG integration by all investment groups

3 ***Disclosure***

Extensive investor briefings and reporting on ESG initiatives

IFM QUARTERLY REPORT

IFM Australian Infrastructure
prepared by Industry Funds Management Pty Ltd
31 March 2011

Manager Report

IFM Australian Infrastructure

Environmental, Social and Governance ("ESG")

The Manager's year-long engagement with Melbourne Airport, Brisbane Airport, NT Airports and Adelaide Airport to develop a best practice Occupational Health and Safety ("OH&S") reporting framework concluded successfully during the quarter. The Manager identified an opportunity to foster a collaborative safety culture that would ultimately benefit each airport, its employees, contractors, customers, stakeholders and the broader community. It was a significant undertaking with support from the senior management of all participating airports, who delegated relevant staff to a workgroup chaired by the Manager's nominee.

An added benefit of this framework is that it prepares the airports in advance of new federal OH&S legislation, which will harmonise workplace safety laws by implementing uniform legislation in each State and Territory. The new workplace safety laws are intended to commence on 1 January 2012.

The Manager is now conducting a review of all of its Australian investee companies to ensure that their boards and directors can satisfy the new legal requirements. The Manager is also reviewing workplace safety legislation in other countries where it has investments to ensure that board reporting on workplace safety complies with best practice.

Sector Review and Outlook

Economic Conditions

The seasonally adjusted GDP increased by 0.7% during the December quarter and 2.7% over the 12-month period, while the unemployment rate in March remained at the low level of 4.9%. Although the Australian economy has been impacted by natural disasters over the summer, the economy is expected to improve at an above trend pace over the coming year due to a stronger business investment outlook and a boost to demand from the post-flood reconstruction efforts in Queensland.

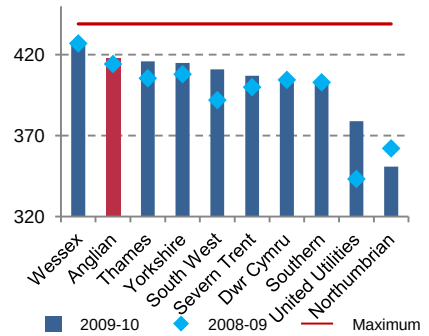
Materiality and Relevance to returns and risk

Aim: to meet and exceed benchmark returns on a long-term basis

Proactive asset management

Anglian

WASC OPA[1] Points

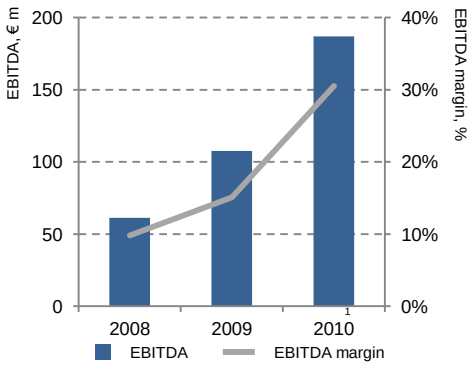


- Led Anglian to be one of the most efficient UK water companies
- Ensured customer service measures were included in management incentive plans
- Initiated early refinancing of bank acquisition facilities, successfully completed in 2011

(1) OPA:Overall Performance Assessment, a ranking provided by OFWAT

50Hertz

Strong EBITDA & margin performance

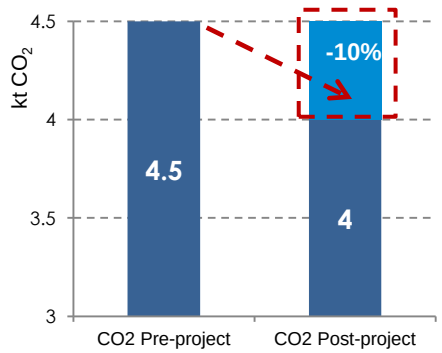


- IFM Investment Director as interim CFO drove treasury and cash management
- Developed regulatory road map following multiple meetings with regulator
- Improved planning and delivery of capex programme

(1) Pro-forma 12 months using IFRS. Comparison with 2009 not relevant due to significant beneficial regulatory changes introduced on 1 Jan 2010 and inclusion of results where 50 Hertz Transmission was still part of the Vattenfall Group in 2009. Figures based on management accounts.

Dalkia Polska

Reduced CO_2 footprint



- Implementation of special biomass project that offsets 10% of the emissions of Dalkia Polska
- Formed strategy committee to drive growth in Poland
- IFM led Warsaw district heating network bolt-on acquisition

Essential Power

Select executed initiatives	Impact $m p.a.
Replaced energy trading firm	500
Renegotiated maintenance agreements	850
Increased rated capacity	1,300
Renegotiated gas contract	500
Lowered premium with insurance underwriter	500
Total cost savings p.a.	**3,650**

- IFM Investment Director placed as interim CFO for the five months after acquisition
- IFM recruited exceptional permanent management team
- Took control of the budgeting process and prepared rigorous budget that was 33% higher in EBITDA terms and achieved by the company

We use an open-end fund structure to align with our investor base . . .

Long-term infrastructure investments matched to long-term liabilities of pension funds

KEY BENEFITS OF OPEN-END FUNDS

- Known portfolio of assets in the fund (unlike a blind pool)
- Reduced j-curve: quicker investment period, no fees on undrawn commitments and cash yield from day one
- Vintage diversification: no pressure to invest or divest assets in poor markets
- Exclusive access to certain acquisitions due to long-term ownership structure
- LPs partner with long-term, like-minded, institutional investors only
- Robust redemption policy and quarterly valuations conducted by external valuers

Key Consideration	Open-end	Closed-end
Term	▪ Evergreen or perpetual	▪ Typically 10 to 14 years
Investment Period or Vintage	▪ Ongoing; Immediate exposure to income generating assets	▪ Limited to commitment period, typically 4 or 5 years
Investment Strategy	▪ Long-term hold is well suited to investments in post-development, “take-out” deals or “yield-oriented” deals ▪ No rush to deploy capital ▪ Ability to grow and diversify fund over time	▪ Shorter term focus is suited to turn-around or development deals ▪ Mandatory exit is not consistent with the long-term hold philosophy of core infrastructure, and discourages strategic partnering
Contributions & Redemptions	▪ Investors have control	▪ Manager has control
Valuations	▪ Regular, independent and accurate	▪ Manager’s discretion; not necessarily independent
Liquidity	▪ Liquidity available from cash yield, exits if appropriate, and redemption option	▪ Liquidity available from distributions and asset divestments at discretion of manager
Distributions vs Reinvestment	▪ Investors have control: reinvestment or distributions	▪ Distributions only until towards end of fund life (typically after investment period)

. . . with competitive terms

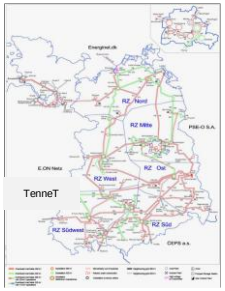
Summary of Principal Terms	
The Partnership	IFM Global Infrastructure (U.S.) L.P. is a Delaware limited partnership which invests in the Master Fund
The Master Fund	IFM Global Infrastructure Fund (the "Master Fund") holds the underlying infrastructure investments
Base currency	The Master Fund is denominated in US Dollars, the Partnership is denominated in USD
Minimum commitment	USD10 million
Management fee	Modified fees apply for all investors once queue as of June 2013 is drawn: ▪ 0.97% pa for commitments <$300m (based on NAV) ▪ 0.85% pa on total commitment if >$300m
Performance fee	▪ 20% over 8% per annum ▪ No catch-up ▪ 50% held back each year to cover any future performance deficits
Catch-up	None
Other fees	No transaction, monitoring, financing, consulting fees, etc. Fund establishment cost shared pro rata amongst investors
Total expense ratio (TER)[1]	2.62%
Term	Open-end
Reporting	▪ Monthly Statement of Limited Partner's Capital within 8 business days of month end ▪ Quarterly performance reports within 45 days of the end of a calendar quarter ▪ Annual audited financial statements of feeder fund and Master Fund by May 1 following the year end ▪ Annual meetings and regular fund updates by phone or face-to-face meetings ▪ Customised – specific reporting requirements accommodated to the extent information is available
Valuations	Quarterly independent valuations conducted for all portfolio companies
Redemptions	Clear redemption policy created with assistance and approval of investors; available upon request

1) Management fees (1.25%) plus all other Fund expenses divided by Master Fund Net Asset Value as at 31 December 2012
Please note: this is a summary only, for full terms please see the PPM (copy available upon request)

APPENDIX I: PORTFOLIO COMPANIES

Portfolio companies

50hertz



Date of Initial Investment	May -10
Total invested capital	€186.5m
6/2013 Valuation	€324.9m
Fully Diluted Ownership	40.0%

Regulated transmission network in Germany

- One of the four transmission grid operators in Germany
- Control area covers eastern Germany, Hamburg and Berlin, totalling 109,000 km² (42,085 mi²) and 18 million customers
- Relatively young system and asset base
- Efficient grid operator, with below industry fault rates
- Due to its central location, grid plays a critical role in European power markets via interconnections to Poland, Denmark and Czech Republic
- Business has inbuilt expansion opportunities driven by increasing generation capacity, renewable power connectivity, interconnections to neighbouring countries among others

Anglian Water Group

Date of Initial Investment	Oct -06
Total invested capital	£332.4m
6/2013 Valuation	£484.8m
Fully Diluted Ownership	19.8%

Regulated water & sewerage company in the UK

- Fourth largest water supply and sewerage company in England and Wales by Regulated Capital Value
- Provides water to 4.2 million people and sewerage services to 5.9 million people
- Serves the largest geographic area of the regional water and sewerage companies in England and Wales
- Customer base for water services is predominantly residential, accounting for approximately 66% of delivered volume
- 95% of sewerage customers are residential

Portfolio companies

arqiva

Date of Initial Investment	Dec -04
Total invested capital	£304m
6/2013 Valuation	£319.5m
Fully Diluted Ownership	14.8%

Broadcast & wireless communication infrastructure

- Largest independent telecommunication infrastructure provider in the UK with a monopoly position in terrestrial broadcasting
- Business lines include: UK digital TV transmission towers, Satellite and optical fiber infrastructure for media, Wireless sites for mobile operators
- Customers include: Television networks (e.g. BBC, ITV, Channel 4, BSkyB) and radio broadcasters, Mobile wireless operators (e.g. Vodafone, O2, Orange), Public safety organizations such as the police, fire and ambulance services
- Arqiva's activities fall under the UK telecommunications regulator (OfCom)

Colonial Pipeline

Date of Initial Investment	Feb -07
Total invested capital	$426m
6/2013 Valuation	$571m
Fully Diluted Ownership	15.8%

Regulated pipeline in the US

- Colonial is the largest refined petroleum products pipeline in the US
- Operates 8,851 km (5,500 mi) of large diameter pipes and transports 2.3 million barrels per day , equal to approx 17% of total US refined product consumption
- The pipeline has the ability to transport over 50 different grades of refined product
- Approx 60% of Colonial's revenues are based on regulated indexed tariff growth rates
- Plays an essential role in the US economy and represents an attractive regulated long term asset
  - Next regulatory period commences in July 2011 for a five year period; growth rate was announced by FERC in Dec 2010

Portfolio companies

Dalkia Polska

Date of Initial Investment	Nov -10
Total invested capital	PLN 766m
6/2013 Valuation	PLN 1,470m
Fully Diluted Ownership	40.0%

Dalkia Polska investment was made in 2010 following on from 2006 acquisition of Dalkia Łódź

Regulated district heating and cogeneration in Poland

- Dalkia Polska is the holding company for a portfolio of businesses, including:
  - Seven cogeneration plants with a thermal capacity of 4,875 MWth, electric capacity of 820MWel
  - District heating network of 3,381 km (2,100 mi) post acquisition of SPEC Warsaw, the largest district heating network in the EU
- Number one in the Polish district heating market and number three in the Polish cogeneration market
- Attractive core infrastructure business – essential service, participates in GDP growth, natural monopoly characteristics and regulated
- Opportunity for green energy investment through the development of biomass projects
- IFM originally invested in the subsidiary Dalkia Łódź in 2006; significant understanding of the business and the sector
- SPEC bolt-on acquisition announced on 26 July 2011

Duquesne Light Holdings

Date of Initial Investment	Jul -06
Total invested capital	$327.2m
6/2013 Valuation	$361m
Fully Diluted Ownership	25.2%

Regulated transmission & distribution network in the US

- Duquesne, based in Pittsburgh, Pennsylvania, engages in the supply, transmission and distribution of electricity
- Majority of the company's earnings are sourced from regulated transmission and distribution; approx 587,000 direct customers
- This asset intensive business, coupled with its regulated nature, provides stable and predicable cash flows
- In July 2010, Duquesne filed a distribution rate case with the Pennsylvania Public Utility Commission
  - Rate case authorizes a US$45.7 million aggregate rate increase effective from April 2011

Portfolio companies

ESSENTIAL POWER

Date of Initial Investment	May -08
Total invested capital	$922.4m
6/2013 Valuation	$732.9m
Fully Diluted Ownership	100%

Formerly North American Energy Alliance (NAEA). Name change effective as of January 2012

Portfolio of gas-fired and hydro electricity generating plants in the US

- Essential Power comprises six power stations and eight smaller projects with an aggregate capacity of 1,706 MW
- Located in the historically capacity constrained Eastern US power market (New Hampshire, Massachusetts, New Jersey and Maryland)
- The portfolio's modern gas-fired assets are located within highly structured markets with revenues from energy and capacity sales
- A combination of tolling and power purchase agreements, financial hedges and the ability to sell capacity three years in advance provides Essential Power certainty in many of the main components of its revenues
- The gas and hydro powered portfolio is expected to benefit from increasing focus on carbon issues in the US going forward

MAG

Date of Initial Investment	Feb-13
Invested Capital	£895.4m
6/2013 Valuation	£1,005m
Total Distributions	£18m
Fully Diluted Ownership[(1)]	35.5%
Co-Investors[(2)]	Manchester City Council
Leverage[(3)]	23.4%

Airports group in the UK

- Manchester Airports Group ("MAG") is one of the top three airport operators in the UK, handling c.42m passengers p.a. across four airports – Manchester, Stansted, Bournemouth & East Midlands
- Essential infrastructure assets, with Manchester / Stansted being the 3rd / 4th largest airports in the UK, with c.19m / c.18m passengers p.a.
- High quality assets, with both Stansted and Manchester having Code F1 runways (capable of handling A380 aircraft)
- Portfolio is diversified by customer, revenue source, passenger mix and regulatory regime (Manchester is unregulated whilst Stansted is currently regulated)
- Strong growth potential, with Stansted in particular presenting opportunities to both win aeronautical market share and maximise non-aeronautical revenues via the reconfiguration of terminal buildings and related infrastructure

(1) Economic ownership of 35.5%; voting rights of 50.0%
(2) Manchester City Council also have a 35.5% ownership stake (50.0% voting rights), with the remaining 29.0% owned by nine district councils (no voting rights)
(3) Net Debt / Enterprise Value at acquisition

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IFM Global Infrastructure (US) GP, LLC

This Information Booklet summarizes and is qualified in its entirety by information contained in the Confidential Private Placement Memorandum (the "Memorandum") for the JPMorgan Infrastructure Investments Fund (the "Fund"), and in the event of a conflict between this Booklet and such information, the information contained in the Memorandum shall supersede this Booklet. Investors should have the financial ability and willingness to accept the risk characteristics of the Fund's investments. Performance or estimated performance shown does not represent the Fund's investments and should not be used to predict the Fund's return. The Fund's performance may be volatile. Investors may lose all or a substantial amount of their investment in the Fund. J.P. Morgan's fees and organizational and other Fund expenses will offset the Fund's returns. The Fund may engage in leverage and other speculative investment practices that involve a substantial degree of risk. The Fund is subject to various other risk factors and conflicts of interest. For further information regarding risk factors and potential conflicts of interest, please refer to the "Risks and Disclosures" Appendix in this Booklet. This Booklet is for informational purposes only and is intended solely for the person to whom it is delivered by J.P. Morgan. This Booklet is confidential and may not be reproduced or distributed in any jurisdiction without the express prior written consent of J.P. Morgan. This document does not constitute an offer to sell or the solicitation of an offer to purchase any security or investment product. Any such offer or solicitation may only be made by means of delivery of the Memorandum.

Alaska Retirement Management Board
JPMorgan Infrastructure Investments Fund

September 19, 2013

J.P.Morgan
Asset Management

Today's presenters

Paul Ryan, Managing Director, is the CEO of the OECD Infrastructure Equity and Debt strategies. Paul joined Global Real Assets from the JPMorgan Investment Bank, where he was co-head of Public Finance Banking with primary coverage for transport and energy infrastructure. In that role, Paul structured and financed many of the largest deals in the infrastructure sector and advised governments, municipalities and infrastructure funds on acquisitions, disposals, equity and debt raises. Earlier in his career, Paul ran Equity Capital Markets for JPMorgan in Australia, with a strong focus on the real estate and infrastructure sectors. Paul received an undergraduate degree in economics from Macquarie University and an MBA from Yale University.

Mark Weisdorf, Managing Director, is the Portfolio Manager of OECD Infrastructure at J.P. Morgan Asset Management – Global Real Assets. Mark leads an infrastructure equity team with approximately $8 billion in assets under management. Mark is also a Member of the Investment Committee for the Asian Infrastructure strategy and the Portfolio Oversight Team for the Infrastructure Project Finance Loans strategy. Earlier in his career, he was Vice President of Private Market Investments at the Canada Pension Plan Investment Board (CPPIB), where he was responsible for the development and implementation of Private Equity, Real Estate and Infrastructure investment strategies. Mark obtained a B. Commerce degree from the University of Toronto, where he is a past President of the Alumni Association, and holds professional designations as a CA/CPA, CBV and CFA.

Amy Cummings, Executive Director, is a Client Portfolio Manager and investment specialist in the Real Estate Investment Group. An employee since 1999, Amy is responsible for marketing all of the real estate capabilities. She has a broad-based real estate acquisition and management experience, in addition to client portfolio management. Prior to joining the firm, Amy worked with Lend Lease Real Estate Investments where she acted as a portfolio manager and marketer for net leased real estate. Prior to that, she ran and had a majority interest in Net Lease Partners, an institutional net lease advisory company. Amy attended Stanford University.

Chris Hawkins, Executive Director, is a Client Advisor in J.P. Morgan Asset Management's Institutional Americas Group. Chris serves the investment needs of large corporate and public retirement plans. As a Client Advisor, his role is to marshal the firm's extensive resources in the delivery of tailored solutions across a spectrum of alternative (real assets/infrastructure, private equity, hedge funds), and traditional (equities, fixed income) asset classes aiming to exceed the strategic and tactical investment objectives of his clients. Prior to joining the firm, he was a senior relationship manager at State Street Global Advisors. Chris has a B.A. in Economics and a B.A. in Communication from Stanford University and a Masters Degree in Education from the University of California, Berkeley. He holds Series 7, 63 and 65 licenses and is a Certified Financial planner (CFP).

Characteristics of IIF

- Income
- Low volatility of returns
- Diversification
- Inflation protection
- Long-term liability matching

A leading global fiduciary with a dedicated infrastructure platform

J.P.Morgan Asset Management

Scale, stability and strength

- More than 180 years of experience as a fiduciary
- Over $1.4trn in AUM
- Nearly 1,300 investment professionals
- Over 350 different investment strategies
- Leadership positions in the Americas, U.K., Continental Europe, Asia, Japan, and Australia

Global Real Assets ("GRA")

GRA depth and experience

- Experienced real assets manager since 1970
- Over $67bn in AUM[1]
- Over 400 employees globally in 14 offices
- Innovative strategies across real estate, infrastructure, and maritime assets

Global Infrastructure Investments Platform

Infrastructure Debt Strategy	JPMorgan Infrastructure Investments Fund	Asian Infrastructure Strategies

Client-focused, fiduciary infrastructure manager

- Active asset manager with a 6 year track record of growth
- Over $9bn in AUM in infrastructure assets[1]
- Dedicated global team of over 60 professionals
- Immediate investment opportunity in a transparent portfolio
- Structures in place to monitor for, and manage conflicts

As of June 30, 2013

[1] GRA AUM shown as Gross Asset Value for equity funds and as total commitments for the Infrastructure Debt Strategy

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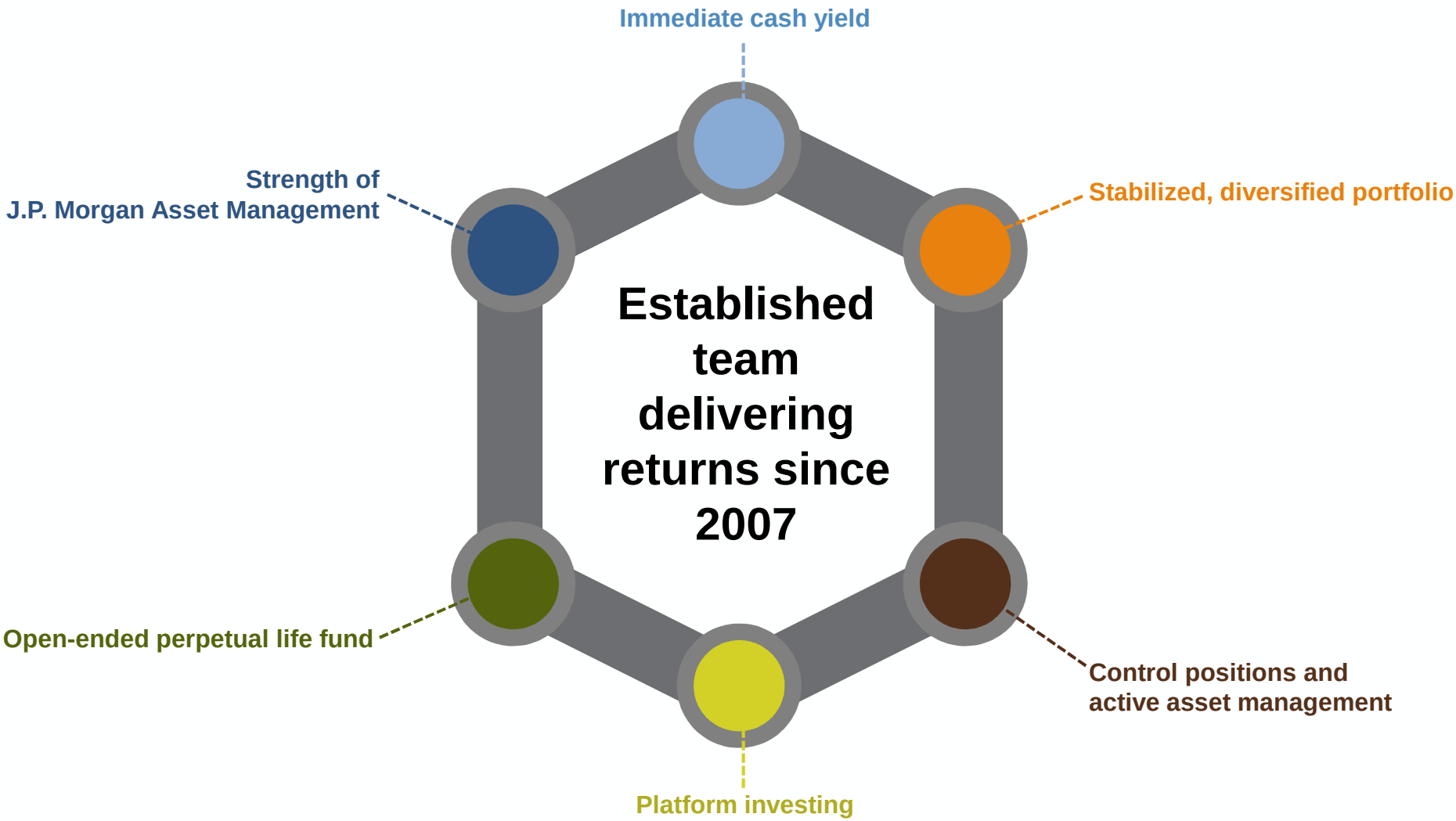
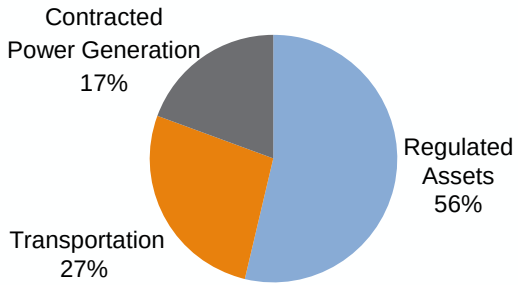
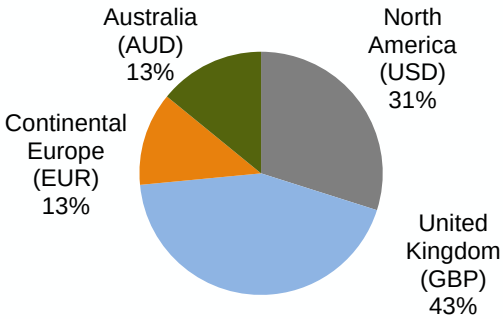
JPMorgan Infrastructure Investments Fund ("IIF") – Value proposition



For illustrative purposes only

IIF value proposition – Global core infrastructure

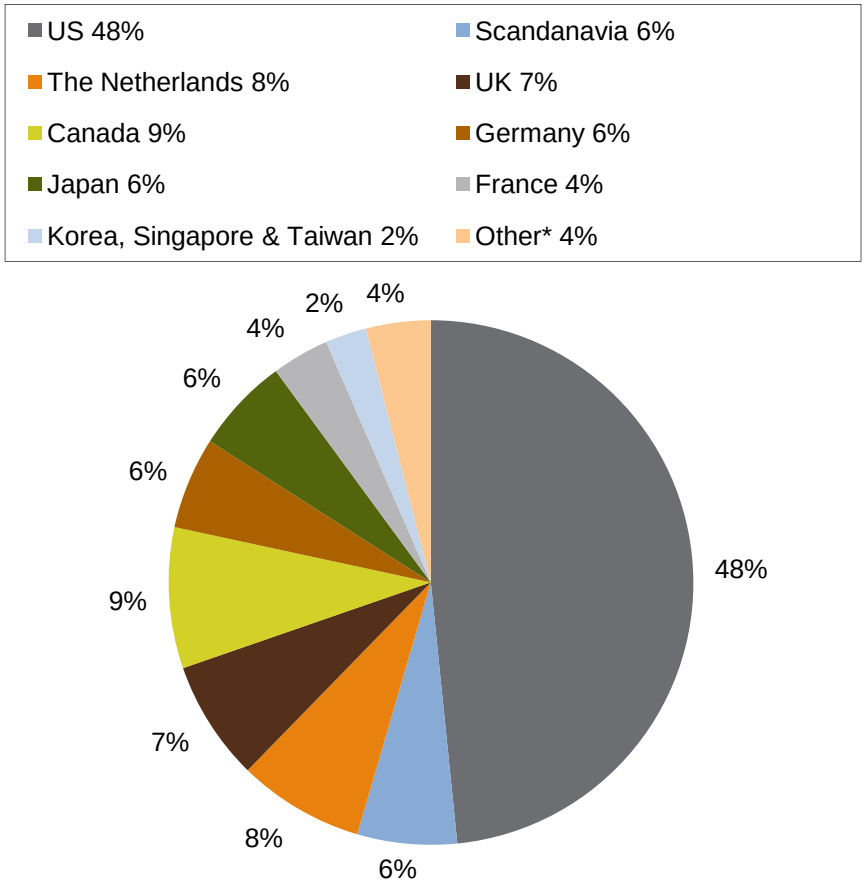
IIF Attributes	Characteristics	
Core OECD Strategy	■ Mature market core infrastructure ■ Attractive risk/return profile ■ Immediate yield	■ Diversification ■ Transparent portfolio ■ Inflation protection
Immediate Access to a Stable, Diversified Portfolio[1]	■ Sector breakdown[2]: 	■ Geographic breakdown[2]: 
Control and Active Asset Management	■ Control positions facilitate active asset management, risk mitigation, ability to drive returns	
Deep Global Team	■ Access to the broader resources of J.P. Morgan Asset Management	
Open-ended Structure, 93 Institutional Investors	■ Matching fund life and asset life ■ No forced investments or divestitures ■ Robust, transparent valuation process	■ Over 40 years of open-ended fund management ■ Liquidity via the redemption process ■ Quarterly NAVs

[1]Upon capital call
[2]As of June 30, 2013

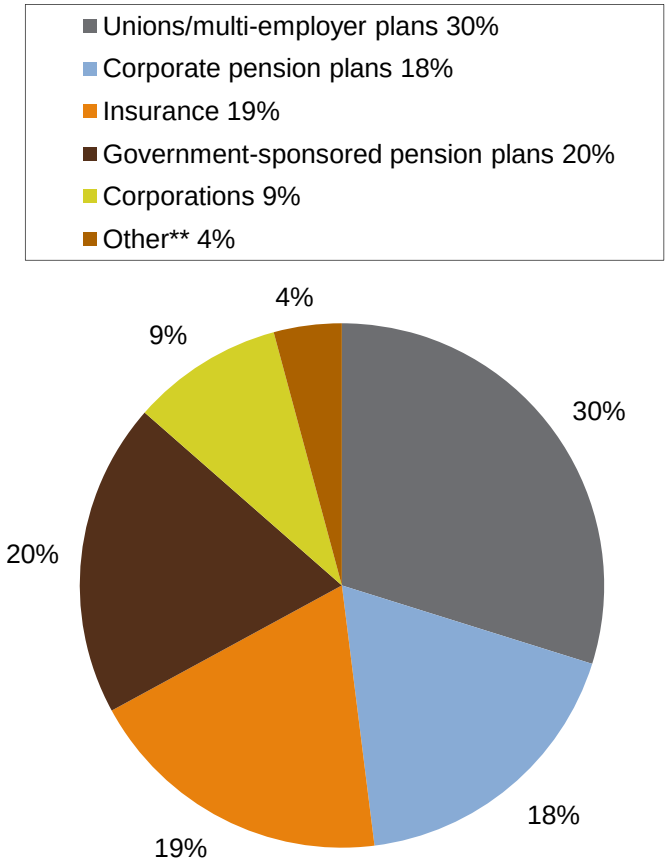
Investor commitments since inception

93 institutional investors across 16 different countries as of June 30, 2013

Commitments by geography



Commitments by investor type



Source: J.P. Morgan Asset Management .
*Other includes Bahamas, Cayman Islands, Mexico, Switzerland and Spain.
The charts and/or graphs shown above and throughout the presentation are for illustration and discussion purposes only.

** Other includes sponsor commitment, fund of funds, endowments & foundations and HNWI.

Infrastructure Investments Group ("IIG") – Professionals in New York and London

CEO, OECD Infrastructure Equity and Debt – Paul Ryan[1, 2, 3], MD

Portfolio Manager – Mark Weisdorf[1,2], MD
Head of Asset Management – Surinder Toor[1, 2, 3], MD

Chief Investment Officer – Matt LeBlanc[1, 2, 3], MD
Chief Operating Officer – Brian Goodwin[1, 2, 3], MD

Collectively source and execute deals, and manage the current portfolio assets

Peter Antolik, ED
Kenneth Bonn, ED
Andrew Gilbert, ED
Robert Hardy, ED
Hai-Gi Li, ED
Daniel Schuller[3], ED
Mark Walters[3], ED

Functional Experience:

Executive Management
Operations / Management Consulting
Engineering
Accounting / Finance

Sector Experience:

Power & Energy
Regulated Utilities
Transportation

Eugene Ide, VP
Peter Aquilina, Assc
Dan Mitaro, Assc
Mark Scarsella, Assc
Paul Beuyukian
Robin Lutz
Lauren Webb

200+ years of infrastructure experience,*
*15 years average infrastructure experience for senior team members***

Research

Head of Infrastructure Research
Serkan Bahçeci, ED

Head of Client Strategy – Michael O'Brien, MD

North America	Europe	Asia
Steve Weddle, MD	François Bornens, ED	Tyler Goodwin, MD

[1]Members of the Investment Committee (also includes Joe Azelby, Steve Greenspan, Vijay Pattabhiraman, and Dave Esrig); [2]Members of the Operating Committee (also includes Dave Esrig); [3]Members of the Risk Committee.
*Includes all acquisitions, asset management, and senior investment professionals. **Senior members include Executive Directors and Managing Directors.
There can be no assurance that the professionals currently employed by J.P. Morgan Asset Management will continue to be employed by J.P. Morgan Asset Management or that the past performance or success of any such professional serves as an indicator of such professional's future performance or success.

A broad platform supporting the core team

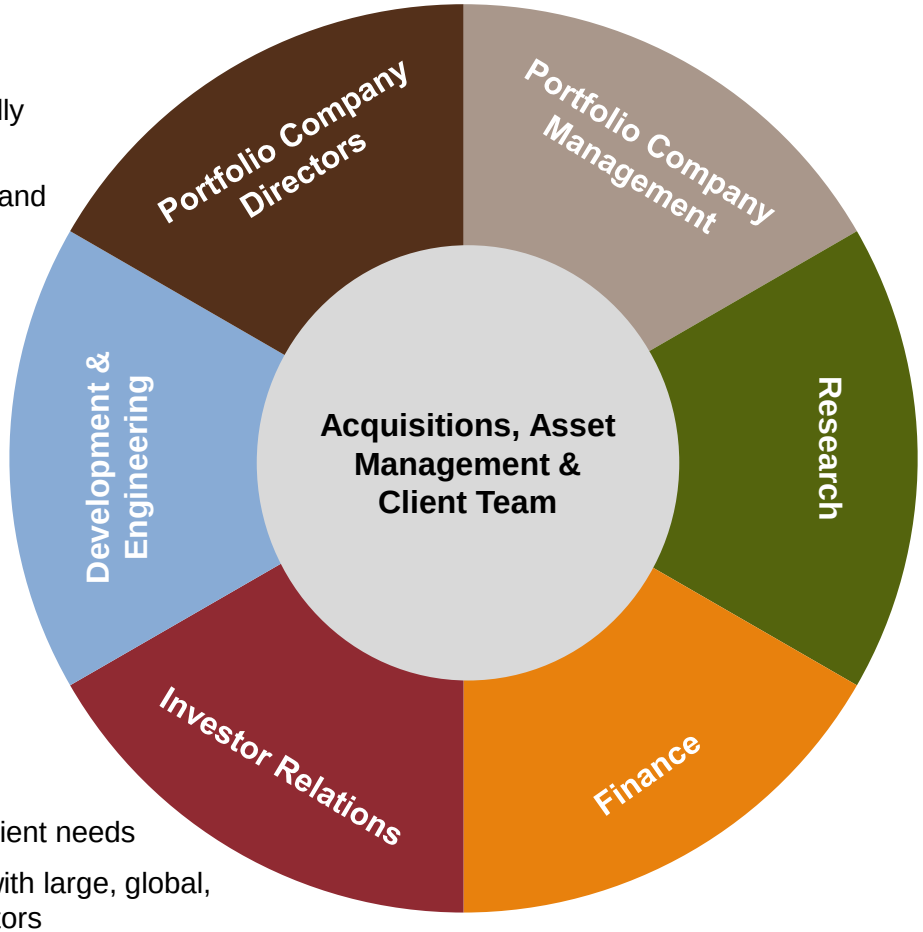
IIF is supported by over 60 individuals with diverse backgrounds and areas of expertise

Portfolio Company Directors

- Former senior executives appointed by IIF
- Deep experience across infrastructure businesses globally
- Additional "eyes and ears" and valuable input into acquisitions and asset management functions

Portfolio Company Management

- Composed of CEOs and their executive management teams
- Regular dialogue and knowledge sharing
- Key role in diligence and business planning for potential acquisitions



Development & Engineering

- Team of senior engineers
- Value-add in major capex and engineering projects
- Contribute to both asset management and acquisitions

Research

- Works with the broader GRA real estate research group
- Economic forecasts for potential investments
- Review business plan assumptions

Investor Relations

- Team dedicated to managing client needs
- Highly experienced in dealing with large, global, institutional infrastructure investors

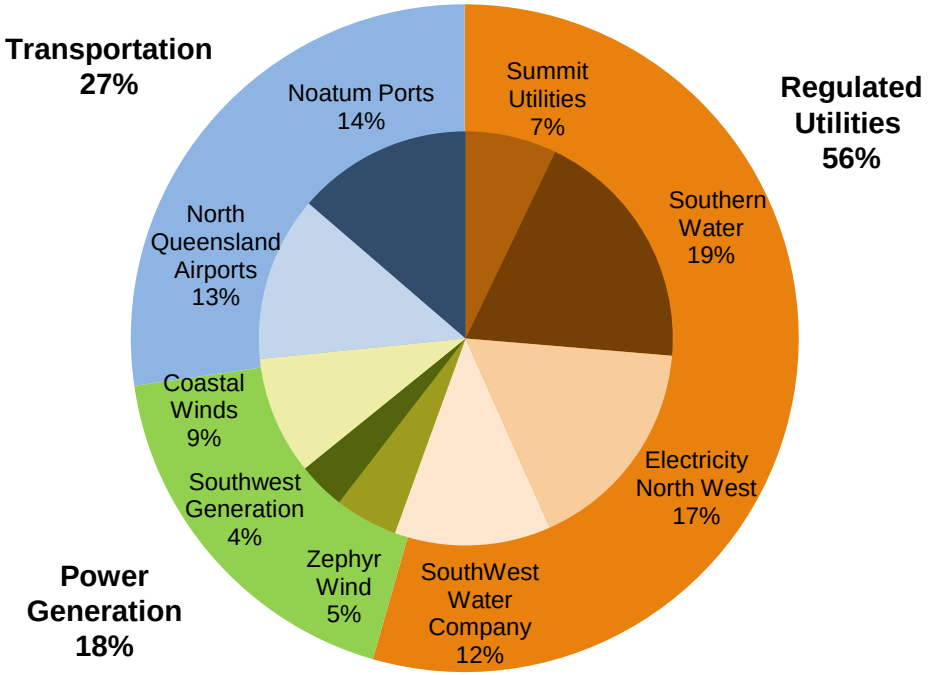
Finance

- Team of finance professionals
- Broad capabilities in analysis, reporting, and fund operations

As of June 30, 2013.

Immediate access to an actively managed, diversified portfolio[1]

Nine asset platforms diversified across four countries with a NAV of over $3bn



Aggregate fund overview	
■ Total annualized revenues	$3.1bn
■ Total annualized EBITDA	$1.7bn
■ Total number of employees	7,600

IIF targets control positions to drive returns

Portfolio company	IIF owned/ managed stake	Largest shareholder	Co-invest
Summit Utilities	100%	✓	
Zephyr Wind	33%	Co-largest	
Southern Water	28%/29%	✓	✓
Electricity North West	50%	Co-largest	
Southwest Generation	45%	Co-largest	
Coastal Winds	37%		
North Queensland Airports	50%	✓	
SouthWest Water Company	100%	✓	
Noatum Ports	67%/100%	✓	✓

[1]Upon capital call

As of June 30, 2013. Pie chart may not add to 100% due to rounding. The above information is qualified in its entirety by the Memorandum. Prospective investors should carefully consider the summary in conjunction with relevant sections of the Memorandum and should consult with their own financial, legal and tax advisors with respect thereto.

Overview of current portfolio

Regulated Assets: Water

SouthWest Water Company

Location: U.S.
NAV: $383.0mm
% Owned: 100%

Southern Water Services

Location: U.K.
NAV: $603.9mm
% Owned: 29.3%*

Platform Investment Company

Opportunity for reinvestment, expansion, and growth

Regulated Assets: Energy

Summit Utilities

Location: U.S.
NAV: $224.1mm
% Owned: 100%

Electricity North West

Location: U.K.
NAV: $535.6mm
% Owned: 50%

Transportation

Noatum Ports

Location: Spain
NAV: $429.3mm
% Owned/Managed**: 67%/100%

North Queensland Airports

Location: Australia
NAV: $404.5mm
% Owned: 50%

Aggregate Fund Overview

Gross Asset Value	$7.3bn
Net Asset Value	$3.0bn
Total Leverage	59%

Portfolio Company Fundamentals***

Total annualized Revenues	$3.1bn
Total annualized EBITDA	$1.7bn
Total number of Employees	7,600

Contracted Power Generation

Southwest Generation

Location: U.S.
NAV: $116.8mm
% Owned: 45%

Coastal Winds

Location: U.S.
NAV: $290.0mm
% Owned: 37%

Zephyr Wind

Location: U.K.
NAV: $153.8mm
% Owned: 33%

Past performance is not indicative of future returns. These examples represent some of the investments of the Fund. However, you should not assume that these types of investments will be available to or, if available, will be selected for investment by the Fund in the future.
*IIF manages an additional 0.9% on behalf of co-investors **IIF manages 33% for APG
***Includes 100% of portfolio companies, not limited to IIF's stake. As of June 30, 2013

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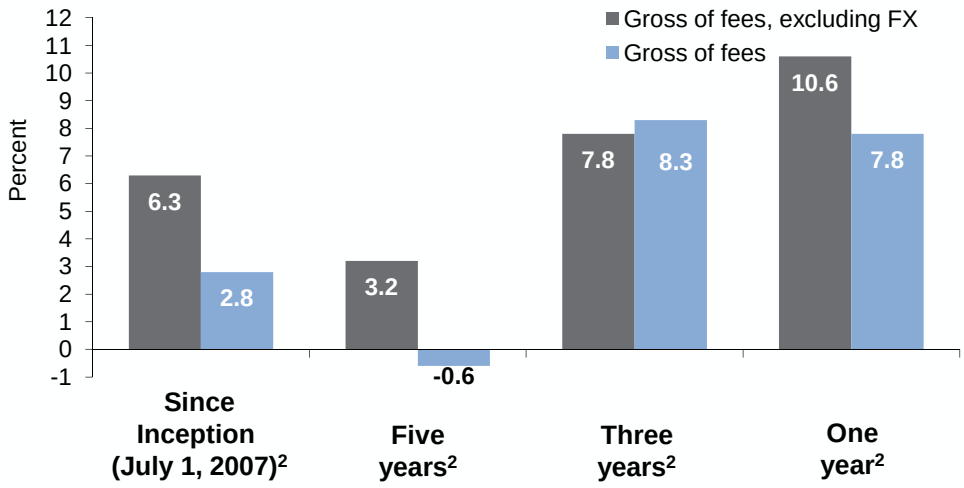
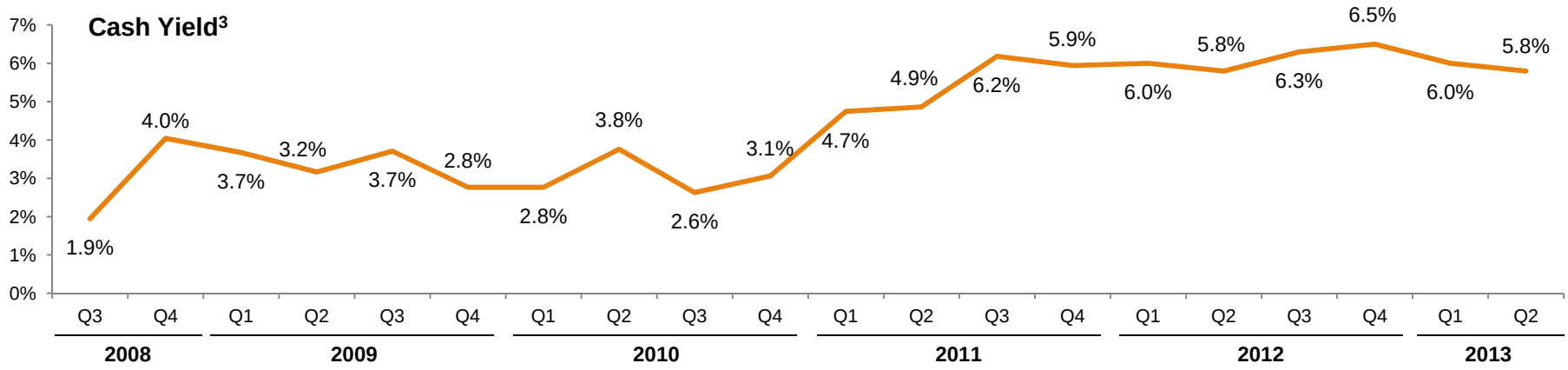
IIF Performance

As of June 30, 2013
Total Return[1]



- Net asset value: $3.0 billion
- Gross asset value: $7.3 billion

Projected yield[3] (2013-2015): 5-7%



[1] Performance numbers represent a composite return of the combined fund investor vehicles (FIVs) in existence as of June 30, 2013. Specific FIV and investor returns are shown on the quarterly investor statement.
[2] Periods greater than one year are annualized. Returns for periods greater than one quarter are time-weighted rates of return calculated by linking quarterly returns. The sum of Asset performance, FX impact and Other may not equal total returns due to the compounding effects of linking quarterly returns. Other includes dividend income, Fund income and expenses.
[3] Yield based on NAV. The trailing one-year cash yields were calculated using individual quarterly cash yields.
Opinions, estimates, forecasts, and projections are based on current market conditions, constitute our judgment and are subject to change without notice. There can be no guarantee they will be met.

Source: J.P. Morgan Asset Management

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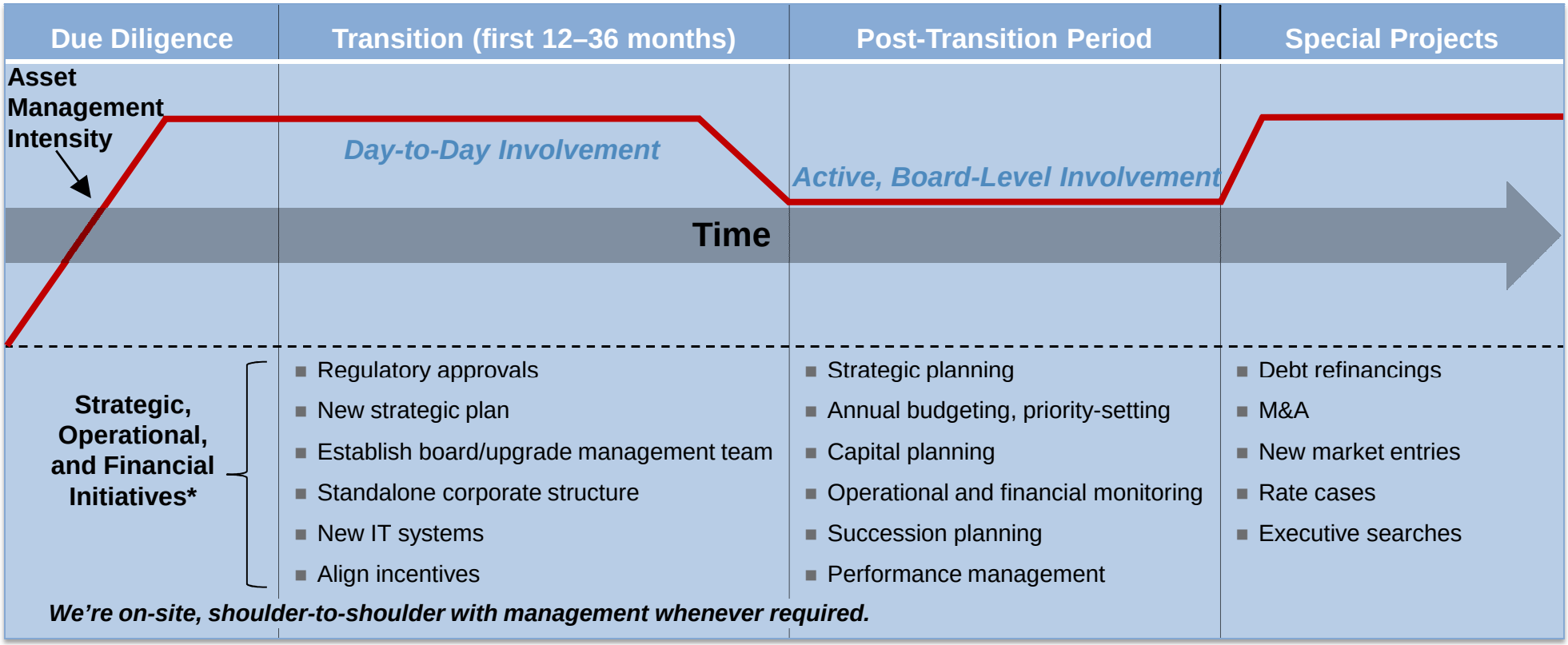
Active asset management

- **Through control positions, IIG and executive management teams:**
  - Execute the strategic plan to transform the business
  - Increase the commercial focus (revenue growth, operational efficiency, financing)
  - Reduce asset-level risk

- **Constant involvement throughout the asset lifecycle**



*Select examples of actual involvement / experience

Risk management requires control and active asset management

Risk committee

- **Objective:** identify, assess, mitigate and monitor risks
- **Primary mechanism:** Risk Register
- **Frequency:** quarterly updating of Risk Register, convening of the Risk Committee, and determination of mitigating actions

Committee members

- Paul Ryan, Chief Executive Officer
- Matt LeBlanc, Chief Investment Officer
- Brian Goodwin, Chief Operating Officer
- Surinder Toor, Global Head of Asset Management
- Dan Schuller, Investment Principal
- Mark Walters, Investment Principal

Quarterly risk review process

For illustrative purposes only. The risk management process includes an effort to monitor and manage risk, but does not imply low risk.

Environmental, Social, and Governance issues drive core infrastructure

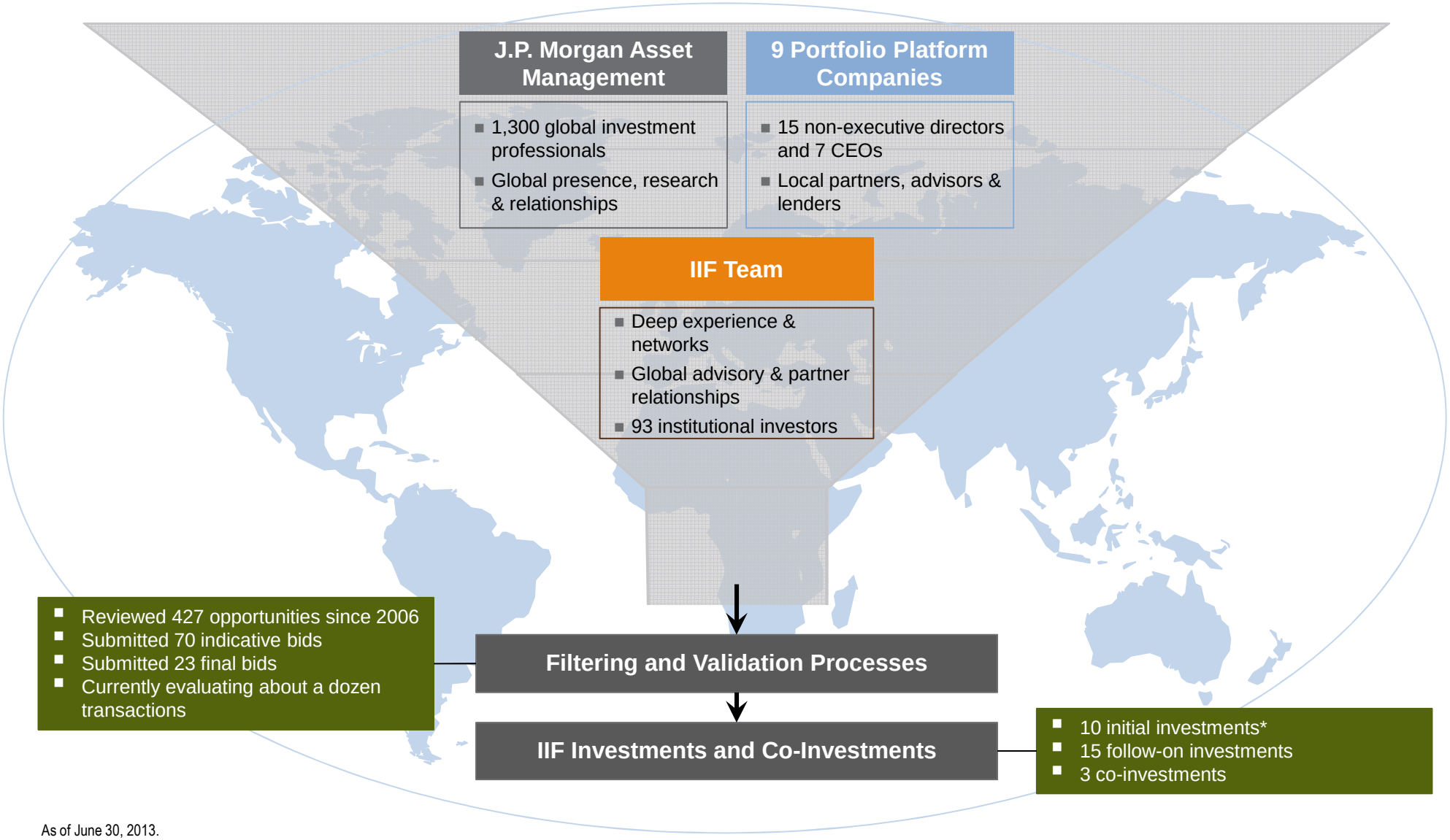
ESG supports the sustainability and performance of core infrastructure

Screening investment opportunities and actively managing assets

"Three Lenses of Sustainability"

	Principles	Concrete Examples
Environmental	■ Be responsible stewards of the environment	✓ Summit is targeting the conversion of 50,000 propane/oil users to cleaner natural gas in Colorado, Missouri, and Maine ✓ Zephyr Wind in the U.K., and Coastal Winds in the U.S., generate 750 MW of clean energy ✓ Southern Water's completion of a $500 million wastewater treatment facility is the largest built in the U.K. over the past decade
Social	■ Serve our communities	✓ ENW has established a training and apprenticeship program to replace a retiring skilled workforce with local youth ✓ NQA's funding of community environmental and sustainability projects in the vicinity of the airport
Governance	■ Adhere to governance best practices (accountability, integrity, and transparency)	✓ A high percentage of independent representation on the boards of our portfolio companies leads to: • An increased focus on risk management oversight and control • A high priority on ESG, health, and safety issues

A deep global network for sourcing investment opportunities



As of June 30, 2013.
*Merged Southern Missouri Natural Gas into Summit Utilities

Portfolio design and market outlook drive 2013/2014 priorities

Transportation

Gas & electric utilities

Water and wastewater

Outlook for the current decade

- Lower GDP growth, deleveraging and higher inflation
- Shale gas results in lower gas and electricity prices
- Potential for increases in U.S. utility ROEs, and consolidation in the U.S. water sector

2013/2014 priorities

- Attractive transportation assets are a priority for IIF
  - Airports, seaports, toll roads, and certain municipal parking systems
- Industry fundamentals, rate base expansion, return trends and consolidation make U.S. regulated utilities attractive
  - Natural gas distribution and pipelines, and electric distribution utilities
  - Water and wastewater utilities and services, leveraging IIF's existing platform

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Why IIF?

- **Known portfolio of assets** with immediate return and yield profile; reduced J-curve
- **Investment discipline** – immediate, visible portfolio impact
- A **transparent, external valuation process** facilitates liquidity; both redemptions and additional investments
- **Control stakes** allow JPMAM to partner with management **to actively manage assets**
- **Platform** companies facilitate lower-risk incremental **investment via bolt-on acquisitions**
- GRA has over **40 years of experience managing open-ended funds**
- Unique ability to leverage the **breadth and depth of JPMAM**

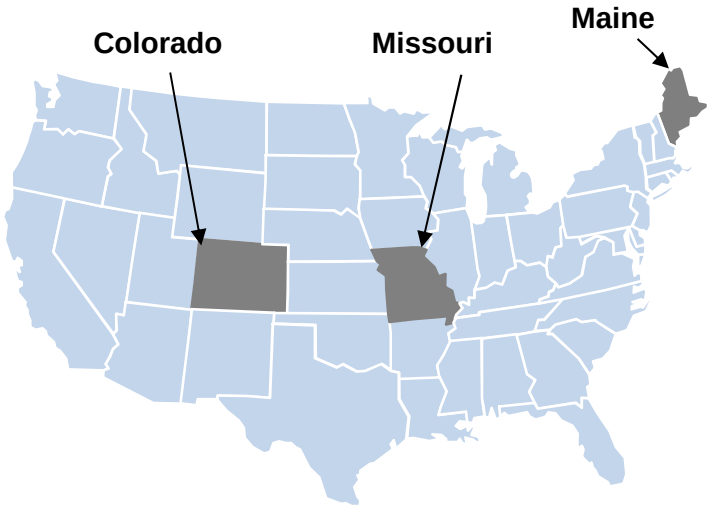
J.P. Morgan Asset Management ("JPMAM") is the service name for the JPMorgan Chase & Co. asset management business globally.

Appendices

Summit Utilities: Overview

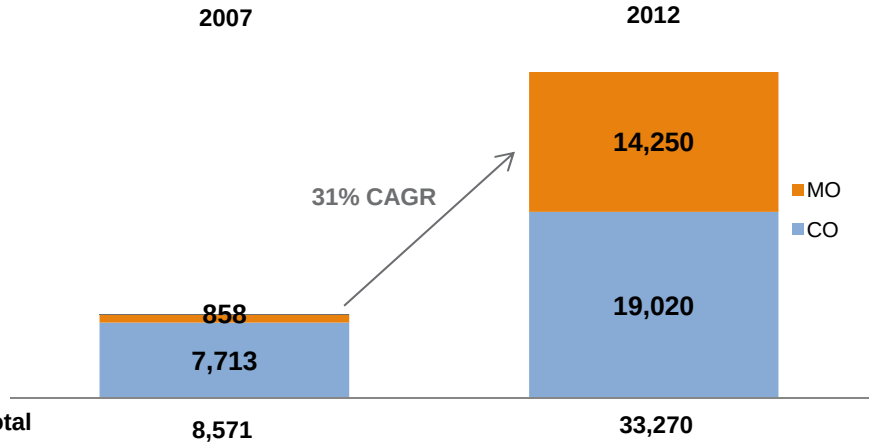
Key Facts

- Regulated natural gas service to 33,000 customers in CO and MO
- Equity: NAV of $202.9 m, 6.4% of total portfolio
- Acquisition: May 2007, $35.8 m for 81.0% of the equity
- Current Ownership: IIF – 100.0%



Effective Organic Growth Platform

Customer Base



	2007	2012
Total	8,571	33,270
EBITDA	$4.2 m	$14.8 m
Rate Base	$52.9 m	$304.4 m

Performance

US$ mm[1]	2012	2013F	2014F
Revenues	25	36	57
EBITDA	15	23	44

Pine County, CO
Service Line Installation

Kennebec Valley, ME
Steel Pipeline Lay down Yard

Branson, MO
Regulator Station

(1) Fiscal year ending December 31st

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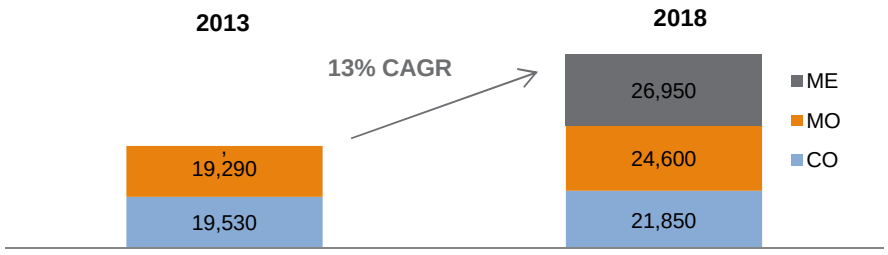
Summit Utilities: Maine Expansion

Opportunity Overview

- Several expansion opportunities within Maine totaling **$800-1,000m in capital investment**
- Over **500 workers** constructing the **$310m Kennebec Valley system** with **gas flow anticipated in Q4 2013**

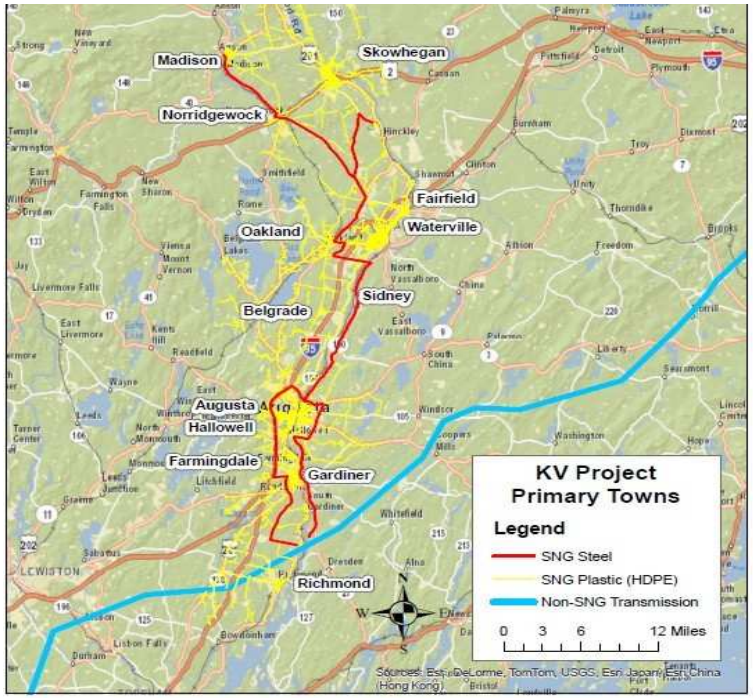


	2013	2018
Total	38,820	73,400
EBITDA	$22.8 m	$86.2 m
Rate Base	$414.4 m	$744.1m

Highlights

- **Leverage IIG's Natural Gas Platform**
- **Growth Prospects:** Currently, less than 5% of Maine is served by natural gas; customers expected to save $1,000-1,700 p.a. vs. fuel oil
- **Long-term Anchor Contracts:** Industrial, commercial, and municipal customers
- **Constructive Regulatory Framework:** Rate Plan that is inflation adjusted and can be applied to all projects throughout the state
  - **Targeted Returns: ~15%**

Kennebec Valley Natural Gas System (KV)



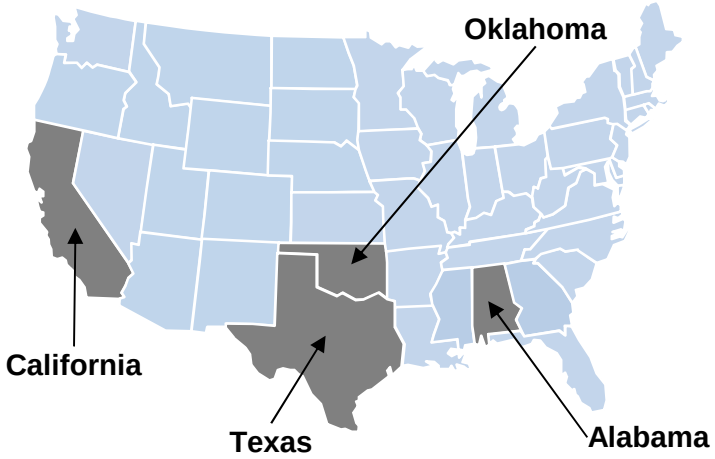
Shown for illustrative purposes only. Investment pipeline is subject to change based upon existing market conditions, available investment opportunities and applicable current laws and regulations. These opportunities do not represent the Fund's investments and should not be used to predict the Fund's return, liquidity, revenue or credibility. The Fund's performance may be volatile. The Fund is subject to various other risk factors and conflicts of interest.

SouthWest Water Company ("SWWC"): Overview

SouthWest Water Company

Key Facts

- 350K customers in CA, TX, AL and OK
- Equity: NAV of $359.4 mm, 11.2% of total portfolio
- Acquisition: September 2010, $292 mm for 90.0% of the equity
- Current Ownership: IIF – 100.0%



Key Facts by Business Unit – 2013 Plan

	Revenue	EBITDA	EBITDA Margin (%)	Water & WW Connections
Suburban Water (CA)	57%	62%	34%	75,000 (W)
Texas Utilities	33%	26%	25%	45,000 (W&WW)
SE Utilities (AL)	10%	12%	36%	8,000 (WW)
Total	**100%**	**100%**		
Total	**$136 mm**	**$42 mm**	**31%**	**128,000**

Performance

US$ mm[1]	2012	2013F	2014F
Revenues	175[2]	136	144
EBITDA	34[2]	42	48

South Shelby County, AL Wastewater Treatment Plant

Beachwood Estates, Tyler, TX Wastewater Treatment Plant

City of Pflugerville, TX Water Distribution System

(1) Fiscal year ending December 31st
(2) 2012 actual Revenue and EBITDA includes non-regulated business performance results. EBITDA includes adjustments for one-time costs associated with exiting the Texas Services business by the end of Q3 2012, restructuring charges and other non-recurring expenses.

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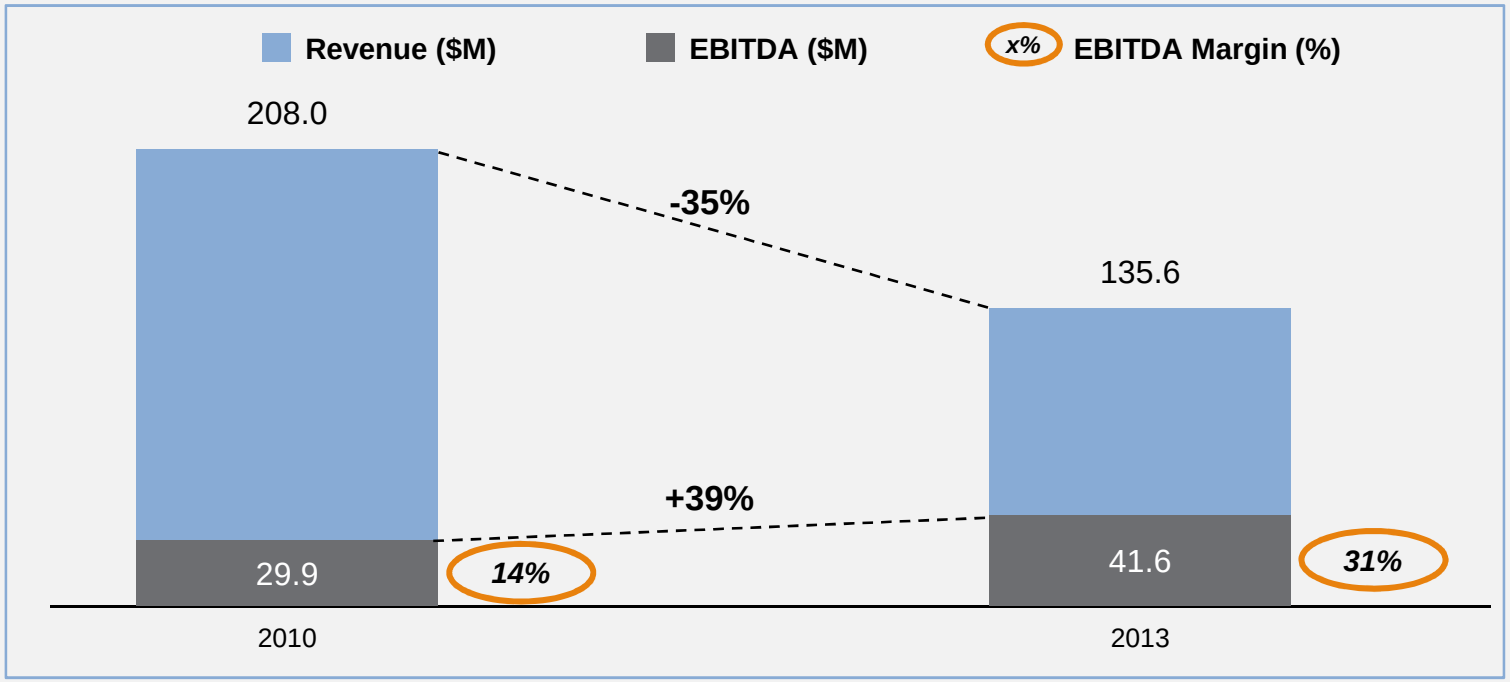
SouthWest Water Company

SWWC: Before and after de-risking

- IIG determined, in 2012, that SWWC should exit the non-regulated services business

2010		2013
Regulated and non-regulated utility operations	→	Regulated utility operations
Nine states	→	Four states



Next Steps:

Achieve 2013 budget and then pursue profitable growth opportunities

IIF Ownership: 90% → IIF Ownership: 100%

A robust and transparent quarterly valuation process

A systematic process which requires input, evaluation, and sign-off by internal and external parties

Quarterly IIG Review
Operating Committee review and sign off

- **Budget projections**
- **DCF modelling**
- **Model review**
- **External inputs and checks**

Approved by IIG, Management, and Company Board

Updated for most recent company results and projections

Review of model outputs by Management and IIG

Economic/ market assumptions vetted with external market sources

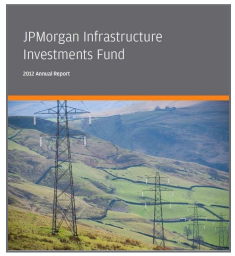
Quarterly Independent Reviews

Independent annual external valuation[1]

Ernst & Young KPMG Deloitte.

GRA independent valuation

Annual Audited Financial Statements



Independent external audit

pwc

[1]Staggered throughout the year.

This information above is given for illustrative purposes. It is considered to be accurate at the time of writing, but no warranty of accuracy is given and no liability in respect of any error or omission is accepted. The information is included solely to illustrate the valuation process which are or may be utilized by the Fund.

JPMorgan Infrastructure Investments Fund – Summary terms and conditions*

Management Fee

- The Management Fee commences when capital is drawn, is charged on cost until the 3rd anniversary of the drawdown, then on the investor's NAV each successive third anniversary thereafter
- **The option of a 4-year soft lock period OR an 8-year hard lock period is available**

8 Year Hard Lock

- First $50mm–1.25%
- Next $50mm–1.15%
- Amounts above $100mm–1.10%

4 Year Soft Lock

- First $50mm–1.50%
- Next $50mm–1.30%
- Amounts above $100mm–1.10%

Commitment Fee*

- Charged for the shorter of (a) 1 year from commitment acceptance and (b) the full drawdown of the investor's commitment. Same tiered schedule as Management Fee
- Fully credited back to investor through the incentive fee calculation

Incentive Fee*

- *Hurdle Return:* 7% (with no catch-up)
- *Incentive Fee:* 15%
- *Cap:* 13.5% net of fees and expenses
- *Hold Back:* Yes
- *Incentive Period:* 3 years
- *Sharing:* 50% J.P. Morgan/50% Team

Quarterly Distributions

- Paid out or reinvested at investors' preference

Repurchases

- Repurchase Requests can be submitted semi-annually

*The above summary terms are qualified in entirety by the Memorandum. Prospective investors should carefully consider the summary in conjunction with relevant sections of the Memorandum and should consult with their own financial, legal and tax advisors with respect thereto.

Risks and disclosures

SUPPLEMENTARY INFORMATION

Infrastructure investments are subject to significant risks. While J.P. Morgan believes that infrastructure investments have compelling risk and return characteristics, past performance is no guarantee of future results, and any risk or return analyses should not be relied upon. Risk/return continuums and other relative comparisons are based on J.P. Morgan's analysis of information available to it on project developments in the referenced asset classes, and such information may not be accurate or complete. Specific investments shown are for illustrative purposes only, and you should not assume that similar investments will be available to or, if available, will be selected for investment by the Fund.

Information contained in this Booklet, except where otherwise indicated, solely represents J.P. Morgan's views based on available information and current market conditions. The views expressed herein may change at any time based on new information, changing conditions or revised analyses.

The deduction of an advisory fee reduces an investor's return. Actual account performance will vary on individual portfolio security selection and the applicable fee schedule. Fees are available upon request.

The following is an example of the effect of compounded advisory fees over a period of time on the value of a client's portfolio: A portfolio with a beginning value of $100 million, gaining an annual return of 10% per annum would grow to $259 million after 10 years, assuming no fees have been paid out. Conversely, a portfolio with a beginning value of $100 million, gaining an annual return of 10% per annum, but paying a fee of 1% per annum, would only grow to $235 million after 10 years. The annualized returns over the 10 year time period are 10.00% (gross of fees) and 8.91% (net of fees). If the fee in the above example was 0.25% per annum, the portfolio would grow to $253 million after 10 years and return 9.73% net of fees. The fees were calculated on a monthly basis, which shows the maximum effect of compounding.

ADDITIONAL INFORMATION ON SPECIFIC PRESENTATIONS

KEY RISK FACTORS FROM THE MEMORANDUM AND OTHER DISCLOSURES

The following summarizes certain key risk factors that are fully set out, along with other risk factors, in the Memorandum. Defined terms used herein shall have the meanings ascribed thereto in the Memorandum. Prospective investors should carefully consider the summaries below in conjunction with the risk factors section of the Memorandum and should consult with their own financial, legal and tax advisors with respect thereto. The different organizational structures of the Fund Investor Vehicles are likely to result in different actual returns to Investors investing in different Fund Investor Vehicles. In certain circumstances, the variation in returns between Fund Investor Vehicles may be material. Before deciding to invest in the Fund or any Fund Investor Vehicle, all prospective investors are strongly urged to seek independent advice as to the most appropriate Fund Investor Vehicle through which to invest in the Fund. J.P. Morgan does not provide tax or regulatory advice. It is the sole responsibility of each prospective investor to ensure that it invests in a Fund Investor Vehicle that suits its personal circumstances and status.

General risk: There can be no assurance that the Fund will succeed in meeting its investment objective or Portfolio Target Return, or that there will be any return on capital or of the original capital invested. Investors will only have recourse to the assets of their particular Fund Investor Vehicle for any losses suffered.

Risks associated with infrastructure investments generally: Investing in infrastructure assets involves a variety of risks, not all of which can be foreseen or quantified, and which include, among others: the burdens of ownership of infrastructure; local, national and international economic conditions; the supply and demand for services from and access to infrastructure; the financial condition of users and suppliers of infrastructure assets; risks related to construction, regulatory requirements, labor actions, health and safety matters, government contracts, operating and technical needs, capital expenditures, demand and user conflicts, bypass attempts, strategic assets, changes in interest rates and the availability of funds which may render the purchase, sale or refinancing of infrastructure assets difficult or impracticable; changes in environmental laws and regulations, investments in other funds, troubled infrastructure assets and planning laws and other governmental rules; changes in energy prices; negative developments in the economy that may depress travel activity; force majeure acts, terrorist events, under-insured or uninsurable losses; and other factors which are beyond the reasonable control of the Fund or the Investment Adviser. Many of these factors could cause fluctuations in usage, expenses and revenues, causing the value of the Investments to decline and negatively affecting the Fund's returns.

Lack of liquidity of interests: The Interests are subject to restrictions on transferability and resale under various securities laws and may not be Transferred or resold except in compliance with those laws and with the prior written approval of the applicable General Partner or Board of Directors (which generally may be withheld or conditioned in its absolute discretion). There will be no public market for the Interests.

The portfolio target return is subject to market conditions: The Portfolio Target Return is based on current available investment opportunities and predictions of the infrastructure market and economic conditions generally. Because the Fund has an indefinite term and current estimates of market conditions are likely to change over time, prospective investors should note that the actual realized return over the term of the Fund may vary materially from the Portfolio Target Return. The Investment Adviser reserves the right to amend the Portfolio Target Return without the consent of Investors in the event the Investment Adviser determines, in its absolute discretion, that such amendment is warranted by a material change in circumstances.

Appraisals and valuations: Most of the Fund's Investments will be highly illiquid, and will most likely not be publicly traded or readily marketable. The Investment Adviser, therefore, will not have access to readily-ascertainable market prices when establishing valuations for the Investments, and the Investment Adviser and the Fund can provide no assurance that any given Investment will be valued or sold at a price equal to the value ascribed by the Investment Adviser to such Investment.

Risks and disclosures (cont'd)

Regulatory and tax risks: The operation of the Fund and the tax consequences of an investment in the Fund are substantially affected by legal requirements, including those imposed by ERISA, the Code and regulations promulgated under these and other applicable U.S. laws, and by the laws, including tax laws, of the Cayman Islands, Canada, Germany and any other jurisdiction in which an Entity may be organized, formed or incorporated or in which an Investment may be made. To ensure compliance with such regulations and laws that may affect a group of Investors, the Investment Adviser may, acting reasonably and in good faith, take actions to ensure compliance with such regulations and laws. Such actions or omissions may have an adverse effect on certain Investors. J.P. Morgan does not provide tax or regulatory advice.

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Environmental risks: The Fund may become liable for substantial costs from remedying environmental problems associated with the properties it holds. The costs of any such remediation may exceed the value of the relevant property and/or the aggregate assets of the Fund. Environmental problems may also affect the use and operation of such properties.

Future investments; inability to invest committed capital: Investments that will be acquired by the Fund have not yet been identified. The activity of identifying, completing and realizing attractive Investments is highly competitive and involves a high degree of uncertainty. The Fund will be competing for investments with other infrastructure investment vehicles, as well as financial institutions and other institutional investors. No assurance can be given that the Fund will be successful in obtaining suitable investments.

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Leverage: The Fund intends to leverage its investments with recourse and non-recourse debt and may also obtain credit facilities or subscription lines. Although the use of leverage can enhance returns and increase the number of Investments that can be made, it can also substantially increase the risk of loss for such leveraged investments.

Diversification: Given the concentration of the Fund's assets in the infrastructure industry, the Fund will be more susceptible to adverse economic or regulatory occurrences affecting that industry than a fund that is not concentrated in a single industry. Such possibly limited degree of diversification means the performance of the Fund may be more susceptible to a single economic, political or social event.

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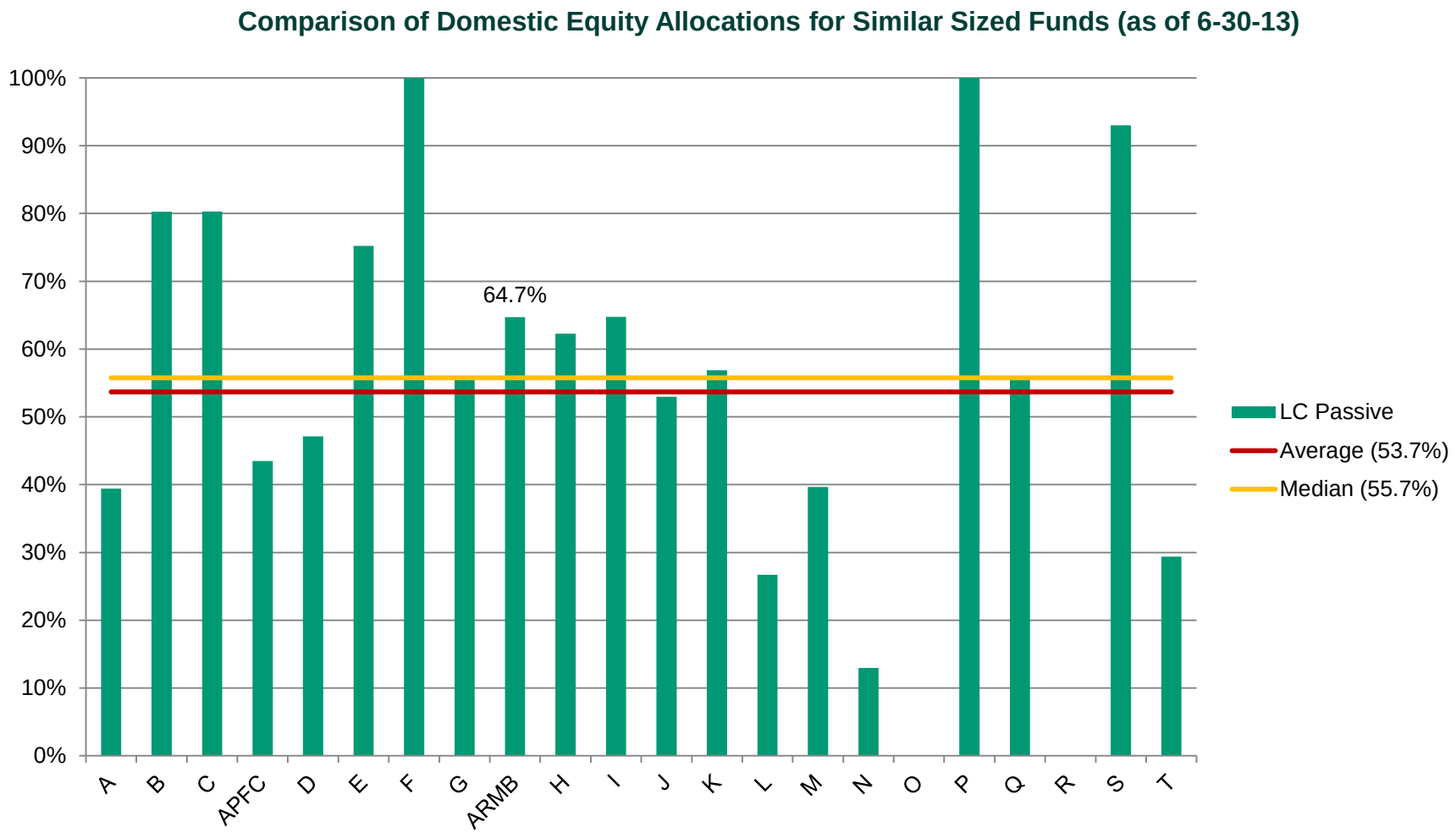
Review of Active Domestic Asset Management

Gary Bader

September 20, 2013

Active Passive Comparison



[1]SMid cap funds categorized as small cap
[2]Mid cap funds categorized as large cap
[3]Data provided for funds C,O,P, & R as of 3-31-13
[4]Data for funds A-T provided by Callan Associates

Active Passive Comparison (cont.)

- Comparison with other large (>$1B) public funds in the Callan database.
- Average and median passive allocations within large cap data set were 54% and 56% respectively.
- ARMB's passive large cap allocation was slightly above average at 65%.

Passive Allocation				
Fund	Fund Size ($M)	LC Passive (%)	LC ($M)	LC Passive ($M)
A	67,982	39.4%	20,952	8,260
B	53,230	80.2%	8,653	6,943
C	46,595	80.3%	15,541	12,475
APFC	45,917	43.5%	4,513	1,962
D	29,688	47.1%	9,833	4,635
E	28,731	75.2%	12,677	9,533
F	22,953	100.0%	2,752	2,752
G	22,045	55.6%	7,096	3,942
ARMB	18,069	64.7%	4,072	2,635
H	14,823	62.3%	4,598	2,862
I	12,756	64.8%	2,240	1,450
J	9,691	52.9%	2,902	1,536
K	8,065	56.9%	1,905	1,084
L	6,663	26.7%	2,331	623
M	4,473	39.6%	1,172	465
N	4,048	13.0%	699	91
O	2,952	0.0%	180	-
P	1,708	100.0%	527	527
Q	1,382	55.9%	533	298
R	1,169	0.0%	621	-
S	1,161	93.0%	510	474
T	1,052	29.4%	404	119

[1]SMid cap funds categorized as small cap
[2]Mid cap funds categorized as large cap
[3]Data provided for funds C,O,P, & R as of 3-31-13
[4]Data for funds A-T provided by Callan Associates

Callan

ARMB Board Meeting

Investment Performance
Periods Ended 6/30/13

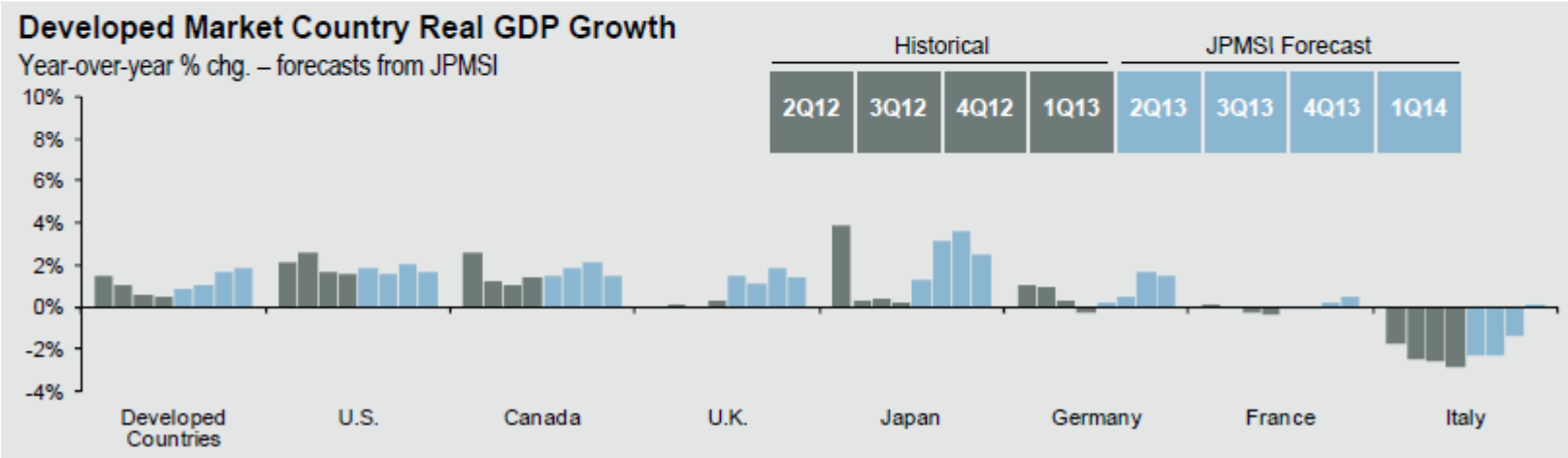
Michael J. O'Leary, CFA
Executive Vice President

Paul Erlendson
Senior Vice President

Agenda

- Market and Economic Environment
- Total Fund Performance
  - Major Asset Classes
- Review of Major Activities

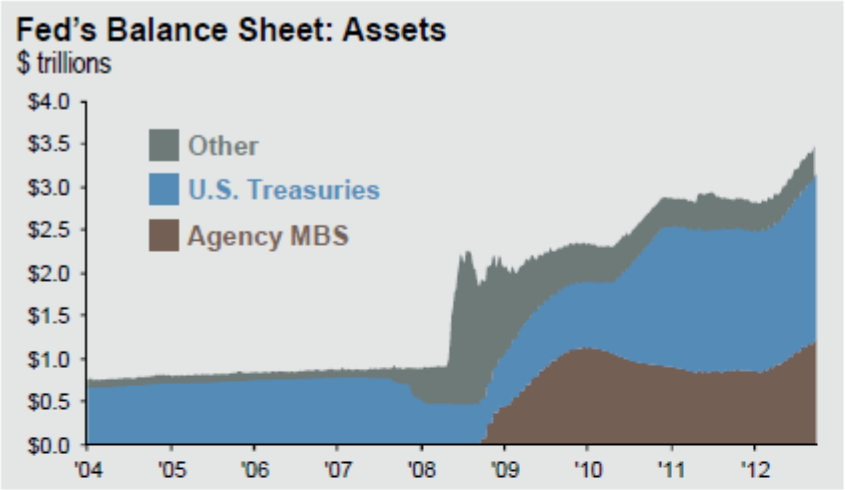
Economic Growth – Slowed in Emerging – big debates regarding China

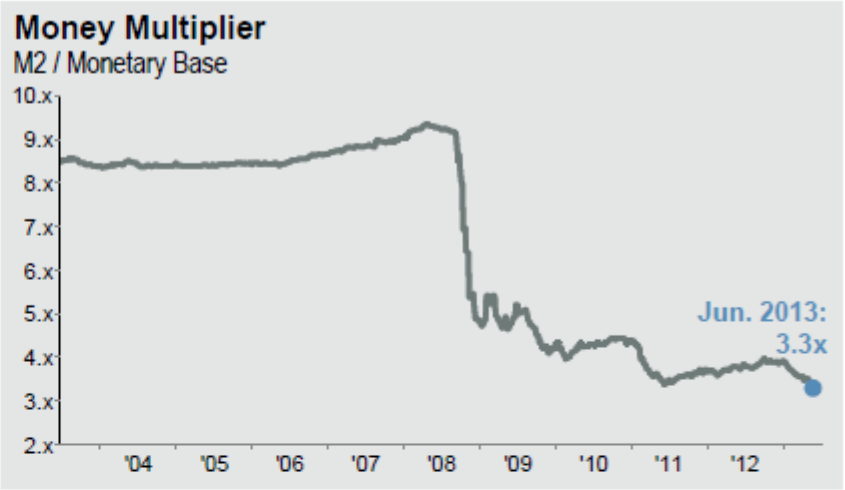


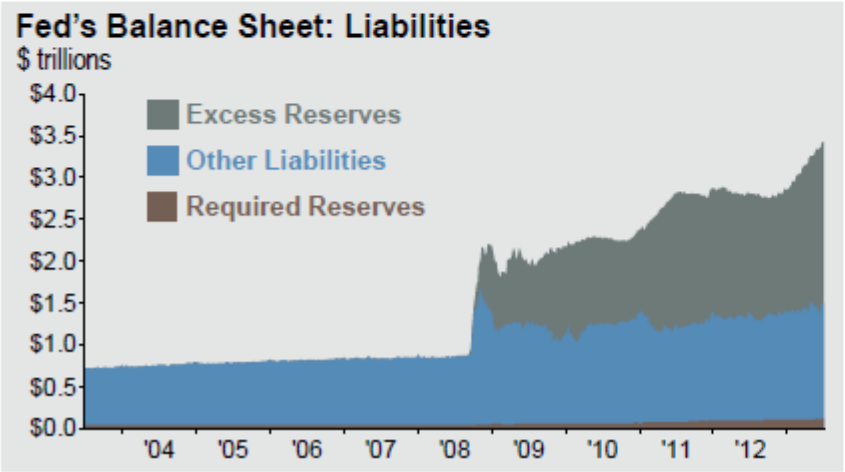
Source: JP Morgan

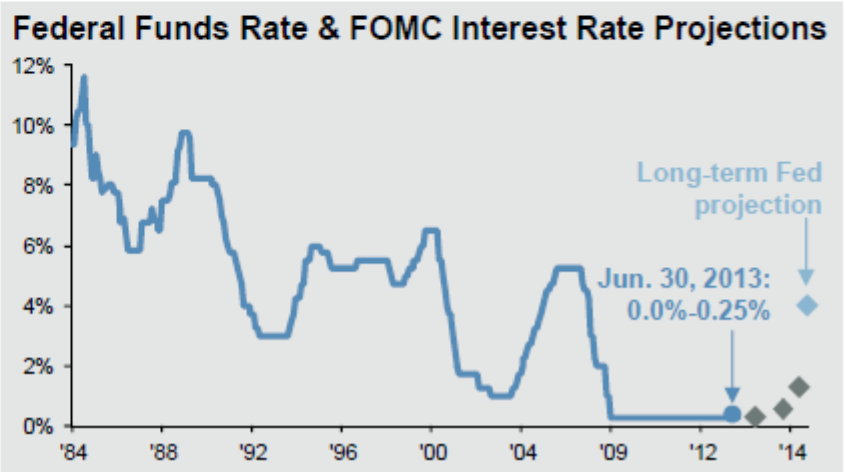
Fed Plans Dominate Markets in Q2

Taper or Not





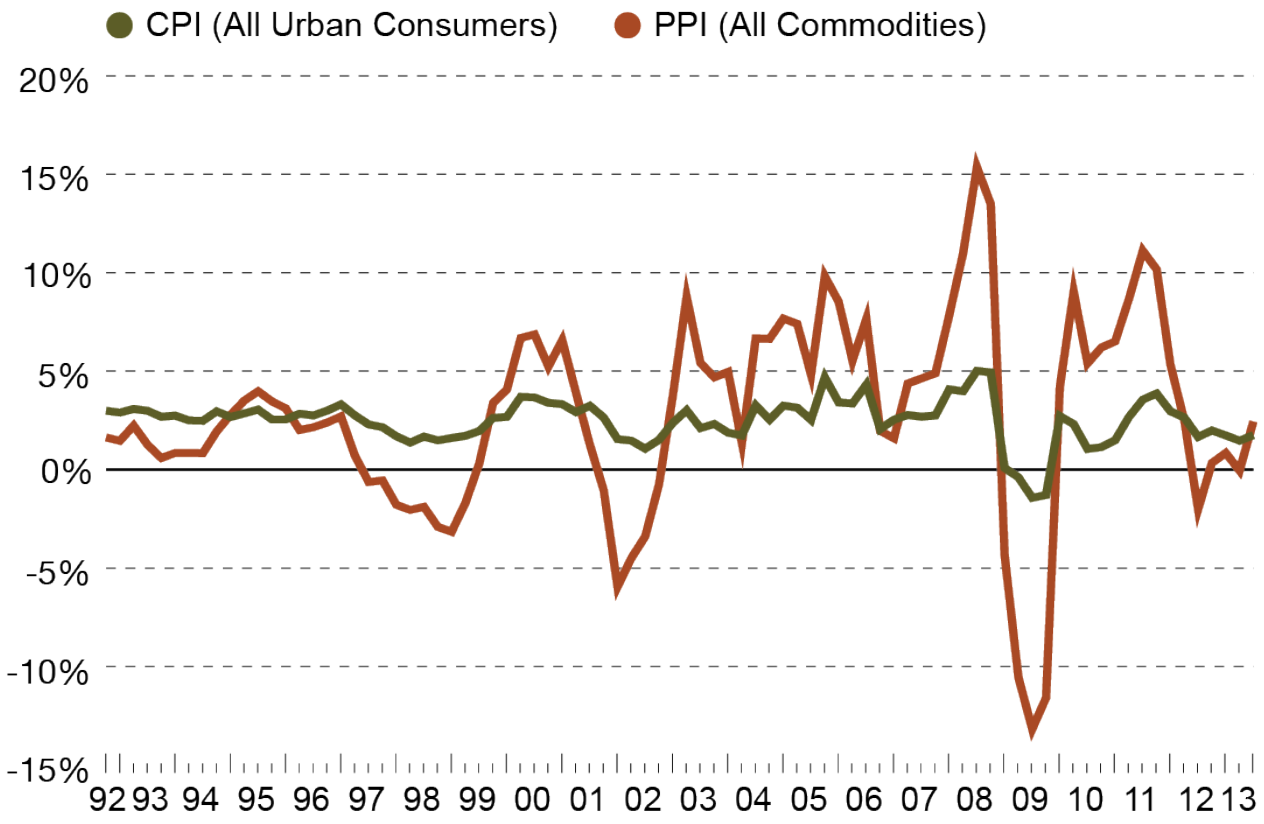




Source: JP Morgan

Inflation Remains Low

Inflation Year-Over-Year

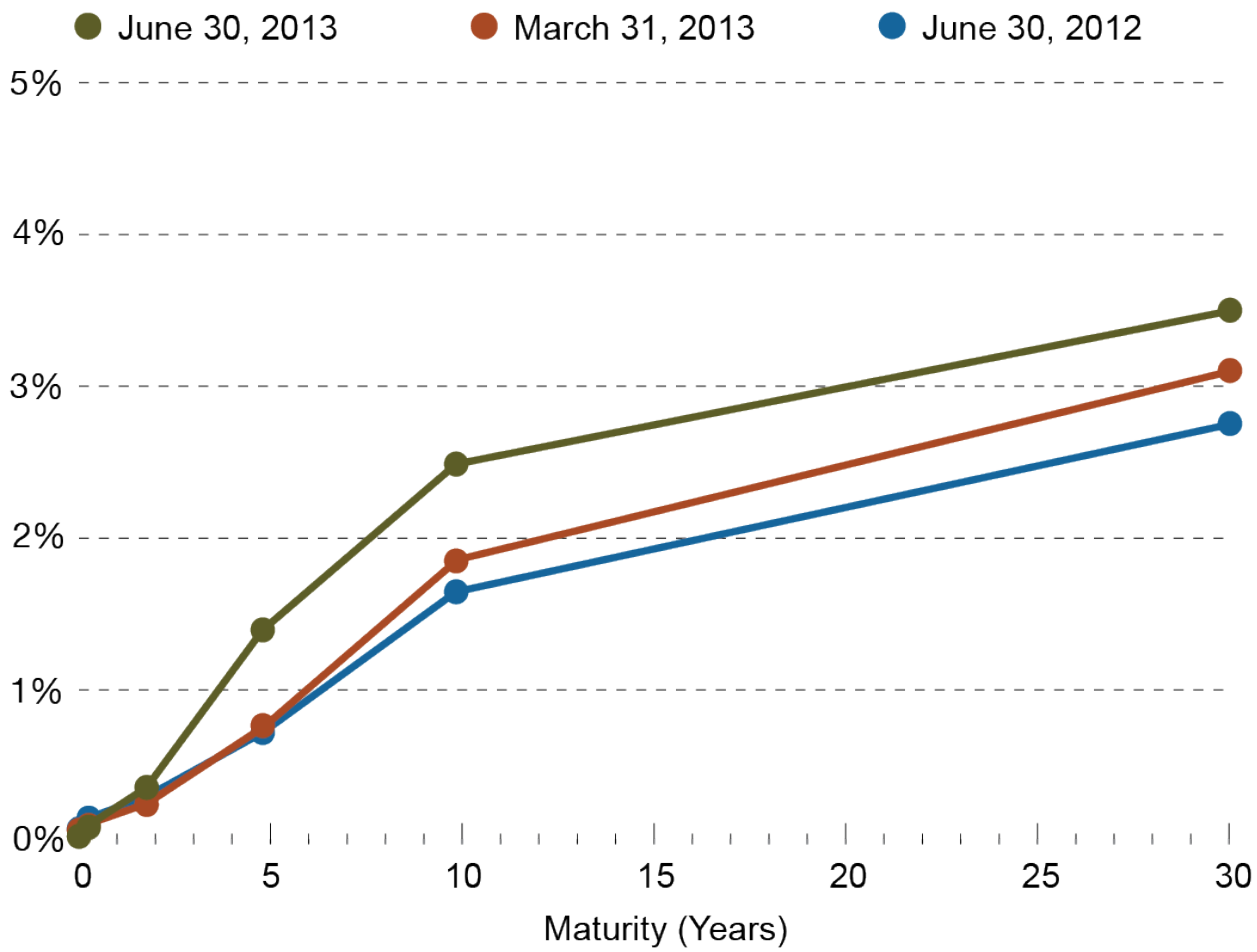


Source: Bureau of Labor Statistics

U.S. Treasury Curves

Significant Move Up in May & June

U.S. Treasury Yield Curves

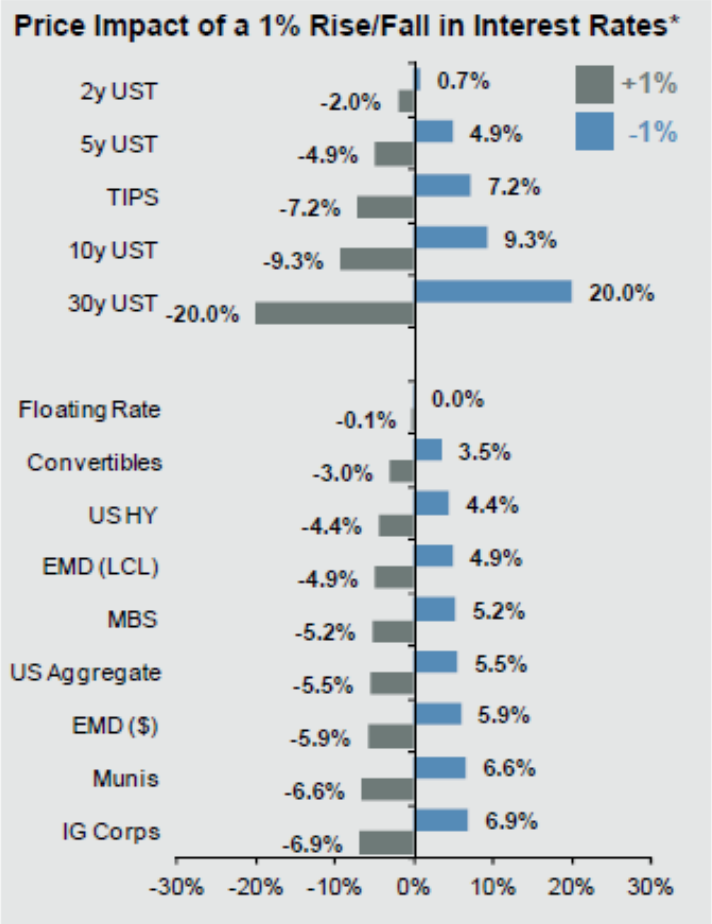


Source: Bloomberg

Yields remain extremely low

US Treasuries	# of issues	Correlation to 10-year	Avg. Maturity	Yield 6/30/2013	Yield 6/30/2012	Return 2Q13	Return YTD 2013
2-Year	77	0.69	2 years	0.36%	0.33%	-0.09%	0.00%
5-Year	60	0.92	5	1.41%	0.72%	-2.43%	-2.26%
10-Year	20	1.00	10	2.52%	1.67%	-4.57%	-4.87%
30-Year	18	0.92	30	3.52%	2.76%	-6.13%	-9.01%
TIPS	34	0.63	10	0.53%	-0.46%	-7.05%	-7.39%
Sector							
Broad Market	8,413	0.88	7.5 years	2.35%	1.98%	-2.32%	-2.44%
MBS	766	0.83	7.1	3.12%	2.44%	-1.96%	-2.01%
Municipals	9,054	0.54	9.9	2.79%	2.26%	-3.11%	-2.77%
Corporates	4,632	0.53	10.2	3.35%	3.27%	-3.31%	-3.41%
High Yield	2,057	-0.19	6.7	6.66%	7.35%	-1.44%	1.42%
Floating Rate	31	-0.21	2.9	1.64%	3.16%	-0.15%	1.03%
Convertibles	490	-0.29	–	1.09%	0.90%	1.80%	9.24%
EMD ($)	1,125	0.25	9.3	5.40%	5.44%	-5.14%	-6.52%
EMD (LCL)	460	0.03	6.9	5.55%	5.57%	-6.48%	-6.16%

Source: U.S. Treasury, Barclays Capital, FactSet, J.P. Morgan Asset Management.



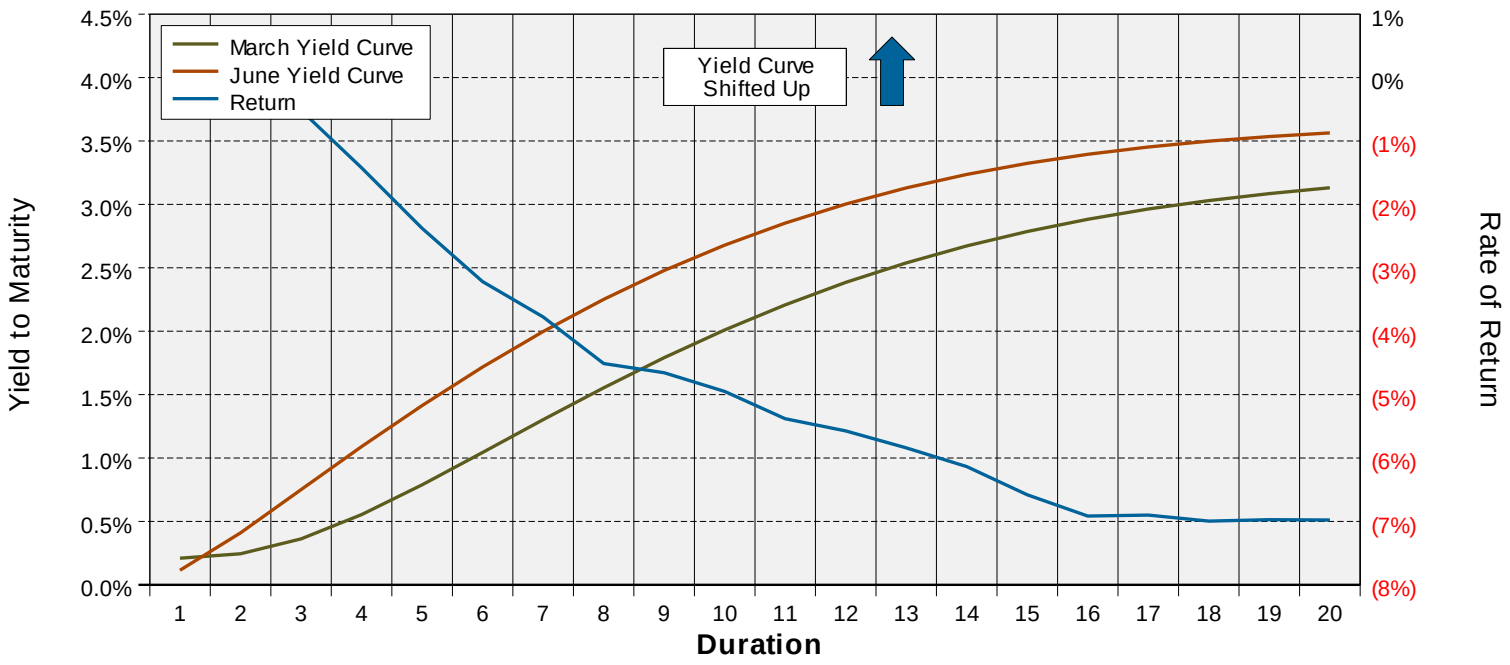
Low yields cause interest rate sensitivity to rise (i.e. duration to lengthen)

Source: JP Morgan

The longer the duration, the poorer Q2 performance

Return on right scale

Yield Curve Change and Rate of Return
One Quarter Ended June 30, 2013



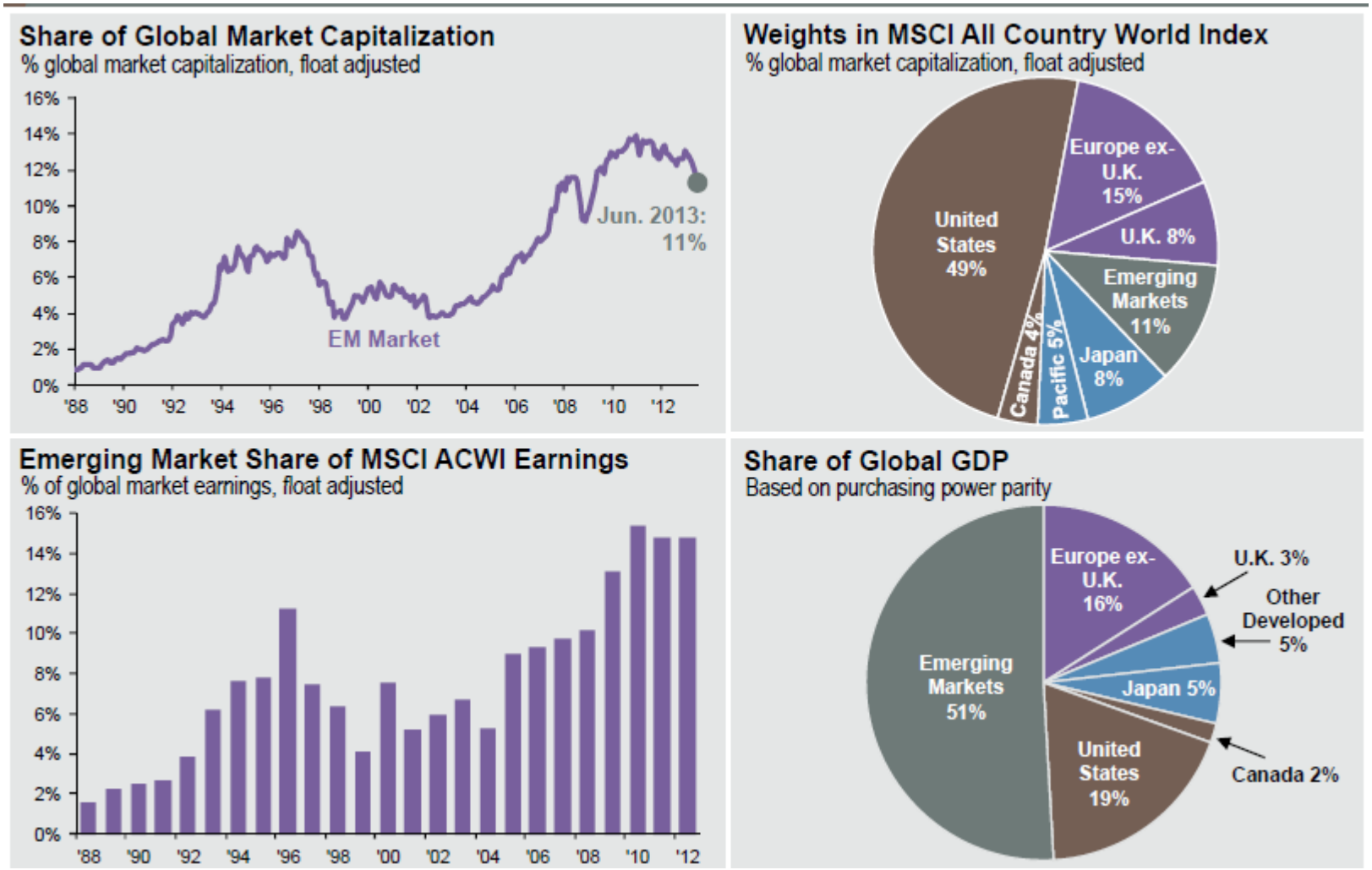
Implications of a further rise in rates

Total Returns Fixed Income Indices	Yield to Worst	OAS	Duration	Approximate Interest Rate Increase to Offset Annual Coupon
Barclays Aggregate	2.4%	61	5.49	0.43%
Barclays Intermediate Agg.	2.1%	52	4.31	0.48%
Barclays Government/Credit	2.0%	59	5.68	0.36%
Barclays Int. Govt/Credit	1.5%	45	3.88	0.39%
Barclays U.S. Treasury	1.2%	1	5.15	0.24%
Barclays Government	2.1%	72	5.11	0.41%
Barclays Agencies	1.5%	38	3.95	0.38%
Barclays Corporate	3.4%	152	6.87	0.49%
Barclays U.S. MBS	3.1%	60	5.22	0.60%
Barclays CMBS	2.3%	150	3.14	0.75%
Barclays ABS	1.3%	58	2.78	0.46%
Barclays High Yield	6.7%	492	4.41	1.51%
Barclays Municipal	2.9%	n/a	7.94	0.37%

Source: Barclays Capital As of: *7/1/2013*

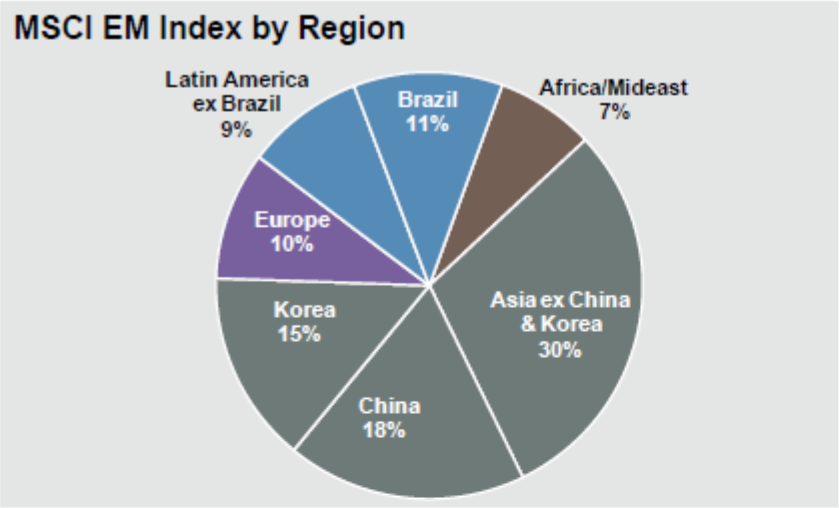
Source: PNC Capital Advisors

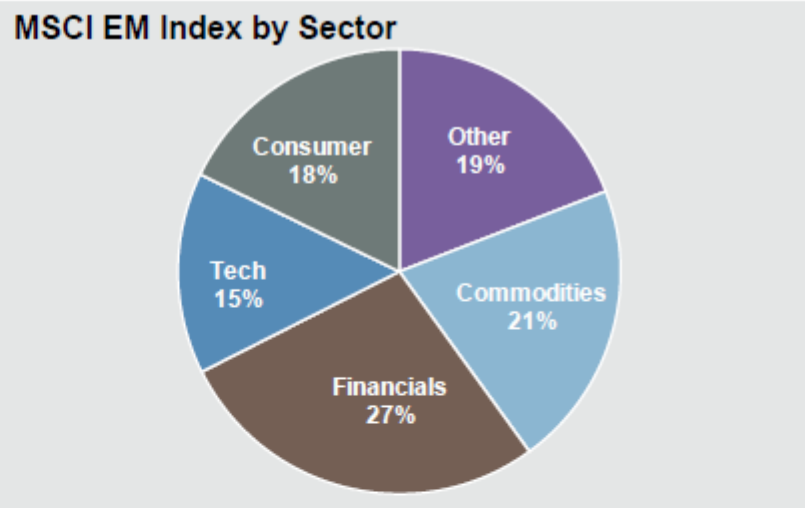
EM still not a huge part of Global Equity but, by some measures, more than 50% of Global GDP

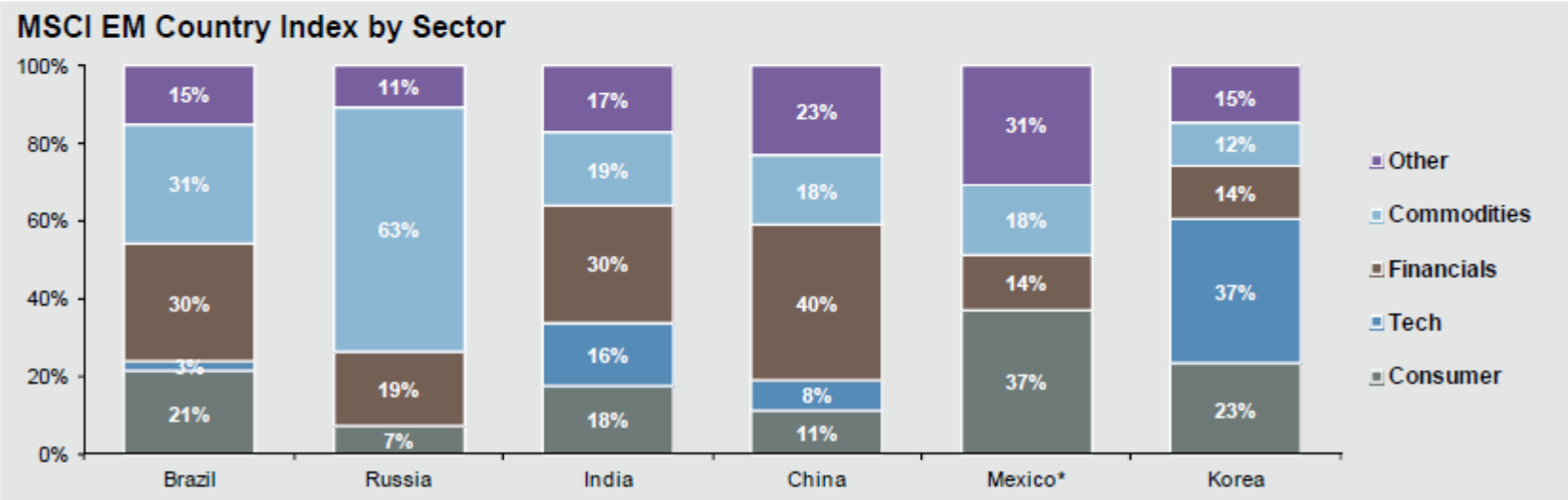


Source: JP Morgan

Greater Differentiation By Sector Amongst Emerging Economies







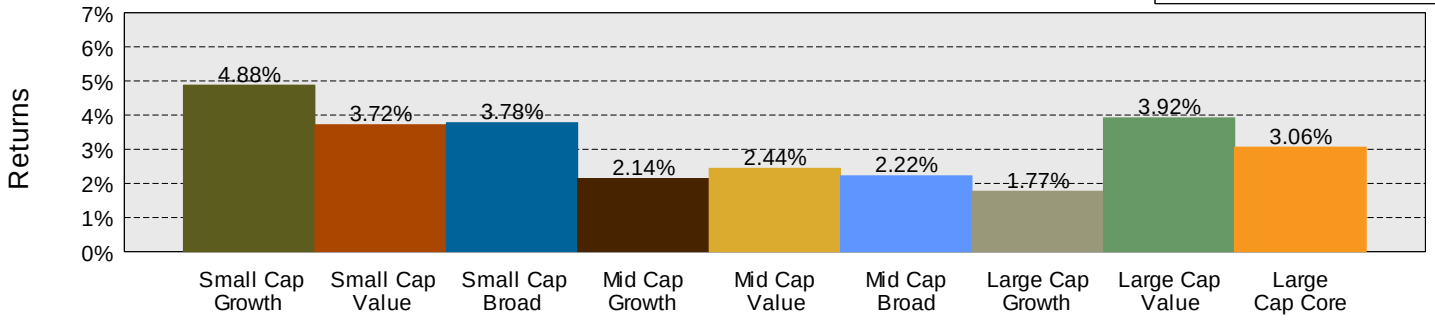
Source: JP Morgan

U.S. Equity Returns

Quarter Ending June 30, 2013

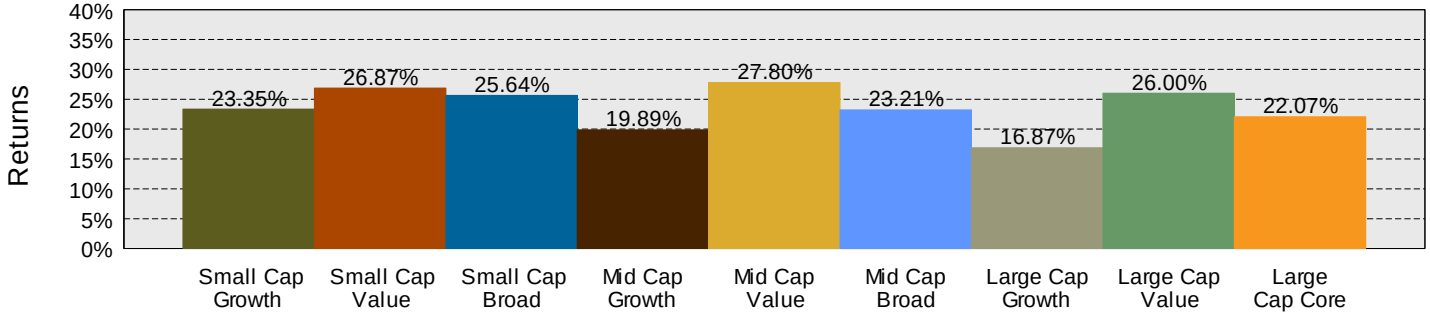
S&P 500:	2.91%
S&P 500 Growth:	2.48%
S&P 500 Value:	3.36%
S&P Mid Cap:	1.00%
S&P 600:	3.92%
S&P 600 Growth:	3.44%
S&P 600 Value:	4.39%

Separate Account Style Group Median Returns for Quarter Ended June 30, 2013



S&P 500:	20.60%
S&P 500 Growth:	16.78%
S&P 500 Value:	25.04%
S&P Mid Cap:	25.18%
S&P 600:	25.18%
S&P 600 Growth:	22.06%
S&P 600 Value:	28.46%

Separate Account Style Group Median Returns for One Year Ended June 30, 2013



Global & International Equity Index Returns

Style Median and Index Returns* for Periods ended June 30, 2013

International Equity	Quarter	2 Quarters	Year	3 Years	5 Years	10 Years
Global Style	**1.03**	**9.03**	**19.97**	**14.12**	**3.17**	**8.58**
Non-U.S. Style	-0.43	4.30	18.69	11.16	0.84	8.87
Core Style	**-0.33**	**4.92**	**19.61**	**11.49**	**0.84**	**8.52**
MSCI EAFE–Unhedged	-0.98	4.10	18.62	10.04	-0.63	7.67
MSCI EAFE–Local	1.21	11.01	24.93	8.97	1.16	6.06
MSCI EAFE Growth–Unhedged	-1.20	5.47	18.67	10.85	-0.38	7.62
MSCI EAFE Value–Unhedged	-0.74	2.74	18.56	9.17	-0.93	7.64
MSCI World–Unhedged	0.65	8.43	18.58	13.72	2.70	7.25
MSCI World–Local	1.74	11.70	21.41	13.08	3.51	6.39
MSCI AC World ex U.S.–Unhedged	-2.90	0.27	14.14	8.48	-0.34	9.09
MSCI AC World–Unhedged	-0.23	6.38	17.21	12.96	2.86	8.14
Pacific Equity	**Quarter**	**2 Quarters**	**Year**	**3 Years**	**5 Years**	**10 Years**
Pacific Basin Style	**-2.25**	**3.95**	**16.72**	**10.53**	**2.68**	**10.55**
Japan Style	4.01	16.78	22.26	10.48	1.27	7.45
Pacific Rim Style	**-6.18**	**-4.21**	**11.39**	**8.26**	**3.00**	**14.25**
MSCI Pacific–Unhedged	-1.74	7.83	18.45	9.50	1.07	8.16
MSCI Pacific–Local	4.94	20.88	38.32	10.78	-0.26	5.68
MSCI Japan–Unhedged	4.40	16.55	22.24	8.62	-0.14	6.24
MSCI Japan–Local	10.31	33.90	52.19	12.89	-1.43	4.25
Europe Equity	**Quarter**	**2 Quarters**	**Year**	**3 Years**	**5 Years**	**10 Years**
Europe Style	**0.18**	**3.48**	**21.09**	**12.33**	**-0.26**	**8.85**
MSCI Europe–Unhedged	-0.51	2.18	18.86	10.53	-1.35	7.50
MSCI Europe–Local	-0.79	6.11	18.77	8.39	2.23	6.50
Emerging Markets	**Quarter**	**2 Quarters**	**Year**	**3 Years**	**5 Years**	**10 Years**
Emerging Markets Style	**-7.52**	**-7.21**	**5.81**	**4.94**	**-0.31**	**14.62**
MSCI EM–Unhedged	-7.95	-9.40	3.23	3.72	-0.11	14.02
MSCI EM–Local	-4.29	-4.71	6.47	5.34	2.43	13.52
International Small Cap Equity	**Quarter**	**2 Quarters**	**Year**	**3 Years**	**5 Years**	**10 Years**
Small Cap Style	**-0.50**	**7.82**	**23.76**	**15.11**	**3.05**	**12.43**
MSCI EAFE Small Cap–Unhedged	-2.52	5.69	20.88	11.88	2.48	10.38

*Returns less than one year are not annualized.
Sources: Callan Associates Inc., MSCI Inc.

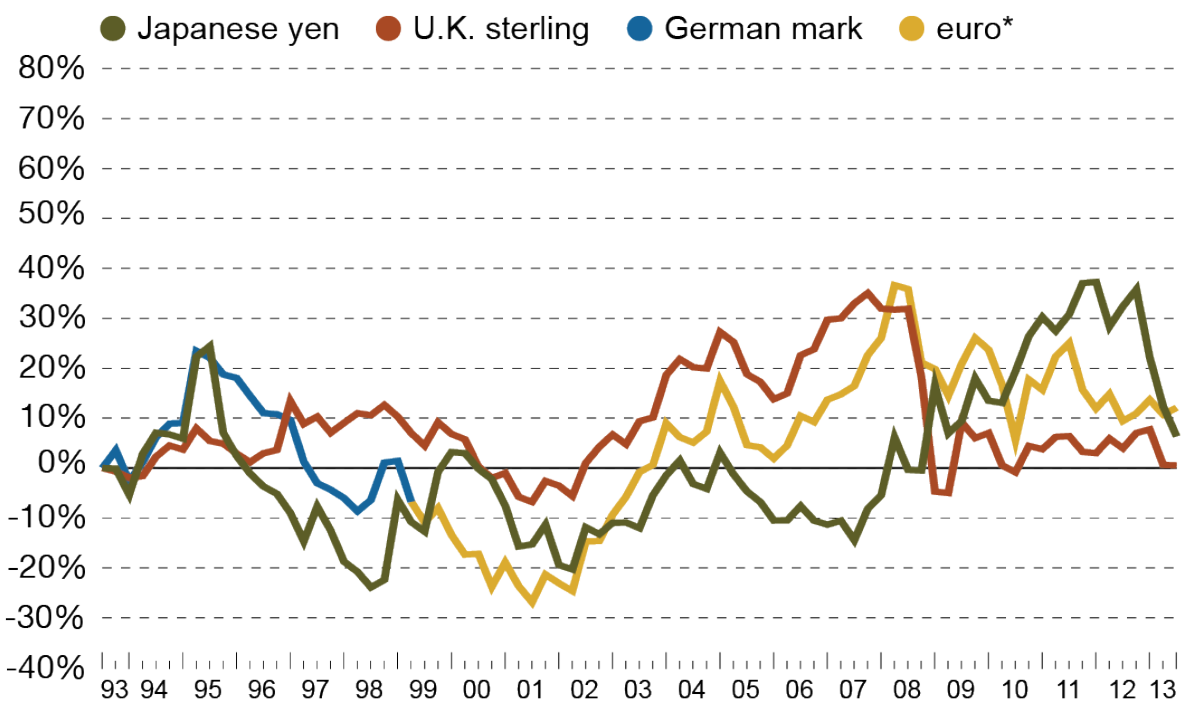
Huge difference between Local & Unhedged Returns

Despite weak recent results, long-term EM results among top performing

Dollar Strength

Yen reacting to changed policy toward greater monetary ease this year

Major Currencies' Cumulative Returns (vs. U.S. Dollar)



*euro returns from 1Q99
Source: MSCI Inc.

Quarterly Return Attribution for EAFE (U.S. Dollar)

Country	Total	Local	Currency	Wtg
Australia	-13.93%	-1.97%	-12.20%	8.02%
Austria	-3.05%	-4.23%	1.23%	0.27%
Belgium	-4.45%	-5.61%	1.23%	1.14%
Denmark	-3.92%	-5.03%	1.23%	1.11%
Finland	0.50%	-0.72%	1.23%	0.77%
France	2.66%	1.42%	1.23%	9.43%
Germany	2.71%	1.46%	1.23%	8.65%
Greece	-9.96%	-11.06%	1.23%	0.03%
Hong Kong	-4.61%	-4.69%	0.08%	3.03%
Ireland	-3.63%	-4.80%	1.23%	0.32%
Israel	-4.16%	-4.29%	-0.17%	0.50%
Italy	0.82%	-0.40%	1.23%	1.97%
Japan	4.40%	10.31%	-5.35%	22.56%
Netherlands	2.83%	1.59%	1.23%	2.61%
New Zealand	-10.38%	-2.76%	-7.84%	0.12%
Norway	-5.78%	-1.36%	-4.48%	0.82%
Portugal	-0.68%	-1.89%	1.23%	0.17%
Singapore	-6.33%	-4.28%	-2.18%	1.67%
Spain	-0.64%	-1.84%	1.23%	2.82%
Sweden	-6.10%	-2.52%	-3.67%	3.11%
Switzerland	-0.29%	-0.37%	0.08%	9.19%
U.K.	-2.16%	-2.04%	-0.12%	21.66%

Sources: Russell Investment Group, Standard & Poor's.

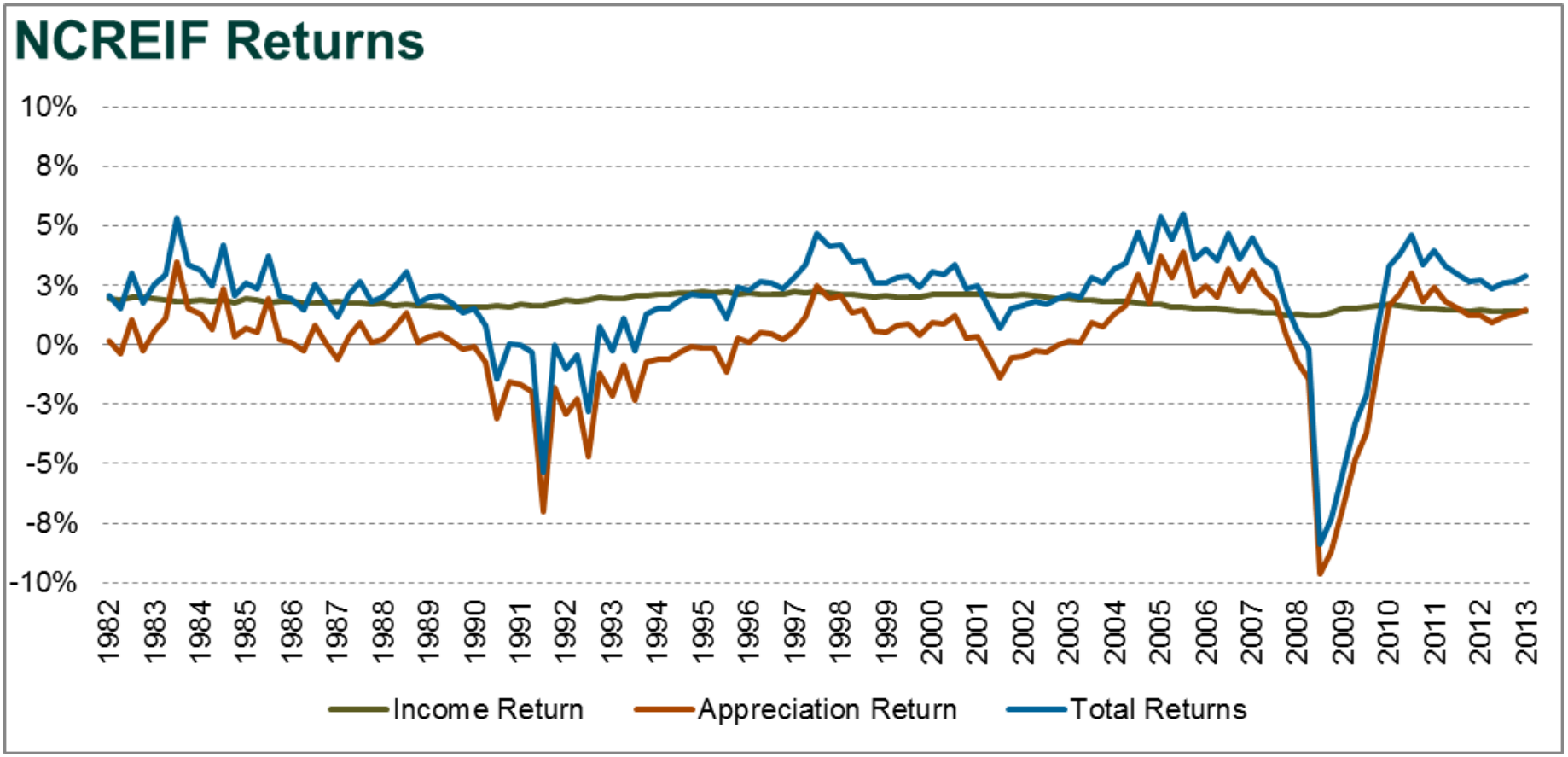
Hedge Fund Perspective

Style Median and Index Returns* for Periods ended June 30, 2013

Diversified Hedge Fund Strategies	Quarter	2 Quarters	Year	3 Years	5 Years	10 Years
Hedge Fund-of-Funds Database	**1.03**	**4.94**	**9.52**	**5.39**	**1.98**	**4.94**
CS Hedge Fund Index	0.13	3.68	9.23	6.26	2.88	6.48
CS Investable Blue Chip Index	-1.28	1.27	6.00	4.65	1.03	3.34
Credit Suisse Subindices	**Quarter**	**2 Quarters**	**Year**	**3 Years**	**5 Years**	**10 Years**
Equity Market Neutral	1.98	2.73	5.04	3.99	-8.47	-0.52
Convertible Arb	1.10	3.81	7.54	6.95	6.03	4.67
Fixed Income Arb	-0.80	1.35	7.51	7.90	4.62	4.07
Multi-Strategy	0.71	3.83	10.39	8.54	4.54	6.71
Distressed	2.85	7.98	15.52	7.36	4.44	8.08
Risk Arb	1.62	1.96	4.22	2.97	2.70	4.75
Event Driven Multi	1.81	6.60	14.05	5.40	3.71	7.75
Long-Short Equity	1.82	7.01	13.28	6.62	2.47	6.94
Short Bias	-4.15	-12.35	-22.36	-16.71	-15.56	-8.09
Global Macro	-0.81	1.33	5.83	7.10	4.51	8.68
Managed Futures	-6.99	-3.59	-4.99	0.12	-0.64	3.37

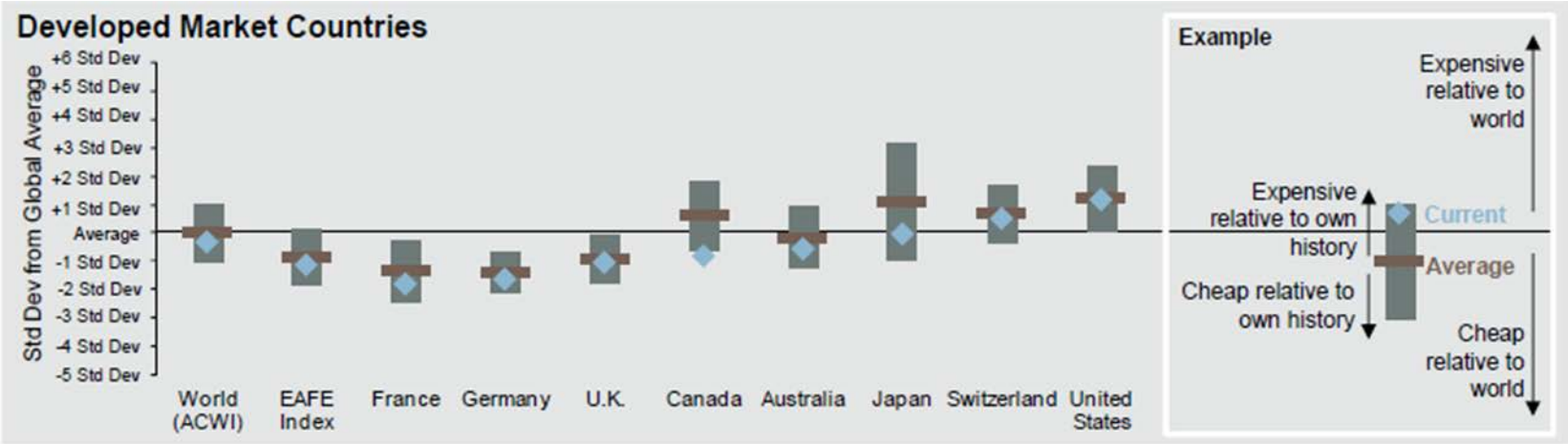
*Returns less than one year are not annualized.
Sources: Callan, Credit Suisse Hedge Index LLC

Real Estate Returns – NCREIF (unlevered & pre-fee) Returns



Source: NCREIF

Most developed markets appear attractively valued relative to their own histories and the world. US & Switzerland possible exceptions

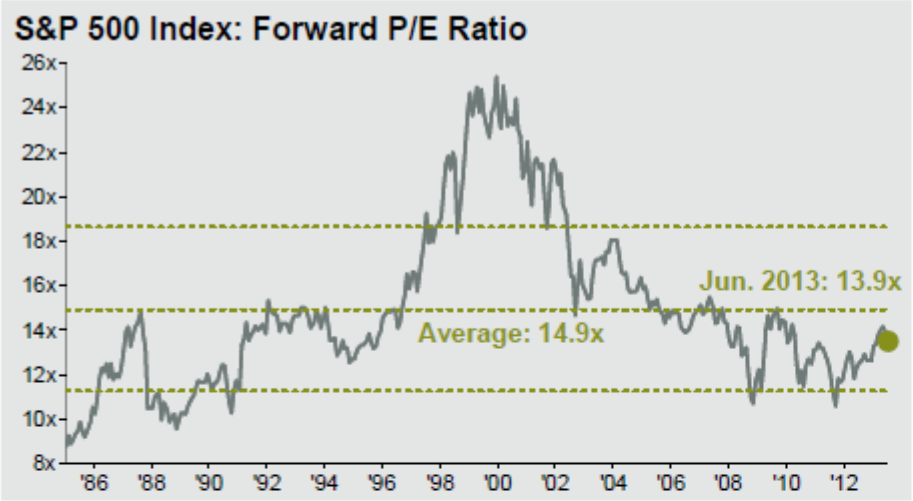


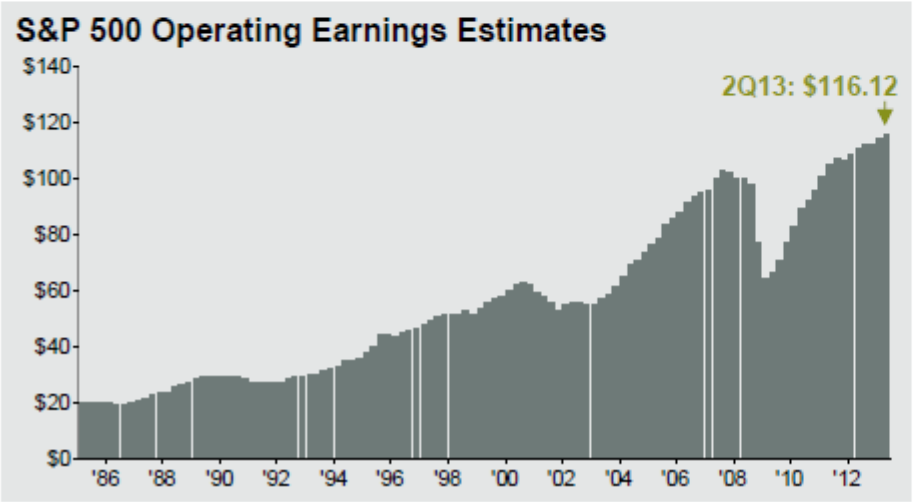
	Current Composite Index	Current				10-year avg.			
		Fwd. P/E	P/B	P/CF	Div. Yld.	Fwd. P/E	P/B	P/CF	Div. Yld.
World (ACWI)	-0.32	12.9	1.8	7.7	2.7%	13.3	2.1	7.0	2.5%
EAFE Index	-1.13	12.5	1.5	6.9	3.4%	13.0	1.6	6.1	3.4%
France	-1.80	11.7	1.2	5.8	3.8%	11.7	1.5	5.7	3.8%
Germany	-1.63	11.3	1.4	5.5	3.4%	11.8	1.5	4.8	3.4%
U.K.	-1.05	11.5	1.7	8.1	3.9%	12.2	1.9	7.0	3.9%
Canada	-0.82	13.0	1.7	6.7	3.1%	13.7	2.1	7.4	2.5%
Australia	-0.56	13.4	1.9	9.1	4.7%	13.3	2.1	8.2	4.5%
Japan	-0.04	13.4	1.3	6.6	1.8%	16.3	1.3	5.9	2.0%
Switzerland	0.52	14.4	2.4	9.8	3.2%	13.5	2.4	9.8	3.0%
United States	1.18	14.2	2.4	9.5	2.0%	14.2	2.3	8.4	2.1%

Source: JP Morgan

Make your own forecast for the S&P

Pick EPS level & PE





S&P 500 Index Levels

Index levels implied by operating earnings and P/E ratio combinations

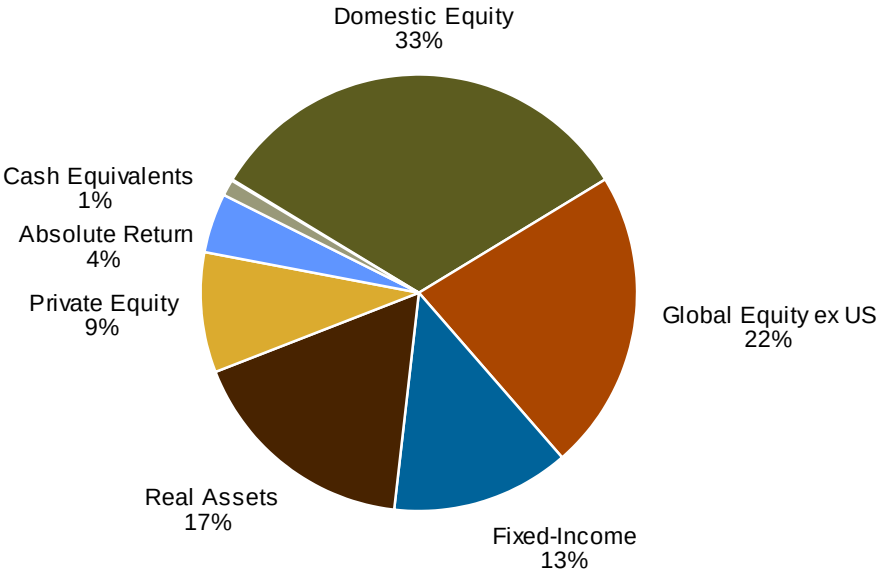
	$80	$90	$100	$110	$120	$130
11x	880	990	1100	1210	1320	1430
12x	960	1080	1200	1320	1440	1560
13x	1040	1170	1300	1430	1560	1690
14x	1120	1260	1400	1540	1680	1820
15x	1200	1350	1500	1650	1800	1950
16x	1280	1440	1600	1760	1920	2080
17x	1360	1530	1700	1870	2040	2210
18x	1440	1620	1800	1980	2160	2340
19x	1520	1710	1900	2090	2280	2470

Source: JP Morgan

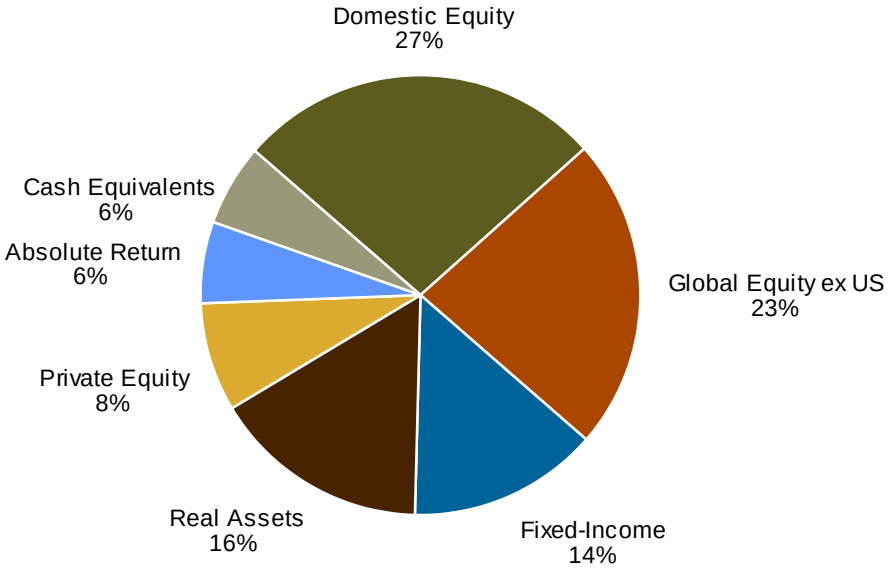
Asset Allocation – Employees' Retirement Plan

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

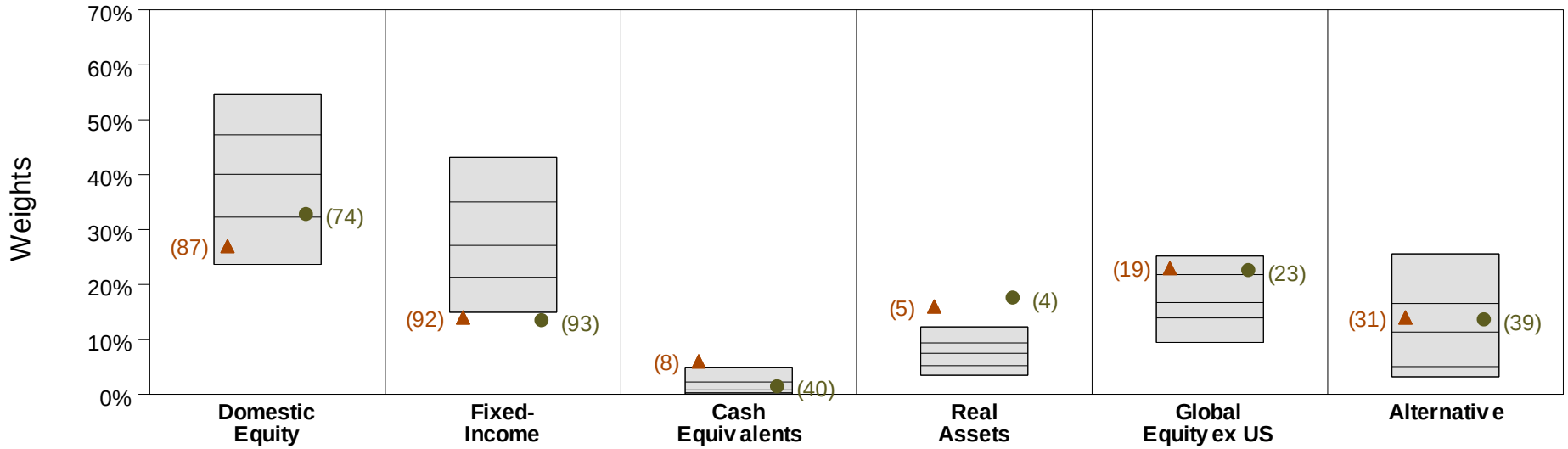


Asset Class	$000s Actual	Percent Actual	Percent Target	Percent Difference	$000s Difference
Domestic Equity	2,180,511	32.6%	27.0%	5.6%	373,487
Global Equity ex US	1,494,730	22.3%	23.0%	(0.7%)	(44,587)
Fixed-Income	884,148	13.2%	14.0%	(0.8%)	(52,828)
Real Assets	1,160,374	17.3%	16.0%	1.3%	89,544
Private Equity	598,588	8.9%	8.0%	0.9%	63,308
Absolute Return	294,813	4.4%	6.0%	(1.6%)	(106,748)
Cash Equivalents	79,519	1.2%	6.0%	(4.8%)	(322,042)
Total	6,692,682	100.0%	100.0%		

Asset Allocation Versus Public Funds (ERP)

Callan Public Fund Database

Asset Class Weights vs Public Fund Sponsor Database



	Domestic Equity	Fixed-Income	Cash Equivalents	Real Assets	Global Equity ex US	Alternative
10th Percentile	54.60	43.15	4.93	12.29	25.17	25.58
25th Percentile	47.23	35.05	2.24	9.34	21.80	16.53
Median	40.08	27.11	0.81	7.46	16.70	11.34
75th Percentile	32.25	21.31	0.30	5.22	13.91	5.05
90th Percentile	23.65	14.92	0.06	3.47	9.46	3.18
Fund ●	32.58	13.21	1.19	17.34	22.33	13.35
Target ▲	27.00	14.00	6.00	16.00	23.00	14.00
% Group Invested	98.87%	98.87%	62.15%	55.37%	95.48%	49.72%

- Total domestic equity is above target while international equity is slightly below target.
- Real assets and alternatives are high when compared to other public funds. Policy is “growth” oriented as opposed to “income” oriented.

*Note that “Alternative” includes private equity and absolute return

PERS Performance – 2nd Quarter 2013 & Trailing 12 Months

Relative Attribution Effects for Quarter ended June 30, 2013

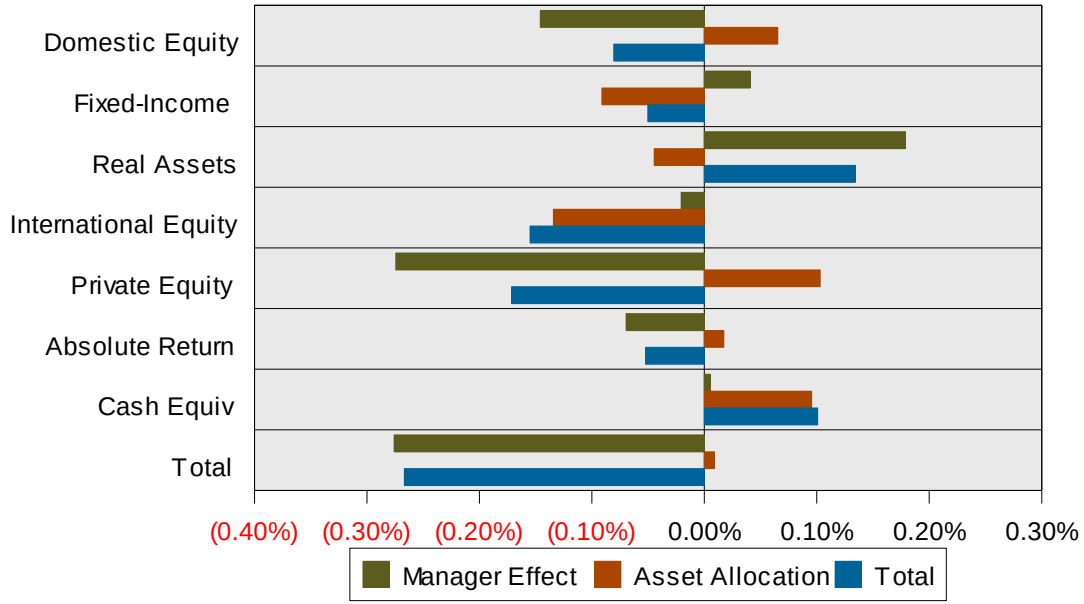
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	32%	27%	2.92%	2.69%	0.08%	0.12%	0.20%
Fixed-Income	14%	14%	(2.00%)	(1.68%)	(0.04%)	(0.00%)	(0.05%)
Real Assets	17%	16%	1.16%	0.35%	0.14%	0.00%	0.14%
Global Equity ex US	23%	23%	(1.63%)	(2.90%)	0.29%	0.01%	0.30%
Private Equity	9%	8%	5.21%	1.67%	0.31%	0.01%	0.32%
Absolute Return	4%	6%	2.05%	1.25%	0.03%	(0.03%)	0.00%
Cash Equivalents	1%	6%	(0.00%)	0.02%	(0.00%)	0.00%	0.00%
Total			**1.00% =**	**0.09% +**	**0.80% +**	**0.12%**	**0.92%**

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%	21.23%	21.46%	(0.06%)	0.29%	0.22%
Fixed-Income	16%	14%	0.57%	(0.04%)	0.12%	(0.30%)	(0.18%)
Real Assets	17%	16%	10.47%	8.35%	0.40%	(0.04%)	0.36%
Global Equity ex US	21%	23%	15.01%	14.14%	0.20%	(0.19%)	0.01%
Private Equity	9%	8%	11.61%	21.24%	(0.89%)	0.09%	(0.80%)
Absolute Return	4%	6%	8.41%	5.11%	0.12%	0.16%	0.28%
Cash Equiv	3%	6%	0.25%	0.11%	0.01%	0.32%	0.33%
Total			**12.50% =**	**12.27% +**	**(0.11%) +**	**0.33%**	**0.22%**

PERS Intermediate Term Performance

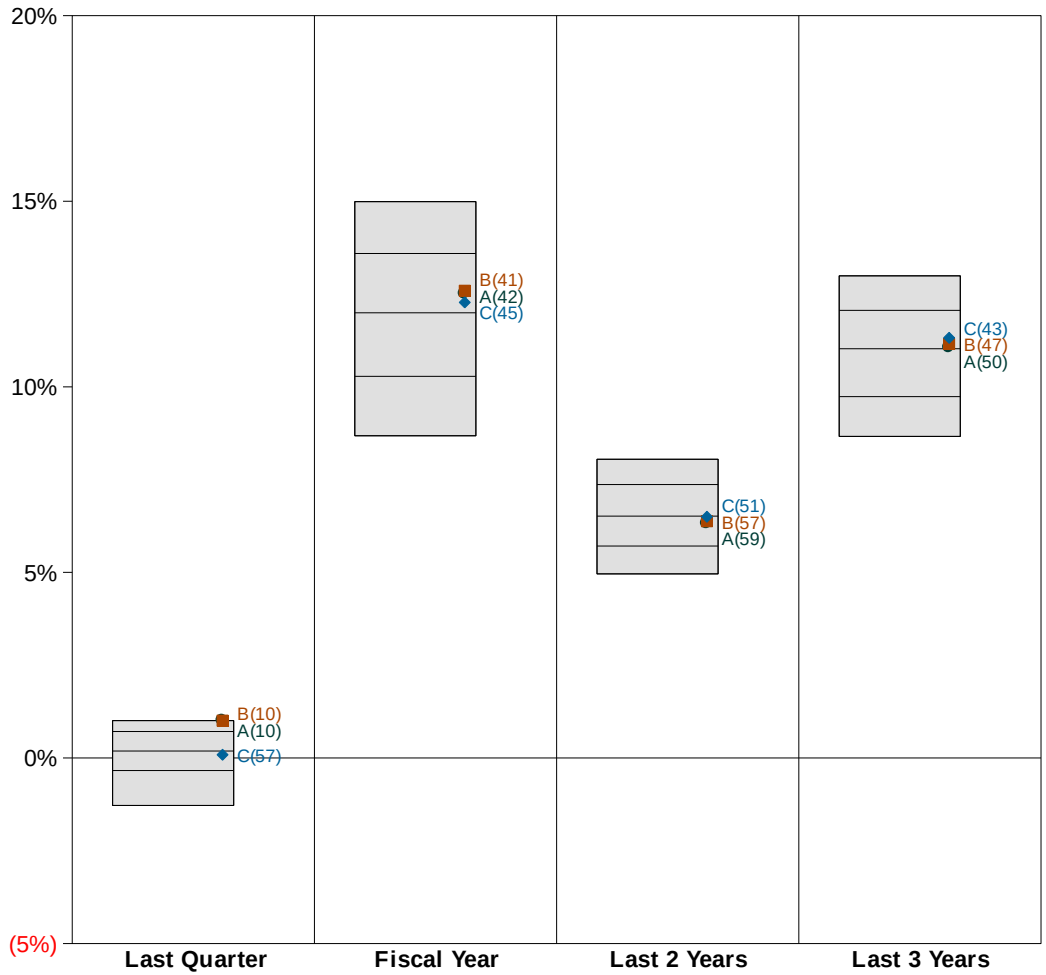
Three Year Annualized Relative Attribution Effects



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%	18.07%	18.63%	(0.15%)	0.07%	(0.08%)
Fixed-Income	17%	17%	3.62%	3.34%	0.04%	(0.09%)	(0.05%)
Real Assets	16%	16%	11.95%	10.79%	0.18%	(0.04%)	0.13%
International Equity	22%	23%	8.39%	8.48%	(0.02%)	(0.13%)	(0.15%)
Private Equity	9%	8%	13.64%	15.81%	(0.27%)	0.10%	(0.17%)
Absolute Return	4%	6%	4.02%	5.11%	(0.07%)	0.02%	(0.05%)
Cash Equiv	2%	3%	0.39%	0.11%	0.01%	0.10%	0.10%
Total			**11.05%**	**= 11.32%**	**+ (0.28%)**	**+ 0.01%**	**(0.27%)**

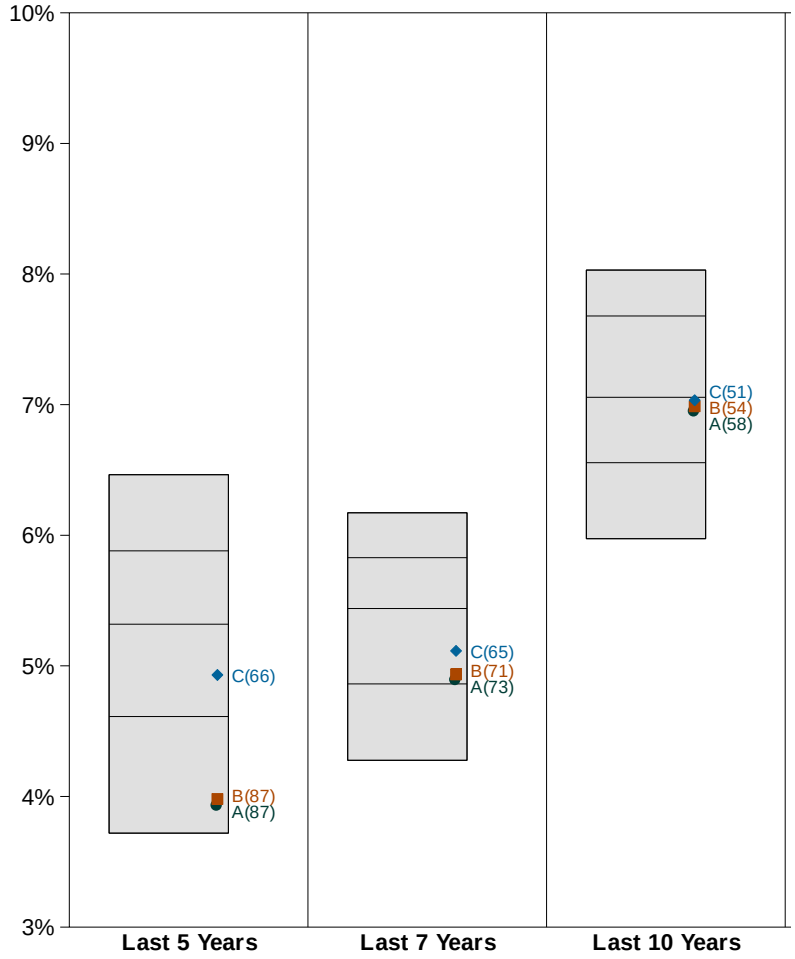
Cumulative Total Fund Returns



	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years
10th Percentile	1.01	14.99	8.05	12.99
25th Percentile	0.71	13.59	7.37	12.06
Median	0.19	11.99	6.51	11.02
75th Percentile	(0.34)	10.28	5.71	9.74
90th Percentile	(1.28)	8.68	4.96	8.66
PERS Total Plan ● A	1.00	12.50	6.31	11.05
TRS Total Plan ■ B	1.01	12.59	6.38	11.15
Target Index ◆ C	0.09	12.27	6.50	11.32

Last quarter above target; all other time periods very close to target

Longer-term Returns

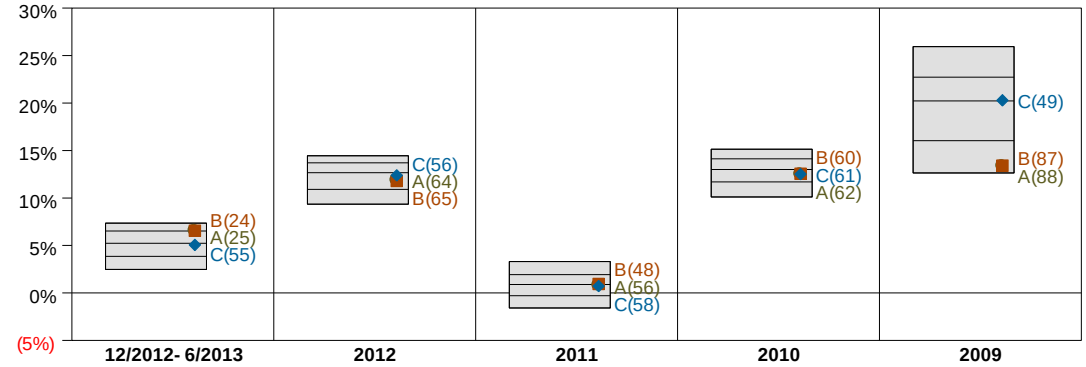


	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	6.46	6.17	8.03
25th Percentile	5.88	5.83	7.68
Median	5.32	5.44	7.06
75th Percentile	4.61	4.86	6.56
90th Percentile	3.72	4.28	5.97
PERS Total Plan ● A	3.92	4.89	6.94
TRS Total Plan ■ B	3.98	4.94	6.99
Target Index ◆ C	4.93	5.11	7.03

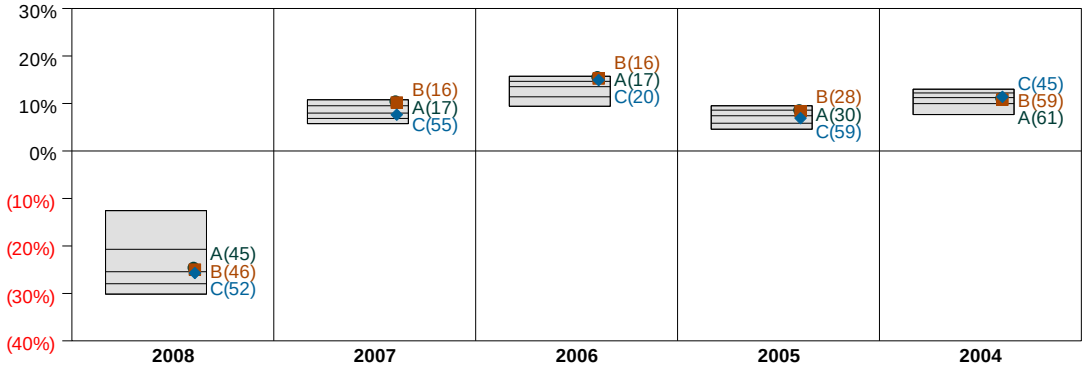
- **5-year performance still affected by 2009 timing related issues**
- **Both shorter & longer-term results improving relative to target**
- **Target has been close to median (see preceding page) & 10 year return shown here.**

Calendar Period Performance

Relative to Public Fund Database



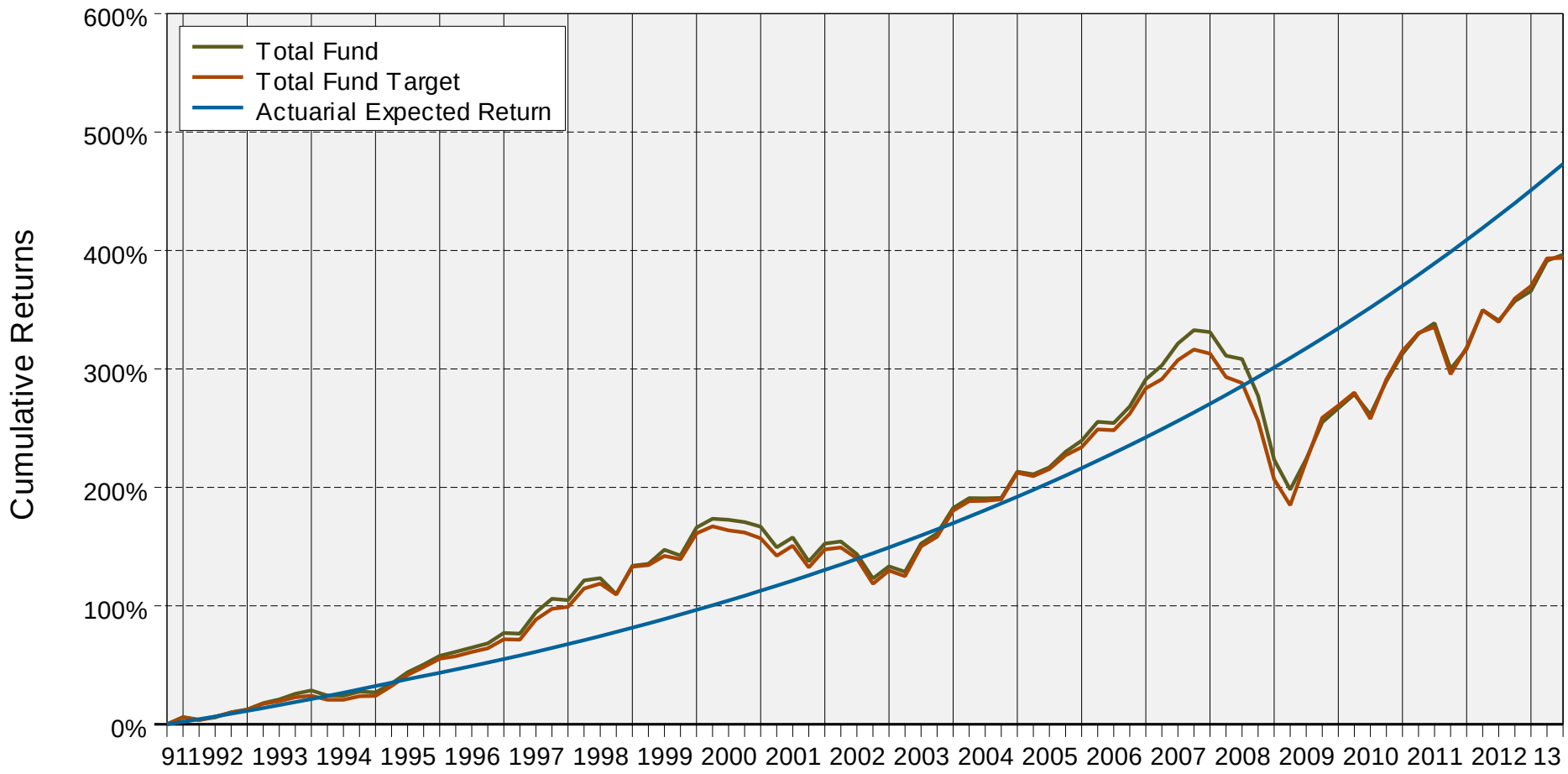
	12/2012- 6/2013	2012	2011	2010	2009
10th Percentile	7.36	14.45	3.31	15.13	25.93
25th Percentile	6.53	13.70	1.92	14.13	22.73
Median	5.24	12.66	0.89	13.00	20.23
75th Percentile	3.86	10.91	(0.29)	11.69	16.03
90th Percentile	2.47	9.34	(1.58)	10.10	12.63
PERS Total Plan ● A	6.52	11.81	0.77	12.45	13.31
TRS Total Plan ■ B	6.55	11.79	0.95	12.55	13.40
Target Index ◆ C	5.06	12.38	0.72	12.51	20.28



	2008	2007	2006	2005	2004
10th Percentile	(12.58)	10.77	15.73	9.53	13.01
25th Percentile	(20.71)	9.53	14.67	8.58	12.22
Median	(25.44)	7.97	13.54	7.40	11.22
75th Percentile	(27.97)	6.85	11.42	5.85	9.96
90th Percentile	(30.14)	5.75	9.41	4.59	7.68
PERS Total Plan ● A	(24.91)	10.17	15.24	8.31	10.79
TRS Total Plan ■ B	(24.98)	10.20	15.26	8.38	10.83
Target Index ◆ C	(25.71)	7.64	14.91	6.89	11.40

Long-term Return Relative to Target –TRS

Cumulative Returns Actual vs Target

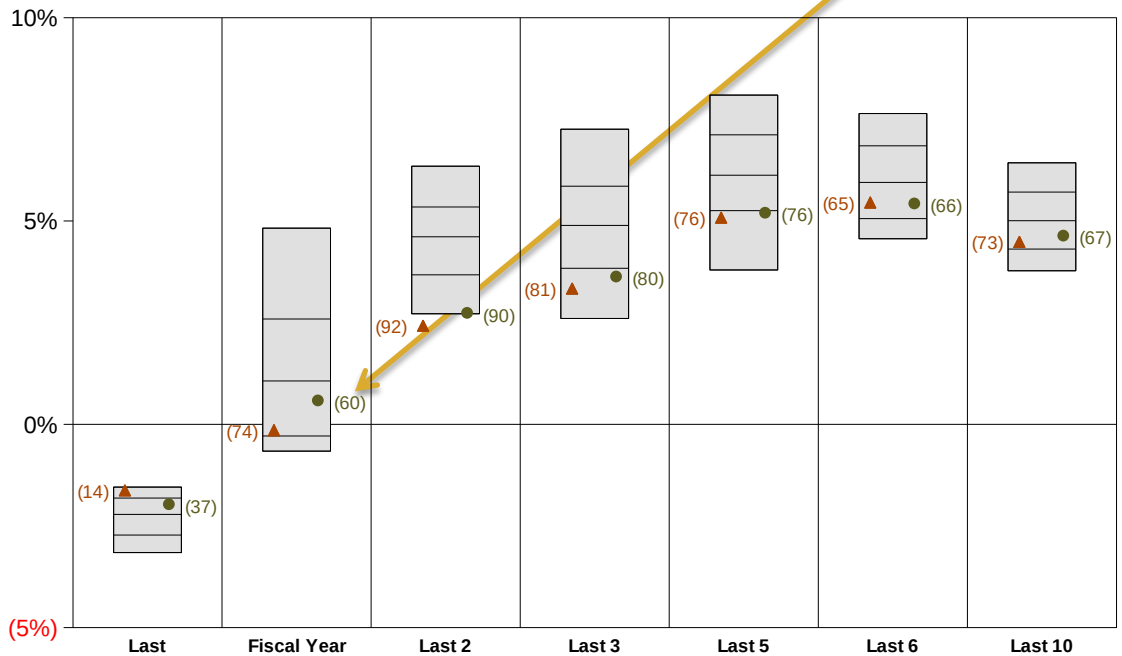


Total Bond Performance

Includes In-House and External Portfolios

Focus on trailing 1-year return

Performance vs Pub Pln- Domestic Fixed (Gross)

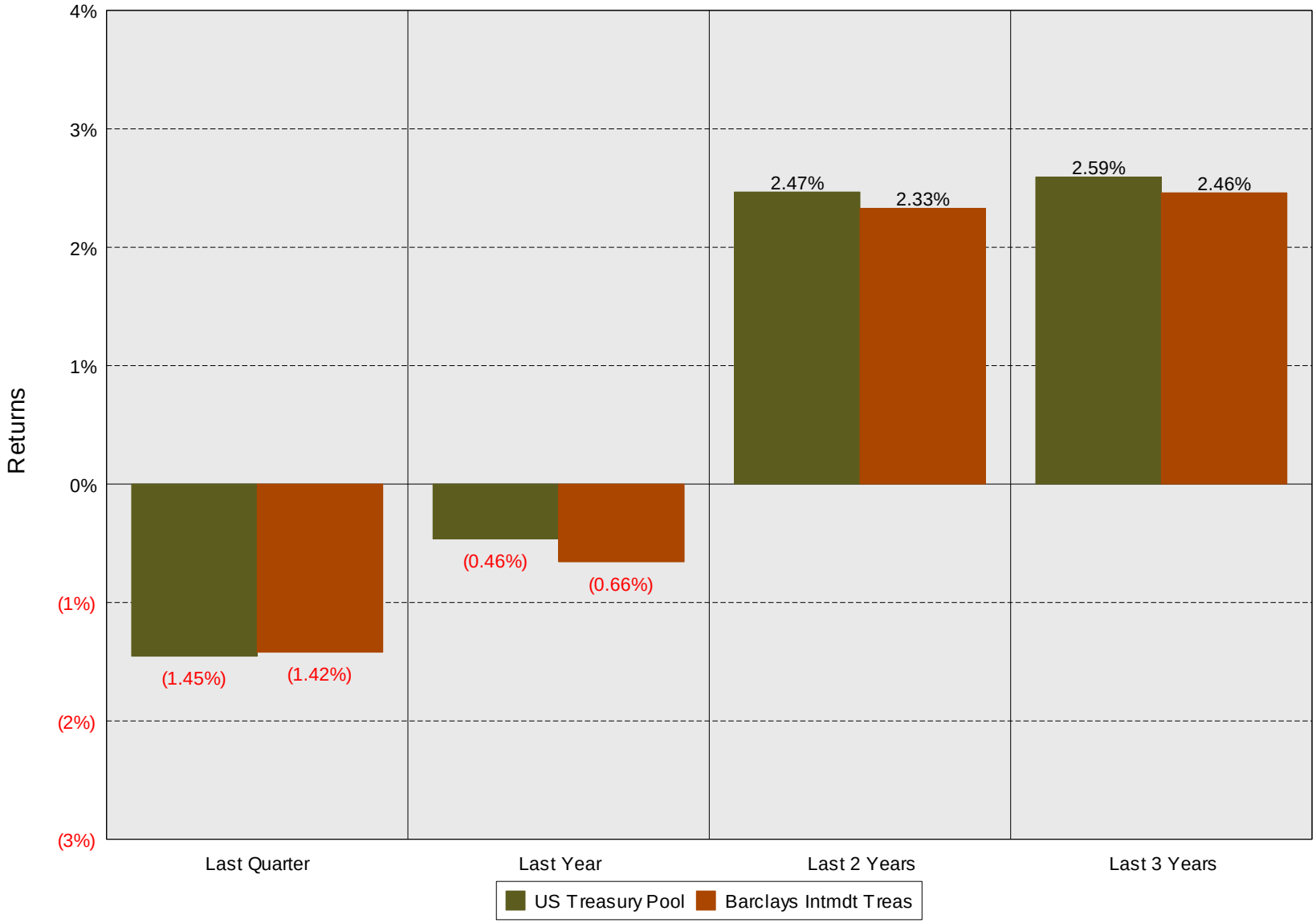


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	(1.55)	4.83	6.35	7.26	8.10	7.64	6.43
25th Percentile	(1.82)	2.59	5.35	5.86	7.12	6.85	5.71
Median	(2.22)	1.07	4.61	4.89	6.13	5.95	5.01
75th Percentile	(2.72)	(0.29)	3.68	3.84	5.26	5.06	4.31
90th Percentile	(3.16)	(0.66)	2.72	2.60	3.80	4.56	3.78
Total Fixed-Income Pool ●	(2.00)	0.55	2.71	3.60	5.17	5.40	4.61
Fixed-Income Target ▲	(1.63)	(0.14)	2.43	3.34	5.08	5.46	4.49

- 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 (9.28% vs. HY benchmark of 9.57%).

In-House Portfolio

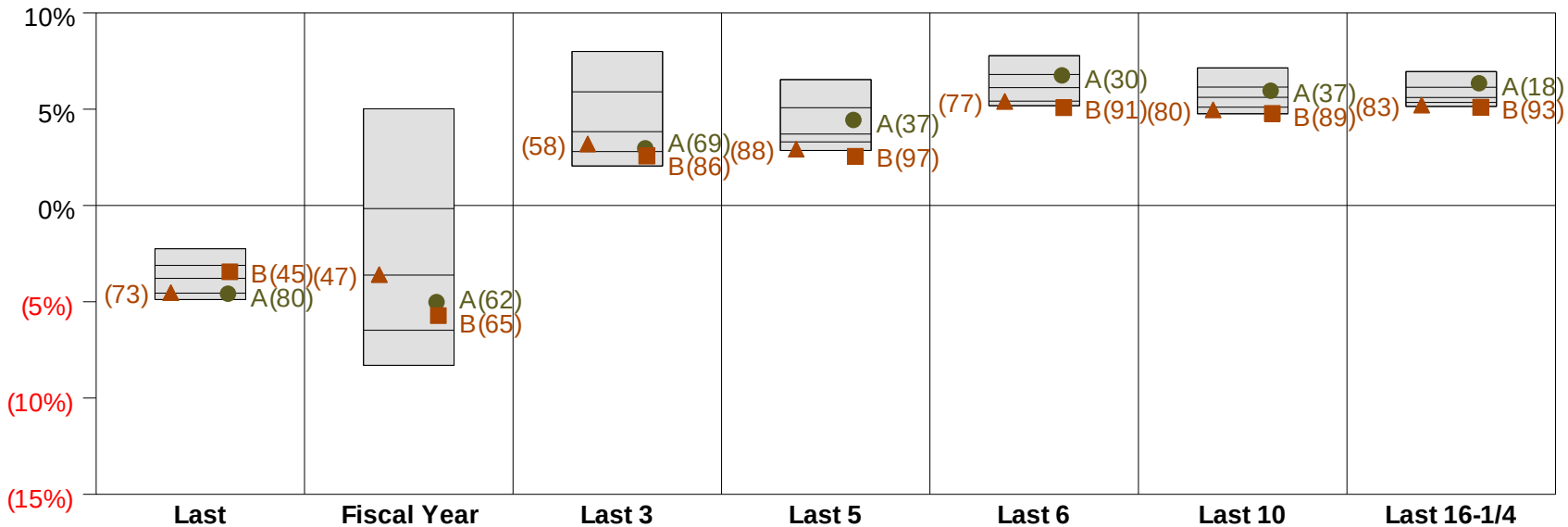
Compared to BC Intermediate Treasury Index



Non-US Fixed Income

Mondrian – Despite weak recent returns, stronger than benchmark for longer term periods.

Performance vs CAI Non-U.S. Fixed-Inc Style (Gross)



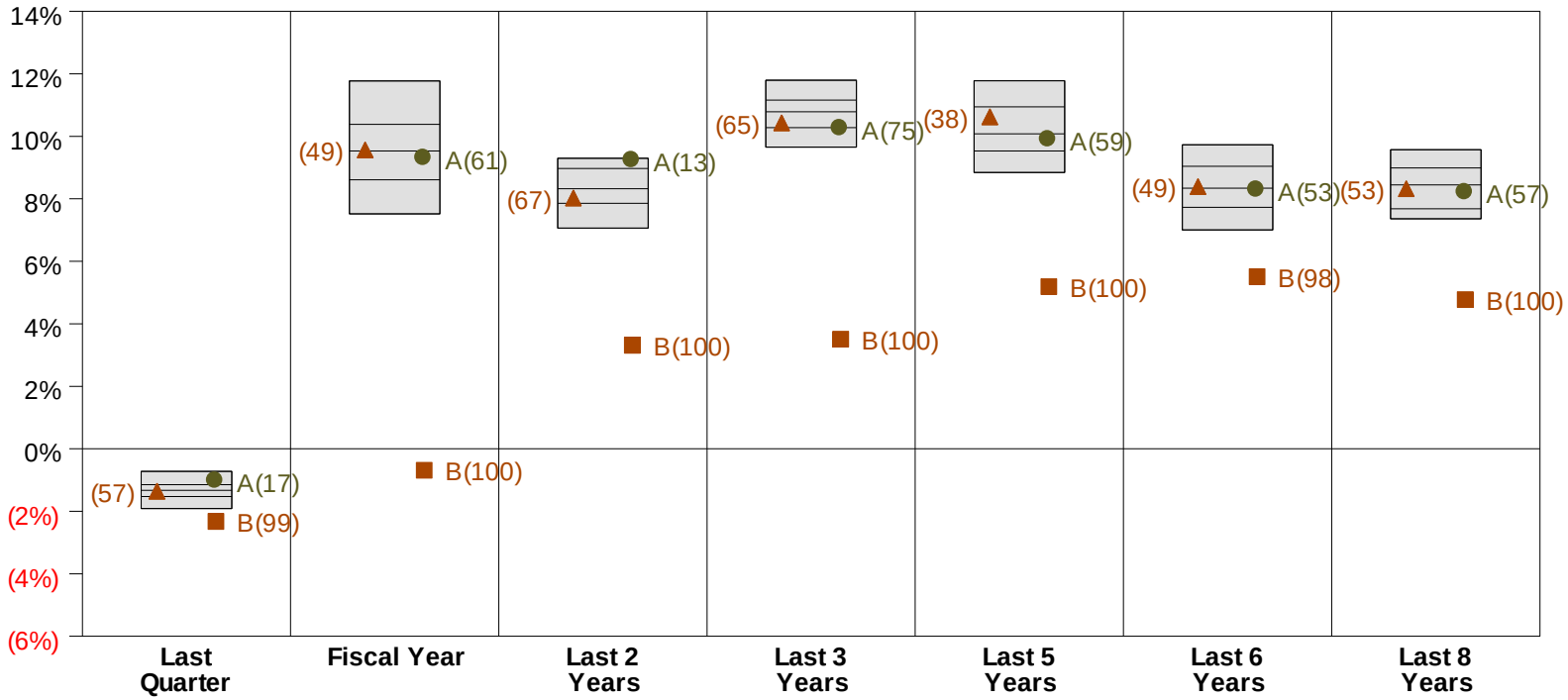
	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years	Last 16-1/4 Years
10th Percentile	(2.24)	5.02	8.00	6.54	7.78	7.14	6.95
25th Percentile	(3.11)	(0.16)	5.90	5.08	6.81	6.15	6.14
Median	(3.79)	(3.62)	3.84	3.71	6.12	5.62	5.61
75th Percentile	(4.55)	(6.47)	2.80	3.31	5.42	5.11	5.35
90th Percentile	(4.88)	(8.30)	2.05	2.86	5.18	4.76	5.14
Mondrian Investment Partners ● A	(4.68)	(5.11)	2.89	4.35	6.66	5.87	6.27
Citi WGBI Non-US Idx ■ B	(3.44)	(5.72)	2.57	2.55	5.08	4.78	5.10
Mondrian Benchmark ▲	(4.52)	(3.59)	3.20	2.93	5.41	4.97	5.22

High Yield Bonds

MacKay Shields

Strong absolute returns but benchmark like results over 3, 6 & 8 years

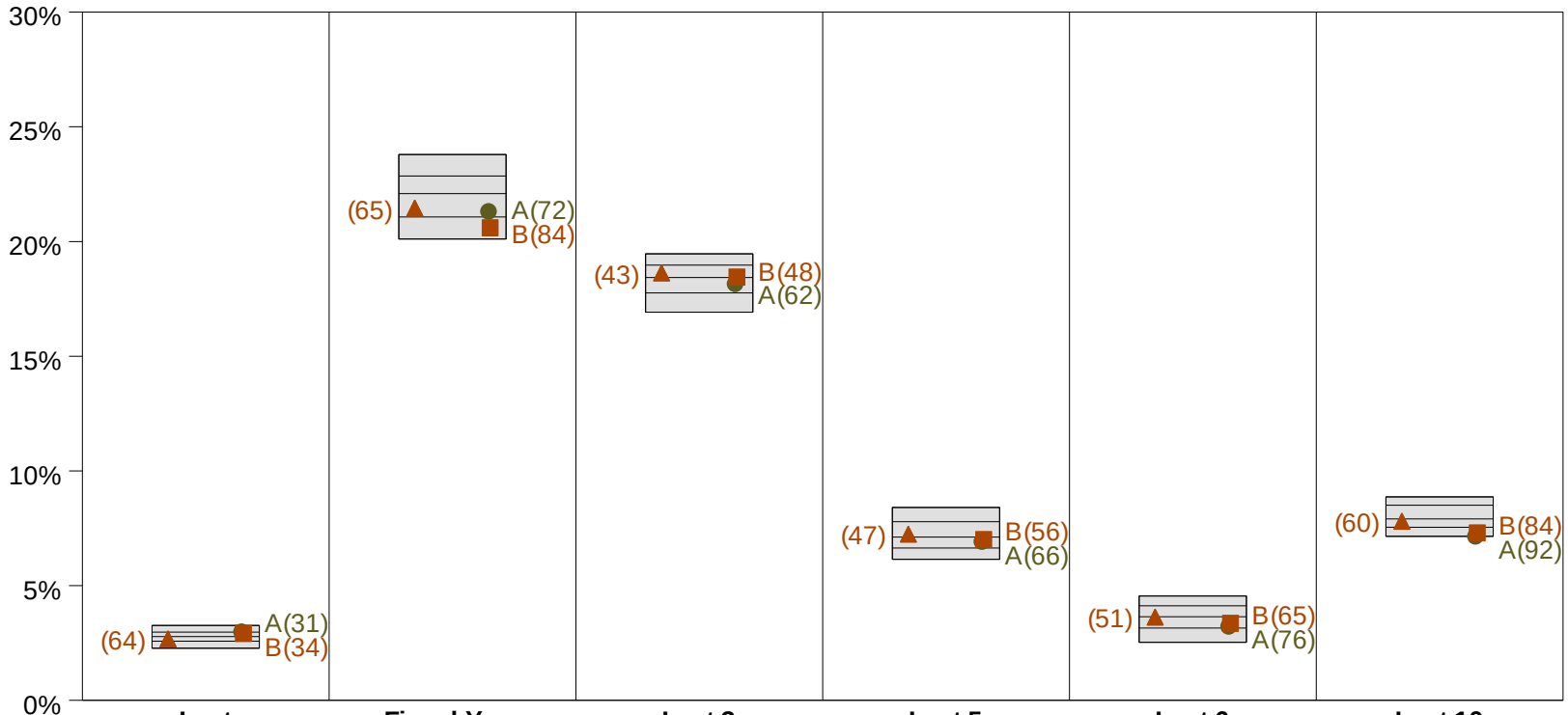
Performance vs CAI High Yield Fixed-Inc Style (Gross)



	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 8 Years
10th Percentile	(0.72)	11.77	9.30	11.79	11.78	9.73	9.57
25th Percentile	(1.15)	10.38	8.97	11.16	10.95	9.04	8.99
Median	(1.33)	9.53	8.32	10.78	10.08	8.34	8.44
75th Percentile	(1.53)	8.61	7.85	10.28	9.53	7.73	7.68
90th Percentile	(1.91)	7.52	7.06	9.65	8.84	7.00	7.36
MacKay Shields ● A	(1.04)	9.28	9.21	10.24	9.88	8.27	8.19
BC Aggregate Index ■ B	(2.32)	(0.69)	3.31	3.51	5.19	5.51	4.77
High Yield Target ▲	(1.35)	9.57	8.03	10.43	10.62	8.39	8.32

Total Domestic Equity

Performance vs Pub Pln- Domestic Equity (Gross)



	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	3.26	23.79	19.46	8.41	4.55	8.87
25th Percentile	2.97	22.86	18.97	7.79	4.12	8.51
Median	2.78	22.09	18.43	7.12	3.64	7.91
75th Percentile	2.58	21.07	17.76	6.64	3.15	7.55
90th Percentile	2.27	20.11	16.92	6.14	2.53	7.15
Domestic Equity Pool ● A	2.92	21.23	18.07	6.84	3.14	7.08
Standard & Poor's 500 ■ B	2.91	20.60	18.45	7.01	3.36	7.30
Russell 3000 Index ▲	2.69	21.46	18.63	7.25	3.63	7.81

Domestic Equity Component Returns

Newly adopted policy (effective 7-1-13) will alter cosmetics of "true" traditional active & passive returns

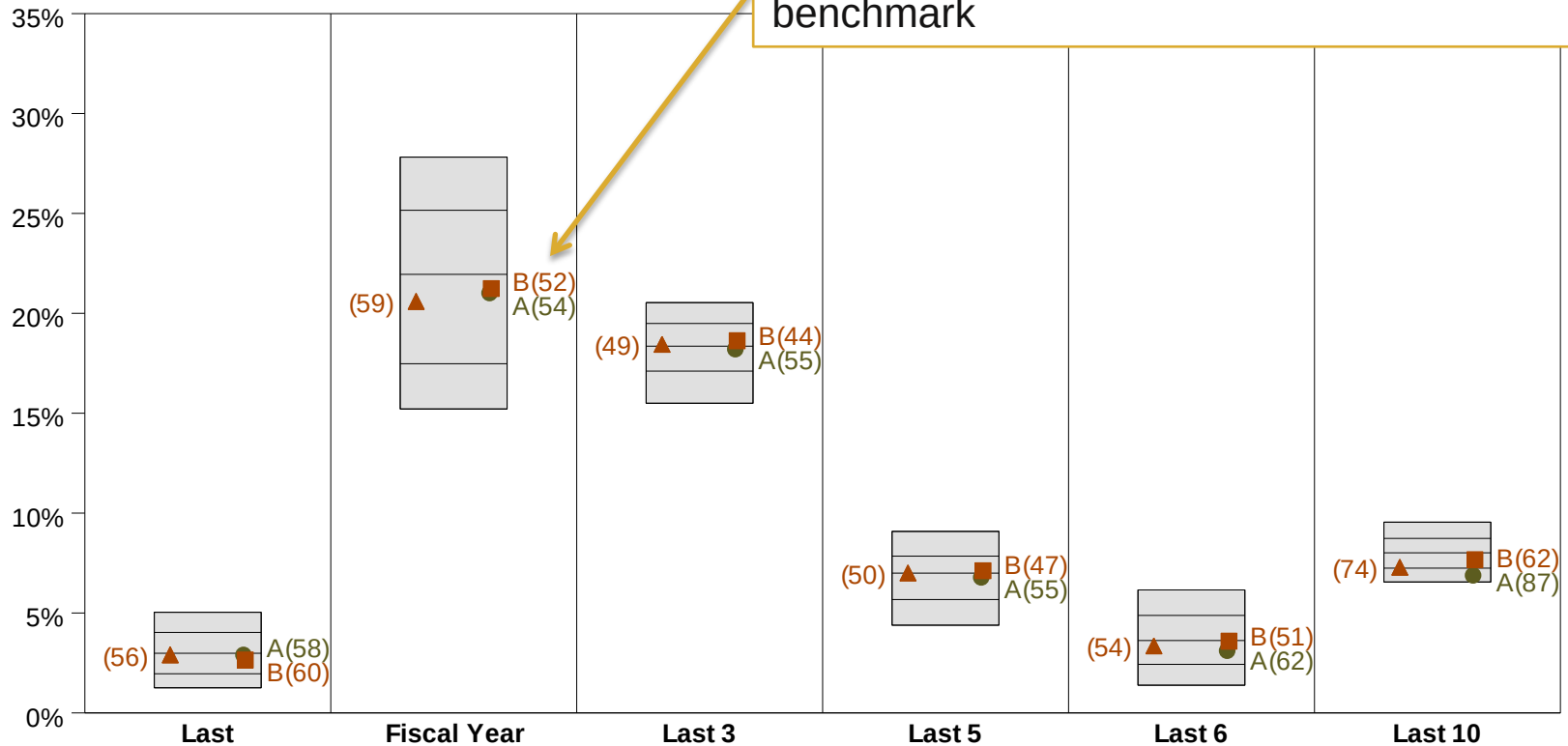
	Last Quarter	Last 1/2 Year	Last Year	Last 3 Years	Last 5 Years
Total Dom Equity Pool	2.92%	14.07%	21.23%	18.07%	6.84%
Russell 3000 Index	2.69%	14.06%	21.46%	18.63%	7.25%
Large Cap Managers	2.82%	14.02%	20.92%	18.11%	6.69%
Large Cap Active	3.01%	14.14%	20.50%	17.72%	6.69%
Large Cap Passive	2.65%	13.85%	21.13%	18.27%	6.61%
Russell 1000 Index	2.65%	13.91%	21.24%	18.63%	7.12%
Small Cap Managers	3.96%	17.35%	26.77%	19.10%	7.76%
Small Cap Active	4.05%	17.49%	26.92%	20.29%	8.27%
Small Cap Passive	2.66%	15.19%	23.70%	16.96%	7.55%
Russell 2000 Index	3.08%	15.86%	24.21%	18.67%	8.77%
Other Equity	0.88%	4.86%	9.01%	10.13%	-

- Other category includes defensive equity oriented portfolios
- New policy ("Alternative Equity") will shift the Relational portfolio to the grouping previously named "Other Equity"

Large Cap Domestic Equity Pool

Performance vs CAI Large Capitalization Style (Gross)

Early but nice to see recent better than benchmark

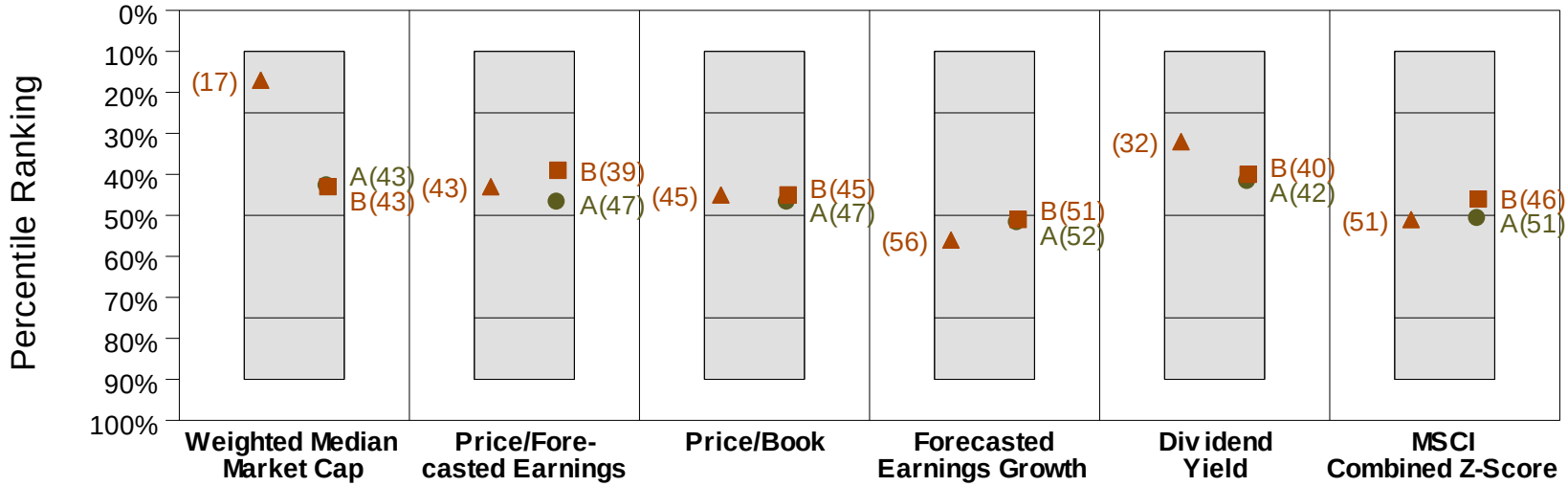


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	5.04	27.82	20.54	9.09	6.16	9.55
25th Percentile	4.03	25.16	19.50	7.85	4.88	8.74
Median	2.99	21.95	18.36	7.00	3.62	8.01
75th Percentile	1.96	17.48	17.11	5.68	2.44	7.25
90th Percentile	1.26	15.22	15.50	4.39	1.39	6.56
Large Cap Pool ● A	2.82	20.92	18.11	6.69	3.03	6.80
Russell 1000 ■ B	2.65	21.24	18.63	7.12	3.59	7.67
S&P 500 Index ▲	2.91	20.60	18.45	7.01	3.36	7.30

Large Cap Total Equity Characteristics

Portfolio Characteristics Percentile Rankings
Rankings Against CAI Large Capitalization Style
as of June 30, 2013

Very similar to Russell 1000
No apparent style bias

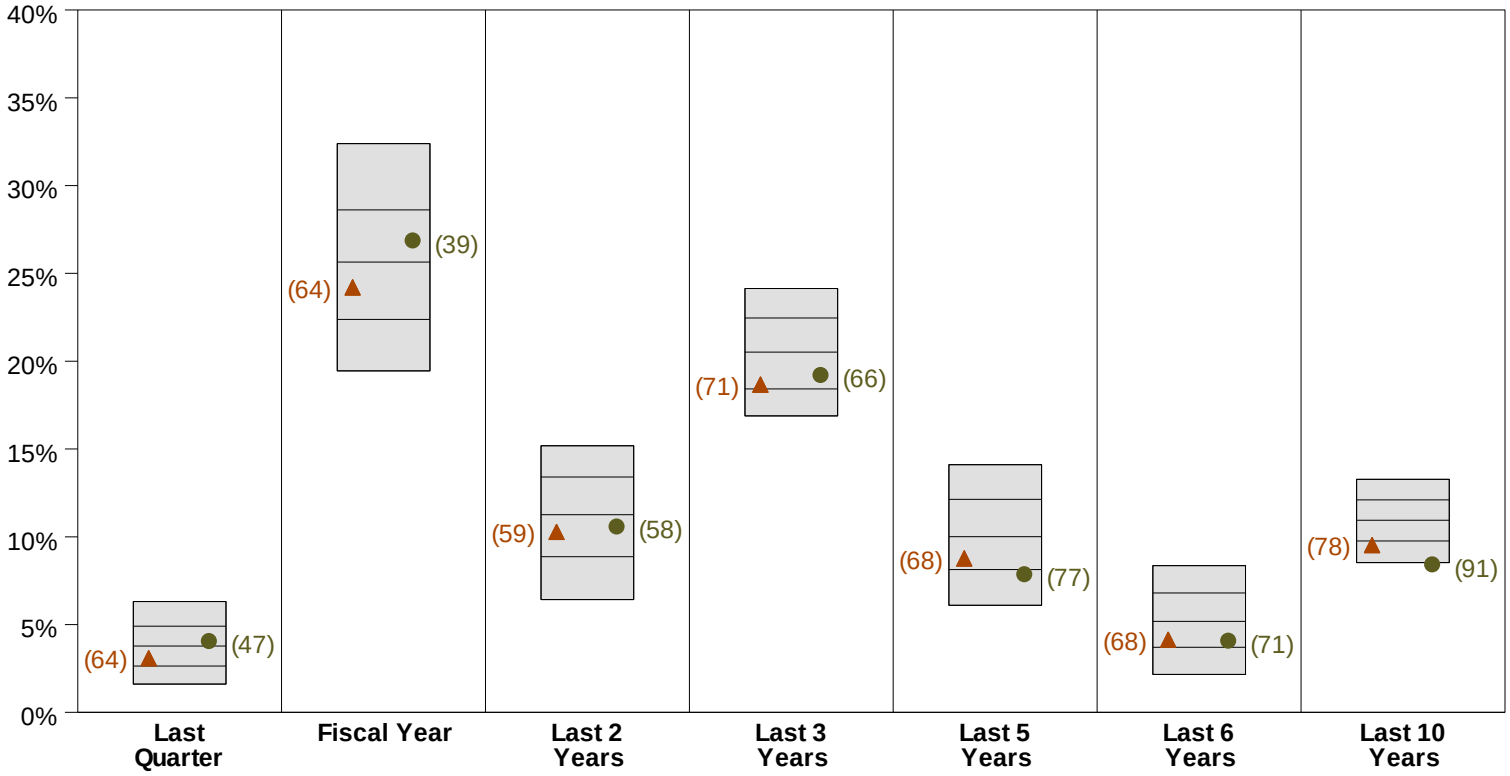


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	68.98	17.60	4.08	16.66	2.60	1.43
25th Percentile	53.11	15.52	3.39	14.58	2.27	0.93
Median	46.31	13.37	2.22	11.45	1.93	(0.01)
75th Percentile	34.11	12.10	1.80	9.41	1.38	(0.59)
90th Percentile	28.47	11.62	1.63	8.48	0.93	(0.79)
Large Cap Pool ● A	48.63	13.62	2.26	11.01	2.06	(0.03)
Russell 1000 ■ B	48.71	14.10	2.31	11.14	2.10	0.03
S&P 500 Index ▲	61.24	13.80	2.31	10.80	2.18	(0.03)

Small Cap Pool

Quarter, FY, 2-, and 3-year results better than benchmark

Performance vs CAI Small Capitalization Style (Gross)

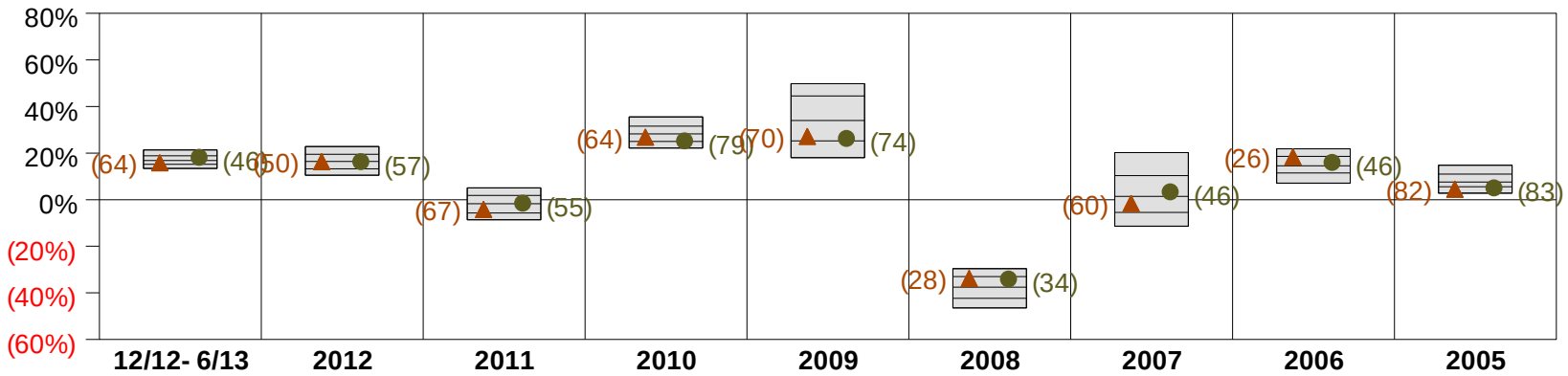


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	6.31	32.39	15.19	24.14	14.11	8.36	13.27
25th Percentile	4.91	28.62	13.41	22.46	12.14	6.80	12.10
Median	3.78	25.64	11.26	20.52	10.01	5.18	10.95
75th Percentile	2.64	22.38	8.87	18.42	8.14	3.70	9.76
90th Percentile	1.61	19.45	6.43	16.89	6.10	2.16	8.53
Small Cap Pool ●	3.96	26.77	10.48	19.10	7.76	3.98	8.32
Russell 2000 Index ▲	3.08	24.21	10.28	18.67	8.77	4.14	9.53

Small Cap Performance

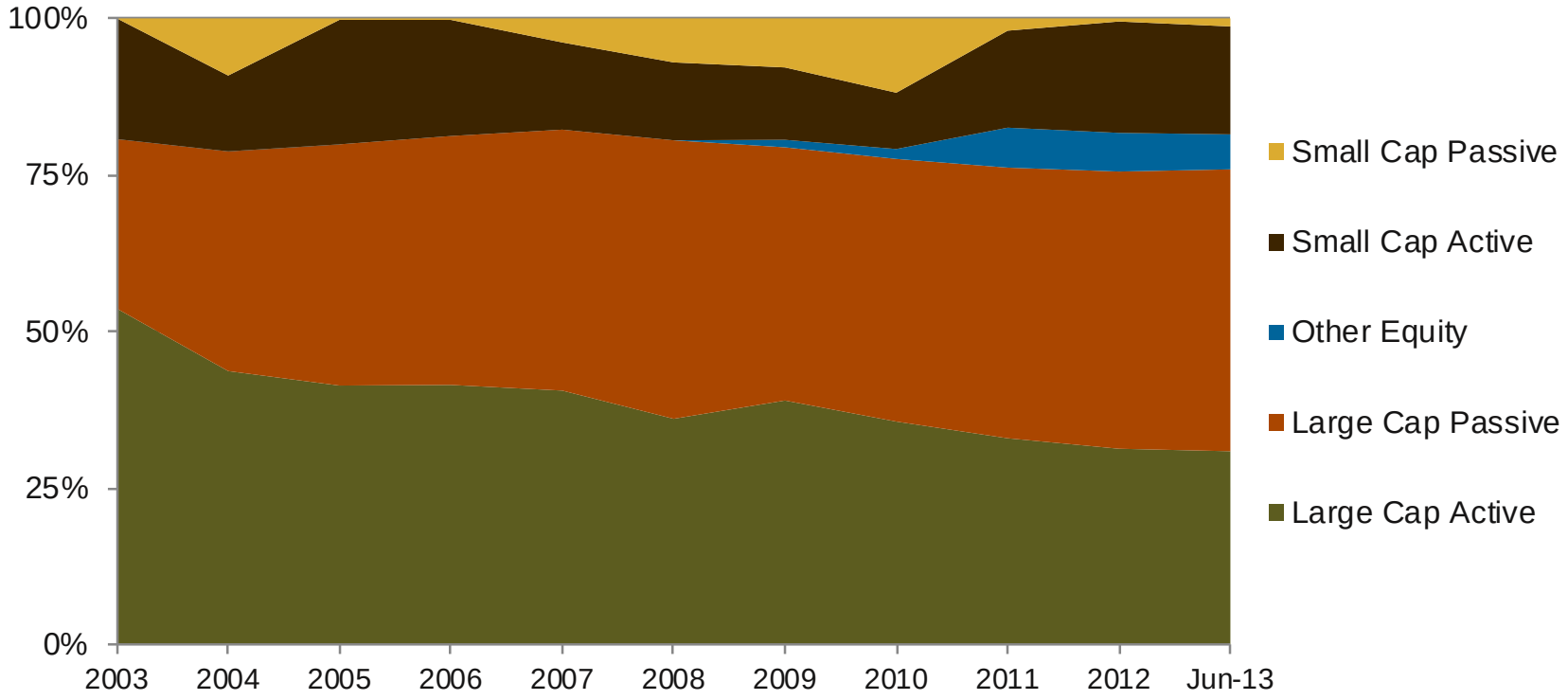
Calendar Periods

Performance vs CAI Small Capitalization Style (Gross)



	12/12- 6/13	2012	2011	2010	2009	2008	2007	2006	2005
10th Percentile	21.38	22.78	5.11	35.54	49.83	(29.58)	20.21	21.82	14.79
25th Percentile	18.86	19.50	1.84	31.53	44.57	(33.03)	10.32	18.62	10.97
Median	16.83	16.38	(1.76)	28.25	33.98	(37.57)	1.39	14.59	7.55
75th Percentile	15.22	13.24	(5.72)	24.99	25.24	(42.30)	(5.47)	11.44	5.55
90th Percentile	13.42	10.51	(8.64)	22.16	18.02	(46.48)	(11.41)	7.07	2.77
Small Cap Pool ●	17.35	15.41	(2.33)	24.35	25.40	(34.97)	2.53	15.24	4.28
Russell 2000 Index ▲	15.86	16.35	(4.18)	26.85	27.17	(33.79)	(1.57)	18.37	4.55

Equity Composite Allocation

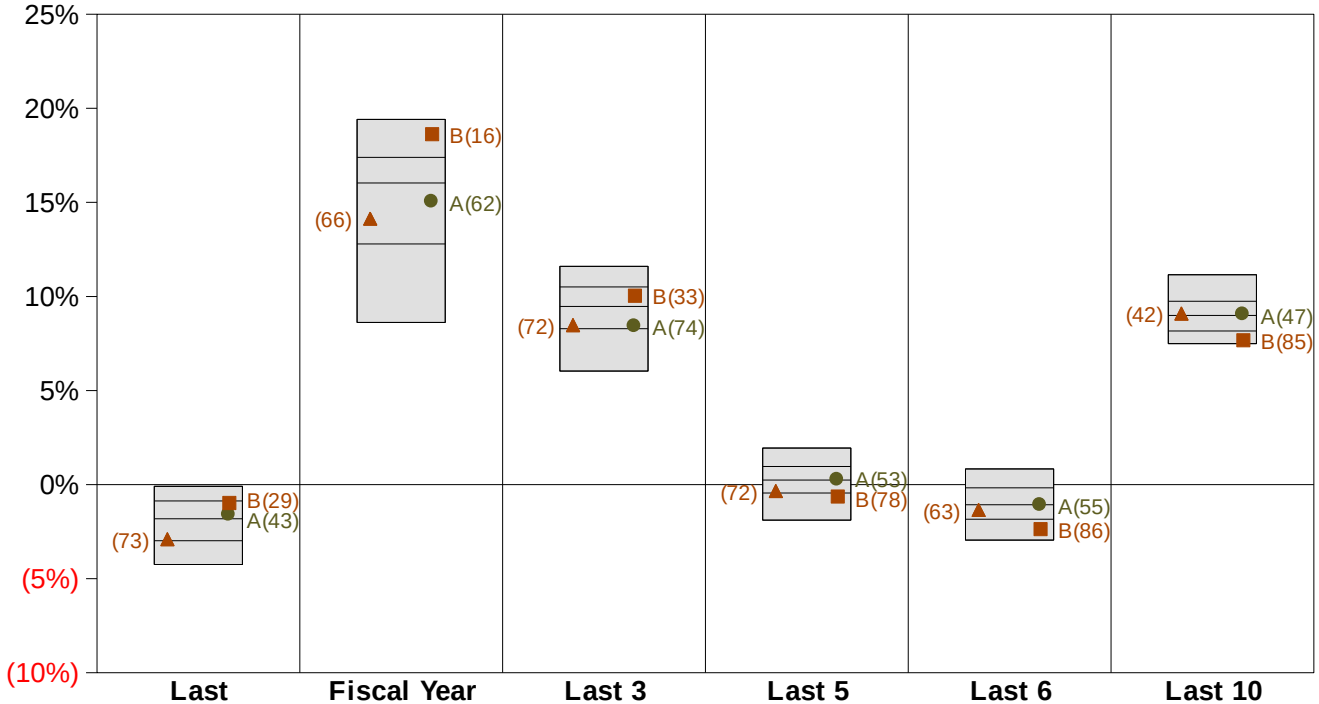


Composite	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Jun-13
Large Cap Active	53.7%	43.7%	41.4%	41.5%	40.6%	36.1%	39.0%	35.6%	33.0%	31.3%	30.9%
Large Cap Passive	27.1%	35.1%	38.5%	39.7%	41.7%	44.5%	40.4%	41.9%	43.2%	44.3%	45.0%
Other Equity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	1.6%	6.4%	6.2%	5.6%
Small Cap Active	19.3%	12.1%	19.9%	18.5%	13.9%	12.4%	11.6%	9.0%	15.5%	17.8%	17.2%
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 Pub Pln- International Equity (Gross)

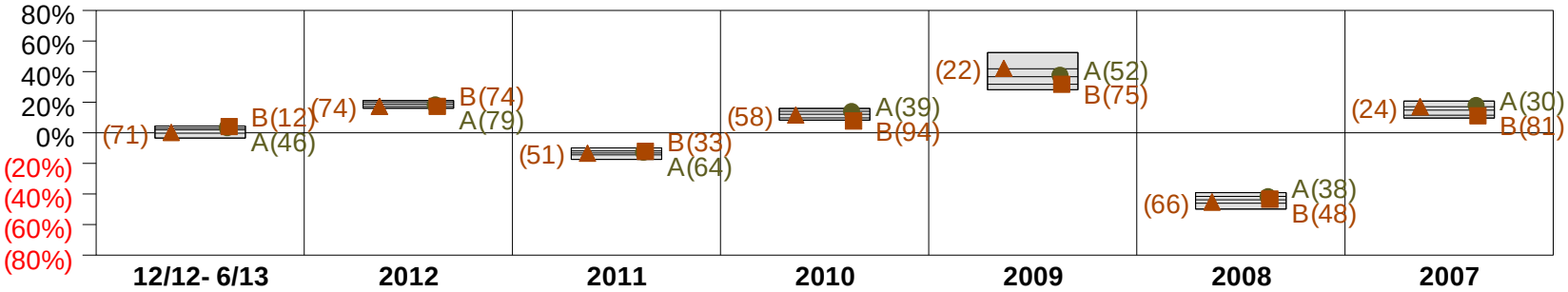


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	(0.09)	19.41	11.60	1.95	0.83	11.16
25th Percentile	(0.87)	17.40	10.51	0.96	(0.17)	9.75
Median	(1.82)	16.03	9.47	0.24	(1.07)	8.99
75th Percentile	(2.98)	12.79	8.28	(0.45)	(1.84)	8.16
90th Percentile	(4.25)	8.62	6.04	(1.89)	(2.95)	7.49
Employees' Total Int'l Equity ● A	(1.63)	15.01	8.39	0.23	(1.12)	9.02
MSCI EAFE Index ■ B	(0.98)	18.62	10.04	(0.63)	(2.37)	7.67
MSCI ACWI ex US Index ▲	(2.90)	14.14	8.48	(0.34)	(1.34)	9.09

International

Calendar Periods

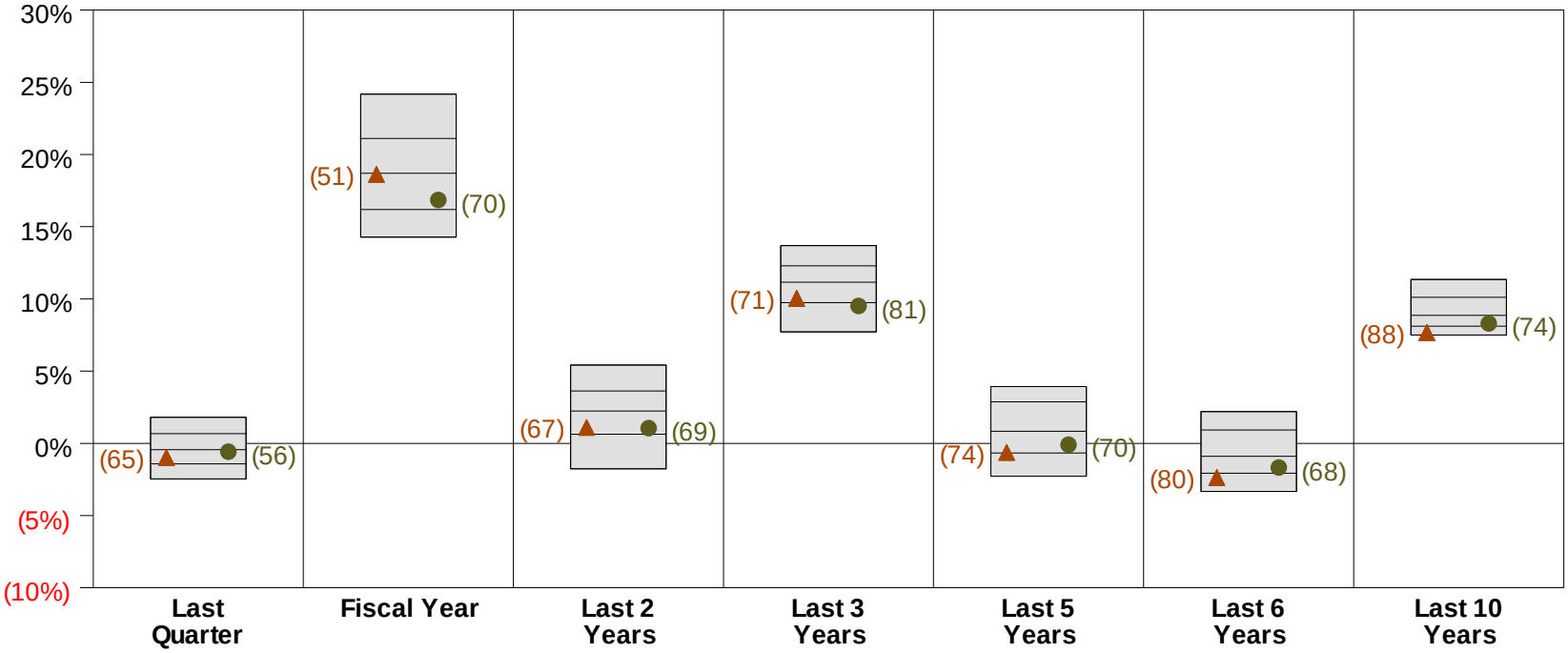
Performance vs Pub Pln- International Equity (Gross)



		12/12- 6/13	2012	2011	2010	2009	2008	2007
10th Percentile		4.48	21.20	(9.81)	15.98	52.55	(39.13)	20.77
25th Percentile		3.14	20.11	(11.81)	14.10	41.83	(41.56)	17.05
Median		1.94	18.78	(13.16)	12.17	36.65	(43.77)	14.82
75th Percentile		(0.24)	17.28	(14.45)	9.76	31.74	(46.03)	11.57
90th Percentile		(3.40)	16.09	(17.36)	8.25	28.17	(49.82)	9.68
Total International Equity	● A	2.12	17.09	(13.95)	12.70	36.35	(43.03)	16.61
MSCI EAFE Index	■ B	4.10	17.32	(12.14)	7.75	31.78	(43.38)	11.17
MSCI ACWI ex US Index	▲	0.27	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 Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years
10th Percentile	1.80	24.17	5.42	13.69	3.93	2.21	11.35
25th Percentile	0.67	21.11	3.62	12.29	2.87	0.93	10.12
Median	(0.44)	18.69	2.24	11.16	0.84	(0.89)	8.87
75th Percentile	(1.42)	16.19	0.63	9.75	(0.67)	(2.07)	8.11
90th Percentile	(2.47)	14.28	(1.76)	7.71	(2.28)	(3.33)	7.50
Int'l Equity Pool (ex Emerging. Mkt) ●	(0.69)	16.73	0.93	9.39	(0.22)	(1.81)	8.18
MSCI EAFE Index ▲	(0.98)	18.62	1.10	10.04	(0.63)	(2.37)	7.67

Emerging Markets Pool

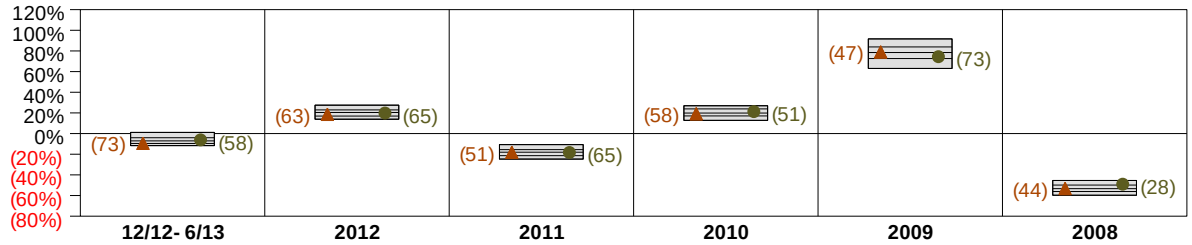
Performance vs CAI Emerging Markets Equity DB (Gross)

	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years
10th Percentile	(2.52)	17.47	4.72	11.26	6.37
25th Percentile	(5.78)	9.94	(1.70)	7.70	3.33
Median	(7.22)	6.19	(4.77)	5.36	1.02
75th Percentile	(8.77)	3.32	(7.03)	3.09	(1.20)
90th Percentile	(9.98)	0.76	(9.55)	0.23	(3.28)
Emerging Markets Pool ●	(6.95)	4.53	(6.48)	3.23	0.28
MSCI Emerging Mkts Idx ▲	(7.95)	3.23	(6.70)	3.72	(0.11)

Emerging Markets Pool

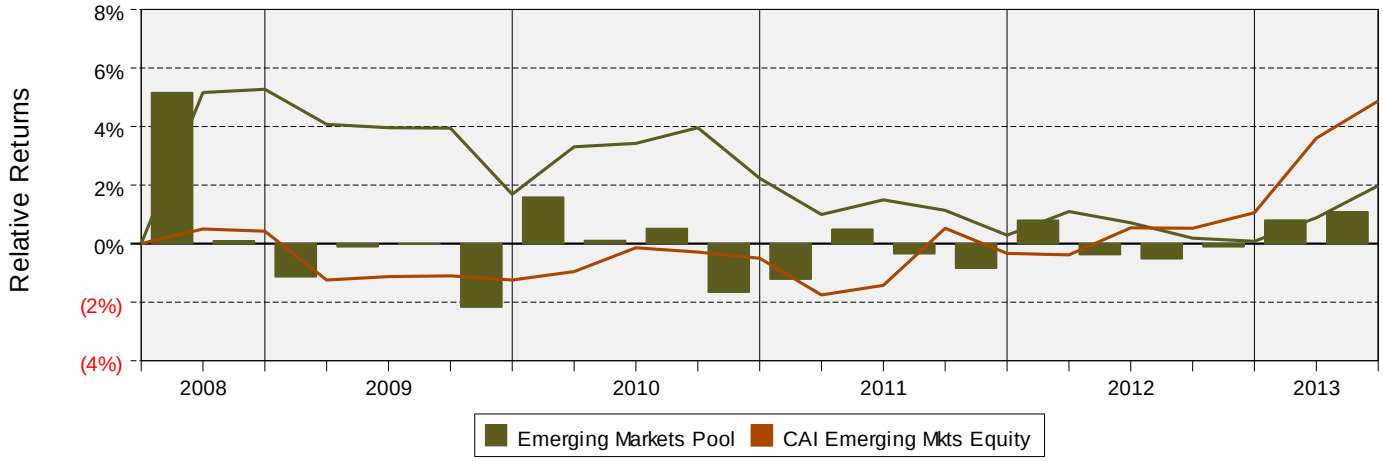
Calendar Periods

Performance vs CAI Emerging Markets Equity DB (Gross)



	12/12- 6/13	2012	2011	2010	2009	2008
10th Percentile	1.20	27.52	(10.72)	26.97	91.66	(45.44)
25th Percentile	(4.01)	22.96	(15.54)	23.87	83.93	(49.86)
Median	(7.08)	20.50	(18.01)	19.85	78.52	(53.33)
75th Percentile	(9.54)	17.03	(21.41)	17.13	72.63	(56.14)
90th Percentile	(11.61)	13.90	(24.72)	12.74	63.04	(59.71)
Emerging Markets Pool ●	(7.67)	18.38	(19.73)	19.83	72.93	(50.49)
MSCI Emerging Mkts Idx ▲	(9.40)	18.63	(18.17)	19.20	79.02	(53.18)

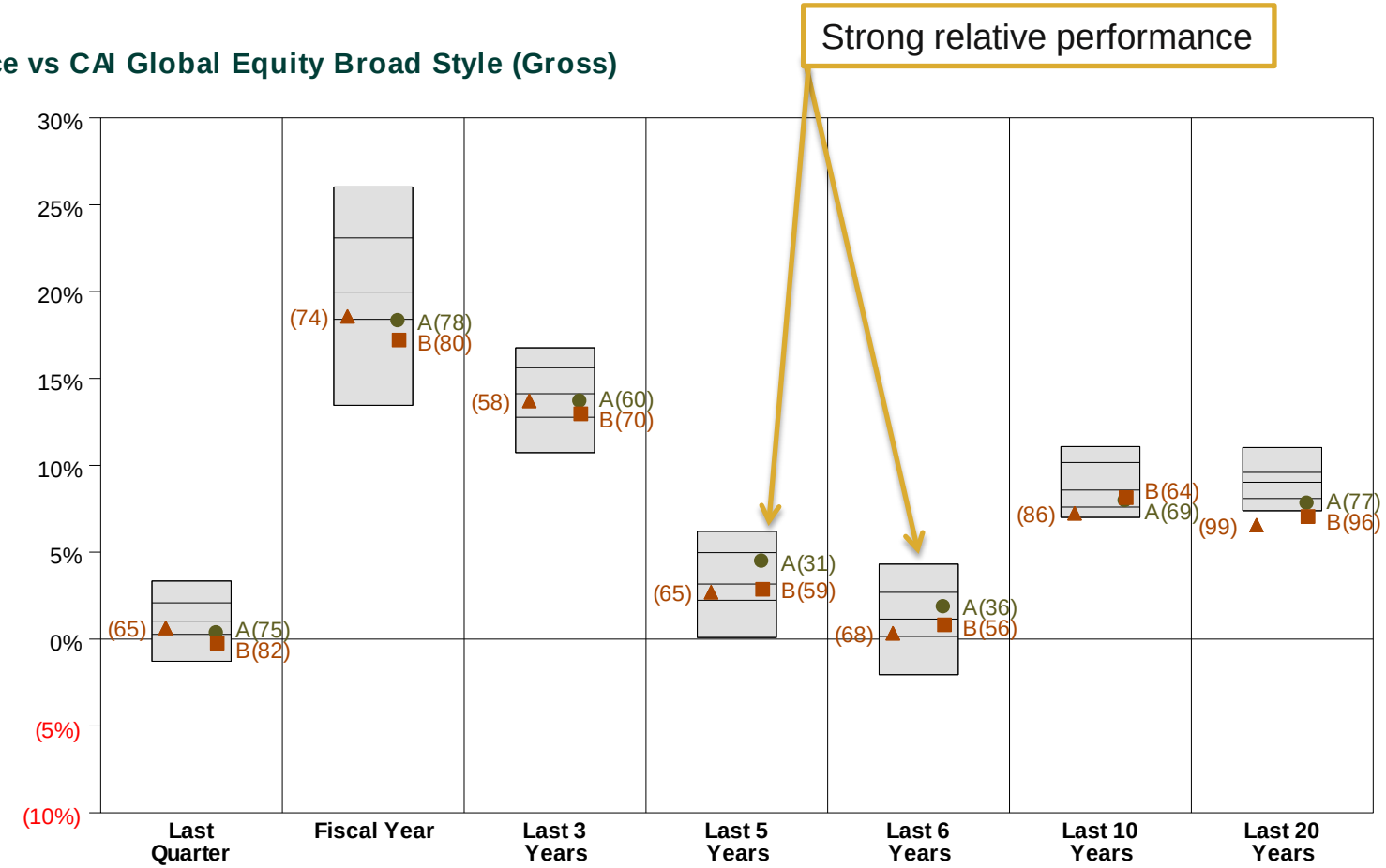
Cumulative and Quarterly Relative Return vs MSCI Emerging Mkts Idx



Global

Lazard

Performance vs CAI Global Equity Broad Style (Gross)



	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 6 Years	Last 10 Years	Last 20 Years
10th Percentile	3.34	26.03	16.77	6.21	4.32	11.08	11.03
25th Percentile	2.09	23.09	15.61	4.97	2.69	10.16	9.59
Median	1.03	19.97	14.12	3.17	1.15	8.58	9.03
75th Percentile	0.27	18.40	12.77	2.24	0.16	7.59	8.09
90th Percentile	(1.28)	13.45	10.73	0.08	(2.04)	7.00	7.38
Lazard Global ● A	0.30	18.26	13.65	4.43	1.80	7.90	7.77
MSCI ACWI Idx ■ B	(0.23)	17.21	12.96	2.86	0.82	8.14	7.06
MSCI World Index ▲	0.65	18.58	13.72	2.70	0.34	7.25	6.56

Real Assets Category

	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years
Real Assets(Prelim)	**1.13%**	**10.19%**	**11.83%**	**1.83%**
Real Assets Target (1)	0.60%	8.30%	10.77%	4.17%
Real Estate Pool	1.50%	8.67%	12.75%	(2.11%)
Real Estate Target (2)	2.37%	10.70%	13.78%	3.78%
Private Real Estate	2.02%	8.57%	12.28%	(2.65%)
NCREIF Total Index	2.87%	10.72%	13.14%	2.79%
REIT Internal Portfolio	(1.95%)	9.53%	18.65%	6.36%
NAREIT Equity Index	(2.13%)	10.21%	18.46%	7.72%
Total Farmland	0.85%	15.56%	13.54%	10.33%
UBS Agrivest	1.07%	18.84%	15.27%	10.81%
Hancock Agricultural	0.46%	10.27%	10.75%	9.74%
ARMB Farmland Target (3)	1.75%	17.72%	15.23%	12.41%
Total Timber	1.20%	7.17%	5.62%	-
Timberland Investment Resources	1.70%	5.86%	3.93%	-
Hancock Timber	0.20%	10.12%	8.62%	-
NCREIF Timberland Index	0.93%	9.37%	3.59%	2.05%
TIPS Internal Portfolio	(6.69%)	(4.61%)	5.00%	4.66%
BC US TIPS Index	(7.05%)	(4.78%)	4.63%	4.41%
Total Energy Funds *	3.97%	5.61%	6.26%	5.41%
CPI + 5%	1.51%	6.76%	7.46%	6.35%
MLP Composite	2.84%	-	-	-
Alerian MLP Index	1.94%	28.38%	20.98%	18.17%

RE trailed target

Timber leading target

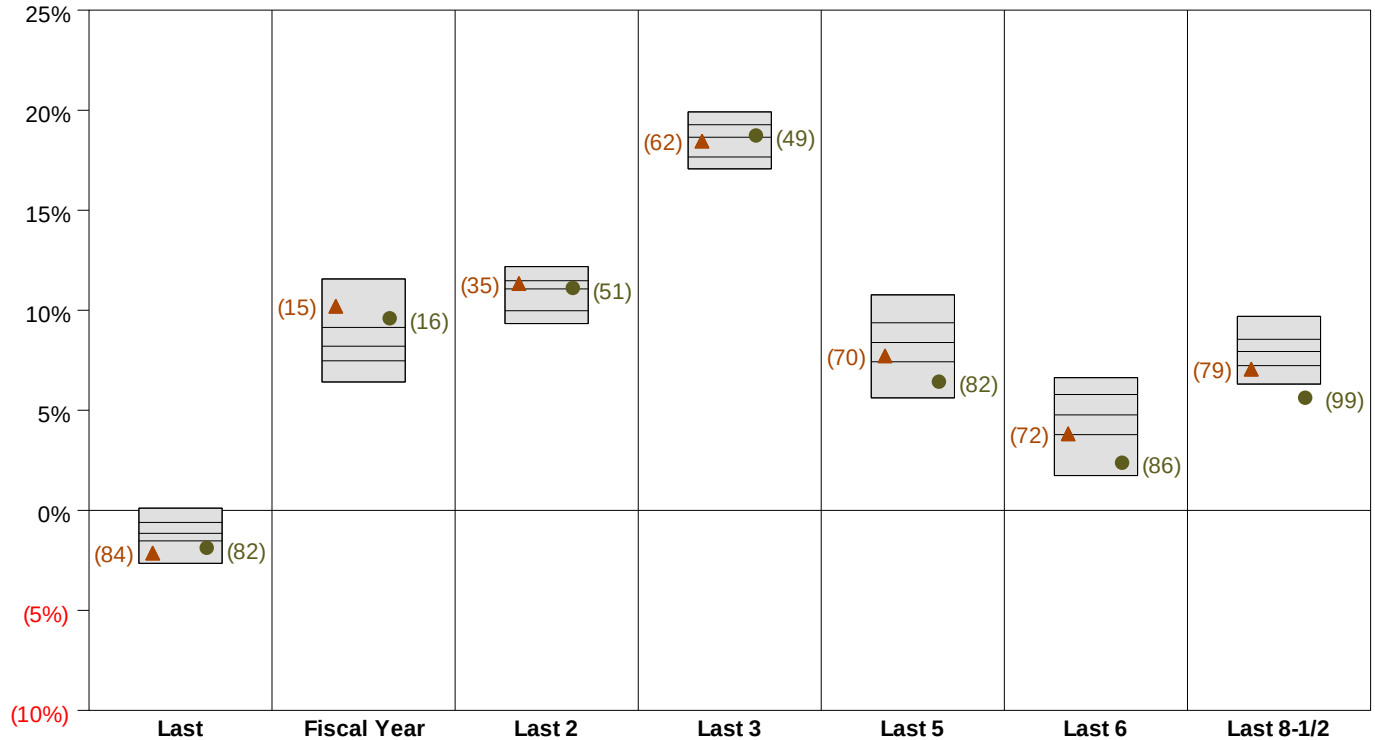
TIPS better than target

Second full quarter

*Please note that real estate returns are provided by ARMB's real estate consultant

REIT Portfolio

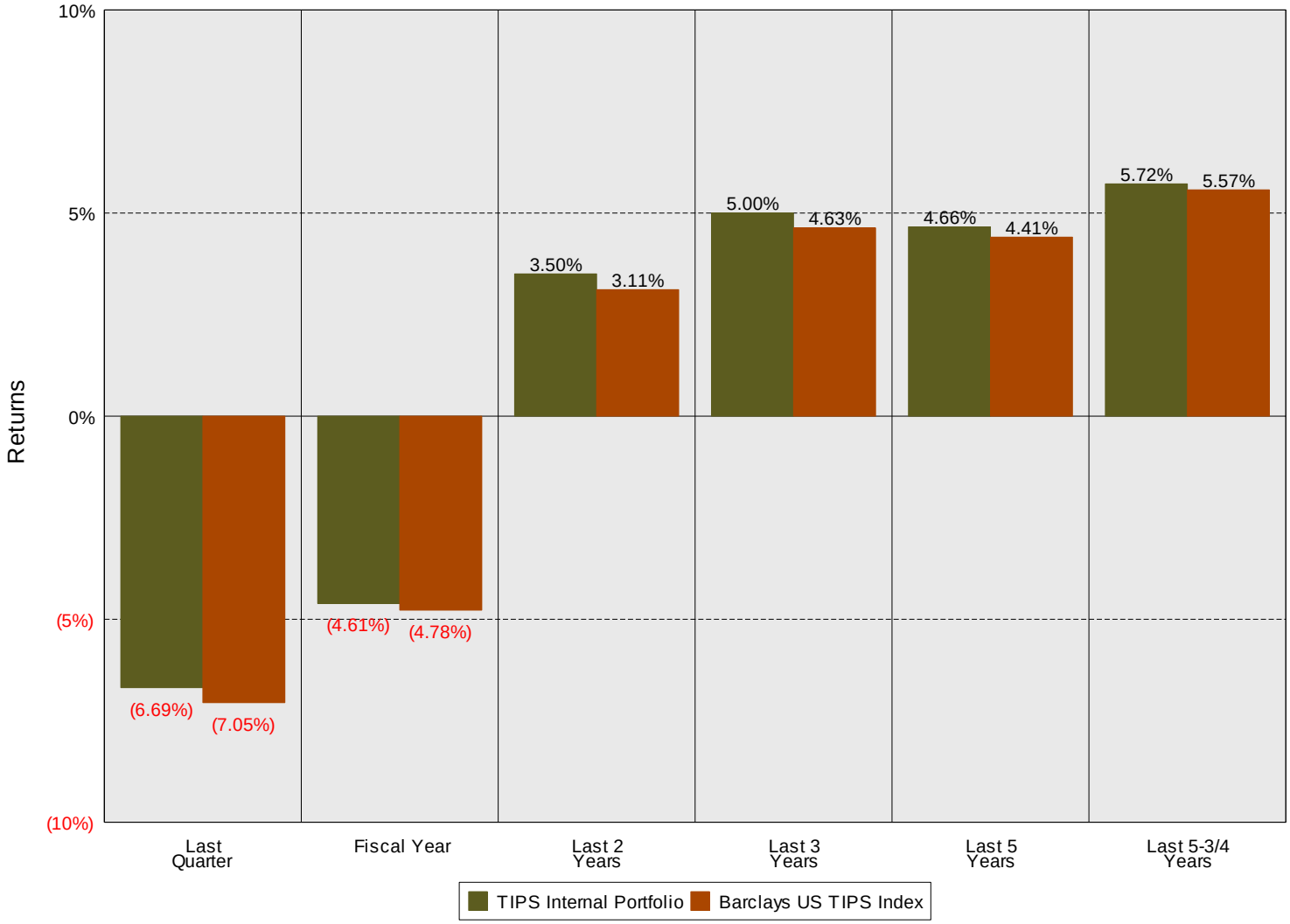
Performance vs CAI Real Estate-REIT DB (Gross)



	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 8-1/2 Years
10th Percentile	0.11	11.57	12.18	19.92	10.77	6.63	9.70
25th Percentile	(0.60)	9.14	11.48	19.28	9.37	5.79	8.55
Median	(1.14)	8.20	11.07	18.65	8.39	4.77	7.94
75th Percentile	(1.52)	7.48	9.98	17.66	7.42	3.79	7.24
90th Percentile	(2.65)	6.41	9.33	17.07	5.62	1.74	6.31
REIT Holdings ●	(1.95)	9.53	11.03	18.65	6.36	2.31	5.56
NAREIT All Equity Index ▲	(2.13)	10.21	11.34	18.46	7.72	3.83	7.06

- Better than index returns in the quarter
- Index like performance over the last 2- and 3-year periods

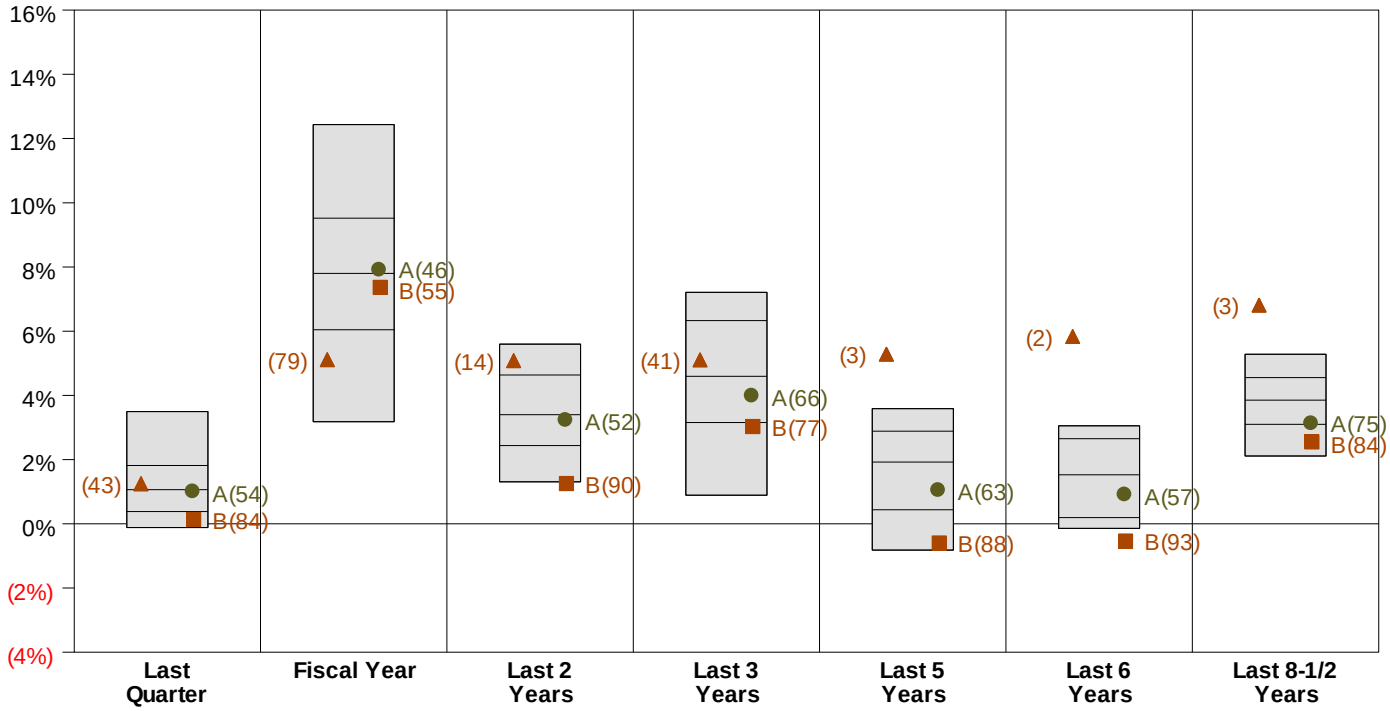
Internally Managed TIPS Portfolio



- Index+ performance over longer-term periods at minimal cost

Absolute Return Composite

Performance vs Absolute Return Hedge FoFs Style (Net)

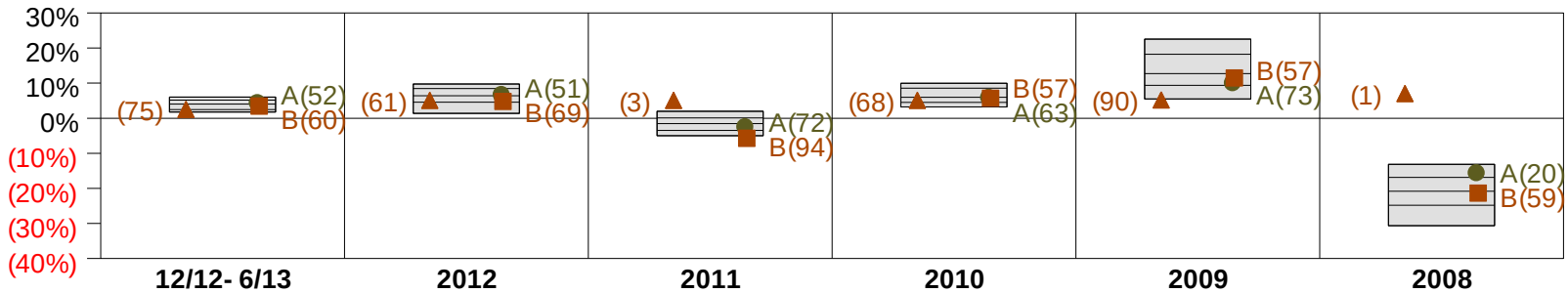


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 6 Years	Last 8-1/2 Years
10th Percentile	3.50	12.44	5.59	7.21	3.59	3.05	5.28
25th Percentile	1.82	9.52	4.64	6.33	2.89	2.65	4.55
Median	1.07	7.80	3.40	4.59	1.92	1.53	3.85
75th Percentile	0.38	6.04	2.44	3.16	0.44	0.20	3.10
90th Percentile	(0.12)	3.18	1.31	0.89	(0.82)	(0.14)	2.11
Absolute Return Composite ● A	0.98	7.89	3.20	3.96	1.02	0.88	3.10
HFRI Fund of Funds Compos ■ B	0.14	7.37	1.25	3.03	(0.60)	(0.54)	2.55
T-Bills + 5% ▲	1.25	5.11	5.08	5.11	5.29	5.84	6.81

Reflects June 30 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- 6/13	2012	2011	2010	2009	2008
10th Percentile	6.04	9.75	1.95	9.99	22.57	(13.13)
25th Percentile	5.18	8.45	0.10	8.57	18.25	(16.88)
Median	4.05	6.42	(1.51)	5.98	12.75	(20.84)
75th Percentile	2.45	4.58	(3.49)	4.53	9.36	(24.82)
90th Percentile	1.77	1.40	(4.99)	3.24	5.48	(30.63)
Absolute Return Composite ● A	3.88	6.23	(2.93)	5.43	9.55	(16.10)
HFRI Fund of Funds Compos ■ B	3.46	4.79	(5.72)	5.70	11.47	(21.37)
T-Bills + 5% ▲	2.51	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	$1,142	**-0.7** 87	**7.1** 91	**8.5** 96	**6.1** 33	**5.9** 24	**8.0** 99		**0.3** 4	**0.5** 100	**0.7** 1
CAI Mt Fd: Dom Bal Style Passive Target		-0.8 87	6.5 93	8.3 96	5.9 35	5.8 24	7.5 99				0.7 1
Long Term Balanced Fund	$490	**0.5** 59	**12.4** 57	**11.9** 48	**6.4** 31	**5.8** 24	**13.6** 87		**0.1** 24	**0.4** 100	**0.4** 21
CAI Mt Fd: Dom Bal Style Passive Target		0.3 68	11.9 63	11.7 50	6.3 31	5.7 25	13.2 93				0.5 21
Target 2010 Trust	$11	**0.2** 5	**10.2** 11	**10.4** 12						**0.2** 98	
CAI Tgt Date 2010 Custom Index		0.1 6	10.0 11	10.4 12							
Target 2015 Trust	$109	**0.5** 2	**12.1** 9	**11.8** 9	**7.3** 1	**6.7** 2	**11.2** 77		**0.5** 1	**0.2** 98	**0.6** 9
CAI Tgt Date 2015 Custom Index		0.5 2	12.2 9	11.8 9	7.1 1	6.5 2	11.3 76				0.6 9
Target 2020 Trust	$64	**0.8** 4	**14.0** 7	**13.0** 7	**6.0** 5	**5.4** 9	**15.7** 43		**0.2** 12	**0.3** 99	**0.4** 43
CAI Tgt Date 2020 Custom Index		0.7 6	13.9 7	13.0 7	5.9 6	5.3 13	15.8 40				0.4 46
Target 2025 Trust	$47	**1.2** 5	**15.6** 12	**14.0** 9	**5.6** 10	**4.8** 47	**18.6** 35		**0.2** 14	**0.3** 98	**0.3** 63
CAI Tgt Date 2025 Custom Index		1.0 6	15.7 12	14.1 8	5.5 12	4.8 50	18.7 33				0.3 65
Target 2030 Trust	$32	**1.4** 4	**17.0** 9	**14.9** 5						**0.3** 99	
CAI Tgt Date 2030 Custom Index		1.3 7	17.0 9	14.9 4							
Target 2035 Trust	$35	**1.6** 3	**18.2** 9	**15.5** 2						**0.3** 99	
CAI Tgt Date 2035 Custom Index		1.5 5	18.2 9	15.6 2							
Target 2040 Trust	$41	**1.8** 2	**18.8** 11	**15.7** 4						**0.3** 100	
CAI Tgt Date 2040 Custom Index		1.6 4	18.7 11	15.7 4							
Target 2045 Trust	$49	**1.7** 3	**18.7** 11	**15.7** 4						**0.3** 100	
CAI Tgt Date 2040 Custom Index		1.6 4	18.7 11	15.7 4							

Investment Manager	Market Value ($mm)	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	5 Year Risk	5 Year Risk Quadrant	5 Year Excess Rtn Ratio	3 Year Tracking Error	5 Year Sharpe Ratio
Target 2050 Trust	$56	**1.8** 3	**18.7** 5	**15.7** 1						**0.3** 99	
CAI Tgt Date 2050 Custom Index		1.6 5	18.7 5	15.7 1							
Target 2055 Trust	$21	**1.7** 2	**18.7** 5	**15.7**						**0.3**	
CAI Tgt Date 2055 Custom Index		1.6 2	18.7 5	15.7							

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)	$272	**2.9** 58	**20.6** 69	**18.5** 45	**7.1** 55	**5.7** 62	**21.5** 57		**0.6** 5	**0.0** 99	**0.3** 51
CAI Large Cap Core Style											
S&P 500 Index		2.9 58	20.6 69	18.5 46	7.0 59	5.7 64	21.5 56				0.3 54
BlackRock S&P 500 Index Fund (i)	$146	**2.9** 58	**20.6** 68	**18.5** 45	**7.1** 54	**5.8** 60	**21.5** 57		**1.2** 1	**0.0** 99	**0.3** 49
CAI Large Cap Core Style											
S&P 500 Index		2.9 58	20.6 69	18.5 46	7.0 59	5.7 64	21.5 56				0.3 54
Russell 3000 Index (i)	$30	**2.7** 59	**21.5** 52	**18.6** 44						**0.1** 100	
CAI Large Cap Style											
Russell 3000 Index		2.7 59	21.5 52	18.6 44	7.2 41	5.8 49	22.4 48				0.3 44
World Eq Ex-US Index (i)	$23	**-3.0** 94	**13.2** 93	**8.0** 89						**1.2** 100	
CAI Non-U.S. Equity Style											
MSCI ACWI x US (Net)		-3.1 94	13.6 92	8.0 89	-0.8 76	2.2 64	26.9 29				-0.0 75
SSgA Global Balanced (i)	$54	**-1.2** 48	**9.0** 63	**9.3** 33						**0.4** 100	
CAI Mt Fd: Gl Bal Style											
Global Balanced Custom Benchmark		-1.3 49	8.9 63	9.1 35							
Long US Treasury Bond Index (i)	$10	**-5.7** 32	**-8.4** 94	**6.1** 93						**0.1** 97	
CAI Extended Mat FI Style											
BC Long Treas		-5.6 31	-8.4 94	6.2 93	7.6 92	8.1 81	17.4 7				0.4 94
US Treasry Infl Prtcd SEC (i)	$20	**-7.1** 77	**-4.9** 87	**4.5** 70						**0.0** 96	
CAI Real Return											
BC US TIPS Index		-7.1 69	-4.8 83	4.6 59	4.4 70	5.8 67	6.1 24				0.7 74
World Gov't Bond Ex-US Indx (i)	$7	**-3.5** 46	**-5.6** 64	**2.5** 86						**0.1** 97	
CAI Non-U.S. F-I Style											
Citi WGBI Non-US Idx		-3.4 45	-5.7 65	2.6 86	2.6 97	4.7 87	9.0 76				0.3 96
US Real Estate Invmnt Trust (i)	$33	**-1.4** 71	**7.4** 77	**17.8** 73						**0.1** 100	
CAI Real Estate-REIT DB											
US Select REIT Index		-1.3 66	7.7 65	18.1 69	7.0 78	4.1 84	35.3 16				0.2 79

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)	$47	**-2.5** 49	**-0.7** 77	**3.8** 65	**5.0** 73	**5.5** 54	**4.8** 37		**-1.5** 98	**0.0** 99	**1.0** 72
CAI Core Bond Mut Fds											
Barclays Govt/Credit Bd		-2.5 49	-0.6 76	3.9 64	5.3 60	5.7 52	4.8 37				1.0 71
Intermediate Bond Fund (i)	$16	**-1.4** 26	**-0.7** 62	**2.2** 59	**3.7** 72	**4.7** 52	**3.8** 20		**-0.8** 95	**0.0** 100	**0.9** 86
CAI Intermediate F-I Mut											
Barclays Gov Inter		-1.4 24	-0.6 55	2.3 57	3.8 69	4.8 49	3.7 27				0.9 85
State Street Inst Trsry MM (i)	$38	**0.0** 99	**0.0** 100	**0.0** 100	**0.1** 100		**0.2** 97		**-1.8** 100	**0.0** 84	**-1.2** 100
Money Market Funds											
3-Month T-Bills		0.0 99	0.1 100	0.1 100	0.2 100	1.3 100	0.2 89				-0.3 100

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

(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.

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	$62	**1.8** 8	**17.2** 44	**8.0** 84						**3.5** 57	
CAI Non-U.S. Equity MF											
MSCI EAFE Index		-1.0 62	18.6 27	10.0 51	-0.6 61	1.4 61	26.0 65				-0.0 62
RCM Soc Resp	$32	**2.0** 55	**21.3** 30	**15.9** 59						**4.4** 40	
CAI Core Equity Mut Fds											
KLD 400 Social Idx		4.2 16	24.8 13	17.9 25	8.3 8	6.2 21	21.0 76				0.4 2
T. Rowe Price Small Cap	$111	**3.1** 58	**24.8** 36	**22.5** 8	**13.6** 3	**8.7** 6	**25.7** 63		**1.4** 1	**1.1** 99	**0.5** 4
CAI Sm Cap Broad Mut Fds											
Russell 2000 Index		3.1 58	24.2 41	18.7 42	8.8 46	5.8 55	26.2 54				0.3 48
T. Rowe Price Stable Value Fd	$340	**0.6** 23	**2.8** 10	**3.2** 13	**3.5** 19	**3.9** 20	**0.3** 93		**3.6** 16	**0.1** 81	**12.1** 4
CAI Stable Value DB											
5 Yr US Treas Rolling		0.4 60	1.8 63	2.5 47	3.0 43	3.2 63	0.4 52				7.1 39
Def Comp Interest Income Fund	$181	**0.5** 37	**2.2** 37	**3.9** 1						**2.5** 1	
CAI Stable Value DB											
5 Yr US Treas Rolling		0.4 60	1.8 63	2.5 47	3.0 43	3.2 63	0.4 52				7.1 39

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

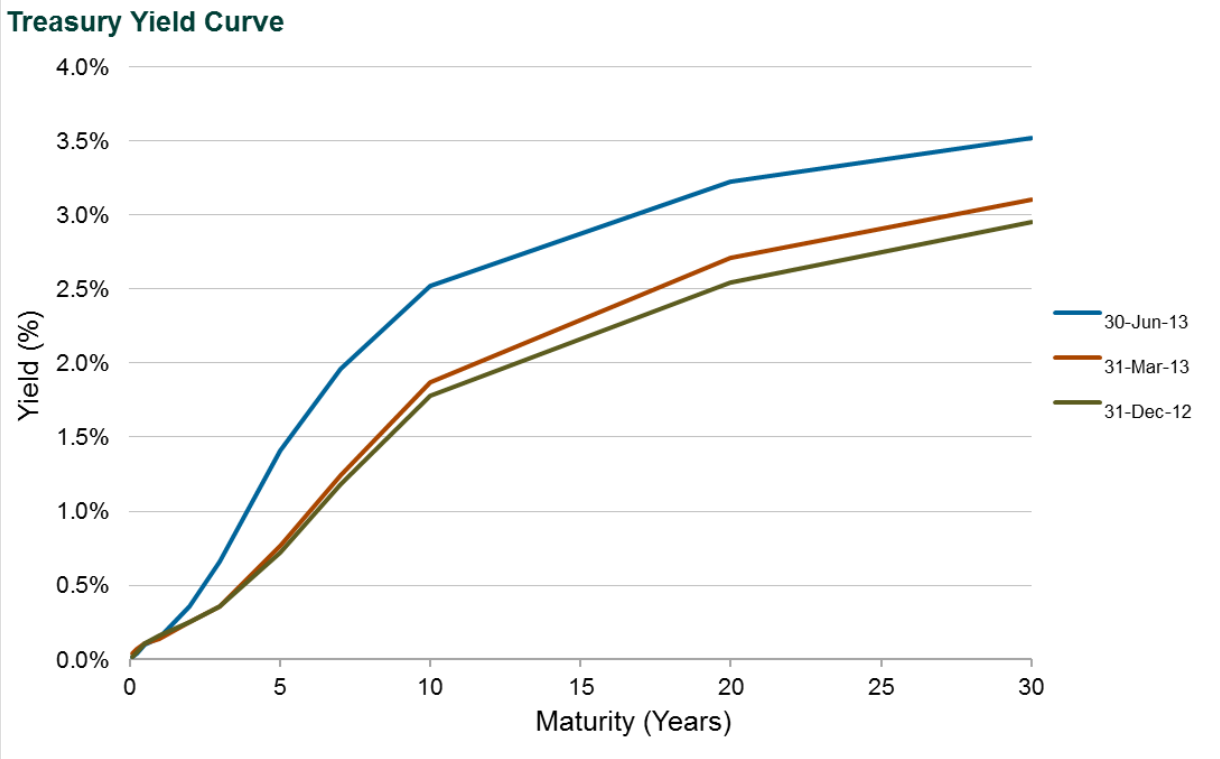
(i) – Indexed scoring method used. Green: manager & index differ by less than +/- 10 percentiles; Yellow: manager and index differ by +/- 20 percentiles; Red: manager & index differ by more than 20 percentiles.

Subsequent Market Results

YTD Through 8/23/13

Index	YTD
Barclays Aggregate	-3.24%
US Treasury	-3.07%
1-3 Year Treasury	0.03%
7-10 Year Treasury	-6.17%
US Credit	-3.96%
High Yield (2% Constr.)	2.41%

Index	YTD
S&P 500	18.27%
Russell 2000	23.24%
MSCI EAFE	11.75%
MSCI Emerging Markets	-9.65%



ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Global Ex-US Manager Search	ACTION:	X
DATE:	September 19, 2013	INFORMATION:	

BACKGROUND:

On June 21, 2012, ARMB terminated Capital Guardian Emerging Markets due to poor performance and moved the proceeds into the passively managed BlackRock MSCI ACWI Ex-US IMI Index fund while indicating the future need for additional active managers to diversify large assets under management among the few international managers currently under contract. On April 18, 2013, ARMB heard a presentation by Callan describing that an international equity core plus median manager benchmarked against the MSCI ACWI Ex-US experienced an average annualized excess return of 1.98% for 20 years ending December 31, 2012.

STATUS:

As of July 31, 2013, ARMB's overall portfolio was underweight the Global Equity Ex-US target allocation of 25% by approximately 3.0%. ARMB's Global Ex-US portfolio is significantly more concentrated and less diversified among managers than the domestic portfolio. On July 31, 2013, the average developed international portfolio represented approximately 3.1% percent of total ARMB defined benefit assets compared to domestic large cap portfolios which averaged 1.5%. The addition of one or more active managers would reduce the likelihood of further concentrating the portfolio and better diversify ARMB's international portfolio.

RECOMMENDATION:

The Alaska Retirement Management Board direct staff to engage Callan Associates to conduct a search for one or more Global Ex-US investment manager(s).

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Allianz/RCM ESG Benchmark Change	ACTION:	X
DATE:	September 19, 2013	INFORMATION:	

BACKGROUND:

On April 25, 2008, the Alaska Retirement Management Board (ARMB) hired Allianz (formerly RCM) to manage an environmental, social, and governance (ESG) focused fund for the participant directed plans. Allianz was directed to invest in the KLD LargeMid Cap Social Index universe of stocks while being benchmarked against the S&P 500 Index. On February 15, 2012, ARMB approved an IFS Report Recommendation which added the MSCI USA ESG Index (formerly KLD) as a strategic benchmark for the Allianz ESG fund.

STATUS:

Given the large disparity between the Allianz ESG investment universe (based on the MSCI USA ESG Index) and the S&P 500 benchmark used to measure risk and return, there is potential for large weighting biases and tracking error. As of June 30, 2013, constituent weights of the MSCI USA ESG Index overlapped only 48% of the S&P 500 Index constituent weights. On a sector level, the indices vary most significantly within Energy, Telecom Services, and Healthcare. These universe and benchmark differences make it difficult to measure the effectiveness of manager stock selection, due to returns being largely driven by the MSCI USA ESG universe characteristics.

RECOMMENDATION:

The Alaska Retirement Management Board authorize staff to work with Allianz to amend the Investment Management Agreement to change the Allianz ESG fund's performance benchmark to the MSCI USA ESG Index, effective October 1, 2013.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Taxable Municipal Fixed Income Investment Guidelines

ACTION: X

DATE: September 19-20, 2013

INFORMATION: ____

BACKGROUND:

At its December 2012 meeting, the Alaska Retirement Management Board (ARMB) instructed Callan Associates (Callan) to conduct a search for a taxable municipal bond manager to invest up to $200 million in assets.

Callan sent requests for information to over twenty firms and received twelve responses. From those responses, Callan narrowed the list to six firms: Eaton Vance, Goldman Sachs, Guggenheim Investments, Income Research & Management, T. Rowe Price and Western Asset Management Company.

Staff conducted on-site interviews of Guggenheim Investments and Western Asset Management Company. These prospective investment managers presented at the April 2013 ARMB meeting and the Board awarded a $100 million mandate to each manager.

STATUS:

Staff has negotiated contracts with each manager. The discussions included building a draft set of investment guidelines for taxable municipal fixed income, attached.

RECOMMENDATION:

That the Board approve Resolution 2013-17, establishing investment guidelines for taxable municipal fixed income.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to Taxable Municipal Fixed Income Guidelines

Resolution 2013-17

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

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

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

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

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

WHEREAS, the Board has authorized investment in fixed income securities; and

WHEREAS, the Board will establish and from time to time as necessary modify guidelines for fixed income securities.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopts the attached Taxable Municipal Fixed Income Guidelines, attached hereto and made a part hereof, regarding investment in fixed income securities.

DATED at Fairbanks, Alaska this _____ day of September, 2013.

_____
Chair

ATTEST:

_____
Secretary

TAXABLE MUNICIPAL FIXED INCOME GUIDELINES

A. Purpose. The emphasis of investments in fixed income securities shall be diversification, subject to defined constraints, to minimize risk.

B. Investment Management Service to be Performed. Taxable municipal fixed income Contractors shall invest and reinvest the cash and securities allocated to them and deposited in their account, without distinction between principal and income, in a portfolio consisting of fixed income securities with an intended emphasis on taxable municipal securities. These securities will be selected and retained by Contractors solely on the basis of their independent judgment relating to economic conditions, financial conditions, market timing, or market analysis, and will not be subject to direction from the ARMB.

C. Performance Standards. Contractors are expected to have returns, net of fees, in excess of the appropriate benchmark over rolling 5-year periods with an ex-ante tracking error, defined as the annualized standard deviation of returns relative to the index, of less than two percent. The benchmark is the Barclays Taxable Municipal: US Aggregate Eligible Index. The Contractors cannot guarantee any outcome and these targets are not to be considered an assurance or guarantee of performance or of realized risk in the portfolio.

D. Investment Structure. Permissible U.S. dollar denominated debt investments shall be limited to the following:

1. Money market investments comprising:

    a. Repurchase agreements collateralized only by U.S. Treasury obligations, including bills, notes, and bonds, and only when the collateral carries a market value equal to or greater than 102% of the amount of the repurchase agreements, and only when the custodial bank appointed by retirement funds will take custody of the collateral;

    b. Commercial paper rated at least Prime-1 by Moody's Investor Services, Inc. and A-1 by Standard and Poor's Corporation;

    c. Negotiable certificates of deposit and bankers acceptances; provided that an issuing bank must have total assets in excess of $5 billion.

2. United States Treasury obligations including bills, notes, bonds, other debt obligations issued by the United States Treasury, and backed by the full faith and credit of the U.S. Government.

3. Other full faith and credit obligations of the U.S. Government.

4. Securities issued or guaranteed by agencies and instrumentalities of the U.S. Government, but not explicitly backed by the full faith and credit of the U.S. Government.

5. Securities issued or guaranteed by municipalities in the United States:
   - general obligation bonds
   - revenue bonds
   - housing authority bonds
   - private activity bonds
   - industrial development bonds
   - residual interest bonds
   - tender option bonds
   - tax and revenue anticipation notes
   - bond anticipation notes
   - tax-exempt commercial paper
   - municipal leases
   - participation certificates
   - corporate backed municipal issuers
   - taxable municipal closed-end funds

E. **Portfolio Constraints.** All limitations are applicable at the time of purchase. Short term securities must be rated at least A-2/P-2/F-2 or equivalent by an Nationally Recognized Statistical Rating Organization (NRSRO) or by the Contractor, if unrated. Long term securities must be rated investment grade by an NRSRO or by the Contractor, if unrated. Only one rating is necessary, and the median rating will apply for securities rated by more than one NRSRO. The Contractor shall apply appropriate diversification standards subject, however, to the following limitations based on the current market value of assets:

1. The portfolio's duration may not exceed a band of +/-20% around the duration of the index.

2. The Contractor may not invest more than 20% of the portfolio's assets in securities that are not rates by an NRSRO.

3. The Contractor may not invest more than 25% of the portfolio's assets in securities originated by it or an affiliated company.

4. There shall be no investment in private placements, except Rule 144A securities.

5. The Contractor shall not sell securities short.

6. The Contractor shall not purchase securities on margin.

7. The Contractor shall not utilize options or futures.

8. Externally Managed Assets: Internal cross trading is permitted but only in accordance with requirements under: (1) 29 U.S.C. §1108(b)(19); (2) 29 C.F.R. §2550.408b-19; and (3) 26 U.S.C. §4975(d)(22).

F. Required Remedies. Recognizing that ratings and relative asset worth may change, the Contractor shall liquidate invested securities with care and prudence when the credit rating of a security falls below the minimum standards set in these guidelines or when the relative market value of that investment type exceeds the levels of holdings permitted in these guidelines. The Contractor is required to notify the chief investment officer to discuss the situation and the proposed liquidation strategy if it is not prudent simply to liquidate immediately.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Medical Office Real Estate Separate Account(s)	ACTION:	
DATE:	September 19, 2013	INFORMATION:	**X**

BACKGROUND:

Recognizing the changing cash flow dynamics of ARMB's defined benefit pension plans, investments offering higher current income returns are desirable. ARMB has been invested in the LaSalle Medical Office Fund II, a closed-end real estate fund, since 2006 and has experienced a strong and stable income return once the portfolio was invested. Most recently, the June 30, 2013 income return was 2% net for the quarter and 8.3% net for the trailing twelve months. In accordance with the terms of the fund, the LaSalle Medical Office Fund II is currently winding down. Barring new investments by ARMB, its exposure to medical office is expected to be $0 by 2015, as investments in the fund are sold and distributed back to investors.

STATUS:

Medical office properties are an attractive subsector of the real estate asset class. Some attributes are:

- Supported by significant economic driver. Health care is a large and growing part of GDP. Aligned with aging demographics of U.S. baby boomer population.
- Diversification. Inelastic demand curve in relation to traditional GDP growth based investments.
- Attractive income returns. Income returns exceed traditional institutional real estate investments.
- Timely. Beneficiary of Affordable Care Act as medical providers search for more economical configurations to offer services and the insured population increases. Medical office out-patient services are generally more economical than performing in-patient hospital procedures.
- Property size, in terms of price, are relatively small compared to other traditional real estate property types which makes it easier to build a diversified portfolio within limited capital availability.

ARMB currently invests in core apartment, office, industrial, and retail properties through four separate account mandates. While not ideal for all investment strategies, the separate account structure is superior to commingled fund structures from the standpoint of control and is a viable approach for a medical office strategy.

RECOMMENDATION:

No ARMB approval is currently being sought. This is an informational action item to apprise the Board of the CIOs intention to explore establishing medical office real estate separate accounts with one or more of ARMB's current real estate separate account advisors.

If the approach is determined to be feasible, the CIO currently has sufficient discretion in the Real Estate Guidelines to commit to medical office investments. The size of the strategy is anticipated to be $150 - $200 million. The CIO will report back to the Board if real estate separate accounts are established to pursue medical office investments.

ALASKA RETIREMENT MANAGEMENT BOARD
M E M O R A N D U M

To: ARMB Trustees
From: Judy Hall
Date: September 4, 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	8/15/13
Pamela Leary	Comptroller	Equities	7/8/13
Bob Mitchell	Investment Officer	Equities	7/8/13 8/7/13

Alaska Retirement Management Board
2013 Meeting Calendar

September 18	Committee Meetings: Audit Budget Legislative Real Assets Salary Review
September 19-20 Thursday-Friday Fairbanks	*Audit Results/Assets – KPMG *Approve Budget *Performance Measurement – 2nd Quarter *Real Estate Annual Plan *Real Estate Evaluation – Townsend Group *Manager Presentations
October 3-4	Education Conference - New York City
October ____ (Telephonic)	Audit Committee
October 28 Anchorage	Strategic Planning/Governance
December 4	Committee Meetings: Audit Legislative
December 5-6 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement – 3rd 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 – 4th 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 – 1st Quarter *Manager Presentations
September 17 – Wednesday	Committee Meetings: Audit Budget Legislative Real Assets Salary Review
September 18-19 Thursday-Friday Fairbanks	*Audit Results/Assets – KPMG *Approve Budget *Performance Measurement – 2nd Quarter *Real Estate Annual Plan *Real Estate Evaluation – Townsend Group *Manager Presentations
October ___	Education Conference
October ___	Audit Committee
December 3 – Wednesday	Committee Meetings: Audit Legislative
December 4-5 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement – 3rd Quarter Manager Review (Questionnaire) Private Equity Review *Manager Presentations