ALASKA RETIREMENT MANAGEMENT BOARD

BOARD OF TRUSTEES
AGENDA

February 12-13, 2015

Meeting in the
Egan Room
Centennial Hall
101 Egan Drive
Juneau, Alaska

Thursday, February 12, 2015

I.	9:00 am	Call to Order	
II.		Roll Call	
III.		Public Meeting Notice	
IV.		Approval of Agenda	
V.		Communications, Public/Member Participation, and Appearances (Three Minute Limit)	
VI.		Approval of Minutes: December 4-5, 2014	
VII.	9:10	Reports	
		1.	Chair Report
		2.	Committee Reports A. Audit Committee, *Martin Pihl, Chair* B. Legislative Committee, *Gail Schubert, Chair*
		3.	Division of Retirement & Benefits Report A. Membership Statistics/Buck Invoices/HRA Rates B. Legislative Update *Jim Puckett, Chief Operating Officer, DRB*
		4.	Treasury Division Report *Pamela Leary, Director, Treasury Division*
		5.	Chief Investment Officer Report, *Gary Bader*
	10:00-10:15	6.	Fund Financial Report *Scott Jones, State Comptroller, DOR* *Kevin Worley, Chief Financial Officer, DRB*

10:15 – Break
15 Minutes

	10:30-10:45	7.	Manager Review/GEMS Analysis *Gary Bader, Chief Investment Officer*

10:50-11:20	8.	MacKay Shields *Andrew Susser and Kirk Kashevaroff*
11:25-11:55	9.	ARMB Equity Yield Strategy *Gary Bader, Chief Investment Officer*

Lunch – 12:00 – 1:30 pm

1:30-2:15	10.	Crestline Investors *Doug Bratton, Keith Williams, and Jesus Payan*
2:20-2:50	11.	UBS AgriVest *Jim McCandless*
2:55-3:25	12.	TIR Timber *Tom Johnson, Mark Seaman and Chris Mathis*

3:25 Break
10 Minutes

3:35-4:00 13. Investment Actions/Information

A. Absolute Return Guideline Revision Resolution 2015-01

B. Crestline Contract Modification

C. Equity Yield Portfolio Modification

Gary Bader, Chief Investment Officer

End of Day

Friday February 13, 2015

9:00-10:30 14. Capital Markets Assumptions
Paul Erlendson and Dana Brown, Callan Associates Inc.

10:30 Break
10 Minutes

VIII. Unfinished Business
1. Disclosure Reports
2. Meeting Schedule
3. Legal Report

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

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

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
MEETING

Location:
Anchorage Marriott Hotel
820 West Seventh Avenue
Anchorage, Alaska

MINUTES OF
December 4-5, 2014

Thursday, December 4, 2014

CALL TO ORDER

CHAIR GAIL SCHUBERT called the meeting of the Alaska Retirement Management Board (ARMB) to order at 9:01 a.m.

ROLL CALL

Six 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 (arrived late)
Tom Brice
Sandi Ryan
Martin Pihl

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

Investment Advisory Council Members Absent
Robert Shaw

Department of Revenue Staff Present
Gary M. Bader, Chief Investment Officer
Scott Jones, State Comptroller
Pamela Leary, Director, Treasury Division
Shane Carson, State Investment Officer
Zach Hanna, State Investment Officer
Bob Mitchell, State Investment Officer

Judy Hall, Board Liaison

Department of Administration Staff Present
Kevin Worley, Chief Financial Officer, Division of Retirement & Benefits (DRB)
Jim Puckett, (December 5th only), Chief Operating Officer, Division of Retirement & Benefits

Consultants, Invited Participants, and Others Present
John Boucher, Office of Management & Budget
Steve Harding, Anodos Advisors, LLC
Ryan Wolfshorndl, Anodos Advisors, LLC
Josh Yager, Anodos Advisors, LLC
David Slishinsky, Buck Consultants
Dana Brown, Callan Associates, Inc.
Paul Erlendson, Callan Associates, Inc.
Gary Robertson, Callan Associates, Inc.
Stuart Goering, Department of Law, Assistant Attorney General
Dan McLaughlin, KKR
Chris Sheldon, KKR
Melissa Beedle, KPMG
Michael Hayhurst, KPMG
Devang Gambhirwala, Quantitative Management Associates
Kevin O'Rourke, Quantitative Management Associates

PUBLIC MEETING NOTICE

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

APPROVAL OF AGENDA

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

MR. BADER requested item VIII 13F. Callan Comments be added to the agenda.

The agenda was approved as amended.

PUBLIC/MEMBER PARTICIPATION, COMMUNICATIONS, AND APPEARANCES

None

APPROVAL OF MINUTES: September 18-19, 2014

MRS. HARBO moved to approve the minutes of the September 18-19, 2014 meeting. MR. PIHL seconded the motion.

The minutes were approved.

ELECTION OF OFFICERS

MR. PIHL moved to reelect Chair Schubert, Vice Chair Trivette, and Secretary Harbo by unanimous consent. MS. RYAN seconded the motion.

There was no objection and the motion passed unanimously.

REPORTS

1. CHAIR REPORT

None

2. COMMITTEE REPORTS

A. Audit Committee

MR. PIHL reported on two meetings of the Audit Committee. The first was a telephonic meeting on November 20th reviewing the draft of the six retirement plan reports prepared by DRB. MR. PIHL noted the GASB requirements have increased work to KPMG. There has been full cooperation and no exceptions of any substantial nature were found.

The second meeting occurred on December 3rd. KPMG is very near completion of their work with still no exceptions to report. Discussions ensued regarding the finding of a consistent difference in the payroll numbers in the Buck reports versus actual payrolls provided by DRB. Buck was asked about the growth assumptions used in the 25-year projections and the potential significant impact on the PERS unfunded liability allocations using the percentage of pay method. MR. PIHL noted Buck will address these issues in front of the Board on Friday.

MR. PIHL stated further discussion occurred regarding the relationship between DRB, the actuary, and the Board, which included contract relationship, access, review of reports before finalization, and a budget line item for actuarial work. The Audit Committee has continuing concern over DRB having only one person staffed for the employer audit function. The request has been made to the Commissioner for the additional staff needed to perform employer audits. Under the expanded auditing by KPMG, employers will be audited on a regular schedule in which the frequency of every 10 years, five years, three years, or one year, will depend upon the size of the employer.

B. Legislative Committee

MR. TRIVETTE reported the Legislative Committee met on December 3rd. He noted all current Trustees were present at the meeting. He believes the Committee is on target to provide the current actuarial information in a useable format to the Legislature. A follow-up meeting may occur in mid-January.

3. RETIREMENT & BENEFITS DIVISION REPORT

A. Membership Statistics (informational)

KEVIN WORLEY, Chief Financial Officer, noted the membership statistics are included in the Board packets and new columns have been added. For PERS, Tier I, II, and III, have been separated providing a DB total distinguished from the Tier IV DC total. A TRS DB total has also been provided.

MR. TRIVETTE requested an update on the DC medical plan. MR. WORLEY noted the trust funds are set up, but the major medical plan is still in discussion.

B. Buck Consulting Invoices (informational)

MR. WORLEY noted both the regular services and the non-regular service requests to Buck are being monitored and reported as costs for the Division.

4. TREASURY DIVISION REPORT

PAMELA LEARY, Director, Treasury Division, related that with the new Administration, a new Commissioner of Revenue, RANDY HOFFBECK, has been appointed by Governor Walker. He will be starting in January. Also, a new Deputy Commissioner, JERRY BURNETT, started his position yesterday. MR. PIHL inquired about the new Deputy Commissioner's responsibilities with regard to the ARMB. MS. LEARY explained she will retain responsibility for the Board and the two Deputy Commissioners will be delegated other responsibilities.

MS. LEARY informed the second installment of one billion dollars from the constitutional budget reserve into the ARMB funds occurred on November 13th, 2014. The third and final installment is scheduled for March 10, 2015. MS. LEARY stated she is awaiting the budget request results, which will be issued on December 15th, 2014.

CHAIR SCHUBERT asked if there is a likelihood the final installment scheduled for March 10th could be postponed, given the current budget crisis. MS. LEARY stated she has not heard anything to that effect. MR. BRICE believes legislative action would be required to change the current legal statute.

5. CIO REPORT

GARY BADER, Chief Investment Officer, reviewed the CIO Report included in the Board's packet. The dates of rebalancing are listed on the summary sheet and any rebalances which occurred after November 7th will be reported at the next meeting. Several transactions have occurred in and out of the cash account with the absolute return managers as the Board-approved strategies get funded. The specific paperwork is available to all Board members for review. The small cap and large cap futures overlay commitment of $11 million each with State Street was renewed.

MR. BADER explained the Pyramis Global Advisors tactical bond fund was funded by drawing down small cap assets of $40 million from Jennison, $30 million from Luther King, and $30 million from Lord Abbett. The MacKay Shields high yield fund was funded in the amount of $50 million out of the bond portfolio. On November 13th, the cash account funded the Arrowstreet Capital international mandate of $200 million, McKinley for $100 million, SSgA Value for $60 million, Analytic Index for $36 million, and Analytic Buy-Write for $4 million, SSgA Russell 200 for $200 million, Lazard Emerging Income Fund for $20 million. Due to the availability to invest money of certain days, some of the transactions did not take place on November 13th, but the total amount placed into the fund equals a billion dollars. The account is complicated and is available in hard copy to members, if requested.

MR. BADER reported a $30 million commitment to Glendon Capital Management, which is a private equity fund whose managing directors have significant opportunistic distressed debt experience. MR. BADER reported an additional $50 million commitment to the Almanac Fund, who has successfully managed funds for the ARMB since 2004. The strategy of this real estate fund is to invest at the entity level by providing growth capital to real estate operating companies. The Board Chair was notified of both investments.

MR. BADER stated that the IAC, Callan, and staff met the Tuesday before Thanksgiving to review the GEMS model, as requested by the Board at the September meeting. The GEMS model report and the report on the manager reviews will be presented at the February meeting.

MR. BADER commented on the changes in the price of oil as it affects the investments in the fund and noted staff is proposing investments with a more defensive posture. MR. BADER stated there has been a bull market for the last six years and staff believes it is wise to be positioned in a fashion to have less severe impacts if there is a market decline.

TRUSTEE PIHL asked if this is a good time to increase the allocation to real assets. MR. BADER noted real assets are more of a defense against inflation. The portfolio currently has asset groups in real assets like MLPs, which are highly dependant upon oil, and have been negatively affected in the near-term. The portfolio's allocation to REITS has recently increased. MR. BADER believes the portfolio's strategic target is good.

6. FUND FINANCIAL PRESENTATION and Cash Flow Update

State Comptroller SCOTT JONES and Chief Financial Officer of the Division of Retirement and Benefits KEVIN WORLEY presented the Fund Financial Report. MR. JONES reviewed the financial statements for the month ending October 2014. The PERS system ended with $15.5 billion, the TRS system with $6.8 billion, the JRS with $169 million, the National Guard and Naval Militia with $37.4 million, SBS with $3.3 billion, and Deferred Comp with $787 million, for a total of $26.6 billion. MR. JONES stated the change in invested assets was 2.46% year-to-date, which was mostly due to the contributions to the system. The plans were at a net investment loss through that month. All asset allocations were within the bands. MR. JONES noted for the month ending November 2014, the $190 million worth of investment income had brought the plan into positive investment income territory for the year.

MR. WORLEY gave a supplemental report relating to cash inflows and outflows from each of the retirement plans for the four months ending October 31st. Inflows included one billion dollars into the PERS DB plan, TRS DB and healthcare plans in July, $5.2 million appropriation into JRS, a one-time appropriation to the National Guard DB plan, and RDS rebates of $8.7 million to the Retirement Health Care Trust, $2.8 million to the Teachers Retirement Health Care Trust, and approximately $24,000 to JRS.

MR. WORLEY stated the benefits paid out of each of the system per month is approximately $56 million out of PERS DB plan, $29 million of the PERS healthcare, $34.7 of Teachers DB, $9.3 million of Teachers healthcare, $880,000 of JRS, $15.4 million of SBS, and $3.8 million of the Deferred Comp plan. MR. WORLEY noted separation from service and retirement comprises about 95% of the request for funds leaving PERS, TRS, DCR, SBS, and Deferred Comp.

7. PRIVATE EQUITY REVIEW

GARY ROBERTSON of Callan Associates, Inc., provided a detailed report on the private equity review. Thomson Reuters has stopped collecting data for its private equity unmanaged voluntary database benchmark and has agreed to use Cambridge Associates' database of professionally managed portfolios as the benchmark. This change has made it harder to be above median and in the upper quartile.

MR. ROBERTSON reported the funded target for private equity this year is 9% and is slightly underfunded. The total fund increased over $3.1 billion or 17% this year. The manager distribution is approximately Abbott 45%, Pathway 45%, and 10% in-house portfolio. Blum is public stocks and will be taken out of the portfolio. MR. ROBERTSON explained the history of the portfolio with Abbott being hired in 1998, Pathway in 2002, Blum in 2005, and the in-house beginning in 2007. This has been a phenomenal year in the market with the Russell 3000 last four quarters providing 25.2% returns. He believes this is a mid/late expansion and would introduce caution now.

MR. ROBERTSON noted in the third quarter of this year, there was a big jump in the average buyout price to eleven times EBIDA or cash flow, up from six times EBIDA in June. This big increase in price is consistent with a demand push. Credit is still very easy to attain in the market. The SEC is now regulating the industry and focusing on conflicts of interest, adherence to limited partnership agreements, fundraising documentation and company valuations. This is a positive benefit for plan sponsors and the investments. Another regulatory trend that may have unintended consequences is the regulation that banks cannot loan to more than six times EBIDA, which could drive lending out of the regulated areas into private lending areas.

MR. ROBERTSON explained the private equity portfolio's changes from last year. This year, the commitments increased 12%, paid-in capital increased 9%, uncalled commitments increased 24%, portfolio distribution of $460 million, net cash flow of $199 million, NAV increased 7%, and the portfolio appreciated 20%. The portfolio has a total value to paid-in, TVPI, of $1.47, which is mid second quartile of the new Cambridge benchmark, as opposed to high second quartile of the Thomson Reuters benchmark.

DR. MITCHELL asked if being in the second quartile of the Cambridge benchmark is acceptable because the benchmark is made up of a more robust group of managers. MR. ROBERTSON agreed and explained the industry has not changed, but the lens for looking at the managers has changed and it will be harder to get into top quartile managers because there are a lot fewer of them now. MR. ROBERTSON believes the portfolio's industry balance is excellent, and benchmarks well against the new tougher database.

CHAIR SCHUBERT asked if the portfolio is a mid-range funder or large funder for Abbott. MR. ROBERTSON noted Abbott has a large client in the Utah retirement system and other large separate accounts. Abbott's base is $8 billion.

MR. ROBERTSON advised Abbott's distribution for this year was $208 million. Pathway's total appreciation was 18% adding $134 million to the portfolio. Pathway's TVPI is $1.52, which is high in the upper quartile. Pathway's industry is based more on buyouts, making them more volatile in these markets. The in-house portfolio also had a total appreciation this year of 18%. The in-house net cash flow was 5%. The portfolio continues to be built and the increase in NAV was 13%. The in-house TVPI is $1.29, which is just under the median.

DR. MITCHELL asked if there are managers the ARMB should be reviewing who are doing better than Abbott and Pathway. MR. ROBERTSON advised not to change Abbott and Pathway, but he believes there might be one other interesting candidate to consider. MR. TRIVETTE asked if the ARMB should be moving away from separate accounts and to rethink the strategy with P/E. MR. ROBERTSON does not believe the ARMB should be moving away from separate accounts. This is a capital constrained industry and completely commercial. The institutional portfolio cannot be too tactical in its timing. He believes the portfolio is excellently diversified and the strategy is continually being monitored.

CHAIR SCHUBERT recessed the meeting from 10:27 a.m. to 10:40 a.m.

8. PERFORMANCE MEASUREMENT - 3RD QUARTER

PAUL ERLENDSON and DANA BROWN of Callan Associates, Inc., provided a detailed report on the third quarter performance measurement. MR. ERLENDSON commented the last several years since the end of the global financial crisis have been extraordinary in terms of availability of capital, opportunities producing tremendous returns, equity-like exposures, and bond returns driven by decreasing interest rates. The fund is positioned in an overall conservative risk adverse manner. This is shown in the strategic design of the portfolio which is intended to participate in the markets while being mindful it is inevitable that things cannot just continue to grow. The portfolio is designed to protect in those kinds of environments.

MR. ERLENDSON explained inflation has been very low on a historical basis and there are new real asset strategies that did not exist 10 years ago that have been brought to market to help mitigate the anticipated reversion to the mean. These strategies include commodity exposure, real estate exposure, and TIPS, inflation protected bonds. A significant part of inflation is food prices and energy prices, and energy prices are down dramatically, which provides an increase in disposable income that can be deployed elsewhere in the economy. There was a downdraft in the U.S. economy in 2008, but there has been a consistent increase in GDP growth since then. The unemployment rate is also getting better and was down to 5.9% as of the end of September. The raw data shows a recovery taking place within the U.S., which is unlike other parts of the world.

Through the 14th of November, the S&P 500 has returned 12.3%, Russell 2000 at 2%, EAFE at -2.9%, and emerging markets at 1.4%. The ARMB has structured the domestic equity portfolio to be very large cap in nature and so has participated strongly in these recoveries. The P/E ratios of large cap companies have been increasing, but are still close to the long-term average. The commodity-based sector, including energy, utilities, industrials, and materials have not participated well during the last quarter. Energy was the worse performing sector, as oil prices dropped more than 20% between August 1st and September 30th.

One of the impacts that is important as an investor outside of the U.S., is the impact of currency. The dollar has been strengthening and the currency effect has been a real detractor in terms of a U.S. investor's valuation outside the U.S. This is part of the cycle of investing. MR. BRICE asked if shifting away from global equity toward domestic equity would be a good strategy given the currency exchanges. MR. ERLENDSON believes the current broad range of allocations established, which include diversification and target weights, is an appropriate current policy.

MR. BRICE asked if the currency effect is not enough of a factor to consider a shift in the portfolio. MR. BADER advised the ARMB historically has allowed investment managers to decide when they think they can make a currency bet. Staff has not found any currency managers with robust enough returns to warrant an overlay on the portfolio.

MR. ERLENDSON explained the importance of the treasury curve. During the third quarter, interest rates for shorter maturities have increased slightly, but on the longer end, the interest rates have decreased, which means the long bonds have gone up in value because they are worth more as interest rates come down. MR. ERLENDSON explained interest rates do not go up and down by the same amount across the entire maturity spectrum. Flattening of the curve occurs when one end is going up and the other end is going down. As the yield curve flattens, there are lower expected rates of growth going forward.

MR. ERLENDSON noted public pension plans have decreased their exposure to fixed income to about 28% versus about 40% 20 years ago. The composition of the bond portfolio has gotten riskier with increased high yield bonds and additional currency risk. The real estate portfolio includes both direct investment in properties and REITs. Over the last three years, private real estate, U.S. denominated REITs, and global REITs, have provided positive returns in the mid-teens. This has been a very constructive part of the overall portfolio diversification.

MR. ERLENDSON reviewed the composition and performance of PERS and noted the allocations of the other plans are essentially identical. Approximately 2/3 of the assets are allocated to return-seeking strategies and approximately 1/3 of the assets are allocated to risk mitigating strategies. The actual asset allocation has been tightly managed and remains very close to the target asset allocation. Compared to other public funds' allocations as of September 30th, the portfolio is in the bottom 25% of exposure to domestic equities, in the top 25% of exposure to domestic and global equities, in the top 25% of exposure in alternatives, including private equity, and in the top 10% of exposure in real assets.

MR. BROWN continued the presentation and stated most of the portfolio's asset classes have done very well relative to their benchmarks over the last year, with the exception of the conservative structure of domestic equity. The portfolio has had strong absolute performance and strong relative performance over the last year and last three years. The portfolio has outperformed the target index on an overall basis for five-year, 10-year, and inception, but is still trailing in the seven-year period.

MR. BROWN provided an update regarding the fixed income manager Mondrian. He informed their recent underperformance is consistent with their philosophy, process, and focus on underlying fundamentals, while maintaining a more risk-adverse orientation. Over the five-year, 10-year, and since inception, Mondrian has performed well and MR. BROWN does not see any particular issue with them. The small cap portfolio is doing very well and has beat the benchmark overall in seven of the last eight quarters. Two microcap managers have trailed, but that is to be expected because microcap stocks have underperformed small cap. The manager Luther King is being watched closely because of their underperformance due to an overweight security selection in the energy sector. International equity is slightly behind the benchmark for the quarter, but ahead in all other periods. Both emerging market managers have performed well relative to their benchmark and peers.

MR. BROWN explained the SSgA Treasury Money Market Fund is not shown in the stoplight chart because the difference between bottom quartile and top quartile in the peer group is four basis points, which would unfairly penalize SSgA. It will be added back when a more normal environment returns for treasury money market funds. MR. ERLENDSON added the stoplight chart is a consolidated and useful way to give information, but in the case of treasury money market funds, it is misleading.

MR. BADER commented the SSgA Treasury Money Market Fund was provided as an option in response to participants wanting a safe harbor for their funds during 2008. The investment environment has changed in these several years and MR. BADER believes some of the participants are still in the SSgA fund because of inertia and they are essentially earning nothing on their investment. MR. BADER believes participants need to be educated on the true cost of keeping their funds in an investment option like this over a long period of time.

MR. TRIVETTE expressed his appreciation for the explanation of the investment performance charts and believes it is critical plan members have perspective on their investments. He requested the issue be placed on the agenda to work on.

9. KPMG - Audit Report

CHAIR SCHUBERT introduced MICHAEL HAYHURST, Engagement Audit Partner, and MELISSA BEEDLE, Audit Senior Manager, from KPMG. MR. HAYHURST informed KPMG met with the Audit Committee for the audits completed on the Treasury Division and for the system plans. He summarized the key points of the audit status and areas of interest, provided a brief update from an accounting standpoint, then reviewed next steps and items in the appendices.

MR. HAYHURST advised KPMG has issued clean opinions on the invested assets for the retirement systems, as well as the Treasury Division invested assets under the investment authority of the Commissioner of Revenue. KPMG is in the process of finalizing and expects to issue shortly the clean opinions on PERS, TRS, JRS, NGNMRS, DBS, and DC plans. New requirements for census data testing at employer sites were required this year in implementing GASB 67. These will also be required next year in GASB 68. MR. HAYHURST stated KPMG had an amazing amount of support from the state and employers regarding the census testing efforts.

MR. HAYHURST reported there were no deficiencies in internal controls identified that especially would rise to the level of a material weakness or a significant deficiency. The consistent year-over-year differential related to the valuation of the alternative investments for the lag between year-end and the period used by the managers for the last valuation date was the only uncorrected misstatement, which is assessed each year, and found not to be material. The audit showed no noted concern, no significant related party transactions to be disclosed, nor litigation claims or assessments, nor legal acts or frauds identified, nor noncompliance with laws or regulations.

MR. HAYHURST stated that KPMG is required to review the Comprehensive Annual Financial Report (CAFR) when it is issued for PERS and TRS to ensure the information is materially consistent with the audited financials. KPMB is in the process of completing the GASB 67 required consultation process with their national office, as it relates to the implementation of GASB 67. This should be completed by the end of the week.

KPMG also reviewed the actuary report and concluded the assumptions and methodologies used were reasonable under appropriate actuary methods. During the census testing, 990 employees were reviewed. There were some exceptions, but no systemic issues were identified. There was one recalculated pensionable wage difference in this review, which was fairly small.

MR. TRIVETTE expressed his appreciation to MR. HAYHURST for making this process better for the whole plan. MR. PIHL complemented MR. HAYHURST and KPMG for their complicated audit work.

CHAIR SCHUBERT recessed the meeting from 11:45 a.m. to 1:30 p.m.

10. MIDDLE MARKET LENDING

CHAIR SCHUBERT introduced DAN MCLAUGHLIN and ERIC FALK from Kohlberg Kravis and Roberts (KKR) to give a presentation on middle market direct lending. MR. MCLAUGHLIN noted CHRIS SHELDON was called to London and is not present today. MR. MCLAUGHLIN expressed his appreciation to the Board for the continued investment relationship with KKR.

KKR has been in the investment business for about 40 years, with the majority of that time spent in private equity. There are over 1,000 employees around the world. The credit business was built in 2004 and is approximately $30 billion of the firm's $100 billion assets. The primary offices of operation for KKR's credit business are San Francisco, New York, and London. Those are the critical markets for the direct lending strategy. The majority of the transactions occur in North America, with a smaller extent in Europe. MR. MCLAUGHLIN informed KKR is its own largest investor, putting the firm's and employees' capital alongside the limited partners. This is good incentive and good alignment.

MR. FALK explained KKR's four critical components of their investing business, sourcing an investment idea, evaluating the investment idea, structuring the investment, and managing the risk of the investment and the portfolio of investments. The team of investment professionals is global and consists of approximately 30 people, including credit experts, industry research analysts, and banking originators called Capital Solutions Group.

MR. FALK advised the founders of KKR believed a critical part to investing wisely is creating an excellent decision-making process by providing incentives for people to work together who are in different parts of the company. MR. FALK reviewed the market opportunity, why it exists, and how to address the opportunity. The U.S. middle market historically has been one of the biggest growth drivers. Much of the debt capital lent into the middle market before the 2008 crisis came from hedge funds, commercial banks, and collateralized loan obligations (CLO). After the crisis, regulation has become a big detractor for banks lending to the middle market. Hedge funds have also retreated from middle market lending.

KKR believes this secular shift in supply of capital has created a huge opportunity in this middle market, which are companies that have $100 million or less in earnings, and a value of a billion dollars or less. KKR focuses on the larger middle market space with companies who have between $25 million and $100 million in earnings. KKR believes they can realize synergies from working with other areas of KKR, particularly insights from the credit business in getting a detailed understanding of how the company works.

MR. FALK reviewed the process of two recent transactions, one with Sportsman's Warehouse and one with AmTech International. He discussed the companies' backgrounds and reasons for their interesting return profiles. Loans issued for direct lending are made on a floating rate basis and are structured with a minimum rate of LIBOR. The structures of the deals are privately negotiated, which provide covenants and enhancements to protect the principal.

MR. ERLENDSON asked if KKR direct lending is ever involved in situations where KKR Private Equity is the equity owner. MR. FALK noted KKR direct lending does not participate as a bilateral lender to KKR Private Equity. MR. ERLENDSON asked what investor protections allow for recouping of assets if there is a default. MR. FALK explained KKR is lending senior secured and takes security over all the tangible assets in the business. The structure of the actual agreement contains rights, including foreclosure rights, renegotiating rights, and the right to divert cash flow to repay the loan.

DR. MITCHELL asked if there are more than enough deals to utilize all the funds in the strategy or if money is kept in reserve until appropriate transactions can be found. MR. FALK stated as with any market, there are times with more deals and times with fewer deals. He believes the macro environment has a tremendous number of opportunities and KKR is well suited to finding and evaluating these deals. There is also less competition in the larger middle market space. MR. FALK showed the statistics and sector diversification from the first lending fund. The expected cash-on-cash return is 11% to 14% with up to two-times leverage. The second fund will be positioned similarly.

MR. PIHL requested an explanation of the fee structure. MR. MCLAUGHLIN explained the manager fee on invested capital is 1.25%, and in addition, there is a 15% carry performance fee over an 8% preferred return. MR. MCLAUGHLIN gave the example if there was a 10% return, KKR would get 15% of that 10%, plus the 1.25% management fee.

MR. BRICE asked what type of economic environment or business cycle would be a damaging to this strategy. MR. FALK noted a prolonged recession would be the most damaging economic environment for the portfolio. A slow growth environment is very good for this portfolio because it is good for middle market companies. MR. FALK believes the more likely risks in the portfolio are idiosyncratic risks for the different companies. KKR is very comfortable taking these risks because they have done their work to place structural and analysis mitigations within the individual deals and they have a good process history.

MR. BRICE requested KKR's opinion on how the national economy will affect their strategy. MR. FALK believes over the past few years, the market performance and economic performance needs to be disassociated. The credit market performance has been driven by the interest rate environment. He believes there will be a mean reversion and capital will flow out of the liquid credit markets. MR. FALK thinks there will be a more normal type of credit cycle in the next term with specific industries with heightened risk. He believes it is possible to look forward two to three years and understand what a company's cash flow is going to be in order to repay the loan.

MR. TRIVETTE asked if there were any defaults in the first fund, and requested a list of corporations who were lent to in the first fund. MR. FALK noted there has not been a default since the last reported period, but there is one company that is like to report as a default. It is not a large position and KKR is enacting all of their rights. KKR believes they will end up with a strong recovery after some time. MR. FALK stated a list of assets could be provided, but he does not have a list with him. There have been about 40 companies lent to and about 11 have been repaid. Some of the companies include, Things Remembered, Back Office Associates, Sportsman's Warehouse, and Asset Acceptance Corporation. MR. MCLAUGHLIN noted the second fund currently has seven investments.

11. MARKET PARTICIPATION STRATEGY (MPS)

CHAIR SCHUBERT introduced KEVIN O'ROURKE, Client Relations, and DEVANG GAMBHIRWALA, Portfolio Manager, of Quantitative Management Associates (QMA) to give a presentation on Market Participation Strategy (MPS). MR. O'ROURKE related that STEVE BRUNDAGE, who was at the educational conference, was unable to travel this week and sends his regards. QMA is based in New Jersey and has been managing a value equity portfolio for the ARMB for over seven years. They have been in business for nearly 40 years and manage several different aspects of assets, including asset allocation portfolios, passive equity strategies, and active equity portfolios. Some of the other public pension plans QMA works with includes the State of Hawaii, the State of New York, and the State of Florida.

MR. O'ROURKE believes the three characteristics clients would say that distinguish their firm are stability, expertise, and consistency. QMA is a wholly-owned subsidiary of Prudential. Many of the investors on the investment team have spent their entire career at QMA. The team consists of 53 investment professionals and approximately 1/3 of those have PhDs. QMA follows a very consistent and repeatable investment approach, producing a very consistent performance pattern over time.

MR. O'ROURKE explained MPS is a defensive equity strategy, which is designed to capture upside participation when the equity markets are rising and more importantly, preserve capital during times of crisis or when equity markets are falling. The strategy was launched in 1992 and currently, there is about $480 million under management. This strategy is highly liquid and is able to provide investors with daily liquidity, in terms of investments or redemptions. MPS has a low correlation with other equity-based strategies and the key element is downside protection.

MR. TRIVETTE asked in which asset class this strategy would be placed in the overall portfolio. MR. BADER stated MPS would go into the alternative equity strategy.

MR. GAMBHIRWALA informed he is the lead portfolio manager for this strategy and has been working on the strategy since inception. He showed the return profile for MPS compared to the S&P 500, providing increasing participation as the market is going up and tailing the downside risk as the market is going down.

The MPS portfolio is comprised of 20% in call options on the S&P 500 and futures, and 80% in treasuries. Call options are a bullish view on the market and give the right, but not the obligation, to purchase the underlying S&P 500. The call options are long-term with five-year maturities that hold their value and are traded on the Chicago Board of Options Exchange (CBOE). The two key features of an option is the price at which you can participate called strike price, and the maturity. Futures may also be added opportunistically to manage equity exposure or to provide liquidity.

The portfolio primarily invests in zero coupon treasury bonds because they are simple to understand, extremely liquid, and perform well in times of crisis. The treasuries are actively managed during this low interest rate environment. The intent is not to chase after yield, but to ensure the treasuries hold value if interest rates were to go up, as is expected. Zero coupon treasuries or treasury strips is a treasury bond that has no coupon because it has been stripped away. It is bought at a discount instead of having to worry about reinvesting the coupons. The interest is implied in the price.

MR. GAMBHIRWALA explained how the MPS portfolio is actively managed to combine both the bonds and the options, which drives the attractive return profile. The exposures in both bonds and options are managed through a disciplined process around which parameters are considered in rebalancing the portfolio to lock in gains. The same disciplined process is used in times of market corrections to preserve capital.

MR. TRIVETTE requested an explanation of the fee structure. MR. GAMBHIRWALA informed the asset-based fee is 30 basis points for the first $50 million and 25 basis points on assets above $50 million.

DR. MITCHELL asked if MR. GAMBHIRWALA knows the percentage institutional clients place in this strategy to help reduce equity portfolio risk compared to the chart on page 20 of the presentation. MR. GAMBHIRWALA stated asset allocation is more art than science. It is difficult to give a static answer because of the different return preferences, but the range is between 10% to 20%.

DR. JENNINGS requested further information on the tactical overlay that is suggested on slide four of the presentation. MR. GAMBHIRWALA explained approximately 75% to 80% of the decisions are process driven based on trigger points. The asset allocation team's view on equities also informs decisions for managing the product.

MR. ERLENDSON asked for additional information on comparing the MPS to the S&P 500 over shorter periods of time in order to provide an appropriate way for the Board to evaluate the success of this strategy. MR. GAMBHIRWALA encouraged this strategy be evaluated over a five to seven-year market cycle to see the value of capital preservation and participation in the upside as markets go up. This strategy has a superior Sharpe ratio compared to the S&P 500 over different periods of time. Since inception, this strategy has about 61% of the volatility of the S&P 500, which smooths the return pattern over time.

DR. JENNINGS asked for a description of the option strategy used in MPS. MR. GAMBHIRWALA explained MPS is long volatility, since the call options are owned, which is different from a buy-write strategy. The strength in MPS lies in owning long-term calls and providing the downside protection in a down market. MPS would be a nice complement to a buy-write strategy.

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

12. PERFORMANCE CONSULTANT REVIEW

MR. BADER advised the Alaska statutes require the Board have a performance consultant review at least once every four years. With the Board's approval, staff engaged Anodos Advisors to conduct the review of the general consultant Callan Associates, and the real estate consultant Townsend Group. MR. BADER introduced STEVE HARDING, RYAN WOLFSHORNDL, and JOSH YAGER, of Anodos Advisors. MR. HARDING described how Anodos was selected to provide an independent review of the performance reporting by investment consultant Callan, who focuses on the entire portfolio, and investment consultant Townsend, who focuses on real estate within the real asset class of the portfolio.

Anodos was to determine whether the performance reports provided were sufficient and consistent with the consulting agreement, and whether the benchmarks were appropriate. Anodos was to perform a number recalculations to ensure accuracy. After the summary of recommendations from this current review, Anodos provided comment on the follow-up on the prior audit's recommendations, as it relates to the current scope of work.

MR. HARDING stated Anodos found Callan's reports conform to the performance consulting agreement and to best practices within the industry. The Townsend's reports were found to conform to the performance consulting agreement and to best practices within the industry. MR. HARDING noted Anodos performed the recalculations to test the accuracy of the performance measurements and concluded both Callan and Townsend reported accurately and consistently with best practices within the industry.

MR. HARDING described the process by which Anodos determined that the benchmarks used were reasonable and appropriate, but enhancements can be made to some of the benchmarks. At the individual manager level, eight instances were observed where the primary benchmark used to measure the manager's risk and return characteristics are not statistically representative of the manager's actual portfolio characteristic. In at least 20 instances, the benchmark being used was not sufficiently supported statistically by the information provided in the performance reports, particularly for the fixed income portfolio. It is recommended the information be included in the reports. MR. HARDING commented Callan, Townsend, and staff provided all necessary documents and interviews in a timely manner in order to comply with the four-year statutory timeframe constraint for the review.

MR. YAGER commented the 19 recommendations made in the report by Anodos are not in order of importance, nor do they have equal weighting. After the report was submitted to the ARMB, he thought it would be helpful to craft a slide, Exhibit A, which ranks the recommendations in order of priority. The first and most important observation is within the fixed income components of the portfolio, there is fundamental data not included regarding the credit quality of the portfolio and the duration of the portfolio. There is no information on whether the bonds are high yield, high risk, or safe high credit quality, and whether the bonds are long-term or short-term bonds. The second issue within the fixed income portfolio is if the credit quality and duration of the bonds are unknown or not tracked, then a test cannot be performed on whether the benchmark is appropriately set.

MR. YAGER explained the next issue which deserves attention is data in the report to confirm or refute whether the benchmarks are right. The very granular data is found in the 400-page quarterly report provided to staff. There is statistical data available for some of the managers, but not all of the managers. The benchmarks cannot be tested without this data.

MR. YAGER believes it is important for the Board to have the conversation regarding a manager's deviation from the benchmark and at what point that benchmark is no longer appropriate. Schedule D of the report identifies managers that either deviate from the size factor or from a style factor, and also those managers whose information was not included and unable to be tested. MR. YAGER stated the report is finished, but if staff can provide the missing data, Anodos is happy to make additional observations.

MR. YAGER noted performance gross of fees is clear in the reports. He recommended including a fee schedule, as accepted by the Global Institute on Performance standards (GIP), which clearly shows the performance of the managers relative to the benchmarks on a net of fee basis. This conforms with industry best practices and consistent with Board policies and procedures. It could be issued annually. MR. YAGER discussed the Board could then have the conversation regarding the issue of managers who have higher than average fees and lower than benchmark performance, and comparing manager fees to industry fees.

MR. TRIVETTE requested Anodos provide Exhibit A, which is the slide ranking the report observations in order of priority. MR. YAGER agreed to provide it to MR. BADER and staff.

MR. YAGER noted other observations in the report. He believes the consultant presentation has a disproportionate amount of economic data included, but does not provide any recommendations or context as to how the data is being used. The performance reports should note, "This is being reported gross of fees." The manager level performance has year time periods of one, three, five, six, 10, and since inception, which is not consistent with the industry standard, nor the fund level performance of one, three, five, and seven-year. Only eight of the managers have characteristics outlined in the portfolio, including weighted median market cap, price forecast, and price to book, that is important to observe for all of the managers. An outside party, at a later date, has no record this data was reviewed for any of the other managers.

MS. ERCHINGER asked if internal portfolios are ever compared against external portfolios to try to match the fees or costs. MR. YAGER commented he has never seen internal costs allocated to the internally managed fund, because in many cases, that overhead is not able to be precisely split. In all of the cases he has been involved, the concession is the externally managed portfolio is not free and had better outperform the internally managed portfolio, which is nearly free.

13. INVESTMENT ACTIONS

A. Municipal Taxable Bond Guidelines Resolution 2014-26

MR. BADER explained that many times there is not consistency between the classifications of some of the municipal securities, for instance one university might be titled a municipal bond and another university might be titled a corporate bond. This creates compliance issues, which are presented to the Audit Committee, that are not really compliance issues. He requested Resolution 2014-26 be approved, revising the investment guidelines for taxable income, municipal securities. The language added under Item D5. should read, "Securities issued or guaranteed by municipalities in the United States, including, but not limited to territories and commonwealths, such as securities issued by nonprofit institutions and special purpose entities, higher education institutions, healthcare organizations and project finance corporations, regardless of tax status." Item E2. has a typo and the word "rates" should read, "rated."

<u>MRS. HARBO moved to approve Resolution 2014-26.</u> <u>MR. TRIVETTE seconded the motion.</u>

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

B. MPS Strategy

MR. BADER advised that staff is recommending the MPS Strategy to the Board to fulfill three objectives, 1) to minimize the impact of volatility on the portfolio while achieving equity-like returns, 2) to cushion against large equity draw-downs, and 3) to benefit from possible increases in interest rates. MR. BADER presented a detailed PowerPoint illustrating how MPS worked over a long period of time and explained the benefits of its process. He showed the Black-Scholes formula, discussed volatility, and the impact interest rates have on call options. MR. BADER and staff recommend the Board hire QMA to manage a $200 million market participation strategy portfolio, subject to successful contract and fee negotiations.

<u>MRS. HARBO moved to hire QMA to manage a $200 million market participation strategy portfolio, subject to successful contract and fee negotiations.</u> <u>MR. TRIVETTE seconded the motion.</u>

MR. TRIVETTE advised that Callan has provided a review of this strategy, which is included in the Board packet.

MS. ERCHINGER inquired how the figure of $200 million was determined. MR. BADER stated that the number originally came from the CIO's authority to invest up to 1% of the portfolio in strategies like this with a manager in good standing, who has been reviewed by Callan. MR. BADER believes this will complement the portfolio's other defensive strategies and favors the small bite of $200 million.

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

C. KKR Lending Partners

MR. BADER advised staff visited KKR in their offices in San Francisco this summer to conduct due diligence. Callan completed their analysis in July and concluded KKR's asset management platform is robust and deeply resourced, and KKR's direct lending team is experienced and positioned to compete in the direct lending space. MR. BADER discussed the fees and is comfortable paying the bonus to KKR if earnings are over 8%. This is a defensive strategy and would be managed in the private equity class. MR. BADER and staff recommend the Board commit $100 million to the KKR Lending Partners strategy, subject to successful contract negotiations.

MR. BRICE moved ARMB commit up to $100 million to the KKR Lending Partners' strategy, subject to successful contract negotiations. MRS. HARBO seconded the motion.

CHAIR SCHUBERT asked if there is a constraint limitation for the $100 million number. MR. BADER noted there is no constraint and is comfortable increasing the invested amount. He noted this strategy is a replacement for fixed income, even though it will be in the private equity class. The private equity earnings assumption is S&P 500 plus 350 basis points.

MR. BRICE moved to amend the origination motion to read, "ARMB commit up to $200 million to the KKR Lending Partners' strategy, subject to successful contract negotiations." MRS. HARBO seconded the motion.

A roll call vote was taken on the amendment, and the motion to amend passed unanimously.

Dr. Jennings suggested the size of the investment should be calibrated to the size of the fund and it is appropriate to discuss vintage year diversification and build up the assets over multiple years.

MR. TRIVETTE asked if Callan provided a written report of their review of this strategy that could be provided to the Board. MR. ERLENDSON noted he has a copy of the favorable assessment with him today. MR. TRIVETTE asked if KKR was selected out of a pool of managers. MR. BADER informed the selection of KKR was not conducted through a search. After visiting KKR this summer and hearing their presentation, staff specifically requested Callan perform a review.

MR. BADER advised he will confer with MR. HANNA regarding sizing of the portfolio up to $200 million and confer with KKR to negotiate fees. This strategy is a fund which is open for a specific period of time and so the investment would go into the strategy all at once and KKR would call it down as they needed it.

A roll call vote was taken on the amended motion that reads: MR. BRICE moved ARMB commit up to $200 million to the KKR Lending Partners' strategy, subject to successful contract negotiations. MRS. HARBO seconded the motion.
The motion passed unanimously.

D. Information: SSgA Managed Volatility Strategy

MR. BADER advised the next action item is titled "Information," because staff believed this investment would have been made before the meeting. As the Board meeting drew closer, staff decided to postpone investment and present it to the Board for their comments and approval. MR. BADER explained the strategy managed by SSgA is called Managed Volatility and was presented at the October education conference in New York. MR. BADER informed he discussed this strategy with all of the trustees and eight out of nine were in favor of investment and one was undecided. MR. BADER and staff recommended the ARMB allocate $200 million in this strategy, which will be allocated $100 million in large cap and $100 million in small cap.

MRS. HARBO moved that ARMB commit $200 million in the SSgA Managed Volatility Strategy, allocating $100 million to large cap and $100 million to small cap. MR. TRIVETTE seconded the motion.

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

E. Apollo Aviation

MR. BADER reminded the Board that Apollo Aviation also gave a presentation at the October education conference in New York regarding their limited partnership SASOF Fund III. This is Apollo's third institutionally focused private equity fund focused on a commercial aircraft leasing and part-out investment strategy. The fund will invest in mid-life and mature aviation assets targeting a 15% net rate of return. Staff had the opportunity to tour a manufacturing facility where engines are refurbished and was impressed with the demonstration of Apollo's knowledge of the industry and competitive advantage. Callan is currently conducting a due diligence review of Apollo. The fund has a closing before the next Board meeting. MR. BADER and staff recommended ARMB approve an investment of up to $50 million in Apollo Aviation, subject to favorable review by Callan.

MS. RYAN moved that the ARMB invest up to $50 million in Apollo Aviation, subject to favorable review by Callan. MR. BRICE seconded the motion.

MS. ERCHINGER commented she understands the value of diversification and requested a discussion on when it could become a problem of having too many different investments for staff to diligently follow. MR. BADER explained the two primary managers in the private equity space are Abbott Capital and Pathway. Staff is trying to develop the capability internally to manage private equity to avoid some of the investment management fees. Most of the internally managed private investments have been in the $50 million range. MR.

BADER advised additional staff in private equity has been requested in the new budget that has yet to be reviewed by the Governor.

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

F. Callan Comments

MR. ERLENDSON believes the performance evaluation process was very constructive. It is Callan's responsibility to provide the ARMB with useful information from which informed decisions can be made regarding the current investment program and future management of the program. Callan agrees with some of the observations by Anodos, including working with staff to construct the reports to meet ARMB's needs and labeling the reports more explicitly to identify gross of fee and net of fee performance. Callan has a difference of opinion with some of the observations by Anodos, including the discussion about the statistical fit of the benchmarks to the managers. MR. ERLENDSON agrees it is important to review the mandate with the managers to ensure clear understanding and compliance.

MR. ERLENDSON addressed the issue of stating returns gross of fees and net of fees. He explained this is complex because the structure of managers with performance fees makes it more difficult. The complicated question of how to evaluate fees for an internally managed portfolio also needs to be addressed. Callan believes it is important to discuss with staff how best to present exhibits regarding performance and determine the priority of information.

DR. JENNINGS stated the auditor's presentation highlighted the question for him regarding what is needed for good governance. He noted Callan provides three sets of documentation, a 50-page presentation, a 200-page back-up book, and a 500-page staff book. DR. JENNINGS commented the 200-page back-up book does not accomplish much and suggested having a super concise report, three to five pages or so, to be used in the oversight role. DR. JENNINGS believes it would be useful to notate which of the auditor's observations were integrated into practice and which observations were not integrated into practice.

MR. BADER commented the Board did go through a process of reviewing and addressing recommendations from the previous audit. MS. ERCHINGER noted it may be a disservice to Callan by not documenting that the Board did review the recommendations previously set forth. She agrees with the suggestion to document whether or not the Board will integrate the audit's observed recommendations. MS. ERCHINGER appreciates the amount of economic data that is being provided for context and believes Callan is doing a great job. She agrees reporting results net of fees is important.

MR. PIHL also believes the practice of reporting results net of fees is extremely important and recommends the Board clearly asks for this.

MR. TRIVETTE agrees net of fee reporting is important and commented this audit makes him feel extremely comfortable with Callan and Townsend.

RECESS FOR THE DAY

CHAIR SCHUBERT recessed the meeting at 4:43 p.m.

Friday, December 5, 2014

CALL BACK TO ORDER

CHAIR SCHUBERT reconvened the meeting at 9:17 a.m.

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

14. ACTUARIAL DISCUSSION

A. Actuary Response to Questions from September Meeting

B. Final Experience Analysis

CHAIR SCHUBERT introduced DAVID SLISHINSKY of Buck Consultants, who provided a detailed presentation regarding the responses to additional questions raised by the Board after the experiential analysis results were given at the September meeting. MR. SLISHINSKY addressed the first issue of the impact of the actuarial assumption and methodology changes from HB 385 and SB 119 on the FY16 contribution rates. Page four of the presentation shows the development and the changes in these actuarial measures as of June 30th, 2015, for purposes of determining the FY16 contribution.

The projected unfunded liability in 2015 was about $7.2 billion for PERS. The funded ratio was 66.5%. The contribution rate was 40.28%, and the amount of additional state assistance was about $558 million. The two-year lag was eliminated and the two-year roll-forward valuation was used. The unfunded liability remains the same. The funded ratio remains the same. The contribution rate decreases to 36.25%, and the amount of additional state assistance decreases to about $459 million.

MR. SLISHINSKY explained SB119 contains the intent of the Legislature to eliminate smoothing in the actuarial value of assets. In order to incorporate the intent of that language, Buck recommended the portfolio assets be moved to fair market value as of June 30th, 2014, but from that point forward, moved back into the five-year smoothing methodology. The amount of market volatility, if not smoothed, would cause major changes and shifts in the present contribution rates and contribution amounts going forward. The fair market value immediately recognizes fully for the year any investment gains or losses, which as of June 30th, 2014, the actuarial value of assets increased slightly and the unfunded liability decreased by $57 million. The funded ratio increased slightly. The contribution rate decreased and the additional state assistance decreased to about $454 million.

The next change analyzed was the state contribution of a total of $3 billion for FY15, one billion for PERS and two billion for TRS. The unfunded liability is reduced to about $6.7 billion. The funded ratio grows to about 69%. The amortization payment amount decreases. The contribution rate decreased to 34.3%, and the amount of additional state assistance decreases to about $412 million.

MR. TRIVETTE asked if there is a breakdown of the calculations of the cost and savings by individual assumption changes. MR. SLISHINSKY advised that breakdown was included in Buck's presentation and in the report on the experience analysis measured, as of June 30th, 2013.

MS. ERCHINGER noted at the last meeting, only the presentation was provided because the full experience analysis was not yet finished. She requested a copy of the full experience analysis. MS. HALL stated the full experience analysis is provided in the Board packet and there are copies available.

MR. SLISHINSKY discussed the next item reviewed under HB385 was the legislative change in the amortization methodology from the weighted amortization, which used layers that represented the experience gains, losses, and any changes in the unfunded each year, to a fixed 25-year closed amortization period beginning June 30th, 2014. Based on the 2013 valuation, the weighted amortization period was about 17 years.

HB385 also changed the methodology from a level dollar amortization to a level percentage of pay. This change reduces the initial payments of the unfunded liability, but the payment amounts increase with the payroll increase assumption each year. The payroll increase assumption is 3.62%. At some point in time, it is expected the level percentage of pay amount will exceed the amount under the level dollar methodology. MR. SLISHINSKY explained those two changes in the amortization methodology do not change the unfunded ratio. The funded ratio does not change. The contribution rate is reduced significantly from 34.3% of pay down to 21.9% of pay. The state assistance contribution is reduced from $412 million down to $110 million.

MR. SLISHINSKY reviewed the change due to actual FY14 investment return, which was estimated to be 17.7% for purposes of developing the FY16 contribution rate. The fair value of assets is increased. The unfunded liability is reduced from approximately $6.7 billion down to $5.3 billion. MR. SLISHINSKY discussed the changes Buck made from their June presentation of the development of the FY16 contribution. One of the changes was incorporating the 17.7% rate of return for FY14. Another change was including a more accurate number of benefit payments for the year.

Then finally, the changes in assumptions from the experience study presented in September were also incorporated. These included an increase in the salary scale and increase in mortality, which were the primary drivers to the increase in actuarial accrued liability, thus increasing the unfunded liability by about a billion dollar. The unfunded liability then increased from $5.3 billion to almost $6.4 billion with the change in assumptions. The funded ratio reduced from 75% to 71.9%. The contribution rate increased from 18.43% of pay to 22.58% of pay. The state assistance amount increased almost $100 million, from $25 million up to about $125 million.

MR. PIHL inquired as to how much of unfunded liability increase is due to the change in salary assumption. MR. SLISHINSKY informed the wage growth assumption was not changed. The merit scales were changed to more accurately reflect what was occurring. The full impact of the pay increases is affecting the benefits, which impact an increase in the liabilities, as well as the normal cost.

MR. TRIVETTE requested MR. SLISHINSKY provide an outline of the calculation of the missed opportunity costs incurred regarding the unfunded liability. MR. TRIVETTE would like to include this information in the required annual report to the Legislature.

MR. SLISHINSKY expressed it is difficult for the lay person to think in terms of the time value of money over a number of years and the impact of adjusting from one point in time to another, using the 8% assumption as interest to accumulate past amounts forward and also use the assumption to discount future amounts backwards.

MS. ERCHINGER believes it is important to note the one-billion dollar appropriation into PERS reduced the state assistance by $42 million a year and the HB385 changes reduced the state assistance by $302 million a year. MS. ERCHINGER noted this is fortuitous for the state today because of the current price of oil. MR. SLISHINSKY added the breakdown is close to 50/50 between the impact of the extension of the amortization period back out to 25 years and the change from level dollar to level percentage of pay.

MR. SLISHINSKY continued the presentation reviewing next the impact of the changes on TRS. The biggest impact is TRS received $2 billion of the $3 billion appropriation. The 17.7% rate of return also affected the TRS numbers. The reduction in the unfunded liability on TRS is over $1.6 billion. The funded ratio increased from 57.8% to 73.8%. The unfunded liability decreased from $4.3 billion down to $2.4 billion. The funded ratio increased from 57.4% up to 77%. The contribution rates decreased significantly from 69.24% down to 24.48%. The state assistance contribution decreased from $479 million down to $130 million. MR. SLISHINSKY noted page six of the presentation shows the combined impact amount of PERS and TRS for the unfunded liability and the state assistance.

MR. SLISHINSKY discussed the next question that raised was regarding information on the development of the investment return assumption. The econometric model used to develop the long-term expected rates of return for each of the asset classes takes into consideration the current economic factors expected to impact short-term investment return and grade the long-term historical expectation. These are referred to as non-linear expectations. In order to replicate the level of the impact that short and long-term expectations have on the discount rate, the expected rates of return from the model were applied to the cash flows for the plans to determine the discounted value of the present value of all benefits expected to be paid. This was blended and normalized to come up with one rate of return of 8.9%. MR. SLISHINSKY continued with a detailed explanation with regard to the expected real rates of return for each asset classes combined with the shift in asset allocation and change in future benefit payments.

MR. BADER noted this methodology will be discussed more at the February meeting. He asked if the 8.9% assumption was built into the valuation. MR. SLISHINSKY stated there was no change to the discount rate of 8%. This is a confirmation to ensure the rate being used is equal or less than the expected long-term rate of return.

MS. ERCHINGER expressed her appreciation for the extra work on the presentation. She feels it is a good learning exercise and this provides her with assurance and confidence the asset allocation is appropriate.

MR. SLISHINSKY provided an update to the Board on the roll-forward procedure and the determination of the contribution rates shown on page eight of the presentation. This was the same process shown at the June meeting. MS. ERCHINGER requested further explanation on the interest during FY14 and FY15 on the accrued liability side. MR. SLISHINSKY explained the interest on the liability is adjusted for the time value of money and also adjusted from one point in time to another point in time. The difference between the interest on the liability and the interest or rate of return on the assets is the expected interest on the unfunded liability. MR. TRIVETTE asked if that number, the net interest on the unfunded, will be referenced in a report. MR. SLISHINSKY stated the net interest number will be included in the report.

MR. SLISHINSKY continued his presentation providing an extensive explanation of the expected normal cost calculations for full-time and part-time salaries. The total normal cost plus the amortization payment gives the total contribution amount expected to be paid in FY16 for PERS, both pension and healthcare, of about $651 million. The members are expected to contribute $100 million of that. The state and employer contribution is expected to be about $550 million. The contribution rate is determined by taking these amounts and dividing them by the expected payroll, which is calculated to be 22.58%. The DCR contribution is added and converted to a percentage of total payroll, the capped employer contribution is subtracted out, to come up with the additional state contribution of 5.19%, which is multiplied by total payroll for a total of $126.5 million. If the adjustment were made to this calculation for the part-time pay, all the numbers would be slightly higher.

MR. PIHL asked why the payroll numbers from the current calculation do not agree with the payroll numbers shown on page 14. MR. SLISHINSKY advised the payroll numbers on page 14 are based on the old assumptions, before the final valuation and experience analysis change in the salary scale. The numbers on the projection are based on the new assumptions.

CHAIR SCHUBERT inquired what other states are doing in terms of amortizing these payments, particularly those states with very tight budgets. MR. SLISHINSKY gave examples of changes in methodology. California, for instance, changed the way they determine their actuarial value of assets by extending their smoothing. Other states have increased employee contributions or increased both employee and employer contributions. Some states have increased the amortization period and some states have cut benefits. CHAIR SCHUBERT noted Alaska cannot cut benefits.

MR. SLISHINSKY reported Colorado PERA legislated a reduction in their cost of living adjustment from 3.5% down to 2% per year. The retirees sued, and the case went to the Supreme Court, who ruled the state contribution did not pertain to the COLA adjustment and could be reduced. South Dakota had a similar reduction in COLA and their Supreme Court ruled the state has to provide a COLA, but can determine the amount. Minnesota had a similar argument and ruling by the Supreme Court.

CHAIR SCHUBERT commented she is trying to determine whether any changes can be made if the state faces such a horrendous budget deficit that the payments are unable to be made. MR. SLISHINSKY commented there are many systems struggling with the same issue, especially looking back at what has happened through the financial crisis and its impacts on funding. South Dakota has a provision in their statute that if certain actuarial triggers are met, the state has to either increase contributions or decrease benefits.

MRS. HARBO asked if it is true that most systems are funded with investment earnings and employee contributions. MR. SLISHINSKY believes most systems are funded 72% from investment earnings, 9% from employees, and 19% from employers.

CHAIR SCHUBERT recessed the meeting from 10:41 a.m. to 10:51 a.m.

MR. SLISHINSKY explained the changes to the TRS calculations from the June presentation. He then reviewed the 30-year projections in detail for both PERS and TRS using the level percentage of pay and the level dollar methodologies.

MR. PIHL requested further explanation of the discrepancies between the payroll numbers for PERS and TRS summarized on page 52 of the presentation and the actual payroll numbers from DRB in the report. For PERS, this amount was $150 million more than what was actual in 2014. MR. SLISHINSKY explained by using the annualized part-time pay for PERS increases the projected 2015 payrolls by about $95 million, which after being adjusted, there would still be some difference, but it would not be grossly overstated. MR. PIHL asked why payroll is not adjusted to actual numbers each year. MR. SLISHINSKY noted he has suggested adjusting the payroll to actual numbers each year going forward.

MR. PIHL asked why the adopted payroll growth assumption of 3.62% is not shown as the growth per year in the illustrated payroll. MR. SLISHINSKY explained the percentage is different because of the dynamic nature of the open group projection and the fact new entrants are being included. There is also a change in the assumption for increasing active membership.

MR. PIHL recommended using one payroll growth assumption for benefit determination calculations and the cost of the system, and another payroll growth assumption for the actual payroll projections for contributions. MR. PIHL believes this presentation indicates the need for more opportunity for the ARMB to discuss with the actuary and have some input on what the projections are based on. MR. SLISHINSKY recommended diving deeply into some of these issues at the committee level and then presenting the results to the full Board on more of a summary basis. CHAIR SCHUBERT suggested holding a work session on these issues.

MS. ERCHINGER requested having an opportunity between the actuary's report and the review of the actuary, for the Board to engage in a dialog around the assumptions being used and make changes, if necessary. The opportunity would then be provided for the actuary to perform any recalculations for a final review.

MR. TRIVETTE asked if the actual Buck report dated November 2014 has been sent to GRS, since their report given in September was based on the PowerPoint presentation. He asked if a request has been made to GRS to provide input back to the Board regarding the full report. MR. BADER informed Buck's report has been provided to GRS, but did not receive it in advance of the meeting in time to do a review. MR. TRIVETTE expressed concern that the spirit of the statute is not really being followed, in which GRS is to review Buck's report before the Board has a chance to review the report.

MR. BADER stated he takes some responsibility because he felt it was important for the Board to have a role in setting the state contribution rate. If the Board had not acted, the rate would have been set without the Board's input for purposes of building the budget. MR. BADER explained there was a time constraint and everybody rushed. This was certainly not a normal year and Buck is not at fault. MR. TRIVETTE noted his intent was not to fault anyone, but only to get clarification.

MR. SLISHINSKY recommended in the future, Buck could prepare the report in draft form before the Board meeting and provide that to GRS and then present the report. He noted there was duplicative work involved in preparing the presentation and then the final report. It would be more efficient for Buck to prepare only one report and present that to the Board for review page-by-page.

JOHN BOUCHER, Office of Management & Budget, commented he sensed the uneasiness and haste around the rushed process during the September meeting and agreed this was not the ideal situation. He encouraged the Board to discuss the new reality and processes required to determine the contribution rates. The Board's meeting cycle may have to be reexamined in order to meet these new deadlines, as well as reexamine the time it takes for Buck and GRS to complete their work and for Retirement and Benefits to compile their information.

MR. SLISHINSKY continued his presentation detailing the graphs of the results of the 30-year projections for both PERS and TRS on both level percent of pay and level dollar methodologies.

MR. TRIVETTE expressed his appreciation to MR. SLISHINSKY and stated he has reviewed part of the full report and has no concerns. He has technical questions, which he believes can be addressed in a work session or a committee level meeting. At the work session, MR. TRIVETTE would also like to discuss employee growth. He understands the timing of the report this year was not typical and is in no way saying anybody did anything wrong. MR. TRIVETTE stated the fact the report has been sent to GRS probably complies with the statute and he would like to hear back from them when the time comes.

MR. BRICE stated it would be wonderful to have the conversation with GRS in Juneau during session, so legislators and legislative staff can listen and get some background information.

MS. ERCHINGER expressed her appreciation to MR. SLISHINSKY for all of his work on these detailed schedules. She noted this level of transparency has helped her put all of the various changes into context.

UNFINISHED BUSINESS

1. Calendar

MS. HALL noted the 2015 calendar is included in the packet and there are no changes.

2. Disclosure Report

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

3. Legal Report

MR. GOERING had nothing to report.

ACTION ITEMS - NEW BUSINESS

MR. BADER noted the action items have been addressed during the meeting. The only action item for the Department of Revenue is the liquidity analysis, which will be completed by MR. BADER and staff. MR. BADER informed if the Board has an expectation the Department of Revenue will pursue additional information from the actuary, the Board should provide a specific list of those requests and the authority to do so.

MS. ERCHINGER believes the Legislative Committee has decided to craft a list of specific requests, provide that to CHAIR SCHUBERT, who would formally submit a letter to MR. BADER and to the Department of Administration clearly identifying the requests from the Board.

OTHER MATTERS TO PROPERLY COME BEFORE THE BOARD

None

PUBLIC/MEMBER COMMENTS

None

INVESTMENT ADVISORY COUNCIL COMMENTS

None from IAC.

CHAIR SCHUBERT asked if Callan had any comments. MR. ERLENDSON invited trustees and staff to the 35th annual Callan conference that begins of Monday, January 26th, at the Palace Hotel in San Francisco. He informed the panels will include, ERSKINE BOWLES and ALAN SIMPSON, GARY LOCKE, and FELIPE COUSTEAU. Registration is on the Callan website at www.callan.com.

TRUSTEE COMMENTS

MR. TRIVETTE commented one of the reasons the Legislative Committee was designed is to have enhanced communication and interaction with the Legislature to fulfill the requirement that by the first day of each regular legislative session, report to the Governor, Legislature, et cetera, on the findings, conditions, systems, and other statistical data necessary for a proper understanding of the financial status of the system. MR. TRIVETTE believes some of the information discussed at the committee meeting on Wednesday and at the meeting today needs to be properly reported. The work for the Legislative Committee is to gather that material between now and the finish of the committee meeting in January. MR. TRIVETTE expressed his appreciation to all the trustees and to staff for the tremendous job that is being done. He thanked the consultants, as well, and wished everybody a great holiday.

CHAIR SCHUBERT wished everyone a Merry Christmas and Happy New Year.

FUTURE AGENDA ITEMS

None

ADJOURNMENT

There being no objection and no further business to come before the Board, the meeting was adjourned at 11:37 a.m. on December 5, 2014, on a motion made by MRS. 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 December 31, 2014	ACTION:	
DATE:	February 12, 2015	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 December 31, 2014.

MEMBERSHIP STATISTICS AS OF SEPTEMBER 30, 2014

	PERS						TRS					JRS	NG	SBS	DCP
	DB				DC	SYSTEM	DB			DC	SYSTEM				
	Tier I	Tier II	Tier III	Total	Tier IV	TOTAL	Tier I	Tier II	Total	Tier III	TOTAL				
Active Members	2,608	5,296	11,366	19,270	16,545	35,815	876	5,179	6,055	4,206	10,261	76	n/a	22,806	6,488
Terminated Members	2,122	5,025	11,300	18,447	7,876	26,323	437	2,607	3,044	1,777	4,821	3	n/a	20,325	4,083
Retirees & Beneficiaries	23,446	5,772	2,049	31,267	9	31,276	10,569	1,508	12,077	-	12,077	108	650	n/a	n/a
Managed Accounts	n/a	n/a	n/a	n/a	6,285	6,285	n/a	n/a	n/a	1,700	1,700	n/a	n/a	1,040	1,046
Retirements - 1st QTR FY15	198	158	102	458	n/a	458	192	191	383	n/a	383	-	26	n/a	n/a
Full Disbursements - 1st QTR FY15	31	35	128	194	461	655	15	30	45	117	162	-	n/a	641	154
Partial Disbursements - 1st QTR FY15	n/a	n/a	n/a	n/a	38	38	n/a	n/a	n/a	13	13	n/a	n/a	546	447

MEMBERSHIP STATISTICS AS OF DECEMBER 31, 2014

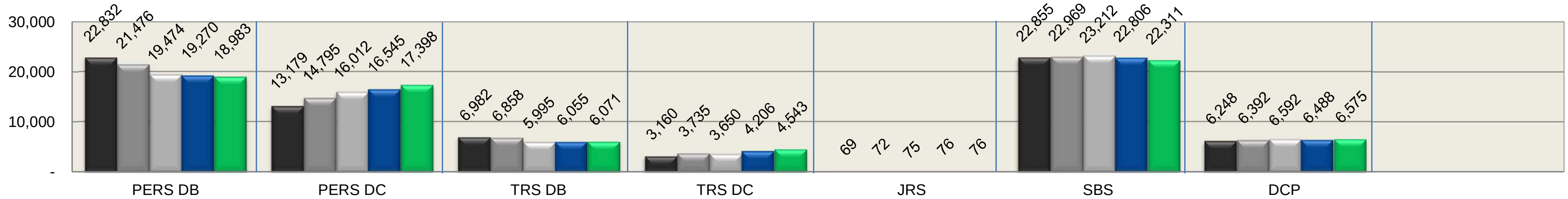
	PERS						TRS					JRS	NG	SBS	DCP
	DB				DC		DB			DC					
	Tier I	Tier II	Tier III	Total	Tier IV	TOTAL	Tier I	Tier II	Total	Tier III	TOTAL				
Active Members	2,523	5,173	11,287	18,983	17,398	36,381	880	5,191	6,071	4,543	10,614	76	n/a	22,311	6,575
Terminated Members	2,070	4,995	11,199	18,264	7,930	26,194	424	2,554	2,978	1,711	4,689	3	n/a	21,284	4,177
Retirees & Beneficiaries	23,437	5,880	2,124	31,441	9	31,450	10,541	1,523	12,064	-	12,064	109	656	n/a	n/a
Managed Accounts	n/a	n/a	n/a		6,195	6,195	n/a	n/a		1,679	1,679	n/a	n/a	1,051	1,084
Retirements - 2nd QTR FY15	128	127	80	335	n/a	335	10	21	31	n/a	31	-	34	n/a	n/a
Full Disbursements - 2nd QTR FY15	25	32	155	212	378	590	11	34	45	52	97	-	n/a	553	112
Partial Disbursements - 2nd QTR FY15	n/a	n/a	n/a	n/a	23	23	n/a	n/a	n/a	10	10	n/a	n/a	577	473

Alaska Division of Retirement and Benefits

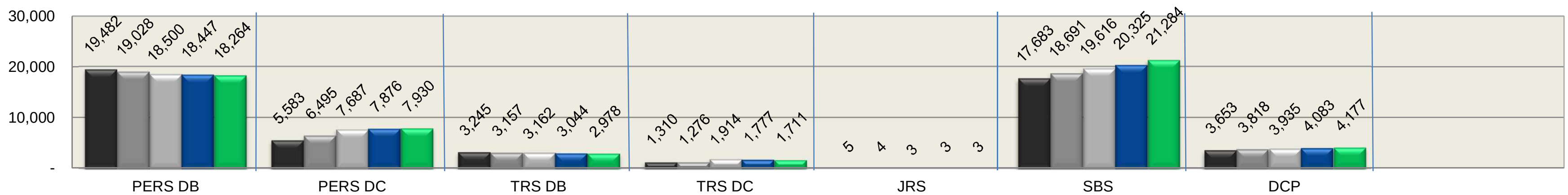
FY 2015 QUARTERLY REPORT OF MEMBERSHIP STATISTICS

Annual & Quarterly Trends as of December 31, 2014

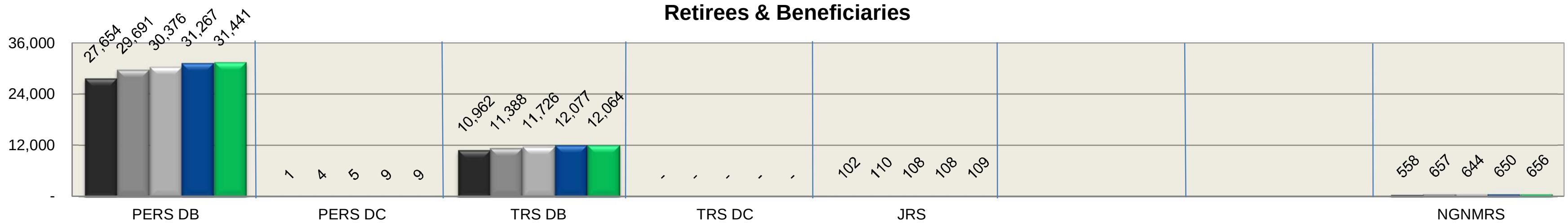
Active Members



Terminated Members

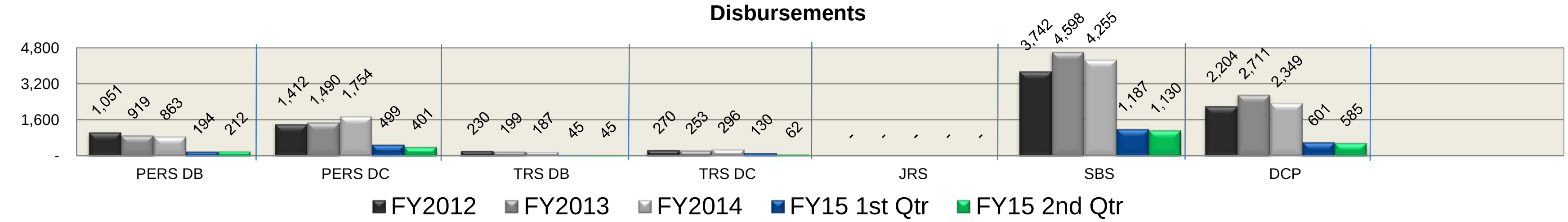


Retirees & Beneficiaries



Retirements

Disbursements



LEGEND

Active Members - All active members at the time of the data pull,
except SBS & DCP, which are counts of contributors during the final quarter of each period.

Terminated Members - All members who have terminated without refunding their account,
except SBS & DCP, which are counts of members with balances at the end of the period less active members.

Retirees & Beneficiaries - All members who have retired from the plans, including beneficiaries eligible for benefits.

Managed Accounts - Individuals who have elected to participate in the managed accounts option with Great West.

Retirements - The number of retirement applications processed.

Full Disbursements - All types of disbursements that leave the member balance at zero.

Partial Disbursements - All types of disbursements that leave the member balance above zero. If more than one partial disbursement is completed during the quarter for a member, they are counted only once for statistical purposes.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Invoices & Summary of Monthly Billings - Buck Consultants, A Xerox Company	ACTION:	
DATE:	February 12, 2015	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 monthly invoices to the Division for Fiscal Year 2014 for the months of October, November, and December 2014.

Attached are the summary totals for the six months ended December 31, 2014.

Buck Consultants
Billing Summary
For the Three Months Ended September 30, 2014

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations	$ 32,079	24,928	7,369	2,737	139	-	-	-	-	$ 67,252
ARMB Presentations	8,894	8,093	-	-	-	-	-	-	-	16,987
Audit Request	501	171	2	-	-	34	297	-	-	1,005
CAFR Information	1,419	1,419	-	-	-	-	-	-	-	2,838
Preparation of FY 15 and FY 16 rate allocations for PERS and TRS under new actuarial methodology required under HB 385	5,279	4,140	-	-	-	-	-	-	-	9,419
Actuarial study to determine the actuarial impact of the change in assumptions by decrement proposed by the experience analysis	9,584	7,622	4,336	2,892	-	-	-	-	-	24,434
Preparation of projections over 30 years of the state assistance contributions to PERS and TRS under funding method changes required under HB 385 and SB 119 and new assumptions based on experience analysis	17,604	13,144	-	-	-	-	-	-	-	30,748
30-year projections of actuarial funding updated for new assumptions	2,520	2,234	-	-	-	-	-	-	-	4,754
Research, review, and discussions regarding the FY15 state "on-behalf-of" contribution rates considering excess contributions under SB 119 and level percent of payroll amortization methodology	5,426	4,518	-	-	-	-	-	-	-	9,944
Prepare of summary of the actuarial impact of actuarial assumption and methodology changes on the FY 16 actuarial measures	2,383	2,383	-	-	-	-	-	-	-	4,766
Letter documenting the impact on FY15 contribution rates for the change in the amortization methodology to leave percent of pay under HB 385 and that these rates were met with $3 billion appropriated under SB 119	3,952	3,377	-	-	-	-	-	-	-	7,329
Calculation of FY 16 contribution rates using the roll-forward valuation method, the change in the amortization methodology to level percent of pay under HB 385, $3 billion appropriated under SB 119 in FY 15 and 17.7% FY 14 rate of return, and adoption of new assumptions	6,137	5,302	-	-	-	-	-	-	-	11,439
Development of calculator to determine the cost to PERS P/F members to recognize military service for use in eligibility service for healthcare benefits	4,169	-	-	-	-	-	-	-	-	4,169
Work in process for the Healthcare Design Study for DCR, including 30-year projections of annual contribution rates and funding status	4,036	4,036	-	-	-	-	-	-	-	8,072
Prepare of summary of investment rate of return assumptions under the building block approach	1,639	1,639	1,639	-	-	-	-	-	-	4,917
Prepare of summary on GEMS, the model Buck uses for forecasting investment rates of returns	168	168	168	-	-	-	-	-	-	503
Information on Cash Balance Plans	252	252	-	-	-	-	-	-	-	503
Projection of actuarial cost under the full DCR Tier	2,476	1,867	-	-	-	-	-	-	-	4,343
Misc emails and phone calls	4,283	3,328	525	237	5	1	10	-	-	8,389
TOTAL	$ 112,801	88,620	14,039	5,866	144	35	307	-	-	$ 221,811

Buck Consultants
Billing Summary
For the Three Months Ended December 31, 2014

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations	$ 129,425	74,671	24,628	3,062	1,411	-	1,323	-	-	$ 234,520
ARMB Presentations	3,316	3,315	-	-	-	-	-	-	-	6,631
CAFR Information	4,606	4,370	-	-	-	-	-	-	-	8,976
Completion of GASB 67 Plan Accounting Reports for the fiscal year ending June 30, 2014 as required by KPMG, submitted November 24th	7,531	6,809	6,444	3,378	-	-	-	-	-	24,162
30-year projections of actuarial funding updated for actual FY16 budgeted additional state assistance contributions	771	770	-	-	-	-	-	-	-	1,541
Preparation of projections over 30 years of the state assistance contributions to PERS and TRS under funding method changes required under HB 385 and SB 119 and new assumptions based on experience analysis	2,325	2,325	-	-	-	-	-	-	-	4,650
Prepare and revisions to summary of the actuarial impact of actuarial assumption and methodology changes on the FY 16 actuarial measures	1,733	1,732	-	-	-	-	-	-	-	3,465
Consulting, research, and analysis for the implementation of new GASB accounting	881	880	-	-	-	-	-	-	-	1,761
Consulting on Same Sex Benefits	503	503	-	-	-	-	-	-	-	1,006
Research and discussions regarding the Total FY 15 salaries used to determine contribution rates and the impact Part-time PERS members have on that calculation	4,962	-	-	-	-	-	-	-	-	4,962
Research and discussions regarding the summary of changes developed by the OMB for the Governor's office	1,503	1,503	-	-	-	-	-	-	-	3,006
Research and discussions regarding the purposed PERS termination cost for the City of Fairbanks if the Chief of Police position is eliminated from participation in PERS	1,761	-	-	-	-	-	-	-	-	1,761
Research and discussions regarding the funding status of the PERS Voluntary Savings Plan	2,251	-	-	-	-	-	-	-	-	2,251
Misc emails and phone calls	5,838	3,497	1,097	224	53	-	50	-	-	10,760
TOTAL	$ 167,406	100,375	32,169	6,664	1,464	-	1,373	-	-	$ 309,452

Buck Consultants
Billing Summary
Summary through the Six Months Ended December 31, 2014

	PERS	TRS	JRS	NGNMRS	EPORS	AHF	RHF	SBS	DCP	TOTAL
Actuarial Valuations	$ 161,504	99,599	31,997	5,799	1,550	-	1,323	-	-	$ 301,772
ARMB Presentations	12,210	11,408	-	-	-	-	-	-	-	23,618
Audit Request	501	171	2	-	-	34	297	-	-	1,005
CAFR Information	6,025	5,789	-	-	-	-	-	-	-	11,814
Preparation of FY 15 and FY 16 rate allocations for PERS and TRS under new actuarial methodology required under HB 385	5,279	4,140	-	-	-	-	-	-	-	9,419
Actuarial study to determine the actuarial impact of the change in assumptions by decrement proposed by the experience analysis	9,584	7,622	4,336	2,892	-	-	-	-	-	24,434
Preparation of projections over 30 years of the state assistance contributions to PERS and TRS under funding method changes required under HB 385 and SB 119 and new assumptions based on experience analysis	19,929	15,469	-	-	-	-	-	-	-	35,398
30-year projections of actuarial funding updated for new assumptions	2,520	2,234	-	-	-	-	-	-	-	4,754
Research, review, and discussions regarding the FY15 state "on-behalf-of" contribution rates considering excess contributions under SB 119 and level percent of payroll amortization methodology	5,426	4,518	-	-	-	-	-	-	-	9,944
Prepare and revisions to summary of the actuarial impact of actuarial assumption and methodology changes on the FY 16 actuarial measures	4,116	4,115	-	-	-	-	-	-	-	8,231
Letter documenting the impact on FY15 contribution rates for the change in the amortization methodology to leave percent of pay under HB 385 and that these rates were met with $3 billion appropriated under SB 119	3,952	3,377	-	-	-	-	-	-	-	7,329
Calculation of FY 16 contribution rates using the roll-forward valuation method, the change in the amortization methodology to level percent of pay under HB 385, $3 billion appropriated under SB 119 in FY 15 and 17.7% FY 14 rate of return, and adoption of new assumptions	6,137	5,302	-	-	-	-	-	-	-	11,439
Development of calculator to determine the cost to PERS P/F members to recognize military service for use in eligibility service for healthcare benefits	4,169	-	-	-	-	-	-	-	-	4,169
Work in process for the Healthcare Design Study for DCR, including 30-year projections of annual contribution rates and funding status	4,036	4,036	-	-	-	-	-	-	-	8,072
Prepare of summary of investment rate of return assumptions under the building block approach	1,639	1,639	1,639	-	-	-	-	-	-	4,917
Prepare of summary on GEMS, the model Buck uses for forecasting investment rates of returns	168	168	168	-	-	-	-	-	-	503
Information on Cash Balance Plans	252	252	-	-	-	-	-	-	-	503
Projection of actuarial cost under the full DCR Tier	2,476	1,867	-	-	-	-	-	-	-	4,343
Completion of GASB 67 Plan Accounting Reports for the fiscal year ending June 30, 2014 as required by KPMG, submitted November 24th	7,531	6,809	6,444	3,378	-	-	-	-	-	24,162
30-year projections of actuarial funding updated for actual FY16 budgeted additional state assistance contributions	771	770	-	-	-	-	-	-	-	1,541
Consulting, research, and analysis for the implementation of new GASB accounting	881	880	-	-	-	-	-	-	-	1,761
Consulting on Same Sex Benefits	503	503	-	-	-	-	-	-	-	1,006
Research and discussions regarding the Total FY 15 salaries used to determine contribution rates and the impact Part-time PERS members have on that calculation	4,962	-	-	-	-	-	-	-	-	4,962
Research and discussions regarding the summary of changes developed by the OMB for the Governor's office	1,503	1,503	-	-	-	-	-	-	-	3,006
Research and discussions regarding the purposed PERS termination cost for the City of Fairbanks if the Chief of Police position is eliminated from participation in PERS	1,761	-	-	-	-	-	-	-	-	1,761
Research and discussions regarding the funding status of the PERS Voluntary Savings Plan	2,251	-	-	-	-	-	-	-	-	2,251
Misc emails and phone calls	10,121	6,825	1,623	461	58	1	60	-	-	19,149
TOTAL	$ 280,207	188,995	46,208	12,530	1,608	35	1,680	-	-	$ 531,263

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Fiscal Year 2016 Health Reimbursement Arrangement amounts for employers	ACTION:	
DATE:	February 12, 2015	INFORMATION:	X

BACKGROUND:

AS 39.30.350 "Employer Contribution Fund" states that Teachers' and Public Employees' Retiree health reimbursement arrangement plan trust fund is an employer contribution fund. Employee contributions are not permitted.

AS 39.30.360 "Management and Investment of the Fund" states that "The Alaska Retirement Management Board is the fiduciary of the fund and has the same powers and duties under this section in regard to the fund as are provided under AS 37.10.220."

AS 39.30.370 "Contributions by Employers" states that "For each member of the plan, an employer shall contribute to the teachers' and public employees' retiree health reimbursement arrangement plan trust fund an amount equal to three percent of the average annual compensation of all employees of all employers in the TRS and PERS." The Division of Retirement & Benefits calculates the HRA amount annually and reports this to all affected employers for proper payroll reporting each fiscal year.

STATUS:

Attached is the memorandum from the Division of Retirement & Benefits for Fiscal Year 2016's Health Reimbursement Arrangement employer contribution per pay period. The amounts have been reported to employers.

Also attached is a summary spreadsheet for fiscal years 2008 - 2016.

MEMORANDUM

STATE OF ALASKA
DEPARTMENT OF ADMINISTRATION
Division of Retirement and Benefits

To: Kevin Worley
Chief Financial Officer

Date: January 26, 2015

From: Christina Maiquis CTM
Accounting Supervisor

Subject: FY 2016 HRA Employer Contribution Amounts

Alaska Statute 39.30.370 "Contributions by Employers" relates to the employer contributions required to fund the Health Reimbursement Arrangement (HRA) Plan for Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) Defined Contribution Retirement (DCR) Plan members. The statute states in part:

> *For each member of the plan, an employer shall contribute to the teachers' (TRS) and public employees' (PERS) retiree health reimbursement arrangement plan trust fund an amount equal to three percent of the average annual compensation of all employees of all employers in the teachers' retirement system and public employees' retirement system. The administrator shall maintain a record for each member to account for employer contributions on behalf of that member.*

In order to compute the dollar amount required to fund the PERS and TRS HRA Plan, a rate of 3.00% is applied to the average annual compensation of all employees of all employers in PERS and TRS. Contributions to a DCR members HRA account are required each pay period in which the employee is enrolled in the Defined Contribution Retirement (DCR) Plan, regardless of the compensation paid during the calendar year. By definition, the HRA employer contribution is a dollar amount.

The Fiscal Year 2016 HRA employer contribution amounts are shown below:

FY 2016 HRA Amounts

Annual	Quarterly	Monthly	Semi-monthly	Bi-weekly	Weekly	Hourly
$2,004.52	$501.13	$167.04	$83.52	$77.10	$38.55	$1.28

The attached document shows a comparative of HRA rates since Fiscal Year 2008.

Approved:

Kevin Worley, Chief Financial Officer

January 26, 2015
Date

Attachment

G:\DRB\Accounting\HRA\HRA Contribution Amounts\FY 2016\2016 HRA Contribution Approval Memo.doc

Division of Retirement & Benefits
Health Reimbursement Arrangement (HRA)
Employer contribution amounts by fiscal year

Fiscal Year	Annual	Quarterly	Monthly	Semi-monthly	Bi-weekly	Weekly	Hourly
2008	1,531.27	382.82	127.61	63.80	58.89	-	0.98
2009	1,616.81	404.20	134.73	67.37	62.18	-	1.04
2010	1,699.71	424.93	141.64	70.82	65.37	-	1.09
2011	1,720.70	430.17	143.39	71.70	66.18	-	1.10
2012	1,778.09	444.52	148.17	74.09	68.39	-	1.14
2013	1,848.43	462.11	154.04	77.02	71.09	-	1.18
2014	1,896.60	474.15	158.05	79.03	72.95	-	1.22
2015	1,960.53	490.13	163.38	81.69	75.41	37.70	1.26
2016	2,044.52	501.13	167.04	83.52	77.10	38.55	1.28

NOTE: For fiscal year 2007, HRA amounts were computed by employer rather than the HRA as a plan. Beginning fiscal year 2008, HRA amounts were computed and applied uniformly to all members and are reflected above.

CHIEF INVESTMENT OFFICER REPORT

1. Rebalanced portfolios on Nov.13, 2014, Nov 20, 2014, and December 16, 2014.
2. Transferred $3,496,259 from cash account to Blue Glacier Fund.
3. Transferred $1,248,639 from cash account to Blue Glacier Fund.
4. Transfer of $75 million to Baillie Gifford and $75 million to Allianz Global Investors from Cash.
5. Transferred $50 million to Lazard Infrastructure from cash.
6. Transferred $5,743,739 from cash to Blue Glacier Fund.
7. Transferred $15,982,580 from cash to Blue Glacier Fund.
8. Authorized $16 million to Large Cap Overlay Separate Account.
9. Authorized $11 million to Small Cap Overlay Separate Account.
10. Informed Chair of intent to invest $50 million in NGP Natural Resources XI.
11. Transferred $1,698,213 from cash account to Blue Glacier Fund.
12. Transferred $200 million from cash account to Allianz Structured Alpha fund.
13. Transferred $100 million from cash account to SSgA Managed Volatility – Russell 2000.
14. Transferred $100 million cash and "in kind" to Russell 1000 Managed volatility strategy.
15. Increased LaSalle Investment Real Estate allocation $50 million (from Cornerstone).
16. Redeemed $5,275,000 from Blue Glacier Fund.
17. Informed Board Chair and Real Assets Committee Chair of intent to commit $50 million to Clarion Ventures 4 LP.
18. Everest Capital____________
19. Apollo Aviation___________
20. Other___________________

11/13/2014

Rebalancing Trades (Final)

	DC Medical		DC Health Reimburesement		DC OD&D		
	PERS	TRS	PERS	TRS	PERS	TRS	P&F
	AYX2	AYX3	AYY2	AYY3	AY6G	AY6H	AY6I
Broad Domestic Equity							
Large Cap Pool (AYQK)	(357,958)	(133,156)	(1,790,637)	(545,135)	(121,991)	(33,060)	(62,786)
Small Cap Pool (AYQC)	(57,938)	(21,529)	(303,597)	(92,680)	(20,940)	(5,767)	(9,708)
Alternative Equity Strategies							
Advent Capital Convertible Bond (AY52)	(11,920)	(4,429)	(62,456)	(19,067)	(4,308)	(1,186)	(1,998)
Alternative Equity Strategies Pool (AYYK)	(39,478)	(14,692)	(193,755)	(58,918)	(13,130)	(3,533)	(7,048)
Global Equity Ex-US							
International Equity Pool (AYRC)	(287,494)	(106,442)	(1,459,339)	(443,797)	(99,944)	(27,156)	(48,651)
International Equity - Small Cap Pool (AYRK)	(18,402)	(6,838)	(96,427)	(29,437)	(6,651)	(1,832)	(3,083)
Emerging Markets Pool (AYSC)	(42,024)	(15,615)	(220,207)	(67,223)	(15,188)	(4,183)	(7,042)
Frontier Market Pool (AYMC)	(5,993)	(2,227)	(31,403)	(9,587)	(2,166)	(596)	(1,004)
Private Equity							
Private Equity Pool (AYSK)	(109,780)	(40,795)	(575,212)	(175,600)	(39,673)	(10,925)	(18,395)
Real Assets							
Real Estate Pool (AYVK)	(84,083)	(31,284)	(440,016)	(134,362)	(30,339)	(8,350)	(14,095)
JP Morgan Real Estate (AY7A)							
REIT Holdings (AYPC)	(20,700)	(7,692)	(108,460)	(33,111)	(7,481)	(2,060)	(3,469)
Farmland Pool (AYTK)	(44,398)	(16,498)	(232,630)	(71,017)	(16,045)	(4,418)	(7,439)
Timber Pool (AYUK)	(22,299)	(8,286)	(116,839)	(35,669)	(8,058)	(2,219)	(3,737)
Energy Pool (AYVC)	(6,239)	(2,318)	(32,691)	(9,979)	(2,255)	(621)	(1,046)
TIPS Internally Managed (AY6N)	(5,212)	(1,937)	(27,311)	(8,338)	(1,884)	(519)	(874)
MLP Pool (AYWK)	(29,277)	(10,880)	(153,404)	(46,831)	(10,581)	(2,914)	(4,906)
Private Infrastructure (AYZK)	(6,199)	(2,304)	(32,485)	(9,917)	(2,241)	(617)	(1,039)
Public Infrastructure (AYMK)	(9,867)	(3,667)	(51,700)	(15,783)	(3,566)	(982)	(1,653)
Absolute Return							
Absolute Return Pool (AYTC)	(59,360)	(22,058)	(311,029)	(94,950)	(21,452)	(5,907)	(9,947)
Fixed Income							
Taxable Municipal Bond Pool (AYZC)	(13,995)	(5,200)	(73,335)	(22,387)	(5,058)	(1,393)	(2,345)
US Treasury Fixed Income Pool (AY1A)	(80,054)	(29,748)	(419,454)	(128,050)	(28,930)	(7,967)	(13,414)
Mondrian Inv. Partners Inc (AY63)	(31,553)	(11,756)	(145,724)	(44,138)	(9,702)	(2,549)	(5,934)
High Yield Pool (AYPK)	(37,789)	(14,042)	(198,001)	(60,446)	(13,656)	(3,760)	(6,332)
Lazard Emerging Income (AY5M)	(9,168)	(3,406)	(48,038)	(14,665)	(3,313)	(913)	(1,536)
Tactical Fixed Income Pool (AYIC)	(9,453)	(3,524)	(42,994)	(13,010)	(2,849)	(744)	(1,800)
Short-term Fixed Income							
State of AK Short Term Pool (AY70)	1,400,633	520,323	7,167,144	2,184,097	491,401	134,171	239,281

11/13/2014

Rebalancing Trades (Final)

	Pension				Health Care		
	PERS	TRS	JRS	Mil	PERS	TRS	JRS
	AY21	AY22	AY23	AY24	AYW2	AYW3	AYW4
Broad Domestic Equity							
Large Cap Pool (AYQK)	(7,325,368)	85,018,338	(1,544,947)	(338,499)	(73,814,736)	1,333,792	(283,857)
Small Cap Pool (AYQC)	(1,178,997)	14,892,900	(269,540)	(76,398)	(12,993,334)	187,192	(49,664)
Alternative Equity Strategies							
Advent Capital Convertible Bond (AY52)	(247,785)	3,054,910	(55,442)		(2,672,852)	36,750	(10,217)
Alternative Equity Strategies Pool (AYYK)	(820,172)	9,052,204	(165,108)		(7,857,405)	151,332	(30,297)
Global Equity Ex-US							
International Equity Pool (AYRC)	(5,811,993)	69,950,839	(1,269,168)	(367,427)	(60,810,458)	1,014,117	(233,087)
International Equity - Small Cap Pool (AYRK)	(374,357)	4,730,408	(85,611)	(24,599)	(4,126,889)	59,492	(15,774)
Emerging Markets Pool (AYSC)	(854,902)	10,802,625	(195,506)	(56,176)	(9,424,396)	135,860	(36,023)
Frontier Market Pool (AYMC)	(121,915)	1,540,525	(27,880)	(8,011)	(1,343,980)	19,374	(5,137)
Private Equity							
Private Equity Pool (AYSK)	(2,282,060)	28,135,322	(510,663)		(24,616,586)	338,460	(94,093)
Real Assets							
Real Estate Pool (AYVK)	2,754,069	17,052,006	(199,865)		(18,811,450)	19,678	(71,909)
JP Morgan Real Estate (AY7A)	(3,831,389)	3,996,870	(165,481)				
REIT Holdings (AYPC)	(430,298)	5,305,114	(96,289)		(4,641,631)	63,819	(17,742)
Farmland Pool (AYTK)	(922,918)	11,378,618	(206,525)		(9,955,557)	136,881	(38,054)
Timber Pool (AYUK)	(463,539)	5,714,928	(103,722)		(5,000,197)	68,749	(19,112)
Energy Pool (AYVC)	(129,692)	1,598,983	(29,017)		(1,399,013)	19,236	(5,348)
TIPS Internally Managed (AY6N)	(108,349)	1,335,829	(24,245)		(1,168,762)	16,069	(4,467)
MLP Pool (AYWK)	(608,605)	7,503,448	(136,190)		(6,565,031)	90,265	(25,094)
Private Infrastructure (AYZK)	(128,876)	1,588,899	(28,838)		(1,390,183)	19,114	(5,314)
Public Infrastructure (AYMK)	(205,112)	2,528,810	(45,899)		(2,212,544)	30,421	(8,458)
Absolute Return							
Absolute Return Pool (AYTC)	(1,233,954)	15,213,306	(276,125)		(13,310,657)	183,011	(50,878)
Fixed Income							
Taxable Municipal Bond Pool (AYZC)	(285,083)	3,596,987	(65,109)	(17,590)	(3,138,616)	45,121	(11,997)
US Treasury Fixed Income Pool (AY1A)	(1,668,808)	20,508,805	(372,381)	14,074	(17,950,694)	245,235	(68,614)
Mondrian Inv. Partners Inc (AY63)	(627,716)	6,537,953	(119,046)	(82,600)	(5,586,387)	150,900	(21,748)
High Yield Pool (AYPK)	(785,947)	9,684,104	(175,785)	1,250	(8,473,573)	116,366	(32,389)
Lazard Emerging Income (AY5M)	(186,739)	2,356,162	(42,649)	(11,522)	(2,055,911)	29,556	(7,858)
Tactical Fixed Income Pool (AYIC)	(195,127)	1,892,766	(34,723)	(3,450)	(1,623,076)	44,320	(6,336)
Short-term Fixed Income							
State of AK Short Term Pool (AY70)	28,075,632	(344,971,659)	6,245,754	970,948	300,943,918	(4,555,110)	1,153,467

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

November 12, 2014

Mary Ellen MacDonald
Client Service Officer
Lafayette Corporate Center
2 Avenue de Lafayette
Boston, MA 02111

Dear Mary Ellen:

RE: Capital Contribution Blue Glacier Fund, L.P.

This letter is your authorization to transfer **$3,496,259.00** as early as possible on **Thursday, November 13, 2014** from account AY70 to account AY9F using the currently applicable absolute return ratios and then wire transfer the full amount as soon as possible using the following instructions:

Bank Name: The Bank of New York Mellon
ABA Number: 021-000-018
Account Name: Blue Glacier Fund, L.P. (Class B)
Account Number: 890-1180-254
Reference: Investor – Capital Contribution – November 12, 2014
Reference Details: Alaska Retirement Management Board on behalf of the State of Alaska Retirement and Benefits Plans Trust

This transfer is a new capital contribution under the subscription agreement dated October 22, 2004. Please provide the Fed Confirmation number for this transaction to Scott Markowitz of Bank of New York Mellon via e-mail at Scott.Markowitz@bnymellon.com.

Sincerely,

Gary M. Bader

Gary M. Bader
Chief Investment Officer

GMB

cc: Scott Jones, Comptroller
Bob Mitchell, Investment Officer
Zachary Hanna, Investment Officer
Scott Markowitz, Bank of New York Mellon
Travis Keith, Crestline Investors, Inc.

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

November 13, 2014

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

Dear Mary Ellen:

RE: Capital Contribution Blue Glacier Fund, L.P.

This letter is your authorization to transfer **$1,248,639.00** on **Tuesday, November 18, 2014** from account AY70 to account AY9F using the currently applicable absolute return ratios and then wire transfer the full amount as soon as possible using the following instructions:

Bank Name: The Bank of New York Mellon
ABA Number: 021-000-018
Account Name: Blue Glacier Fund, L.P. (Class B)
Account Number: 890-1180-254
Reference: Investor – Capital Contribution – November 18, 2014
Reference Details: Alaska Retirement Management Board on behalf of the State of Alaska Retirement and Benefits Plans Trust

This transfer is a new capital contribution under the subscription agreement dated October 22, 2004. Please provide the Fed Confirmation number for this transaction to Sarah Baulch of Bank of New York Mellon via e-mail at Sarah.Baulch@bnymellon.com.

Sincerely,

for Gary M. Bader
Chief Investment Officer

GMB

cc: Scott Jones, Comptroller
Bob Mitchell, Investment Officer
Zachary Hanna, Investment Officer
Sarah Baulch, Bank of New York Mellon
Travis Keith, Crestline Investors, Inc.

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: 907.465.4399
Fax: 907.465.4397

November 25, 2014

Mary Ellen MacDonald
State Street Global Services
IIS Public Funds
1200 Crown Colony Drive, CC2
Quincy, MA 02169

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Wednesday, December 3, 2014. Please process the following cash transfer using the applicable sending pool ratio:

Short Term Pool (AY70)	<$150,000,000>
Baillie Gifford Overseas (AYLR)	$75,000,000
Allianz Global Investors (AYLP)	$75,000,000

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

Sincerely,

For Gary M. Bader
Chief Investment Officer

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

GMB/smh

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: 907.465.4399
Fax: 907.465.4397

November 28, 2014

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

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Tuesday, December 2, 2014. Please process the following cash transfer using the current AYMK Infrastructure Public Pool ratios:

Short Term Pool (AY70)	< $50,000,000 >
Lazard Infrastructure (AYRF)	$50,000,000

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

Sincerely,

For Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, ARMB Chair
Angela Rodell, Commissioner
Pamela Leary, Director
Scott Jones, State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Steve Sikes, State Investment Officer
Liam Dundon, NRS
Diane Murphy, NRS

GMB/pjh

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: 907.465.4399
Fax: 907.465.4397

November 28, 2014

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

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Tuesday, December 9, 2014. Please process the following cash transfer using the current AYMK Infrastructure Public Pool ratios:

Short Term Pool (AY70)	< $50,000,000 >
Brookfield Infrastructure (AYRE)	$50,000,000

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

Sincerely,

For Gary M. Bader
Chief Investment Officer

cc: Gail Schubert, ARMB Chair
Angela Rodell, Commissioner
Pamela Leary, Director
Scott Jones, State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Steve Sikes, State Investment Officer
Liam Dundon, NRS
Diane Murphy, NRS

GMB/pjh

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

December 2, 2014

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

Dear Mary Ellen:

RE: Capital Contribution Blue Glacier Fund, L.P. – Class B

This letter is your authorization to transfer **$5,743,739.00** on **Monday, December 8, 2014** from account AY70 to account AY9F using the currently applicable absolute return ratios and then wire transfer the full amount as soon as possible using the following instructions:

Bank Name: The Bank of New York Mellon
ABA Number: 021-000-018
Account Name: Blue Glacier Fund, L.P. (Class B)
Account Number: 890-1180-254
Reference: Investor – Capital Contribution – December 8, 2014
Reference Details: Alaska Retirement Management Board on behalf of the State of Alaska Retirement and Benefits Plans Trust

This transfer is a new capital contribution under the subscription agreement dated October 22, 2004. Please provide the Fed Confirmation number for this transaction to Sarah Baulch of Bank of New York Mellon via e-mail at Sarah.Baulch@bnymellon.com.

Sincerely,

For Gary M. Bader
Chief Investment Officer

GMB/vk

cc: Scott Jones, Comptroller
Bob Mitchell, Investment Officer
Zachary Hanna, Investment Officer
Sarah Baulch, Bank of New York Mellon
Travis Keith, Crestline Investors, Inc.

THE STATE of ALASKA
GOVERNOR BILL WALKER

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

December 8, 2014

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

Dear Mary Ellen: RE: Capital Contribution Blue Glacier Fund, L.P. – Class B

This letter is your authorization to transfer **$15,982,580.00** on **Wednesday, December 10, 2014** from account AY70 to account AY9F using the currently applicable absolute return ratios and then wire transfer the full amount as soon as possible using the following instructions:

Bank Name: The Bank of New York Mellon
ABA Number: 021-000-018
Account Name: Blue Glacier Fund, L.P. (Class B)
Account Number: 890-1180-254
Reference: Investor – Capital Contribution – December 10, 2014
Reference Details: Alaska Retirement Management Board on behalf of the State of Alaska Retirement and Benefits Plans Trust

This transfer is a new capital contribution under the subscription agreement dated October 22, 2004. Please provide the Fed Confirmation number for this transaction to Sarah Baulch of Bank of New York Mellon via e-mail at Sarah.Baulch@bnymellon.com.

Sincerely,

for Gary M. Bader
Chief Investment Officer

GMB/WA

cc: Scott Jones, Comptroller
Bob Mitchell, Investment Officer
Zachary Hanna, Investment Officer
Sarah Baulch, Bank of New York Mellon
Travis Keith, Crestline Investors, Inc.

LETTER OF DIRECTION

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

VIA FACSIMILE: 617-204-0088

Please accept this letter as authorization to execute the following instruction(s).

Letter of Direction Date	12/10/2014			
Client Account Name	State of Alaska Defined Benefit Plans			
Client Account Number	AY6B			
Fund Name and Code	Large Cap Overlay Separate Account			
Transaction Type	Change in Notional			
Transaction Amount(s)	Notional Value	$16,000,000	In-Kind:	
Trade Date	12/10/2014	Settlement Date (if required)		
Special Instructions	Please adjust notional value to $16 million			

We understand that we will contact our custodian/trustee to ensure that funds are properly received by SSgA or the appropriate custodian on settlement and/or trade date. This letter should be faxed to the SSgA Boston office at 617-204-0088.

Sincerely yours,

Gary M. Bader
Authorized Signature

12/10/2014
Date

___Gary M. Bader____________________
Authorized Signator Name (Printed)

(907) 465-4399
Phone

cc: JP Morgan

LETTER OF DIRECTION

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

VIA FACSIMILE: 617-204-0088

Please accept this letter as authorization to execute the following instruction(s).

Letter of Direction Date	12/10/2014			
Client Account Name	State of Alaska Defined Benefit Plans			
Client Account Number	AY6A			
Fund Name and Code	Small Cap Overlay Separate Account			
Transaction Type	Change in Notional			
Transaction Amount(s)	Notional Value	$11,000,000	In-Kind:	
Trade Date	12/10/2014	Settlement Date (if required)		
Special Instructions	Please adjust notional value to $11 million			

We understand that we will contact our custodian/trustee to ensure that funds are properly received by SSgA or the appropriate custodian on settlement and/or trade date. This letter should be faxed to the SSgA Boston office at 617-204-0088.

Sincerely yours,

Gary M. Bader
Authorized Signature

12/10/2014
Date

___Gary M. Bader____________________
Authorized Signator Name (Printed)

(907) 465-4399
Phone

cc: JP Morgan

THE STATE of ALASKA
GOVERNOR BILL WALKER

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

Memo

To: Gail Schubert, Chair, Alaska Retirement Management Board

From: Gary M. Bader, Chief Investment Officer Gary

Date: December 12, 2014

Re: Summary Investment Memo and notice of intent to commit up to $50 million to a direct private equity partnership investment in NGP Natural Resources XI, L.P.

NGP Energy Capital Management (NGP, the firm) is a well-respected and established firm focused on investments in natural resources. The firm is currently raising NGP Natural Resources XI to continue their history of successful investments in oil and gas production. Staff has concluded that an investment in the fund is an opportunity to increase expected returns and to add diversification to both the private equity portfolio and the overall pension fund. In accordance with authority delegated to the CIO, I intend to commit up to $50 million to NGP Natural Resources XI, L.P. effective December 18, 2014.

Compelling aspects of NGP XI:

Highly experienced team with a strong investment franchise	▪ For the past 25 years, NGP has invested $10.6 billion in 187 North American natural resources development companies. ▪ NGP is one of the preeminent oil and gas investors with a history of successfully backing repeat winners. 49% of investments have been to repeat management teams. ▪ The firm has a team of 68 people, half investment professionals. The organization shares the economics broadly and is slowly transitioning to the younger generation.
Strong investment returns independent of oil and gas commodity prices	▪ Strong consistent returns – all 10 NGP funds have had double-digit net returns and most are first quartile and have significantly outperformed public benchmarks. ▪ Strong alignment of interests with management teams and limited partners. ▪ Risk management culture. NGP's focus is on oil and gas production and development and proven reserves – not exploration or land flipping. ▪ NGP has a low correlation to commodity prices. Baseline oil and gas production is generally hedged for 3 years.

THE STATE of ALASKA
GOVERNOR BILL WALKER

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

December 17, 2014

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

Dear Mary Ellen:

RE: Capital Contribution Blue Glacier Fund, L.P. – Class B

This letter is your authorization to transfer **$1,698,213.00** on **Wednesday, December 23, 2014** from account AY70 to account AY9F using the currently applicable absolute return ratios and then wire transfer the full amount as soon as possible using the following instructions:

Bank Name: The Bank of New York Mellon
ABA Number: 021-000-018
Account Name: Blue Glacier Fund, L.P. (Class B)
Account Number: 890-1180-254
Reference: Investor – Capital Contribution – December 23, 2014
Reference Details: Alaska Retirement Management Board on behalf of the State of Alaska Retirement and Benefits Plans Trust

This transfer is a new capital contribution under the subscription agreement dated October 22, 2004. Please provide the Fed Confirmation number for this transaction to Sarah Baulch of Bank of New York Mellon via e-mail at Sarah.Baulch@bnymellon.com.

Sincerely,

Gary M. Bader

Gary M. Bader
Chief Investment Officer

GMB

cc: Scott Jones, Comptroller
Bob Mitchell, Investment Officer
Zachary Hanna, Investment Officer
Sarah Baulch, Bank of New York Mellon
Travis Keith, Crestline Investors, Inc.

THE STATE of ALASKA
GOVERNOR BILL WALKER

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

December 22, 2014

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

Dear Ms. MacDonald:

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Monday, December 29, 2014. Please process the following cash transfer using the applicable sending pool ratios:

Short Term Pool (AY70)	< $200,000,000 >
Allianz Structured Alpha (AYLW)	$200,000,000

Furthermore please take this letter as your authorization to wire the following amount listed to the corresponding account per the wire instructions below:

Wire out on behalf of AYLW	
Wire out from AY70	$200,000,000

The wire instructions for Allianz Structured Alpha (AYLW) are as follows:

Bank:	J.P. Morgan Chase N.A.
SWIFT:	CHASUS33
ABA:	021000021
Account Number:	22622-6858
Account Name:	Structured Alpha 1000 Plus LLC
Ref:	Alaska Retirement Management Board

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

Sincerely,

Gary M. Bader
for Chief Investment Officer

THE STATE
of ALASKA
GOVERNOR BILL WALKER

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

December 22, 2014

Mary Ellen MacDonald
State Street Global Services
IIS Public Funds
1200 Crown Colony Drive, CC2
Quincy, MA 02169

Dear Ms. MacDonald,

The Alaska Retirement Management Board (ARMB) requests the following changes to be made on Monday, December 29, 2014. Please process the following cash transfer using the applicable sending pool ratios:

Short Term Pool (AY70)	< $100,000,000 >
SSgA Managed Volatility – Russell 2000 (AYKV)	$100,000,000

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

Sincerely,

for Gary M. Bader
Chief Investment Officer

Cc: Gail Schubert, ARMB Chair
Randall Hoffbeck, Commissioner
Pamela Leary, Director
Scott Jones, State Comptroller
James McKnight, Senior Investment Compliance Officer
Bob Mitchell, State Investment Officer
Shane Carson, State Investment Officer

GMB/sjc

THE STATE
of ALASKA
GOVERNOR BILL WALKER

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

December 29, 2014

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

Attention: SSgA Boston Shareholder Services – (617) 204-0088, ssgatradeinstruct@ssga.com

Dear State Street Global Advisors:

State of Alaska requests the below in-kind contribution from its separately managed account:

Trade Date:	**Pricing Date: December 29, 2014**
Transaction:	In-kind Contribution
SSgA Strategy Name:	SSgA Russell 1000 Managed Volatility Strategy
SSgA Account Code:	AYKU
Amount:	~$100,000,000 (cash and securities)
Currency:	USD
Special Instructions:	Initial funding. Please work with our transition manager, (SSGM) and our custodian, (State Street Bank) to ensure a smooth transition. This includes attaining certified lists, final values, trade dates and instructing on residual cash.

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

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

(617) 204-0088

Sincerely yours,

Gary M. Bader

Date: 12/29/2014

THE STATE of ALASKA
GOVERNOR BILL WALKER

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

January 6, 2015

George Duke
Portfolio Manager
LaSalle Investment Management
100 East Pratt Street, 20th Floor
Baltimore, MD 21202

Dear Mr. Duke,

Alaska Retirement Management Board (ARMB) has increased the allocation to its real estate separate account managed by LaSalle Investment Management by $50 million. This increase brings the total allocation that LaSalle is authorized to invest on behalf ARMB to $276,601,299, per the 9/30/2014 quarterly report. This allocation increase is effective immediately.

Please contact me if you have any questions.

Sincerely,

Gary M. Bader

Gary M. Bader
Chief Investment Officer

cc: Pamela Leary, Director, Treasury Division
Scott Jones, Comptroller
Micolyn Magee, The Townsend Group

THE STATE
of ALASKA
GOVERNOR BILL WALKER

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

January 12, 2015

David Mabry
Managing Director
Crestline Investors, Inc
201 Main Street, Suite 1900
Fort Worth, Texas 76102

Dear David:

RE: Redemption from Blue Glacier Fund, L.P.

On Wednesday January 14, 2015, please redeem and wire transfer **$5,275,000.00** to the following account at State Street Bank:

State Street Bank
ABA Number: 011-000-028
Account Number: 00132191
Account Name: State of Alaska – AY9F
Attn: Mary Ellen MacDonald, 617-664-9416

Sincerely,

Gary M. Bader

Gary M. Bader
Chief Investment Officer

GMB/scv

cc: Scott Jones, Comptroller
Bob Mitchell, Investment Officer
Zachary Hanna, Investment Officer
Nancy Fong, Bank of New York
Mary Ellen MacDonald, State Street Bank.

Bader, Gary M (DOR)

From: Bader, Gary M (DOR)
Sent: Thursday, January 08, 2015 5:04 PM
To: 'Gail Schubert'; 'kerchinger@cityofseward.net'
Cc: Hall, Judith A (DOR); Sikes, Stephen R (DOR)
Subject: Notification of Intent to Invest $50 million in Clarion Ventures 4

Hi Gail and Kris,

This email serves as notification of my intent to commit $50 million of ARMB funds to Clarion Ventures 4 LP, a closed-end real estate commingled fund targeting a 15%+ net IRR. The investment is an attractive opportunity to increase expected returns and add diversification to both the real estate portfolio and the overall retirement plans' investment portfolios.

The Fund is a follow-on offering to the Clarion Development Venture series of funds in which ARMB committed $50 million to Fund II in 2004 and $30 million to Fund III in 2008. Early successes in Fund II were offset by later term losses as the cycle turned and the Great Financial Crisis impacted the strategy. Fund III's results are expected to be outstanding with a projected 16% IRR and 1.7x equity multiple.

The Clarion strategy is focused on the US Domestic market only and is targeting higher risk and higher return investments that include development, redevelopment, and repositioning assets. The ARMB real estate portfolio is primarily made up of income focused "core" investments. The Clarion Ventures 4 Fund will complement these investments by investing in more entrepreneurial opportunities that represent the best opportunities Clarion is able to source.

Clarion has proven itself as a skilled investor and valuable partner to ARMB given its fiduciary mindset and high level of transparency. The portfolio manager and team that will manage the fund are experienced and the same individuals who were involved with the previous funds. Staff has a high degree of confidence in their abilities. These relationships are valuable and it is in ARMB's best interest to continue what has been a good partnership.

The Board authority for this commitment is within the approved Fiscal Year 2015 Real Assets Plan where staff indicated it planned to explore value-add and opportunistic real estate funds. With prior notification to the Chairs of ARMB and the Real Assets Committee, the real estate policies and procedures grant the CIO the discretion to commit to new investment funds up to $100 million for each fund. I will report this action to the Board at the February meeting.

Please let me know if you have any questions.

Thank you
Gary

ALASKA RETIREMENT MANAGEMENT BOARD
FINANCIAL REPORT

As of December 31, 2014

ALASKA RETIREMENT MANAGEMENT BOARD
Schedule of Investment Income and Changes in Invested Assets by Fund
For the Six Months Ending December 31, 2014

	Beginning Invested Assets	Investment Income (1)	Net Contributions (Withdrawals)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Public Employees' Retirement System (PERS)						
Defined Benefit Plans:						
Retirement Trust	$ 7,720,341,308	$ (11,964,107)	$ 471,662,032	$ 8,180,039,233	5.95%	-0.15%
Retirement Health Care Trust	6,948,399,164	(9,836,314)	(80,801,019)	6,857,761,831	-1.30%	-0.14%
Total Defined Benefit Plans	14,668,740,472	(21,800,421)	390,861,013	15,037,801,064	2.52%	-0.15%
Defined Contribution Plans:						
Participant Directed Retirement	491,615,700	2,253,943	39,314,019	533,183,662	8.46%	0.44%
Health Reimbursement Arrangement	155,432,460	(96,461)	14,800,266	170,136,265	9.46%	-0.06%
Retiree Medical Plan	28,293,975	13,326	6,586,310	34,893,611	23.33%	0.04%
Defined Benefit Occupational Death and Disability:						
Public Employees	10,850,124	(10,530)	716,325	11,555,919	6.50%	-0.09%
Police and Firefighters	5,165,027	(3,797)	497,696	5,658,926	9.56%	-0.07%
Total Defined Contribution Plans	691,357,285	2,156,481	61,914,616	755,428,383	9.27%	0.30%
Total PERS	**15,360,097,757**	**(19,643,940)**	**452,775,629**	**15,793,229,447**	2.82%	-0.13%
Teachers' Retirement System (TRS)						
Defined Benefit Plans:						
Retirement Trust	3,770,919,368	(7,164,917)	922,873,694	4,686,628,145	24.28%	-0.17%
Retirement Health Care Trust	2,264,530,724	(3,487,766)	180,417,334	2,441,460,292	7.81%	-0.15%
Total Defined Benefit Plans	6,035,450,092	(10,652,683)	1,103,291,028	7,128,088,437	18.10%	-0.16%
Defined Contribution Plans:						
Participant Directed Retirement	215,005,412	812,214	9,110,167	224,927,793	4.61%	0.37%
Health Reimbursement Arrangement	49,102,919	(36,507)	3,133,367	52,199,779	6.31%	-0.07%
Retiree Medical Plan	11,565,438	3,615	1,843,566	13,412,619	15.97%	0.03%
Defined Benefit Occupational Death and Disability	3,074,708	(4,102)	(3,224)	3,067,382	-0.24%	-0.13%
Total Defined Contribution Plans	278,748,477	775,220	14,083,876	293,607,573	5.33%	0.27%
Total TRS	**6,314,198,569**	**(9,877,463)**	**1,117,374,904**	**7,421,696,010**	17.54%	-0.14%
Judicial Retirement System (JRS)						
Defined Benefit Plan Retirement Trust	139,434,530	(147,931)	2,530,267	141,816,866	1.71%	-0.11%
Defined Benefit Retirement Health Care Trust	26,405,394	(35,361)	(14,914)	26,355,119	-0.19%	-0.13%
Total JRS	**165,839,924**	**(183,292)**	**2,515,353**	**168,171,985**	1.41%	-0.11%
National Guard/Naval Militia Retirement System (MRS)						
Defined Benefit Plan Retirement Trust	37,555,947	(190,273)	(304,223)	37,061,451	-1.32%	-0.51%
Other Participant Directed Plans						
Supplemental Annuity Plan	3,312,097,202	44,512,581	(1,472,664)	3,355,137,119	1.30%	1.34%
Deferred Compensation Plan	785,486,812	13,584,330	(348,921)	798,722,221	1.68%	1.73%
Total All Funds	**25,975,276,211**	**28,201,943**	**1,570,540,078**	**27,574,018,233**		
Total Non-Participant Directed	21,171,071,086	(32,961,125)	1,523,937,477	22,662,047,438	7.04%	-0.15%
Total Participant Directed	4,804,205,125	61,163,068	46,602,601	4,911,970,795	2.24%	1.27%
Total All Funds	**$ 25,975,276,211**	**$ 28,201,943**	**$ 1,570,540,078**	**$ 27,574,018,233**	**6.15%**	**0.11%**

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 December 31, 2014

	Beginning Invested Assets	Investment Income[1]	Net Contributions (Withdrawals)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income[2]
Public Employees' Retirement System (PERS)						
Defined Benefit Plans:						
Retirement Trust	$ 8,267,225,376	$ (57,309,216)	$ (29,876,927)	$ 8,180,039,233	-1.05%	-0.69%
Retirement Health Care Trust	6,918,381,058	(46,893,344)	(13,725,883)	6,857,761,831	-0.88%	-0.68%
Total Defined Benefit Plans	15,185,606,434	(104,202,560)	(43,602,810)	15,037,801,064	-0.97%	-0.69%
Defined Contribution Plans:						
Participant Directed Retirement	527,990,993	(4,087,514)	9,280,183	533,183,662	0.42%	-0.20%
Health Reimbursement Arrangement	167,944,135	(1,083,580)	3,275,710	170,136,265	0.79%	-0.12%
Retiree Medical Plan	33,571,769	(203,817)	1,525,659	34,893,611	3.94%	-0.59%
Defined Benefit Occupational Death and Disability:						
Public Employees	11,468,122	(74,872)	162,669	11,555,919	0.77%	-0.65%
Police and Firefighters	5,599,403	(36,664)	96,187	5,658,926	1.06%	-0.65%
Total Defined Contribution Plans	746,574,422	(5,486,447)	14,340,408	755,428,383	1.19%	-0.73%
Total PERS	**15,932,180,856**	**(109,689,007)**	**(29,262,402)**	**15,793,229,447**	-0.87%	-0.69%
Teachers' Retirement System (TRS)						
Defined Benefit Plans:						
Retirement Trust	4,749,360,169	(33,161,250)	(29,570,774)	4,686,628,145	-1.32%	-0.70%
Retirement Health Care Trust	2,466,114,418	(16,773,010)	(7,881,116)	2,441,460,292	-1.00%	-0.68%
Total Defined Benefit Plans	7,215,474,587	(49,934,260)	(37,451,890)	7,128,088,437	-1.21%	-0.69%
Defined Contribution Plans:						
Participant Directed Retirement	223,389,022	(1,783,062)	3,321,833	224,927,793	0.69%	-0.79%
Health Reimbursement Arrangement	51,692,208	(337,774)	845,345	52,199,779	0.98%	-0.65%
Retiree Medical Plan	12,934,339	(80,446)	558,726	13,412,619	3.70%	-0.61%
Defined Benefit Occupational Death and Disability	3,089,650	(20,888)	(1,380)	3,067,382	-0.72%	-0.68%
Total Defined Contribution Plans	291,105,218	(2,222,170)	4,724,524	293,607,573	0.86%	-0.76%
Total TRS	**7,506,579,805**	**(52,156,430)**	**(32,727,366)**	**7,421,696,010**	-1.13%	-0.70%
Judicial Retirement System (JRS)						
Defined Benefit Plan Retirement Trust	143,057,092	(988,813)	(251,413)	141,816,866	-0.87%	-0.69%
Defined Benefit Retirement Health Care Trust	26,521,012	(178,831)	12,938	26,355,119	-0.63%	-0.67%
Total JRS	**169,578,104**	**(1,167,644)**	**(238,475)**	**168,171,985**	-0.83%	-0.69%
National Guard/Naval Militia Retirement System (MRS)						
Defined Benefit Plan Retirement Trust	37,590,266	(354,883)	(173,932)	37,061,451	-1.41%	-0.95%
Other Participant Directed Plans						
Supplemental Annuity Plan	3,368,205,371	(14,855,950)	1,787,698	3,355,137,119	-0.39%	-0.44%
Deferred Compensation Plan	798,829,666	(1,107,092)	999,647	798,722,221	-0.01%	-0.14%
Total All Funds	**27,812,964,068**	**(179,331,006)**	**(59,614,830)**	**27,574,018,233**		
Total Non-Participant Directed	22,894,549,017	(157,497,388)	(75,004,191)	22,662,047,438	-1.02%	-0.69%
Total Participant Directed	4,918,415,051	(21,833,618)	9,384,888	4,911,970,795	-0.25%	-0.44%
Total All Funds	**$ 27,812,964,068**	**$ (179,331,006)**	**$ (65,619,303)**	**$ 27,574,018,233**	**-0.88%**	**-0.65%**

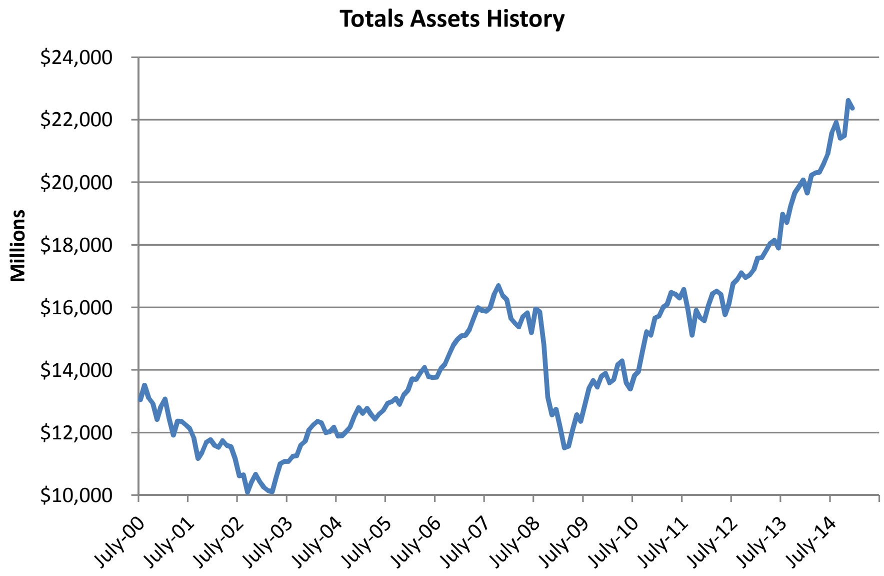
Notes:

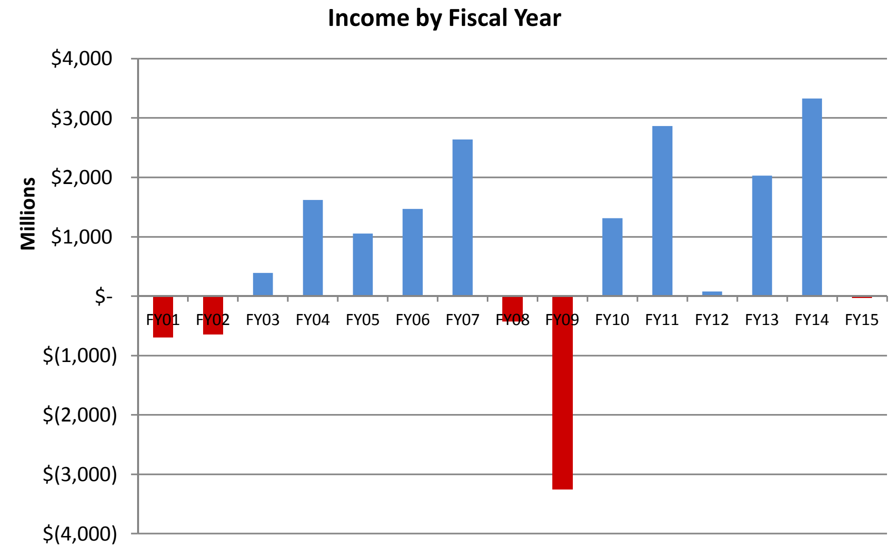
(1) Includes interest, dividends, securities lending, expenses, realized and unrealized gains/losses

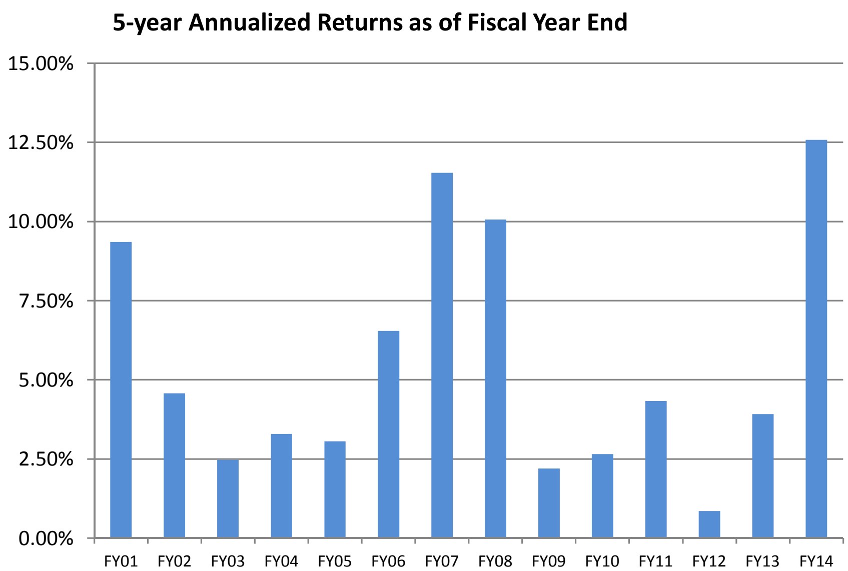
(2) Income divided by beginning assets plus half of net contributions/(withdrawals). Actual returns are calculated by Callan and Associates and can be found at: http://www.revenue.state.ak.us/treasury/programs/programs/other/armb/investmentresults.aspx

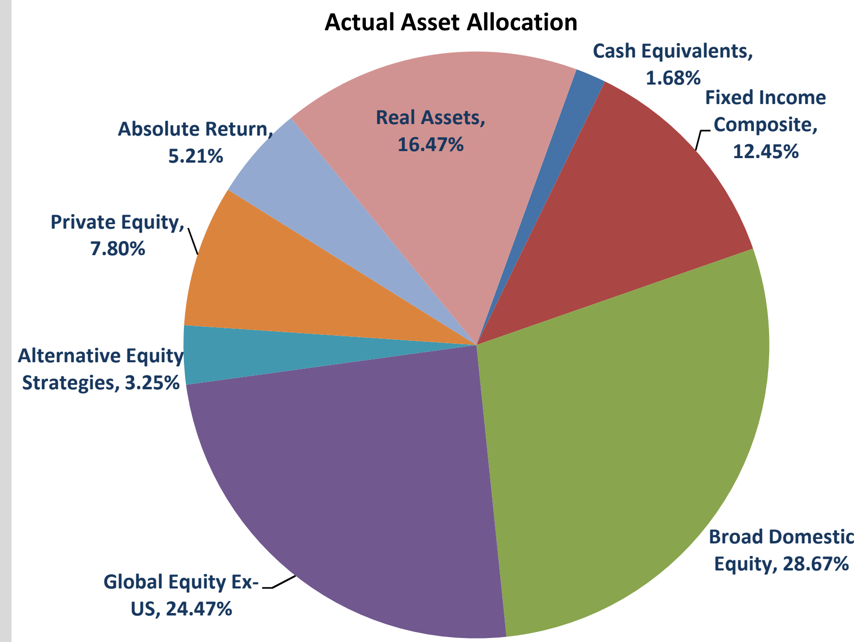
Total Defined Benefit Assets

As of December 31, 2014



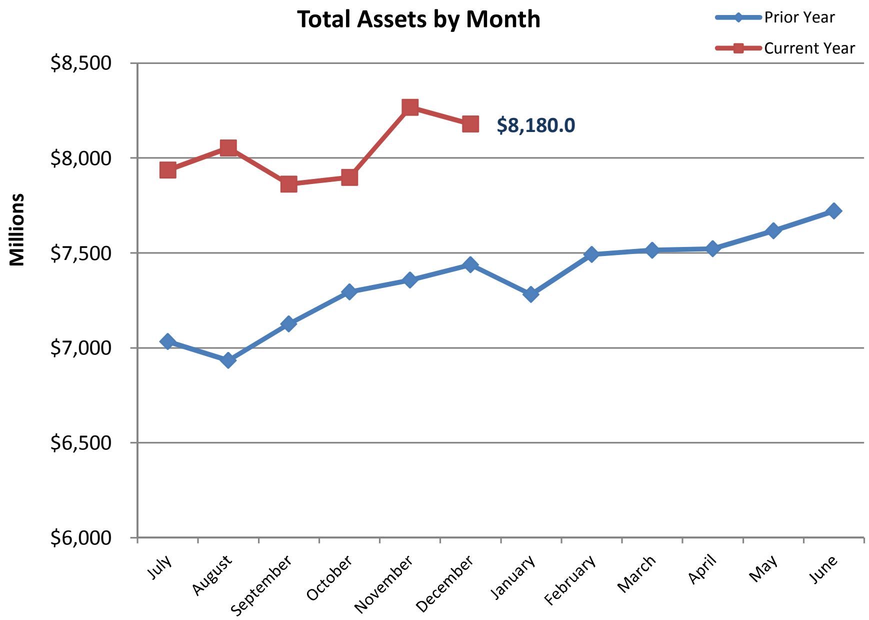


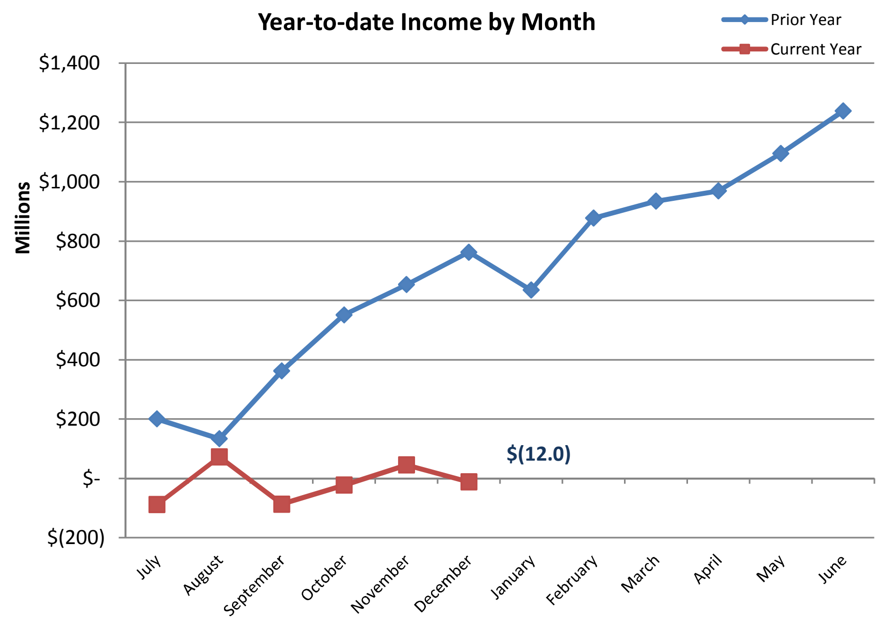


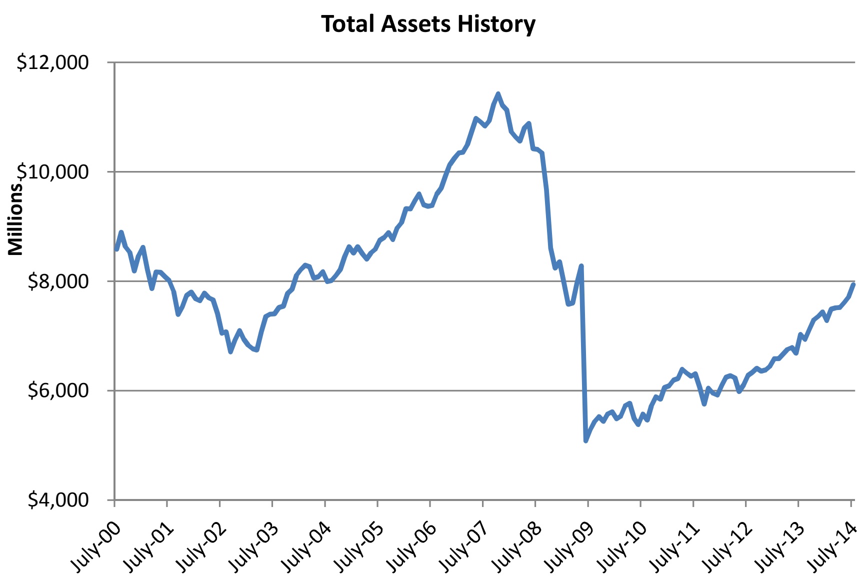


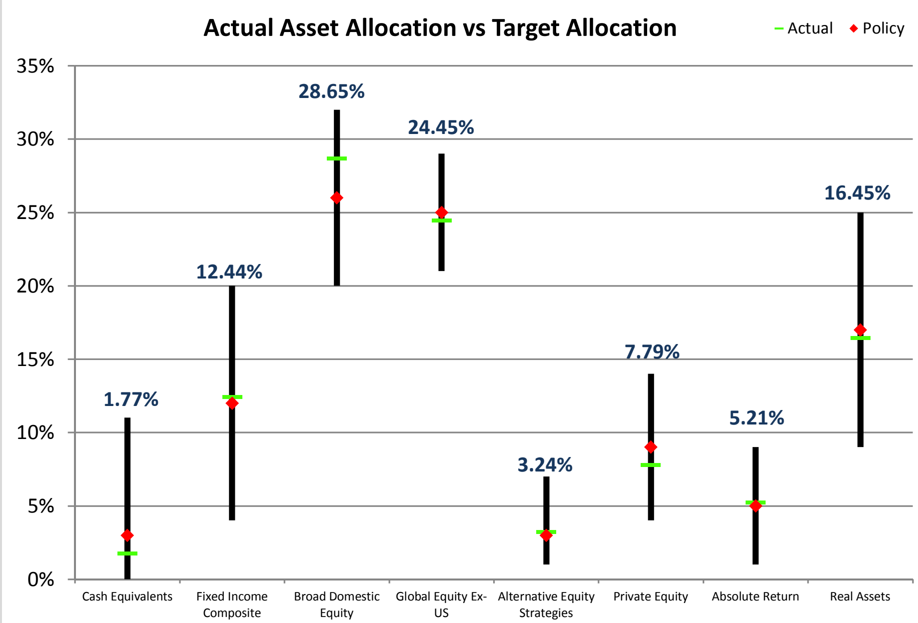
Public Employees' Retirement Pension Trust Fund

For the Six Months Ending December 31, 2014



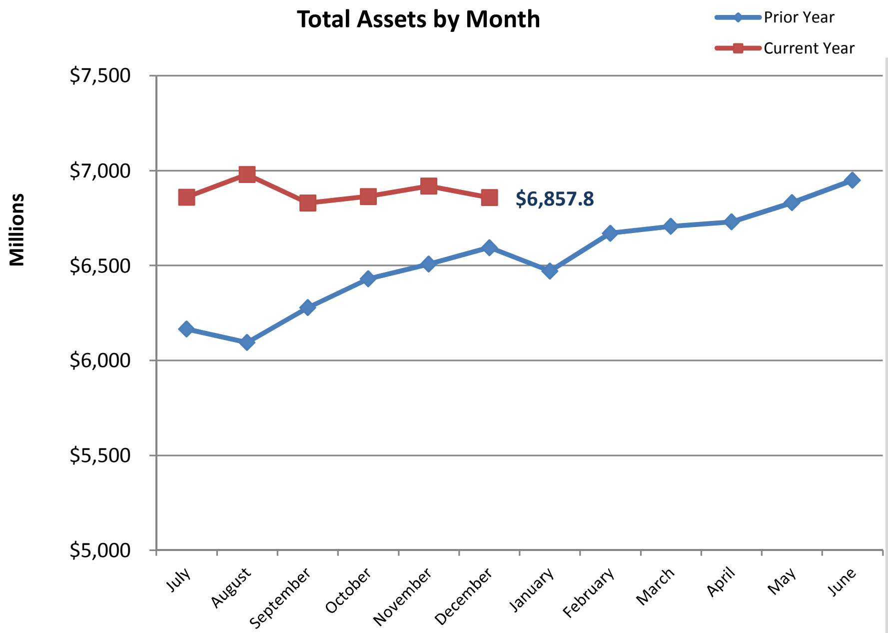


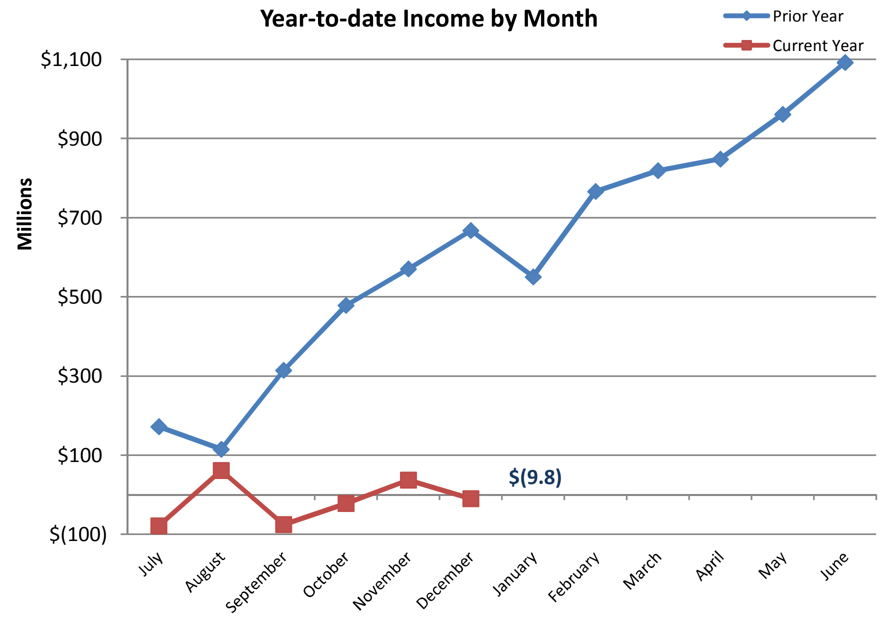


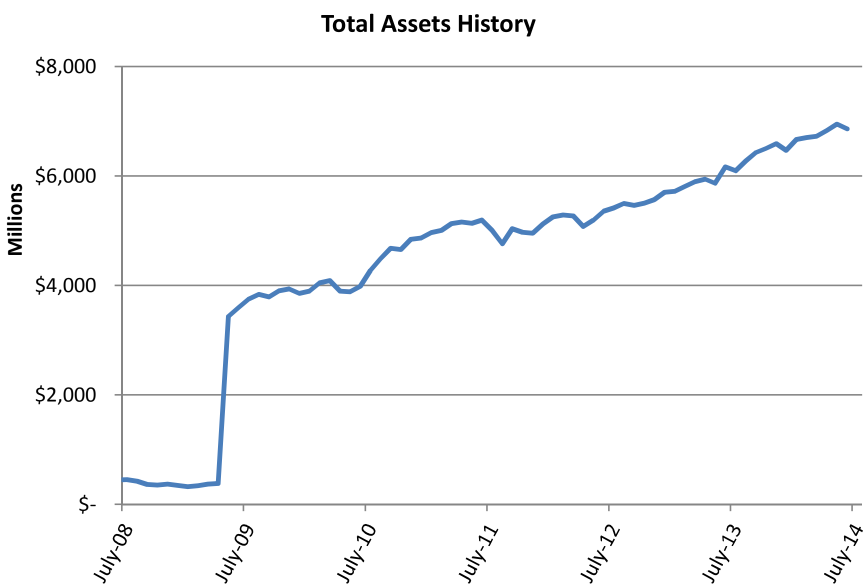


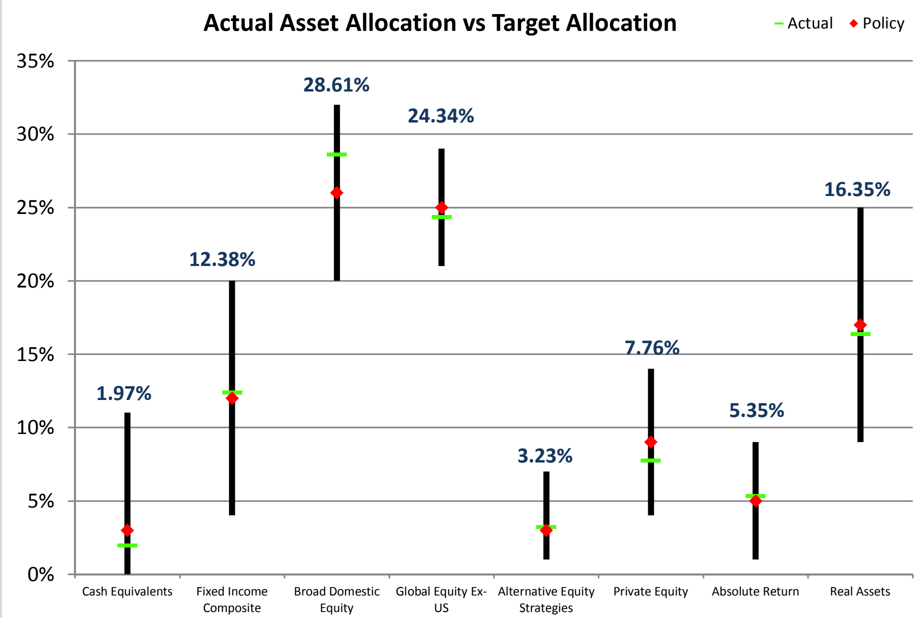
Public Employees' Retirement Health Care Trust Fund

For the Six Months Ending December 31, 2014



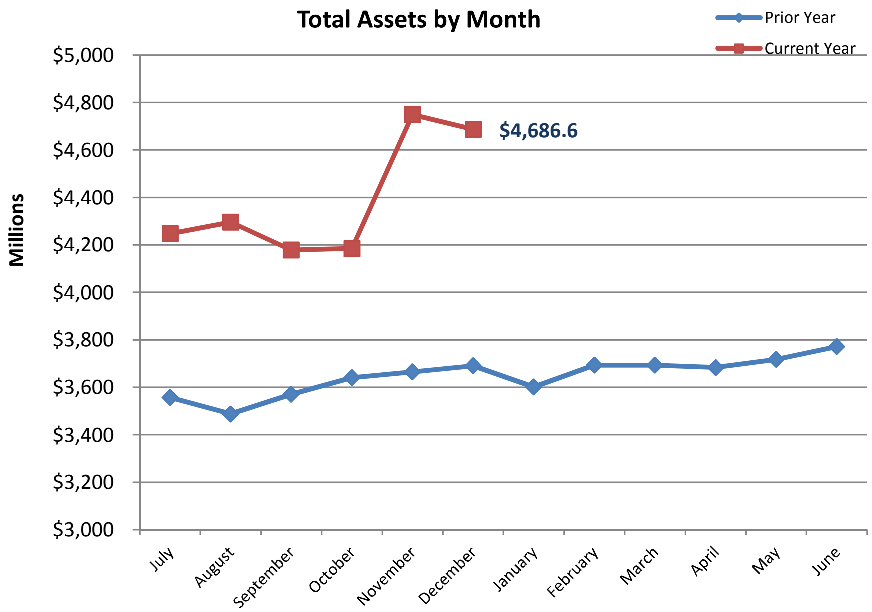


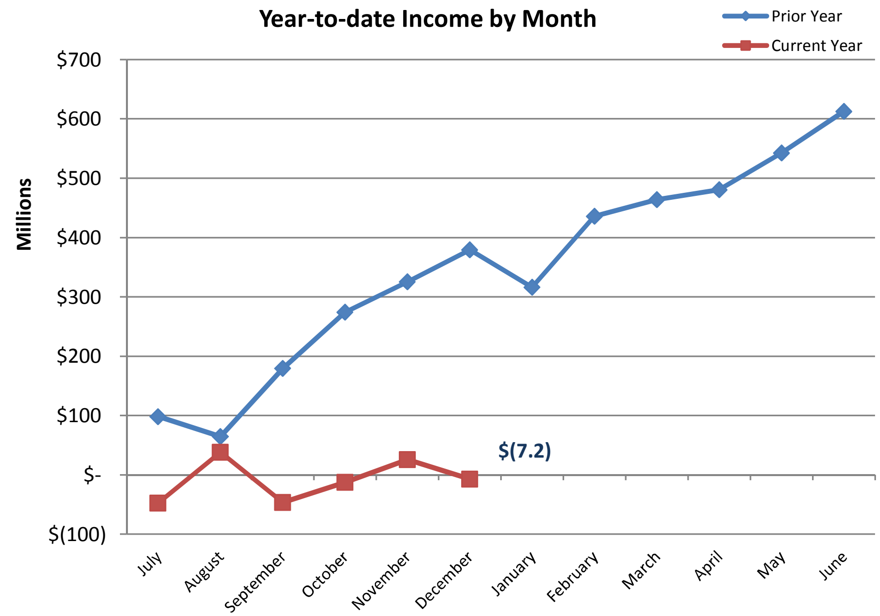


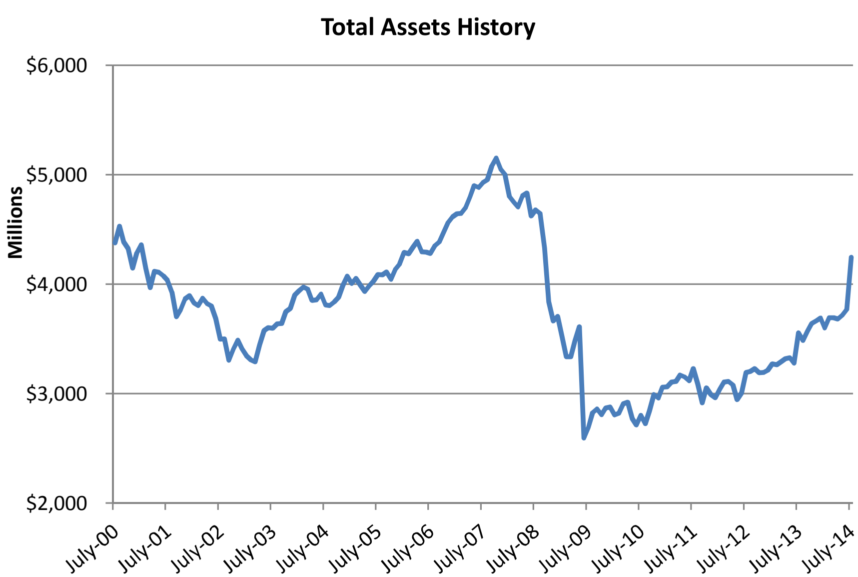


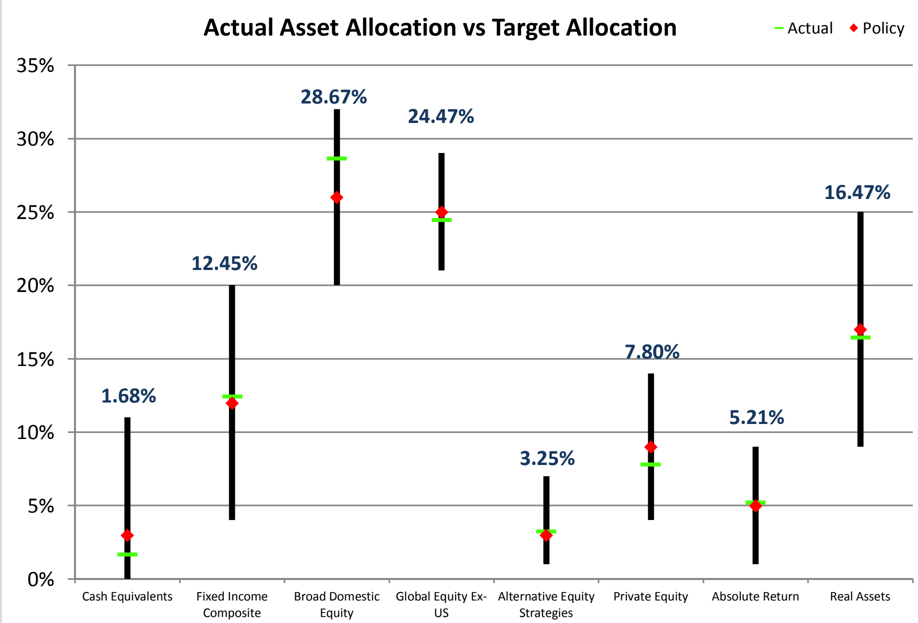
Teachers' Retirement Pension Trust Fund

For the Six Months Ending December 31, 2014



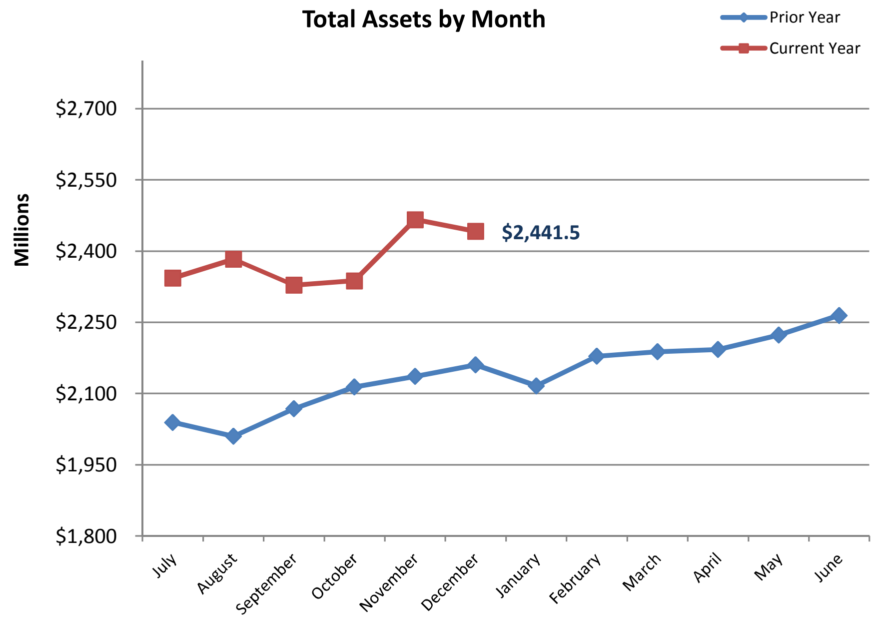


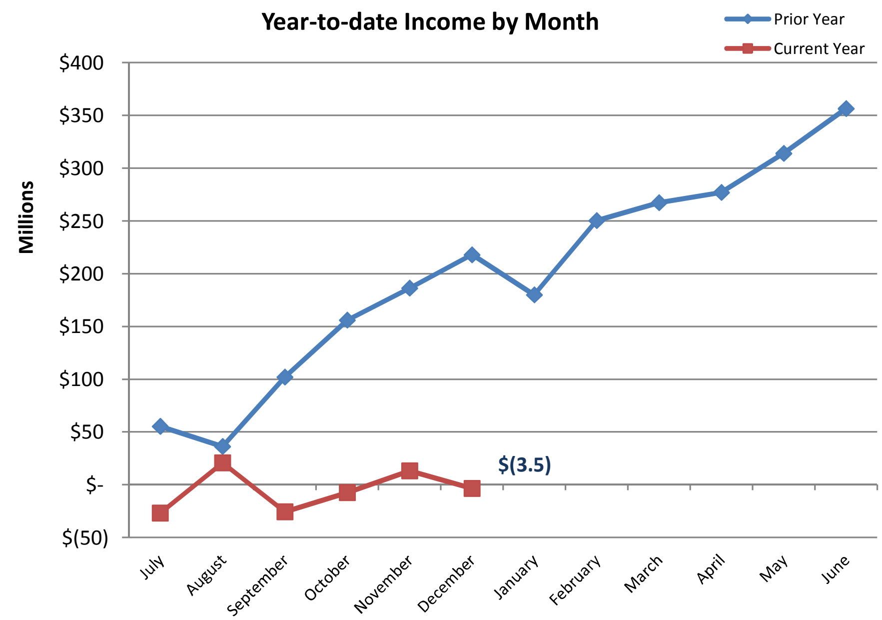


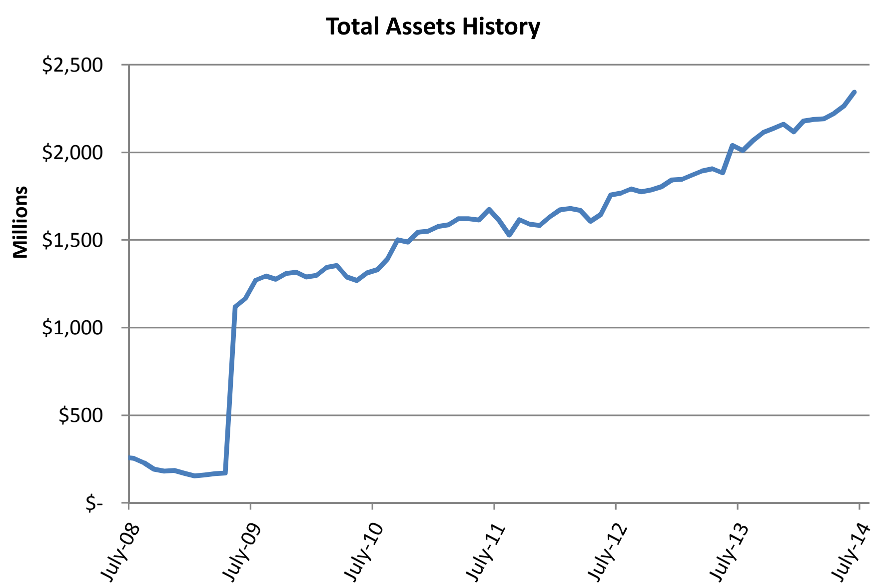


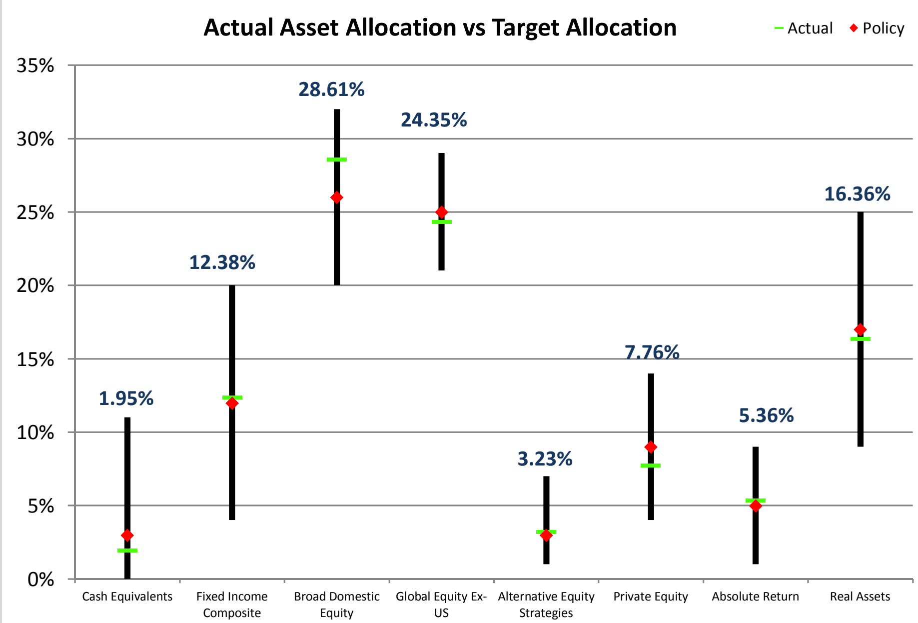
Teachers' Retirement Health Care Trust Fund

For the Six Months Ending December 31, 2014



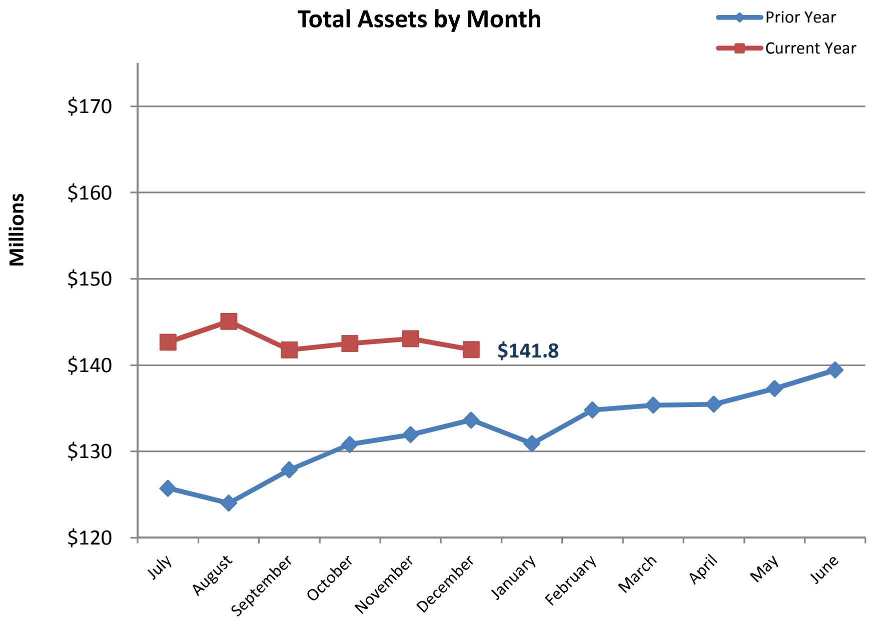


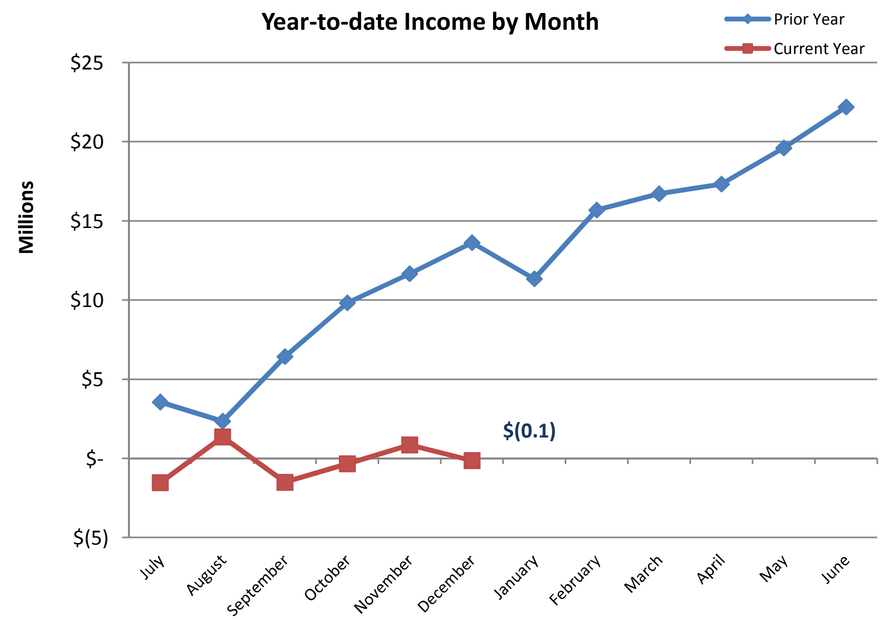


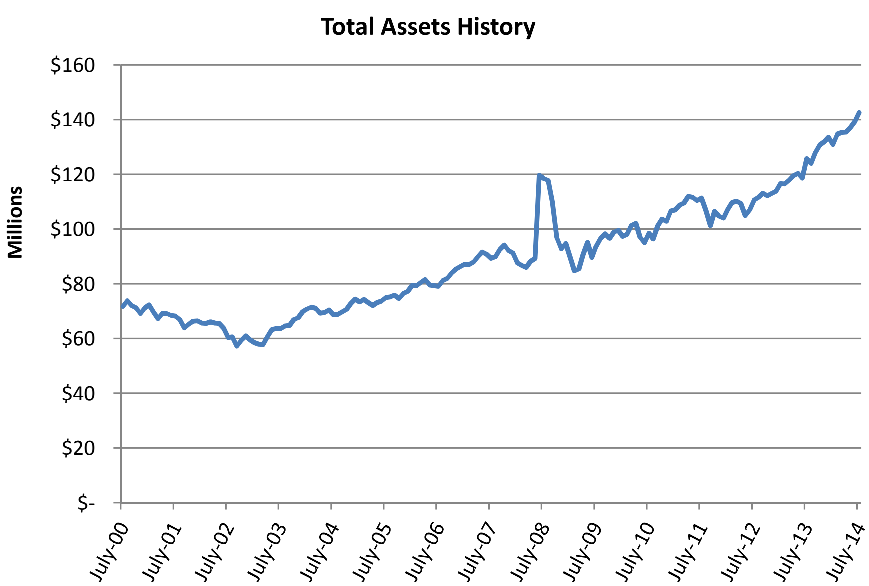


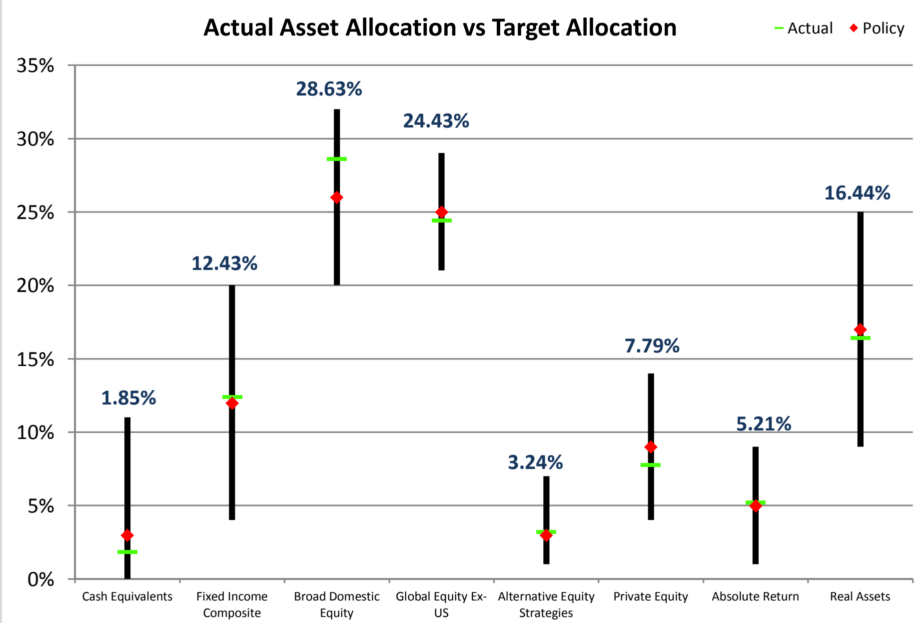
Judicial Retirement Pension Trust Fund

For the Six Months Ending December 31, 2014

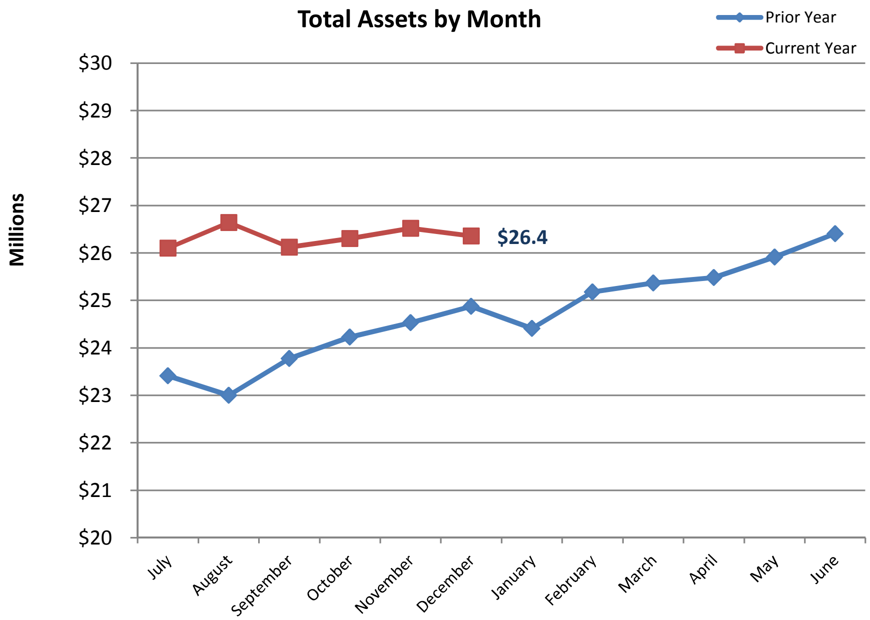


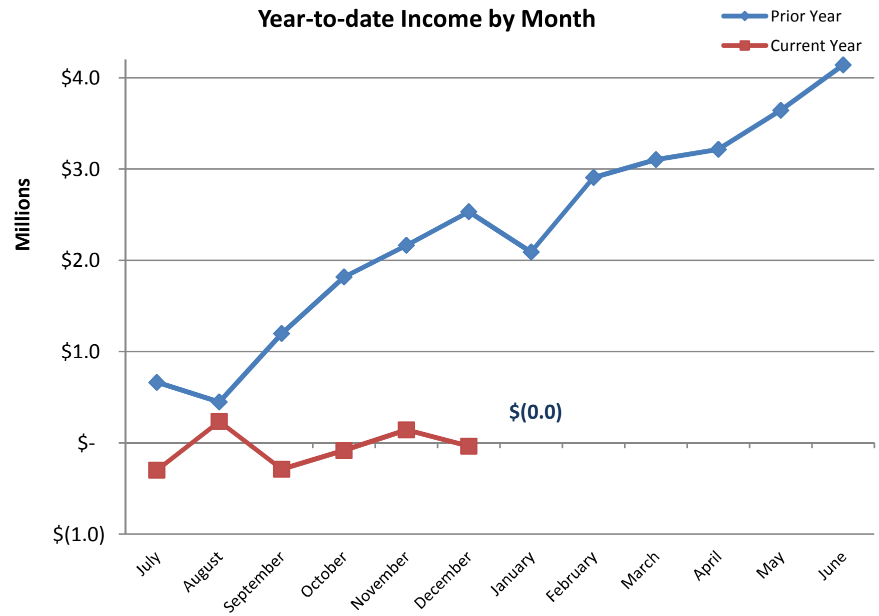


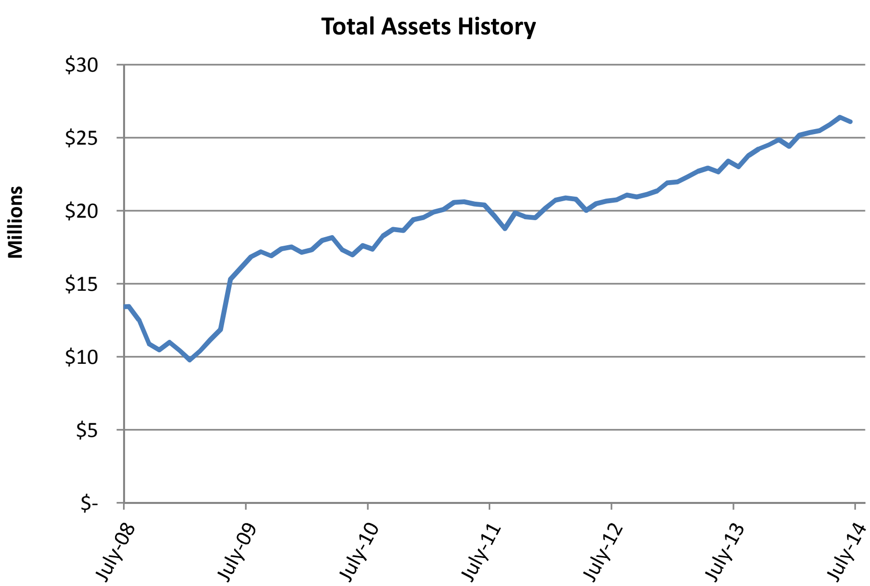


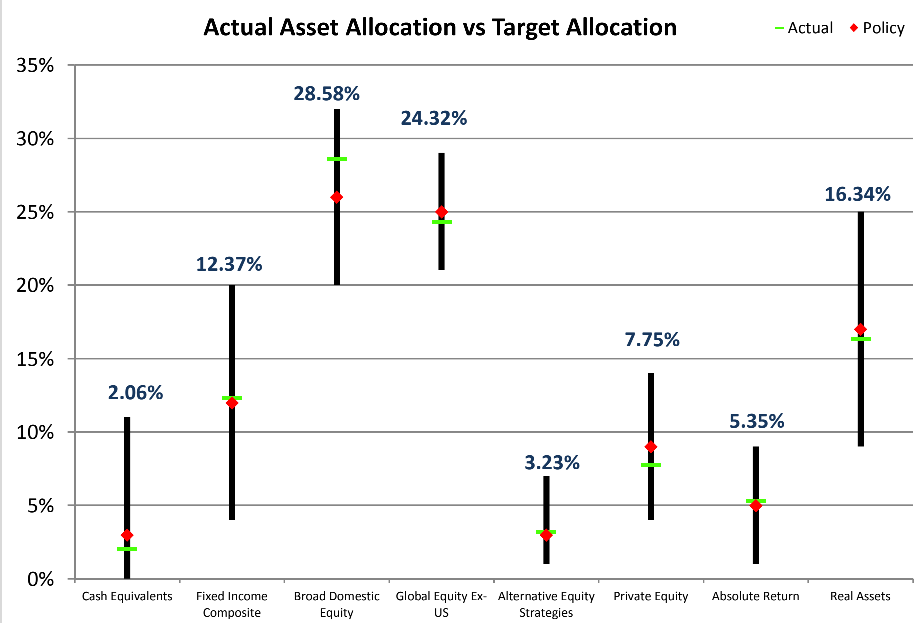


Judicial Retirement Health Care Trust Fund
For the Six Months Ending December 31, 2014



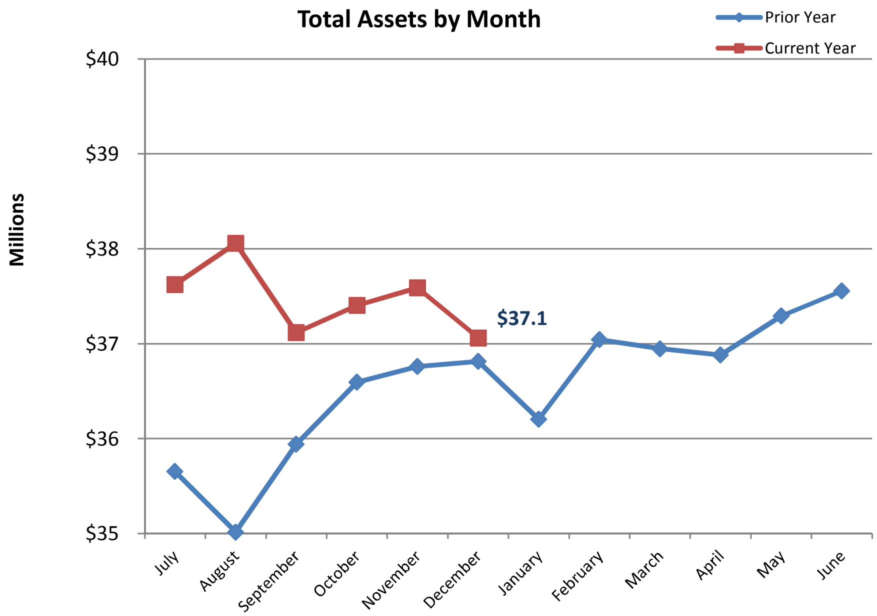


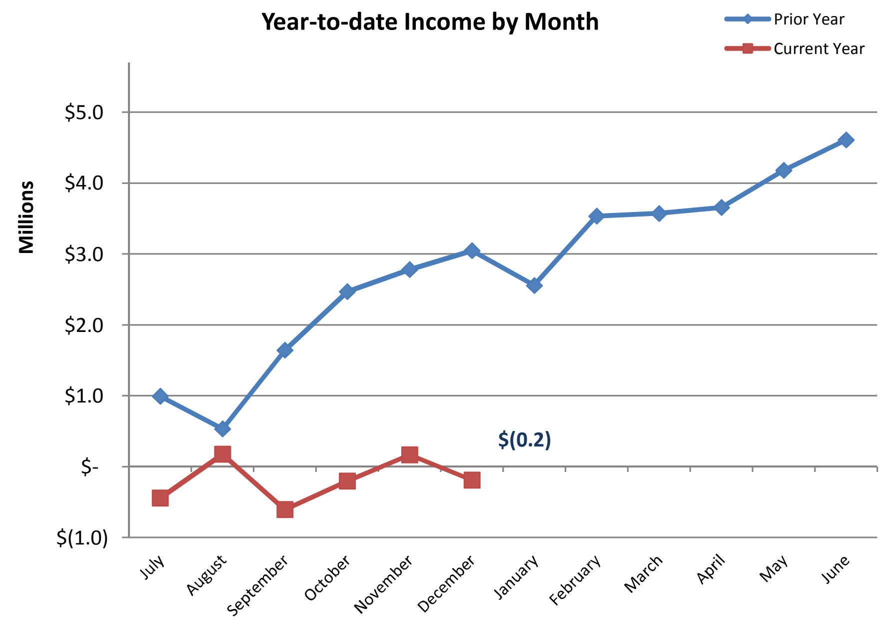


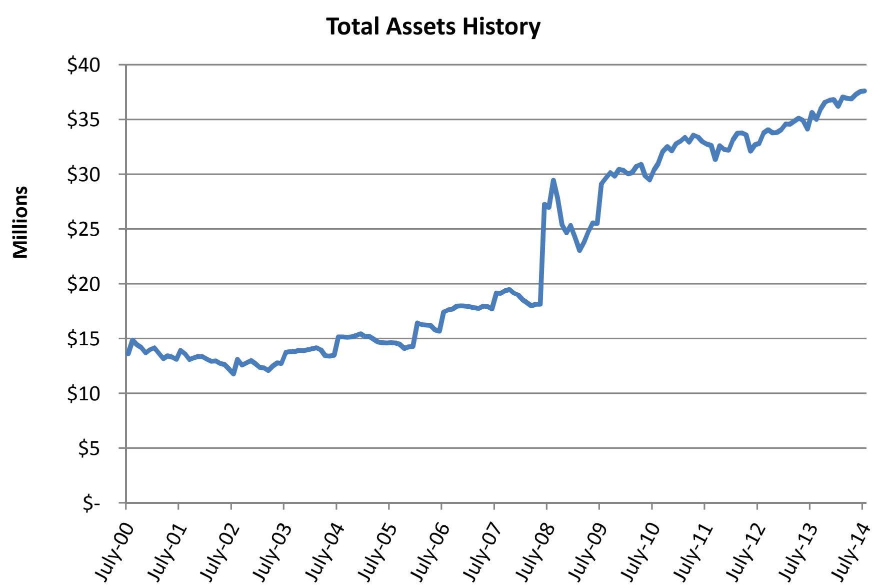


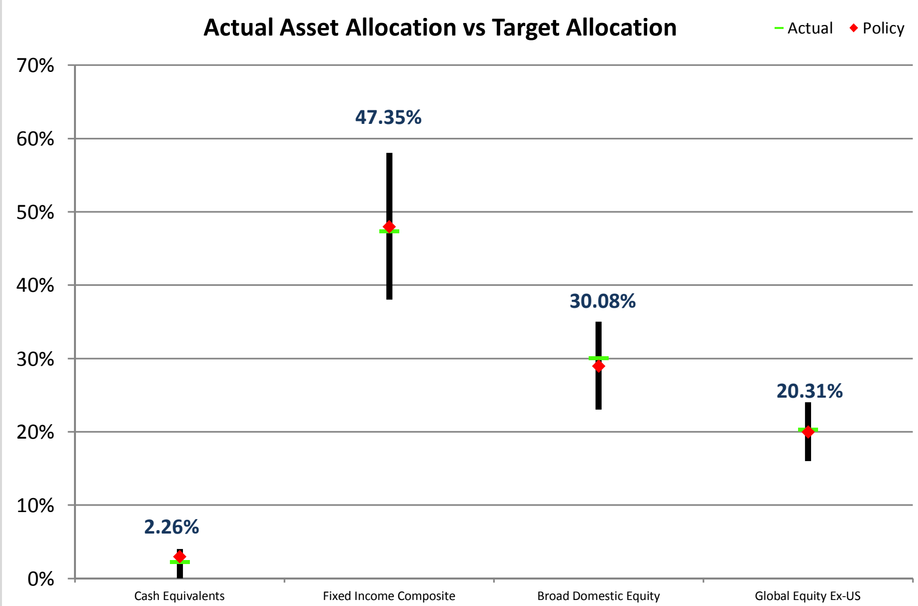
Military Retirement Trust Fund

For the Six Months Ending December 31, 2014









ALASKA RETIREMENT MANAGEMENT BOARD

Reporting of Funds by Manager

All Non-Participant Directed Plans

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

	Beginning Invested Assets	Investment Income	Net Contributions and (Withdrawals)	Ending Invested Assets	% increase (decrease)
Cash					
Short-Term Fixed Income Pool	$ 1,032,864,697	$ (80,492)	$ (613,855,405)	$ 418,928,800	-59.44%
Total Cash	1,032,864,697	(80,492)	(613,855,405)	418,928,800	-59.44%
Fixed Income					
US Treasury Fixed Income	1,311,937,765	(3,336,196)	-	1,308,601,569	-0.25%
Taxable Municipal Bond Pool					
Western Asset Management	117,195,222	1,545,179	-	118,740,401	1.32%
Guggenheim Partners	113,267,085	1,065,522	-	114,332,607	0.94%
	230,462,307	2,610,701	-	233,073,008	1.13%
Tactical Fixed Income Pool					
Pyramis Global Advisors	120,684,141	(337,107)	-	120,347,034	-0.28%
International Fixed Income Pool					
Mondrian Investment Partners	413,785,434	(12,946,502)	-	400,838,932	-3.13%
High Yield Pool					
MacKay Shields, LLC	607,583,733	(8,606,930)	-	598,976,803	-1.42%
Emerging Debt Pool					
Lazard Emerging Income	168,512,795	(4,013,218)	-	164,499,577	-2.38%
Total Fixed Income	2,852,966,175	(26,629,252)	-	2,826,336,923	-0.93%

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

Domestic Equities					
Small Cap Pool					
Passively Managed					
SSgA Russell 2000 Growth	17,790,316	512,601	-	18,302,917	2.88%
SSgA Russell 2000 Value	63,210,023	1,717,814	-	64,927,837	2.72%
Total Passive	81,000,339	2,230,415	-	83,230,754	2.75%
Actively Managed					
Barrow, Haney, Mewhinney & Strauss	106,892,725	2,193,369	-	109,086,094	2.05%
DePrince, Race & Zollo Inc.- Micro Cap	98,045,796	3,575,742	-	101,621,538	3.65%
Frontier Capital Mgmt. Co.	102,698,234	3,227,340	-	105,925,574	3.14%
Jennison Associates, LLC	104,400,602	823,307	-	105,223,909	0.79%
Lord Abbet Small Cap Growth Fund	104,438,692	704,970	-	105,143,662	0.68%
Lord Abbett & Co.- Micro Cap	109,992,663	7,096,489	-	117,089,152	6.45%
Luther King Capital Management	100,597,028	1,284,179	-	101,881,207	1.28%
SSgA Futures Small Cap	11,164,333	312,131	-	11,476,464	2.80%
Transition Account	-	-	-	-	-
Victory Capital Management	111,488,462	1,543,556	-	113,032,018	1.38%
SSgA Volatility-Russell 2000	-	(1,584,180)	100,000,000	98,415,820	100.00%
Total Active	849,718,535	19,176,903	100,000,000	968,895,438	14.03%
Total Small Cap	930,718,874	21,407,318	100,000,000	1,052,126,192	13.04%
Large Cap Pool					
Passively Managed					
SSgA Russell 1000 Growth	1,488,678,676	(14,506,191)	(100,000,000)	1,374,172,485	-7.69%
SSgA Russell 1000 Value	1,329,620,908	8,149,133	-	1,337,770,041	0.61%
SSgA Russell 200	776,439,495	(3,317,222)	-	773,122,273	-0.43%
Total Passive	3,594,739,079	(9,674,280)	(100,000,000)	3,485,064,799	-3.05%
Actively Managed					
Allianz Global Investors	377,592,712	(2,887,333)	-	374,705,379	-0.76%
Barrow, Haney, Mewhinney & Strauss	343,703,178	1,011,709	-	344,714,887	0.29%
Lazard Freres	402,955,688	1,066,448	-	404,022,136	0.26%
McKinley Capital Mgmt.	371,508,406	(552,174)	-	370,956,232	-0.15%
Quantitative Management Assoc.	342,103,105	2,471,693	-	344,574,798	0.72%
SSgA Futures large cap	14,055,418	34,932	-	14,090,350	0.25%
Transition Account	-	-	-	-	-
SSgA Volatility-Russell 1000	-	(1,140,409)	100,000,000	98,859,591	100.00%
Total Active	1,851,918,507	4,866	100,000,000	1,951,923,373	5.40%
Total Large Cap	5,446,657,586	(9,669,414)	-	5,436,988,172	-0.18%
Total Domestic Equity	6,377,376,460	11,737,904	100,000,000	6,489,114,364	1.75%

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

Alternative Equity Strategies					
Alternative Equity Strategy Pool					
Relational Investors, LLC	127,447,471	(2,638,034)	(3,329,753)	121,479,684	-4.68%
Analytic Buy Write Account	274,817,596	2,481,978	-	277,299,574	0.90%
Allianz Global Investors Buy-Write Account	-	-	-	-	-
ARMB Equity Yield Strategy	141,692,731	(1,177,551)	-	140,515,180	-0.83%
Total Alternative Equity Strategy Pool	543,957,798	(1,333,607)	(3,329,753)	539,294,438	-0.86%
Convertible Bond Pool					
Advent Capital	194,128,018	(669,852)	-	193,458,166	-0.35%
Total Alternative Equity Strategies	738,085,816	(2,003,459)	(3,329,753)	732,752,604	-0.72%
Global Equities Ex US					
Small Cap Pool					
Mondrian Investment Partners	146,108,545	810,905	-	146,919,450	0.56%
Schroder Investment Management	152,693,887	(855,672)	-	151,838,215	-0.56%
Total Small Cap	298,802,432	(44,767)	-	298,757,665	-0.01%
Large Cap Pool					
Blackrock ACWI Ex-US IMI	538,156,726	(17,778,644)	-	520,378,082	-3.30%
Brandes Investment Partners	1,036,710,813	(34,391,027)	-	1,002,319,786	-3.32%
Cap Guardian Trust Co	791,130,619	(24,749,057)	-	766,381,562	-3.13%
Lazard Freres	419,926,390	(15,660,120)	-	404,266,270	-3.73%
McKinley Capital Management	495,478,139	(7,054,595)	-	488,423,544	-1.42%
SSgA Futures International	-	-	-	-	-
Allianz Global Investors	185,597,737	(8,044,289)	75,000,000	252,553,448	36.08%
Arrow Street Capital	204,550,478	(6,282,758)	-	198,267,720	-3.07%
Baillie Gifford Overseas Limited	189,494,937	(6,645,403)	75,000,000	257,849,534	36.07%
State Street Global Advisors	634,681,720	(20,580,118)	-	614,101,602	-3.24%
Total Large Cap	4,495,727,559	(141,186,011)	150,000,000	4,504,541,548	0.20%
Emerging Markets Equity Pool					
Lazard Asset Management	411,931,835	(31,205,472)	-	380,726,363	-7.58%
Eaton Vance	271,877,560	(16,687,077)	-	255,190,483	-6.14%
Total Emerging Markets Pool	683,809,395	(47,892,549)	-	635,916,846	-7.00%
Frontier Market Pool					
Everest Capital Frontier Markets Equity	96,014,900	(5,812,200)	-	90,202,700	-6.05%
Total Global Equities	5,574,354,286	(194,935,527)	150,000,000	5,529,418,759	-0.81%

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

Private Equity Pool					
Abbott Capital	772,824,523	6,237,838	(15,740,247)	763,322,114	-1.23%
Angelo, Gordon & Co.	8,042,659	-	(432,900)	7,609,759	-5.38%
Blum Capital Partners-Strategic	6,921,134	(4)	(223,857)	6,697,273	-3.23%
Lexington Partners	48,159,799	1,562,568	(2,545,451)	47,176,916	-2.04%
Merit Capital Partners	15,991,061	-	-	15,991,061	-
NB SOF III	9,894,212	(3)	1,526,896	11,421,105	15.43%
Resolute Fund III	2,591,106	-	4,378	2,595,484	0.17%
Glendon Opportunities	16,093,989	-	-	16,093,989	-
New Mountain Partners IV	-	-	3,732,288	3,732,288	100.00%
Onex Partnership III	22,335,764	(4)	(18,155)	22,317,605	-0.08%
Pathway Capital Management LLC	813,515,824	10,538,019	(4,455,221)	819,598,622	0.75%
Warburg Pincus Prvt Eqty XI	16,729,495	1,452,150	977,160	19,158,805	14.52%
Warburg Pincus X	25,001,254	(23,592)	(528,360)	24,449,302	-2.21%
Total Private Equity	1,758,100,820	19,766,972	(17,703,469)	1,760,164,323	0.12%
Absolute Return Pool					
Global Asset Management (USA) Inc.	361,154,719	5,688,945	-	366,843,664	1.58%
Prisma Capital Partners	406,907,186	6,302,581	-	413,209,767	1.55%
Crestline Investors, Inc.	186,576,942	2,444,602	23,424,532	212,446,076	13.87%
Allianz Global Investors	-	-	200,000,000	200,000,000	100.00%
Total Absolute Return Investments	954,638,847	14,436,128	223,424,532	1,192,499,507	24.92%

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

Real Assets					
Farmland Pool					
UBS Agrivest, LLC	494,542,183	9,125,538	763,331	504,431,052	2.00%
Hancock Agricultural Investment Group	221,840,453	1,793,457	(2,580,799)	221,053,111	-0.35%
Total Farmland Pool	716,382,636	10,918,995	(1,817,468)	725,484,163	1.27%
Timber Pool					
Timberland Invt Resource LLC	262,939,098	2,084,769	-	265,023,867	0.79%
Hancock Natural Resource Group	96,739,899	(56,671)	-	96,683,228	-0.06%
Total Timber Pool	359,678,997	2,028,098	-	361,707,095	0.56%
Energy Pool					
EIG Energy Fund XV	34,905,217	83,174	1,000,000	35,988,391	3.10%
EIG Energy Fund XD	7,015,624	(9,470)	-	7,006,154	-0.13%
EIG Energy Fund XIV-A	51,768,139	(80,950)	2,000,000	53,687,189	3.71%
EIG Energy Fund XVI	7,098,822	(294,331)	2,400,000	9,204,491	29.66%
Total Energy Pool	100,787,802	(301,577)	5,400,000	105,886,225	5.06%
REIT Pool					
REIT Trans Account	-	-	-	-	-
REIT Holdings	342,664,767	4,473,244	-	347,138,011	1.31%
Total REIT Pool	342,664,767	4,473,244	-	347,138,011	1.31%
Treasury Inflation Proof Securities					
TIPS Internally Managed Account	84,258,942	(907,379)	-	83,351,563	-1.08%
Master Limited Partnerships					
Advisory Research MLP	218,081,798	(6,114,896)	-	211,966,902	-2.80%
Tortoise Capital Advisors	242,134,790	(7,147,019)	-	234,987,771	-2.95%
Total Master Limited Partnerships	460,216,588	(13,261,915)	-	446,954,673	-2.88%
Infrastructure Private Pool					
IFM Global Infrastructuer Fund-Private	-	-	-	-	-
JP Morgan Infrastructure Fund-Private	96,233,206	1,598,195	-	97,831,401	1.66%
Total Infrastructure Private Pool	96,233,206	1,598,195	-	97,831,401	1.66%
Infrastructure Public Pool					
Brookfield Investment Mgmt.-Public	80,994,288	33,094	50,000,000	131,027,382	61.77%
Lazard Asset Mgmt.-Public	78,590,093	(2,297,499)	50,000,000	126,292,594	60.70%
Total Infrastructure Public Pool	159,584,381	(2,264,405)	100,000,000	257,319,976	61.24%

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

Real Estate					
Core Commingled Accounts					
JP Morgan	209,774,730	2,030,189	-	211,804,919	0.97%
UBS Trumbull Property Fund	87,389,601	(827,545)	-	86,562,056	-0.95%
Total Core Commingled	297,164,331	1,202,644	-	298,366,975	0.40%
Core Separate Accounts					0.53%
Cornerstone Real Estate Advisers Inc.	122,057,577	800,702	(150,000)	122,708,279	
LaSalle Investment Management	153,051,009	3,430,733	(658,224)	155,823,518	1.81%
Sentinel Separate Account	155,832,361	2,665,932	(665,155)	157,833,138	1.28%
UBS Realty	307,733,398	4,157,359	(1,756,987)	310,133,770	0.78%
Total Core Separate	738,674,345	11,054,726	(3,230,366)	746,498,705	1.06%
Non-Core Commingled Accounts					
Almanac Realty Securities IV	2,283,447	-	-	2,283,447	-
Almanac Realty Securities V	21,732,845	-	-	21,732,845	-
BlackRock Diamond Property Fund	22,767,294	-	-	22,767,294	-
Colony Investors VIII, L.P.	23,407,117	(4,369,787)	(1,163,297)	17,874,033	-23.64%
Cornerstone Apartment Venture III	688,128	(21,461)	(666,667)	-	-100.00%
Coventry	12,660,953	(99,895)	-	12,561,058	-0.79%
ING Clarion Development Ventures II	1,883,724	30,444	-	1,914,168	1.62%
ING Clarion Development Ventures III	14,830,137	2,611,425	-	17,441,562	17.61%
KKR Real Estate Partners Americas LP.	30,487,602	1,110,437	(3,068,199)	28,529,840	-6.42%
LaSalle Medical Office Fund II	3,034,791	170,124	(177,917)	3,026,998	-0.26%
Lowe Hospitality Partners	2,780,995	(299,160)	-	2,481,835	-10.76%
Silverpeak Legacy Pension Partners II, L.P.	64,056,062	2,340,257	-	66,396,319	3.65%
Silverpeak Legacy Pension Partners III, L.P.	8,046,176	(199,237)	-	7,846,939	-2.48%
Tishman Speyer Real Estate Venture VI	31,178,524	1,657,145	-	32,835,669	5.32%
Tishman Speyer Real Estate Venture VII	10,678,126	2,739,420	(8,816,182)	4,601,364	-56.91%
Total Non-Core Commingled	250,515,921	5,669,712	(13,892,262)	242,293,371	-3.28%
Total Real Estate	1,286,354,597	17,927,082	(17,122,628)	1,287,159,051	0.06%
Total Real Assets	3,606,161,916	20,210,338	86,459,904	3,712,832,158	2.96%
Total Assets	$ 22,894,549,017	$ (157,497,388)	$ (75,004,191)	$ 22,662,047,438	-1.02%

ALASKA RETIREMENT MANAGEMENT BOARD

Reporting of Funds by Manager

Participant Directed Plans

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

Interim Transit Account	**Beginning Invested Assets**	**Investment Income**	**Net Contributions (Withdrawals)**	**Transfers In (Out)**	**Ending Invested Assets**	**% Change in Invested Assets**	**% Change due to Investment Income (2)**
Treasury Division [(1)]							
Cash and Cash Equivalents	$ 6,476,633	$ 1,317	$ (4,508,373)	$ -	$ 1,969,577	-69.59%	0.03%
Participant Options							
T. Rowe Price							
Stable Value Fund	339,260,393	674,653	(1,458,317)	6,501,435	344,978,164	1.69%	0.20%
Small Cap Stock Fund	129,927,342	3,460,469	349,713	(2,806,458)	130,931,066	0.77%	2.69%
Alaska Balanced Trust	1,195,762,339	(6,087,206)	297,154	(2,151,253)	1,187,821,034	-0.66%	-0.51%
Long Term Balanced Fund	536,905,245	(4,209,546)	2,993,266	(2,322,713)	533,366,252	-0.66%	-0.78%
AK Target Date 2010 Trust	7,355,310	(47,371)	(9,305)	510,789	7,809,423	6.17%	-0.62%
AK Target Date 2015 Trust	103,539,574	(736,654)	287,115	(1,271,196)	101,818,839	-1.66%	-0.71%
AK Target Date 2020 Trust	65,220,028	(537,944)	367,905	(596,754)	64,453,235	-1.18%	-0.83%
AK Target Date 2025 Trust	39,891,274	(354,806)	408,007	(639,135)	39,305,340	-1.47%	-0.89%
AK Target Date 2030 Trust	29,870,767	(292,703)	463,115	(394,546)	29,646,633	-0.75%	-0.98%
AK Target Date 2035 Trust	25,385,972	(269,786)	579,772	(159,847)	25,536,111	0.59%	-1.05%
AK Target Date 2040 Trust	25,811,016	(287,728)	530,513	(469,339)	25,584,462	-0.88%	-1.11%
AK Target Date 2045 Trust	27,450,227	(294,882)	805,973	(241,814)	27,719,504	0.98%	-1.06%
AK Target Date 2050 Trust	29,038,672	(313,554)	921,834	42,313	29,689,265	2.24%	-1.06%
AK Target Date 2055 Trust	20,301,406	(203,781)	669,828	38,943	20,806,396	2.49%	-0.99%
Total Investments with T. Rowe Price	2,575,719,565	(9,500,839)	7,206,573	(3,959,575)	2,569,465,724		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	36,328,580	538	(128,198)	2,098,817	38,299,737	5.43%	0.00%
S&P 500 Stock Index Fund Series A	353,302,883	(850,062)	(1,305,384)	(3,359,451)	347,787,986	-1.56%	-0.24%
Russell 3000 Index	60,891,307	(2,974)	221,863	129,651	61,239,847	0.57%	0.00%
US Real Estate Investment Trust Index	33,516,700	608,126	(16,457)	1,692,069	35,800,438	6.81%	1.77%
World Equity Ex-US Index	24,285,659	(986,667)	152,463	355,433	23,806,888	-1.97%	-4.02%
Long US Treasury Bond Index	13,286,815	415,932	42,779	2,191,850	15,937,376	19.95%	2.89%
US Treasury Inflation Protected Securities Index	15,674,505	(171,006)	(166,939)	252,696	15,589,256	-0.54%	-1.09%
World Government Bond Ex-US Index	9,931,395	(98,735)	14,083	23,575	9,870,318	-0.61%	-0.99%
Global Balanced Fund	57,679,657	(783,780)	(65,934)	545,194	57,375,137	-0.53%	-1.35%
Total Investments with SSGA	604,897,501	(1,868,628)	(1,251,724)	3,929,834	605,706,983		
BlackRock							
Government/Credit Bond Fund	46,474,503	80,344	44,588	1,621,083	48,220,518	3.76%	0.17%
Intermediate Bond Fund	12,857,398	(35,872)	(5,779)	(856,924)	11,958,823	-6.99%	-0.29%
Total Investments with Barclays Global Investors	59,331,901	44,472	38,809	764,159	60,179,341		
Brandes Institutional							
International Equity Fund Fee	79,414,311	(3,244,918)	233,654	(813,582)	75,589,465	-4.82%	-4.10%
RCM							
Sustainable Core Opportunities Fund	42,365,461	(287,354)	68,759	79,164	42,226,030	-0.33%	-0.68%
Total All Funds	$ 3,368,205,371	$ (14,855,950)	$ 1,787,698	$ -	$ 3,355,137,119	-0.39%	-0.44%

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

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

Invested Assets (at fair value)	**July**	**August**	**September**	**October**	**November**	**December**
Investments with Treasury Division						
Cash and cash equivalents	$ 6,952	$ 7,920	$ 1,330	$ 6,559	$ 6,477	$ 1,970
Investments with T. Rowe Price						
Stable Value Fund	337,468	339,982	337,085	340,454	339,260	344,978
Small Cap Stock Fund	127,861	130,619	123,646	129,482	129,927	130,931
Alaska Balanced Trust	1,184,014	1,197,476	1,179,514	1,185,979	1,195,762	1,187,821
Long Term Balanced Fund	521,457	532,786	523,919	527,755	536,905	533,366
AK Target Date 2010 Trust	8,310	7,697	7,802	7,398	7,355	7,809
AK Target Date 2015 Trust	101,864	103,561	101,884	102,903	103,540	101,819
AK Target Date 2020 Trust	62,538	64,289	63,809	63,901	65,220	64,453
AK Target Date 2025 Trust	37,641	39,154	38,733	39,378	39,891	39,305
AK Target Date 2030 Trust	26,962	28,128	28,485	29,474	29,871	29,647
AK Target Date 2035 Trust	22,625	24,006	23,961	24,371	25,386	25,536
AK Target Date 2040 Trust	23,071	24,213	24,449	25,136	25,811	25,584
AK Target Date 2045 Trust	24,583	25,805	25,878	26,364	27,450	27,720
AK Target Date 2050 Trust	25,776	27,100	27,322	27,986	29,039	29,689
AK Target Date 2055 Trust	17,055	18,519	18,959	19,280	20,301	20,806
State Street Global Advisors						
State Street Treasury Money Market Fund - Inst.	36,580	37,327	36,833	37,325	36,329	38,300
S&P 500 Stock Index Fund Series A	324,031	336,062	334,995	343,815	353,303	347,788
Russell 3000 Index	54,512	57,336	57,408	59,041	60,891	61,240
US Real Estate Investment Trust Index	30,398	30,728	28,839	31,767	33,517	35,800
World Equity Ex-US Index	26,093	26,226	24,840	24,068	24,286	23,807
Long US Treasury Bond Index	10,679	11,483	11,489	14,450	13,287	15,937
US Treasury Inflation Protected Securities Index	16,554	16,416	15,840	15,663	15,675	15,589
World Government Bond Ex-US Index	10,147	10,223	9,738	9,716	9,931	9,870
Global Balanced Fund	56,301	57,430	55,787	56,520	57,680	57,375
Investments with BlackRock						
Government/Credit Bond Fund	45,303	45,547	45,334	46,274	46,475	48,221
Intermediate Bond Fund	12,508	12,599	12,594	12,732	12,857	11,959
Investments with Brandes Institutional						
International Equity Fund Fee	84,623	84,803	81,042	78,780	79,414	75,589
Investments with RCM						
Sustainable Core Opportunities Fund	38,809	41,386	40,505	40,857	42,365	42,226
Total Invested Assets	**$ 3,274,713**	**$ 3,338,819**	**$ 3,282,020**	**$ 3,327,429**	**$ 3,368,205**	**$ 3,355,137**
Change in Invested Assets						
Beginning Assets	$ 3,312,097	$ 3,274,713	$ 3,338,819	$ 3,282,020	$ 3,327,429	$ 3,368,205
Investment Earnings	(36,071)	65,542	(55,393)	46,399	38,891	(14,856)
Net Contributions (Withdrawals)	(1,313)	(1,436)	(1,406)	(990)	1,885	1,788
Ending Invested Assets	**$ 3,274,713**	**$ 3,338,819**	**$ 3,282,020**	**$ 3,327,429**	**$ 3,368,205**	**$ 3,355,137**

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
December 31, 2014

	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (1)
Participant Options							
T. Rowe Price							
Interest Income Fund	$ 182,294,497	$ 393,092	$ (1,440,490)	$ 770,702	$ 182,017,801	-0.15%	0.22%
Small Cap Stock Fund	95,101,532	2,526,429	277,841	(722,785)	97,183,017	2.19%	2.66%
Alaska Balanced Trust	15,139,865	(74,541)	98,858	4,110	15,168,292	0.19%	-0.49%
Long Term Balanced Fund	52,236,750	(406,301)	(120,011)	(141,320)	51,569,118	-1.28%	-0.78%
AK Target Date 2010 Trust	3,231,671	(19,415)	16,363	130,650	3,359,269	3.95%	-0.59%
AK Target Date 2015 Trust	10,030,392	(71,192)	141,100	286,806	10,387,106	3.56%	-0.69%
AK Target Date 2020 Trust	15,242,649	(121,016)	345,229	(440,836)	15,026,026	-1.42%	-0.80%
AK Target Date 2025 Trust	7,686,873	(74,225)	177,802	(323,751)	7,466,699	-2.86%	-0.97%
AK Target Date 2030 Trust	4,873,174	(49,220)	121,471	119,140	5,064,565	3.93%	-0.99%
AK Target Date 2035 Trust	3,153,728	(32,430)	80,162	(81,696)	3,119,764	-1.08%	-1.03%
AK Target Date 2040 Trust	3,098,975	(36,664)	80,377	77,416	3,220,104	3.91%	-1.15%
AK Target Date 2045 Trust	1,882,606	(19,557)	82,032	(87,157)	1,857,924	-1.31%	-1.04%
AK Target Date 2050 Trust	1,429,964	(14,757)	50,287	1,787	1,467,281	2.61%	-1.01%
AK Target Date 2055 Trust	2,108,380	(15,922)	39,649	85,563	2,217,670	5.18%	-0.73%
Total Investments with T. Rowe Price	397,511,056	1,984,281	(49,330)	(321,371)	399,124,636		
State Street Global Advisors							
State Street Treasury Money Market Fund - Inst.	11,731,378	176	8,872	1,016,275	12,756,701	8.74%	0.00%
Russell 3000 Index	21,545,645	3,864	184,453	267,155	22,001,117	2.11%	0.02%
US Real Estate Investment Trust Index	12,040,452	224,916	75,667	493,947	12,834,982	6.60%	1.82%
World Equity Ex-US Index	8,575,017	(347,789)	91,196	(71,510)	8,246,914	-3.83%	-4.05%
Long US Treasury Bond Index	4,662,714	136,579	17,777	524,713	5,341,783	14.56%	2.77%
US Treasury Inflation Protected Securities Index	7,347,501	(82,537)	(148,866)	196,928	7,313,026	-0.47%	-1.12%
World Government Bond Ex-US Index	3,552,918	(35,718)	10,664	111,745	3,639,609	2.44%	-0.99%
Global Balanced Fund	40,701,060	(552,564)	104,934	(74,544)	40,178,886	-1.28%	-1.36%
Total Investments with SSGA	110,156,685	(653,073)	344,697	2,464,709	112,313,018		
BlackRock							
S&P 500 Index Fund	184,227,503	(455,167)	314,462	(1,736,601)	182,350,197	-1.02%	-0.25%
Government/Credit Bond Fund	29,135,409	49,543	110,618	386,398	29,681,968	1.88%	0.17%
Intermediate Bond Fund	14,389,426	(39,866)	(51,819)	(72,293)	14,225,448	-1.14%	-0.28%
Total Investments with Barclays Global Investors	227,752,338	(445,490)	373,261	(1,422,496)	226,257,613		
Brandes Institutional							
International Equity Fund Fee	46,219,161	(1,886,882)	231,680	(699,569)	43,864,390	-5.09%	-4.10%
RCM							
Sustainable Core Opportunities Fund	17,190,426	(105,928)	99,339	(21,273)	17,162,564	-0.16%	-0.61%
Total All Funds	$ 798,829,666	$ (1,107,092)	$ 999,647	$ -	$ 798,722,221	-0.01%	-0.14%

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

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

Invested Assets (at fair value)	**July**	**August**	**September**	**October**	**November**	**December**
Investments with T. Rowe Price						
Interest Income Fund						
Cash and cash equivalents	$ 6,053	$ 9,325	$ 8,447	$ 9,067	$ 10,927	$ 9,815
Synthetic Investment Contracts	174,149	170,933	171,144	172,210	171,367	172,203
Small Cap Stock Fund	91,564	94,865	90,111	94,714	95,102	97,183
Long Term Balanced Fund	14,384	15,119	14,509	14,315	15,140	15,168
Alaska Balanced Trust	51,030	51,987	50,662	50,895	52,237	51,569
AK Target Date 2010 Trust	3,023	3,053	3,074	3,109	3,232	3,359
AK Target Date 2015 Trust	9,771	9,945	10,263	10,426	10,030	10,387
AK Target Date 2020 Trust	13,775	14,430	14,543	14,458	15,243	15,026
AK Target Date 2025 Trust	6,875	7,139	7,042	7,443	7,687	7,467
AK Target Date 2030 Trust	4,534	4,464	4,607	4,730	4,873	5,065
AK Target Date 2035 Trust	3,136	3,096	3,023	3,069	3,154	3,120
AK Target Date 2040 Trust	2,896	3,050	3,015	3,008	3,099	3,220
AK Target Date 2045 Trust	1,611	1,681	1,698	1,753	1,883	1,858
AK Target Date 2050 Trust	1,250	1,334	1,340	1,376	1,430	1,467
AK Target Date 2055 Trust	1,909	2,051	2,054	2,241	2,108	2,218
State Street Global Advisors						
State Street Treasury Money Market Fund - Inst.	12,052	12,178	12,207	12,744	11,731	12,757
Russell 3000 Index	19,311	20,245	20,133	20,780	21,546	22,001
US Real Estate Investment Trust Index	11,351	10,968	10,187	11,543	12,040	12,835
World Equity Ex-US Index	8,973	9,177	8,627	8,562	8,575	8,247
Long US Treasury Bond Index	3,393	3,656	3,688	4,389	4,663	5,342
US Treasury Inflation Protected Securities Index	7,832	7,700	7,638	7,622	7,348	7,313
World Government Bond Ex-US Index	3,869	3,918	3,578	3,568	3,553	3,640
Global Balanced Fund	40,960	41,605	40,332	40,269	40,701	40,179
Investments with BlackRock						
S&P 500 Index Fund	171,771	176,659	175,469	179,072	184,228	182,350
Government/Credit Bond Fund	29,050	29,191	28,879	29,088	29,135	29,682
Intermediate Bond Fund	14,475	14,377	14,244	14,317	14,389	14,225
Investments with Brandes Institutional						
International Equity Fund Fee	49,285	49,171	47,081	45,820	46,219	43,864
Investments with RCM						
Sustainable Opportunities Fund	15,784	16,987	16,680	16,770	17,190	17,163
Total Invested Assets	**$ 774,066**	**$ 788,302**	**$ 774,275**	**$ 787,358**	**$ 798,830**	**$ 798,722**
Change in Invested Assets						
Beginning Assets	$ 785,487	$ 774,066	$ 788,302	$ 774,275	$ 787,358	$ 798,830
Investment Earnings	(11,707)	17,483	(14,335)	13,345	9,906	(1,107)
Net Contributions (Withdrawals)	287	(3,247)	308	(262)	1,566	1,000
Ending Invested Assets	**$ 774,066**	**$ 788,302**	**$ 774,275**	**$ 787,358**	**$ 798,830**	**$ 798,722**

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
December 31, 2014

Interim Transit Account	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Treasury Division [(1)]							
Cash and Cash Equivalents	$ 5,381,821	$ 350	$ (164,620)	$ -	$ 5,217,551	-3.05%	0.01%
Participant Options							
T. Rowe Price							
Alaska Money Market	4,288,196	34	(36,097)	42,978	4,295,111	0.16%	0.00%
Small Cap Stock Fund	52,420,079	1,405,738	420,699	(594,461)	53,652,055	2.35%	2.69%
Alaska Balanced Trust	1,741,653	(9,362)	(11,907)	16,500	1,736,884	-0.27%	-0.54%
Long Term Balanced Fund	23,137,143	(182,854)	168,253	(45,284)	23,077,258	-0.26%	-0.79%
AK Target Date 2010 Trust	1,753,501	(11,033)	44,958	(31,457)	1,755,969	0.14%	-0.63%
AK Target Date 2015 Trust	7,346,678	(52,723)	205,759	(9,404)	7,490,310	1.96%	-0.71%
AK Target Date 2020 Trust	15,077,542	(123,621)	479,560	29,116	15,462,597	2.55%	-0.81%
AK Target Date 2025 Trust	21,584,268	(194,744)	617,068	(1,354)	22,005,238	1.95%	-0.89%
AK Target Date 2030 Trust	22,202,207	(217,880)	693,389	5,112	22,682,828	2.16%	-0.97%
AK Target Date 2035 Trust	25,641,781	(266,424)	710,199	(3,422)	26,082,134	1.72%	-1.02%
AK Target Date 2040 Trust	32,147,223	(347,816)	881,351	(7,532)	32,673,226	1.64%	-1.07%
AK Target Date 2045 Trust	39,025,180	(421,281)	1,115,765	(42,257)	39,677,407	1.67%	-1.06%
AK Target Date 2050 Trust	45,261,515	(486,612)	1,313,941	(10,493)	46,078,351	1.80%	-1.06%
AK Target Date 2055 Trust	23,710,959	(254,769)	1,033,170	(58,914)	24,430,446	3.03%	-1.05%
Total Investments with T. Rowe Price	315,337,925	(1,163,347)	7,636,108	(710,872)	321,099,814		
State Street Global Advisors							
Money Market	1,249,944	20	26,327	126,351	1,402,642	12.22%	0.00%
S&P 500 Stock Index Fund Series A	35,514,784	(95,925)	339,402	(1,100,942)	34,657,319	-2.41%	-0.27%
Russell 3000 Index	38,461,871	(1,396)	323,198	(694,373)	38,089,300	-0.97%	0.00%
US Real Estate Investment Trust Index	7,845,031	141,348	86,626	(155,236)	7,917,769	0.93%	1.81%
World Equity Ex-US Index	23,488,954	(960,247)	221,995	372,297	23,122,999	-1.56%	-4.04%
Long US Treasury Bond Index	587,869	17,235	12,212	23,955	641,271	9.08%	2.84%
US Treasury Inflation Protected Securities Index	3,034,393	(34,368)	21,536	114,137	3,135,698	3.34%	-1.11%
World Government Bond Ex-US Index	5,691,672	(58,773)	25,394	260,882	5,919,175	4.00%	-1.01%
Global Balanced Fund	13,992,360	(192,628)	95,150	1,446,508	15,341,390	9.64%	-1.30%
Total Investments with SSGA	129,866,878	(1,184,734)	1,151,840	393,579	130,227,563		
BlackRock							
Government/Credit Bond Fund	29,203,267	50,494	173,862	723,291	30,150,914	3.25%	0.17%
Intermediate Bond Fund	455,536	(956)	3,558	101,551	559,689	22.86%	-0.19%
Total Investments with Barclays Global Investors	29,658,803	49,539	177,420	824,842	30,710,603		
Brandes Institutional							
International Equity Fund Fee	42,616,971	(1,757,631)	412,771	(380,046)	40,892,065	-4.05%	-4.12%
RCM							
Sustainable Core Opportunities Fund	5,128,595	(31,690)	66,664	(127,503)	5,036,066	-1.80%	-0.62%
Total All Funds	$ 527,990,993	$ (4,087,514)	$ 9,280,183	$ -	$ 533,183,662	0.98%	-0.77%

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

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

Invested Assets (at fair value)	July	August	September	October	November	December
Investments with Treasury Division						
Cash and cash equivalents	$ 7,897	$ 5,808	$ 5,373	$ 5,236	$ 5,218	$ 5,218
Investments with T. Rowe Price						
Alaska Money Market	3,930	4,288	4,086	4,278	4,288	4,295
Small Cap Stock Fund	48,943	49,624	47,625	51,757	52,420	53,652
Alaska Balanced Trust	1,689	1,637	1,630	1,692	1,742	1,737
Long Term Balanced Fund	22,623	23,171	22,704	22,883	23,137	23,077
AK Target Date 2010 Trust	1,599	1,662	1,664	1,734	1,754	1,756
AK Target Date 2015 Trust	6,655	6,911	6,917	7,097	7,347	7,490
AK Target Date 2020 Trust	13,660	14,223	14,193	14,694	15,078	15,463
AK Target Date 2025 Trust	19,184	20,117	20,135	20,892	21,584	22,005
AK Target Date 2030 Trust	19,606	20,623	20,620	21,502	22,202	22,683
AK Target Date 2035 Trust	22,377	23,489	23,492	24,593	25,642	26,082
AK Target Date 2040 Trust	28,517	30,017	29,672	31,001	32,147	32,673
AK Target Date 2045 Trust	34,393	36,233	35,974	37,617	39,025	39,677
AK Target Date 2050 Trust	39,991	42,129	41,842	43,655	45,262	46,078
AK Target Date 2055 Trust	19,592	21,055	21,323	22,606	23,711	24,430
State Street Global Advisors						
Money Market	1,093	1,230	1,254	1,334	1,250	1,403
S&P 500 Stock Index Fund Series A	35,743	37,537	36,317	35,940	35,515	34,657
Russell 3000 Index	34,232	36,919	36,677	37,664	38,462	38,089
US Real Estate Investment Trust Index	6,980	7,262	6,882	7,638	7,845	7,918
World Equity Ex-US Index	26,247	25,389	23,409	23,258	23,489	23,123
Long US Treasury Bond Index	508	605	567	526	588	641
US Treasury Inflation Protected Securities Index	3,085	3,096	2,998	2,993	3,034	3,136
World Government Bond Ex-US Index	5,694	5,730	5,540	5,551	5,692	5,919
Global Balanced Fund	11,522	11,724	11,729	12,632	13,992	15,341
Investments with BlackRock						
Government/Credit Bond Fund	28,182	28,517	28,231	28,414	29,203	30,151
Intermediate Bond Fund	412	425	412	448	456	560
Investments with Brandes Institutional						
International Equity Fund Fee	39,596	41,627	40,971	41,319	42,617	40,892
Investments with RCM						
Sustainable Opportunities Fund	4,705	4,840	4,776	4,971	5,129	5,036
Total Invested Assets	**$ 488,654**	**$ 505,891**	**$ 497,013**	**$ 513,927**	**$ 527,827**	**$ 533,184**
Change in Invested Assets						
Beginning Assets	$ 491,616	$ 488,654	$ 505,891	$ 497,013	$ 514,072	$ 527,991
Investment Earnings	(9,423)	13,087	(13,911)	9,197	7,392	(4,088)
Net Contributions (Withdrawals)	6,462	4,149	5,034	7,717	6,363	9,280
Ending Invested Assets	**$ 488,654**	**$ 505,891**	**$ 497,013**	**$ 513,927**	**$ 527,827**	**$ 533,184**

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
December 31, 2014

Interim Transit Account	Beginning Invested Assets	Investment Income	Net Contributions (Withdrawals)	Transfers In (Out)	Ending Invested Assets	% Change in Invested Assets	% Change due to Investment Income (2)
Treasury Division [1]							
Cash and Cash Equivalents	$ 2,068,235	$ (43)	$ (208,384)	$ -	$ 1,859,808	-10.08%	0.00%
Participant Options							
T. Rowe Price							
Alaska Money Market	1,576,652	16	25,980	156,983	1,759,631	11.61%	0.00%
Small Cap Stock Fund	21,447,751	575,040	91,679	(235,391)	21,879,079	2.01%	2.69%
Alaska Balanced Trust	280,257	(1,446)	8,796	4,271	291,878	4.15%	-0.50%
Long Term Balanced Fund	11,830,384	(93,562)	85,320	(16,637)	11,805,505	-0.21%	-0.79%
AK Target Date 2010 Trust	456,165	(2,827)	9,698	-	463,036	1.51%	-0.61%
AK Target Date 2015 Trust	2,191,138	(15,836)	52,807	-	2,228,109	1.69%	-0.71%
AK Target Date 2020 Trust	4,751,159	(39,433)	125,620	-	4,837,346	1.81%	-0.82%
AK Target Date 2025 Trust	6,787,426	(63,195)	165,222	(344)	6,889,109	1.50%	-0.92%
AK Target Date 2030 Trust	7,352,373	(72,600)	266,009	(46,318)	7,499,464	2.00%	-0.97%
AK Target Date 2035 Trust	11,347,782	(119,382)	342,023	(7,107)	11,563,316	1.90%	-1.04%
AK Target Date 2040 Trust	12,137,285	(132,854)	325,418	(21,416)	12,308,433	1.41%	-1.08%
AK Target Date 2045 Trust	20,967,492	(228,500)	394,975	1,000	21,134,967	0.80%	-1.08%
AK Target Date 2050 Trust	28,443,287	(311,292)	643,212	(2,183)	28,773,024	1.16%	-1.08%
AK Target Date 2055 Trust	5,922,972	(64,443)	367,291	(2,127)	6,223,693	5.08%	-1.06%
Total Investments with T. Rowe Price	135,492,123	(570,314)	2,904,050	(169,269)	137,656,590		
State Street Global Advisors							
Money Market	110,617	2	2,046	23,159	135,824	22.79%	0.00%
S&P 500 Stock Index Fund Series A	11,901,597	(34,839)	76,430	(372,094)	11,571,094	-2.78%	-0.30%
Russell 3000 Index	16,765,984	(5,962)	117,219	(484,739)	16,392,502	-2.23%	-0.04%
US Real Estate Investment Trust Index	2,718,856	48,458	19,965	(93,064)	2,694,215	-0.91%	1.81%
World Equity Ex-US Index	9,220,108	(377,710)	66,554	8,305	8,917,257	-3.28%	-4.08%
Long US Treasury Bond Index	121,216	3,660	2,134	5,839	132,849	9.60%	2.92%
US Treasury Inflation Protected Securities Index	1,251,062	(14,101)	9,830	9,999	1,256,790	0.46%	-1.12%
World Government Bond Ex-US Index	2,834,153	(28,951)	23,593	116,057	2,944,852	3.91%	-1.00%
Global Balanced Fund	8,172,406	(111,498)	55,857	701,652	8,818,417	7.90%	-1.30%
Total Investments with SSGA	53,095,999	(520,941)	373,628	(84,886)	52,863,800		
BlackRock							
Government/Credit Bond Fund	14,306,312	25,119	107,765	399,328	14,838,524	3.72%	0.17%
Intermediate Bond Fund	101,638	(279)	1,756	545	103,660	1.99%	-0.27%
Total Investments with Barclays Global Investors	14,407,950	24,840	109,521	399,873	14,942,184		
Brandes Institutional							
International Equity Fund Fee	17,059,630	(708,463)	128,275	(107,101)	16,372,341	-4.03%	-4.15%
RCM							
Sustainable Core Opportunities Fund	1,265,085	(8,141)	14,743	(38,617)	1,233,070	-2.53%	-0.65%
Total All Funds	$ 223,389,022	$ (1,783,062)	$ 3,321,833	$ -	$ 224,927,793	0.69%	-0.79%

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

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

Invested Assets (at fair value)	July	August	September	October	November	December
Investments with Treasury Division						
Cash and cash equivalents	$ 1,915	$ 2,028	$ 2,028	$ 1,923	$ 2,068	$ 1,860
Investments with T. Rowe Price						
Alaska Money Market	1,594	1,601	1,563	1,561	1,577	1,760
Small Cap Stock Fund	19,566	19,689	18,940	20,961	21,448	21,879
Alaska Balanced Trust	263	254	248	258	280	292
Long Term Balanced Fund	11,630	11,937	11,707	11,748	11,830	11,806
AK Target Date 2010 Trust	511	522	459	453	456	463
AK Target Date 2015 Trust	2,064	2,100	2,087	2,163	2,191	2,228
AK Target Date 2020 Trust	4,680	4,696	4,409	4,591	4,751	4,837
AK Target Date 2025 Trust	6,313	6,480	6,302	6,536	6,787	6,889
AK Target Date 2030 Trust	6,884	7,093	6,801	7,068	7,352	7,499
AK Target Date 2035 Trust	10,355	10,627	10,441	10,926	11,348	11,563
AK Target Date 2040 Trust	11,347	11,585	11,310	11,750	12,137	12,308
AK Target Date 2045 Trust	19,671	20,021	19,519	20,241	20,967	21,135
AK Target Date 2050 Trust	26,464	27,072	26,380	27,492	28,443	28,773
AK Target Date 2055 Trust	5,114	5,251	5,229	5,618	5,923	6,224
State Street Global Advisors						
Money Market	111	159	167	158	111	136
S&P 500 Stock Index Fund Series A	12,900	13,305	12,635	12,283	11,902	11,571
Russell 3000 Index	15,430	16,563	16,273	16,570	16,766	16,393
US Real Estate Investment Trust Index	2,538	2,519	2,380	2,621	2,719	2,694
World Equity Ex-US Index	11,016	10,507	9,538	9,293	9,220	8,917
Long US Treasury Bond Index	99	101	100	104	121	133
US Treasury Inflation Protected Securities Index	1,233	1,248	1,228	1,240	1,251	1,257
World Government Bond Ex-US Index	2,779	2,836	2,742	2,772	2,834	2,945
Global Balanced Fund	6,824	6,802	6,880	7,512	8,172	8,818
Investments with BlackRock						
Government/Credit Bond Fund	13,781	13,989	13,929	13,925	14,306	14,839
Intermediate Bond Fund	89	94	94	92	102	104
Investments with Brandes Institutional						
International Equity Fund Fee	15,356	16,041	15,854	16,311	17,060	16,372
Investments with RCM						
Sustainable Opportunities Fund	1,186	1,183	1,150	1,228	1,265	1,233
Total Invested Assets	**$ 211,713**	**$ 216,303**	**$ 210,392**	**$ 217,397**	**$ 223,389**	**$ 224,928**
Change in Invested Assets						
Beginning Assets	$ 214,956	$ 211,713	$ 216,191	$ 210,392	$ 217,397	$ 223,389
Investment Earnings	(4,029)	5,608	(5,871)	3,802	3,085	(1,783)
Net Contributions (Withdrawals)	785	(1,018)	72	3,202	2,908	3,322
Ending Invested Assets	**$ 211,713**	**$ 216,303**	**$ 210,392**	**$ 217,397**	**$ 223,389**	**$ 224,928**

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

ALASKA RETIREMENT MANAGEMENT BOARD

FINANCIAL REPORT
(Supplement to the Treasury Division Report)

As of December 31, 2014

Prepared by the Division of Retirement & Benefits

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

	Contributions				Expenditures				Net
	Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	Contributions/ (Withdrawals)
Public Employees' Retirement System (PERS)									
Defined Benefit Plans:									
Retirement Trust	$ 168,681,032	$ 666,666,666	$ 7,534	$ 835,355,232	$ (338,361,024)	$ (5,294,134)	$ (20,038,042)	$ (363,693,200)	$ 471,662,032
Retirement Health Care Trust	87,727,226	-	11,502,439	99,229,665	(173,526,005)	-	$ (6,504,679)	(180,030,684)	(80,801,019)
Total Defined Benefit Plans	256,408,258	666,666,666	11,509,973	934,584,897	(511,887,029)	(5,294,134)	$ (26,542,721)	(543,723,884)	390,861,013
Defined Contribution Plans:									
Participant Directed Retirement	56,649,948	-	-	56,649,948	-	(15,630,928)	(1,705,001)	(17,335,929)	39,314,019
Health Reimbursement Arrangement (a)	14,800,272	-	-	14,800,272	-	-	(6)	(6)	14,800,266
Retiree Medical Plan (a)	6,593,629	-	-	6,593,629	-	-	(7,319)	(7,319)	6,586,310
Occupational Death and Disability: (a)									
Public Employees	832,986	-	-	832,986	(114,400)	-	(2,261)	(116,661)	716,325
Police and Firefighters	549,676	-	-	549,676	(49,719)	-	(2,261)	(51,980)	497,696
Total Defined Contribution Plans	79,426,511	-	-	79,426,511	(164,119)	(15,630,928)	(1,716,848)	(17,511,895)	61,914,616
Total PERS	**335,834,769**	**666,666,666**	**11,509,973**	**1,014,011,408**	**(512,051,148)**	**(20,925,062)**	**(28,259,569)**	**(561,235,779)**	**452,775,629**
Teachers' Retirement System (TRS)									
Defined Benefit Plans:									
Retirement Trust	31,331,716	1,108,466,667	4,100	1,139,802,483	(207,358,007)	(1,432,820)	(8,137,962)	(216,928,789)	922,873,694
Retirement Health Care Trust	9,344,087	224,866,667	3,810,673	238,021,427	(55,214,431)	-	(2,389,662)	(57,604,093)	180,417,334
Total Defined Benefit Plans	40,675,803	1,333,333,334	3,814,773	1,377,823,910	(262,572,438)	(1,432,820)	(10,527,624)	(274,532,882)	1,103,291,028
Defined Contribution Plans:									
Participant Directed Retirement	15,262,792	-	-	15,262,792	-	(5,571,586)	(581,039)	(6,152,625)	9,110,167
Health Reimbursement Arrangement (a)	3,133,367	-	-	3,133,367	-	-	-	-	3,133,367
Retiree Medical Plan (a)	1,851,442	-	-	1,851,442	-	-	(7,876)	(7,876)	1,843,566
Occupational Death and Disability (a)	(9)	-	-	(9)	-	-	(3,215)	(3,215)	(3,224)
Total Defined Contribution Plans	20,247,592	-	-	20,247,592	-	(5,571,586)	(592,130)	(6,163,716)	14,083,876
Total TRS	**60,923,395**	**1,333,333,334**	**3,814,773**	**1,398,071,502**	**(262,572,438)**	**(7,004,406)**	**(11,119,754)**	**(280,696,598)**	**1,117,374,904**
Judicial Retirement System (JRS)									
Defined Benefit Plan Retirement Trust	2,791,139	5,241,619	-	8,032,758	(5,295,812)	-	(206,679)	(5,502,491)	2,530,267
Defined Benefit Retirement Health Care Trust	267,539	-	31,522	299,061	(280,949)	-	(33,026)	(313,975)	(14,914)
Total JRS	**3,058,678**	**5,241,619**	**31,522**	**8,331,819**	**(5,576,761)**	**-**	**(239,705)**	**(5,816,466)**	**2,515,353**
National Guard/Naval Militia Retirement System (NGNMRS)									
Defined Benefit Plan Retirement Trust (a)	627,300	-	-	627,300	(769,503)	-	(162,020)	(931,523)	(304,223)
Other Participant Directed Plans									
Supplemental Annuity Plan	87,619,880	-	-	87,619,880	-	(84,780,158)	(4,312,386)	(89,092,544)	(1,472,664)
Deferred Compensation Plan	21,698,891	-	-	21,698,891	-	(21,451,748)	(596,064)	(22,047,812)	(348,921)
Total All Funds	**509,762,913**	**2,005,241,619**	**15,356,268**	**2,530,360,800**	**(780,969,850)**	**(134,161,374)**	**(44,689,498)**	**(959,820,722)**	**1,570,540,078**
Total Non-Participant Directed	328,531,402	2,005,241,619	15,356,268	2,349,129,289	(780,969,850)	(6,726,954)	(37,495,008)	(825,191,812)	1,523,937,477
Total Participant Directed	181,231,511	-	-	181,231,511	-	(127,434,420)	(7,194,490)	(134,628,910)	46,602,601
Total All Funds	**$ 509,762,913**	**$ 2,005,241,619**	**$ 15,356,268**	**$ 2,530,360,800**	**$ (780,969,850)**	**$ (134,161,374)**	**$ (44,689,498)**	**$ (959,820,722)**	**$ 1,570,540,078**

(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 December 31, 2014

	Contributions				**Expenditures**				**Net**
	Contributions EE and ER	State of Alaska	Other	Total Contributions	Benefits	Refunds	Administrative & Investment	Total Expenditures	**Contributions/ (Withdrawals)**
Public Employees' Retirement System (PERS)									
Defined Benefit Plans:									
Retirement Trust	$ 35,563,236	$ -	$ 695	$ 35,563,931	$ (55,826,254)	$ (987,917)	$ (8,626,687)	$ (65,440,858)	$ (29,876,927)
Retirement Health Care Trust	18,823,015	-	2,788,773	21,611,788	(34,280,678)	-	(1,056,993)	(35,337,671)	(13,725,883)
Total Defined Benefit Plans	54,386,251	-	2,789,468	57,175,719	(90,106,932)	(987,917)	(9,683,680)	(100,778,529)	(43,602,810)
Defined Contribution Plans:									
Participant Directed Retirement	12,356,530	-	-	12,356,530	-	(2,284,076)	(792,271)	(3,076,347)	9,280,183
Health Reimbursement Arrangement [(a)]	3,275,710	-	-	3,275,710	-	-	-	-	3,275,710
Retiree Medical Plan [(a)]	1,527,038	-	-	1,527,038	-	-	(1,379)	(1,379)	1,525,659
Occupational Death and Disability: [(a)]								-	
Public Employees	178,887	-	-	178,887	(14,838)	-	(1,380)	(16,218)	162,669
Police and Firefighters	105,369	-	-	105,369	(7,802)	-	(1,380)	(9,182)	96,187
Total Defined Contribution Plans	17,443,534	-	-	17,443,534	(22,640)	(2,284,076)	(796,410)	(3,103,126)	14,340,408
Total PERS	**71,829,785**	**-**	**2,789,468**	**74,619,253**	**(90,129,572)**	**(3,271,993)**	**(10,480,090)**	**(103,881,655)**	**(29,262,402)**
Teachers' Retirement System (TRS)									
Defined Benefit Plans:									
Retirement Trust	8,130,414	-	109	8,130,523	(34,104,424)	(129,676)	(3,467,197)	(37,701,297)	(29,570,774)
Retirement Health Care Trust	2,669,336	-	930,417	3,599,753	(11,073,995)	-	(406,874)	(11,480,869)	(7,881,116)
Total Defined Benefit Plans	10,799,750	-	930,526	11,730,276	(45,178,419)	(129,676)	(3,874,071)	(49,182,166)	(37,451,890)
Defined Contribution Plans:									
Participant Directed Retirement	4,236,897	-	-	4,236,897	-	(636,768)	(278,296)	(915,064)	3,321,833
Health Reimbursement Arrangement [(a)]	845,345	-	-	845,345	-	-	-	-	845,345
Retiree Medical Plan [(a)]	560,105	-	-	560,105	-	-	(1,379)	(1,379)	558,726
Occupational Death and Disability [(a)]	-	-	-	-	-	-	(1,380)	(1,380)	(1,380)
Total Defined Contribution Plans	5,642,347	-	-	5,642,347	-	(636,768)	(281,055)	(917,823)	4,724,524
Total TRS	**16,442,097**	**-**	**930,526**	**17,372,623**	**(45,178,419)**	**(766,444)**	**(4,155,126)**	**(50,099,989)**	**(32,727,366)**
Judicial Retirement System (JRS)									
Defined Benefit Plan Retirement Trust	710,921	-	-	710,921	(911,899)	-	(50,435)	(962,334)	(251,413)
Defined Benefit Retirement Health Care Trust	65,619	-	7,659	73,278	(54,265)	-	(6,075)	(60,340)	12,938
Total JRS	**776,540**	**-**	**7,659**	**784,199**	**(966,164)**	**-**	**(56,510)**	**(1,022,674)**	**(238,475)**
National Guard/Naval Militia Retirement System (NGNMRS)									
Defined Benefit Plan Retirement Trust [(a)]	-	-	-	-	(135,650)	-	(38,282)	(173,932)	(173,932)
Other Participant Directed Plans									
Supplemental Annuity Plan	15,593,828	-	-	15,593,828	-	(11,912,010)	(1,894,120)	(13,806,130)	1,787,698
Deferred Compensation Plan	5,230,901	-	-	5,230,901	-	(3,974,843)	(256,411)	(4,231,254)	999,647
Total All Funds	**109,873,151**	**-**	**3,727,653**	**113,600,804**	**(136,409,805)**	**(19,925,290)**	**(16,880,539)**	**(173,215,634)**	**(59,614,830)**
Total Non-Participant Directed	72,454,995	-	3,727,653	76,182,648	(136,409,805)	(1,117,593)	(13,659,441)	(151,186,839)	(75,004,191)
Total Participant Directed	37,418,156	-	-	37,418,156	-	(18,807,697)	(3,221,098)	(22,028,795)	15,389,361
Total All Funds	**$ 109,873,151**	**$ -**	**$ 3,727,653**	**$ 113,600,804**	**$ (136,409,805)**	**$ (19,925,290)**	**$ (16,880,539)**	**$ (173,215,634)**	**$ (59,614,830)**

(a) Employer only contributions.

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

	PERS DCR Plan	TRS DCR Plan	Supplemental Annuity Plan	Deferred Compensation	TOTAL
Payment to Beneficiary	-	-	58,636	124,226	182,862
Death Benefit	165,904	14,766	2,578,804	1,328,789	4,088,263
Disability	61,807	-	124,279	-	186,086
Hardship	-	-	-	18,783	18,783
Minimum Required Distribution	16,016	1,082	1,966,796	854,986	2,838,880
Qualified Domestic Relations Order	63,801	-	1,812,109	193,323	2,069,233
Retirement	23,523	3,750	2,589,890	3,075,997	5,693,160
Separation from Service	15,299,877	5,551,988	74,744,650	15,761,353	111,357,868
Purchase of Service Credit	-	-	643,180	94,291	737,471
Transfer to a Qualifying Plan	-	-	261,814	-	261,814
TOTAL	15,630,928	5,571,586	84,780,158	21,451,748	127,434,420

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Manager Review Meeting

ACTION:

DATE: February 12, 2015

INFORMATION: X

BACKGROUND

In preparation for the annual Manager Review meeting with the Investment Advisory Council (IAC) members and the general consultant (Callan), staff updated and sent the 2014 Manager Questionnaire to all investment managers under contract with the Alaska Retirement Management Board (Board). The questionnaire topics can broadly be classified as: Ownership/Structure, Process, Portfolio Performance and Characteristics, and Other Issues – including the investment process, change in ownership, growth of assets, and legal issues.

Every manager completed a questionnaire, and the responses were provided to the CIO, Callan, and IAC members. After reviewing all questionnaires, the group met to discuss the manager responses and other matters to be brought before the group. Participants in the review were Gary Bader, Chief Investment Officer; Judy Hall, Board Liaison Officer; Paul Erlendson, Callan Associates; and Dr. Jerrold Mitchell, Dr. Bill Jennings and Robert Shaw, IAC members. The reviewers met in San Francisco November 25, 2014 (Dr. Mitchell participated via teleconference).

Trustees had requested that staff and the IAC review the GEMS model used by Buck consultants in the FY2013 actuarial valuations of the retirement systems. Jay Kloepfer and Karen Harris of Callan Associates participated in that discussion topic.

MEETING NOTES:

GEMS Model Discussion

Paul Erlendson provided additional background on the GEMS model, describing it as a process coming from the insurance business to justify capital market assumptions, now being picked up by US consulting firms. Callan Associates is subscribing to GEMS through its RiskFirst software for more flexibility in developing capital market assumptions. It doesn't give you assumptions, but it tells you what happens to your assumptions in various scenarios.

Jay Kloepfer and Karen Harris provided a perspective of using GEMS as a risk management tool for its corporate clients in conjunction with RiskFirst software which has GEMS as an underlying component. The software has capability for projection and simulation in forecasting capital markets using qualitative and quantitative inputs. Callan is still digging into the details of the GEMS component, and will continue to analyze and attempt to replicate its under-lying assumptions.

In reference to the 9% earnings assumption from the September Buck Consultants presentation, the discussion turned to questions on the basis for the long-term forecast, definitions of "normal" bond markets, the range of reasonableness, and use for a long-term time horizon. Attached is a memo further describing GEMS.

Manager Review

Each participant identified certain managers for further discussion and in-depth review:

- Allianz/RCM: Questions regarding the Allianz relationship to PIMCO and its status related to the Bill Gross departure from that firm. ARMB has large cap, international and hedge fund mandates with Allianz/RCM/NFJ. PIMCO participates in the income statement of Allianz, and there is concern that lost revenues from PIMCO may create pressure for cost cutting at other Allianz managers. The issue is not a threat to our managers at this point; a bigger concern would be senior people at the investment level departing.

- DePrince, Race, Zollo: Staff met with DRZ just prior to the Education Conference to discuss underperformance in returns and receipt of letter reducing fee structure, and adherence to management style – DRZ invests in dividend paying companies. Given board policy, managers are given a six year window and time to turn things around. DRZ is within that time frame.

- McKinley Capital Management: Concerns were expressed regarding assets under management, succession planning and manager style, noting that APFC and ARMB are the firm's largest clients, representing a significant share of assets under management. Staff met with McKinley investment staff, including Bob Gillam, in Anchorage. Dr. Jennings questioned if the model is still current and valid, or has it passed its half-life. McKinley's momentum-based investment style is not in favor, and there is not much success in this style. Callan is not favorable to momentum investing, but would look to McKinley for that style. McKinley is above the index.

- Luther King Capital Management: Similar to McKinley in company structure, Luther King is a family trust and there could be transition issues. Portfolio Manager Steve Purvis is a long-term employee, but if he leaves it would be a serious event and trigger watch-list placement.

- Capital Group: In general, not responsive to questionnaire – using composite return numbers rather than ARMB return numbers, and did not address investment process and organization questions. Changes two years ago in investment process were outlined by Callan; no change currently in investment style. Callan reports a lack of transparency in the cultural make-up of the firm; suggests a direct inquiry from ARMB for more transparency.

- Master Limited Partnership Mandates: Both Tortoise and Advisory Research show rapid growth in accounts and assets. The concern is staffing to handle increase and organizational decision when to close to new business.

- Relational Investors: The current fund is liquidating as a result of Ralph Whitworth illness – and returning money to ARMB. No follow-up funds announced and current fund probably liquidated by the end of 2015. Discussion of place in portfolio for activist investing – is it worth higher risk, including headline risk?

- Victory Capital: Concern expressed regarding change in ownership. With many different owners, does it lead to emphasis on asset gathering which might be detrimental to performance. Leadership and future plan difficult to discern, but asset gathering seemed implicit in responses. Staff will follow-up with the firm.

- Brandes Investment Partners: Discussion and clarification of portfolio manager status with Glenn Carlson; Juan Benito is portfolio manager, but there is a five-person investment committee where investment decisions made.

The meeting included general discussions on wide-ranging topics, including:

- Hedging: Acknowledging that some managers do have the ability to hedge, it seems a zero-sum game; but it is a possible education conference topic.

- Securities Lending: Staff reports repeated requests from State Street to renew the securities lending program which was discontinued many years ago. Consensus to remain out of program; concentrate on mandates that offer a non-lending option.

- Asset Allocation: Future discussion will be scheduled on the asset allocation structure – and whether this can be streamlined to have fewer categories.

- IAC Operations: IAC presence appreciated as a tool if something starts off-track – not a shadow CIO, but system of checks and balances. Additional discussion on assignment of presentation topics by individual IAC members during the year.

THE STATE of ALASKA
GOVERNOR BILL WALKER

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

MEMORANDUM

To: Alaska Retirement Management Board

Date: February 12, 2015

Telephone: 465-3702
Fax: 465-4397

From: Gary Bader, Chief Investment Officer
Investment Advisory Council Members

Re: GEMS Analysis

At the September board meeting Buck presented GEMS, an Economic Scenario Generator. Buck uses GEMS as the asset return generator in their Asset / Liability Modeling practice. They believe that GEMS provides a more realistic long-term projection of expected investment returns than the ones used by many investment consultants. During the meeting the IAC was asked to review the GEMS approach and share comments with the Board. The GEMS model is a product of Conning, Inc.

Conning, Inc. is global company located in Hartford, Connecticut. It has additional offices in New York, London, Cologne, and Hong Kong with approximately $91.6 billion in assets under management as of June 2014. After its founding in 1912, Conning developed a reputation as an insurance and equity specialist. The company became an early pioneer in third party management of insurance assets when it entered the industry in 1988. Its business currently combines asset management, risk and capital management solutions, and insurance research. Conning is known for its expertise in mathematics, insurance, IT and model building.

The *GEMS Economic Scenario Generator* simulates future states of the global economy and financial markets, including the pricing of derivative and alternative assets. GEMS inputs are derived from ten different models which include more than 200 financial, economic and macro-economic variables. All variables within GEMS are linked dynamically within a specified economy, whether on a stand-alone economic basis or within a global economic framework. In order to capture correlation behavior between different components of its model, GEMS uses two primary mechanisms: Direct functional relationships among the economic models and correlation of the independent random processes associated with the models. Many essential elements of the GEMS model are proprietary and therefor undisclosed.

The difference between *GEMS Economic Scenario Generator* and others claiming to model the global economy is that GEMS incorporates extreme events into its model structure. This facilitates more comprehensive risk management approaches. In other models claiming to model the global economy, individual economies are often joined together in an arbitrary manner, such as a static covariance matrix. Arbitrary links fail to capture the true intricacies of the global economy, such as enhancements in correlation during crisis events. GEMS models were built to respect the relationship between variables, including tail correlation, such that contagion effects in economic crises are properly modeled.

According to Conning, some of the key features of the GEMS approach are:

1. Robustness and reliability
2. Academically rigorous
3. Utilizes the most up-to-date research
4. Empirically demonstrable
5. Relationships fully accounted for within and across economies
6. Extensively tested and validated

The baseline interest rate model used by GEMS is a well-accepted Cox-Ingersoll-Ross model that is widely used. It is a somewhat insurer and actuarially-oriented model which is biased towards history. This can be good and bad. Good insofar as GEMS apparently can incorporate historical anomalies, but bad in that it may be “blinded” by historical possibilities. At the September meeting, Buck reported a 9% long-term earnings projection. More information is needed to understand the basis of such a high forecast.

In sum, GEMS is viewed by staff and the IAC as a useful supplement to the Board’s primary Callan-led capital market assumptions process, but not a co-equal complement.

MacKay Shields

Mandate: **High Yield** **Hired:** **2005**

Firm Information

MacKay Shields LLC (MacKay Shields) is a wholly owned subsidiary of New York Life Investments, which in turn is owned by its parent company New York Life Insurance Company.

As of September 2014, MacKay Shields had $89.9 billion in fixed income assets under management.

Key Executives:
Andrew Susser, Senior Managing Director, Head of High Yield
Jeffrey Phlegar, Chairman & Chief Executive Officer
Virginia Rose, Senior Managing Director, Head of Institutional Client Service
Joseph Maietta, Associate Director, Client Services

Investment Approach

MacKay Shields utilizes a bottom-up, value oriented approach to investing in the U.S. high yield market. The key feature of this strategy is the disciplined investment process employed, which requires every security invested in to have what they believe is a margin-of-safety through sufficient asset coverage. The MacKay Shields team focuses on companies they believe to have strategic importance in their industries, with characteristics such as low cost assets, large market shares and high barriers to entry.

Every security in the portfolio is categorized into one of four levels of risk, which are delineated by the strength of asset coverage, volatility of cash flows and the potential for default. The team seeks to manage the portfolio to make sure that it is properly compensated for the level of credit risk. In doing so, they believe that they can maximize the portfolio's risk adjusted return.

Benchmark: BofA Merrill Lynch High Yield Master II Index from inception through 12/31/06 and the BofA Merrill Lynch High Yield Master II Constrained Index thereafter

Total ARMB Mandate & Fees

Assets Under Management:
9/30/14: $555,776,729
9/30/13: $521,131,392
9/30/12: $462,770,981
9/30/11: $392,595,194
9/30/10: $177,204,937
9/30/09: $154,100,797
9/30/08: $133,534,720
9/30/07: $140,649,540
9/30/06: $130,112,292

Fee Schedule: 45 Basis Points

Concerns: None

9/30/14 Performance (gross of fees)

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
MacKay Shields	-1.65%	6.58%	10.40%	9.92%
Benchmark	-1.92%	7.23%	10.95%	10.40%

ALASKA RETIREMENT MANAGEMENT BOARD

INVESTMENT REVIEW

FEBRUARY 12, 2015

Representing MacKay Shields

ANDREW SUSSER
Executive Managing Director
Head of High Yield

KIRK KASHEVAROFF
Managing Director
Institutional Business Development

MACKAY SHIELDS

Agenda

MacKay Shields

Contents

MacKay Shields:
A Leader in Income-Oriented Investing

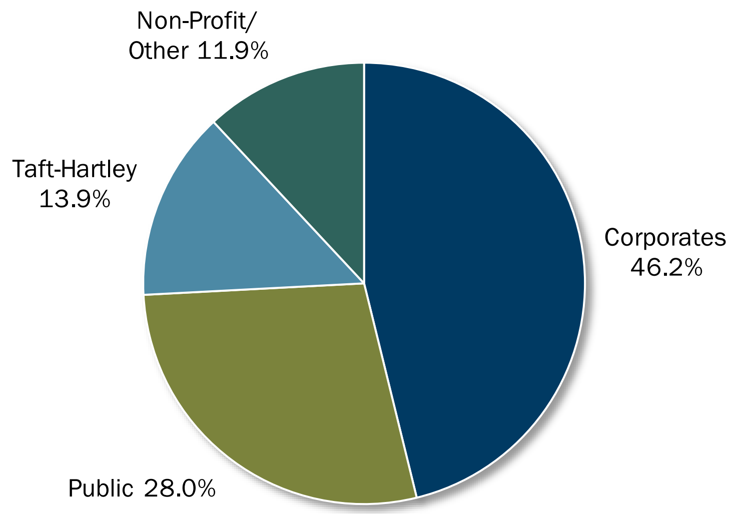
MACKAY SHIELDS

Overview

- Founded in 1938
- Strong AAA-rated parent company
- Equity alignment for senior professionals
- 48 investment professionals, 156 employees
- Non-bureaucratic, entrepreneurial culture
- Team approach across all products and business units
- Research-centered investment professionals

Group Segmentation (US, blns)	$91.6
Global Fixed Income	55.9
High Yield	20.6
Municipals	12.7
Convertibles	2.4

Institutional Separate Account Assets
By Client Type



AUM shown is as of December 31, 2014. In respect to AUM by client type and by group segmentation, due to rounding the sum of the items may not equal 100% or any expressed totals as applicable.

Team of Seasoned Credit Investors

MacKay Shields

High Yield Investment Team and Coverage

Andrew Susser
Executive Managing Director
Lead Portfolio Manager

Gaming, Retail

28 Years Experience

Dohyun Cha, CFA
Managing Director

Energy, Utilities

17 Years Experience

Won Choi, CFA
Managing Director

Chemicals, Metals, Paper/Packaging

18 Years Experience

Eric Gold
Managing Director

Cable/Broadcasting, Technology, Telecommunications

27 Years Experience

Nate Hudson, CFA
Managing Director

Auto/Transportation, Building Materials, Homebuilding, Services

23 Years Experience

Michael A. Snyder
Managing Director

Aerospace/Defense, Consumer/Food Products, Manufacturing, Media

27 Years Experience

James S. Wolf
Managing Director

Finance, Healthcare

28 Years Experience

J. Alex Leites
Director

Trader

21 Years Experience

Scott Mallek
Managing Director

Trader

18 Years Experience

Thomas Metcalf
Associate Director

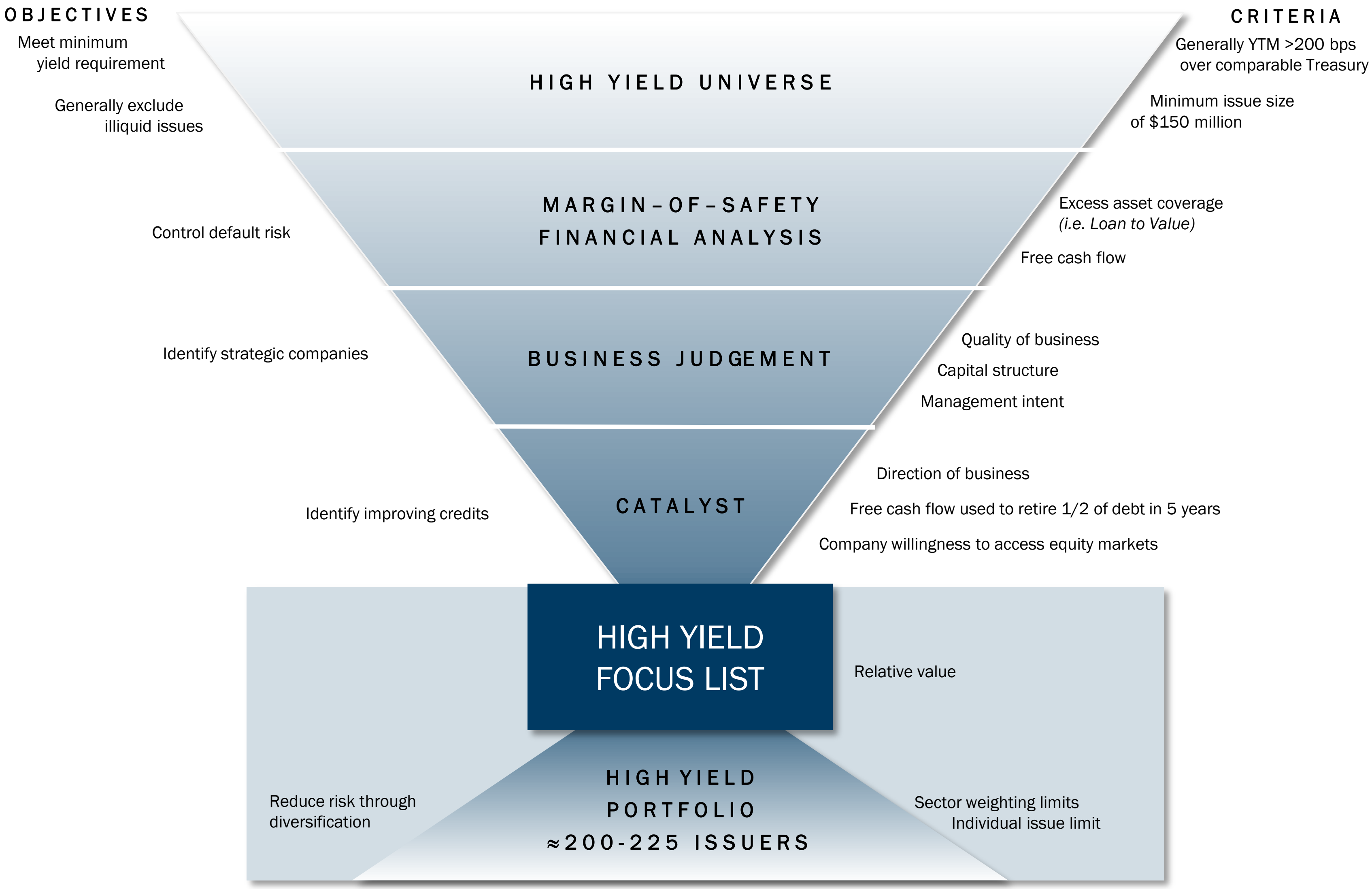
Research Analyst

4 Years Experience

High Yield Investment Process

MacKay Shields

VALUE-ORIENTED SECURITY SELECTION PROCESS



All numbers and ranges referred to above are approximations only, and assume normal market conditions and the application of MacKay Shields standard investment guidelines. In addition, the 200 – 225 range for high yield portfolio issuers referred to above is an approximation of the average number of issuers in a typical portfolio over a rolling three year period only. Unusual market conditions, client cash flow activity, compliance with specific client instructions and other factors may cause the number of issuers in the portfolio to fall outside this approximate range during any given rolling three year period.

We Develop a Thorough Understanding of Risk

Every Holding Is in One of Four Risk Groups

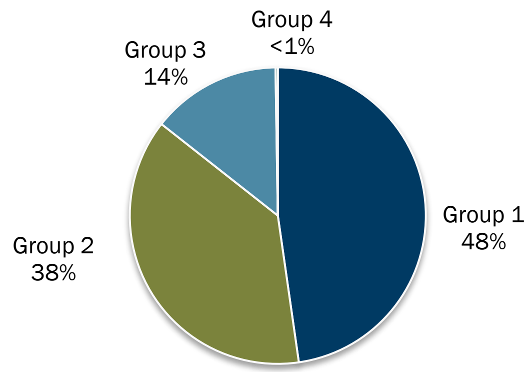
Group 1 – Highest Quality
- Strongest credit profile
- Lowest volatility

Group 2 – Seasoned Issuers
- Significant equity value
- Strong credit statistics
- Strong asset value

Group 3 – Risk Credits
- Trading at discount
- More research intensive
- High yielding relative to universe

Group 4 – Special Situations
- Significant discount to asset value

Portfolio Holdings[1]
(December 31, 2014)



[1]Represents a breakdown of holdings in the Alaska Retirement Management Board portfolio.

MacKay Shields

Historical Rates of Return (%)

Periods Ending December 31, 2014

	Alaska Retirement Management Board[1]	Custom Index[2]
Fourth Quarter	-1.00	-1.06
One Year	2.41	2.51
Three Years – *Annualized*	7.97	8.36
Five Years – *Annualized*	8.84	8.85
Since Inception – *Annualized* (4/15/2005)	7.74	8.11

[1]Gross of fees

[2]The Custom Index consists of the BofA Merrill Lynch High Yield Master II Index from inception through 12/31/06 and the BofA Merrill Lynch High Yield Master II Constrained Index thereafter.

Past performance is not indicative of future results.

Risk Adjusted Returns

	5 Years Ending December 31, 2014	
	Portfolio[1]	Index[2]
Returns (%)	8.8	8.8
Standard Deviation (%)	4.7	6.1
Alpha (%)	2.0	0.0
Beta	0.8	1.0
Up Market Capture	89.2	100.0
Down Market Capture	59.9	100.0
Sharpe Ratio	1.9	1.4

[1]Gross of fees
[2]The Custom Index consists of the BofA Merrill Lynch High Yield Master II Index from inception through 12/31/06 and the BofA Merrill Lynch High Yield Master II Constrained Index thereafter.
Source: Callan Associates High Yield Universe

Longer Duration High Yield Bonds Outperformed

MacKay Shields

Duration to Worst Breakout	BM Total Return 2014 %	% of Index[1]	% of Portfolio[1]	Over/Underweight %	Estimated Impact (bps)
0 to 3 yrs	1.3	40.9	44.1	3.2	4
3 to 7 yrs	2.1	50.8	50.1	(0.7)	(3)
7 to 10 yrs	9.8	5.5	5.5	0.1	1
> 10 yrs	16.5	2.8	0.3	(2.5)	(41)

As of December 31, 2014
Source: Merrill Lynch High Yield Master II Constrained Index, Factset
[1]Average exposure from January 1, 2014 to December 31, 2014

Portfolio Attribution — Q4 2014

MacKay Shields

By Industry

Top Five	(%)
Telecom - Wireless	0.14
Energy - Exploration & Production	0.09
Specialty Retail	0.08
Advertising	0.04
Gas-Distribution	0.04

Bottom Five	(%)
Lease Financing	(0.15)
Banking	(0.09)
Health Facilities	(0.07)
Packaging	(0.06)
Auto Parts & Equipment	(0.04)

By Issuer[1]

Top Five	(%)
Schaeffler Finance	0.13
T-Mobile	0.05
Carlson Wagonlit	0.05
California Resources	0.05
Crown Castle International	0.04

Bottom Five	(%)
Arch Coal	(0.14)
Exide Technologies	(0.13)
Comstock Resources	(0.13)
EnQuest PLC	(0.11)
Paragon Offshore	(0.11)

Relative to the benchmark. As of December 31, 2014
Source: Factset
[1]Issuer attribution includes only credits held in portfolio

Alaska Retirement Management Board

Market Value: $599,521,116
(as of December 31, 2014)

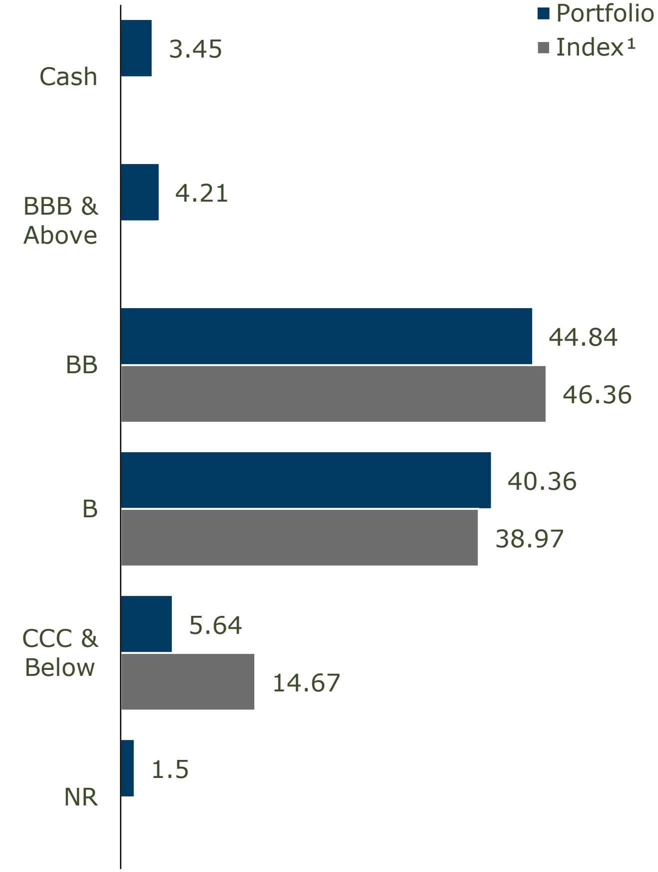
Statistics

	Portfolio	Index[1]
Current Yield (%)	6.71	7.03
Yield to Worst (%)	6.53	6.59
Modified Duration (years)	3.91	4.06
Average Credit Quality	BB-	B+

Top Ten Issuers (%)

	Portfolio
Schaeffler Finance	3.00
T-Mobile	2.61
Sprint Nextel	1.90
Carlson Wagonlit	1.75
GenOn Energy	1.59
Cogent Communications	1.17
HCA	1.11
Charter Communications	1.08
Crown Castle	0.96
Nielsen Finance	0.95

Quality Exposure (%)



Portfolio using average of S&P, Moody's & Fitch; higher of if split-rated.

[1]BofA Merrill Lynch High Yield Master II Constrained Index

Alaska Retirement Management Board

MACKAY SHIELDS

As of December 31, 2014

Duration to Worst (%)

	Portfolio	Index[1]
0 to 3	30.75	31.55
3 to 7	64.28	60.16
7 to 10	4.87	5.08
Greater than 10	0.1	3.21

Coupon (%)

	Portfolio	Index[1]
0 to 4.5	1.03	4.67
4.5 to 6.5	45.99	38.38
Greater than 6.5	52.98	56.95

Price (%)

	Portfolio	Index[1]
Less than $100	35.16	31.93
$100 to $105	43.69	37.33
$105 to $110	17.22	20.98
Greater than $110	3.93	9.75

Sector (%)

	Portfolio	Index[1]
Automotive	7.08	3.53
Banking	0.00	3.17
Basic Industry	14.25	12.48
Capital Goods	7.30	5.83
Consumer Goods	4.30	3.18
Energy	13.90	13.38
Financial Services	4.60	6.39
Healthcare	5.98	8.66
Insurance	1.17	0.90
Media	6.48	9.34
Real Estate	1.11	0.91
Retail	3.67	4.37
Leisure	4.49	4.20
Services	5.59	4.73
Technology & Electronics	2.90	5.03
Telecommunications	9.43	9.44
Utility	2.34	3.34
Transportation	1.92	1.11

[1]BofA Merrill Lynch High Yield Master II Constrained Index
Coupon and price breakout exclude cash and stock

High Yield Overview

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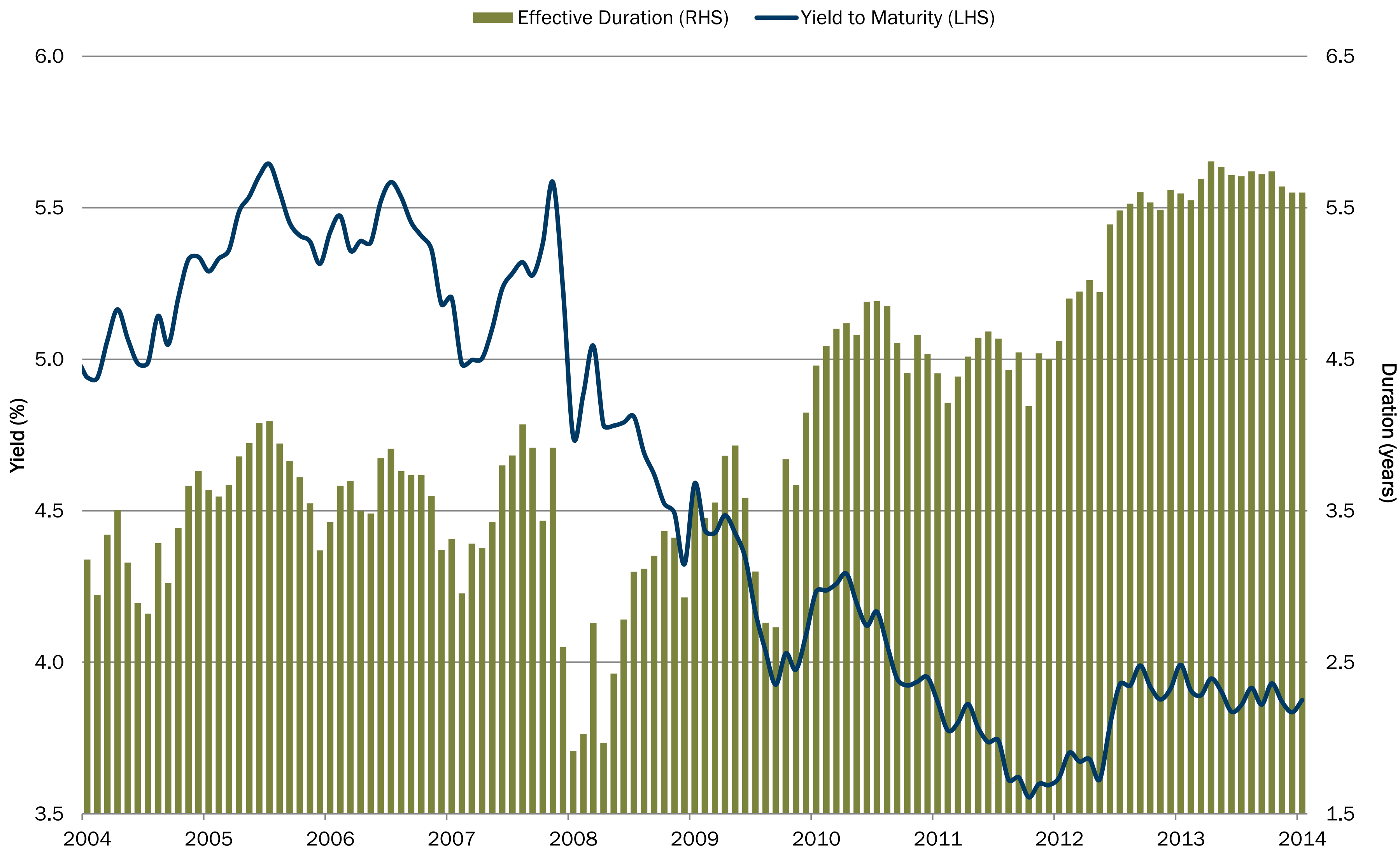
Barclays US Aggregate Index Duration and Yield

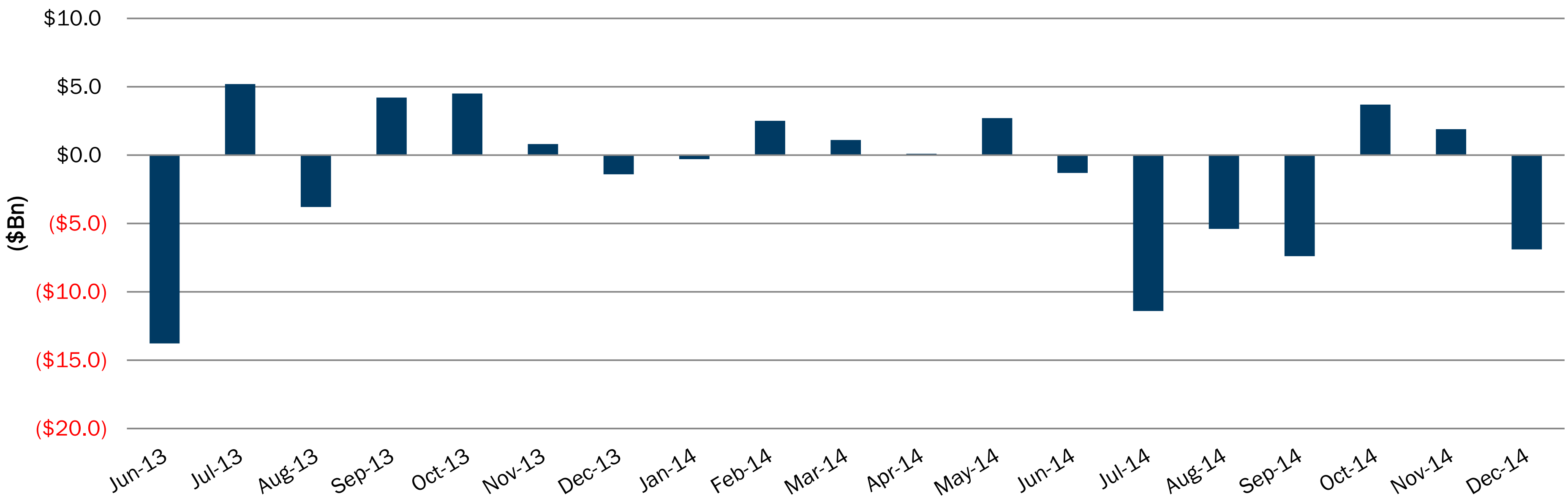
MacKay Shields



As of December 31, 2014
Source: Barclays Capital

US High Yield Mutual Fund & ETF Flows

MacKay Shields

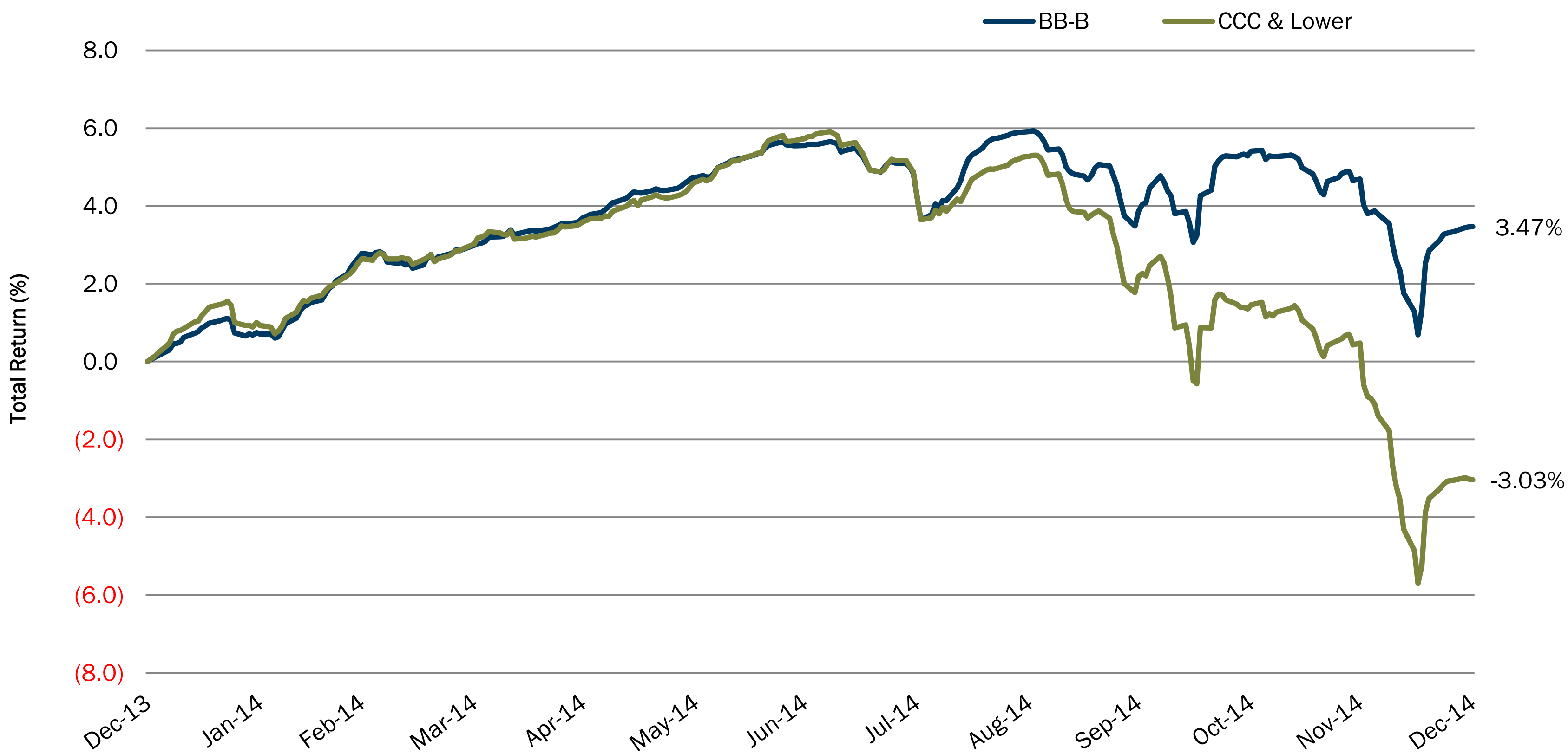


As of December 31, 2014
Source: JP Morgan

Higher Quality Outperformed After Summer Volatility

MacKay Shields

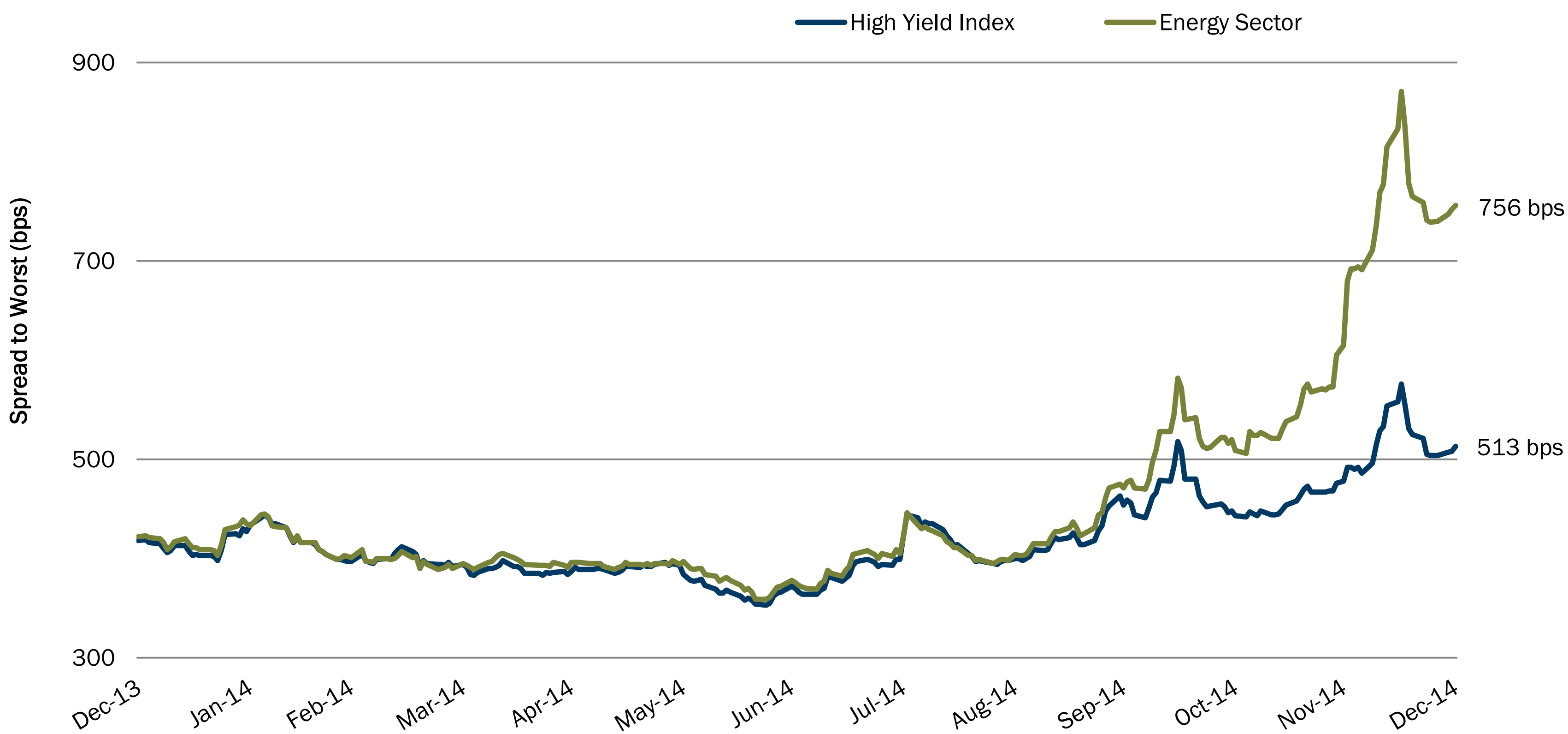
Credit Quality Performance



As of December 31, 2014
Source: BofA Merrill Lynch

Drop in Oil Has Weighed on Energy Sector Credits

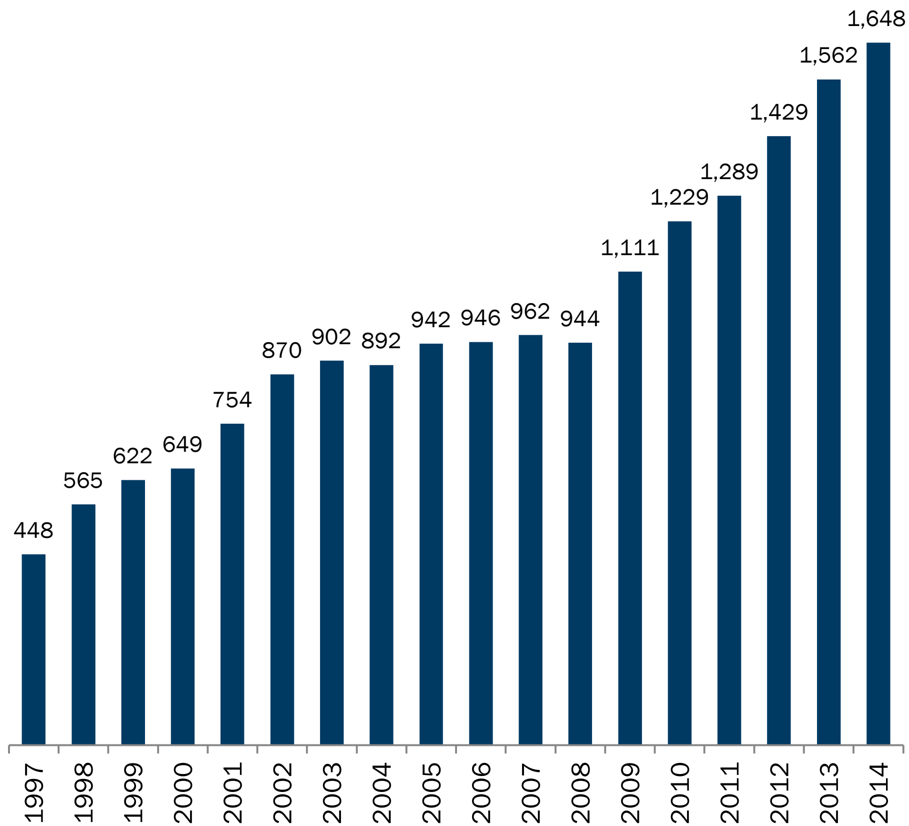
MacKay Shields



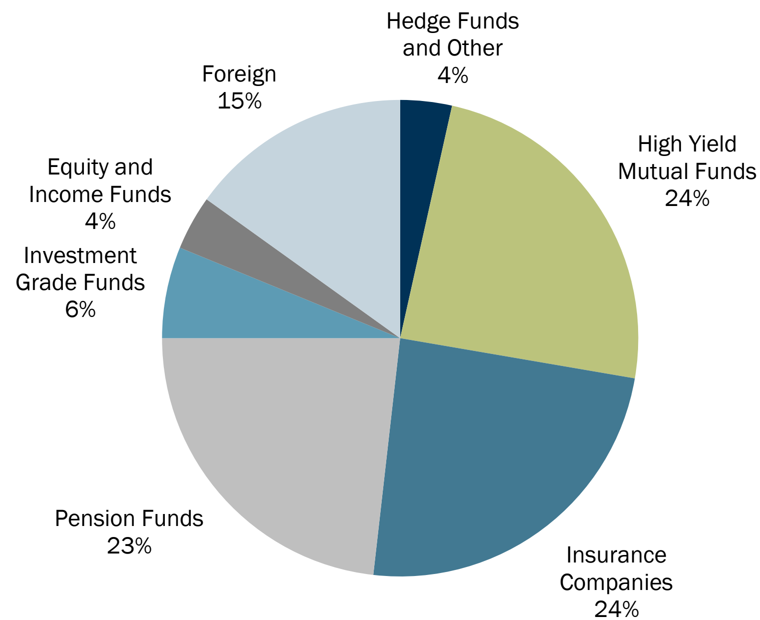
As of December 31, 2014
Source: BofA Merrill Lynch

Growth of US High Yield Market

HY Market Size ($ billions)



HY Investor Base 2013

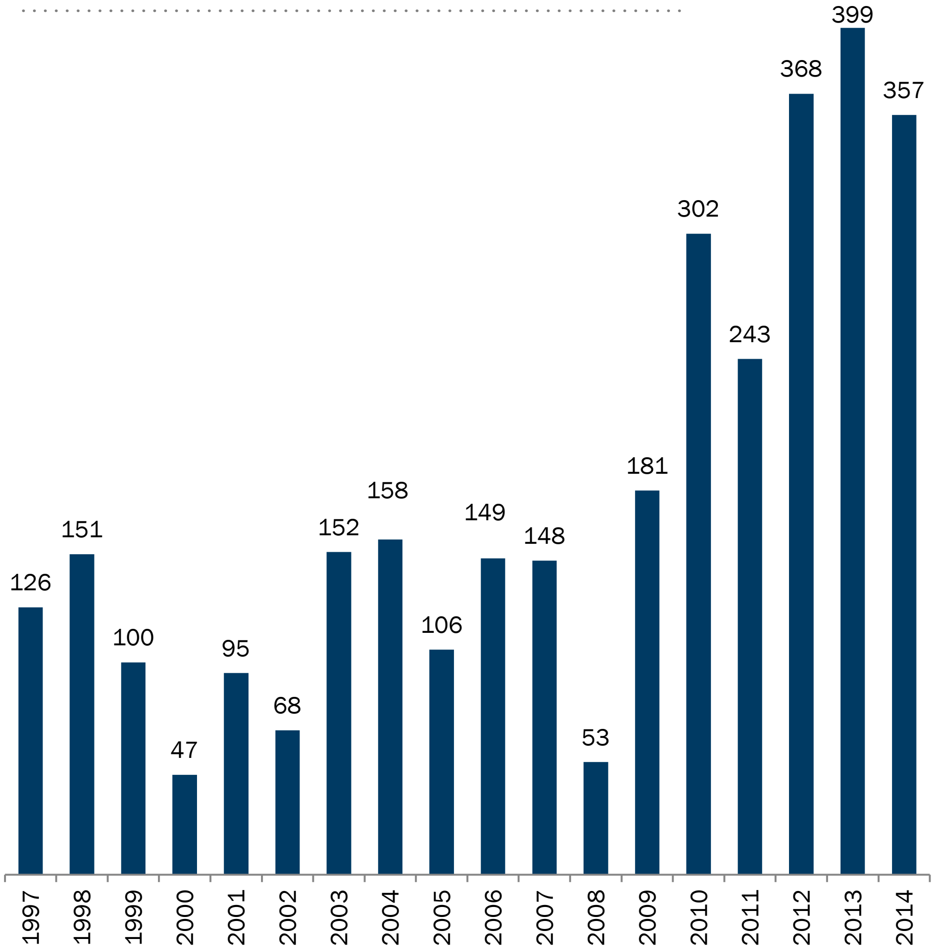


Source: JP Morgan

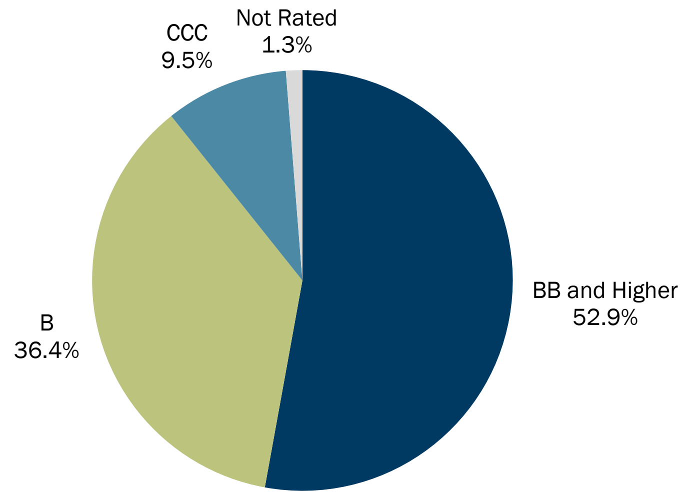
Quality of High Yield New Issuance Has Improved

MACKAY SHIELDS

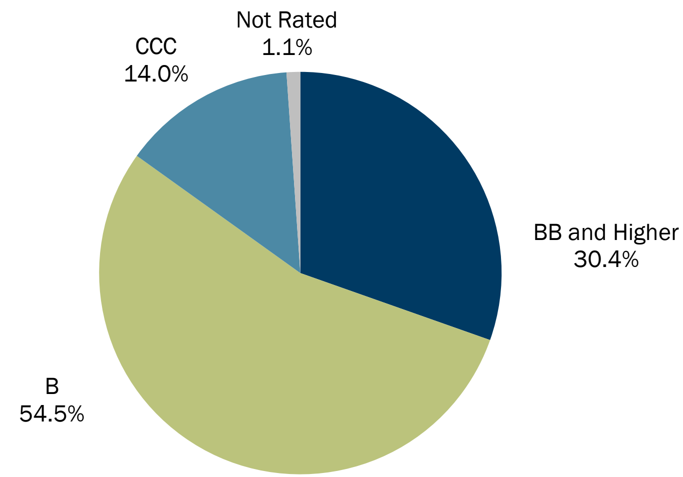
New Issue Volume ($ billions)



Past 2 Years



2007

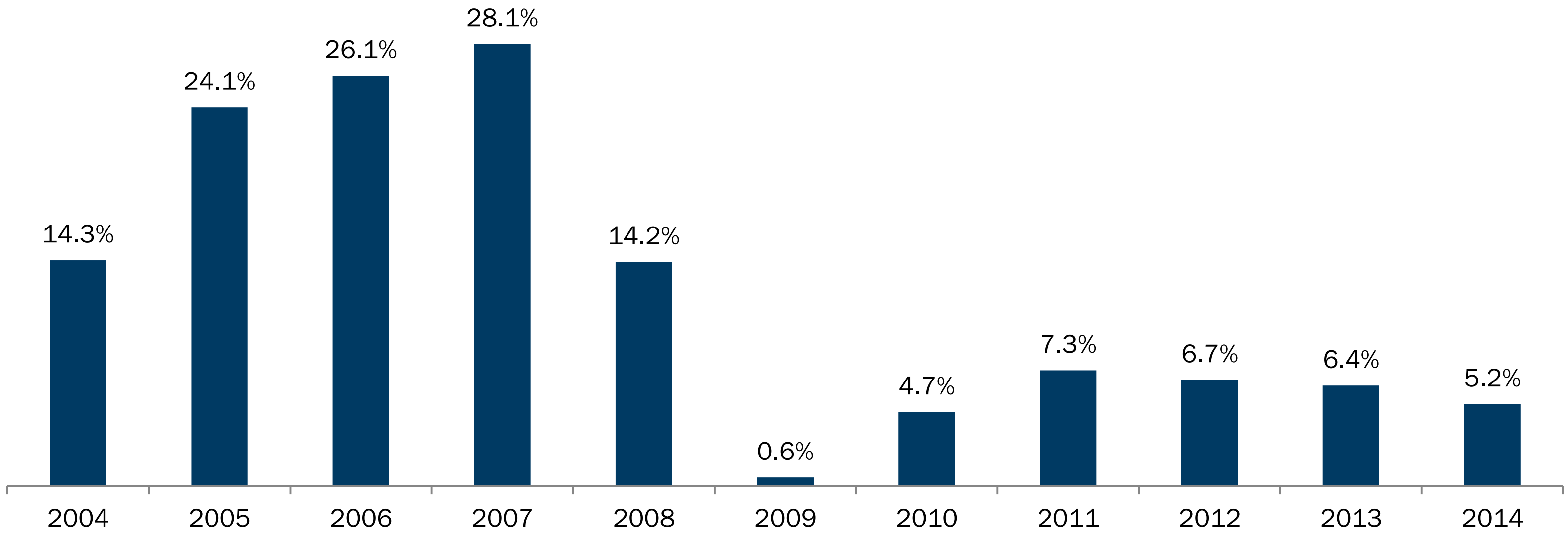


As of December 31, 2014
Source: JP Morgan

LBO Financings Are Smaller Portion of New Issuance

MacKay Shields

LBO Acquisition % of New Issuance

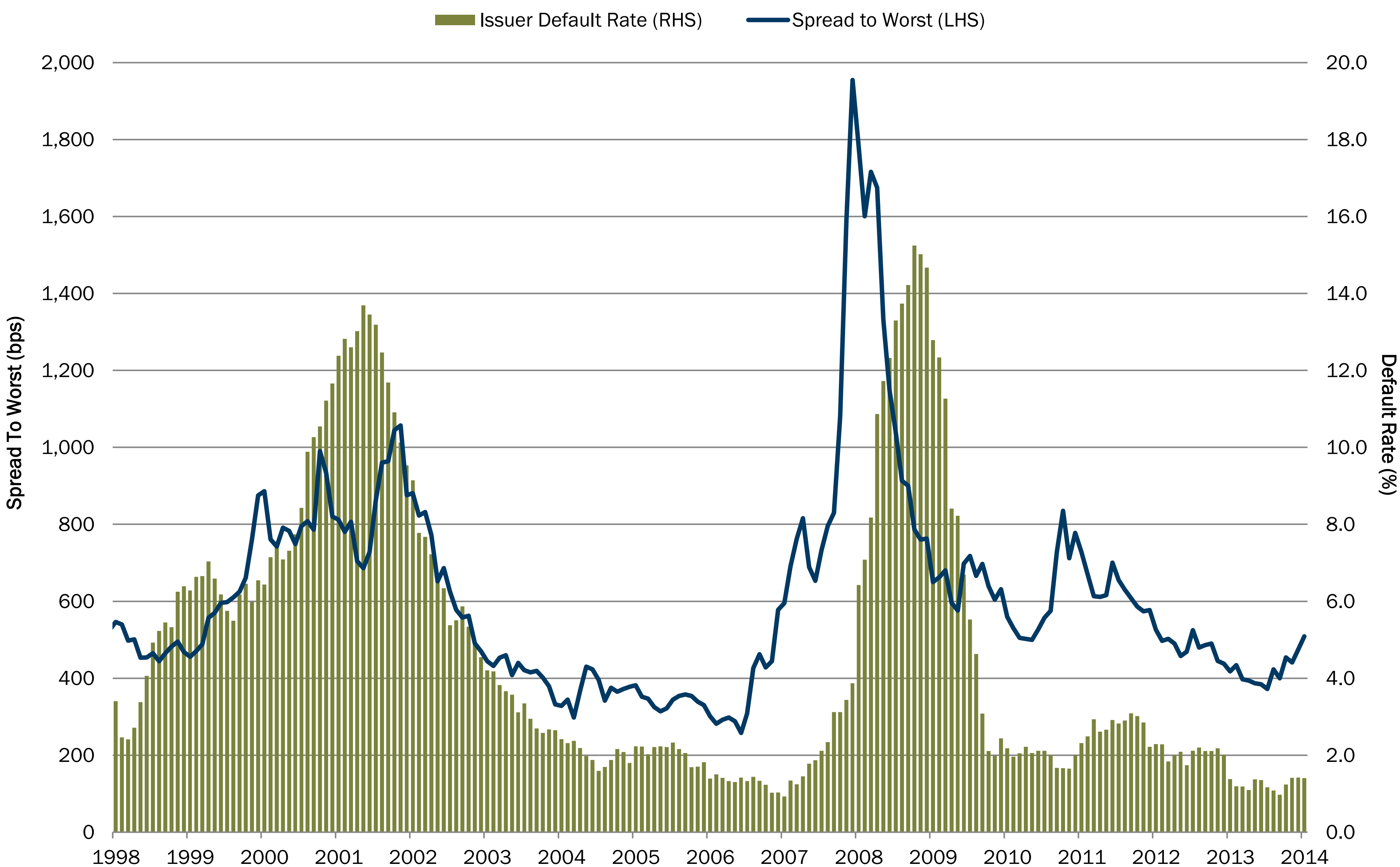


2007 Largest New Issuers	Past Two Years Largest New Issuers
TXU (LBO)	T-Mobile USA
Freeport McMoran	Sprint
HD Supply (LBO)	Tenet Healthcare
Realogy (LBO)	Numericable
First Data (LBO)	GM/GM Finance

As of December 31, 2014
Source: Credit Suisse

High Yield Spreads and Default Rates

MacKay Shields

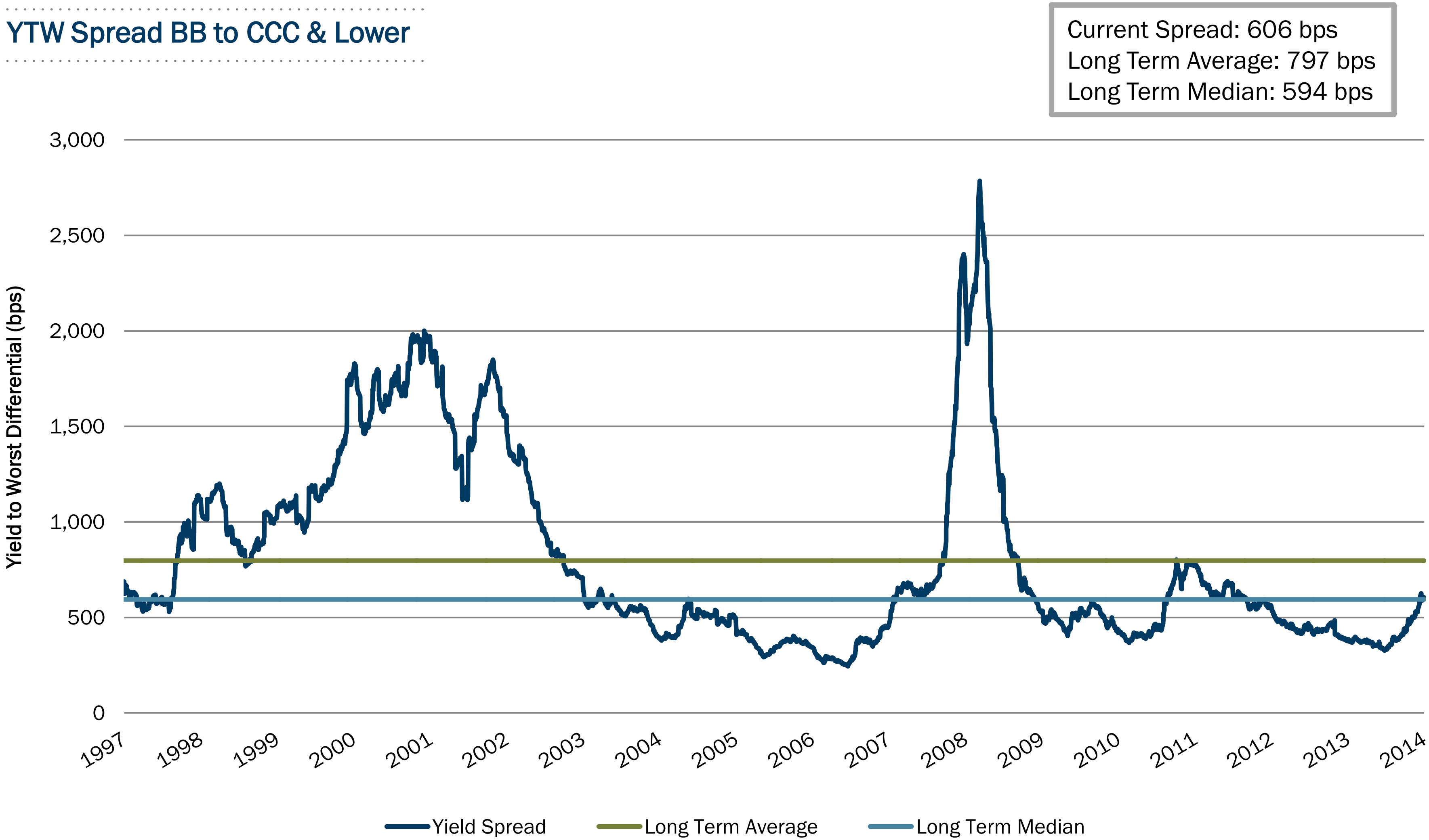


As of December 31, 2014
Source: BofA Merrill Lynch

Additional Yield in CCCs Approaching Historical Levels

MacKay Shields

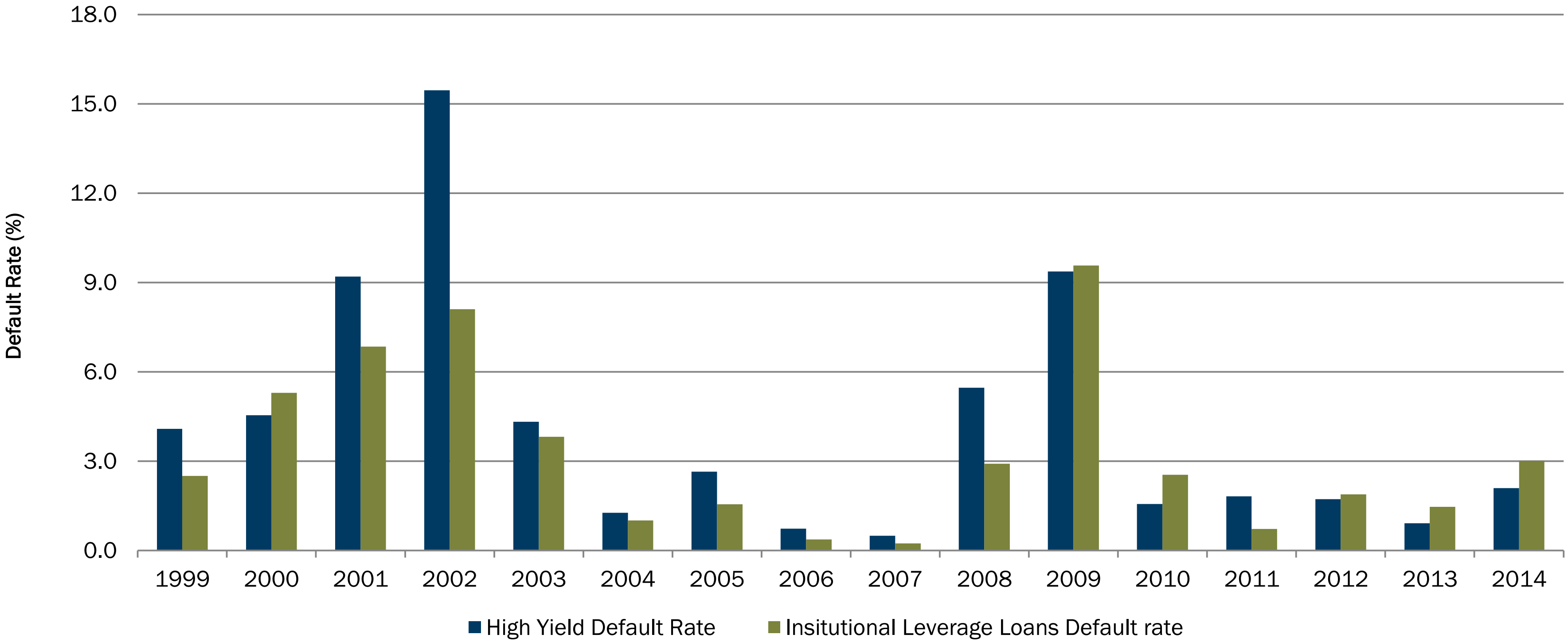
YTW Spread BB to CCC & Lower



As of December 31, 2014
Source: BofA Merrill Lynch

Loan and Bond Default Rates Have Converged

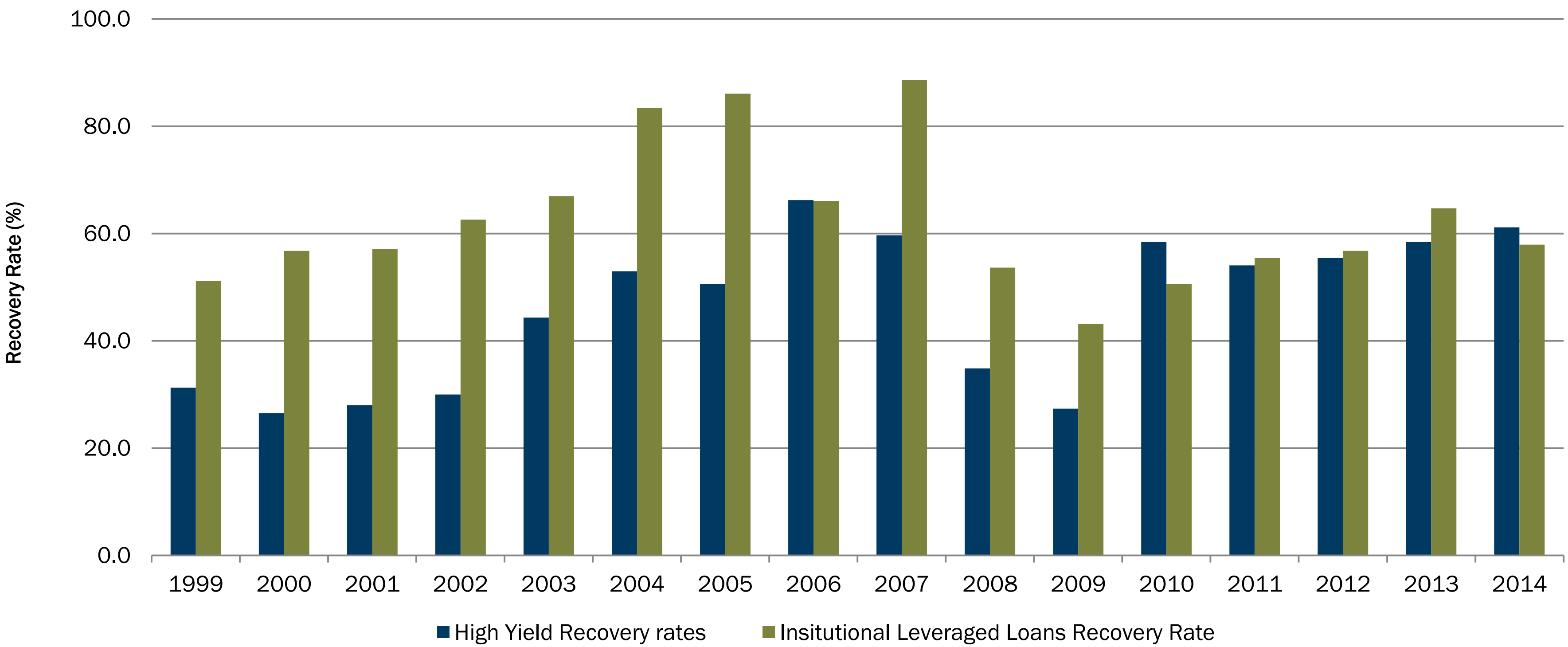
MacKay Shields



	15 Year Avg. Annual Default Rate	5 Year Avg. Annual Default Rate	LTM Annual Default Rate
High Yield Bonds	4.1%	1.6%	2.1%
Leveraged Loans	3.3%	1.9%	3.0%

As of December 31, 2014
Source: Credit Suisse

Recovery Rates Have Also Converged



	15 Year Recovery Rate	5 Year Recovery Rate	LTM Recovery Rate
High Yield Bonds	45.2%	57.5%	61.2%
Leveraged Loans	63.3%	57.1%	57.9%

As of December 31, 2014
Source: Credit Suisse

2nd Lien Portion of the Loan Market has Grown

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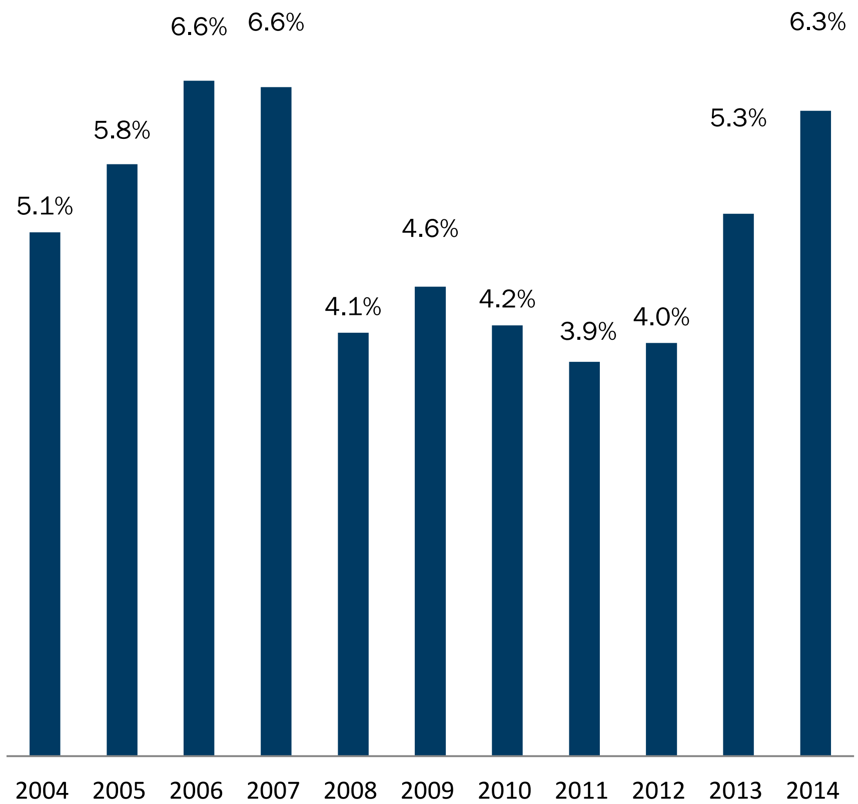
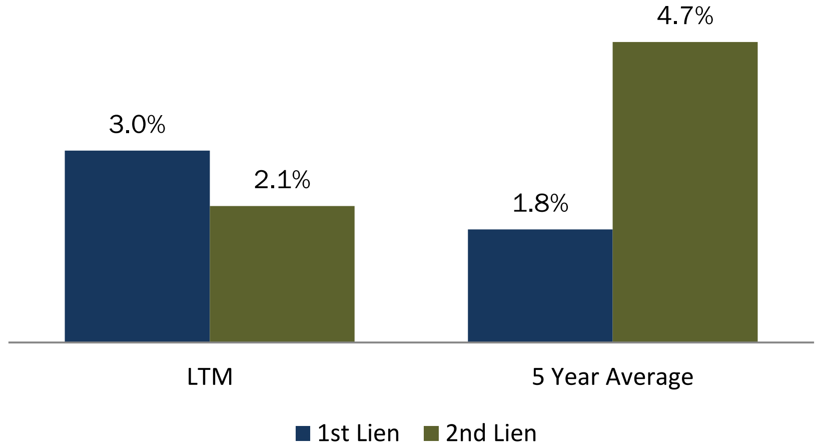
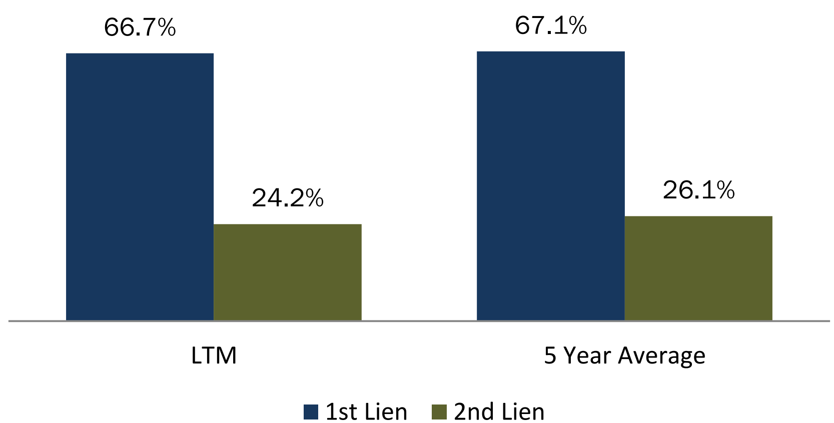
2nd Liens % of Loan Market



Default Rates



Recovery Rates



As of December 31, 2014
Source: Credit Suisse

Appendix

MacKay Shields

MacKay Shields

Investment Guidelines

A. Purpose. The emphasis of investments in high yield fixed income securities shall be diversification, subject to defined constraints, to minimize risk.

B. Merrill Lynch U.S. High Yield Master II Constrained Index.

C. Permissible Investments. Permissible 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; and
   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 states or municipalities in the United States.
6. Obligations of foreign governments, sovereign states, supranational entities, and their instrumentalities.
7. Corporate debt securities comprising:
   a. Corporate debt issued in the U.S. capital markets by U.S. companies; and
   b. Euro-dollar debt (that is, U.S. dollar-denominated securities issued outside the U.S. capital markets by U.S. companies or by foreign issuers); and
   c. Yankee debt (that is, U.S. dollar denominated obligations and issued in the U.S. capital markets by foreign issuers).
8. Convertible bonds.
9. Bank debt.

Investment Guidelines, continued

10. Preferred stock.
11. Common stock.
12. Warrants.

D. Portfolio Constraints: The lower of any S&P, Moody's or Fitch rating will be used for limits on securities rated below B3 or B-, and the higher rating will be used for limits on securities rated A3 or A- or higher. Only one rating is necessary. The following restrictions reference Moody's ratings, but apply to all corresponding ratings by S&P, Moody's or Fitch for a given security. 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 benchmark

2. The Contractor may not invest more than 10% of the portfolio's assets in securities rated A3 or higher by any rating agency (including government instruments). Cash held in the portfolio will be included in this limitation.

3. The Contractor may not invest more than 25% of the portfolio's assets in securities rated below B3. Additionally, the Contractor may not invest more than 5% of the portfolio's assets in unrated securities. Unrated securities shall be assumed to be rated below B3.

4. The Contractor may not invest more than 25% of the portfolio's assets in any one corporate sector as defined by the benchmark, as defined as Industry Level 3.

5. Warrants and common stock are authorized investments only if issued in conjunction with or related to bonds purchased by the contractor.

6. Common stock received from the conversion of a convertible security, the exercise of a warrant or the restructuring of an issuer's debt should be sold within 90 days of receipt or within 90 days of the expiration of a restriction period. If more time is needed, the Advisor must seek permission in writing from the Chief Investment Officer.

7. The Contractor may not invest more than 5% of the portfolio's assets in any one corporate issuer.

Investment Guidelines, continued

8. 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).

9. There shall be no investment in private placements, except Rule 144A securities and bank debt.

10. The manager shall not sell securities short.

11. The manager shall not purchase securities on margin.

12. The manager shall not utilize options or futures.

E. Required Remedies. Recognizing that ratings and relative asset worth may change, the manager shall liquidate invested securities with care and prudence when the relative market value of an investment type limited by these guidelines exceeds the levels of holdings permitted. The manager 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.

Historical Rates of Return (%)

	Alaska Retirement Management Board[1]	Custom Index[2]
2014	2.41	2.51
2013	7.08	7.41
2012	14.79	15.55
2011	7.19	4.37
2010	13.22	15.07
2009	45.54	58.10
2008	-21.55	-26.11
2007	2.66	2.53
2006	11.14	11.77
2005 (4/15-12/31)	3.71	4.30

[1]Gross of fees
[2]The Custom Index consists of the BofA Merrill Lynch High Yield Master II Index from inception through 12/31/06 and the BofA Merrill Lynch High Yield Master II Constrained Index thereafter.
Past performance is not indicative of future results.

Biographies

MACKAY SHIELDS

High Yield Team

Andrew Susser *Executive Managing Director* *Head of High Yield*	Andrew Susser is an Executive Managing Director and Head of High Yield, responsible for the group's implementation of its investment process. He also follows the gaming and retail sectors. Prior to joining MacKay Shields in 2006, he was a Portfolio Manager with GoldenTree Asset Management. Previously, he was a Managing Director and Head of High Yield Bond Research at Banc of America Securities covering the gaming, lodging and leisure sectors. From 1999 to 2004, Andrew was named to the Institutional Investor All-America Fixed Income Research Team; from 2002 to 2004, he was ranked by Institutional Investor as the No. 1 analyst in the high yield sector. Andrew also worked as a Fixed Income Analyst for Salomon Brothers, as a Senior Analyst at Moody's Investors Service and as a Market Analyst and Institutional Trading Liaison for Merrill Lynch Capital Markets. He began his career as a Corporate Finance and M&A Attorney at Shearman & Sterling in their New York office. Andrew received a BA from Vassar College, an MBA from the Wharton Graduate School of Business and a JD from the University of Pennsylvania Law School. He has been working in the investment industry since 1986.
Dohyun Cha, CFA *Managing Director* *Portfolio Manager/Analyst*	Dohyun Cha is a Managing Director and Portfolio Manager/Research Analyst for the High Yield Team, where he helps manage high yield bond investments and follows the energy and utility sectors. Prior to joining MacKay Shields in 2006, he was a Vice President at Credit Suisse, where he was an equity analyst covering the basic materials sector. Previously, he was a Financial Analyst in the Investment Banking Division of CIBC World Markets. Dohyun received a BS from Boston College and is a CFA Charterholder. He has been working in the investment industry since 1997.
Won Choi, CFA *Managing Director* *Portfolio Manager/Analyst*	Won Choi is a Managing Director and Portfolio Manager/Research Analyst for the High Yield Team, where he helps manage high yield bond investments and follows the chemicals, metals and paper & packaging sectors. Prior to joining MacKay Shields in 2002, he was an Associate at Fenway Partners, Inc, a middle market private equity firm. Previously, he was a Financial Analyst in the Investment Banking Division of Salomon Smith Barney. Won received a BA from Yale University and is a CFA Charterholder. He has been working in the investment industry since 1997.

High Yield Team

Eric Gold

Managing Director
Portfolio Manager/Analyst

Eric Gold is a Managing Director and Analyst/Portfolio Manager for the High Yield Team, where he helps manage high yield bond investments and follows the cable TV, broadcasting, technology and telecommunications sectors. Prior to joining MacKay Shields in 2010, he was a sell-side Analyst covering the telecommunications, cable and media sectors at Sterne Agee & Leach, Inc. Previously, he was an Analyst at BlackRock and a sell-side Analyst at Grantchester Securities where he was ranked by Institutional Investor as the #1 analyst in the wireless telecommunications sector for 1999, 2000, 2001 and 2002.

Eric received a BA from Vassar College and an MBA from New York University. He has been working in the investment industry since 1987.

Nate Hudson, CFA

Managing Director
Portfolio Manager/Analyst

Nate Hudson is a Managing Director and Portfolio Manager/Research Analyst for the High Yield Team, where he helps manage high yield bond investments and follows the automotive/transportation, building materials and homebuilding sectors. Prior to joining MacKay Shields in 2008, he was a Senior Analyst of High Yield Credit in Strategic Capital's (White Ridge Advisors) proprietary investment group at Banc of America Securities. Previously, he was a sell-side High Yield Analyst at Banc of America Securities and a High Yield Credit Analyst at Nomura Corporate Research & Asset Management (NCRAM).

Nate received a BA from Yale University and is a CFA Charterholder. He has been working in the investment industry since 1991.

Michael A. Snyder

Managing Director
Portfolio Manager/Analyst

Michael Snyder is a Managing Director and Portfolio Manager/Research Analyst for the High Yield Team, where he helps manage high yield bond investments and follows the aerospace/defense, consumer products, manufacturing and diversified media sectors. Prior to joining MacKay Shields in 2006, he was a Managing Director with AllianceBernstein in the Global High Yield Group. Previously, he was a Managing Director with DLJ Asset Management for DLJ's Leverage Investment Group and was a Director of Bear Stearns High Yield Investment Group, and a Senior Vice President with Prudential Insurance Company of America.

Michael received a BA from Dickinson College and an MBA from Duke University's Fuqua School of Business. He has been working in the investment industry since 1987.

High Yield Team

James S. Wolf *Managing Director* *Portfolio Manager/Analyst*	Jim Wolf is a Managing Director and Portfolio Manager/Research Analyst for the High Yield Team, where he helps manage high yield bond investments and follows the finance and healthcare sectors. Prior to joining the MacKay Shields in 2006, he was a Managing Director and Director of Research at First Albany Capital. Previously, he was a Director with RBC Capital Markets First Albany and a Managing Director of High Yield Research at Bear, Stearns & Co. Jim received a BA from Northwestern University and an MBA from the University of Rochester's Simon School of Business. He has been working in the investment industry since 1987.
Thomas Metcalf *Associate Director* *Research Analyst*	Tom Metcalf is an Associate Director and Research Analyst for the High Yield Team. Prior to joining MacKay Shields in 2011, he was a Content Publisher at iO Global Ltd. Tom received a BS and an MS from the University of Durham and has completed all three levels of the CFA. He has been working in the investment industry since 2011.
Scott D. Mallek *Managing Director* *Trader*	Scott Mallek is a Managing Director and Trader for the High Yield Team. Prior to joining MacKay Shields in 2002, he was an Assistant Vice President involved with IFG High Yield Trading at Salomon Smith Barney. Scott received a BA from Fairfield University and has been working in the investment industry since 1996.
J. Alex Leites *Director* *Trader*	Alex Leites is a Director and Trader for the High Yield Team. Prior to joining MacKay Shields in 2002, he was a Settlements Specialist at Credit Suisse First Boston. He previously worked at Kinexus, Inc., Bank of New York, Lazard Asset Management and Prudential Securities. Alex received a BS from New York University's Stern School of Business and has been in the investment industry since 1993.

Biographies

MacKay Shields

Senior Management

Jeffrey Phlegar
Chairman & Chief Executive Officer

Jeffrey Phlegar is Chairman and Chief Executive Officer, responsible for setting the firm's strategy and leading the organization as it implements these goals across its fixed income business. This includes oversight of the portfolio management teams, enterprise risk, sales and new product development. He is a member of the firm's Board of Managers and leads the Advisory Committee. He joined MacKay Shields in December 2011 after 18 years of service at AllianceBernstein, where he served most recently as president of Special Opportunities and Advisory Services, responsible for building a variety of new business initiatives, including the firm's new alternatives platform. From 2004 to 2008, Jeff co-led AllianceBernstein's fixed income division as executive vice president and chief investment officer. In this role, he was responsible for overseeing all aspects of the firm's fixed income business, including oversight of its portfolio management, research and risk management teams, client relationships worldwide, as well as the development and implementation of new products and successful strategies for distribution, servicing and technology/operations.

Jeff's previous roles at AllianceBernstein included serving as Director of U.S. Fixed Income and Insurance, Director of Liquid Markets/MBS and portfolio manager for Taxable Fixed Income & Insurance. Prior to joining AllianceBernstein in 1993, he had portfolio manager responsibilities at Equitable Capital Management and served as a fixed income product specialist at Dreyfus Corporation.

He earned his MBA from Adelphi University and a BBA at Hofstra University. He has been working in the investment industry since 1987.

Lucille Protas
President & Chief Operating Officer

Lucille P. Protas is an Executive Managing Director and President and Chief Operating Officer of MacKay Shields, responsible for managing all aspects of the firm's infrastructure divisions, including finance/accounting, human resources, administration and back-office operations. She is actively involved in shaping the firm's direction through her participation on its Board of Managers and the Advisory Committee. Lucille joined the firm in 1973 as an Investment Research Assistant and later became a Senior Analyst in the accounting and financial division in 1977. She was named Treasurer in 1983, Chief Administrative Officer in 1992 and Chief Operating Officer in 2007.

She attended Fairleigh Dickinson University. She has been working in the investment industry since 1973.

Marketing & Client Service

John W. Akkerman, CFA, CAIA
Executive Managing Director
Global Head of Distribution

John W. Akkerman is an Executive Managing Director and Global Head of Distribution, responsible for creating and implementing strategies for MacKay Shield's distribution, marketing, consultant relations and client service practices. He is a member of the firm's Senior Leadership Team. He joined MacKay Shields in September 2012 after 16 years in various leadership roles at AllianceBernstein, where he most recently led the firm's specialist institutional sales and marketing functions focused on alternatives and fixed income. From 2004 to 2010 he was responsible for the expansion and leadership of AllianceBernstein's institutional business in Canada, the United States and Latin America. This followed the launch and development of AllianceBernstein's Canadian business from 1996 to 2004. Prior to joining AllianceBernstein in 1996, John was a shareholder at TAL Investment Counsel, a business development executive at Sun Life and a corporate banking officer with Bank of Montreal.

He earned a BComm from Saint Mary's University and an MBA from the University of Western Ontario. A member of CFA Society Toronto, he is a CFA charterholder and a Chartered Alternative Investment Analyst. He has been working in the investment industry since 1987.

Virginia E. Rose
Senior Managing Director
Head of Institutional Client Service

Virginia is a Senior Managing Director and Head of Institutional Client Service. She is responsible for managing the firm's day-to-day relationships with clients, consultants and private fund investors, as well as all aspects of client reporting and data. She is a member of the firm's Management Committee. Prior to joining MacKay Shields in 1990, Virginia was a Marketing Assistant with Glickenhaus & Co., Stamford Capital and a Research Analyst at New York Capital Resources specializing in Mergers & Acquisitions.

She attended Northeastern University. She has been working in the investment industry since 1985.

Kirk Kashevaroff
Managing Director
Institutional Business Development

Joining MacKay Shields in 1996, Kirk was previously a Vice President with IDS Advisory Group in Minneapolis responsible for marketing and client service to institutional funds. He was formerly with Alliance Capital Management and Equitable Capital Management in San Francisco where he was responsible for marketing and client service. Kirk has been in the financial services industry since 1990.

MacKay Shields

Marketing & Client Service

Joseph A. Maietta, CFA *Associate Director* *Client Service Representative*	Joseph joined the firm in 2014 as an Associate Director and Client Service Representative focusing on the firm's High Yield Corporate Bond clients. Prior to joining MacKay Shields, he was a Senior Associate in the Institutional Group at PIMCO and was previously an Associate in the Investment Analytics and Consulting area at JPMorgan Chase & Co. He has over 6 years of investment experience and earned a BS in Finance from Hofstra University Honors College. Joseph is also a CFA Charterholder.

Alaska Retirement Management Board

High Yield Portfolio

MacKay Shields

Alaska Retirement Management Board

MACKAY SHIELDS

Summary Report — Account 1022

December 31, 2014

	Market Value	Percent of Assets
AEROSPACE	18,019,833	3.01
CHEMICALS	11,710,564	1.95
CONSUMER PRODUCTS	19,551,887	3.26
ENERGY	83,423,779	13.92
FINANCIAL	39,367,389	6.57
FOOD AND DRUG	1,142,565	0.19
FOOD/TOBACCO	11,649,682	1.94
FOREST PRODUCTS/CONTAINERS	17,064,436	2.85
GAMING/LEISURE	21,584,961	3.60
HEALTHCARE	35,907,483	5.99
HOUSING	39,163,074	6.53
INFORMATION TECHNOLOGY	26,028,938	4.34
MANUFACTURING	13,020,809	2.17
MEDIA/TELECOM	91,651,692	15.29
METALS/MINERALS	28,213,644	4.71
RETAIL	13,072,659	2.18
SERVICE	41,568,595	6.93
TRANSPORTATION	52,083,204	8.69
UTILITY	14,609,866	2.44
Cash & Equivalents	20,686,010	3.45
Accrual Adjustment for Unsettled Trades	47	0.00
Total Portfolio	**$599,521,116**	**100.00%**

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
AEROSPACE - Aerospace/Defense												
000361AQ8	2,175	AAR CORP REG	7.250	01/15/22	BB	Ba3	103.21	108.00	2,421,711	0.40	4.80	1.84
018804AP9	2,430	ALLIANT TECHNOLOGIES REG	6.875	09/15/20	B+	B1	105.32	106.50	2,637,141	0.44	2.32	0.68
018804AQ7	770	ALLIANT TECHSYSTEMS INC 144A	5.250	10/01/21	B+	Ba3	100.88	100.75	785,881	0.13	5.07	4.11
368682AR1	2,555	GENCORP INC REG	7.125	03/15/21	B-	Ba3	104.90	104.73	2,729,453	0.46	5.83	3.55
446413AD8	545	HUNTINGTON INGALLS INDUSTRIES REG	7.125	03/15/21	BB+	Ba2	102.15	108.00	600,034	0.10	3.22	1.14
482539AA1	805	KLX INC 144A	5.875	12/01/22	BB	Ba3	100.00	101.00	816,072	0.14	5.67	4.93
50077BAL2	2,850	KRATOS DEFENSE & SEC REG	7.000	05/15/19	B-	Caa1	100.00	85.00	2,447,992	0.41	11.46	3.55
615394AK9	1,220	MOOG INC 144A	5.250	12/01/22	BB	Ba3	100.00	101.25	1,242,367	0.21	5.00	5.01
85205TAF7	1,690	SPIRIT AEROSYSTEMS INC REG	5.250	03/15/22	B+	Ba3	100.45	101.75	1,745,700	0.29	4.86	4.45
893647AR8	1,075	TRANSDIGM INC	5.500	10/15/20	CCC+	Caa1	98.92	97.75	1,063,294	0.18	5.96	4.82
893647AW7	705	TRANSDIGM INC REG	6.000	07/15/22	CCC+	Caa1	100.00	99.75	727,560	0.12	6.04	5.79
893647AX5	770	TRANSDIGM INC REG	6.500	07/15/24	CCC+	Caa1	100.47	100.50	802,629	0.13	6.40	5.08
			6.470	**06/27/21**	**B+**	**B1**			**$18,019,833**	**3.01%**	**5.71**	**3.33**
CHEMICALS - Commodity & Fertilizer												
05463DAA8	1,020	AXIALL CORP REG	4.875	05/15/23	BB	Ba3	98.35	94.38	968,979	0.16	5.73	6.69
44701QBB7	735	HUNTSMAN INTL	5.125	11/15/22	B+	B1	100.00	98.50	728,998	0.12	5.36	6.35
44984WAE7	1,626	INEOS FINANCE PLC 144A	7.500	05/01/20	BB-	Ba3	101.99	105.00	1,727,625	0.29	5.82	2.90
502160AL8	340	LSB INDUSTRIES REG	7.750	08/01/19	B+	Ba3	100.00	104.00	364,579	0.06	6.48	3.01
73179PAK2	2,765	POLYONE CORP REG	5.250	03/15/23	BB	Ba3	99.19	99.93	2,805,890	0.47	5.26	6.50
73179PAH9	760	POLYONE CORPORATION	7.375	09/15/20	BB	Ba3	103.78	106.38	824,954	0.14	3.30	0.68
			6.072	01/24/22	BB-	Ba3			7,421,024	1.24	5.30	4.85
CHEMICALS - Specialty Chemicals												
500605AE0	982	KOPPERS INC REG	7.875	12/01/19	BB	Ba3	104.86	102.63	1,014,222	0.17	6.86	2.56
50077DAB0	1,253	KRATON POLYMERS LLC/CAP REG	6.750	03/01/19	B+	B1	101.60	102.25	1,309,385	0.22	5.62	1.96
65339VAB2	800	NEXEO SOLUTIONS REG	8.375	03/01/18	CCC+	Caa1	100.00	97.00	798,333	0.13	9.49	2.64
66977WAP4	355	NOVA CHEMICALS CORP 144A	5.000	05/01/25	BB+	Ba2	100.00	99.25	355,444	0.06	5.09	7.91
680665AH9	786	OLIN CORP	5.500	08/15/22	BB+	Ba1	100.00	101.25	812,156	0.14	5.30	6.05
			6.937	04/26/20	BB-	B1			4,289,540	0.72	6.53	3.50
			6.389	**06/05/21**	**BB-**	**Ba3**			**$11,710,564**	**1.95%**	**5.75**	**4.36**
CONSUMER PRODUCTS - Consumer Durables												
109043AG4	985	BRIGGS & STRATTON CORP	6.875	12/15/20	BB	Ba3	102.24	107.50	1,061,885	0.18	5.39	4.88
117043AP4	1,040	BRUNSWICK CORP 144A	4.625	05/15/21	BB+	Ba1	101.88	98.00	1,025,346	0.17	4.99	5.41
30252FAB4	1,405	FGI OPERATING CO LLC/FIN	7.875	05/01/20	CCC+	Caa1	102.19	90.00	1,282,941	0.21	10.36	4.13
749951AA7	1,795	RADIO SYSTEMS CORP 144A	8.375	11/01/19	B	B3	101.01	107.25	1,950,193	0.33	6.21	3.23
88023UAB7	975	TEMPUR SEALY INTL INC REG	6.875	12/15/20	B+	B3	104.13	106.25	1,038,917	0.17	5.11	3.45
			7.174	07/20/20	B+	B2			6,359,281	1.06	6.53	4.08

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
CONSUMER PRODUCTS - Consumer Non-Durables/Other Non-Durables												
02079DAB9	3,315	ALPHABET HOLDING CO INC	7.750	11/01/17	CCC+	Caa1	98.32	84.75	2,852,281	0.48	14.51	2.37
156577AA6	1,115	AMERICAN GREETINGS	9.750	02/15/19	B-	B3	103.42	105.00	1,211,819	0.20	6.75	1.02
026375AP0	405	AMERICAN GREETINGS CORP REG	7.375	12/01/21	B	B2	105.38	104.50	425,714	0.07	6.29	4.08
628782AH7	1,530	NBTY INC REG	9.000	10/01/18	B-	B3	104.53	101.00	1,579,725	0.26	8.36	1.56
74112BAJ4	605	PRESTIGE BRANDS	5.375	12/15/21	B-	Caa1	96.18	98.25	595,858	0.10	5.68	5.71
74112BAH8	195	PRESTIGE BRANDS INC REG	8.125	02/01/20	B-	Caa1	100.00	106.50	214,277	0.04	5.52	1.00
810186AK2	990	SCOTTS MIRACLE GROW REG	6.625	12/15/20	BB-	B1	100.44	105.25	1,044,890	0.17	4.36	0.92
84762LAL9	130	SPECTRUM BRANDS INC	6.750	03/15/20	B	B3	100.00	104.50	138,434	0.02	5.20	2.82
84762LAN5	310	SPECTRUM BRANDS INC REG	6.375	11/15/20	B	B3	100.00	104.25	325,700	0.05	5.15	3.39
84762LAQ8	1,325	SPECTRUM BRANDS INC REG	6.625	11/15/22	B	B3	105.36	105.75	1,412,404	0.24	5.46	4.12
			7.704	10/24/19	B-	B3			9,801,102	1.63	8.64	2.46
CONSUMER PRODUCTS - Consumer Non-Durables/Textiles												
96926JAA5	1,035	WILLIAM CARTER REG	5.250	08/15/21	BB+	Ba2	100.68	103.00	1,086,578	0.18	4.52	4.00
978097AC7	1,175	WOLVERINE WORLD WIDE	6.125	10/15/20	BB	Ba3	101.12	105.00	1,248,943	0.21	4.66	3.33
			5.718	03/05/21	BB	Ba3			2,335,521	0.39	4.60	3.64
CONSUMER PRODUCTS - Producers												
966244AA3	1,010	WHITEWAVE FOODS CO REG	5.375	10/01/22	BB-	B1	100.47	103.00	1,055,983	0.18	4.90	6.22
			5.375	10/01/22	BB-	B1			1,055,983	0.18	4.90	6.22
			7.169	**05/16/20**	**B**	**B2**			**$19,551,887**	**3.26%**	**7.27**	**3.33**
ENERGY - Exploration & Production												
03674XAA4	2,185	ANTERO RESOURCES FINANCE 144A	5.125	12/01/22	BB	B1	98.58	94.25	2,068,694	0.35	6.05	6.34
03674PAL7	1,060	ANTERO RESOURCES FINANCE REG	5.375	11/01/21	BB	B1	100.38	96.75	1,035,046	0.17	5.96	5.57
03834AAA1	1,050	APPROACH RESOURCES INC	7.000	06/15/21	B-	B3	100.00	74.00	780,267	0.13	13.09	4.75
049296AC0	1,125	ATLAS EN HLDGS OP CO/ATL REG	7.750	01/15/21	B-	Caa1	99.50	72.50	855,828	0.14	14.79	4.18
13057QAA5	1,685	CALIFORNIA RESOURCES CRP 144A	5.000	01/15/20	BB	Ba1	86.50	86.75	1,482,800	0.25	8.25	4.24
165ESCCH8	1,725	CHESAPEAKE ESCROW CLAIM			BB-*	Ba3*	0.00	0.19	319,125	0.05	0.00	0.00
205768AH7	2,675	COMSTOCK RESOURCES INC	7.750	04/01/19	B-	B3	101.01	71.00	1,951,078	0.33	17.76	3.20
205768AJ3	425	COMSTOCK RESOURCES INC	9.500	06/15/20	B-	B3	95.30	68.00	290,794	0.05	19.22	3.73
20605PAB7	1,115	CONCHO RESOURCES INC	7.000	01/15/21	BB+	Ba3	100.00	104.75	1,203,952	0.20	5.54	0.96
20605PAC5	1,320	CONCHO RESOURCES INC	6.500	01/15/22	BB+	Ba3	100.00	104.50	1,418,963	0.24	5.46	4.16
20605PAD3	410	CONCHO RESOURCES INC	5.500	10/01/22	BB+	Ba3	100.00	101.00	419,738	0.07	5.29	4.82
212015AD3	340	CONTINENTAL RESOURCES INC REG	7.375	10/01/20	BBB-	Baa3	99.50	104.88	362,844	0.06	5.52	0.71
212015AF8	1,405	CONTINENTAL RESOURCES INC REG	7.125	04/01/21	BBB-	Baa3	105.27	107.50	1,535,402	0.26	3.71	1.18
29357JAA4	2,765	ENQUEST PLC 144A	7.000	04/15/22	B	B3	97.39	62.00	1,755,161	0.29	16.01	4.85
48019TAA2	3,300	JONES ENERGY HLDGS/FIN 144A	6.750	04/01/22	B-	B3	100.92	76.00	2,563,688	0.43	11.76	5.18
536022AK2	2,165	LINN ENEREGY LLC REG	6.500	05/15/19	B	B1	99.89	85.50	1,869,057	0.31	10.75	3.60
651290AN8	530	NEWFIELD EXPLORATION CO	6.875	02/01/20	BB+	Ba2	107.00	101.50	553,132	0.09	6.33	2.67

*MacKay Shields' in-house rating for “NR” rated security.

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
ENERGY - Exploration & Production (Continued)												
651290AQ1	995	NEWFIELD EXPLORATION COMPANY	5.625	07/01/24	BBB-	Ba1	100.00	98.94	1,012,413	0.17	5.77	7.06
674215AC2	2,435	OASIS PETROLEUM INC REG	7.250	02/01/19	B+	B2	98.14	95.50	2,398,982	0.40	8.58	3.34
674215AG3	565	OASIS PETROLEUM INC REG	6.875	03/15/22	B+	B2	100.00	91.00	525,587	0.09	8.57	5.37
69327RAC5	2,010	PDC ENERGY INC	7.750	10/15/22	B-	B3	100.89	95.00	1,942,386	0.32	8.64	5.60
70788TAC1	572	PENN VIRGINIA RESOURCE	8.375	06/01/20	BB	Ba3	100.00	106.75	614,602	0.10	6.14	2.17
716748AA6	3,615	PETROQUEST ENERGY INC	10.000	09/01/17	B	Caa1	101.78	87.50	3,283,625	0.55	15.91	2.13
747065AB6	790	PVR PARTNERS/PENN VIRGINIA	6.500	05/15/21	BB	Ba3	100.00	101.00	804,461	0.13	6.23	3.73
75281AAN9	690	RANGE RESOURCES	5.000	08/15/22	BB+	Ba2	100.00	100.00	703,033	0.12	5.00	4.39
75281AAQ2	540	RANGE RESOURCES CORP	5.000	03/15/23	BB+	Ba2	100.00	100.00	547,950	0.09	5.00	5.20
761565AC4	875	REX ENERGY CORP 144A	6.250	08/01/22	B-	B3	98.58	74.50	676,788	0.11	11.35	5.36
761565AB6	2,085	REX ENERGY CORP REG	8.875	12/01/20	B-	B3	102.60	89.50	1,881,495	0.31	11.36	4.37
777779AD1	1,040	ROSETTA RESOURCES INC REG	5.625	05/01/21	BB-	B1	100.00	91.51	961,454	0.16	7.32	5.12
777779AF6	255	ROSETTA RESOURCES INC REG	5.875	06/01/24	BB-	B1	100.00	89.00	228,198	0.04	7.53	6.92
74978QAA3	1,285	RSP PERMIAN INC 144A	6.625	10/01/22	B-	B3	99.82	93.00	1,217,515	0.20	7.84	5.78
79970YAC9	1,555	SANCHEZ ENERGY CORP 144A	6.125	01/15/23	B-	B3	96.91	84.00	1,354,880	0.23	8.96	5.81
78454LAH3	2,481	SM ENERGY CO REG	5.000	01/15/24	BB	Ba2	97.75	86.50	2,203,266	0.37	7.05	6.80
78454LAJ9	490	SM Energy Co.	6.125	11/15/22	BB	Ba2	100.00	94.00	464,268	0.08	7.13	6.04
78454LAB6	875	SM ENERGY COMPANY REG	6.625	02/15/19	BB	Ba2	100.94	98.00	879,399	0.15	7.19	3.46
78454LAF7	220	SM ENERGY COMPANY REG	6.500	01/01/23	BB	Ba2	100.00	96.00	218,350	0.04	7.17	5.90
861642AM8	4,475	STONE ENERGY CORP	7.500	11/15/22	B-	B3	96.82	86.00	3,891,385	0.65	10.12	5.58
89600LAA8	2,100	TRIANGLE USA PETROLEUM 144A	6.750	07/15/22	CCC+	Caa1	94.52	66.00	1,450,181	0.24	14.25	5.01
92922PAC0	1,230	W&T OFFSHORE INC REG	8.500	06/15/19	B-	B3	105.85	65.50	810,297	0.14	20.72	3.26
966387AF9	2,985	WHITING PETROLEUM CORP	6.500	10/01/18	BB-	Ba3	102.33	96.50	2,929,031	0.49	7.59	3.21
98212BAD5	1,790	WPX ENERGY INC REG	6.000	01/15/22	BB+	Ba1	100.80	96.25	1,772,398	0.30	6.68	5.47
			6.848	04/19/21	B+	B1			53,237,515	8.88	9.62	4.38
ENERGY - Other Energy/Midstream												
16524RAE3	860	ACCESS MIDSTREAM PARTNERS LP REG	6.125	07/15/22	BB+	Ba2	99.25	106.25	938,039	0.16	4.33	1.86
03077JAB6	460	AMERIGAS FINANCE CORP	7.000	05/20/22	BB*	Ba2	100.00	103.50	479,767	0.08	6.22	4.42
030981AG9	455	AMERIGAS PARTNERS LP	6.250	08/20/19	BB-*	Ba3	100.00	103.25	480,136	0.08	4.91	2.36
030981AF1	320	AMERIGAS PARTNERS LP REG	6.500	05/20/21	BB-*	Ba3	100.00	102.50	330,369	0.06	5.84	3.76
04939MAL3	950	ATLAS PIPELINE LP/FIN CO	4.750	11/15/21	B+	B2	100.00	95.00	908,266	0.15	5.64	5.72
04939MAM1	1,295	ATLAS PIPELINE LP/FIN CO REG	6.625	10/01/20	B+	B2	103.00	101.75	1,339,111	0.22	6.09	3.23
217203AE8	1,404	COPANO ENERGY LLC	7.125	04/01/21	BBB-	Baa3	103.16	108.61	1,549,903	0.26	2.84	1.19
226373AJ7	840	CRESTWOOD MIDSTREAM PART	6.000	12/15/20	BB	B1	100.00	95.75	806,540	0.13	6.88	4.89
570506AM7	2,410	MARKWEST ENERGY PARTNERS LP	6.750	11/01/20	BB	Ba3	102.50	104.00	2,533,513	0.42	5.57	2.53
67059TAD7	1,550	NUSTAR LOGISTICS LP REG	6.750	02/01/21	BB+	Ba1	100.00	105.75	1,682,719	0.28	5.62	4.85
86614WAB2	1,010	SUMMIT MID HLDS LLC / FI REG	7.500	07/01/21	B	B3	100.00	105.00	1,098,375	0.18	6.21	3.67
88160QAG8	1,500	TESORO LOGISTIC	5.500	10/15/19	BB	Ba3	100.00	99.25	1,502,958	0.25	5.68	4.12
88160QAH6	2,075	TESORO LOGISTIC	6.250	10/15/22	BB	Ba3	101.00	99.75	2,092,148	0.35	6.29	6.03
			6.439	04/16/21	BB	Ba3			15,741,843	2.63	5.50	3.75

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Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
ENERGY - Refining												
131477AL5	690	CALUMET SPECIALTY PROD	7.625	01/15/22	B+	B2	102.70	92.50	662,510	0.11	9.09	5.08
131477AM3	3,075	CALUMET SPECIALTY PROD 144A	6.500	04/15/21	B+	B2	99.67	89.00	2,778,946	0.46	8.81	4.90
35914PAK1	1,280	FRONTIER OIL CORP	6.875	11/15/18	BBB-	Baa3	100.00	102.00	1,316,844	0.22	5.72	1.73
			6.760	09/21/20	BB-	B1			4,758,300	0.79	7.99	4.04
ENERGY - Service & Equipment												
20467BAA7	1,575	COMPRESSCO PART	7.250	08/15/22	B	B2	98.95	86.00	1,401,127	0.23	9.91	5.38
34984VAB6	1,861	FORUM ENERGY TECHNOLOGIE REG	6.250	10/01/21	BB	Ba3	102.44	94.00	1,778,418	0.30	7.39	5.28
30283WAA2	1,100	FTS INTERNATIONAL INC 144A	6.250	05/01/22	B	B2	102.50	73.00	814,458	0.14	11.87	5.33
53225CAA9	1,440	LIGHT TOWER RENTALS INC 144A	8.125	08/01/19	B	B2	101.22	77.75	1,171,600	0.20	15.02	3.39
69913JAA7	2,660	PARAGON OFFSHORE LTD 144A	6.750	07/15/22	B	Ba3	90.11	61.00	1,703,896	0.28	15.77	4.87
69913JAB5	1,075	PARAGON OFFSHORE LTD 144A	7.250	08/15/24	B	Ba3	97.87	60.00	680,288	0.11	15.32	5.50
165258AB0	2,780	SEVENTY SEVEN ENERGY INC	6.625	11/15/19	B+	Ba3	99.22	76.00	2,136,333	0.36	13.51	3.83
			6.862	08/02/21	B+	B1			9,686,121	1.62	12.44	4.69
			6.768	**04/19/21**	**B+**	**B1**			**$83,423,779**	**13.92%**	**9.08**	**4.28**
FINANCIAL - Automotive												
37045XAB2	2,355	GENERAL MOTORS FINL REG	6.750	06/01/18	BBB-	Ba1	103.00	113.25	2,680,284	0.45	2.67	3.07
			6.750	06/01/18	BBB-	Ba1			2,680,284	0.45	2.67	3.07
FINANCIAL												
00772BAK7	1,060	AERCAP IRELAND CAP LTD/A 144A	5.000	10/01/21	BB+	Ba2	100.00	103.50	1,110,644	0.19	4.39	5.64
00213UAA4	995	ALIANT HOLDINGS 144A	7.875	12/15/20	CCC+	Caa2	100.63	102.00	1,018,383	0.17	7.11	2.60
370425RZ5	1,015	ALLY FINANCIAL INC	8.000	11/01/31	BB+	B1	104.90	127.25	1,305,121	0.22	5.50	10.00
02005NAD2	1,340	ALLY FINANCIAL INC REG	6.250	12/01/17	BB+	B1	98.60	108.00	1,454,179	0.24	3.35	2.66
02503YAG8	2,270	AMERICAN CAPITAL LTD 144A	6.500	09/15/18	BB	B3	102.23	104.50	2,415,595	0.40	4.49	0.68
025676AL1	1,260	AMERICAN EQUITY INVESTME REG	6.625	07/15/21	BB+	Ba1*	100.00	106.00	1,374,091	0.23	5.13	3.80
14754DAG5	880	CASH AMERICA INTERNATION REG	5.750	05/15/18	BB*	Ba2*	100.00	103.50	917,266	0.15	4.62	3.03
138608AA2	390	CCRE CO LP LLC / FIN COR 144A	7.750	02/15/18	B+	B1	106.38	103.25	414,093	0.07	6.08	1.89
12527MAA8	1,320	CFG HOLDINGS LTD 144A	11.500	11/15/19	B+	B3	99.38	102.00	1,365,797	0.23	10.84	3.03
20367QAB3	2,765	COMMUNITY CHOICE FINANCING REG	10.750	05/01/19	B-	B3	96.26	65.00	1,846,790	0.31	24.20	2.93
68276CAA5	1,120	COMPASS INVESTORS INC (USI) 144A	7.750	01/15/21	CCC+	Caa2	100.00	97.50	1,132,024	0.19	8.28	4.56
26150TAA7	1,815	DRAWBRIDGE SPEC OPPOR FU 144A	5.000	08/01/21	BBB	Baa2*	98.90	99.88	1,854,325	0.31	5.09	5.43
26209NAK9	1,280	DRIVETIME AUTO	8.000	06/01/21	B	B3	100.27	89.88	1,158,933	0.19	10.19	4.78
269246BL7	1,215	E*TRADE FINANCIAL CORP REG	5.375	11/15/22	B+	Ba3	100.05	102.25	1,250,319	0.21	4.93	4.97
303901AG7	262	FAIRFAX FINANCIAL HLDGS	7.375	04/15/18	BBB-	Baa3	93.88	113.10	300,399	0.05	3.15	2.92
303901AB8	310	FAIRFAX FINANCIAL HLDGS	8.300	04/15/26	BBB-	Baa3	86.99	122.11	383,971	0.06	5.63	7.60
315786AA1	1,775	FIDELITY & GUARANTY LIFE HOLDINGS 144A	6.375	04/01/21	BB-	Ba3	101.70	105.00	1,892,039	0.32	5.05	3.66
31942DAB3	980	FIRST CASH FINANCIAL SER	6.750	04/01/21	BB	Ba3	100.79	104.00	1,035,738	0.17	5.85	4.33
37045XAE6	625	GENERAL MOTORS FINL CO	4.750	08/15/17	BBB-	Ba1	100.00	105.46	670,340	0.11	2.58	2.43

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Holdings Report — Account 1022

December 31, 2014

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FINANCIAL (Continued)												
43414TAA4	415	HUB INTL	7.875	10/01/21	CCC+	Caa1	101.50	99.50	421,095	0.07	7.97	5.06
46322VAA3	860	IRONSHORE HOLDING INC 144A	8.500	05/15/20	BBB	Baa3	101.84	120.15	1,042,597	0.17	4.26	4.39
505742AD8	900	LADDER CAP FIN LLLP/CORP 144A	5.875	08/01/21	B+	Ba3	100.00	95.00	877,031	0.15	6.83	5.21
63607TAA9	1,510	National Financial Partners 144A	9.000	07/15/21	CCC+	Caa2	102.11	104.75	1,644,390	0.27	7.74	3.56
63860UAM2	505	NATIONSTAR MORT/CAP CORP REG	6.500	08/01/18	B+	B2	100.00	95.25	494,690	0.08	8.05	3.03
63860UAH3	995	NATIONSTAR MORT/CAP CORP REG	7.875	10/01/20	B+	B2	101.56	96.00	974,789	0.16	8.77	4.42
68268DAA3	525	ONEMAIN FIN HOLDINGS INC 144A	6.750	12/15/19	B+	B2	100.00	102.00	537,469	0.09	6.27	4.16
68268DAB1	925	ONEMAIN FIN HOLDINGS INC 144A	7.250	12/15/21	B+	B2	100.00	102.50	951,851	0.16	6.65	4.11
68276KAA7	525	ONEX YORK ACQUISITION CO 144A	8.500	10/01/22	CCC+	Caa2	100.00	100.00	536,156	0.09	8.50	4.39
74349CAA6	1,070	PROSPECT HLDG LLC/FINANC 144A	10.250	10/01/18	B	B2	97.16	82.50	910,169	0.15	16.70	2.82
74387UAG6	1,420	PROVIDENT FDG/PFG FIN 144A	6.750	06/15/21	B	Ba3	100.00	97.00	1,381,660	0.23	7.34	5.11
74387UAD3	395	PROVIDENT FUNDING ASSOCIATION 144A	10.125	02/15/19	B	Ba3	100.00	105.00	429,859	0.07	7.52	1.83
762515AA2	1,605	RIALTO HOLDINGS 144A	7.000	12/01/18	B	B2	101.10	101.50	1,638,438	0.27	6.42	2.59
847791AA8	935	SPEEDY CASH INC 144A	10.750	05/15/18	B	Caa1	106.50	98.00	929,143	0.15	11.47	2.72
85800TAA7	490	STEARNS LENDING INC	9.375	08/15/20	B+	B2	100.00	100.00	507,354	0.08	9.37	3.56
87261NAG5	590	TITLEMAX FINANCE CORP 144A	8.500	09/15/18	B	B3	100.00	84.00	510,366	0.09	14.15	2.92
			7.504	10/17/20	BB-	B1			36,687,104	6.12	7.65	3.86
			7.453	**08/19/20**	**BB-**	**B1**			**$39,367,389**	**6.57%**	**7.31**	**3.80**
Food and Drug - FOOD AND DRUG												
457030AJ3	1,135	INGLES MARKETS INC REG	5.750	06/15/23	BB-	B1	99.89	100.41	1,142,565	0.19	5.67	5.32
			5.750	**06/15/23**	**BB-**	**B1**			**$1,142,565**	**0.19%**	**5.67**	**5.32**
FOOD/TOBACCO - Beverages & Bottling												
21036PAM0	1,205	CONSTELLATION REG	3.875	11/15/19	BB+	Ba1	100.00	100.75	1,221,560	0.20	3.70	4.38
21036PAN8	1,945	CONSTELLATION REG	4.750	11/15/24	BB+	Ba1	100.00	101.25	1,984,197	0.33	4.59	7.77
			4.417	12/19/22	BB+	Ba1			3,205,758	0.53	4.25	6.48
FOOD/TOBACCO - Producers												
00190B113	0	ASG CONSOLIDATED		12/31/17	NR	NR	0.00	2.00	690	0.00	0.00	0.00
00210VAD9	1,250	ASG CONSOLIDATED LLC 144A	15.000	05/15/17	CCC*	Caa2*	98.29	70.00	899,003	0.15	34.44	1.68
05508WAA3	1,510	B&G FOODS INC REG	4.625	06/01/21	BB-	B1	95.84	97.61	1,479,731	0.25	5.07	5.45
12467AAD0	1,695	C&S GROUP ENTERPRISES LL 144A	5.375	07/15/22	BB	B1	100.11	99.25	1,725,563	0.29	5.50	5.97
487526AA3	1,465	KEHE DISTRIBUTORS LLC/FI 144A	7.625	08/15/21	B-	B3	102.08	106.25	1,598,763	0.27	6.05	3.79
514666AJ5	1,800	LAND O LAKES 144A	6.000	11/15/22	BBB-	Ba2	101.66	107.00	1,939,800	0.32	4.89	6.09
94973BAA9	760	WELLS ENTERPRISES INC 144A	6.750	02/01/20	B+	B3	102.93	102.50	800,375	0.13	6.04	3.44
			6.968	06/17/21	BB-	B2			8,443,924	1.41	8.52	4.80
			6.266	**11/15/21**	**BB-**	**B1**			**$11,649,682**	**1.94%**	**7.35**	**5.26**

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Alaska Retirement Management Board

MacKay Shields

Holdings Report — Account 1022

December 31, 2014

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FOREST PRODUCTS/CONTAINERS - Packaging												
001031AH6	2,090	AEP INDUSTRIES CORP REG	8.250	04/15/19	B	B3	102.82	101.00	2,147,301	0.36	7.75	2.02
058498AP1	680	BALL CORP	6.750	09/15/20	BB+	Ba1	100.00	104.00	720,715	0.12	3.50	0.20
397624AE7	335	GREIF INC	6.750	02/01/17	BB-	Ba2	98.00	107.00	367,872	0.06	3.25	1.90
69073TAP8	255	OWENS BROCKWAY REG	7.375	05/15/16	BB+	Ba3	96.72	105.75	277,498	0.05	3.06	1.28
827048AP4	1,060	SILGAN HOLDINGS INC REG	5.000	04/01/20	BB-	Ba2	100.00	101.50	1,089,150	0.18	4.50	2.94
977255AD0	1,690	WISE METALS GROUP LLC/WI 144A	8.750	12/15/18	B-	Caa1	108.38	105.00	1,781,072	0.30	7.09	2.95
			7.541	04/07/19	B+	B2			6,383,608	1.06	6.07	2.19
FOREST PRODUCTS/CONTAINERS - Paper												
09739DAA8	1,925	BOISE CASCADE COMPANY REG	6.375	11/01/20	BB-	B1	101.01	105.00	2,041,703	0.34	5.50	3.36
373298BU1	400	GEORGIA PACIFIC	8.875	05/15/31	A+	Baa1	99.97	154.98	624,439	0.10	4.20	10.12
727610AL1	1,565	PLASTIPAK HOLDINGS INC 144A	6.500	10/01/21	B+	Caa1	100.00	99.50	1,582,606	0.26	6.59	5.30
75508EAA6	1,605	RAYONIER AM PROD INC 144A	5.500	06/01/24	BB+	Ba3	100.74	82.13	1,325,463	0.22	8.27	6.91
832724AB4	3,924	SMURFIT CAPITAL FUNDING PLC	7.500	11/20/25	BB+	Ba1	95.65	117.25	4,634,408	0.77	5.38	7.64
83272TAC7	450	SMURFIT KAPPA ACQUISITIONS 144A	4.875	09/15/18	BB+	Ba1	100.00	103.50	472,209	0.08	3.78	3.12
			6.853	02/16/24	BB+	Ba3			10,680,827	1.78	5.80	6.33
			7.110	**04/23/22**	**BB**	**Ba3**			**$17,064,436**	**2.85%**	**5.90**	**4.78**
GAMING/LEISURE - Gaming/Established Jurisdiction												
00829WAB4	2,565	AFFINITY GAMING LLC/FIN	9.000	05/15/18	B-	Caa1	101.95	96.00	2,491,898	0.42	10.43	2.79
DD99CAN18	468	CANNERY CASINO RESORTS FIRST LIEN TERM	6.000	10/02/18	B	B2	99.00	92.92	435,102	0.07	8.42	0.25
DD99CAN19	1,070	CANNERY CASINO RESORTS SECOND LIEN TERM	10.000	10/02/19	CCC	Caa2	96.70	76.00	813,497	0.14	19.42	0.25
552953CC3	1,200	MGM RESORTS INTL REG	6.000	03/15/23	B+	B3	100.75	100.50	1,213,200	0.20	5.92	6.37
76882AAA8	1,119	RIVERS PITTSBURGH LP/FIN 144A	9.500	06/15/19	B	B3	108.13	106.00	1,190,865	0.20	6.28	0.44
			8.425	09/29/19	B-	Caa1			6,144,562	1.02	9.78	2.53
GAMING/LEISURE - Gaming/New Jurisdiction												
284710AE0	1,065	ELDORADO RESORTS LLC 144A	8.625	06/15/19	B+	B2	85.55	104.50	1,117,008	0.19	6.60	2.19
361841AD1	635	GLP CAPITAL LP / FIN II REG	4.875	11/01/20	BBB-	Ba1	100.00	101.25	648,097	0.11	4.62	4.81
361841AF6	1,315	GLP CAPITAL LP / FIN II REG	5.375	11/01/23	BBB-	Ba1	99.35	103.50	1,372,805	0.23	4.87	6.79
464592AQ7	475	ISLE OF CAPRI CASINOS REG	5.875	03/15/21	B+	B2	97.25	101.50	490,342	0.08	5.47	3.63
553769AL4	484	MTR GAMING GROUP INC REG	11.500	08/01/19	B	B3	108.25	108.25	547,491	0.09	6.40	0.36
865033AB0	1,125	SUGAR HSP GMNG PROP/FIN 144A	6.375	06/01/21	CCC	B3	94.50	91.00	1,029,727	0.17	8.21	5.07
			6.899	05/06/21	BB-	B1			5,205,469	0.87	6.09	4.24
GAMING/LEISURE - Leisure/Other												
00507VAC3	620	ACTIVISION BLIZZARD 144A	5.625	09/15/21	BB+	Ba2	100.00	105.00	661,269	0.11	4.43	4.06
00507VAE9	310	ACTIVISION BLIZZARD 144A	6.125	09/15/23	BB+	Ba2	100.00	107.75	339,616	0.06	4.59	3.26
169905AE6	1,315	CHOICE HOTELS INTERNATIONAL	5.750	07/01/22	BB	Baa3	101.66	107.25	1,448,144	0.24	4.60	5.95
171484AB4	1,340	CHURCHILL DOWNS INC	5.375	12/15/21	BB	B1	101.02	100.00	1,343,201	0.22	5.37	4.29

Alaska Retirement Management Board

MacKay Shields

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
GAMING/LEISURE - Leisure/Other (Continued)												
35100DAR7	454	FOUR SEASONS HOLDINGS FIRST LIEN TM LN	3.500	06/27/20	BB-	B1	99.75	97.88	444,641	0.07	3.96	0.25
DC0004059	570	FOUR SEASONS HOTELS TERM LN 2ND LIEN	6.250	12/27/20	B-	Caa1	99.00	99.25	565,824	0.09	6.42	0.25
432891AD1	1,835	HILTON WORLDWIDE FIN LLC REG	5.625	10/15/21	B	B3	100.76	104.50	1,939,366	0.32	4.32	3.36
44107TAQ9	365	HOST HOTELS AND RESORTS REG	6.000	10/01/21	BBB	Baa3	100.63	114.99	425,206	0.07	3.41	5.40
553799AA5	1,514	MU FINANCE PLC 144A	8.375	02/01/17	B+*	B1*	100.95	102.38	1,602,482	0.27	4.09	0.10
847788AQ9	620	SPEEDWAY MOTORSPORTS INC	6.750	02/01/19	BB+	Ba2	106.75	103.00	656,038	0.11	5.20	1.88
450912AC4	220	STARWOOD HOTELS &RESORTS	7.375	11/15/15	BBB	Baa2	101.00	104.92	232,890	0.04	1.67	0.85
91879QAK5	551	VAIL RESORTS REG	6.500	05/01/19	BB	Ba3	100.00	103.50	576,254	0.10	4.88	2.13
			6.176	09/06/20	BB-	Ba3			10,234,930	1.71	4.57	2.94
			6.991	**07/29/20**	**B+**	**B1**			**$21,584,961**	**3.60%**	**6.42**	**3.14**
HEALTHCARE - Acute Care												
15135BAC5	817	CENTENE CORPORATION REG	5.750	06/01/17	BB	Ba2	98.75	106.00	869,935	0.15	3.15	2.25
404121AC9	215	HCA INC	6.500	02/15/20	BB	Ba2	112.50	112.05	246,187	0.04	3.88	4.30
404121AE5	1,065	HCA INC	5.875	03/15/22	BB	Ba2	103.25	109.50	1,184,598	0.20	4.33	5.82
404121AF2	970	HCA INC	4.750	05/01/23	BB	Ba2	100.00	101.75	994,654	0.17	4.50	6.79
404121AG0	285	HCA INC	5.875	05/01/23	B-	B2	103.46	105.38	303,109	0.05	5.07	6.53
404119BP3	615	HCA INC REG	4.250	10/15/19	BB	Ba2	100.17	101.50	629,598	0.11	3.90	4.27
404119BN8	1,440	HCA INC REG	5.000	03/15/24	BB	Ba2	99.93	102.75	1,500,800	0.25	4.63	7.24
404119BQ1	1,650	HCA INC REG	5.250	04/15/25	BB	Ba2	100.12	104.50	1,742,056	0.29	4.69	7.87
55342UAD6	1,520	MPT OPER PARTNERSP/FINL REG	6.375	02/15/22	BBB-	Ba1	102.00	106.25	1,651,607	0.28	4.69	1.93
55342UAE4	715	MPT OPER PARTNERSP/FINL REG	5.500	05/01/24	BBB-	Ba1	100.00	104.25	751,942	0.13	4.80	5.97
			5.475	09/20/22	BB	Ba2			9,874,486	1.65	4.43	5.43
HEALTHCARE - Alternate Site Services												
23918KAM0	484	DAVITA INC REG	6.625	11/01/20	B+	B1	104.67	105.00	513,544	0.09	4.36	0.80
35802XAJ2	980	FRESENIUS MED CARE II 144A	4.750	10/15/24	BB+	Ba2	100.00	101.00	997,817	0.17	4.62	7.56
35802XAA1	200	FRESENIUS MEDICAL CARE 144A	6.500	09/15/18	BB+	Ba2	98.62	110.50	224,828	0.04	3.45	3.26
35802XAF0	205	FRESENIUS MEDICAL CARE 144A	5.875	01/31/22	BB+	Ba2	103.88	108.50	227,477	0.04	4.46	5.69
35803QAD9	595	FRESENIUS MEDICAL CARE US REG	6.875	07/15/17	BB+	Ba2	98.50	109.25	668,900	0.11	3.06	2.28
421924BK6	985	HEALTHSOUTH CORP REG	5.750	11/01/24	BB-	B1	103.63	104.00	1,033,840	0.17	4.95	4.89
47009RAA0	1,415	JAGUAR HOLDING COMPANY 144A	9.375	10/15/17	CCC+	Caa1	100.35	102.20	1,474,135	0.25	6.11	0.74
49457QAA5	570	KINDRED ESCROW CORP II 144A	8.000	01/15/20	B-	B2	100.00	106.25	607,272	0.10	6.52	4.13
516545AC4	770	LANTHEUS MEDICAL IMAGING REG	9.750	05/15/17	B-	Caa1	96.70	96.00	748,793	0.12	11.72	2.03
553331AA7	3,375	MULTIPLAN INC	6.625	04/01/22	CCC+	Caa1	101.21	102.25	3,506,836	0.58	6.11	4.33
78572XAE1	645	SABRA HEALTH/CAPTL CORP REG	5.500	02/01/21	BB-	Ba3	100.00	104.00	685,581	0.11	4.61	4.32
78572XAD3	1,050	SABRA HEALTH/CAPTL CORP REG	5.375	06/01/23	BB-	Ba3	100.00	102.00	1,075,703	0.18	5.01	5.36
91359PAJ9	1,180	UNIVERSAL HOSPITAL SVC REG	7.625	08/15/20	B	B3	101.54	86.00	1,048,791	0.17	11.03	4.21
			6.887	04/14/21	B	B2			12,813,516	2.14	6.17	3.90

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Alaska Retirement Management Board

MacKay Shields

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
HEALTHCARE - Long Term Care												
49457QAB3	300	KINDRED ESCROW CORP II 144A	8.750	01/15/23	B-	B2	100.00	107.63	323,823	0.05	7.17	4.69
			8.750	01/15/23	B-	B2			323,823	0.05	7.17	4.69
HEALTHCARE - Medical Products												
21244WAA9	1,400	CONVATEC HEALTHCARE 144A	10.500	12/15/18	B	B3	98.87	105.50	1,483,533	0.25	7.14	0.90
398435AA5	2,170	GRIFOLS WORLDWIDE OP LTD 144A	5.250	04/01/22	B+	B1	100.97	102.27	2,247,740	0.37	4.75	4.50
41043FAJ8	1,975	HANGER ORTHOPEDIC GROUP REG	7.125	11/15/18	B	B1	100.49	100.50	2,002,856	0.33	6.83	1.71
436440AF8	650	HOLOGIC INC REG	6.250	08/01/20	BB	B2	100.00	104.00	692,927	0.12	4.53	0.56
46590GAA1	1,080	PATHEON JLL/DELTA DUTCH NEWCO BV 144A	7.500	02/01/22	CCC+	Caa2	100.75	101.50	1,129,950	0.19	7.14	4.05
879369AB2	1,225	TELEFLEX INC	6.875	06/01/19	B+	B1	100.64	104.25	1,284,081	0.21	4.70	0.41
879369AC0	1,120	TELEFLEX INC 144A	5.250	06/15/24	BB	Ba3	100.00	100.00	1,122,613	0.19	5.25	6.09
92912EAA1	335	VALEANT PHARM	7.500	07/15/21	B	B1	109.00	108.00	373,385	0.06	5.46	3.01
91911KAD4	945	VALEANT PHARMACEUTICALS 144A	5.625	12/01/21	B	B1	100.99	100.75	956,517	0.16	5.41	3.46
91911XAM6	571	VALEANT PHARMACEUTICALS INTERNA 144A	7.000	10/01/20	B	B1	105.70	105.50	612,398	0.10	4.07	0.72
91829KAA1	935	VALEANT VPI ESCROW CORP 144A	6.375	10/15/20	B	B1	100.00	104.50	989,659	0.17	5.05	3.31
			6.820	12/02/20	B+	B2			12,895,659	2.15	5.64	2.74
			6.491	**07/25/21**	**B+**	**B1**			**$35,907,483**	**5.99%**	**5.51**	**3.91**
HOUSING - Building Materials												
120111BL2	1,430	BUILDING MATERIALS CORP 144A	6.750	05/01/21	BB+	Ba2	106.14	105.75	1,528,313	0.25	4.71	1.26
120111BM0	1,220	BUILDING MATERIALS CORP 144A	5.375	11/15/24	BB+	Ba2	100.00	99.75	1,226,240	0.20	5.41	7.52
120113AA3	1,645	BUILDING MATERIALS HOLDI 144A	9.000	09/15/18	B-	B3	103.87	105.00	1,770,843	0.30	6.93	2.33
42210PAQ5	2,055	HEADWATERS INC	7.625	04/01/19	B+	B1	98.27	104.25	2,181,511	0.36	5.46	0.24
42210PAT9	1,605	HEADWATERS INC REG	7.250	01/15/19	CCC+	Caa1	101.54	104.00	1,722,856	0.29	5.79	2.63
644274AD4	2,174	NEW ENTERPRISE STONE & LIME REG	13.000	03/15/18	CCC+	Caa1*	103.96	105.50	2,376,460	0.40	10.13	1.83
644274AB8	1,815	NEW ENTERPRISE STONE & LIME REG	11.000	09/01/18	CCC-	Caa3	91.64	92.50	1,745,425	0.29	13.66	2.79
86614RAB3	1,140	SUMMIT MATERIALS LLC/FIN REG	10.500	01/31/20	B-	Caa1	109.01	111.00	1,315,608	0.22	4.67	0.99
903293BB3	875	USG CORP 144A	7.875	03/30/20	BB	B1	100.50	107.00	953,668	0.16	5.08	1.17
903293AR9	65	USG CORP REG	6.300	11/15/16	B-	Caa1	97.25	105.00	68,773	0.01	3.51	1.75
929160AQ2	157	VULCAN MATERIALS COMPANY	6.500	12/01/16	BB+	Ba3	106.88	106.50	168,055	0.03	2.98	1.80
929160AR0	695	VULCAN MATERIALS COMPANY	7.500	06/15/21	BB+	Ba3	110.58	116.50	811,992	0.14	4.52	5.21
			8.885	10/14/19	B	B2			15,869,743	2.65	7.01	2.31
HOUSING - Real Estate Development												
045086AD7	1,630	ASHTON WOODS USA LLC / FINANCE 144A	6.875	02/15/21	B-	Caa1	98.88	95.25	1,594,910	0.27	7.86	4.75
00234PAC6	1,685	AV HOMES INC 144A	8.500	07/01/19	B-	Caa1	100.00	96.50	1,698,035	0.28	9.48	3.49
11283YAA8	1,085	BROOKFIELD RESIDENTIAL PROPERTIES INC	6.125	07/01/22	BB-	B2	99.38	104.00	1,161,628	0.19	5.28	4.51
11283WAA2	520	BROOKFIELD RESIDENTIAL PROPS INC 144A	6.500	12/15/20	BB-	B2	105.50	104.50	544,902	0.09	5.23	3.46
12505BAA8	1,975	CBRE SERVICES INC	5.000	03/15/23	BB+	Ba1	98.79	102.19	2,047,329	0.34	4.59	5.23
12505BAC4	1,635	CBRE SERVICES INC REG	5.250	03/15/25	BB+	Ba1	99.88	102.00	1,690,352	0.28	4.99	7.61

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Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
HOUSING - Real Estate Development (Continued)												
156504AA0	1,385	CENTURY COMMUNITIES 144A	6.875	05/15/22	B	B3	99.61	100.00	1,397,167	0.23	6.87	4.39
23331ABG3	1,275	D.R. HORTON INC	4.750	02/15/23	BB	Ba1	100.04	99.50	1,291,504	0.22	4.82	6.55
346234AB3	950	FORESTAR USA REAL ESTATE 144A	8.500	06/01/22	BB-	B2	100.00	97.50	932,979	0.16	8.97	5.35
44267DAA5	1,895	HOWARD HUGHES CORP 144A	6.875	10/01/21	B	Ba3	101.43	103.50	1,993,895	0.33	6.01	3.96
57701RAA0	2,460	MATTAMY GROUP CORP 144A	6.500	11/15/20	BB	B1	99.51	100.50	2,492,732	0.42	6.35	3.35
783764AR4	1,565	RYLAND GROUP	5.375	10/01/22	BB-	B1	98.84	97.00	1,539,080	0.26	5.86	6.15
783764AP8	330	RYLAND GROUP REG	6.625	05/01/20	BB-	B1	109.50	106.00	353,444	0.06	5.32	4.44
85375CBE0	610	STANDARD PACIFIC CORP REG	5.875	11/15/24	B+	B1	100.00	100.00	615,475	0.10	5.87	7.07
877249AA0	671	TAYLOR MORRISON 144A	7.750	04/15/20	BB-	B2	106.73	106.00	722,238	0.12	5.71	2.06
88947EAN0	800	TOLL BROS FINANCE CORP REG	4.375	04/15/23	BB+	Ba1	100.13	98.00	791,389	0.13	4.67	6.80
92923CAW4	555	WCI COMMUNITIES INC REG	6.875	08/15/21	B	B3	99.24	100.25	570,802	0.10	6.81	3.81
948565AC0	1,120	WEEKLEY HOMES LLC	6.000	02/01/23	BB-	B2	101.14	95.00	1,092,000	0.18	6.81	6.10
980242AA9	765	WOODSIDE HOMES	6.750	12/15/21	B	B3	100.25	99.50	763,470	0.13	6.84	5.46
			6.339	03/09/22	BB-	B1			23,293,331	3.89	6.28	4.95
			7.371	**03/19/21**	**B+**	**B2**			**$39,163,074**	**6.53%**	**6.58**	**3.88**
Information Technology - INFORMATION TECHNOLOGY												
004498AA9	2,285	ACI WORLDWIDE	6.375	08/15/20	BB	B2	104.50	104.50	2,442,855	0.41	5.00	3.15
018581AF5	1,120	ALLIANCE DATA SYSTEMS CORP 144A	5.250	12/01/17	BB*	Ba2*	98.91	103.00	1,158,500	0.19	4.15	2.68
018581AE8	1,205	ALLIANCE DATA SYSTEMS CORP 144A	6.375	04/01/20	BB*	Ba2*	100.64	102.25	1,251,317	0.21	5.60	2.87
077454AF3	2,965	BELDEN INC 144A	5.500	09/01/22	B+	Ba3	100.40	99.25	2,997,121	0.50	5.62	6.07
077454AG1	1,130	BELDEN INC 144A	5.250	07/15/24	B+	Ba3	100.33	96.00	1,115,122	0.19	5.80	7.16
25389MAD1	2,225	DIGITALGLOBE INC	5.250	02/01/21	BB	B1	95.77	95.00	2,162,422	0.36	6.25	4.99
29444UAN6	1,010	EQUINIX INC REG	5.375	01/01/22	BB	B1	100.00	100.94	1,025,677	0.17	5.19	5.05
29444UAM8	1,570	EQUINIX INC REG	5.375	04/01/23	BB	B1	99.63	100.00	1,591,097	0.27	5.37	5.18
29444UAP1	1,105	EQUINIX INC REG	5.750	01/01/25	BB	B1	99.61	100.88	1,121,905	0.19	5.61	6.32
45169UAE5	625	IGATE CORP REG	4.750	04/15/19	BB-	B1	100.00	100.00	631,267	0.11	4.75	2.98
488360AF5	1,640	KEMET CORP	10.500	05/01/18	B-	Caa1	101.61	102.75	1,713,800	0.29	8.24	1.21
62886EAJ7	1,190	NCR CORP	5.000	07/15/22	BB	Ba3	99.61	97.50	1,187,686	0.20	5.41	6.05
62886EAH1	250	NCR CORP REG	4.625	02/15/21	BB	Ba3	100.00	97.00	246,868	0.04	5.20	5.16
62886EAR9	1,160	NCR CORP REG	5.875	12/15/21	BB	Ba3	102.80	102.75	1,194,929	0.20	5.24	4.26
62886EAS7	1,510	NCR CORP REG	6.375	12/15/23	BB	Ba3	101.81	104.00	1,574,678	0.26	5.67	5.58
81180WAH4	3,010	SEAGATE HDD CAYMAN	4.750	06/01/23	BBB-	Baa3	99.67	103.86	3,138,245	0.52	4.20	6.90
989207AA3	1,385	Zebra Technolog	7.250	10/15/22	B	B2	100.00	105.00	1,475,448	0.25	6.20	4.65
			5.939	**12/16/21**	**BB-**	**Ba3**			**$26,028,938**	**4.34%**	**5.51**	**4.87**
MANUFACTURING												
00508XAF1	610	ACTUANT CORP REG	5.625	06/15/22	BB	Ba2	100.00	103.75	634,400	0.11	4.83	4.66
032177AE7	1,071	AMSTED INDUSTRI	5.000	03/15/22	BB	Ba3	99.25	98.25	1,068,025	0.18	5.29	5.89
035287AD3	875	ANIXTER INC	5.625	05/01/19	BB	Ba3	100.25	105.50	931,328	0.16	4.22	3.81

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Holdings Report — Account 1022

December 31, 2014

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MANUFACTURING (Continued)												
035287AE1	560	ANIXTER INC REG	5.125	10/01/21	BB	Ba3	100.00	100.00	567,813	0.09	5.12	5.57
203372AM9	455	COMMSCOPE	5.500	06/15/24	BB-	B2	100.00	98.50	449,287	0.07	5.71	7.26
203372AL1	300	COMMSCOPE INC 144A	5.000	06/15/21	BB-	B2	100.00	98.50	296,167	0.05	5.28	5.43
29355XAC1	2,625	ENPRO IND	5.875	09/15/22	BB-	B1	102.15	101.00	2,696,230	0.45	5.67	4.72
369300AN8	2,340	GENERAL CABLE CORP REG	5.750	10/01/22	B+	B3	95.13	73.00	1,741,838	0.29	11.02	5.65
398433AH5	1,200	GRIFFON CORPORATION REG	5.250	03/01/22	BB-	B1	99.13	93.63	1,144,500	0.19	6.37	5.73
784635AP9	770	SPX CORPORATION REG	6.875	09/01/17	BB+	Ba3	104.50	109.25	858,871	0.14	3.22	2.40
88830MAH5	1,390	TITAN INTERNATIONAL INC REG	6.875	10/01/20	BB-	B2	101.25	88.00	1,247,091	0.21	9.64	4.47
95081QAK0	1,370	WESCO DISTRIBUTION INC REG	5.375	12/15/21	BB-	B1	100.81	100.88	1,385,260	0.23	5.17	4.30
			5.745	**10/04/21**	**BB-**	**B1**			**$13,020,809**	**2.17%**	**6.40**	**4.88**
MEDIA/TELECOM - Broadcasting												
D99IONCS9	0	ION MEDIA NETWORKS INC			NR	NR	1.54	378.28	28,749	0.00	0.00	0.00
					NR	NR			28,749	0.00	0.00	0.00
MEDIA/TELECOM - Cable/Wireless Video/International Cable												
45824TAE5	550	INTELSAT JACKSON HLDG REG	7.250	04/01/19	B+	B3	100.00	104.38	584,031	0.10	3.87	0.24
45824TAC9	2,685	INTELSAT JACKSON HLDG REG	7.250	10/15/20	B+	B3	105.72	105.63	2,877,127	0.48	4.43	0.76
45824TAG0	120	INTELSAT JACKSON HLDG REG	7.500	04/01/21	B+	B3	100.00	107.00	130,650	0.02	4.59	1.17
92660FAG9	1,765	VIDEOTRON GROUP	5.375	06/15/24	BB	Ba2	100.22	102.00	1,804,516	0.30	5.10	7.20
92769XAF2	4,367	VIRGIN MEDIA SECURED FIN	5.250	01/15/21	BB-	Ba3	103.93	104.50	4,669,233	0.78	4.39	5.04
			5.989	06/24/21	BB-	B1			10,065,557	1.68	4.50	3.88
MEDIA/TELECOM - Cable/Wireless Video/US Cable												
1248EPAZ6	1,330	CHARTER CCO HLDGS LLC/CAP CORP REG	5.125	02/15/23	B+	B1	95.07	97.75	1,325,825	0.22	5.47	6.42
1248EPBE2	315	CHARTER CCO HLDGS REG	5.750	01/15/24	B+	B1	100.00	101.00	326,502	0.05	5.57	5.26
1248EPAY9	660	CHARTER CCO HOLDINGS LLC	5.250	09/30/22	B+	B1	93.25	99.75	667,109	0.11	5.29	6.22
14987EAA5	900	CHARTER CCOH SAFARI LLC REG	5.500	12/01/22	B+	B1	100.00	101.50	917,625	0.15	5.20	4.99
14987EAB3	3,240	CHARTER CCOH SAFARI LLC REG	5.750	12/01/24	B+	B1	100.34	101.13	3,291,975	0.55	5.57	6.28
19238VAG0	1,040	COGECO CABLE IN	4.875	05/01/20	BB-	Ba3*	100.78	100.00	1,048,450	0.17	4.87	3.83
126304AG9	245	CSC HOLDINGS INC	7.875	02/15/18	BB	Ba2	115.95	112.25	282,301	0.05	3.68	2.73
126304AK0	560	CSC HOLDINGS INC	7.625	07/15/18	BB	Ba2	115.20	112.38	648,989	0.11	3.85	3.04
25470XAV7	1,205	DISH DBS CORP	5.875	11/15/24	BB-	Ba3	100.00	100.50	1,219,088	0.20	5.81	7.37
444454AB8	810	HUGHES SATELITE SYSTEMS REG	6.500	06/15/19	B+	Ba3	100.00	107.25	871,065	0.15	4.67	3.86
444454AA0	1,385	HUGHES SATELITE SYSTEMS REG	7.625	06/15/21	B-	B3	105.49	110.00	1,528,194	0.25	5.75	5.12
74819RAP1	2,840	QUEBECOR MEDIA INC REG	5.750	01/15/23	B+	B2	100.19	102.25	2,911,158	0.49	5.40	6.38
92658TAM0	135	VIDEOTRON LIFE REG	9.125	04/15/18	BB	Ba2	82.50	103.38	140,104	0.02	2.36	0.28
92658TAK4	690	VIDEOTRON LTEE	6.375	12/15/15	BB	Ba2	94.98	100.13	692,818	0.12	4.48	0.91
92658TAQ1	2,353	VIDEOTRON LTEE REG	5.000	07/15/22	BB	Ba2	100.32	101.75	2,448,427	0.41	4.72	6.10
			5.873	06/10/22	B+	B1			18,319,629	3.06	5.19	5.50

*MacKay Shields' in-house rating for "NR" rated security.

Alaska Retirement Management Board

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
MEDIA/TELECOM - Diversified Media/Film Exhibition												
62875FAB4	930	NAI ENTERTAINMENT HLDING 144A	5.000	08/01/18	BB	B1	100.00	102.50	972,625	0.16	3.97	2.36
			5.000	08/01/18	BB	B1			972,625	0.16	3.97	2.36
MEDIA/TELECOM - Diversified Media/Print/Other Media												
12505FAA9	540	CBS OUT AMER CAP LLC/COR 144A	5.250	02/15/22	BB-	B1	100.54	100.75	547,673	0.09	4.85	4.43
12505FAE1	785	CBS OUT AMER CAP LLC/COR 144A	5.875	03/15/25	BB-	B1	100.00	100.75	802,417	0.13	5.75	6.05
12505FAC5	455	CBS OUTDOOR AMERICAS CAPITAL	5.625	02/15/24	BB-	B1	100.00	100.50	460,545	0.08	5.37	5.78
228411AE4	985	CROWN MEDIA HOLDINGS INC REG	10.500	07/15/19	B+	B2	100.00	108.75	1,118,878	0.19	3.56	0.51
44919PAF9	690	IAC/INTERACTIVECORP REG	4.875	11/30/18	BB+	Ba1	100.00	101.75	704,972	0.12	4.23	2.69
44919PAC6	1,315	IAC/INTERACTIVECORP REG	4.750	12/15/22	BB+	Ba1	98.23	97.25	1,281,614	0.21	5.18	6.51
513075BB6	550	LAMAR MEDIA CORP REG	5.875	02/01/22	BB-	B1	100.00	103.75	584,089	0.10	5.03	4.27
513075BH3	610	LAMAR MEDIA CORP REG	5.375	01/15/24	BB-	Ba2	102.25	103.00	643,419	0.11	4.80	5.01
65409QBB7	4,435	NIELSEN FINANCE	5.000	04/15/22	BB	B1	100.31	100.50	4,503,989	0.75	4.89	4.56
65409QBA9	1,160	NIELSEN FINANCE LLC/CO	4.500	10/01/20	BB	B1	99.88	100.50	1,178,850	0.20	4.35	3.38
887228AA2	1,100	TIME INC 144A	5.750	04/15/22	BB	B1	101.00	96.75	1,077,603	0.18	6.31	5.78
			5.608	02/08/22	BB	B1			12,904,047	2.15	4.91	4.43
MEDIA/TELECOM - Telecommunications/Data/Internet												
19240BAA3	3,230	COGENT COMM FINANCE INC 144A	5.625	04/15/21	B-	Caa1	98.67	98.00	3,203,756	0.53	6.01	5.16
19239VAC8	3,550	COGENT COMMUNICATIONS GROUP INC 144A	8.375	02/15/18	B+	B1	105.52	104.50	3,822,068	0.64	5.17	0.12
			7.121	07/26/19	B	B2			7,025,824	1.17	5.55	2.42
MEDIA/TELECOM - Telecommunications/Fiber/Long Distance												
35906AAP3	1,210	FRONTIER COMMUN REG	6.250	09/15/21	BB-	Ba3	100.12	100.50	1,237,897	0.21	6.15	5.16
35906AAQ1	765	FRONTIER COMMUNICATIONS REG	6.875	01/15/25	BB-	Ba3	99.81	100.00	780,194	0.13	6.87	7.03
36155WAF3	895	GCI INC REG	8.625	11/15/19	B+	B3	110.49	104.88	948,495	0.16	0.50	0.83
			7.174	12/30/21	BB-	B1			2,966,586	0.49	4.54	4.27
MEDIA/TELECOM - Telecommunications/International Telecom												
67054LAA5	1,390	NUMERICABLE GROUP SA 144A	4.875	05/15/19	B+	Ba3	100.00	99.13	1,403,437	0.23	4.81	3.03
67054LAB3	1,110	NUMERICABLE GROUP SA 144A	6.000	05/15/22	B+	Ba3	100.00	100.55	1,141,265	0.19	5.63	4.45
67054LAC1	1,165	NUMERICABLE GROUP SA 144A	6.250	05/15/24	B+	Ba3	100.00	100.75	1,201,244	0.20	5.95	5.72
785712AB6	970	SABLE INTL FINANCE LTD	8.750	02/01/20	BB	Ba2	100.00	108.50	1,087,815	0.18	4.56	1.00
			6.354	06/24/21	B+	Ba3			4,833,761	0.81	5.23	3.58
MEDIA/TELECOM - Wireless Communications/Cellular/PCS												
852060AD4	2,885	SPRINT CAP CORP	6.875	11/15/28	BB-	B2	95.18	88.00	2,564,144	0.43	8.35	8.38
852060AG7	210	SPRINT CAPITAL CORP	6.900	05/01/19	BB-	B2	109.75	102.00	216,615	0.04	6.36	3.67
85207UAF2	610	SPRINT CORP REG	7.875	09/15/23	BB-	B2	93.75	98.72	616,336	0.10	8.08	6.06
85207UAH8	1,620	SPRINT CORP REG	7.125	06/15/24	BB-	B2	96.72	93.00	1,511,730	0.25	8.20	6.64
852061AR1	10	SPRINT NEXTEL CORP	7.000	08/15/20	BB-	B2	110.25	100.00	10,264	0.00	7.00	4.47

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
MEDIA/TELECOM - Wireless Communications/Cellular/PCS (Continued)												
852061AK6	2,965	SPRINT NEXTEL CORP 144A	9.000	11/15/18	BB+	Ba2	118.93	113.74	3,406,489	0.57	5.05	3.28
852061AQ3	2,760	SPRINT NEXTEL CORP 144A	7.000	03/01/20	BB+	Ba2	113.80	108.00	3,045,200	0.51	5.21	4.25
591709AL4	239	T-MOBILE USA INC	6.625	11/15/20	BB	Ba3	107.00	101.75	245,206	0.04	6.11	3.35
87264AAC9	1,105	T-MOBILE USA INC REG	6.464	04/28/19	BB	Ba3	102.00	104.00	1,179,557	0.20	3.87	0.32
87264AAK1	215	T-MOBILE USA INC REG	6.250	04/01/21	BB	Ba3	103.25	102.35	223,412	0.04	5.62	3.65
87264AAH8	1,740	T-MOBILE USA INC REG	6.125	01/15/22	BB	Ba3	102.97	101.50	1,815,243	0.30	5.78	4.18
87264AAG0	1,655	T-MOBILE USA INC REG	6.731	04/28/22	BB	Ba3	99.00	103.00	1,751,994	0.29	6.06	4.33
87264AAM7	975	T-MOBILE USA INC REG	6.000	03/01/23	BB	Ba3	100.00	100.25	996,288	0.17	5.95	4.66
87264AAL9	3,175	T-MOBILE USA INC REG	6.625	04/01/23	BB	Ba3	101.47	102.40	3,303,786	0.55	6.15	5.00
87264AAJ4	2,010	T-MOBILE USA INC REG	6.500	01/15/24	BB	Ba3	101.27	102.50	2,120,494	0.35	6.06	5.45
87264AAN5	3,855	T-MOBILE USA INC REG	6.375	03/01/25	BB	Ba3	100.78	101.60	3,995,868	0.67	6.11	5.89
			6.943	12/02/22	BB	Ba3			27,002,625	4.50	6.12	4.95
MEDIA/TELECOM - Wireless Communications/Wireless Infrastructure												
228227BE3	990	CROWN CASTLE INTL CORP REG	4.875	04/15/22	BB	B1	96.90	101.00	1,010,089	0.17	4.71	6.02
228227BD5	4,545	CROWN CASTLE INTL CORP REG	5.250	01/15/23	BB	B1	100.76	102.00	4,745,927	0.79	4.95	6.36
78388JAR7	620	SBA COMMUNICATI	4.875	07/15/22	B	B3	99.18	96.25	611,863	0.10	5.49	6.05
78401FAG2	1,115	SBA TELECOMMUNICATIONS	5.750	07/15/20	B+	B3	100.43	101.78	1,164,410	0.19	5.19	3.09
			5.247	07/05/22	BB-	B1			7,532,288	1.26	5.00	5.79
			6.264	**02/09/22**	**BB-**	**B1**			**$91,651,692**	**15.29%**	**5.33**	**4.62**
METALS/MINERALS - Other Metals/Minerals												
016900AC6	455	ALLEGHENY LUDLUM CORP	6.950	12/15/25	BBB-	Ba1	83.00	109.01	497,418	0.08	5.82	7.75
01741RAF9	510	ALLEGHENY TECHNOLOGIES REG	6.125	08/15/23	BBB-	Ba1	99.99	102.30	533,541	0.09	5.77	6.36
039380AK6	1,200	ARCH COAL INC	8.000	01/15/19	CCC+	B3	98.26	55.50	710,267	0.12	26.68	2.75
039380AE0	2,095	ARCH COAL INC REG	7.000	06/15/19	CCC+	Caa1	82.20	29.50	624,543	0.10	44.91	2.68
039380AC4	1,900	ARCH COAL INC REG	7.250	10/01/20	CCC+	Caa1	84.85	32.50	651,938	0.11	35.54	3.16
05155CAA3	2,113	AURICO GOLD INC 144A	7.750	04/01/20	B	B3	98.95	92.00	1,984,899	0.33	9.73	4.08
148411AE1	2,345	CASTLE (A.M.) & CO REG	12.750	12/15/16	B-	Caa2	107.83	99.25	2,340,701	0.39	13.19	1.67
20854PAJ8	2,425	CONSOL ENERGY INC 144A	5.875	04/15/22	BB	B1	100.88	93.00	2,285,327	0.38	7.12	5.70
20854PAH2	925	CONSOL ENERGY REG	6.375	03/01/21	BB	B1	103.40	100.00	944,656	0.16	6.37	3.54
422704AD8	3,230	HECLA MINING CO REG	6.875	05/01/21	B	B3	98.21	88.00	2,879,410	0.48	9.43	4.86
483007AE0	1,945	KAISER ALUMINUM CORP REG	8.250	06/01/20	BB	Ba3	105.85	108.50	2,123,697	0.35	4.79	1.33
644535AD8	2,930	NEW GOLD INC 144A	7.000	04/15/20	BB-	B2	103.04	100.15	2,977,694	0.50	6.94	2.85
644535AF3	485	NEW GOLD INC 144A	6.250	11/15/22	BB-	B2	100.96	98.00	479,173	0.08	6.58	6.07
67000XAL0	910	NOVELIS INC REG	8.375	12/15/17	B	B2	100.09	103.75	947,512	0.16	6.29	1.79
67000XAM8	700	NOVELIS INC REG	8.750	12/15/20	B	B2	99.15	106.00	744,722	0.12	6.65	0.91
704549AH7	355	PEABODY ENERGY CORP	6.500	09/15/20	BB-	Ba3	105.00	86.75	314,757	0.05	9.56	4.47
704549AM6	590	PEABODY ENERGY CORP REG	6.250	11/15/21	BB-	Ba3	98.53	85.50	509,162	0.08	9.13	5.28
819204AA6	1,140	SHALE INLAND HOLDINGS LLC 144A	8.750	11/15/19	B-	Caa1	100.34	101.00	1,164,146	0.19	8.44	3.20

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
METALS/MINERALS - Other Metals/Minerals (Continued)												
852278AA8	1,600	ST BARBARA LTD 144A	8.875	04/15/18	B-	Caa1	97.91	80.00	1,309,978	0.22	17.08	2.59
			7.860	05/10/20	B+	B2			24,023,540	4.01	10.84	3.46
METALS/MINERALS - Steel												
09626GAB5	1,535	BLUESCOPE STEEL LTD/FIN 144A	7.125	05/01/18	BB	Ba3	101.84	103.50	1,606,953	0.27	5.76	2.52
201723AK9	1,160	COMMERCIAL METALS CO REG	4.875	05/15/23	BB+	Ba2	92.62	95.50	1,115,026	0.19	5.55	6.70
30051JAA1	1,500	EVRAZ INC NA CANADA 144A	7.500	11/15/19	BB	Ba3	100.63	96.75	1,468,125	0.24	8.32	3.95
			6.658	03/17/20	BB	Ba3			4,190,104	0.70	6.60	4.13
			7.682	**05/02/20**	**B+**	**B2**			**$28,213,644**	**4.71%**	**10.21**	**3.56**
RETAIL												
043436AM6	1,400	ASBURY AUTO	6.000	12/15/24	B+	B1	100.16	101.75	1,430,800	0.24	5.72	6.25
36467WAA7	1,235	GAMESTOP CORP 144A	5.500	10/01/19	BB+	Ba1	100.36	100.25	1,256,390	0.21	5.42	3.30
398905AH2	1,430	GROUP 1 AUTOMOTIVE INC 144A	5.000	06/01/22	BB	B1	99.67	97.75	1,403,783	0.23	5.37	6.08
532716AT4	760	LIMITED BRANDS INC	6.625	04/01/21	BB+	Ba1	100.00	112.50	867,588	0.14	4.32	5.10
532716AR8	220	LIMITED BRANDS INC REG	8.500	06/15/19	BB+	Ba1	96.75	118.50	261,531	0.04	3.93	3.78
532716AU1	630	LIMITED BRANDS INC REG	5.625	02/15/22	BB+	Ba1	107.50	107.50	690,638	0.12	4.39	5.77
501797AJ3	735	LIMITED BRANDS INC REG	5.625	10/15/23	BB+	Ba1	100.00	108.00	802,528	0.13	4.51	6.90
626738AC2	510	MURPHY OIL USA INC REG	6.000	08/15/23	BB	Ba3	100.00	104.50	544,510	0.09	5.19	5.33
70959WAE3	1,050	PENSKE AUTO GROUP INC REG	5.750	10/01/22	B+	B1	100.00	103.75	1,104,469	0.18	4.99	4.81
70959WAF0	965	PENSKE AUTOMOTIVE GROUP REG	5.375	12/01/24	B+	B1	100.00	101.25	982,826	0.16	5.18	6.36
587118AD2	3,500	THE MEN'S WEARHOUSE INC 144A	7.000	07/01/22	B-	B2	102.83	102.75	3,727,597	0.62	6.40	4.37
			6.110	**08/29/22**	**BB-**	**Ba3**			**$13,072,659**	**2.18%**	**5.45**	**5.15**
SERVICE - Environmental Services												
184496AJ6	870	CLEAN HARBORS INC REG	5.250	08/01/20	BB+	Ba2	100.00	100.50	893,381	0.15	5.09	3.16
184496AL1	545	CLEAN HARBORS INC REG	5.125	06/01/21	BB+	Ba2	100.00	99.75	545,965	0.09	5.17	5.39
237266AG6	1,070	DARLING INGREDIENTS INC REG	5.375	01/15/22	BB+	B1	100.17	98.50	1,080,470	0.18	5.64	5.64
390607AB5	3,620	GREAT LAKES DREDGE & DOCK CORP REG	7.375	02/01/19	B	Caa1	101.94	102.00	3,803,640	0.63	6.33	1.86
			6.539	01/02/20	BB-	B2			6,323,456	1.05	5.94	2.99
SERVICE - Other Services												
00766TAC4	1,095	AECOM TECHNOLOGY 144A	5.875	10/15/24	BB-	Ba3	100.25	102.25	1,134,827	0.19	5.57	7.17
01551UAA2	2,550	ALGECO SCOTSMAN GLOBAL FINANCE PLC 144A	8.500	10/15/18	B	B2	100.00	96.50	2,506,508	0.42	9.62	3.10
01551UAB0	1,325	ALGECO SCOTSMAN GLOBAL FINANCE PLC 144A	10.750	10/15/19	CCC+	Caa1	98.00	86.00	1,169,570	0.20	14.93	3.43
01748NAC8	1,365	ALLEGION US HOLDING CO REG	5.750	10/01/21	BB+	Ba2	100.65	105.75	1,463,109	0.24	4.39	4.10
045054AC7	385	ASHTEAD CAPITAL INC 144A	5.625	10/01/24	BB-	Ba3	100.00	102.50	400,881	0.07	5.23	6.15
053773AZ0	1,215	AVIS BUDGET CAR/FINANCE 144A	5.500	04/01/23	B+	B1	99.87	102.00	1,256,006	0.21	5.12	6.50
053773AV9	550	AVIS BUDGET CAR/FINANCE REG	5.500	04/01/23	B+	B1	100.13	102.00	568,563	0.09	5.12	5.18
053773AQ0	1,205	AVIS BUDGET CORP REG	9.750	03/15/20	B+	B1	104.33	109.00	1,348,044	0.22	3.50	0.67

Holdings Report — Account 1022

December 31, 2014

Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
SERVICE - Other Services (Continued)												
09627HAA4	1,160	BLUELINE RENTAL	7.000	02/01/19	B+	B3	103.05	102.50	1,222,833	0.20	6.09	2.67
14281RAA9	4,195	CARLSON TRAVEL HOLDINGS 144A	7.500	08/15/19	B-	Caa1	101.75	100.75	4,382,027	0.73	7.17	2.27
142812AB2	5,845	CARLSON WAGONLIT B.V. 144A	6.875	06/15/19	B+	B1	103.14	104.50	6,125,885	1.02	5.42	3.05
428040CR8	515	HERTZ CORP REG	4.250	04/01/18	B	B2	100.00	99.50	517,897	0.09	4.41	2.97
428040CG2	923	HERTZ CORP REG	7.375	01/15/21	B	B2	108.25	105.00	1,000,538	0.17	5.82	0.96
451734AA5	2,995	IHS INC	5.000	11/01/22	BB+	Ba1	101.06	99.00	2,991,256	0.50	5.16	6.35
55354GAA8	975	MSCI INC 144A	5.250	11/15/24	BB+	Ba1	100.00	103.50	1,014,955	0.17	4.71	6.39
690070AB3	2,105	OUTERWALL INC 144A	5.875	06/15/21	BB-	Ba3	99.62	93.25	1,968,409	0.33	7.20	5.22
89366QAA1	1,925	TRANSFIELD SERVICES LTD 144A	8.375	05/15/20	B+	Ba3	101.91	106.50	2,070,725	0.35	6.63	3.62
911365AX2	275	UNITED RENTALS	6.125	06/15/23	BB-	B1	101.50	105.00	289,499	0.05	5.14	4.96
911365AZ7	1,525	UNITED RENTALS REG	7.625	04/15/22	BB-	B1	107.66	109.95	1,701,286	0.28	4.58	2.08
911365BB9	280	UNITED RENTALS REG	5.750	11/15/24	BB-	B1	99.50	103.00	290,457	0.05	5.25	5.94
96208TAA2	1,850	WEX INC 144A	4.750	02/01/23	BB-	Ba3	96.77	96.50	1,821,865	0.30	5.29	6.47
			6.860	01/05/21	B+	B1			35,245,140	5.88	6.22	3.87
			6.811	**11/10/20**	**B+**	**B1**			**$41,568,595**	**6.93%**	**6.18**	**3.74**
TRANSPORTATION - Automotive												
019517AA9	2,065	ALLIED SPECIALTY VEHICLES	8.500	11/01/19	BB-	B3	101.49	104.75	2,192,342	0.37	7.06	3.21
019736AC1	1,735	ALLISON TRANSMISSION INC 144A	7.125	05/15/19	B	B2	96.09	104.63	1,831,039	0.31	3.96	0.36
DC0006924	1,330	AMERICAN TIRE DISTRIBUTORS INTIAL TL	5.750	06/01/18	CCC+	B2	100.00	99.75	1,326,744	0.22	5.50	0.25
05329WAJ1	500	AUTONATION INC	6.750	04/15/18	BBB-	Baa3	98.49	112.16	567,937	0.09	2.85	2.94
16169PAA5	1,030	CHASSIX CORP	9.250	08/01/18	CCC*	Caa2*	93.31	67.50	734,948	0.12	9.48	2.56
126442AA0	1,230	CTP TRANS PROD LLC/ FINA 144A	8.250	12/15/19	B+	B2	100.37	105.50	1,302,160	0.22	6.64	3.35
302051AQ0	3,915	EXIDE TECHNOLOGIES REG (DEF)		02/01/18	D*	C*	73.49	4.88	190,856	0.03	0.82	3.07
DC0003892	3,934	EXIDE TECHOLOGIES FUNDED DIP TERM LOAN	9.000	03/31/15	B+*	B1	99.08	89.50	3,521,471	0.59	56.17	0.25
345277AB3	60	FORD HOLDING INC	9.375	03/01/20	BBB-	Baa3	86.38	127.13	78,152	0.01	3.58	4.16
345277AE7	810	FORD HOLDINGS INC	9.300	03/01/30	BBB-	Baa3	108.73	152.40	1,259,569	0.21	4.50	9.32
345397VH3	780	FORD MOTOR CREDIT CO LLC REG	12.000	05/15/15	BBB-	Baa3	127.00	103.93	822,651	0.14	1.36	0.37
45903PAA5	785	INTL AUTOMOTIVE COMPONENTS 144A	9.125	06/01/18	B	Caa1	98.17	104.25	824,332	0.14	7.17	2.14
47010BAD6	885	JAGUAR LAND ROVER AUTOMO 144A	4.250	11/15/19	BB	Ba2	100.00	100.75	898,011	0.15	4.07	4.34
47009XAB5	690	JAGUAR LAND ROVER PLC 144A	8.125	05/15/21	BB	Ba2	96.78	109.50	762,714	0.13	3.86	1.29
521865AX3	1,220	LEAR CORP REG	5.250	01/15/25	BB	Ba2	100.00	101.25	1,242,367	0.21	5.06	6.47
501889AB5	1,735	LKQ CORP REG	4.750	05/15/23	BB-	Ba2	98.93	96.00	1,676,130	0.28	5.35	6.75
65341EAA8	1,400	NEXTEER AUTO GROUP LTD 144A	5.875	11/15/21	BB+	Ba1	100.63	100.00	1,410,967	0.24	5.87	4.87
688225AD3	160	OSHKOSH CORP REG	8.500	03/01/20	BB+	Ba3	100.00	104.75	172,133	0.03	4.91	0.16
688225AG6	920	OSHKOSH CORP REG	5.375	03/01/22	BB+	Ba3	100.53	102.00	954,883	0.16	4.93	4.40
806261AC7	2,695	SCHAEFFLER FINANCE BV 144A	7.750	02/15/17	BB-	Ba2	102.83	109.50	3,029,929	0.51	3.09	1.92
80626PAC4	1,230	SCHAEFFLER FINANCE BV 144A	6.250	11/15/19	B	B1	100.00	103.00	1,280,353	0.21	5.38	3.38
806261AE3	3,210	SCHAEFFLER FINANCE BV 144A	4.750	05/15/21	BB-	Ba2	98.64	100.00	3,229,483	0.54	4.75	3.89
806261AJ2	1,235	SCHAEFFLER FINANCE BV 144A	4.250	05/15/21	BB-	Ba2	99.25	97.50	1,210,832	0.20	4.71	5.48

*MacKay Shields' in-house rating for "NR" rated security.

Holdings Report — Account 1022

December 31, 2014

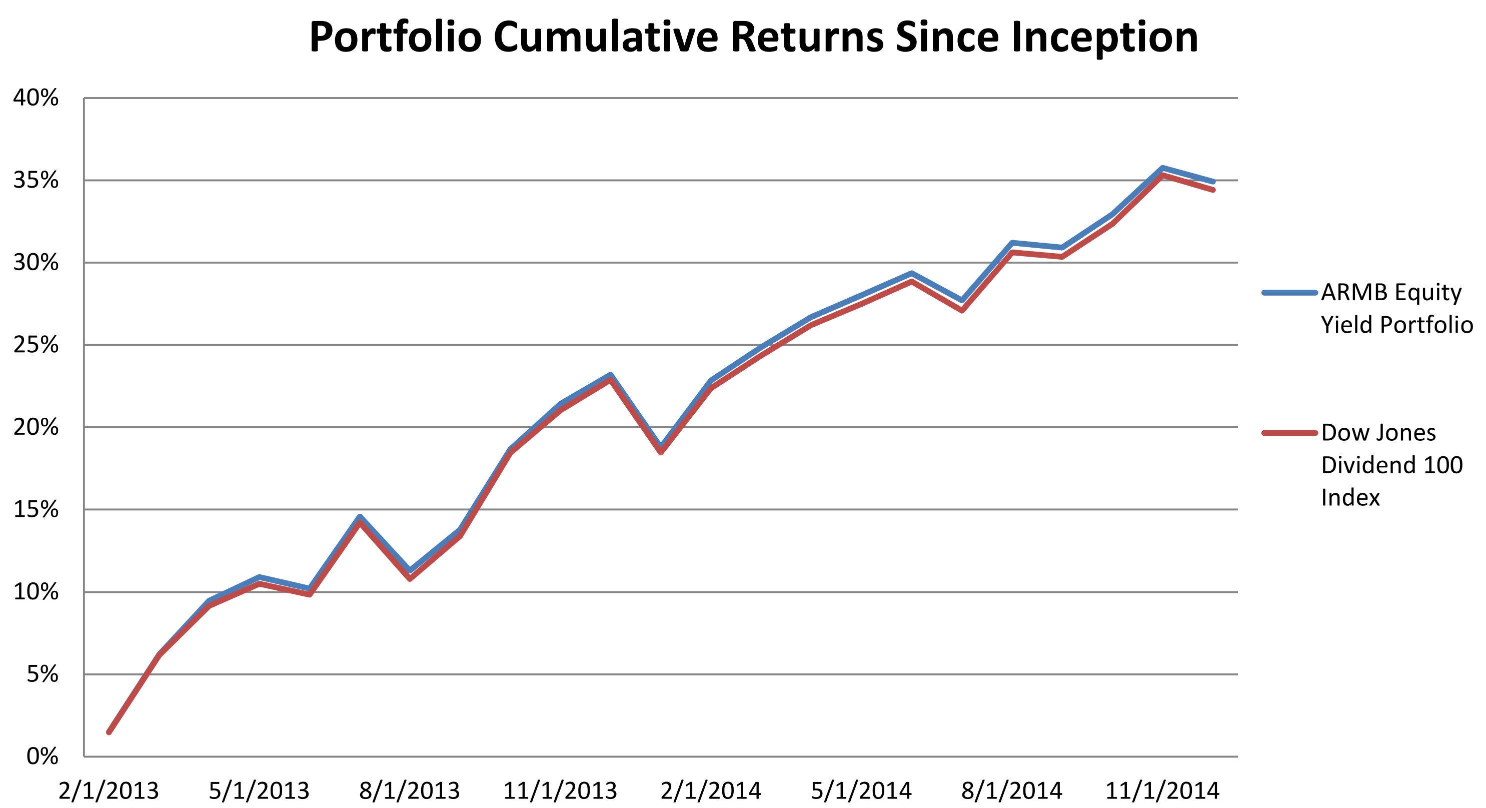
Security Identifier	Shares or Par Value	Security	Coupon	Maturity	S&P	Moody	Unit Cost	Market Price	Market Value	Percent of Assets	YTW	Dur Wst
TRANSPORTATION - Automotive (Continued)												
80626PAD2	6,560	SCHAEFFLER FINANCE BV 144A	6.750	11/15/22	B	B1	101.32	104.50	6,932,690	1.16	5.97	4.09
80626PAA8	2,130	SCHAEFFLER HLDG FIN BV 144A	6.875	08/15/18	B	B1	101.91	104.25	2,275,846	0.38	5.11	2.33
83545GAV4	1,155	SONIC AUTOMOTIVE INC REG	7.000	07/15/22	BB-	B2	99.63	107.50	1,278,906	0.21	5.12	2.25
880349AQ8	1,175	TENNECO INC REG	6.875	12/15/20	BB	Ba3	101.47	105.75	1,246,153	0.21	4.20	0.92
			6.947	06/29/20	B+	Ba3			42,253,596	7.05	9.37	3.17
TRANSPORTATION - Land Transportation												
000324AA1	1,610	AAF HOLDINGS LL	12.000	07/01/19	B-*	B3*	100.00	97.00	1,658,300	0.28	12.90	3.18
338906AD2	1,785	FLEXI-VAN LEASNG 144A	7.875	08/15/18	B+	B3	99.73	99.00	1,820,254	0.30	8.20	3.00
340630AB8	1,460	FLORIDA EAST COAST HOLDINGS	9.750	05/01/20	CCC	Caa3	100.50	99.50	1,476,425	0.25	9.87	4.02
340630AA0	3,260	FLORIDA EAST COAST HOLDINGS CORP	6.750	05/01/19	B	B3	101.12	99.00	3,264,075	0.54	7.02	3.66
87264LAB7	1,436	TRAC INTERMODAL LLC/CORP REG	11.000	08/15/19	B-	B3	102.27	108.00	1,610,554	0.27	8.38	2.87
			8.991	06/04/19	B-	B3			9,829,608	1.64	8.88	3.38
			7.333	**04/16/20**	**B+**	**B1**			**$52,083,204**	**8.69%**	**9.28**	**3.21**
UTILITY												
131347CA2	2,125	CALPINE CORP	6.000	01/15/22	BB	Ba3	100.60	106.50	2,321,917	0.39	4.49	4.09
131347CC8	1,095	CALPINE CORP 144A	5.875	01/15/24	BB	Ba3	100.00	106.50	1,195,839	0.20	4.71	3.34
37244DAC3	4,030	GENON ENERGY CORP REG	9.500	10/15/18	B	B3	99.68	99.50	4,090,674	0.68	9.65	3.06
60467PAJ3	455	MIRANT AMERICAS GENR LLC	9.125	05/01/31	B	Caa1	110.98	85.50	395,945	0.07	11.06	7.64
744499AP9	615	PUBLIC SERVICE CO OF NEW MEXICO	7.950	05/15/18	BBB	Baa2	100.86	117.69	730,017	0.12	2.45	2.99
75952AAJ6	330	RELIANT ENERGY - MID-ATLANTIC	9.681	07/02/26	B+	B2	119.50	106.00	365,685	0.06	8.45	4.58
74971XAC1	4,680	RRI ENERGY INC REG	7.875	06/15/17	B	B3	99.13	99.50	4,672,980	0.78	8.10	2.18
916783103	2	UPSTATE NY POWER PRODUCERS INC			NR	NR	84.31	45.00	90,765	0.02	0.00	0.00
916783AA1	143	UPSTATE NY POWER PRODUCERS INC CB 144A	20.000	06/15/17	B-*	B3*	100.00	109.00	157,147	0.03	15.41	1.92
667748AF4	465	WILLIAMS COS INC - NWEST GAS PIPELINE	7.125	12/01/25	BBB	Baa1	110.13	126.05	588,898	0.10	4.13	7.95
			8.002	**02/06/20**	**B+**	**B2**			**$14,609,866**	**2.44%**	**7.36**	**3.29**
Cash & Equivalents												
-CAD-		CANADIAN DOLLAR			AAA	Aaa	0.00	1.00	0	0.00	0.00	0.00
-CASH-		UNITED STATES DOLLAR	0.090		AAA	Aaa	0.00	1.00	20,686,010	3.45	0.00	0.00
			0.090		**AAA**	**Aaa**			**$20,686,010**	**3.45%**	**0.00**	**0.00**
		Accrual Adjustment for Unsettled Trades							47	0.00		
Total Portfolio			**6.584**	**04/05/21**	**BB-**	**B1**			**$599,521,116**	**100.00%**	**6.78**	**3.91**

*MacKay Shields' in-house rating for "NR" rated security.

ARMB Equity Yield Strategy

February 2015

Performance vs. Index



As of December 31, 2014

Performance vs. Index

Year	Month	ARMB Equity Yield Portfolio	Dow Jones Dividend 100 Index	Portfolio vs. Index
2013	2	1.49%	1.48%	0.01%
2013	3	4.70%	4.67%	0.03%
2013	4	3.27%	2.99%	0.28%
2013	5	1.45%	1.35%	0.10%
2013	6	-0.72%	-0.66%	-0.06%
2013	7	4.38%	4.37%	0.01%
2013	8	-3.28%	-3.42%	0.15%
2013	9	2.49%	2.61%	-0.12%
2013	10	4.88%	5.05%	-0.17%
2013	11	2.76%	2.60%	0.16%
2013	12	1.77%	1.84%	-0.08%
2014	1	-4.42%	-4.41%	0.00%
2014	2	4.08%	3.90%	0.18%
2014	3	2.01%	1.99%	0.02%
2014	4	1.82%	1.85%	-0.02%
2014	5	1.34%	1.28%	0.06%
2014	6	1.34%	1.37%	-0.03%
2014	7	-1.66%	-1.77%	0.11%
2014	8	3.49%	3.53%	-0.04%
2014	9	-0.29%	-0.28%	-0.01%
2014	10	2.02%	2.01%	0.01%
2014	11	2.82%	2.95%	-0.13%
2014	12	-0.83%	-0.89%	0.06%
	ITD	40.51%	39.82%	0.70%
	FYTD	5.57%	5.57%	0.00%
	2013	25.44%	25.05%	0.39%
	2014	12.02%	11.81%	0.21%

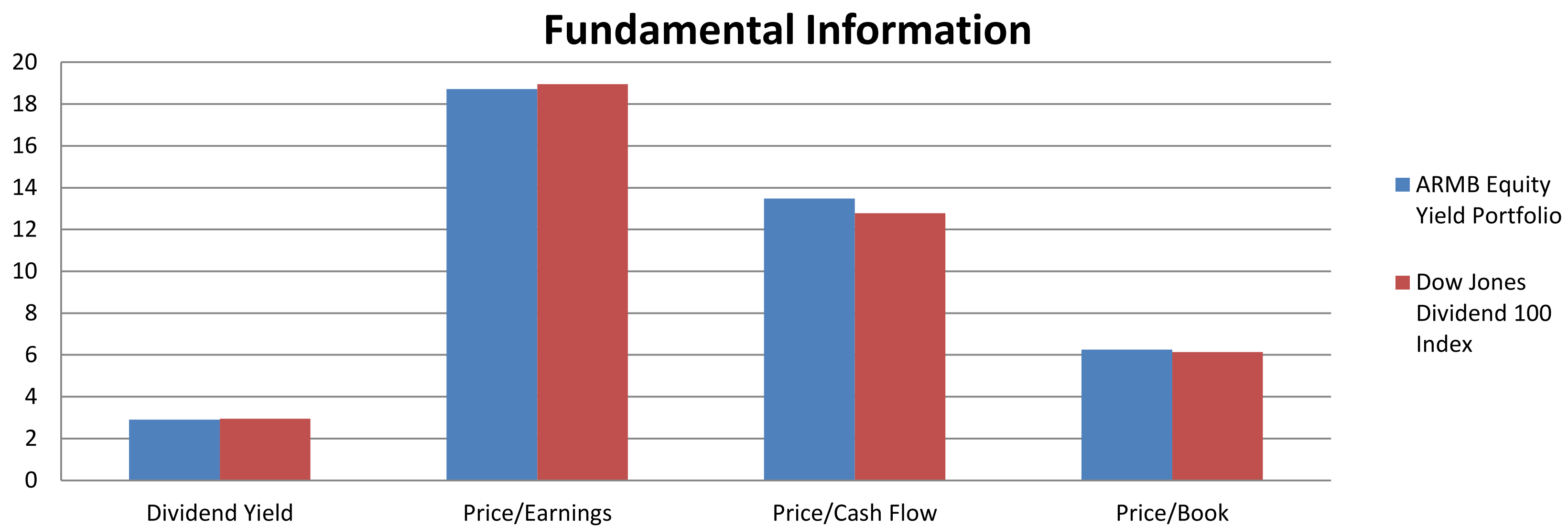
Data Source: Callan, State Street

As of December 31, 2014

Portfolio Characteristics

ARMB Equity Yield Strategy

P/E	18.7	Yield	2.91%
P/B	6.30	Active Share	6.55%
Sharpe Ratio (1 Yr)	3.65	Tracking Error (Annual)	0.37%
Turnover (12 month)	41.03	Net Asset Value	$141 million



Active Share = (Sum of the Absolute Value of portfolio weight differences vs. the benchmark)/ 2

Turnover = (Sum of the Absolute Value of all changes in component weights) / 2

Data Source: FactSet

As of December 31, 2014

Piotroski Characteristics

Piotroski Characteristics:

• Net Income – Positive

• Operating Cash Flow – Positive

• Return on Assets – ROA exceeds prior year ROA

• Quality of Earnings – Last year's operating cash flow exceeds net income

• Long-Term Debt vs. Assets – LTD to assets ratio is down from last year

• Current Ratio – Increased from prior year

• Shares Outstanding – No greater than year-ago figure

• Gross Margin – Full-year GM exceeds prior-year GM

• Asset Turnover – % increase in sales exceeds % increase in total assets

Piotroski Score:

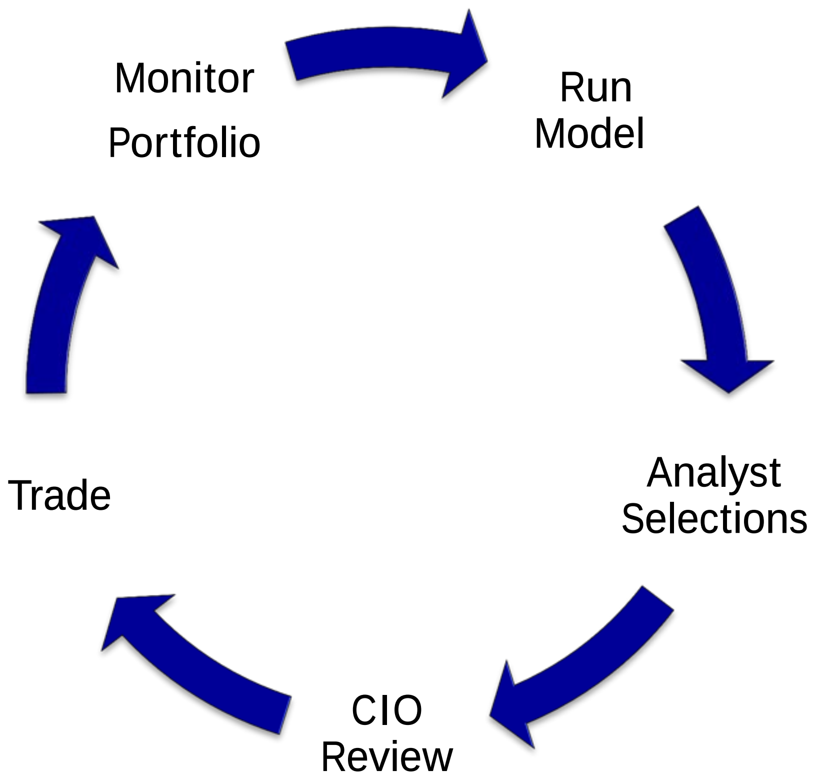
• Add one point for each characteristic that is true

• Score can range from 0 – 9

• Piotroski Score seeks to identify value stocks with greater financial strength

The ARMB Equity Yield Strategy quantitative model incorporates Piotroski scores

Equity Investment Process



Model: Model ranks a universe of dividend paying US securities based on quantitative factors

Analyst: Analysts review securities within sector, selecting securities to over and underweight based on security research and qualitative factors

CIO: Chief Investment Officer reviews analyst security selections

Trade: Portfolio team implements the Buy/Sell program to bring the portfolio in line with the new security recommendations

Monitor Portfolio: Portfolio team monitors daily security activity for corporate actions, index events, and performance

Equity Sell Discipline

A security is typically sold when, in the view of the analyst, another security in the sector has a higher potential return

- A full or partial sale may occur

- A full sale often occurs when a security is not a constituent of the index

Top 10 Holdings

Company	%	Sector	Industry
Chevron Corporation	4.87%	Energy	Oil, Gas & Consumable Fuels
Pfizer Inc.	4.57%	Health Care	Pharmaceuticals
Verizon Communications Inc.	4.43%	Telecommunication Services	Diversified Telecommunication
Johnson & Johnson	4.32%	Health Care	Pharmaceuticals
Intel Corporation	4.12%	Information Technology	Semiconductors & Semiconductor
Exxon Mobil Corporation	4.10%	Energy	Oil, Gas & Consumable Fuels
AT&T Inc.	4.00%	Telecommunication Services	Diversified Telecommunication
Procter & Gamble Company	4.00%	Consumer Staples	Household Products
Microsoft Corporation	3.91%	Information Technology	Software
Coca-Cola Company	3.35%	Consumer Staples	Beverages

Total Number of Companies: 107

Data Source: FactSet

As of December 31, 2014

Best and Worst Performers: 4Q 2014

Positive Factors:

- **Consumer Staples** – Kimberly-Clark, Dr. Pepper Snapple, Hershey
- **Health Care** – AbbVie, Quest Diagnostics, Baxter International
- **Consumer Discretionary** – Tractor Supply Co., Williams-Sonoma, McDonald’s
- **Information Technology** – CDK Global, Microsoft, Analog Devices

Negative Factors:

- **Materials** – LyondellBasell, Air Products and Chemicals
- **Energy** – Patterson-UTI Energy, Chevron

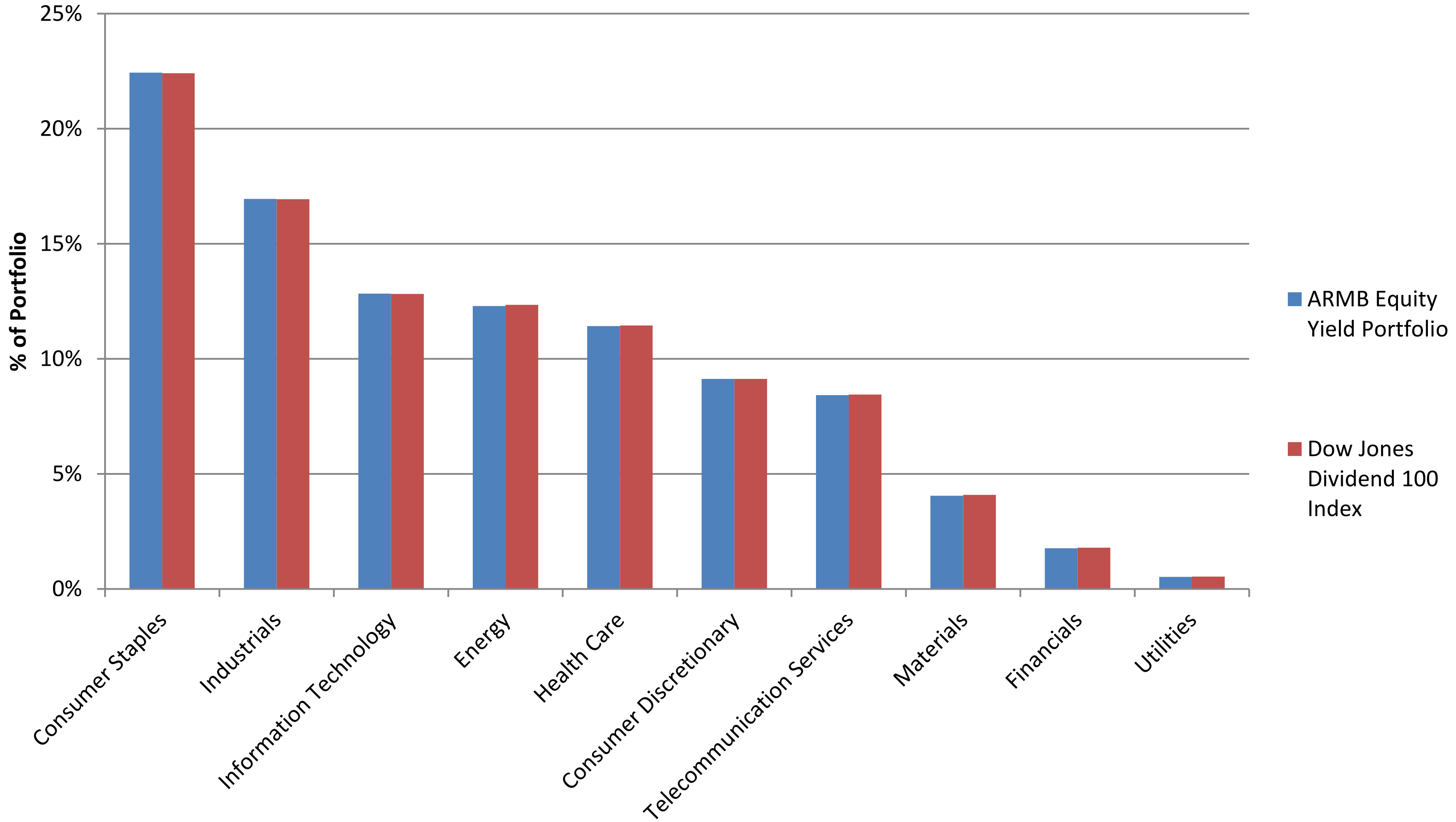
Data Source: FactSet

Sector Exposure

Top Three Sectors: **Consumer Staples 22.45%**

Industrials 16.95%

Information Technology 12.84%



Strategy is designed to be sector neutral

Data Source: FactSet

As of December 31, 2014

Industry Exposure

Top Five Industries:

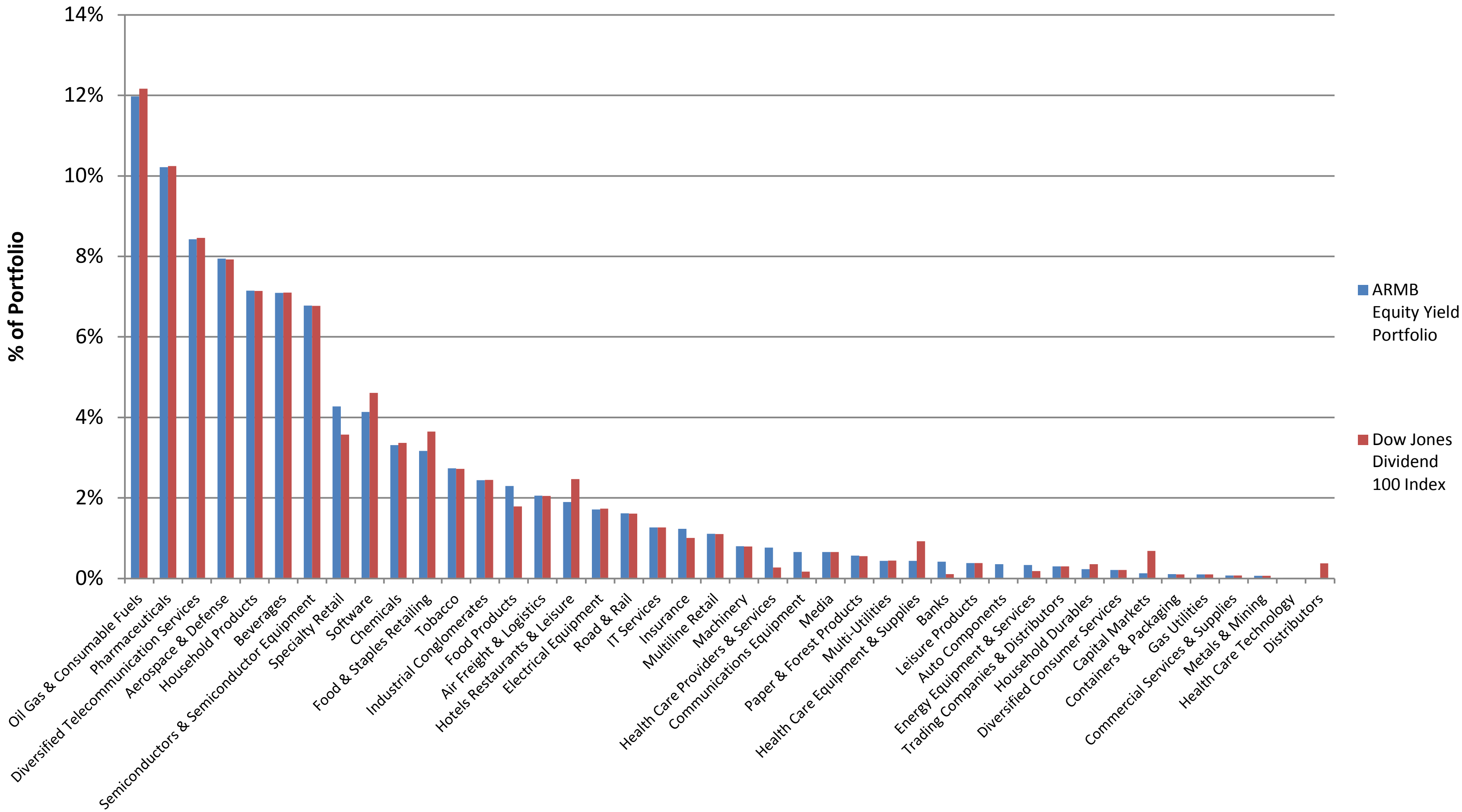
Oil & Gas Consumables 11.97%

Pharmaceuticals 10.22%

Diversified Telecom Services 8.43%

Aerospace & Defense 7.95%

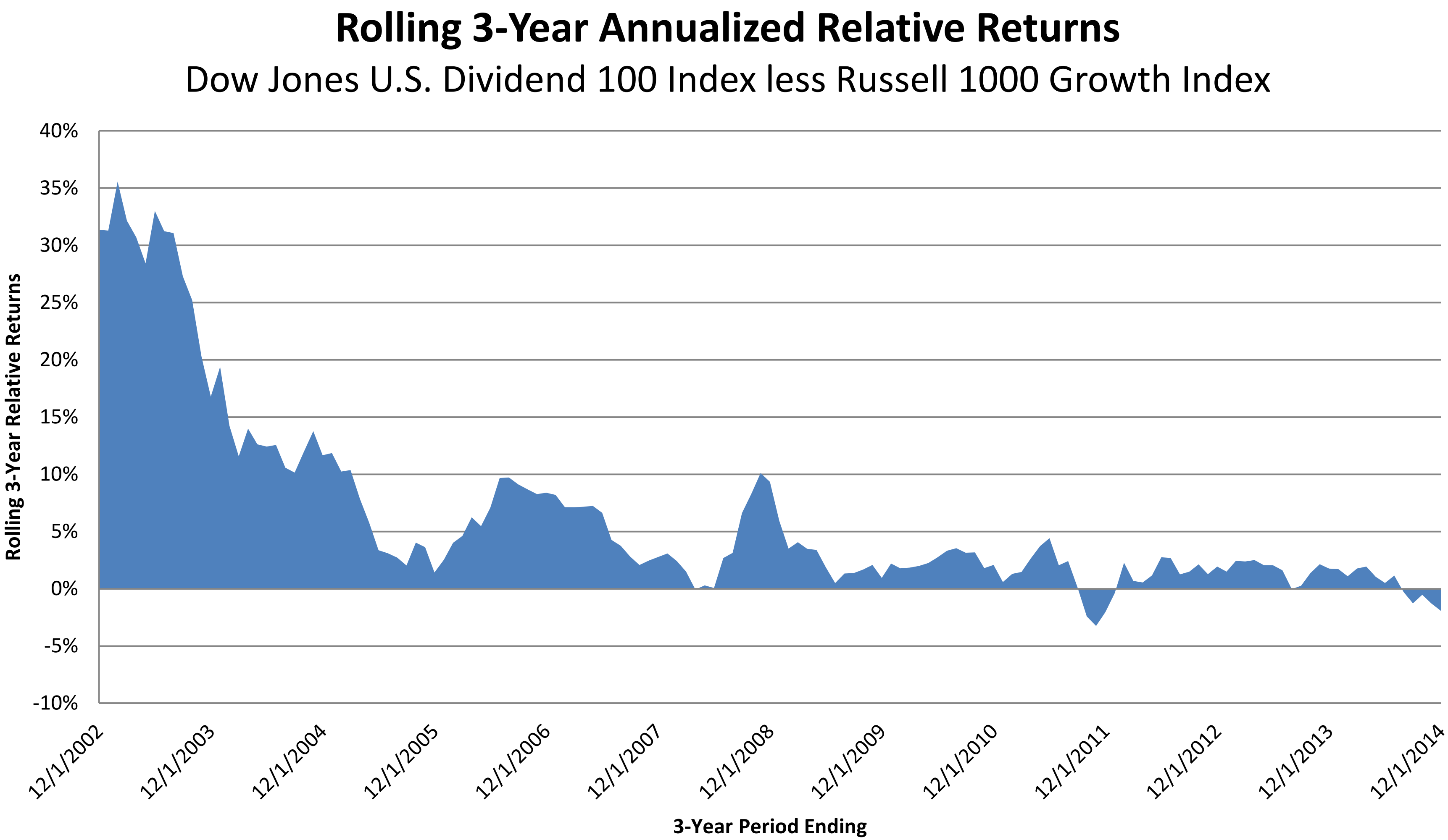
Household Products 7.15%



Data Source: FactSet

As of December 31, 2014

DJ U.S. Dividend 100 Index vs. R1000 Growth Index



Data Source: FactSet

Summary of Experience

ARMB Equity Yield Strategy

- Saved approximately $300,000 in investment management fees
- Reduced volatility of equity portfolio
- Outperformed the index benchmark
- Equaled or exceeded sector benchmark in 7 of 10 sectors
- No compliance issues

Next Moves

- Relax portfolio constraints to permit non dividend paying stocks in the portfolio
- Change the requirement of the market value of the portfolio required to be invested in the Dow Jones U.S. Dividend 100 Index
- Focus analysts on industries included in the Dow Jones U.S. Dividend 100 Index
- Increase the amount of assets that are internally managed
- Target saving $1,500,000 annually in investment management fees through the use of internal staff

Implementation of Direct Investment Program

- Universe: Dow Jones U.S. Broad Market Index

- A stock not in the Dow Jones U.S. Dividend 100 Index may not have a portfolio weight of greater than **3%** at the time of purchase

- All stocks will have a minimum market capitalization of USD $500 million and an average daily trading volume of $2 million

- At least **50%** of the market value of the portfolio will be invested in constituents of the Dow Jones U.S. Dividend 100 Index

Crestline Investors, Inc.

Mandate: **Absolute Return** **Hired:** **November 2004**

Firm Information	Investment Approach	Total ARMB Mandate & Fees
Founded in 1997, Crestline is an investment manager specializing in absolute return and hedge fund investments. Crestline is registered with the SEC and managed $9.5 billion in investments as of September 30, 2014. Crestline has 121 employees, including 67 investment professionals and has offices in Fort Worth, TX; Toronto, Canada; and New York City. Crestline is an employee-owned firm and Doug Bratton, Caroline Cooley, and John Cochran are the principal owners. Crestline shares ownership via phantom equity and profit sharing participation with its employees. **Key Executives:** Doug Bratton, President/CIO Caroline Cooley, Vice President/CIO John Cochran, Vice President/COO	Crestline's investment approach is team oriented with an Investment Committee that has ultimate decision-making authority and accountability. Hedge Funds are evaluated in the following areas: ▪ Investment Strategy/Opportunity Set – an emphasis on understanding the drivers of return and repeatability of the investment process. ▪ Portfolio/Investment Manager – assessing the manager's skill at managing assets and generating alpha with an emphasis on the team's credentials and track record. Also evaluated is the manager as a partner – investing only with managers who display high integrity. ▪ Fund Performance – analyzing past and future returns, as well as the quality of the returns (alpha vs. beta and performance vs. relevant peers). ▪ Risk Management – how is risk measured and controlled. ▪ Business Risk – evaluation of firm's ownership structure, organization chart, compensation structure and investor base as well as business practices. **Benchmark:** T-Bills +5%	**Assets Managed:** 09/30/14: $ 193 million **Fees:** A management fee of 0.75% plus a performance fee of 10% of the gains after a 6% preferred return.

Concerns: None

Performance – Estimated Returns Through 12-31-2014

	1-Year	2-Year Annualized	3-Year Annualized	5-Year Annualized
Crestline - Net	18.07%	13.87%	10.27%	7.08%
Benchmark	5.03%	5.05%	5.07%	5.09%

Crestline

Alaska Retirement Management Board

February 12, 2015

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Crestline Research Associates, Inc. · 375 Park Avenue, Suite 2505 · New York, New York 10152 · (212) 584-4140
Crestline Canada, Inc. · Bay Adelaide Centre, 333 Bay Street, Suite 4930, P.O. Box 29 · Toronto, Ontario M5H 2R2 · Canada · (416) 644-8750
Crestline Asia, Inc. · Yebisu Garden Place Tower · 4-20-3 Ebisu, Shibuya-ku, Tokyo · 150-6018 Japan · +81 3 5789 5717
Crestline Denali Capital, L.P. · 2001 Spring Road · Oak Brook, Illinois 60523 · (630) 928-2560

Crestline

Performance History & Comparisons

Past performance is not a guaranty of future results. Current and prospective investors should not assume that the future performance of any Crestline fund will equal its prior performance results or the results of any previous fund with a similar strategy, and investors risk loss of their entire investment. Each fund's performance results portrayed reflect the deduction of that fund's advisory fees, brokerage commissions and other expenses. The performance results also include the reinvestment of income and dividends, in investment vehicles where such are applicable. For each Crestline fund, an individual investor's returns will vary from the historical performance due to restrictions on participation in certain types of investments and due to the timing of subscriptions, withdrawals, and redemptions; further, the general economic conditions during extreme highs and lows may have affected the returns of the funds.

Principal executive officers of Crestline are also associated with Bratton Capital Management, LP ("BCM") a firm that acts as the investment adviser and general partner to single family-office-related investments. Crestline and BCM are under common control.

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Any opinions expressed herein are our current opinions only. There can be no assurance or guarantee that Crestline's investment strategy will achieve its stated goal. All information provided in this presentation is for informational purposes only. In addition, it should not be assumed that any of the securities and/or strategies discussed herein were or will prove to be profitable. Crestline accepts no liability for loss arising from the use of this material.

The specialized investment program of the Crestline Recovery Funds (the "Funds") involves a number of risks including the risk of loss of the entire amount invested. Moreover an investment in the Funds is very illiquid since the Interests are not freely transferable and the investments the Funds makes are illiquid. Any information in this material regarding market or economic trends or the factors influencing Crestline's historical or future performance are statements of opinion as of the date this material was produced. There is no guarantee that any forecasted opinions will be realized. The Recovery Fund's investment program is by design an illiquid investment strategy since the Funds invest in generally illiquid fund interests on the secondary market generally at a discount due to the investments' illiquid nature. As a result, it is possible an investor may not receive a return of their capital for a considerable period of time. Therefore, an investment in the Funds is not suitable for an investor seeking periodic or routine liquidity.

The targeted returns are forward-looking statements that are subject to uncertainties described further in the relevant offering memorandum. The targeted returns are based on research conducted by Crestline and the conclusions are Crestline's opinions based on its own independent study. The return targets are supported by various quantitative measures including1) the actual track record of the funds, 2) back-tested returns of a pro-forma portfolio using the fund's current asset allocation and 3) a forecast return calculated using a third-party risk model. For further information on targeted returns including input data and calculation methodology please contact Client Servicing. While Crestline believes that the return targets are supportable, there is no guarantee that the funds will achieve the targeted returns. The targeted rates of return included in this presentation are hypothetical returns, and are for illustrative purposes only. Accordingly, no assumptions or comparisons should be made based upon these returns. Targeted returns are subject to inherent limitations, including but not limited to the fact that the returns do not take into account the impact that market and economic risks may have on investment decision trading. In some circumstances the funds have experienced materially different investment results than the targeted returns, and all targeted returns should be viewed together with the actual returns also included in this presentation. In no circumstances should the targeted returns be regarded as a representation, warranty or prediction that the fund will reflect any particular performance or that it will achieve or is likely to achieve any particular result or that investors will be able to avoid losses, including total losses of their investment.

General Risks of Investing in the Crestline Funds

An investment in the Funds is speculative and involves a high degree of risk. Crestline Management, L.P., is a federally registered investment adviser and serves as the investment manager to the domestic and offshore hedge fund of funds. Crestline Canada, Inc., an affiliate, provides portfolio overlay and hedging execution capabilities to client portfolios as well as Crestline's diversified fund of hedge funds. Crestline Investors, Inc., Crestline Management, L.P. and Crestline Canada, Inc. are individually and collectively referred to herein as "Crestline" or "the Firm." Crestline's investment funds (the "Funds") utilize a fund of funds investment approach whereby Fund assets are allocated among portfolio managers. As a result, the success of the Funds is dependent on the portfolio managers' ability to develop and implement investment strategies that achieve the Funds' investment strategies. The Funds are generally not subject to regulatory restrictions or oversight. The principals of Crestline Investors, Inc. are Douglas K. Bratton, John Cochran and Caroline Cooley (the "Principals"). The success of the Funds' investment program will also depend on the expertise of the Principals in choosing portfolio managers and executing on investment transactions. If the Principals were to cease to be associated with the Funds it is likely that the success of their investment program would be adversely affected. The Funds may employ leverage, which among other investment techniques, can make their investment performance volatile. Opportunities for redemptions and transferability of interests in the Funds are restricted so investors may not have access to their capital if and when it is needed. There is generally no secondary market for an investor's interest in the Funds and none is expected to develop. The Funds' management fees, incentive fees/allocations, and expenses, may offset their trading profits. An investor should not invest in the Funds unless it is prepared to lose all or a substantial portion of its investment.

Topics to Be Addressed

Firm Overview

Performance Review – Blue Glacier Fund Class B

Mandate Changes / Direct Investing

Specialty Lending

Firm Overview

Crestline

Crestline

Organization

Douglas Bratton
President / CIO

Caroline Cooley
CIO / Diversified Funds

Research & Portfolio Management
Nowlin Randolph, MD, Head of Research
Sam Levens, MD, Senior PM
Neilson Arbour, Director - Equities
Jeff Marcinowski, Director - Credit
Jeff Tack, Director - Fixed Income
Analysts - 5

Portfolio Construction
Glenn Bearden, MD
Analysts - 8

Beta, Hedging & Trading Strategies
David Finch, MD
Scott Henshaw, VP
Vice-President - 1

Opportunistic Strategies
Curt Futch, MD, Senior PM
Keith Williams, MD, Senior PM
James Favero, Director
Matt McCutchen, Director
Steve Richardson, Director
Chris Semple, Director
Vice-Presidents - 3
Associates - 3
Analysts - 4

Crestline Denali
David Killion, CEO
Greg Cooper, Senior MD
John Thacker, Chief Credit Officer
Staff - 20

Crestline-Kirchner Private Equity[1]
W.B. "Bud" Kirchner, President
Dave Philipp, MD
Associates - 1

Strategic Partnerships
Paul Robson, President – *Crestline Canada*

John Cochran
COO

Client Service & Development
Bruce Pflug, MD

Client Service
David Mabry, MD
Client Service - 8

Development/ Consultant Relations
Sean Gannon, MD
Bill Braxton, Director

Risk Management/Investment Risk
Alex Didych, MD
Senior Risk Developer - 1

Risk Management / Operational Due Diligence
Roger Marcincuk, MD, Global Head of OpsDD
Jeremiah Loeffler, Director of Operations/Opportunistic
Operational Staff - 3

Legal/Compliance
Jesús Payán, General Counsel
Legal/Compliance Staff - 3

Accounting
Camille Sassman, CFO
Accounting Staff - 12

Technology
Nathan Shulman, Director Software Development
Technology Staff - 3

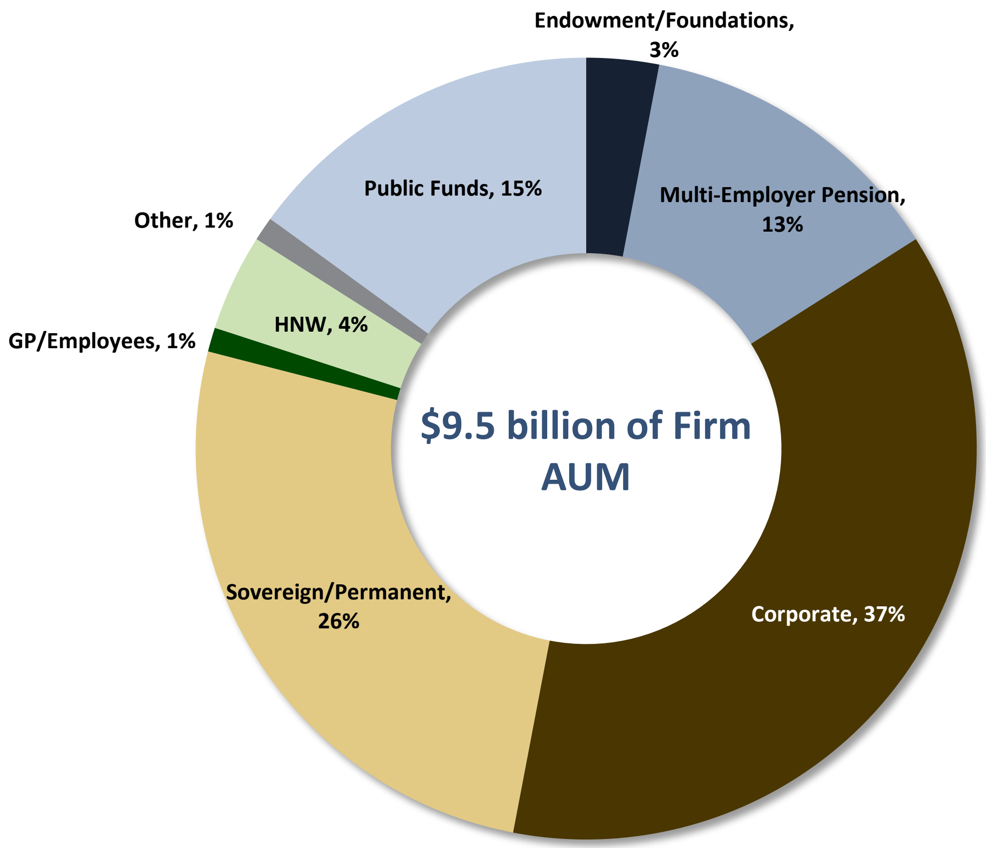
67 Investment Professionals
121 Employees

Diversified Strategies Investment Committee	Opportunistic Strategies Investment Committee	C-K Private Equity[1] Investment Committee	Executive Committee
Douglas Bratton, Chair	Douglas Bratton, Chair	Douglas Bratton, Chair	Douglas Bratton, Chair
John Cochran	John Cochran	John Cochran	John Cochran
Caroline Cooley	Caroline Cooley	Caroline Cooley	Caroline Cooley
Alex Didych	Curt Futch	Bud Kirchner	Bruce Pflug
Sam Levens	Keith Williams	Dave Philipp	
Nowlin Randolph			

[1] Crestline-Kirchner is a partnership focused on underperforming private equity assets.

Crestline

Client Base



95% of Crestline's assets are from institutional investors

AUM for Crestline, its affiliates and its affiliated management team is estimated at $9.5 billion, which includes uncalled capital commitments and $2.3 billion of beta overlay notional amounts, $1.3 billion of AUM consists of previous funds managed by principals of Denali via DC Funding Partners LLC independently of Crestline. The above estimate is based on valuations as of 1/1/2015 except for certain assets managed by Crestline affiliates, which are valued as of earlier dates based on the most recently available data for such assets. Crestline Denali Capital also provides operational and administrative support services to DC Funding Partners LLC.

Other Category represents Hedge Funds and Asset Management Firms.

Crestline

Product Array

Complementary investment approaches

Credit and Opportunistic Strategies ($3.3 bn)

Opportunity Funds

Fund I Launched 9/2005
- Opportunistic
- Target return: LIBOR + 800bp

Fund II Launched 11/2012
- Flexible, opportunistic
- Target return: 12%-16% net
- $980mm committed capital

Crestline Denali Capital

Structures and manages CLOs and other funds

Opportunistically invests in loan market segments in both primary and secondary markets

Structured and managed 11 CLOs and other funds since 2001, joined Crestline platform 2014

Crestline Denali Capital AUM: $1.5 bn

Private Credit

Custom Private Credit Mandate
- Launched 7/2011
- Evergreen structure
- Global high-yield benchmark

Custom Private Credit Strategies
- LIBOR based or absolute return
- Drawdown structures

Specialty Lending Fund

First Close: 10/2014

Direct investing only

Closed-end drawdown style

Target fundraising: $250 to $400m

Target return: 10%-13% net

Hedge Fund and Private Equity Restructuring ($1.1 bn)

Recovery Funds

Secondary fund and direct investments

Fund I Launched 2/2009
- Target return: 20% net

Fund II Launched 1/2011
- Target return: 18%-20% net

Fund III Launched 11/2012
- Target return: 15%-18% net
- $738mm committed capital

Crestline – Kirchner Private Equity

Successor General Partner

Advisory services for Limited Partners

Successor fund creation

Investments into funds and companies

Core Diversified ($2.8 bn)[1]

Crestline Partners

Launched 10/1997
- Non-directional
- Low volatility, low beta
- Target return: LIBOR + 400bp
- Target risk: < 4%

Separate Accounts

Partner with investors to develop custom structures and investment programs to suit specific needs

Custom Derivative Based ($2.3 bn)

Beta, Hedging & Trading Strategies

Launched 12/1998

Portable Alpha

Equity and bond overlays

Tail-risk hedging

Hedging specific exposures

Opportunistic trades

Tactical rebalancing

Liability-driven investing

Client Strategic Partnerships

Fiduciary Co-Investment Programs

[1] These strategies include other specialized portfolios in addition to the funds listed.

AUM for Crestline, its affiliates and its affiliated management team is estimated at $9.5 billion, which includes uncalled capital commitments and $2.3 billion of beta overlay notional amounts, $1.3 billion of AUM consists of previous funds managed by principals of Denali via DC Funding Partners LLC independently of Crestline. The above estimate is based on valuations as of 1/1/2015 except for certain assets managed by Crestline affiliates, which are valued as of earlier dates based on the most recently available data for such assets. Crestline Denali Capital also provides operational and administrative support services to DC Funding Partners LLC.

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See Notes to Performance History & Comparisons for further information.

Crestline

Firm History

Bass Family Alternative Investment History

- 1978 — Hedge fund strategies including: merger, volatility, commodity and index arbitrage
- 1984 — Private equity, venture capital and real estate strategy
- 1986 — Derivatives strategies
- 1986 — Caroline Cooley joins Bass; responsible for risk management and derivatives trading
- 1990 — Doug Bratton joins Bass; responsible for managing multi strategy hedge fund assets
- 1992 — Examples of firms founded by former Bass professionals include: Oakhill Advisors, TPG, Carlson Capital and Avenue Capital
- 1994 — Manager seeding
- 1996 — Corporate governance activist fund
- 1996 — Doug Bratton moves to manage Ed Bass assets

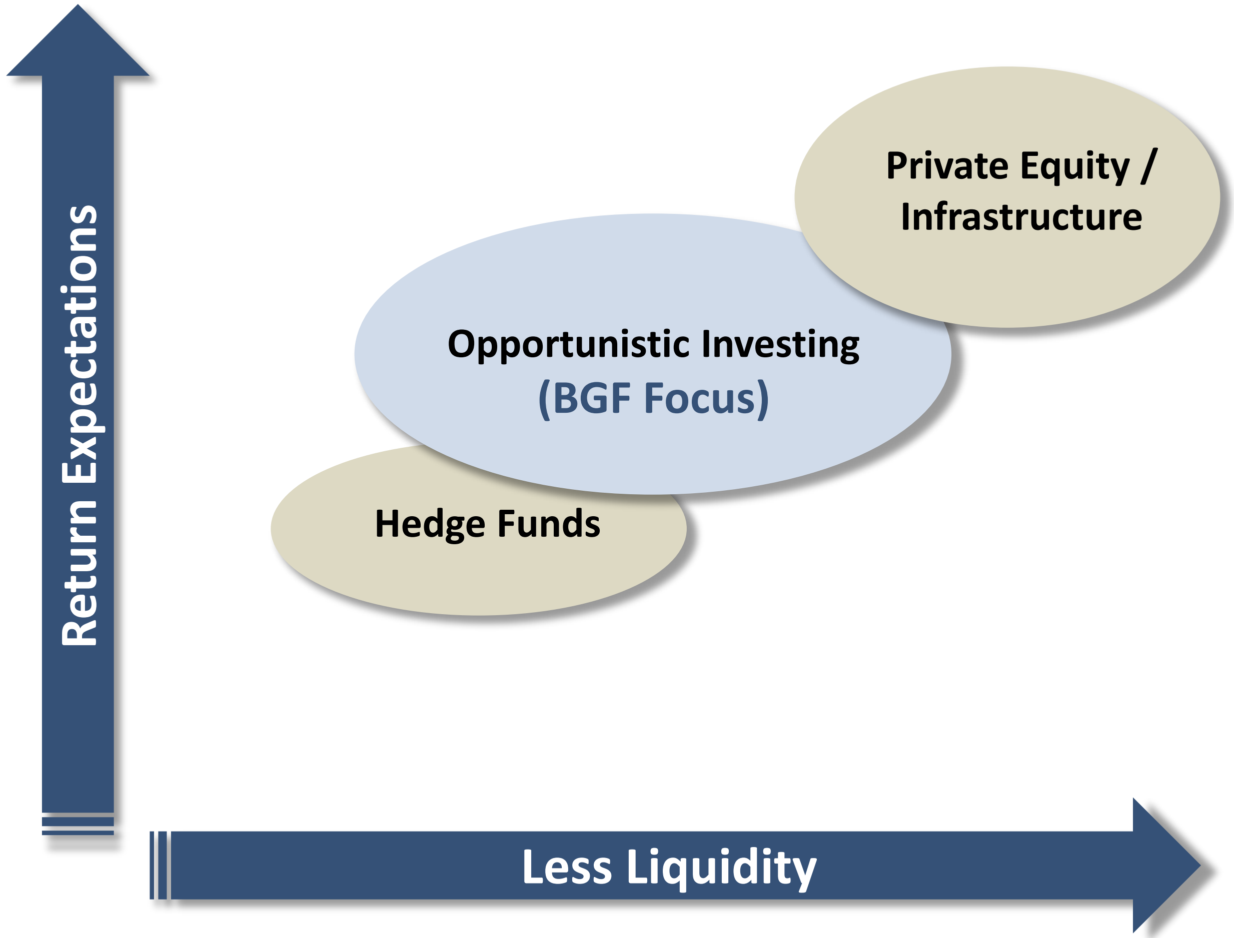
Crestline History

- 1997 — Doug Bratton starts Crestline
- 1997 — Launched Crestline Partners Strategy
- 1998 — Caroline Cooley joins Crestline
- 1998 — John Cochran joins Crestline
- 2002 — Registered with the SEC
- 2002 — Opened to outside investors
- 2004 — Launched first managed account
- 2005 — Launched Opportunity Fund I
- 2007 — Launched dedicated distressed fund
- 2009 — Launched Recovery Fund I
- 2009 — Acquired certain Northwater Capital Management assets
- 2011 — Launched Private Credit Mandate
- 2011 — Launched Recovery Fund II
- 2012 — Launched Recovery Fund III
- 2012 — Acquired certain Lyster Watson assets
- 2012 — Launched Opportunity Fund II
- 2013 — Launched Crestline-Kirchner Private Equity
- 2014 — First Close of Specialty Lending Fund
- 2014 — Partnered with Denali Capital

Performance Review – Blue Glacier Fund Class B

Overview of Alternative Assets

Generally investors in alternative assets are compensated for investing in less liquid assets



Crestline

Space Between Hedge Funds and Private Equity

Hedge Funds | **Opportunistic Investing** | **Private Equity / Infrastructure**

Hedge Funds

Liquid – short term exit strategy usually hold investments less than a year

Quarterly redemptions following 1 year lock up period

Lower return expectations

Lower transparency

Fees – based on current value of capital with annual realization of performance fees

Opportunistic Investing

1 to 3 years average life

Varies based on investment type

12%-16% return expectation

Increased transparency

Variable fee structure

Shallow J curve

Private Equity / Infrastructure

Illiquid – 3 to 5 years investment period with 5 to 7 year holding period after

Investors receive cash as investments are realized

Higher return expectations

Increased transparency

Fees – up front drag because investors pay fees on committed capital, but incentive at realization with requirement to pay back management fees

Crestline

Opportunistic Investment Strategy Taxonomy

Crestline actively invests in dislocations or inefficiencies across the opportunistic taxonomy

HF Secondaries		"Niche" Alternatives				Private Credit		
Fund Interests	Active Investing	Real Assets	Cash Flow Strategies	Structured Finance	Structured Credit	Opportunistic Credit	Performing Credit	Corporate Distressed
Sidepockets	Fund Restructuring	Natural Resources	Consumer Finance	Capital Relief	CDO/CLO	Performing and Non-Performing Loan Pools	Middle Market Secured Loans Direct or Club Deals	Control Debt and Equity
Liquidating Funds	Asset Repurchase	Logistic Assets	Entertainment Royalty/IP	Litigation Finance	Mortgage Finance	Special Situations	ABL Secured Lending	Non-Control Debt and Equity
Redemption Accounts	Activist	Real Estate	Healthcare Royalty	Insurance Linked Products	Asset Backed	Distressed Municipal Credit	Mezzanine Finance/ Structured Equity	Turnarounds

HF Secondaries

Fund Investments

Co-Investment / Direct Investments

Product Summary – As of 9/30/2014 ($mm)

Total Investor Commitments	$264.7	NAV	$142.5
Capital Called from Investor(s)	$108.1	P&L	$34.4
Uncalled Commitments	$156.5	IRR[1]	38.0%
Capital Returned to Investor(s)	$0.0	Realized MOIC	0.0x
Number of Positions	14	Unrealized MOIC	1.3x
Committed to Investments	$276.1	Total MOIC	1.3x

Data shown above represents both the GP and LP's interest unless otherwise noted.
Due to rounding, numbers presented may not add up precisely to the totals.
[1] Based on Limited Partner's cash flows. Excludes GP.
See Notes to Performance History & Comparisons for further information.

Crestline

Fund Summary – As of 9/30/2014 ($mm)

Total Investor Commitment(s) $264.7

Investment Name	Commitment: Date	Commitment: $ Max Commit	Commitment: % Investor Commit	Commitment: $ Commitment	Remaining: Unfunded	Remaining: % Unfunded	Current: NAV	Current: % NAV	Current: Net Invested	Returns: P&L	Returns: IRR	Returns: Total MOIC
Active Investing												
Project Hi-Tech	Dec 13	$12.5	4.7%	$12.5	$0.7	5.4%	$1.45	1.0%	$0.0	$3.4	NM	1.3x
Cash Flow Strategies												
Film Finance Fund	Feb 14	$16.5	6.2%	$16.5	$13.8	83.6%	$2.32	1.6%	$2.7	-$0.4	-47.7%	0.9x
Hedge Fund Secondaries												
Crestline Recovery Fund III	May 13	$62.5	23.6%	$62.5	$47.2	75.5%	$24.35	17.1%	$15.0	$9.3	NM	1.5x
Opportunistic Credit												
Performing & NPL Fund I	May 13	$16.5	6.2%	$16.5	$7.9	48.0%	$8.64	6.1%	$8.6	$0.1	1.1%	1.0x
Spanish Government-Backed Receivables Fund	Aug 14	$16.5	6.2%	$16.5	$16.5	100.0%	$0.00	0.0%	$0.0	$0.0	0.0%	1.0x
U.S. SLAB & European NPL Fund	Jan 14	$16.5	6.2%	$16.5	$5.5	33.2%	$10.95	7.7%	$11.0	-$0.1	-2.0%	1.0x
Performing & NPL Fund II	Jun 13	$20.0	7.6%	$20.0	$7.7	38.3%	$12.76	9.0%	$12.3	$0.5	4.9%	1.0x
Performing Credit												
Upper Middle Market Lending Fund I	May 13	$15.0	5.7%	$15.0	$5.9	39.4%	$10.64	7.5%	$9.1	$1.6	14.9%	1.1x
Upper Middle Market Lending Fund II	May 13	$15.0	5.7%	$15.0	$4.3	28.9%	$11.23	7.9%	$10.5	$0.7	8.2%	1.1x
Middle Market Secured Loans Fund	May 13	$16.5	6.2%	$16.5	$8.6	52.2%	$6.62	4.6%	$6.6	$0.0	0.2%	1.0x
Real Assets												
Aviation Assets Fund	Oct 13	$16.5	6.2%	$16.5	$11.5	70.0%	$4.73	3.3%	$4.9	-$0.2	-5.4%	1.0x
Natural Resources Fund	Jul 13	$16.5	6.2%	$16.5	$0.0	0.0%	$36.80	25.8%	$16.5	$20.3	NM	2.2x
Project Canada	Aug 14	$19.6	7.4%	$19.1	$18.8	98.6%	$0.27	0.2%	$0.3	$0.0	0.0%	1.0x
Structured Credit												
Mortgage Finance Fund	Mar 14	$16.5	6.2%	$16.5	$8.4	50.9%	$8.22	5.8%	$8.1	$0.1	3.7%	1.0x
Cash												
Net working capital							$3.54	2.5%				
Total		$276.6	104.5%	$276.1	$156.9	56.8%		100.0%				

Data shown above represents both the GP and LP's interest unless otherwise noted.
Due to rounding, numbers presented may not add up precisely to the totals.
See Notes to Performance History & Comparisons for further information.

Mandate Changes / Direct Investing

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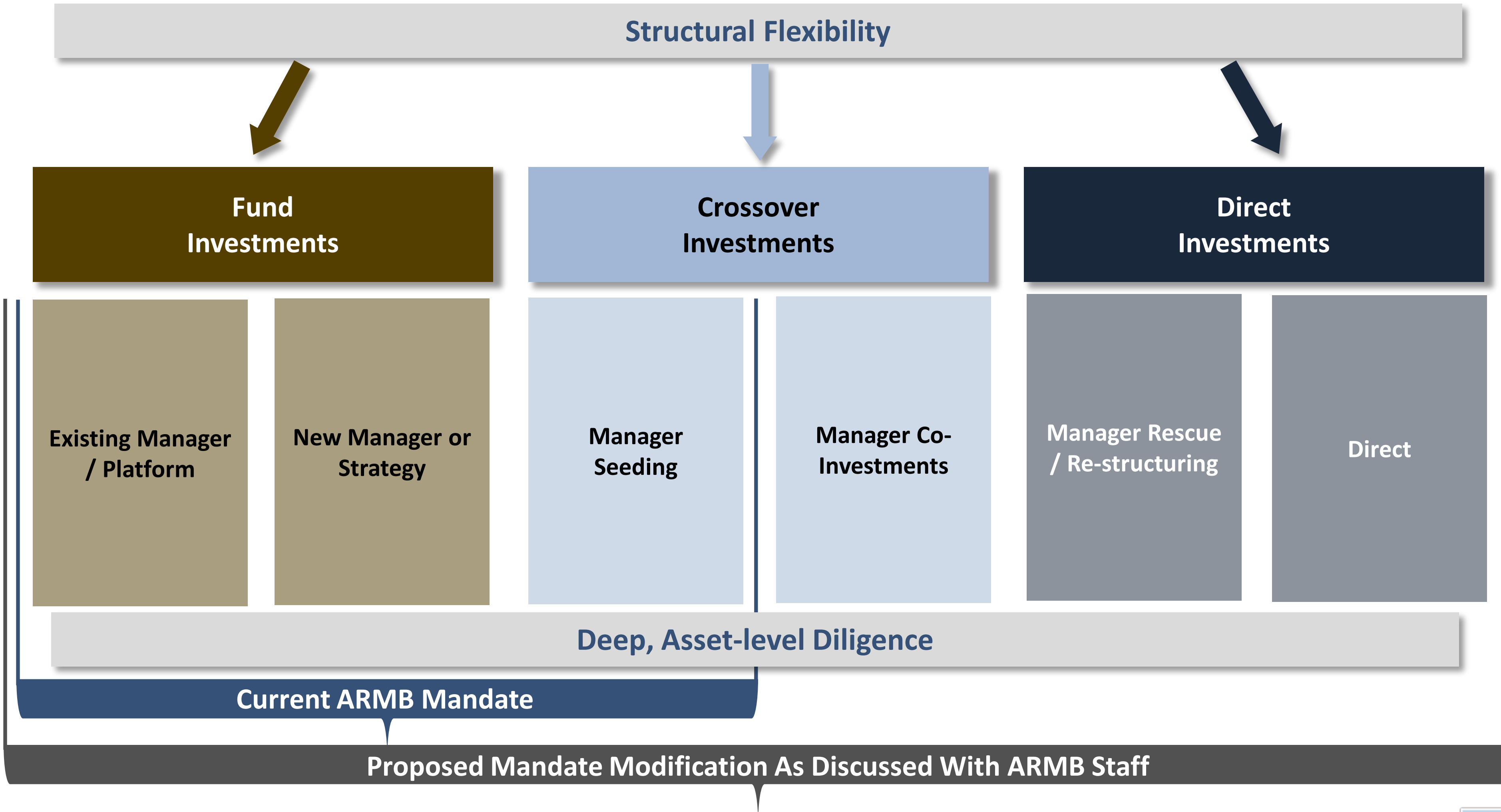
Mandate Modification

We have discussed modifying the existing mandate with ARMB staff to allow for:

- Recurring series of opportunistic investments to extend beyond the initial investment period
- Direct investing
  - Higher absolute and risk adjusted returns
  - Increased capital allocation flexibility
    - Allows for quicker more consistent deployment
    - Allows for more tactical investment approach towards dislocations
    - Creates opportunity to take advantage of co-investments

Investment Mandate Scope

Top-down approach focused on market dislocations and niche strategies



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Potential Direct Investment Types

Crestline will generate unique opportunistic direct investments in areas where we have historical experience

Asset Based/Cash Flow

- Asset-rich investments, examples include specialty finance, energy, consumer finance, agriculture, transportation or pharmaceutical sectors
- Cash flow yielding, defensible assets
- Post 2008 capital void remaining

Direct Lending/Structured Equity

- Small to medium-sized borrowers
- First, second lien and some with structured equity component to optimize risk adjusted returns
- Borrowers with multiple exit scenarios and significant down-side protection

Distressed or Special Situations

- Rescue lending
- Distressed asset purchase
- Liquid credit dislocations

Side Pocket Restructuring/Lift Out

- Typically illiquid, complex transactions from pre 2008 bubble
- Assets include, asset based, credit, real estate, oil and gas and esoteric investments
- Usually as a significant LP or with knowledge of assets, Crestline has sourcing and underwriting advantage

Potential Direct Investment Examples By Types

Crestline has closed deals in each of the four Investment Types

Asset Based/Cash Flow

- Type: Specialty Finance
- Provided a senior secured loan to a full service private real estate lender
- Crestline will provide 90% of the capital while maintaining deal by deal approval rights
- Underlying collateral comprised of small balance ($1 – $10mm) senior secured loans (<60% loan to value)
- The management team has completed over 225 transactions, posted a gross IRR of 34% while losing money on six transactions since 2006
- Cash flowing vehicle supported by a diverse pool of assets
- Base case IRR of 18.0%

Direct Lending/Structured Equity

- Type: Structured Equity
- Highly structured senior preferred equity: 1.0x Liquidation Preference , 10% dividend, 22.5% ownership, incurrence limit, put right and board seat
- Leading provider of transportable medical services equipment with over 1000 contracts (2.5 year average term with automatic renewal)
- High margin (20%-25%), stable business with < 2% annual attrition and great revenue visibility
- Very low technology risk
- Base case IRR / MOIC of 16.5% / 2.5x

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Potential Direct Investment Examples By Types

Crestline has closed deals in each of the four Investment Types

Distressed or Special Situations

- Type: Distressed Asset Purchase
- Purchased a luxury condominium development located in Telluride, CO from Texas Credit Union that recently foreclosed on the property
- Crestline purchased the fully completed property at a 65% discount to original cost and 45% discount to current market comps
- Significant downside protection given attachment point; CL could hold for six years and market values drop by 30% before impairment
- Team up with experienced luxury condo operating partner to manage property
- Base case IRR / MOIC of 27.5% / 1.7x

Side Pocket Restructuring/Lift Out

- Type: Recapitalization of asset in a fund of which CL owned LP interests through secondary purchase
- Provided capital in the form of a convertible note and common equity to pay down existing lenders
- The Company is one of the largest agricultural companies in South America
- Significant asset downside protection
- Negotiated structural downside mitigants such as incurrence covenants
- Equity attachment point at discount to FMV
- Base case IRR / MOIC of 20.5% / 1.7x

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Specialty Lending

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Executive Summary

Opportunity

- **Achieve significant illiquidity premium over high yield and broadly syndicated bank debt markets through directly originated middle market loans. The Fund will expect net returns to the investors to range from 10%-13%**

Investment Thesis

- **Post 2008, traditional commercial banks and other financial institutions significantly reduced their lending efforts to middle market companies. The resulting void has created an attractive opportunity to earn superior returns relative to the public, more liquid, debt alternatives**

- **Senior secured loans to middle market borrowers have compelling investment characteristics**
  - Historically have exhibited higher returns with minimal loss rates through lower defaults and higher recoveries than the broadly syndicated loan market
  - Loans have significant downside protection with low loan-to-value ratios
  - Highly structured transactions with tight covenant packages to enhance lender's collateral
  - Provide an inflation hedge, given the loans are floating rate, and, an attractive Fixed Income alternative
- **Focus on defensible companies with strong and sustainable fundamentals**
  - Market leaders with high barriers to entry
  - Recurring revenue businesses with minimal attrition
  - Highly diverse customer bases
  - Discrete "bucket(s)" of value that can be easily monetized

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Attractive Current Market Opportunity

Large Multi-Year Investment Opportunity within Middle Market Direct Lending

- Since the 2008 financial collapse, an imbalance between **low supply of capital and high demand for financing** has created an illiquidity premium in middle market finance.

- Commercial banks, finance companies, collateralized loan obligation ("CLO") vehicles and hedge funds have reduced or ceased prior lending practices for the following reasons:
  - Bank (traditional and investment) retrenching due to looming new or already-in-place regulation
  - Hedge funds no longer have asset liability mismatches (e.g., short term liabilities with long term assets)
  - Certain finance companies have withdrawn substantially from the marketplace
  - The perceived excess leverage of CLOs and lack of liquidity for middle market names have made CLO entrance back into the middle market slow

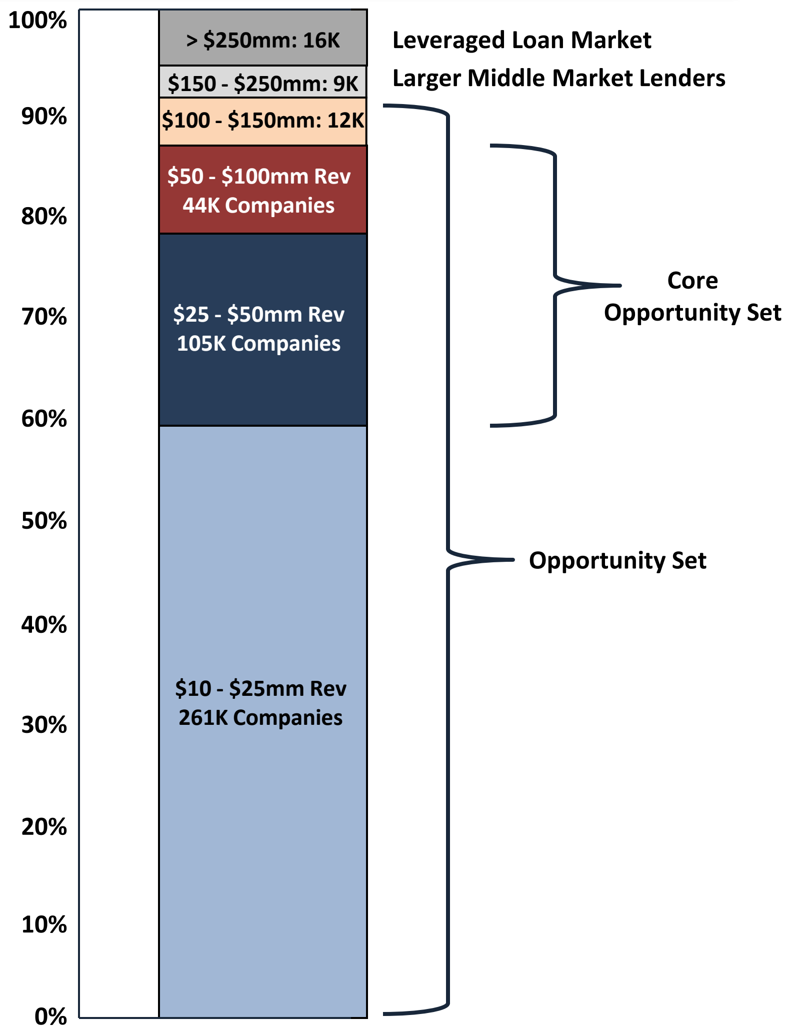
- The U.S. middle market alone consists of ~422,000 companies and accounts for 40%[1] of U.S. GDP
- Significant amounts of un-invested private equity capital on the sidelines
- Middle market loan volume has yet to exceed 2005 single year levels and structures remain much better than syndicated loan market

Source: The Deal Magazine, March 11, 2011.
[1] Middle market defined as $10 million to $150 million revenues.
See Notes to Performance History & Comparisons for further information.

Crestline

Robust and Fragmented Market

North American Companies[1]



- In total number of companies, the middle market is an immense opportunity set
- **149k companies make up the Core Opportunity Set based on revenue between $25mm and $100mm**
- 422k companies make up Opportunity Set based on revenue between $10mm and $150mm
- Leveraged loan and rated bond markets are realistically only accessible for companies with ~$250mm or more in revenue

- Core Opportunity Set = 149k companies
- Assume the average EBITDA is $5mm and the leverage at 2x
- **That is a $1.49 trillion market**

[1] Source: OneSource Database. Note: excludes 2.5mm companies without estimated revenue.

Crestline

Middle Market Competitive Landscape

Middle Market Competitive Landscape for Cash Flow based Lenders

Targeting 8 – 12% Unlevered Returns in Uni-Tranche Structures

Upper Middle Market (>$150mm Enterprise Value)	Fewer lenders capable of providing > $125 million commitment thus premiums can be attained
Middle Market (>$50mm Enterprise Value)	A majority of the capital recently raised by Managers or in the BDC market is focused on this opportunity set, thus creating a more competitive market environment, tighter pricing and weaker structures
Lower Middle Market (>$20mm Enterprise Value)	Fewer institutional caliber lenders willing to focus on smaller check size thus less competitive

Notable Differentiating Characteristics Within Crestline Mandate:

- Crestline believes there are a limited number of institutional quality lower middle market lenders with Crestline's platform strength and experience
- Crestline believes they are one of only a handful of lenders with a willingness to lend to non-sponsor backed companies
- Crestline believes they are one of only a handful of lenders with an ability to directly source lower middle market deals while also having access to club deals from its fund investment general partners
- Crestline will focus a portion of its capital in the specialty finance industry which is an area BDC's are currently restricted from lending

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Crestline Edge

- **Crestline's Specialty Lending team has deep experience in sourcing, underwriting, structuring, and asset management of middle market transactions, establishing a deep credit culture and the ability to act quickly with creative structures**
  - The team has over 40 years of middle market experience ranging from direct lending to advisory/restructuring
  - The Fund's portfolio managers have significant prior experience directly originating, underwriting, structuring, and managing middle market loans for successful portfolios at Goldman Sachs Specialty Lending Group and other major middle market credit firms, investing or managing over 100 deals
  - From years of investing, Crestline has a streamlined, consistent investment process from sourcing to asset management with strong middle office support

- **In addition to deep traditional sourcing networks, Crestline utilizes proprietary sourcing channels to generate significant middle market deal flow**
  - Based on our underwriting criteria, we tailor our direct sourcing to specific industry verticals with the appropriate fundamental business attributes
  - Proprietary sourcing from Crestline affiliated funds and joint venture relationships, including cross-sourcing from other Crestline funds (Opportunity and Recovery Funds) and proprietary first/last look deal flow from Crestline / Kirchner
  - Proprietary deal flow from current and prospective General Partners (some contractual)

- **Senior Investment Professionals have deep special situations and restructuring experience, including being hired in roles as Chief Restructuring Officer for debtors and lead advisory roles for creditors, thus enhancing their ability to maximize recovery values**

- **Senior level (Investment Committee) involvement from the outset establishes quick responses with reliable outcomes, thus eliminating surprises and reducing execution risk**

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Team Continuity and Experience

- Key members of Crestline's Specialty Lending team have been together for almost 7 years and share a common credit culture
  - Core part of team came from Goldman Sachs Specialty Lending Group, a $3+ billion direct lending platform, where senior members overlapped and worked together for approximately 5 years
  - Deeply instilled credit fundamentals are paramount in our hiring and training
- Since joining Crestline, the deal team has consummated over 30 closed transactions
  - Closed transactions have included fund, tactical seeding/JV and direct investments
  - All transaction focus on downside protection and risk mitigation
- As special situations investors and restructuring advisor, the senior team members have deep experience investing and working out distressed deals

Crestline

Fund Overview

Seeking to raise $250mm - $400mm in equity commitments for a Specialty Lending Fund

Goal	❖ Achieve risk adjusted returns to investors of 10-13% (net with minimal leverage) through senior secured floating rate middle market loans with significant margin of safety ➢ Target current coupon to investors ➢ Target underlying investments with loan to value < 65% and cash pay interest of L+650 – L+1000
Target Market / Investment Size	❖ Focus on lower and traditional middle market and specialty finance companies ➢ Underlying companies with enterprise value of $25mm - $250mm ➢ Specialty finance companies with significant underlying "safe" collateral ➢ Typical loan size of $15mm - $100mm; Crestline position size of $15mm - $30mm ➢ Directly originated deals will focus on lower end of market ➢ Traditional or upper middle market deals will typically be sourced from General Partners ➢ Sponsor and Non Sponsor Deals
Benefits to Investors	❖ Attractive absolute and risk adjusted return versus liquid high yield and broadly syndicated loans ➢ Strong structure and loan documentation ➢ Illiquidity premium versus broadly syndicated market loans ➢ Historically strong default, recovery and loss rates ❖ Current cash yield to investor ❖ Senior secured floating rate loan focus ❖ Contractual "club deal" rights from some current General Partners

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Investment Structure & Investment Type

Target Portfolio	Investment Structure	Transaction
85% - 100% First Lien or One-Stop Unitranche Structure	Traditional First Lien, Single Lien Incorporating Risk from First Lien to Implied Mezzanine Risk or Bifurcated First Lien	Refinancing Acquisitions Leveraged Buyouts Growth Capital Dividend Recap DIP / Exit Loans Hung or Dislocated Liquid Deals

Typical Loan Metrics

Average Size: $15 - $30 million	Closing Fees: Up to 3%
Coupon Range: LIBOR + 600 - 1000	Miscellaneous Fees: Up to 2%
LIBOR Floors: 100 bps - 250 bps	

Actual portfolio composition may differ from target portfolio due to various factors.

Complimentary to Existing Allocation

- Crestline's Direct Lending vehicle will provide complimentary exposure, while acting as a valuable diversifier to ARMB's current investment in Middle Market Direct Lending
  - ARMB currently has exposure in the upper middle market segment
  - Crestline's Direct Lending fund targets lower middle market and non-sponsor backed companies

- Similar to ARMB's current investment in the space, Crestline's fund will:
  - Act as an inflation hedge through floating-rate loans
  - Provide current income via coupon payments
  - Offer diversification across multiple industries and geographies
  - Possess relatively lower default risk through structural seniority and customized covenant packages
  - Take advantage of illiquidity premium over broadly syndicated financings

UBS Agrivest, LLC

Relevant Mandates: Farmland **Hired:** 2004

Firm Information	Investment Approach	Total ARMB Mandate
UBS AgriVest LLC is a subsidiary of UBS Realty Investors LLC, which is an indirect wholly owned subsidiary of UBS AG. UBS AG is a pre-eminent global financial services firm, with stock registered on both the New York and Zurich stock exchanges. As of 9/30/14, the firm's total assets under management were $1 billion. **Key Executives:** ***Jim McCandless***, Head of Global Real Estate - Farmland ***J. Scott Haffner***, Director	UBS AgriVest investment decision-making is team oriented. Regional managers work with the portfolio manager and investment committee in the decision-making process. Regional managers source and screen new investment opportunities in consultation with the portfolio manager and members of the investment committee to ensure that the investments meet the established guidelines and standards. Approval and commitment of capital must be cleared by the regional manager, portfolio manager and investment committee. Inputs to the process include: Comparable sales and rent data; Rainfall and growing season statistics; Irrigation sources and water costs; Drainage systems; Crop yield history; Soil types and topography; Crop marketing and/or contracts; Buildings and improvements; Conservation plans; Mineral exploration/production activity; Economic analysis – returns/projections; Phase I environment site assessment; and Legal (access, encroachment, etc). **Benchmark:** Leased only properties in NCREIF Farmland Index weighted 80% row and 20% permanent crop.	**Assets Under Management:** 9/30/14 $505,247,773

Concerns: None.

9/30/2014 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	2.04%	10.31%	16.13%	12.87%
Fee	0.21%	0.88%	0.90%	0.85%
Manager (net)	1.83%	9.43%	15.23%	12.02%
Benchmark	1.36%	11.42%	15.49%	12.56%

UBS

Asset Management

For limited distribution to institutional and professional investors only

Global Real Estate – Farmland

Alaska Retirement Management Board

James B. McCandless
Managing Director, Head of Global Real Estate – Farmland

February 12, 2015

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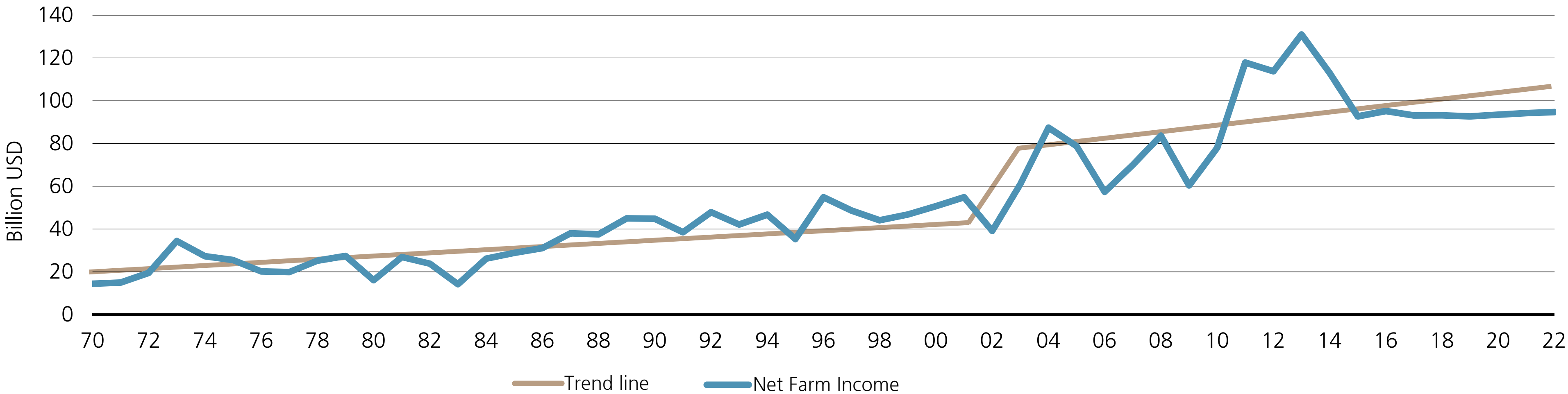
J. Scott Haffner
Executive Director

- UBS AgriVest LLC is the farmland investment business within UBS Global Asset Management, Global Real Estate
- UBS AgriVest LLC began investing for US tax-exempt investors in 1991 through its predecessor and has been a major contributor to the NCREIF Farmland Index since its inception in that same year
- Our seasoned regional officers are responsible for the sourcing, acquiring, managing and selling of properties in their regions subject to investment committee approval

US farm *income*

Net Farm Income

1970 - 2022



Source: USDA as of September 2014. 2014 to 2022 are forecasted by the USDA.

- A decline in commodity prices has resulted in lower income from crop production. Net Farm Income is forecasted to decline by about 25% from the record level in 2013
- The trend line in US farm income has moved to a higher level and the forecast indicates a stable trend going forward
- Farmland rents and values are in the process of levelling off

Farmland *markets*

- Values level off, rents stable
  - Lower income dampens markets
  - Limited supply of offerings
  - Rents are stable
- Farmers are largest single group of buyers
  - Seem to be less active
  - Still strong financial condition, no forced sales
  - Not motivated to sell
- Commodity cropland – moderating to level
- Vegetable cropland – stable
- Permanent cropland – varies by crop
- Water is key in California

Farmland *markets*

- What would cause farmland values to decline?
  - Fast, unexpected increase in interest rates
  - Significant drop in farm income over two or more years, fast rising input costs
  - Significant increase in farms "for sale"

Midnight Sun *portfolio*

Summary as of December 31, 2014

- 64 farms
  97,166 acres
  13 states
- Cost basis: USD 324.1 million
- Market value: USD 504.5 million

Portfolio diversification matrix as of December 31, 2014
(percent by market value)

Crops	Mountain	Pacific West	Delta	Southern Plains	Corn Belt	Pacific Northwest	Southeast	Total
Corn	8.68		4.56	3.40	5.01		0.13	21.78
Vegetables	6.57	9.68		1.06		0.95		18.26
Permanent		8.31				1.67	2.61	12.58
Wheat	7.19		0.29	1.55		3.08		12.11
Cotton		1.93	6.08	1.63			0.13	9.77
Soybeans			3.85		4.84			8.69
Sugar crops	4.38	1.24		0.91				6.53
Feed grains	0.85			1.47		0.78		3.09
Other	1.31	0.95				0.63		2.88
Rice			2.15					2.15
Range & hay	0.48	0.57						1.05
Berries		0.98						0.98
Peanuts							0.13	0.13
Total	29.46	23.65	16.92	10.02	9.84	7.10	3.00	100.00

*Rounding errors may occur

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

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Midnight Sun *portfolio*

Portfolio compared to constraints established in the ARMB Policies and Procedures Investment Guidelines

- As of December 31, 2014 the existing Midnight Sun, Inc./ARMB agriculture portfolio reflects the following distribution of properties compared to the Investment Guidelines for the listed categories:

Guidelines-maximum	Maximum amount (USD mil) @ 535.9* million	Market value (USD mil) of amount invested as of 12/31/14	
40% in any NCREIF region	214.3	149.5	Mountain
30% in any single commodity	160.8	110.6	Corn
15% leased to single tenant	80.4	21.5	Midnight Circles
15% in single property	80.4	26.4	Monarch Orchard
80% row crop, ± 10%	375.1 to 482.3	444.0	
20% permanent crop, ± 10%	53.6 to 160.8	63.9	

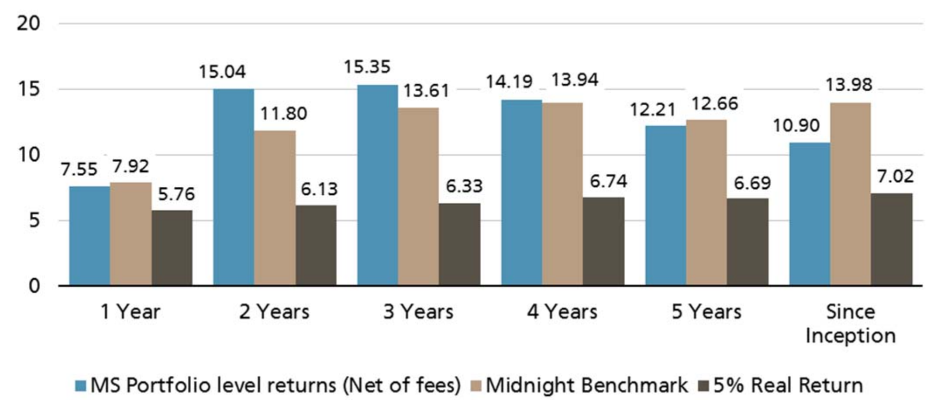
*Maximum amount equals Total Allocation plus unrealized gain in existing portfolio

- Total amount invested as of December 31, 2014: USD 324.1 million
  Amount remaining to invest as of December 31, 2014: USD 27.7 million
  Purchases pending as of 12/31/14: USD 11.1 million

Midnight Sun *portfolio*

Comparisons to portfolio return objectives

- Total return – over rolling five-year periods, a minimum total real rate-of-return (net of investment management fees) of 5% using a time-weighted rate of return calculation and the CPI All Urban Inflation Index



Source: UBS Global Asset Management, Global Real Estate – Farmland. Past performance is not an indication of future results. The manager seeks to achieve the stated objectives; however, there is no guarantee the objectives will be met.
Inception date for portfolio calculations is 4/1/05 at the client's request
To create the Midnight Benchmark, AgriVest excludes investments in the NCREIF Farmland Index that are owner-operated and re-weights all the leased properties in the Index to 90% annual cropland and 10% permanent cropland for the period from inception until January 1, 2008 after which time the re-weighting was revised to 80% annual cropland and 20% permanent cropland. The MB was created at the request of the client to provide an appropriate basis for comparison to the portfolio.

- Income return – defined as cash distributed, is expected to produce 4% returns over rolling five-year period with a minimum of 3% distributed income for individual properties after fees and projected capital expenditures

	1 yr	**2 yrs**	**3 yrs**	**4 yrs**	**5 yrs**	**From inception 4/1/05 - 12/31/14**
MS cash distributed returns (%)	3.07	3.05	3.62	4.44	4.32	4.38

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Timberland Investment Resources, LLC

Relevant Mandates: **Timberland** | **Hired:** **2008**

Firm Information	Investment Approach	Total ARMB Mandate
Timberland Investment Resources, LLC (TIR) is a Timberland Investment Management Organization. TIR is 100% owned by the equity partners of the firm, who also serve as Managing Directors. As of 9/30/14, the firm's total assets under management were $1.19 billion. **Key Executives:** ***Tom Johnson***, Managing Director	TIR's investment philosophy emphasizes active timber and land management, which requires that TIR perform not only the investment management but also many property management functions in-house. TIR is able to reduce operating expenses because of the high level of management conducted with direct employees of TIR. The account management and property management decision making functions are also performed in-house by TIR Partners and staff. TIR believes that much of the return potential for a timberland portfolio, particularly a southern pine portfolio, is contained in the biological growth of the timber. In order to maximize the growth and thus, return potential, TIR conducts rigorous economic and biometric research, coupled with effective implementation of intensive, stand level management plans through TIR's own foresters deployed in the field. TIR's forest biometrician and economist perform research to benefit client portfolios. The same rigorous economic and biometric analysis used to develop the acquisition strategy is applied to the disposition strategy, recognizing that in some cases, properties acquired as timberland may transition to Higher-and-Better-Use properties over the investment term. **Benchmark:** NCREIF Timberland Index.	**Assets Under Management:** 9/30/14 $268,523,909

Concerns: None.

9/30/2014 Performance

	Last Quarter	1-Year	3-Years Annualized	5-Years Annualized
Manager (gross)	0.99%	9.09%	6.53%	3.69%
Fee	0.21%	0.90%	0.88%	0.86%
Manager (net)	0.78%	8.19%	5.65%	2.83%
Benchmark	1.47%	10.38%	7.37%	3.58%

TIMBERLAND INVESTMENT RESOURCES LLC

growing value for our clients every day

Alaska Retirement Management Board (ARMB)

Notice of Caution Regarding Forward looking Statements

This performance review contains various estimates and assumptions concerning projected and forecasted financial facts, conditions and performance. These estimates and assumptions are based on our current expectations and are subject to a number of risks and uncertainties. Actual facts, conditions and performance may differ materially from those reflected or contemplated herein. In addition, this performance review may contain statements that constitute "forward-looking statements" within the meaning of federal securities laws containing words such as "estimate," "expect," "project" and "forecast." No representation or warranty is made as to future performance or investment returns or any forward-looking statements regarding such performance or investment returns.

Agenda

Timberland Investment Resources

5-Year-Old Loblolly Pine Plantation, Tickanetley Property, Georgia

Overview of TIR

- Established in 2003
- Manage timberland portfolios valued at over $1 billion
- Senior management averages over 25 years of experience acquiring, managing and selling timberland (acquired more than 2.4 million acres - 179 transactions - worth over $2.4 billion)
- Privately owned to align financial interests with clients
- Horizontally integrated across core functions – acquisitions, asset management, decision support and dispositions are all in house (employ our own investment foresters and staff internal economic research, biometric research and real estate optimization capabilities)
- Highly disciplined investment process that leverages experience, skills and proprietary tools
- Utilize value oriented investment approach distinguished by a comprehensive and highly intensive due diligence process (historically have acquired *just* 11 percent of all opportunities analyzed)

Management

Experienced Across All Timberland Investment Disciplines

Team	Role	Years Experience	Years w/ TIR	Years w/ Team Members	Earlier Career
Mark Seaman	Chief Executive Officer	37	11	16	Chief Investment Officer of Wachovia Timberland Investments
Gary Allred	Director of Acquisitions	36	11	16	Investment Forester of Wachovia Timberland Investments and Chief Forester of TimberVest
Tom Johnson	Director of Client Services	27	11	14	Regional Manager of Wachovia Institutional Investments and Senior Consultant of PricewaterhouseCoopers
Kevin Colin	Chief Financial Officer	24	11	15	Partner and Financial Officer of Lend Lease Capital Partners
Chris Mathis	Director of Real Estate	15	1	1	President of Mathis Property Group and VP of Temple-Inland
Hong Fu (PhD)	Director of Economic Research	19	10	10	Senior Investment Analyst of Global Forest Partners
Steve Smith	Director of Forest Management	37	7	7	Regional Manager of Potlatch Corporation
Tim Hartigan	Director of Marketing	30	4	8	Principal of Lend Lease Real Estate Investments, Inc.

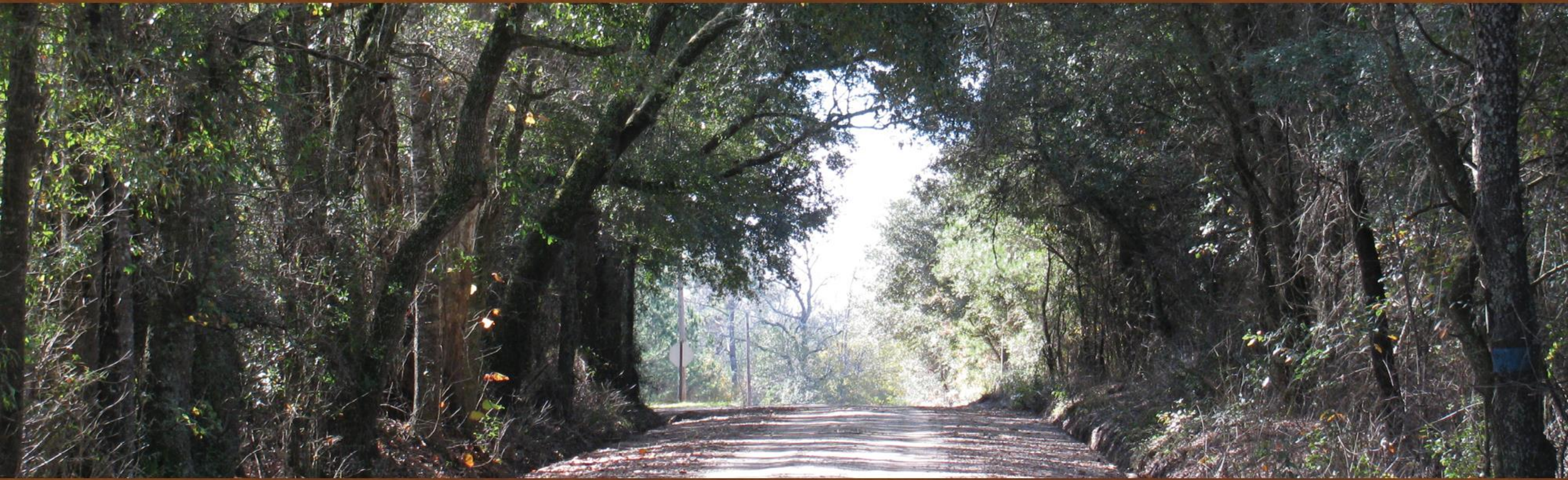
ARMB Timberland Investments

Investment Goals and Objectives

Photo: 9-Year-Old Loblolly Pine Stand, Tickanetley Property, Georgia

Mountainside Timberland Investments

- ARMB provided TIR an original timberland investment mandate in 2008 to place $100 million in a diversified portfolio (increased to $244 million)
- Mountainside Timber, LLC ("Mountainside") was formed with the following investment goals and objectives:
  - Diversification
    - *Species*
    - *Product Type*
    - *Age Class*
    - *Geography (Timber and Land Markets)*
  - Long Term Return Objective
    - *5% Real*
  - Benchmarks:
    - *Absolute: 5% Real*
    - *Relative: NCREIF Timberland Index*
- The following pages describe the acquisition process and investment made to date

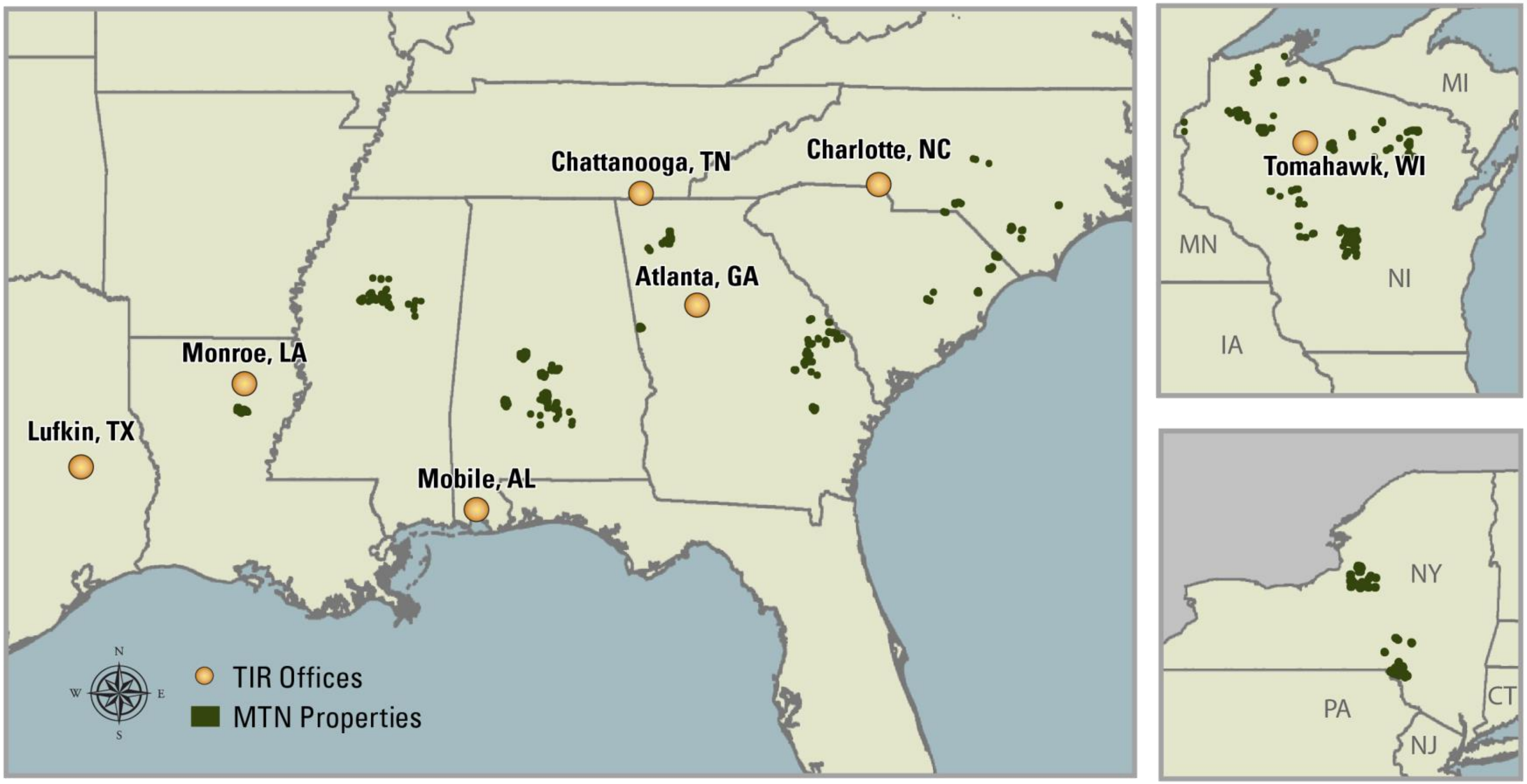


Mountainside

Acquisitions and Holdings

Photo: Live Oaks, Tickanetley Property, Georgia

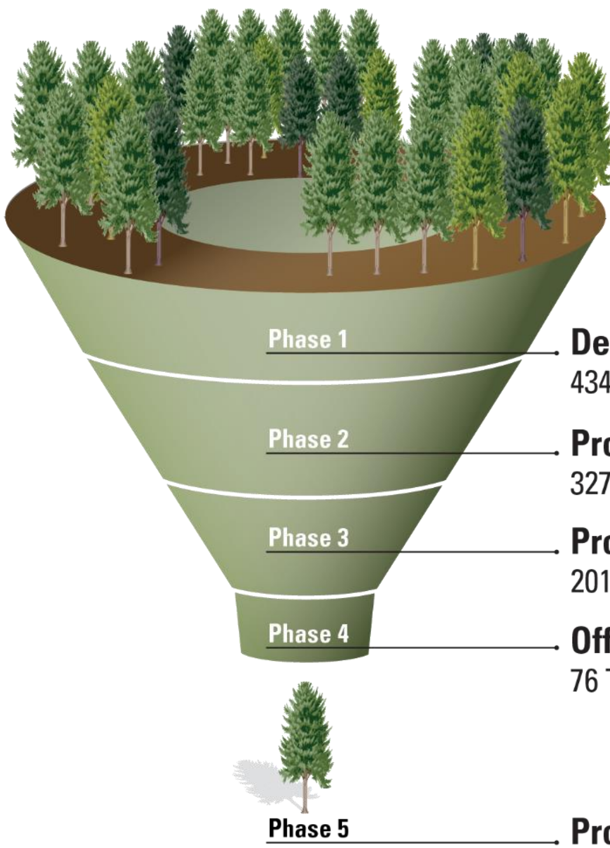
Mountainside Holdings



162,873 Acres in 55 Counties (402 Tracts)

Mountainside Acquisition History

Acquisition Activity Updated January 2015



Deal Tracking
434 Transactions - 12.2 M Acres

Property Evaluated
327 Transactions - 7.5 M Acres

Property Inspected
201 Transactions - 4.4 M Acres

Offer Made
76 Transactions - 2.1 M Acres

Property Bought
8 Transactions - 169 K Acres

Northeast

	Transactions	Acres
Deal Tracking:	57	2.65 M
Property Evaluated:	40	869 K
Property Inspected:	24	704 K
Offer Made:	10	76 K
Property Bought:	2	21 K

Lake States

	Transactions	Acres
Deal Tracking:	19	644 K
Property Evaluated:	13	313 K
Property Inspected:	8	169 K
Offer Made:	3	85 K
Property Bought:	2	54 K

Northwest

	Transactions	Acres
Deal Tracking:	18	578 K
Property Evaluated:	11	263 K
Property Inspected:	4	36 K
Offer Made:	0	0 K
Property Bought:	0	0 K

Southeast

	Transactions	Acres
Deal Tracking:	340	8.32 M
Property Evaluated:	263	6.08 M
Property Inspected:	165	3.49 M
Offer Made:	63	1.93 K
Property Bought:	4	94 K

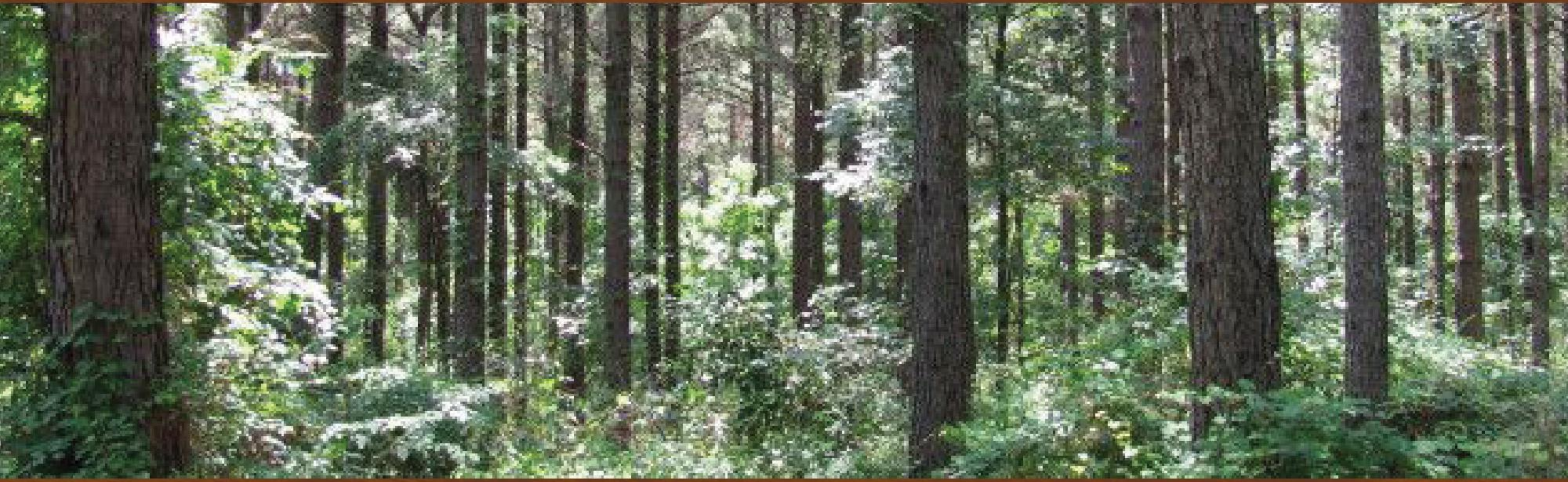
Mountainside Acquisitions

Opportunistic Acquisitions

Over $240 million invested; searching for $11 million in-fill or diversifying transaction.

Transaction	State(s)	Purchase Price	# Acres	$ / Acre	Year	Projected IRR*	Investment Theme
Transaction 1	Georgia, Alabama	$40.2 million	28,065	$1,434	2008	9.90%	Publicly traded Timber REIT that needed liquidity
Transaction 2	Alabama, South Carolina, North Carolina, Mississippi, Louisiana	$67.2 million	45,863	$1,466	2009	10.03%	Institutional Investor that required liquidity to service debt
Transaction 3	Georgia	$18.1 million	9,750	$1,851	2011	10.55%	Industrial timber company needed year end deal to bolster performance
Transaction 4	New York	$9.5 million	9,485	$1,002	2012	9.03%	Family monetized timberland to restructure ownership in furniture business
Transaction 5	Alabama	$20.5 million	10,749	$1,907	2012	8.64%	TIMO closing out fund, high mill demand in the area
Transaction 6	Wisconsin	$9.3 million	4,909	$1,894	2013	9.20%	Family monetized timberland to restructure ownership in sawmill business
Transaction 7	New York	$27.3 million	11,404	$2,390	2014	9.00%	TIMO closing out fund, high timber stocking and good demand
Transaction 8	Wisconsin	$45.3 million	49,536	$915	2014	9.02%	Timber REIT sold remaining acres in the state, good portfolio diversifier
	Total	**$243.1 million**					

*Note: Net of fees and expenses



Timber Fundamentals

Photo: Mature Sawtimber Stand, Woodall Property, Mississippi

Timber Basics – Two Basic Species Types

SOFTWOOD

Framing Lumber

Newspaper

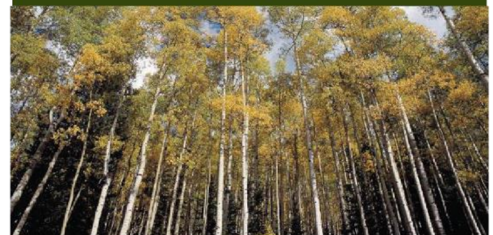
Plywood & OSB
(Floor underlayment, wall and roof sheathing)

Utility Pole

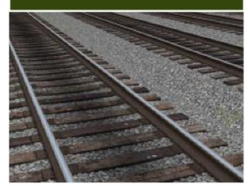
Corrugated Boxes

Shopping bag

HARDWOOD



Railroad Tiles



Glossy Magazines & Catalogs

Flooring

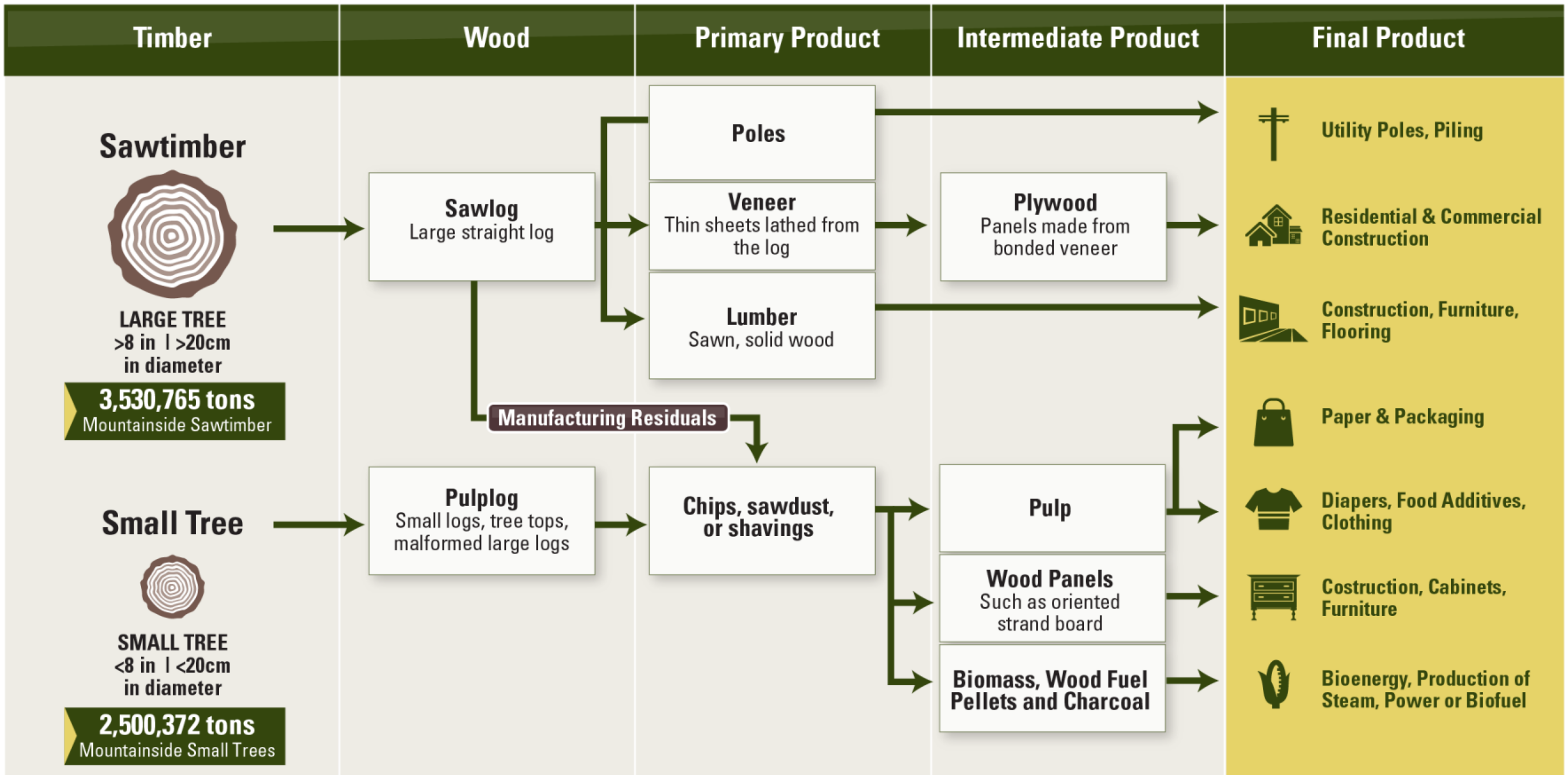
Furniture & Cabinets

Copier Paper

Pallets

Timber Basics

Flow diagram that shows how the main economic products of a timber harvest, sawtimber and pulpwood, become value-added products.



The total tons translate to 162,828 truck loads which linked together would stretch from Juneau to San Francisco.

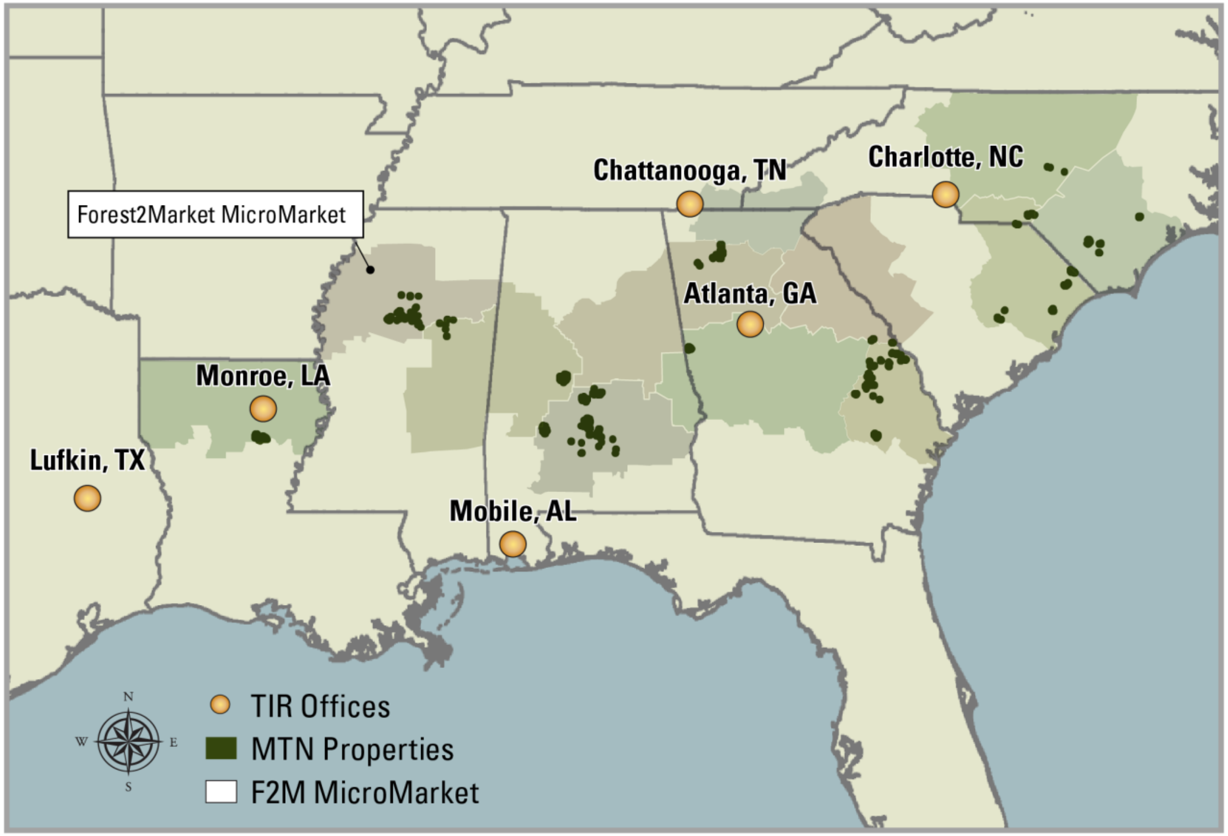
Mountainside

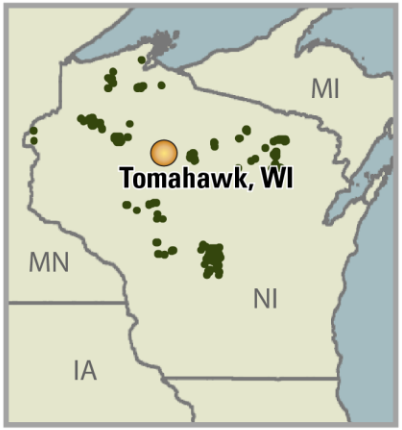
Timberland Diversification

Photo: Sorted and Graded Logs, Tickanetley Property, Georgia

Timberland Diversification – Geographical and Market

Mountainside properties span 8 states,12 separate timber markets across the South, and key hardwood markets in the Northeast and Lake States





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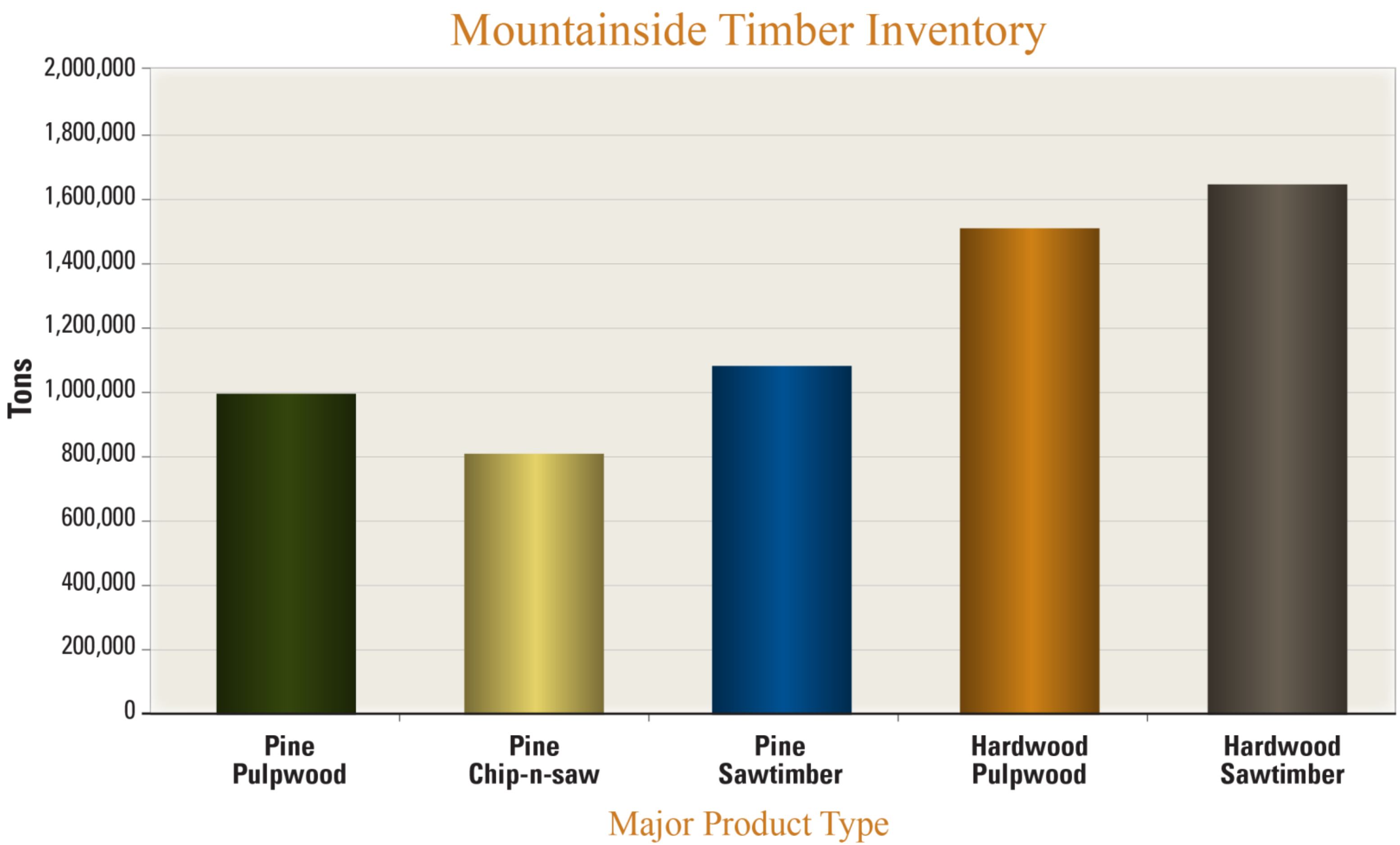
Timber Diversification – Species, Age and Product Class

Exposure to all 5 key timber products, various age classes and species



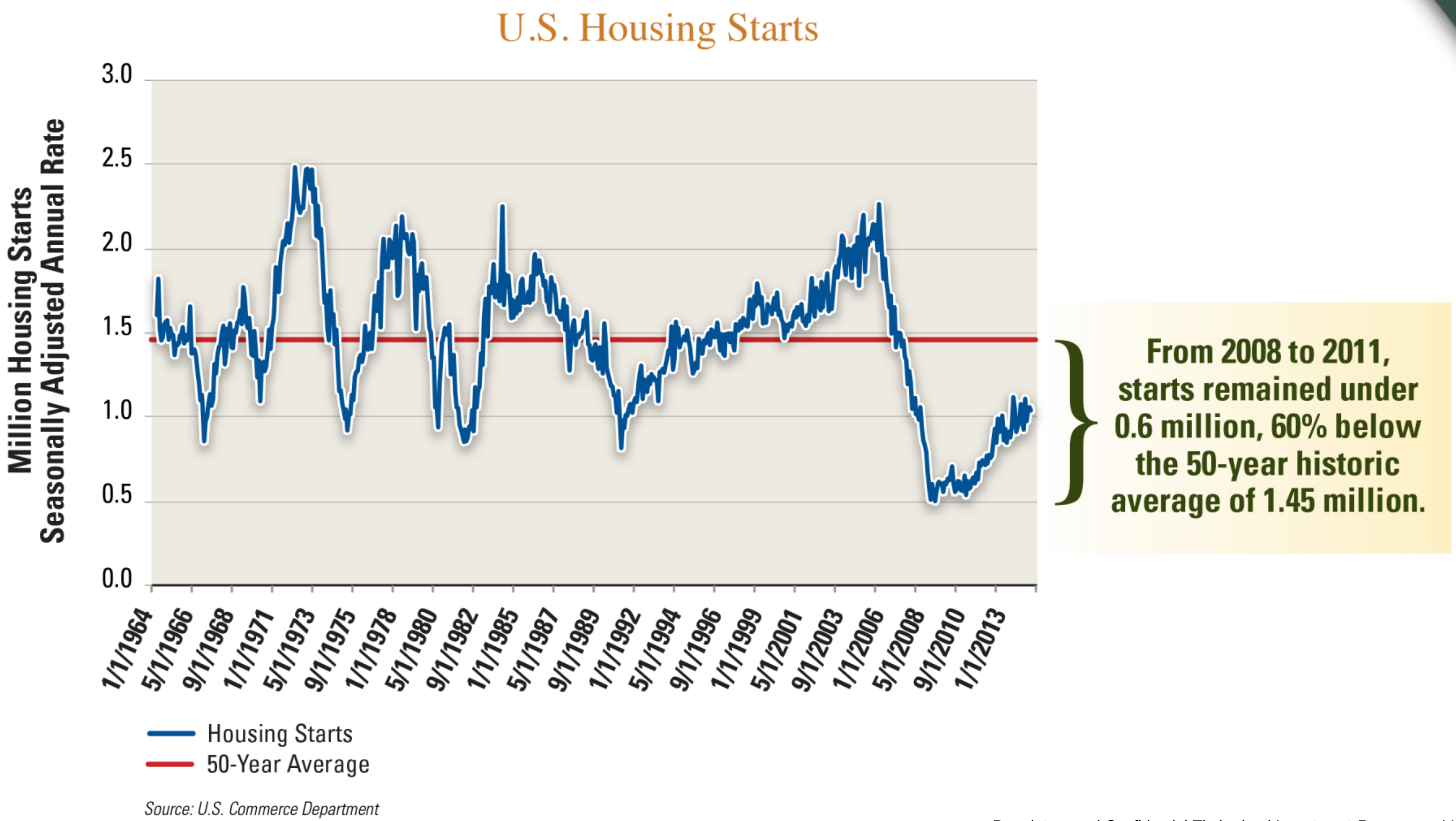
Note: For reference, a typical truckload of logs is 25 tons.

Macroeconomic Perspective

Log processer and skidder – South Carolina

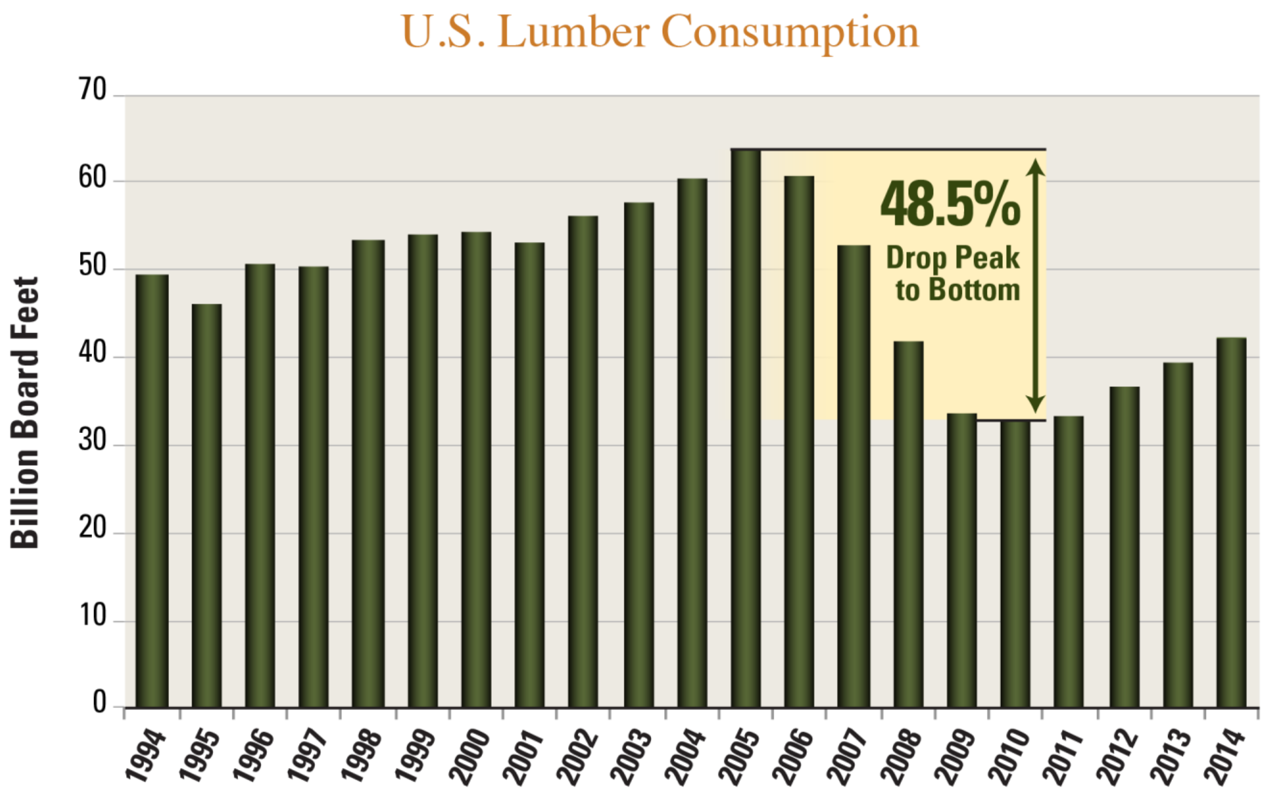
Housing Market Experienced Unprecedented Collapse

From a peak of 2.2 million starts in January 2006, housing starts plummeted to one-fourth that level by 2008. Despite a recovery, current starts still remain 30% below historic norms



Lumber Demand Dropped Following Housing Collapse

The slump in residential and commercial construction during the recession cut lumber demand in half to a record low of 33 billion board feet



Source: RISI

Mills Reduced Capacity and Timber Prices Followed

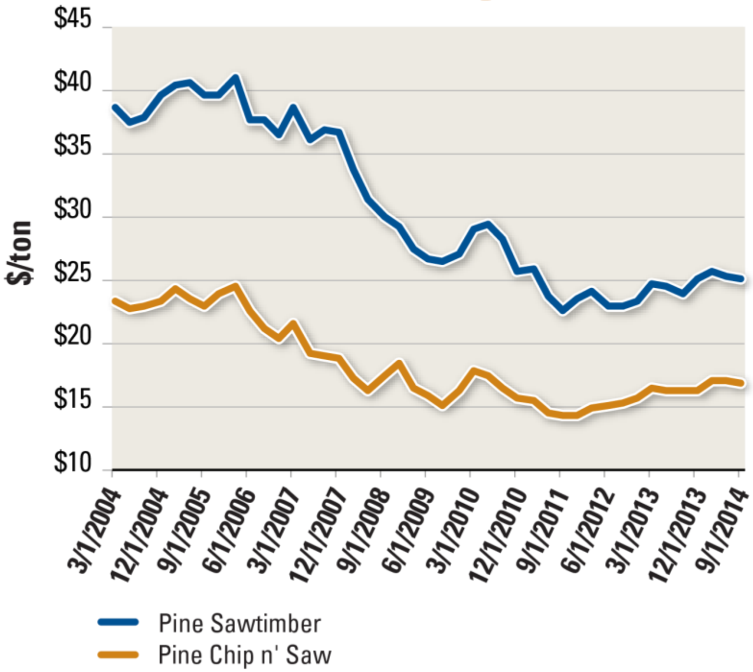
Sawmills scaled back production or were shuttered, which resulted in a decline of softwood sawtimber prices of 45% from their cyclic peak

Total North American Softwood Lumber Capacity

Billion Board Feet	2006	2010	Change from 2006 to 2010	2015	Change from 2010 to 2015
US South	19.72	18.26	-7.4%	19.22	5.3%
US West	21.45	18.96	-11.6%	19.04	0.4%
US North	2.72	2.84	4.4%	2.76	-2.8%
British Columbia	19.49	17.34	-9.9%	15.40	-11.2%
Eastern Canada	19.20	15.62	-18.6%	14.74	-5.6%
North America	**81.92**	**73.02**	**-11.3%**	**71.16**	**-2.5%**

Source: RISI

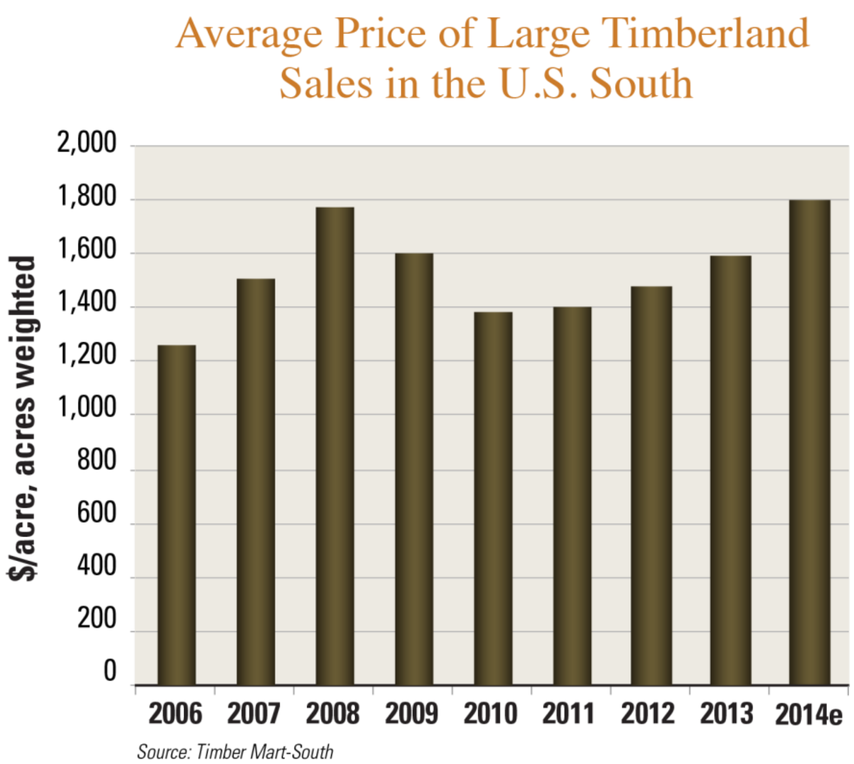
Stumpage Prices of Southern Pine Sawtimber and Chip n' Saw

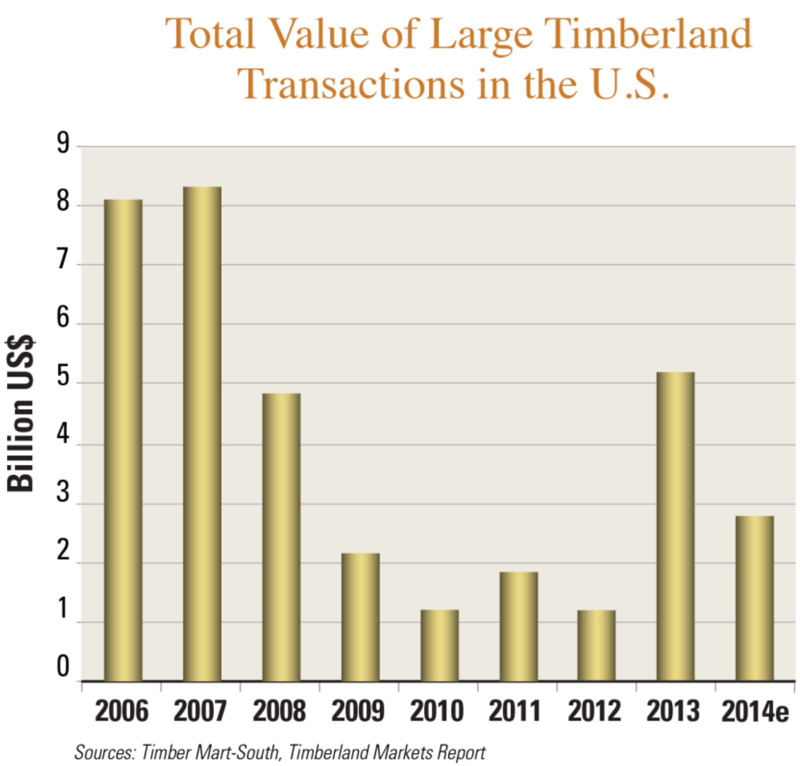


Source: Timber Mart-South

Timberland Land Markets Contracted but Recovered

As timber prices fell during the housing market downturn, timberland markets contracted and prices fell 20-30% during the recession. Since then, new investor capital and expectation of rising timber prices have created a recovery in timberland





Future Macro Outlook

Final harvest site – Alabama

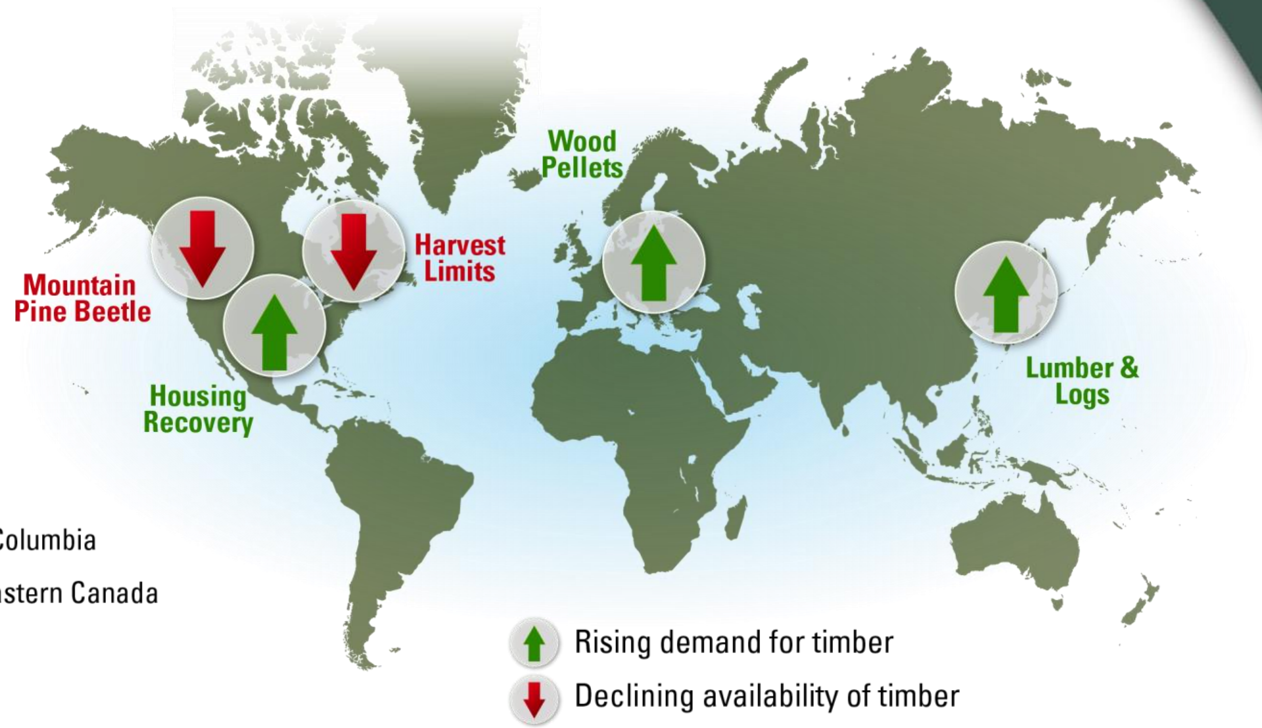
Stage is Set for a Sustained Recovery in Timber Markets

Three factors will help drive growth in timber prices and timberland values:

1 Recovery of the housing market
- Driven by demographic growth

2 Strong demand for wood exports
- Logs and lumber to Asia
- Wood pellets to Europe

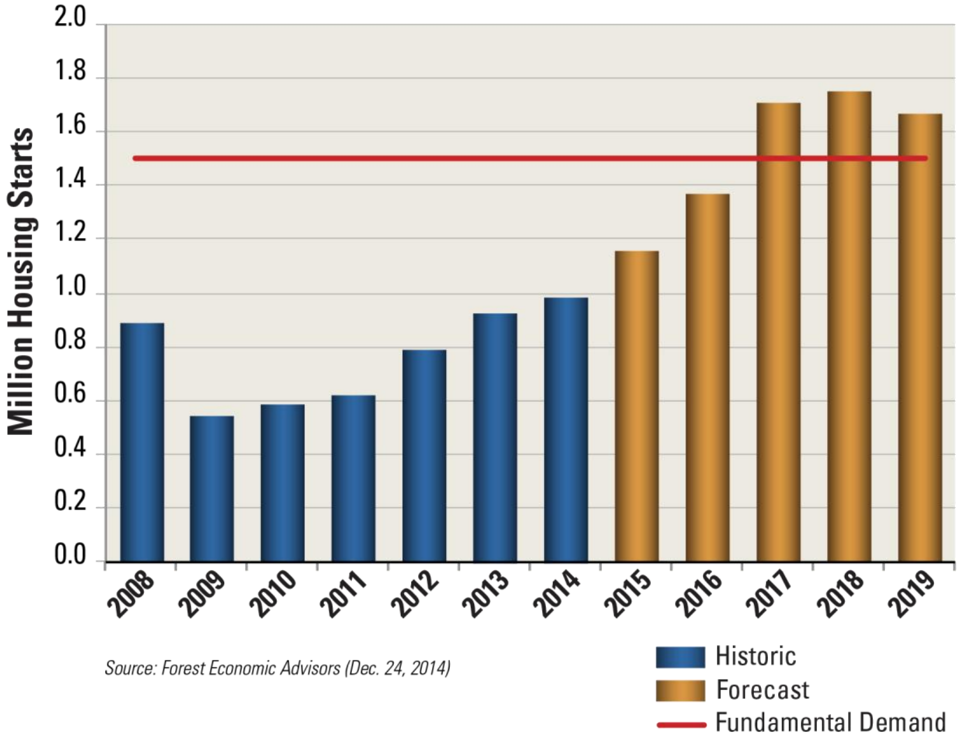
3 Limits by Canada to supply lumber
- Mountain pine beetle epidemic in British Columbia
- Cutbacks in the annual allowable cut in Eastern Canada



U.S. Housing Market will Return to Long-Term Trend

The U.S. is adding 2.5 to 3.0 million people each year, creating pent-up demand for housing that will be released as the economic recovery takes hold and employment rates rise

Historic and Projected U.S. Housing Starts

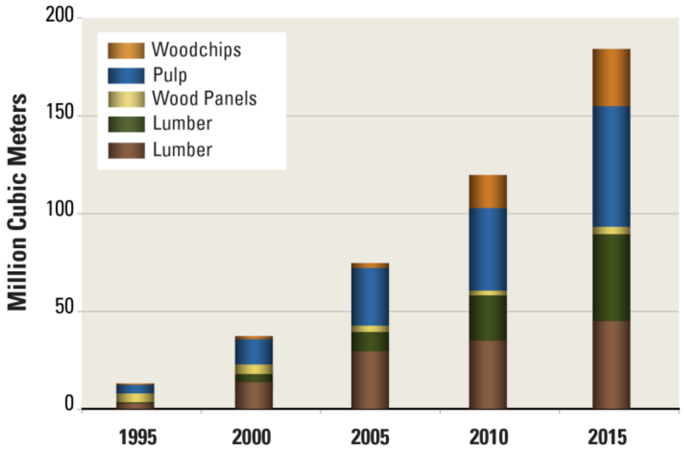


Source: Forest Economic Advisors (Dec. 24, 2014)

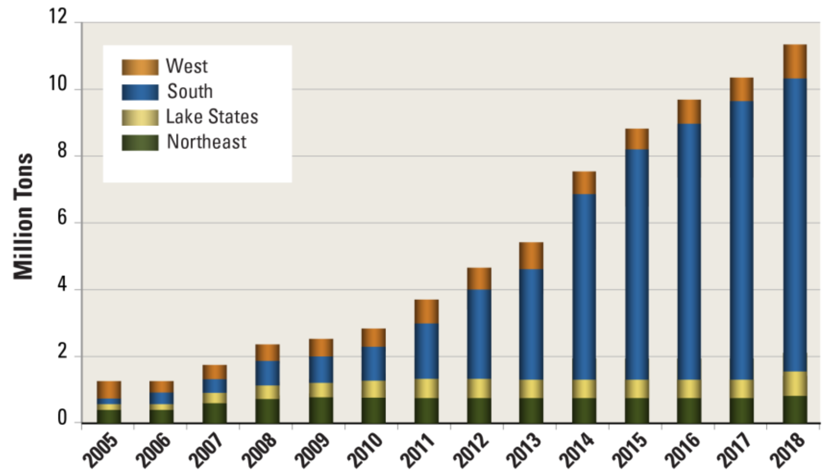
The U.S. population is growing 0.9% a year, creating an underlying demand of 1.3 - 1.5 million homes a year

North American Wood Exports to Asia and Europe

China's wood deficit will grow as it shifts to a consumer oriented economy. The European Union's focus on renewable energy is spurring demand for wood pellets from Canada and the U.S. South.



Source: RISI



Source: RISI

China's timber deficit is expected to grow 9% per year.

As China's per capital income grows, its middle class is expected to expand from 157 million people today to 555 million by 2020. This growth would spur demand for the construction of 10 million new homes per year through the next decade.

The European Union has adopted targets of 20% renewable energy production and a 20% reduction of carbon emissions (1990 baseline) by the year 2020.

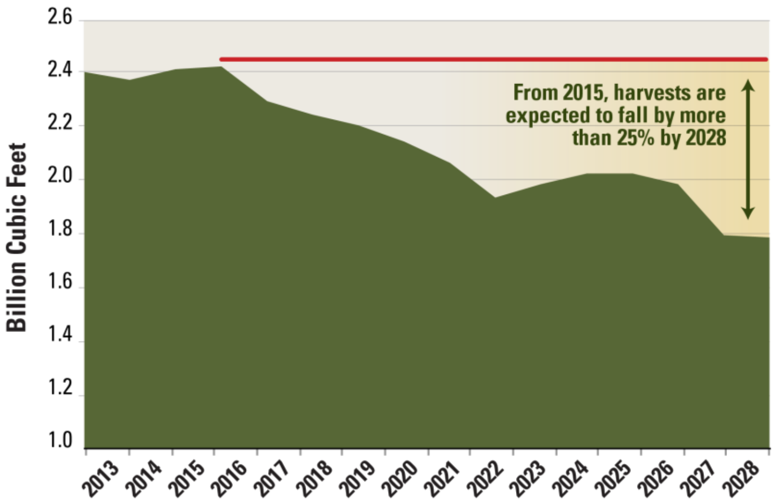
To reach these renewable energy targets, several EU members like the United Kingdom, the Netherlands and Belgium, are aggressively promoting and adopting the use of wood pellets as a primary fuel source.

Canada's Ability to Supply U.S. Markets is Limited

Historically, Canada has supplied one-third of the lumber consumed in the U.S., but its future capacity to do so will be constrained by new environmental restrictions and a declining timber inventory caused by a pine beetle outbreak in British Columbia.

- Between 2015 and 2028, British Columbia harvests are expected to fall by 25%
- Meanwhile, more lumber from BC is being shipped to Asian markets, particularly China
  - From under 20% in 2008 to over 40% by 2014
- Eastern Canada's timber output will plateau because of lower limits being placed on the region's Annual Allowable Cut (AAC) levels, a consequence of emerging environmental concerns

British Columbia Softwood Harvest



Source: RISI

Flooring and Furniture will Lift Northern Hardwoods

Rising spending on home remodeling and new home construction will generate rising demand for hardwood floors, cabinets and furniture

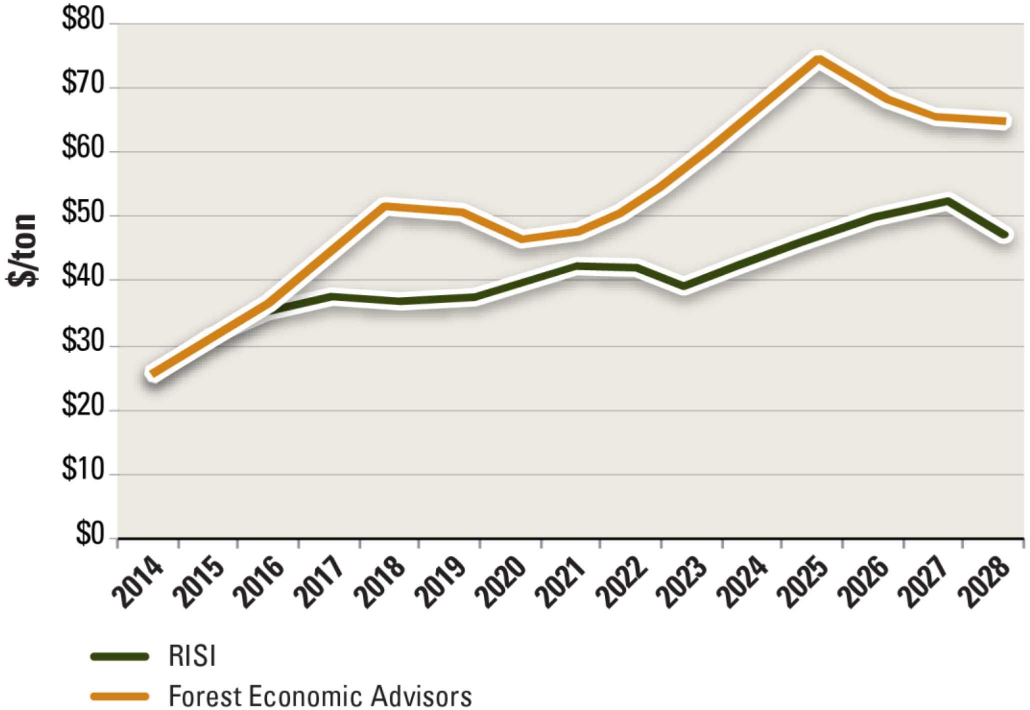
Source: RISI

Total hardwood lumber production from the Northeast and Lake States is expected to expand from 4.1 billion board feet in 2014 to 4.8 billion board feet over the next decade, a increase of 17%.

Timber Markets are Expected to Recover Strongly

The combined effects of a housing recovery, rising exports to Asia and Europe, and limited supply from Canada, will support sawtimber prices through the next cycle

Projected Southern Pine Sawtimber Prices by Economic Forecasting Group



Sources: RISI, Forest Economic Advisors

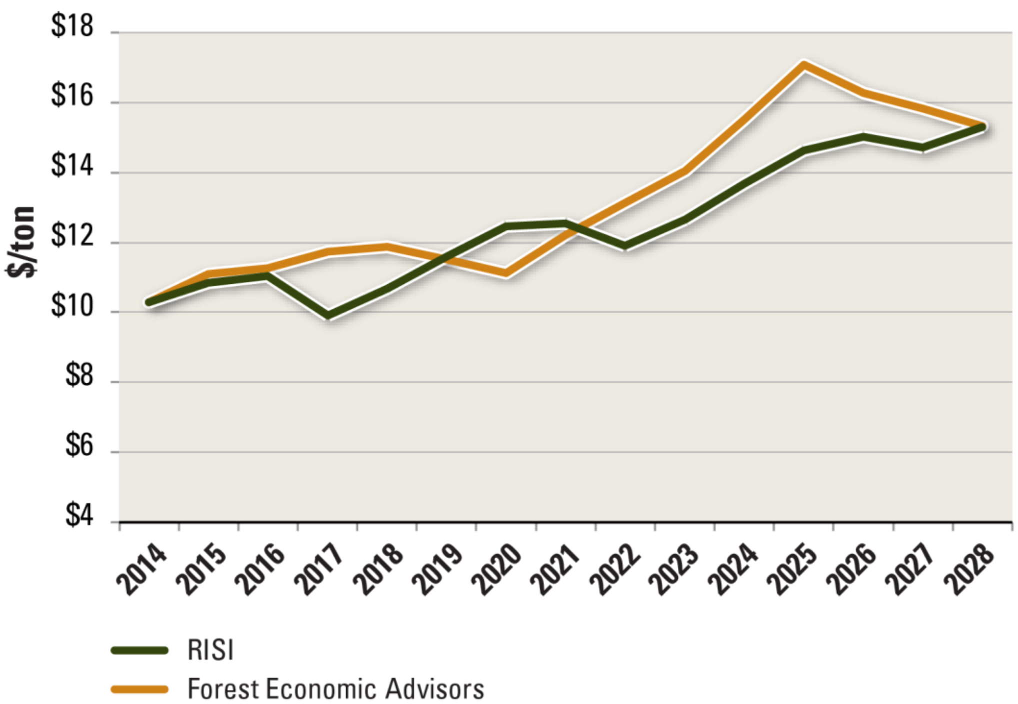
Price Projections for Southern Pine Sawtimber

Annualized Rate	3 Year	5 Year	15 Year
FEA	19.3%	14.3%	10.1%
RISI	12.9%	8.1%	5.4%

Pulpwood Prices Will Rise at a Slower Rate

Pulpwood has already seen a strong appreciation in value. Future price increases will be dampened by competition from sawmill chips and residuals as lumber output grows.

Projected Southern Pine Pulpwood Prices by Economic Forecasting Group



Sources: RISI, Forest Economic Advisors

Projected Appreciation Rates for Southern Pine Pulpwood

Annualized Rate	3 Year	5 Year	10 Year
FEA	4.5%	2.3%	4.2%
RISI	-1.2%	2.4%	2.9%

Performance

Photo: Woods Road in Maturing Loblolly Pine Plantation, Tickanetley Property, Georgia

Mountainside – Performance Results

	12-31-2014		
Time Period	ARMB Investment Benchmark	Mountainside Annualized Gross (12/31/2014)	NCREIF Property Index (12/31/2014)
1 Year	5% Real *(Estimated at 5.66%)*	7.47%	10.48%
3 Year	5% Real *(Estimated at 6.31%)*	6.83%	9.30%
5 Year	5% Real *(Estimated at 6.67%)*	4.09%	5.78%
Since Inception[1] (6 Years)	**5% Real** *(Estimated at 6.86%)*	**5.85%**	**3.95%**

[1] Note: Inception values calculated as of the first completed quarter.
Performance results do not reflect the deduction of performance fees. Performance results, net of fees, for the 1 Year, 3 Year, 5 Year and since Inception periods were 6.59%, 5.95%, 3.23%, and 4.98%, respectively.

Forest road framed by mature and pre-merchantable pine stands in North Carolina

2 year old loblolly pine plantation in Emmanuel County, Georgia

Looking Forward

Photo: First Thinned Loblolly Pine Stand, Cheaha Property, Alabama

Looking Forward

We are well positioned and will continue to execute

- Acquisitions have positioned us in attractive timber and land markets
- We are diligently working to find the final transaction(s) that will add value to the Mountainside portfolio
- We will continue to make a commitment to the resources needed to execute our management plans

Biographies

Photo: Longleaf Pine Seedling, Sassafras Property, North Carolina

Mark T. Seaman, *President and Chief Investment Officer*

Mark directs all business and investment strategy and operations for TIR and also serves as the firm's chief investment officer, directing portfolio strategy and management. He has more than 30 years of senior management experience in the timberland investment arena and he founded TIR in 2003. Mark was previously executive managing director of Wachovia's timberland investment business. During his tenure with Wachovia, he grew the company's timberland assets under management from $60 million to almost $1.4 billion and directed all phases of its timberland investment business. His responsibilities entailed developing and managing the company's core investment strategy, which entailed establishing its investment discipline and building its portfolio management, accounting, reporting, compliance, marketing, sales and product development functions.

In addition to helping to launch and expand two, highly successful timberland investment management organizations (TIMOs), Mark also has been directly involved in the development of more than 15 separate account and 6 commingled fund programs on behalf of numerous institutional investment clients. These efforts have included directing more than 150 acquisitions encompassing more than 1.85 million acres in 12 states and managing more than 180 dispositions involving more than $400 million in assets. Because of his success in this regard, Mark is widely recognized among TIMO senior executives for his disciplined investment approach and his capacity to make and manage investments that are supportive of clients' unique risk and return objectives.

Mark is a graduate of Virginia Polytechnic Institute and State University where he received a BS degree in forest management. He also is a Registered Forester, a Certified Forester and a member of Society of American Foresters.

seaman@tirllc.com | 404-848-2000

Tom E. Johnson, *Managing Director, Client Relationship Management*

Tom is responsible for all client relationship management and he directs the firm's domestic and international business development efforts. He was a founding member of TIR and plays key roles in shaping its strategic direction and overseeing the implementation of its core investment strategy on behalf of clients. This includes participating in all buy-hold-sell decisions and establishing operational parameters and priorities for the management of the company's business and portfolios.

Tom began his career at Wachovia where he spent ten years managing significant client relationships in the institutional investment and corporate trust markets. In that capacity, he served as the bank's West Coast territory manager, which entailed directing all business development and client relationship management activities in support of its retirement and charitable fund clients. Prior to joining Wachovia, Tom was a principal consultant at PricewaterhouseCoopers Management Consulting. In that role, he was an industry advisor to global investment management firms, managing major projects that influenced the implementation of clients' business operations and marketing functions.

In addition to his years of experience in the institutional investment arena, Tom is a forester who grew up in a saw-milling family in North Carolina. This background gives him a unique perspective on the timberland asset class - enabling him to provide valuable counsel to TIR with regard to the firm's strategic direction and to consistently reflect and represent the needs and interests of its clients.

Tom is a graduate of Appalachian State University where he earned a BSBA in finance. He earned his MBA and MS in forest resources, with honors, at the University of Georgia and is a member of the Phi Kappa Phi honor society. He is a member of the Advisory Committee for the University of Georgia's Center for Forest Business. He also holds the designation of Chartered Alternative Investment Analyst (CAIA[SM]) and is on the CAIA Real Assets Committee.

johnson@tirllc.com | 404-848-2000

Christopher T. Mathis, J.D., *Director of Real Estate*

Chris oversees TIR's asset monetization efforts on behalf of clients by developing and executing land sale strategies that are designed to optimize the long-term investment performance of clients' portfolios. In addition, he plays a key role in the land acquisition analysis process.

Chris has a broad range of experience in timberland finance, law and operations in the forest products industry. He previously held a variety of senior leadership positions at Temple-Inland, including: Vice President of Treasury and Investor Relations; Vice President of Strategic Resource Planning; and, Senior Corporate Attorney. During his tenure at Temple-Inland, Chris led the sale of 1.55 million acres of the company's high quality timberland assets for $2.4 billion in a tax-deferred manner. Chris also managed Temple-Inland's treasury and investor relations departments through the financial crisis and the sale of the company to International Paper in February 2012 for $4.3 billion. In addition, he served on the company's pension investment committee that managed the company's defined benefit plan assets of $1.3 billion. Just prior to joining TIR, Chris headed the Mathis Property Group, where he consulted with a family-office to evaluate opportunities to invest in timberland and other real estate asset classes.

Chris is a Texas native and holds a Bachelor of Business Administration, Master of Business Administration, and Doctor of Jurisprudence from Texas Tech University. He also completed the Stanford University Executive Program at the Stanford Graduate School of Business.

mathis@tirllc.com | 404-736-3486

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT:	Absolute Return Policy Revision	ACTION:	X
DATE:	February 12, 2015	INFORMATION:	

BACKGROUND:

The Alaska Retirement Management Board started investing in Absolute Return investment strategies in November of 2004 through a custom fund-of-funds program. The overall goal of the ARMB's absolute return allocation is to produce strong real returns with lower volatility and correlation to other asset classes. In 2013, the ARMB adopted a more opportunistic and less constrained approach to absolute return. The revised program focuses on producing higher returns, with the ability to take on additional risk and market correlation.

STATUS:

The ARMB's absolute return managers are now using a larger risk budget to opportunistically select a more concentrated portfolio of investment styles and underlying investments. The early results are good, with 2013 returns of 10.2% and 2014 estimated returns of 7.2%.

The ARMB has previously authorized the CIO to approve co-investments. Co-investments are investment opportunities that are offered to the ARMB's investment managers on a fee-advantaged basis by underlying hedge fund managers or other managers. Some of the ARMB's investment managers have also demonstrated the ability to source and execute investments directly and, at times, the line between a co-investment and a direct investment is unclear. ARMB staff expects that the addition of direct investments to the ARMB portfolio would increase risk adjusted returns.

Additionally, the ARMB's absolute return program was originally structured to exclusively use investment managers to invest in underlying hedge funds. Under certain circumstance, it makes sense for the ARMB to invest directly in hedge funds. Staff recommends revising the policy to allow the ARMB to make investments directly in hedge funds with the assistance of an investment consultant.

RECOMMENDATION:

That the Alaska Retirement Management Board adopt Resolution 2015-01 revising the Absolute Return Policies and Procedures.

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD

Relating to Absolute Return Investment Guidelines

Resolution 2015-01

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 absolute return strategies; and

WHEREAS the Board will establish and from time to time as necessary modify guidelines for absolute return strategies.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopts the attached Absolute Return Investment Guidelines, regarding investment in absolute return strategies.

This resolution repeals and replaces Resolution 2014-10

DATED at Anchorage, Alaska this ______ day of February, 2015.

____
Chair

ATTEST:

____
Secretary

ALASKA RETIREMENT MANAGEMENT BOARD

ABSOLUTE RETURN

INVESTMENT POLICIES & PROCEDURES

REVISED ~~APRIL 2014~~FEBRUARY 2015

TABLE OF CONTENTS

ALASKA RETIREMENT MANAGEMENT BOARD

INTRODUCTION – ABSOLUTE RETURN CHARACTERISTICS

The Alaska Retirement Management Board (ARMB) has determined that an allocation to "absolute return strategies" should improve the return and risk characteristics of the defined benefit pension portfolios. ARMB has made an allocation to be invested in a diversified basket of such approaches and ARMB's absolute return program will be comprised of investments in underlying hedge funds. ARMB recognizes that absolute return strategies are not an asset class but rather a number of investment management strategies that when undertaken skillfully exhibit return patterns that are largely uncorrelated to traditional asset classes (stocks, bonds etc). The spectrum of absolute return strategies is broad. It includes approaches that have historically tended to exhibit risk characteristics, as measured by standard deviation of returns, similar to bond investments. At the other end of the spectrum are strategies that exhibit significant volatility of returns. ARMB's intent is to invest in some combination of strategies that, in aggregate, will exhibit a volatility pattern that is in between bonds and equities. The standard deviation of annual returns is expected to be in the 5-10% range. As a frame of reference, recent standard deviation statistics for domestic equities have ranged from 16-23% while investment grade bonds have exhibited standard deviations of 3.5-4.5%.

Managers of absolute return portfolios frequently employ leverage, engage in short sales, utilize complex instruments (e.g. derivatives, swaps etc.) and complex strategies. Unlike investments in traditional stock and bond portfolios, absolute return strategies do not have an inherent "natural" return pattern that is augmented by manager skill. Instead, the return is almost entirely dependent upon manager skill. Many of the strategies used have long histories so that "typical" or reasonable expectations may be formulated. These expectations are not assured and in any case require skillful implementation by the manager. Many "absolute return" strategies are dependent upon market liquidity, the level and stability of interest rates and volatility of markets (volatility often enhances opportunities). The widely accepted universe of investment strategies utilized by absolute return managers includes event-driven (e.g., merger arbitrage, distressed securities, special situations), relative value (e.g., convertible arbitrage, fixed-income arbitrage, market neutral equity), and directional/opportunistic/tactical (e.g., long/short equity, global macro, and managed futures) "styles" that tend to have low correlations to traditional, long-only equity and fixed-income strategies.

Unlike long-only managers whose returns are substantially explained by capital market movements, absolute return managers achieve returns substantially independent of normal market cycles. With their highly discretionary use of risk capital, they seek to generate profits regardless of conditions in the equity or fixed-income markets. To control risk or enhance return, they will often use short-selling, derivatives, leverage, and, in certain cases, illiquid securities. While these strategies often seek to mitigate the impact of general market's directional movements, returns are still heavily influenced by market-related activity, such as trading volume, market volatility, mergers & acquisitions, bankruptcy, IPOs and other corporate issuance. Notwithstanding the effectiveness of a particular investment strategy, returns are dependent upon exceptional manager skill.

Absolute return managers typically utilize a limited partnership structure or other investment vehicles to limit investor liability and to accommodate a generous profit sharing structure that is typical to the arena. Hedge fund managers frequently receive performance-based fees typically 20% (or more) of net profits, plus 1% (or more) in management fees. Fund of hedge fund managers also typically employ a management and incentive fee structure, but at a lower level than the underlying funds. Helping to further reduce the agency risks found in most long-only manager relationships, hedge fund managers typically invest, and are usually expected to invest, a significant portion of their personal net worth alongside their investors. In addition, to the extent funds lose capital, a high watermark provision typically defers incentive fees until the losses have been recouped. Nevertheless, incentive fees on upside performance can, at the margin, adversely motivate hedge fund managers to consider riskier opportunities, thus warranting careful ongoing review of investments in funds of such managers.

I. INVESTMENT OBJECTIVES AND IMPLEMENTATION

A. INVESTMENT OBJECTIVES

ARMB's aggregate absolute return program seeks to achieve consistent positive real returns and to maximize long-term total return within prudent levels of risk through a well-diversified portfolio of absolute return strategies. This will be delivered through investments in underlying hedge funds that, in aggregate, do not materially rely upon the direction of the equity or fixed-income markets. This program's value-added return will be primarily derived from selection of the manager and, to a lesser degree, strategy allocation. However, for purposes of risk diversification, the Investment Manager is not expected to create concentrated exposures to individual investments or investment strategies, as defined below under Program Risk Management and Implementation.

B. IMPLEMENTATION APPROACH

The due diligence process of evaluating individual hedge funds is particularly challenging and requires significant experience and knowledge of this portion of the investment management universe. As such, it poses certain challenges to a potential investor with limited resources. Therefore, to invest in this area ARMB recognizes the need to either delegate this fiduciary responsibility or to engage a consultant to assist with the investment process. Accordingly, ARMB ~~will~~ may select, with assistance from its investment consultant, individual hedge funds and/or an investment adviser ("Investment Manager") who is qualified to properly assemble and manage a diversified portfolio of investments. The structure utilized may be:

1. A portfolio separately managed by an Investment Manager and comprised of limited liability interests in individual limited liability entities;
2. An investment with limited liability in a "fund of one" that invests exclusively in a diversified portfolio managed by the Investment Manager and comprised of limited liability entities;
3. Investments with limited liability in one or more "funds of funds" that are structured to invest in diversified portfolios of various limited liability entities. A key distinction between this approach and approach #2 is that there would be other investors participating with ARMB.

~~3.~~4. Limited liability interests in individual hedge funds. When utilizing this approach, the ARMB will engage an investment consultant to assist with the due diligence of individual hedge funds that are not already in the ARMB's portfolio.

ARMB may use a combination ~~one, two or all three~~ of these approaches. The determination of the ideal approach will be influenced by the willingness of qualified Investment Managers (or potential general partners) to enter into agreements and the effects on ARMB's ability to access the best underlying investments.

When conducting a search for an Investment Manager, ARMB shall apply the following guidelines for qualifying an Investment Manager:

1. The Investment Manager of a separate absolute return portfolio shall be a bank, insurance company, or a registered investment adviser under the Investment Advisers Act of 1940.
2. In the case of a fund of funds vehicle in which other investors may participate, ARMB prefers that its investment shall not represent more than 10% of the commingled vehicle's total market value, except if the vehicle has substantially the same managers and strategic allocations as another vehicle of the Investment Manager, in which case the investment shall not exceed 10% of the total market value of the combined vehicles. ARMB also prefers that no other investor, besides those affiliated with the Investment Manager, would hold more than 10% of assets in such commingled vehicle(s).
3. The Investment Manager must represent on an initial and recurring basis that its personnel responsible for carrying out services with ARMB have not, to the best knowledge of the Investment Manager, been convicted of any crime or found liable in a civil or administrative proceeding or pleaded no contest or agreed to any consent decree with respect to any matter involving breach of trust or fiduciary duty, fraud, securities law violations, violations of disclosure provisions in bankruptcy law regulations or any act or omission involving moral turpitude.

C. PORTFOLIO PERFORMANCE OBJECTIVES

Evaluation of quarterly performance is necessary to assess the program's progress toward its long-term investment goals. It is understood that there will likely be periods during which performance deviates from long-term return objectives. During such times, greater emphasis shall be placed on performance comparisons with fund-of-fund managers that employ similar styles or strategic allocations.

The performance objectives for the overall program are as follows and individual Investment Manager guidelines will be set in writing by the CIO:

1. To achieve a return in excess of a portfolio composed of 70% MSCI All Country World Index (ACWI) and 30% Barclays Capital Aggregate Bond Index based upon rolling 6-year periods, net of all fees.
2. To achieve the above return objective with an expected annual standard deviation of such returns in the 5-10% range based on rolling 3-year periods.

3. To achieve the above return and volatility objectives with lower exposure to the equity and the bond markets, beta should not consistently exceed either 0.50 to the S&P 500 Stock Index or 0.50 to the Barclays Aggregate Bond Index based upon rolling 3-year periods unless permitted in writing by the Chief Investment Officer.

Attaining these objectives does not guarantee continued investment by ARMB nor does failure to achieve these guidelines mandate termination of the investment.

D. PROGRAM RISK MANAGEMENT AND IMPLEMENTATION

The selection and management of assets in the absolute return portfolio will be guided to generate a high level of risk adjusted return and to maintain prudent diversification of assets and specific investments.

While specific investment guidelines for fund-of-funds vehicles are determined by the vehicle's governing legal documentation for each fund offering, ARMB shall apply the following measures of risk management and diversification for evaluating and reviewing an absolute return program based on a broadly diversified mandate involving one or more Investment Managers:

1. Institutional Quality

All underlying hedge fund investments must be of institutional investment quality. Institutional quality will be defined as being of a quality whereby the investment would be considered acceptable by other prudent institutional investors.

2. Leverage

The underlying hedge funds in ARMB's portfolio shall use leverage in a prudent manner that is consistent with leverage applied in similar hedge fund strategies and that when aggregated is consistent with fund-of-funds programs broadly diversified across both directional and non-directional strategies. ***ARMB does not permit financial leverage by the Investment Manager*** except in the case of a commingled fund where leverage is only used to facilitate the timing of purchases and redemptions.

3. Liquidity/Redemption

The underlying redemption schedules for the program shall be such that at least 25% of the funds under management have quarterly (or more frequent) redemption, up to an additional 30% may have less frequent, but up to annual redemption, 30% may have up to three year redemption, and 15% may have up to five year redemption. These redemption periods are subject to standard notice periods and holdbacks pending annual audits. Notwithstanding stated redemption schedules, ARMB recognizes that such timetables for liquidity may be suspended under certain circumstances, such as periods of unusual financial stress within markets or within underlying hedge funds. Managers may also make investments through closed-end funds or other structures that are not subject to these liquidity guidelines with approval from the Chief Investment Officer.

4. Strategy

To be broadly diversified by strategic allocations, ARMB's program shall contain exposures to the three broad investment categories of underlying funds: relative value, event driven, and directional/opportunistic/tactical strategies. The targeted maximum exposure to any one underlying fund strategy, as defined by the Credit Suisse Hedge Fund Index shall be as follows:

Long/Short Equity (including Market Neutral and Short Biased)	65%
Event Driven (including Distressed and Risk Arbitrage)	65%
Multi-Strategy/Other	~~40~~65%
Fixed Income Arbitrage	30%
Global Macro	25%
Convertible Arbitrage	15%
Managed Futures	15%

The above targeted exposures will be based on the combined allocations to fund-of-fund portfolios and individual separate portfolios, if any. Investment Manager's need to be aware of these program level strategy guidelines, but individual portfolios are not required to meet them. Investment Manager specific strategy guidelines may be implemented in individual contracts or through written direction by the Chief Investment Officer to tailor investment manager specific guidelines to particular mandates or styles.

5. Manager

To be broadly diversified by hedge fund manager, each of ARMB's absolute return portfolios shall contain exposure to a minimum of 10 individual funds, with the maximum exposure to any one underlying fund, or group of affiliated funds, limited to 10% of ARMB's aggregate fund program, unless otherwise specifically exempted by ARMB staff.

6. Risk Management at the Portfolio Level

The ARMB's absolute return program shall permit the Investment Manager to hedge risk at the portfolio level (via index options, futures, CDS's, of through other means) with prior approval from the Chief Investment Officer.

7. Co-Investments and Direct Investments

The ARMB's absolute return program shall permit the Investment Manager to co-invest in direct investments alongside existing hedge fund managers or other investment managers and to make Direct Investments with approval from the Chief Investment Officer. Co-Investments and Direct Investments are not subject to the specific strategy or liquidity constraints of the absolute return program.

E. REPORTING

1. Monthly Reporting

The Investment Manager is required to provide, or cause to be provided, at least the following information on a monthly basis.

a. Within 30 calendar days, the Investment Manager shall provide to ARMB and the Custodian a report of ARMB's account cash flows and valuations, and any other information reasonably requested. If an external administrator is used, this information should come directly from the administrator to ARMB and the Custodian.

2. Quarterly Reporting

The Investment Manager is required to provide, or cause to be provided, at least quarterly reports to ARMB that shall minimally include the following:

a. Calculation of estimated net asset value with a summary of discrepancies, if any, with ARMB's custodian bank outstanding more than 90 days. If an external administrator is used, this information should come directly from the administrator to ARMB.

b. Performance results and attribution on a strategy basis with results on a fund basis available on request.

c. Listing of strategic allocations (e.g., convertible arbitrage, market neutral equity, fixed-income arbitrage, multi-strategy relative value, distressed, merger arbitrage, multi-strategy event-driven, long-short equity, global macro, managed futures) as a percent of the Investment Manager's total fund assets as of quarter end.

d. Disclosure of any positions of financial or market leverage, on a strategy basis and an aggregate basis.

e. Identification of any underlying managers with a market value greater than 2% of total fund assets or fund of fund assets. For regular reporting pseudonyms may be used in the place of sensitive fund names, but more detailed information must be available on request per Section E.5 below.

f. Notice of changes in organizational structure, ownership, key personnel, and investment strategy of the firm. Material changes shall be reported in a timely manner by at least two means of communication (e.g., phone call, email, fax, and/or letter). Generally, timely reporting means reporting PRIOR to a material change.

3. Annual Reporting

The Investment Manager is required to provide, or cause to be provided, the following information on at least an annual basis.

a. Annual filing of Form ADV with the Securities and Exchange Commission.

b. Annual financial statements for ARMB's absolute return portfolio audited by an accounting firm acceptable to ARMB.

c. Ongoing annual report of compliance with the Investment Management Agreement representations with particular attention to the subsection regarding the ethical/legal conduct of personnel.

4. Meetings with ARMB

The Investment Manager is required to meet with ARMB and staff in Alaska as reasonably requested and at least annually. These meetings will provide the Investment Manager with the opportunity to discuss how its investment strategy has evolved since previous meetings. The written and oral presentations at these meetings should, at minimum, include the following:

a. *Performance for Past Period*: Standard time periods for each report should include at least: Last Quarter, Year to Date, Latest 12 Months, 3 Years and Since Inception. Returns should be annualized for periods over one year and calculated on a time-weighted basis for the total portfolio. All returns should be net of all management and incentive fees.

b. *Rationale for Performance Results*: Discussion of the rationale for performance results, relating specifically to strategic and manager allocations during the current review period.

c. *Specific Near-Term Strategy*: Discussion of the Investment Manager’s strategy for the portfolio over the near-term period.

d. *Changes in the Investment Manager’s Firm*: Discussion of any changes in the Investment Manager’s firm including, but not limited to, organizational structure, ownership, key personnel, investment strategy and philosophy.

e. *Changes in the Fund’s Requirements*: Discussion of any changes in the Investment Manager’s fund objectives or guidelines, particularly in relation to ARMB’s above stated objectives and guidelines.

5. Transparency

To meet fiduciary obligations ARMB may, at times, require 100% transparency with respect to underlying hedge fund investments. This transparency shall include at minimum information with respect to all underlying hedge fund names, hedge fund strategies, background information on hedge fund principals, and historical performance information. All information supplied shall be subject to the confidentiality provisions described in Section III and the legal agreements with the Investment Manager.

6. Other Information

The Investment Manager will also provide any other reasonable information requested by the Staff, or ARMB’s Custodian Bank, or other agent of ARMB.

F. CONFLICTS OF INTEREST

1. Investment Manager Affiliated/Proprietary Products

In absolute return investing, there may be situations wherein the Investment Manager may recommend its proprietary investment product(s) or may have a financial interest in investment products recommended for investment. If considering placing ARMB in such product(s), an analysis of why competing products are not suitable must be presented for the

Staff's review, and any investment must be approved by Staff.

2. Allocation of Investments/Redemptions Among Accounts

There may be instances where the Investment Manager will either need to allocate an investment opportunity or to redeem an investment opportunity from a number of clients or competing products (i.e., fund-of-funds). The Investment Manager must have suitable protective covenants or processes for resolving conflicts in allocation and redemption among accounts.

3. Personal Investments

The Investment Manager will provide ARMB with its policies for personal investments by employees and notify Staff of any changes. The Investment Manager's employees are permitted to invest personally or otherwise have beneficial interest in investments held on behalf of clients such as ARMB only after the Investment Manager makes sure that ARMB's portfolio has an opportunity to secure a full and appropriate allocation. Similarly, the Investment Manager's employees are permitted to sell an interest in investments that are also held by ARMB only after the Investment Manager makes sure that ARMB's portfolio has an opportunity to first and fully liquidate the holding. This section shall not apply to employee investments in the Investment Manager's commingled funds.

G. TAX CONSEQUENCES

The Investment Manager will endeavor (with best efforts attempts) to preclude federal and other taxation of ARMB (or its subsidiary entities as the case may be) including at the investment entity level, and to minimize UBIT incidence by ARMB. This may include investing in entities that do not intend to generate UBIT and when possible employing vehicles structured to shield the System from UBIT. It is required that any investments structured to avoid taxation be designed such that secondary sales or replacement of the Investment Manager are not impeded.

H. LINES OF RESPONSIBILITY

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

1. ***Board of Trustees*** - The fiduciaries elected by the Public Employees and Teachers Retirement Systems and appointed by the Governor to represent the beneficiaries' interest.
2. ***Staff*** - Investment professionals on the staff of the Department of Revenue and assigned ARMB responsibilities who will assist in the absolute return investment program's design, policy implementation and administration.
3. ***Investment Manager(s)*** - Qualified fiduciaries that provide institutional absolute return investment management services and maintain a discretionary relationship with ARMB in implementing the absolute return program. In separate account relationships the Investment Manager must be a bank, insurance company, or a Registered Investment Advisor under the Investment Company Act of 1940, registered with the Security and Exchange Commission.

4. ***Consultant*** - Professionals retained to support ARMB through the provision of expert absolute return and alternative investment program knowledge and technical support.

The responsibilities, with respect to the absolute return portfolio, of the parties cited above are outlined in Section II.A.1-4.

II. PROCEDURES FOR INVESTMENT

A. GENERAL ALLOCATION OF RESPONSIBILITIES

The absolute return program shall be implemented and monitored through the coordinated efforts of the Board of Trustees for the Alaska Retirement Management Board (the "Board"); ARMB's Staff (the "Staff"); the qualified Investment Manager(s) (the "Manager") and the Consultant ("Consultant"). Delegation of responsibilities for each participant is described in the following sections.

1. Board of Trustees

Board of Trustees shall approve the investment policies and objectives which the Trustees judge to be appropriate and prudent to implement its strategic plan for the investment of ARMB's assets; review the performance criteria and policy guidelines for the measurement and evaluation of the investment managers of ARMB's assets; review the Consultant and Staff's recommendations to retain a qualified investment manager(s) and set discretionary investment limits; supervise the investment of ARMB's assets to ensure that ARMB's investments remain in accordance with the Board's strategic planning and the ARMB's Objectives and Policies and the *Absolute Return Policies and Procedures* documents. The Board shall select and make ongoing retention decisions regarding all service providers including the investment manager.

The Board of Trustees will guide the execution of the program by review and approval of long term target ranges for absolute return strategies prepared by Staff, which will be updated and revised periodically as appropriate. The Board will monitor the program's progress and results through a performance measurement report prepared quarterly by the Consultant and reviewed by Staff, and as appropriate shall consult with the Investment Advisory Council.

2. Staff

The Staff will develop draft investment objectives and policy language for Board consideration. The Staff will guide the execution of the program by developing long-term target ranges for absolute return strategies, which will be updated and revised periodically as appropriate. The Staff will also review the Manager's quarterly portfolio reports and review the Manager's and the portfolio's performance in relation to assigned responsibilities.

The Staff will coordinate program compliance among all participants and communicate the investment policies, objectives and performance criteria to the Investment Manager(s). The Staff will coordinate the receipt and distribution of capital.

Staff and Consultant will identify qualified Investment Manager(s) for implementation of absolute return investment program, and will advise the Board of Trustees of any material changes in the manager organization(s).

3. Investment Manager(s)

The Investment Manager(s) shall acquire and manage, on a discretionary basis, absolute return investments on behalf of ARMB and in accordance with the Investment Objectives as described in Section I of ARMB's *Absolute Return Policy and Procedures* document and the Investment Policies as described in Section II.

The asset allocation executed by the Manager will be dictated by the target strategy ranges established in the *Absolute Return Policies and Procedures*.

4. Consultant

As approved by the Board, the Consultant shall advise on program development, conduct Investment Manager searches when requested; and provide independent, third party advice and information. The Consultant will also be available to be retained to conduct special project work when requested by ARMB.

B. INVESTMENT PROCEDURE

Absolute return investments in compliance with ARMB's Policies Procedures shall be acquired through the following process:

Eligible Investments and Target Ranges: The Investment Manager shall construct an absolute return portfolio designed to meet ARMB's criteria as discussed in the document with particular focus on the expected return and volatility parameters and the risk management guidelines in Section I.

Specific Investments: The Investment Manager will identify underlying hedge funds that are in compliance with ARMB investment guidelines. The Investment Manager will be responsible for all aspects of evaluation and closing.

C. SPECIFIC MANAGER RESPONSIBILITIES

1. Funding Procedures

The Investment Manager shall provide ARMB, on a best efforts basis, with five (5) days notice of capital additions. ARMB shall also be provided with documented wiring instructions in advance.

2. Investment Management

Investment Managers are directly accountable for the following investment management responsibilities. This section designates certain investment responsibilities that the Investment Manager will perform or cause to be performed.

a. The Investment Manager will be responsible for evaluating investment opportunities and selecting, on a discretionary basis with fiduciary responsibility, absolute return investments to be made on behalf of ARMB. The screening and selection will be made with a view to maximize ARMB's risk adjusted rate of return, within the parameters and allocations of each absolute return strategy as set by the Board of Trustees in the Policies and Procedures.

b. Conduct full and proper due diligence while fully documenting the process. Due diligence will be conducted to a standard of completeness attributable to a prudent expert. The Investment Manager will make available for review by ARMB, or its agents, the Investment Manager policies, procedures, and standards for conducting due diligence, and the due diligence documentation performed on any investment made on ARMB's behalf. On-site visits by the Investment Manager at the underlying hedge fund manager's main office will be a mandatory part of investment due diligence.

c. With respect to limited partnerships, funds or other entities in which the Investment Manager invests, the Investment Manager shall require that each general partner, manager, or principal of such entity, as the case may be, provide written representation that each investment professional has not been convicted of any crime or found liable in a civil or administrative proceeding or pleaded no contest or agreed to any consent decree with respect to any matter involving breach of trust or fiduciary duty, fraud, securities law violations, violations of disclosure provisions in bankruptcy law regulations or any act or omission involving moral turpitude **OR** shall prior to entry into such investments inform ARMB that obtaining such representations is not possible or unnecessary under the circumstances presented.

d. Negotiate investment terms and conditions, partnership agreements and other closing documents on ARMB's behalf, with a view to maximize returns, minimize expenses, safeguard ARMB's assets, secure investor rights, and make investments on ARMB's behalf.

3. Ongoing Operations

The Investment Manager shall manage or cause to be managed by an external administrator acceptable to ARMB, each investment made such as to enhance ARMB's value in the investment. The Investment Manager shall be responsible for conducting or supervising the following services with respect to each investment:

a. Monitoring and Voting -- Maintaining close communication with the underlying hedge fund managers, maintaining an awareness of and documenting the progress and level of performance of each investment. As appropriate, this will include attendance at annual meetings and sitting on advisory boards. It will also involve voting on ARMB's behalf as the need arises.

b. Adding Value -- The Investment Manager shall take all necessary or appropriate steps consistent with applicable capital and operating budgets to assure ARMB's investment is managed to or above its anticipated performance level.

c. Disbursement, Receipt and Cash Management -- Develop procedures for funding commitments on a timely basis and coordinating the receipt of cash distribution from the investments, including a policy for the orderly liquidation of any in-kind distributions received.

d. Books and Records -- The Investment Manager and/or an external administrator shall maintain books of account with correct entries of all receipts and expenditures incident to the management of the investment. These books, together with all records, correspondence, files and other documents, shall at all times be open to the inspection of ARMB. The Investment Manager shall maintain complete and accurate records of all transactions related to the managed investment, including receipts and all correspondence relating thereto on such forms as ARMB's auditors may reasonably require and make such records available for inspection and copying by ARMB at all reasonable times. The Investment Manager shall bear the costs associated with the retention of such records and if ARMB shall request copies of such records, the Investment Manager shall bear the cost of duplicating and sending such records to ARMB.

e. On-Going Review -- The Investment Manager shall keep itself informed of the overall market conditions relative to the managed investments and the managed investments' competitive position in the applicable investment strategies. The Investment Manager will also be responsible for ensuring compliance with hedge fund agreements, attending to amendments, resolutions, voting proxies, and other investment related matters. All such activities will be undertaken with a view toward maximizing value to ARMB.

f. Disposition Review -- The Investment Manager shall review the managed investments with respect to continued timely return of capital, income and gains. The Investment Manager will be responsible for managing to cash any in-kind distributions received from the investments.

g. Notice -- The Investment Manager shall notify the Staff as soon as practicable in writing of any investigation, examination or other proceeding involving the investments or investment sponsors commenced by any regulatory agency or of any action, suit or proceeding commenced against or by the Investment Manager or an investment sponsor.

4. Portfolio Accounting and Financial Control

The Investment Manager shall be responsible for accounting, reporting and financial control and administration systems that shall at least meet the following objectives:

a. Financial/Accounting Control -- The Investment Manager and/or an external administrator or custodian will provide control systems to protect assets, detect errors and insure the reliability of information generated by the accounting system.

b. Investments' Financial Statements -- On at least a quarterly basis, unless specifically exempted by Staff, the Investment Manager will require from underlying hedge funds unaudited financial statements or capital balance statements, and annually, audited financial statements.

D. SPECIFIC CONSULTANT RESPONSIBILITIES

The Consultant will provide consultation on the initial development and ongoing review and recommendation of revisions to ARMB's Policies and Objectives as well as *Absolute Return Policies and Procedures*, and assist with Investment Manager searches when requested by ARMB. The Consultant will provide ongoing quarterly Investment Manager performance evaluation, independent third party advice and information, and will also be available to be retained to perform special projects as requested by the Board.

III. CONFIDENTIALITY

Pursuant to 15 AAC 112.770, ARMB shall withhold from other persons all information furnished to it by Investment Manager(s) or Consultant(s) which is reasonably designated by Investment 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 Section I.E of this document shall be considered confidential pursuant to 15 AAC 112.770 to the extent that information is reasonably designated by Investment Manager(s) as being confidential or proprietary, or to the extent the disclosure of which would unfairly prejudice the ability of Investment Manager(s) or ARMB to invest in the absolute return investment space.

IV. REVISIONS

This document will be reviewed no less than annually and revised as appropriate.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Crestline Contract and Direct Lending ACTION: X

DATE: February 12, 2015 INFORMATION:

BACKGROUND:

The Alaska Retirement Management Board started investing in Absolute Return investment strategies in November of 2004. Crestline Investors is one of the ARMB's original absolute return managers. In 2013, the ARMB adopted a more opportunistic and less constrained approach to absolute return. The revised program focuses on producing higher returns, with the ability to take on additional risk and market correlation.

STATUS:

Since 2013, Crestline has focused their investments on opportunistic and private credit investment strategies for the ARMB. The early results are strong, with 2013 returns of 9.8% and 2014 estimated returns of 18.1% on a combined basis.

Crestline is in the process of completing their investment process for the initial set of opportunistic investments. The investments have had good initial performance and staff is comfortable with the process and results. Staff recommends revising the Crestline contract to allow for a recurring series of opportunistic investments.

With authorization from the CIO, Crestline has made successful co-investments on the ARMB's behalf. Co-investments are investment opportunities that are offered to the ARMB's investment managers on a fee-advantaged basis by underlying hedge fund managers or other managers. Crestline has also demonstrated the ability to source and execute investments directly and, at times, the line between a co-investment and a direct investment is unclear. ARMB staff recommends allowing direct investments in Crestline's portfolio to increase risk adjusted returns.

Crestline is in the process of raising a middle market direct lending fund, Crestline Specialty Lending. The supply/demand dynamics are attractive for private direct lending with a high demand for financing and a low supply of capital combining to produce premium return opportunities with strong downside protection. Crestline has assembled an internal team with significant prior private lending experience. Crestline also has strong deal flow and a good institutional platform for direct lending. Chief Investment Officer Gary Bader and State Investment Officer Zachary Hanna conducted due diligence with Crestline's direct lending team in August and recommend up to a $50 million investment in Crestline Specialty Lending, L.P.

RECOMMENDATION:

That the Alaska Retirement Management Board direct staff to negotiate an amendment to Crestline's contract to allow for direct investments and future opportunistic investments and to negotiate a commitment of up to $50 million to Crestline Specialty Lending, L.P.

ALASKA RETIREMENT MANAGEMENT BOARD

SUBJECT: Internally Managed Equity Yield Portfolio – Constraint Modifications

ACTION: X

DATE: February 12, 2015

INFORMATION:

BACKGROUND:

With the goal of establishing an equity yield focused strategy to supplement historically low treasury yields, at the April 2012 meeting ARMB authorized a $100 million investment in an internally managed dividend portfolio benchmarked against the Dow Jones U.S. Dividend 100 Index. In developing the portfolio strategy, staff focused on the following characteristics: dividend yield, sustainability, size, liquidity, performance, risk, and stock/sector diversification.

STATUS:

Staff implemented the Internally Managed Equity Yield Strategy on February 5, 2013. Since inception, the portfolio has outperformed the benchmark Dow Jones U.S. Dividend 100 Index, equaled or exceeded benchmark sector performance in 7 of 10 GICS sectors, and reduced the volatility of the equity portfolio. Additionally, the Equity Yield Strategy has had no compliance issues.

After taking into account the successful track record the portfolio has established, staff has determined that the following proposed changes to the portfolio constraints are warranted:

Constraint	Current	Proposed	Change
Universe	Dow Jones US Broad Market Index	Dow Jones US Broad Market Index	None
Security weight (vs. benchmark)	+/- 0.5%	+/- 3%	**+ 2.5%**
Portfolio weight invested in index constituents (min.)	90%	50%	**- 40%**
Market Capitalization	USD $500 million	USD $500 million	None
Average Daily Trading Volume	USD $2 million	USD $2 million	None
Dividend Required	Yes	No	**Dropped**

RECOMMENDATION:

The Alaska Retirement Management Board approve the proposed changes to the investment constraints of the ARMB Internally Managed Equity Yield Portfolio.

Callan

February 13, 2015

Alaska Retirement Management Board

2015 Capital Market Projections (Preliminary)

Paul Erlendson
Senior Vice President

Dana Brown
Senior Vice President

Agenda

- Process Overview
  – How and why does Callan create capital market expectations?
- 2015 Expectations
  – What are our expectations and where have changes been made?
- Current Environment
  – Economic data and charts
- Detailed 2015 Expectations and Resulting Portfolio Mixes
- Implications for Investors

Why Make Capital Market Projections?

Guiding Objectives

- Cornerstones of strategic planning—expectations and time horizon.
- Projections represent our best thinking regarding the long-term (5- to 10-year) outlook, recognizing our median projections represent the midpoint of a range, rather than a specific number.
- Develop results that are readily defensible both for individual asset classes and for total portfolios.
- Be conscious of the level of change suggested in strategic allocations for long-term investors: DC participants, wealthy families, DB plan sponsors, foundations, endowments, and trusts.
- Reflect common sense and recent market developments.
- Balance conflicting goals and conflicting opinions.

How are Capital Market Projections Constructed?

- Annual Process to update 10-Year Projections
  - Evaluate current environment and economic outlook
  - Examine relations between economy and historical asset class performance
  - Create 10-year risk, return, and correlation projections
  - Test projections for reasonable results
- Cover Most Broad Asset Classes and Inflation
  - Broad Domestic Equity
    - *Large Cap*
    - *Small Cap*
  - International Equity
    - *Developed Markets*
    - *Emerging Markets*
  - Domestic Fixed Income
  - International Fixed Income
  - Real Estate
  - Alternative Investments
  - Cash
  - Inflation
- Incorporates both advance quantitative modeling as well as qualitative feedback and expertise of Callan consulting professionals.

Themes Explored in Setting the 2015 Expectations

- Most asset classes appear to be at least fairly valued or overpriced.
- Other than the US, the rest of the world looks weak.
  - US economic outlook is positive
  - Europe's growth is anemic and the fear of deflation is real; Japan is in a similar predicament
  - Some EM countries show potential for growth and valuations appear reasonable. Economic growth will be muted relative to past cycles, given weakness in developed ex-US and reliance on commodities.
  - China is undergoing a period of challenging growth.
- Are yields in the US poised for increase?
  - Interest rates fell in 2014 despite completion of taper and anticipation of Fed policy.
  - Stimulus in Europe and elsewhere has led to even lower yields overseas; US yields even more attractive.
  - Divergent economic progress and rate policies between US and other central banks challenge US policy effectiveness.
  - Do rising rates doom the return expectations for fixed income, or is now an opportunity to reassess the role of bonds in a portfolio and confirm that conviction?
- Non-US equity markets seriously lagged that of the US; are they poised to rebound, or will they continue to re-price to reflect weakening expectations?
- Sharp contrast remains between a long term, strategic vision for an investor (10+ years), the short term (1-3 years) reality, and the path from the current conditions to the long term expectations.

The Capital Markets at January 2015

U.S. Equity Markets Continue Rally, International Markets Derail, Fixed Income Rebounds

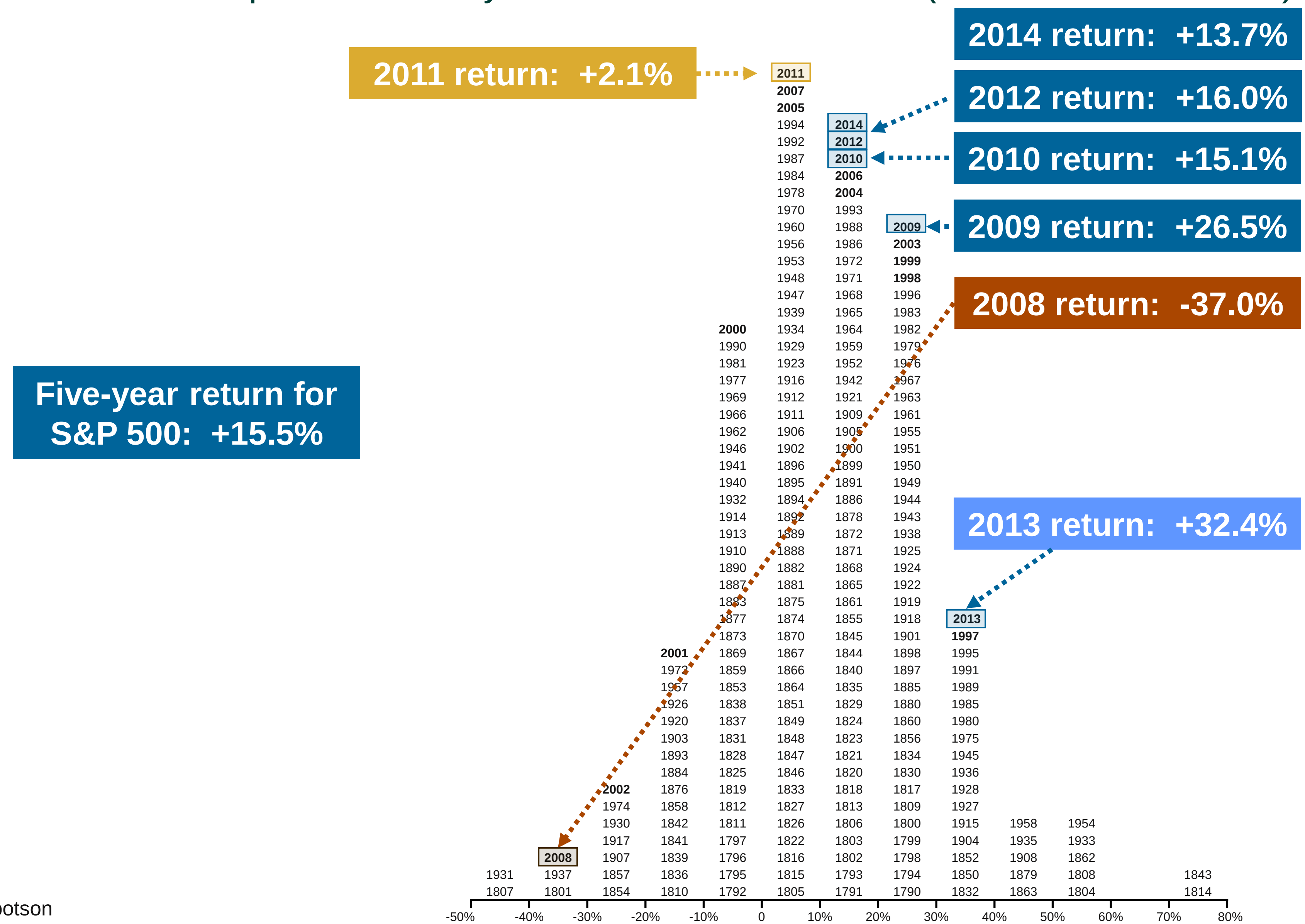
- Results for 2014 showed continuing strength in large cap U.S. equity, weakness in small cap, with substantial intra-year variability. Developed international markets turned down as economic fortunes flagged, while emerging markets continue to suffer.
- Five-year equity returns through 2014 are free of the financial crisis and are very strong. Ten-year returns no longer include the 2000 – 2002 downturn, but no longer include the robust 2003-04 results. Fifteen-year equity returns are still below long-run averages, and are equal to those of fixed income.

	2009	2010	2011	2012	2013	2014 YTD thru Dec	Average Annual Returns 5 Years 2010–14	10 Years 2005–14	15 Years 2000–14
Broad U.S. Stock Market									
Russell 3000	28.34	16.93	1.03	16.42	33.55	12.56	15.63	7.94	4.82
S&P Super Composite 1500	27.25	16.38	1.75	16.17	32.59	13.08	15.58	7.88	4.81
Large Cap U.S. Stocks									
Russell 1000	28.43	16.10	1.50	16.42	33.11	13.24	15.64	7.96	4.62
S&P 500	26.47	15.06	2.11	16.00	32.39	13.69	15.45	7.67	4.24
Small Cap U.S. Stocks									
Russell 2000	27.17	26.85	-4.18	16.35	38.82	4.89	15.55	7.77	7.38
S&P 600 Small Cap	25.57	26.31	1.02	16.33	41.31	5.76	17.27	9.02	9.87
Non-U.S. Stock Markets									
MSCI EAFE US$	31.78	7.75	-12.14	17.32	22.78	-4.90	5.33	4.43	2.54
MSCI Emerging Markets	79.02	19.20	-18.17	18.63	-2.27	-1.82	2.11	8.78	7.38
Fixed Income									
Barclays Aggregate	5.93	6.54	7.84	4.21	-2.02	5.97	4.45	4.71	5.70
Citi Non-US	4.38	5.22	5.17	1.51	-4.56	-2.68	0.85	2.64	4.65
Hedge Funds									
DJCS Hedge Fund Index	18.57	10.95	-2.52	7.67	9.73	4.13	5.88	5.82	6.34
Cash Market									
90-Day T-Bill	0.21	0.13	0.10	0.11	0.07	0.03	0.09	1.54	2.01
Inflation									
CPI-U	2.72	1.50	2.96	1.74	1.50	0.76	1.69	2.12	2.24

Source: Callan Associates

Stock Market Returns by Calendar Year

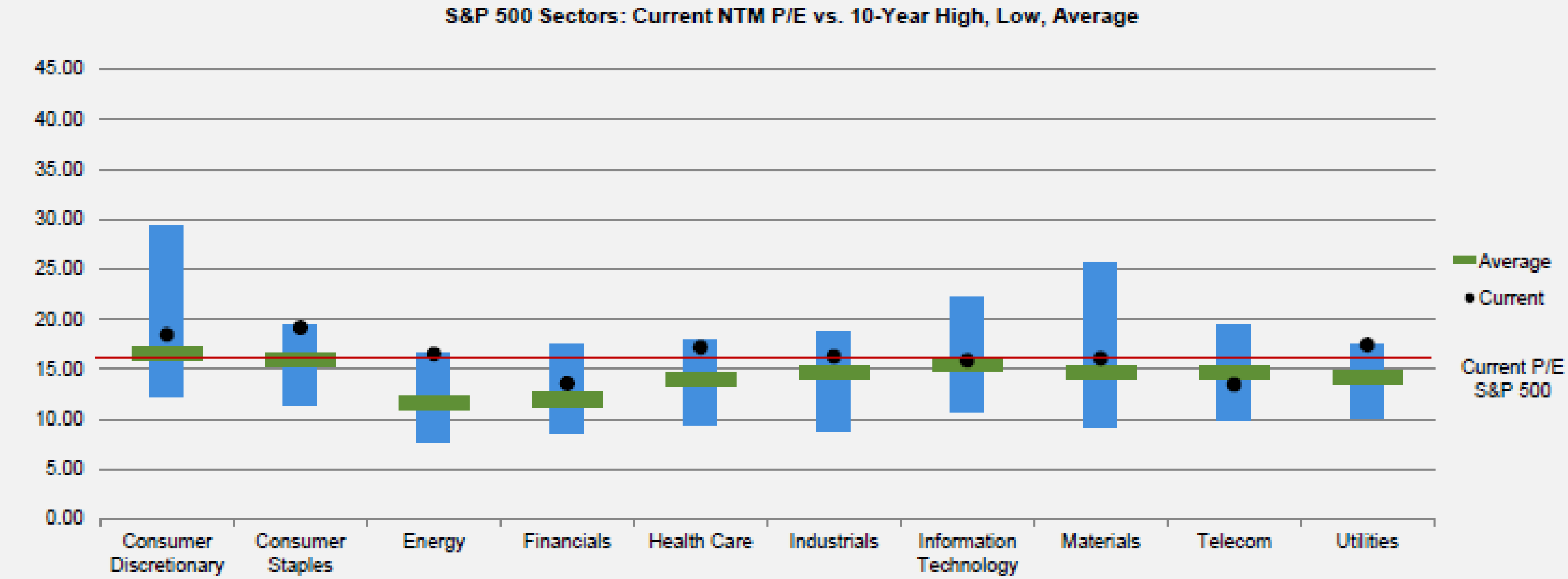
2014 Performance in Perspective: History of the U.S. Stock Market (226 Years of Returns)



Source: Ibbotson

Stock market valuations at 12/31/14

Most sectors' valuations above long-term averages

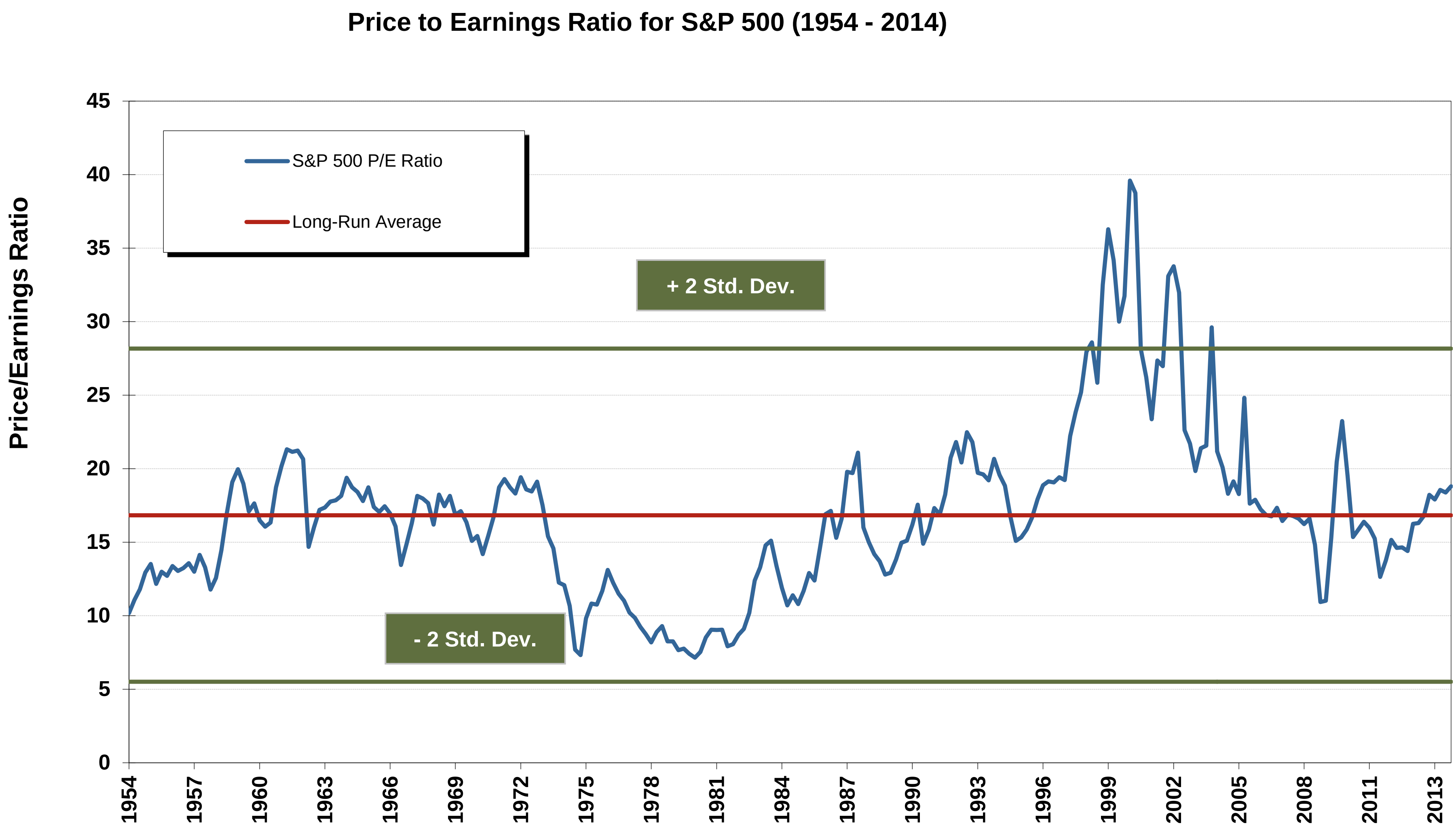


	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Telecom	Utilities
Average	16.61	15.91	11.68	11.96	14.06	14.68	15.54	14.64	14.66	14.20
High	29.37	19.41	16.54	17.44	17.93	18.77	22.28	25.70	19.31	17.41
Low	12.30	11.51	7.86	8.57	9.61	8.92	10.82	9.28	9.91	10.05
Current	18.44	19.15	16.54	13.58	17.18	16.28	15.85	16.06	13.47	17.41

Sources: Eaton Vance and FactSet

Equity Is Not Yet Egregiously Overpriced

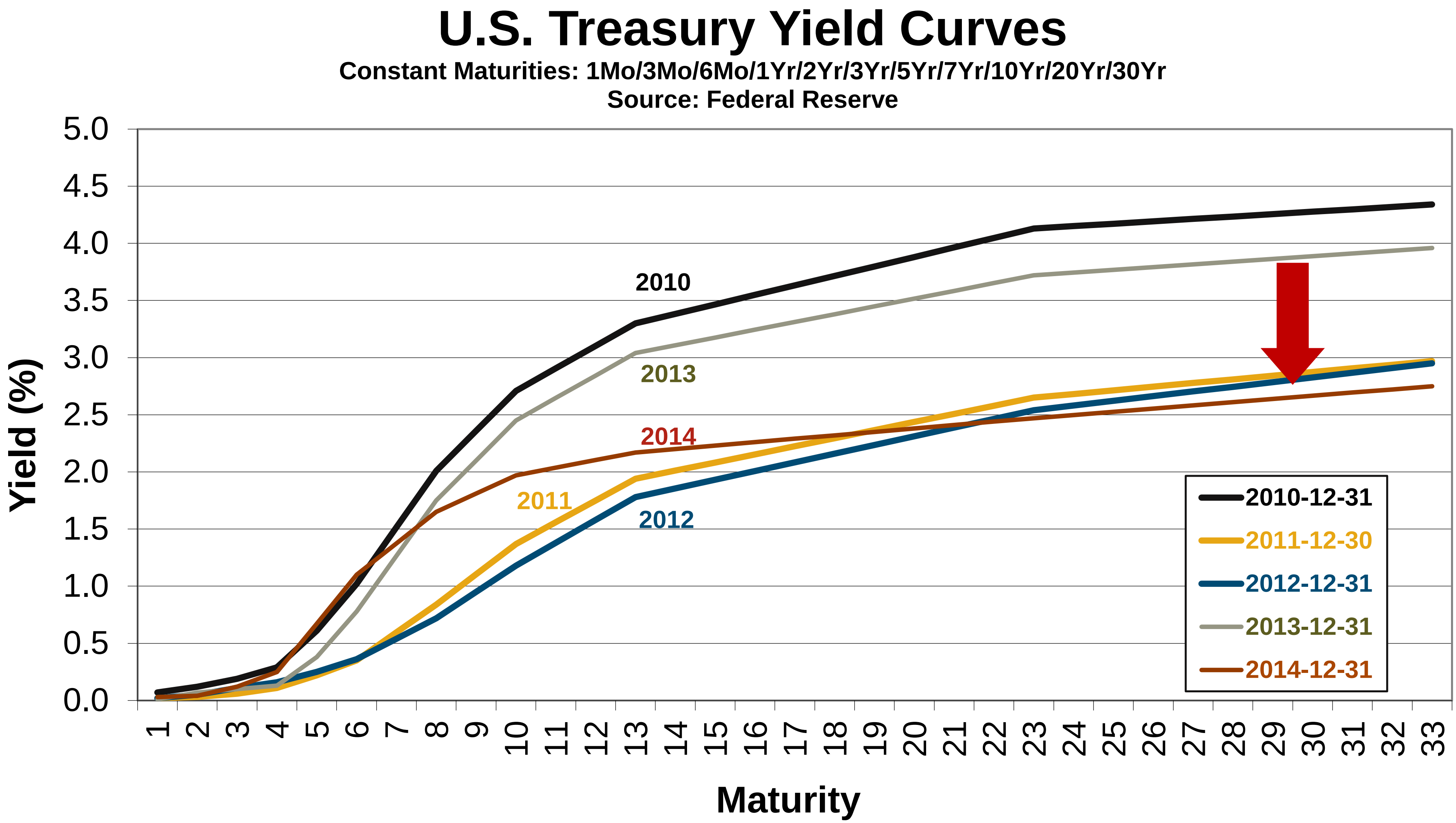
Trailing P/E Caught Up to Its Long Run Average



Trailing earnings as reported for the fiscal year; includes negative earnings from 1998 onward.
Source: Standard & Poor's and Callan

Treasury Rates Fell on the Long End in 2014

U.S. Treasury Yield Curves



Source: Federal Reserve and Callan

Bonds: Non-dollar exposure hurt

Longer duration helped

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Higher	EM (Local Currency) 22.97	EM (Local Currency) 6.27	EM (Local Currency) 15.22	EM (Local Currency) 18.11	Treasury 13.74	High Yield 58.21	EM (Local Currency) 15.68	Municipal 10.70	EM (Local Currency) 16.76	High Yield 7.44	Municipal 9.05
	Global Agg Ex-U.S. 12.55	Bank Loan 5.06	High Yield 11.85	Global Agg Ex-U.S. 11.03	MBS 8.34	Bank Loan 51.62	High Yield 15.12	Treasury 9.81	High Yield 15.81	Bank Loan 5.29	Investment Grade 7.46
	High Yield 11.13	Municipal 3.51	Global Agg Ex-U.S. 8.16	Treasury 9.01	Global Agg Ex-U.S. 4.40	EM (Local Currency) 21.98	Bank Loan 10.13	Investment Grade 8.15	Investment Grade 9.82	MBS -1.41	MBS 6.08
	Investment Grade 5.39	Treasury 2.79	Bank Loan 6.74	MBS 6.90	Municipal -2.47	Investment Grade 18.68	Investment Grade 9.00	MBS 6.23	Bank Loan 9.66	Investment Grade -1.53	Treasury 5.05
	Bank Loan 5.17	High Yield 2.74	MBS 5.22	Investment Grade 4.56	Investment Grade -4.94	Municipal 12.91	Treasury 5.87	High Yield 4.98	Municipal 6.78	Municipal -2.55	High Yield 2.45
	MBS 4.70	MBS 2.61	Municipal 4.84	Municipal 3.36	EM (Local Currency) -5.22	Global Agg Ex-U.S. 7.53	MBS 5.37	Global Agg Ex-U.S. 4.36	Global Agg Ex-U.S. 4.09	Treasury -2.75	Bank Loan 1.60
	Municipal 4.48	Investment Grade 1.68	Investment Grade 4.30	Bank Loan 2.08	High Yield -26.16	MBS 5.89	Global Agg Ex-U.S. 4.95	Bank Loan 1.52	MBS 2.59	Global Agg Ex-U.S. -3.08	Global Agg Ex-U.S. -3.08
Lower	Treasury 3.54	Global Agg Ex-U.S. -8.65	Treasury 3.08	High Yield 1.87	Bank Loan -29.10	Treasury -3.57	Municipal 2.38	EM (Local Currency) -1.75	Treasury 1.99	EM (Local Currency) -8.98	EM (Local Currency) -5.72

Sources: Eaton Vance, Morningstar

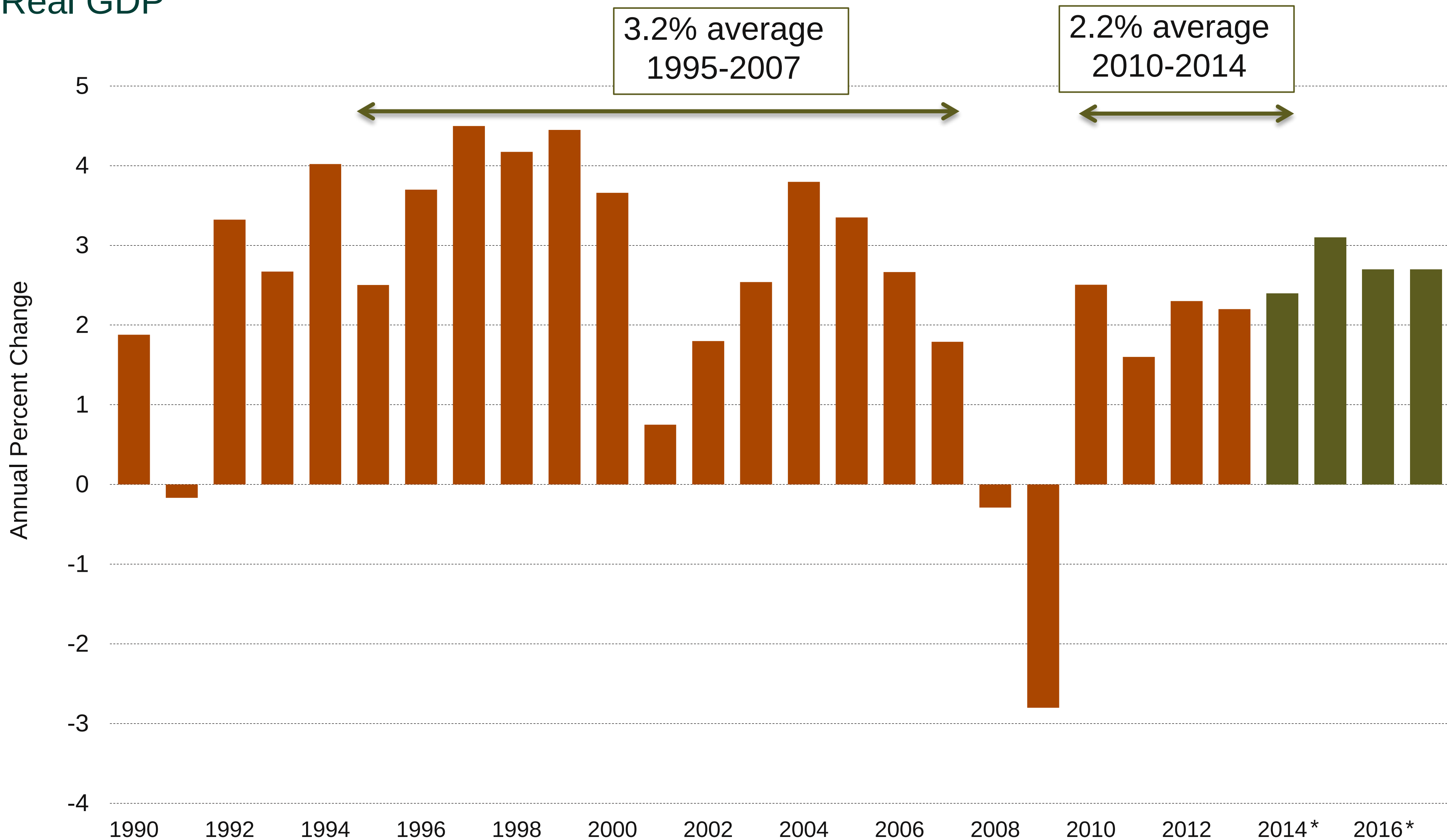
Economy Update Through December 2014

That Rebound We've Been Talking About? It's Here (in the US, that is).

- Hiccup in GDP data suggested sudden stop to growth in the US in the first quarter. 2nd quarter growth then came in at 4%, third quarter revised up to 5%, and growth for the year will average close to 2.5%.
- Job market is front and center. Job growth has been very strong – consistent monthly gains in excess of 200,000.
- However, labor force participation remains a problem. Labor force matters because it determines the unemployment rate, a variable the Fed is keying on for policy moves.
- Consumer spending is strong, directly contradicting the weak GDP data in the first quarter, and supporting the revisions in the third quarter. Inventories have been built in anticipation of even stronger spending.
- Capital market is pricing in an end to Fed accommodation, and the start of actual tightening by the third quarter of 2015.
- Fed is increasing watch on inflationary pressures. Inflation remains benign, but extended monetary accommodation around the globe and steadying growth lead to concerns that inflation could spark.
  - Most likely source at the moment – wage growth.
  - How many months of >200,000 job gains can we absorb before the labor market can be considered tight?
  - Wage pressures are NOT currently evident.

Below-Par Recovery for the U.S. Economy

Real GDP



* 2014 estimate, 2015-17 forecast – IHS Global Insight
Source: IHS Global Insight

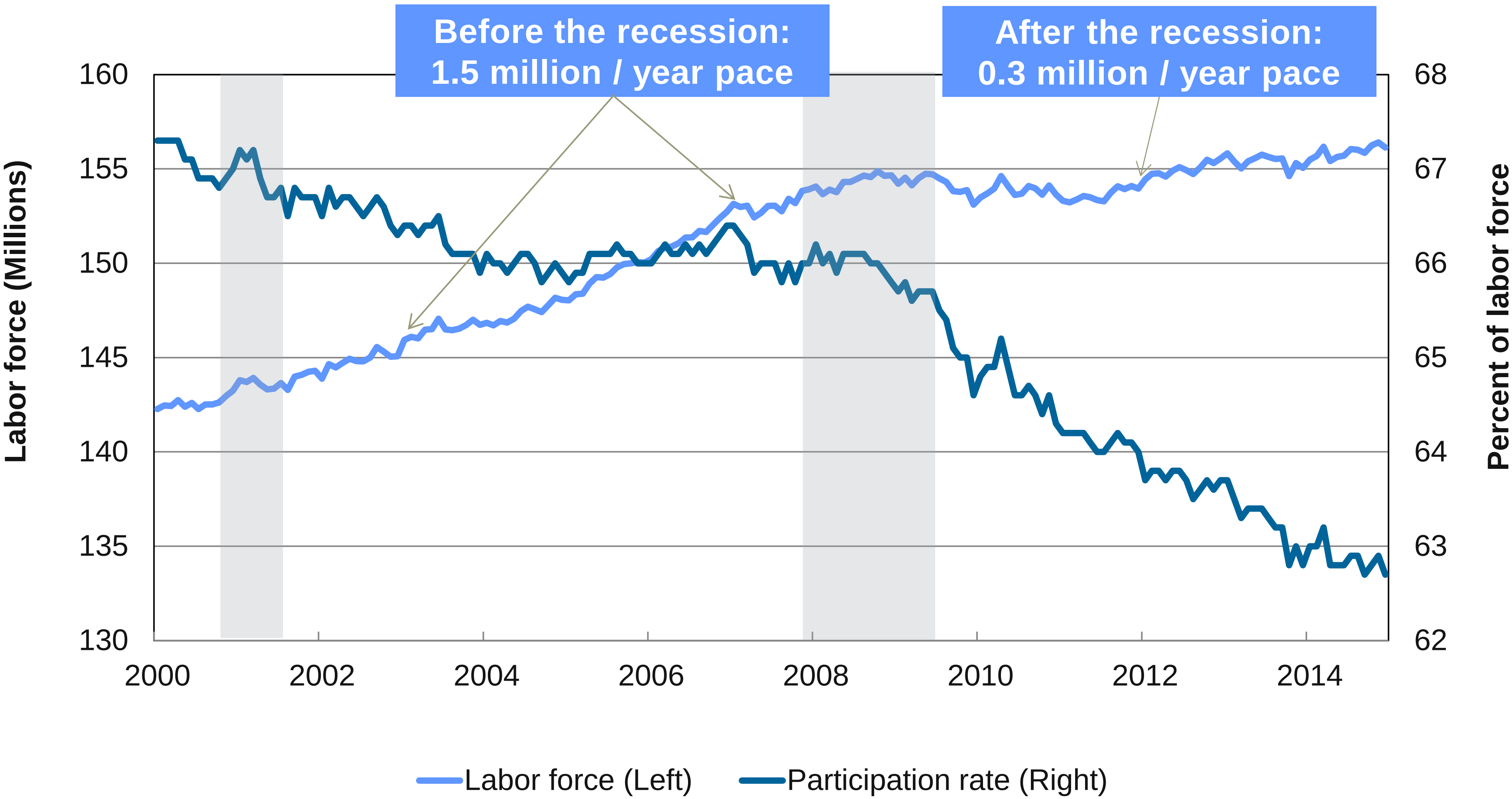
Sustained GDP Growth Driving Job Creation

When Will the Labor Market Get Tight Enough for Upward Pressure on Wages?

Source: IHS Global Insight

Growth in the Labor Force Has Downshifted

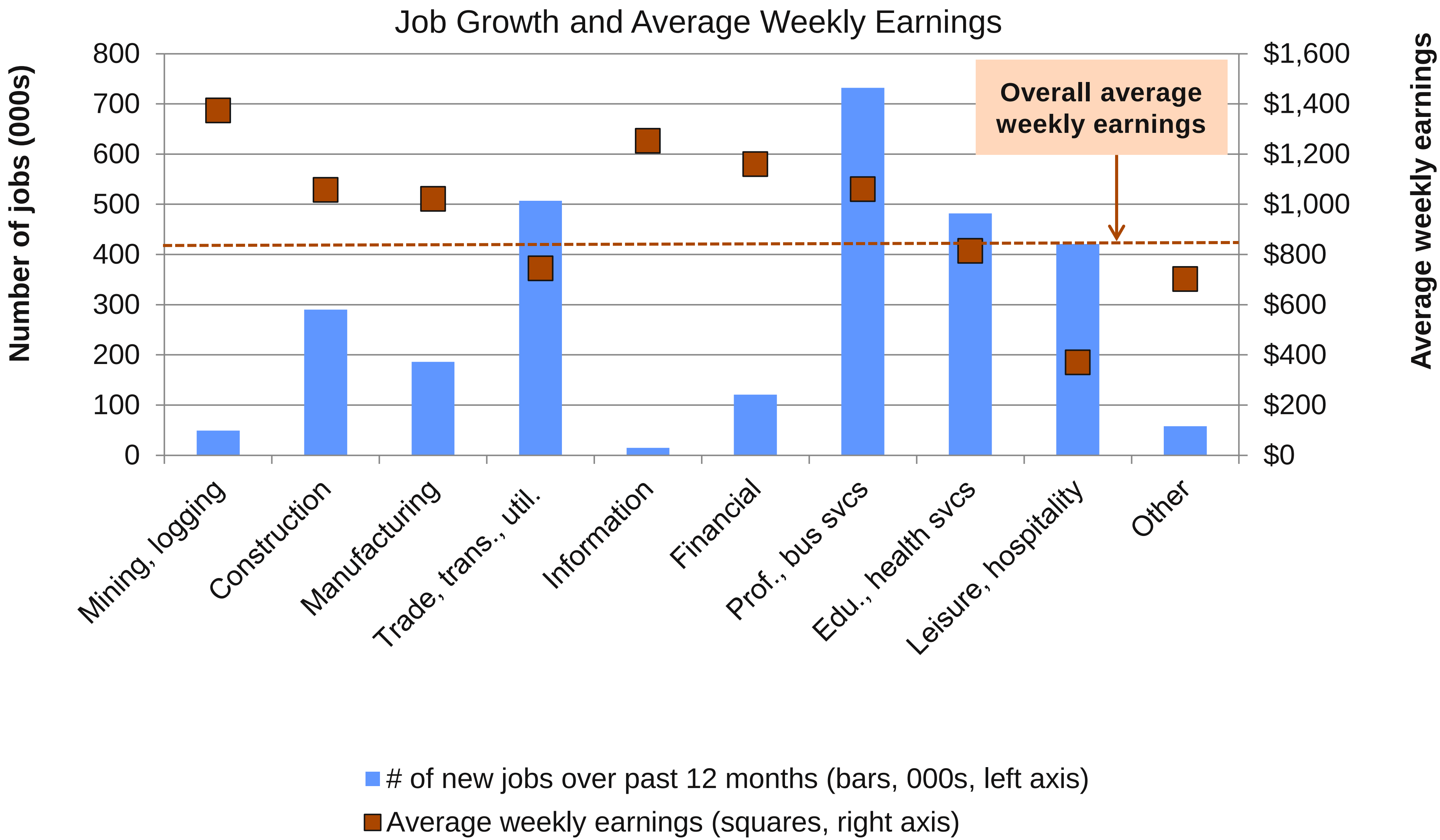
Size of the Labor Force and the Participation Rate



Initial unemployment claims have been edging down, suggesting an expanding employment picture

Sources: IHS Global Insight; U.S. Department of Labor and Callan

Recent Job Creation Is Skewed Toward Lower-Income

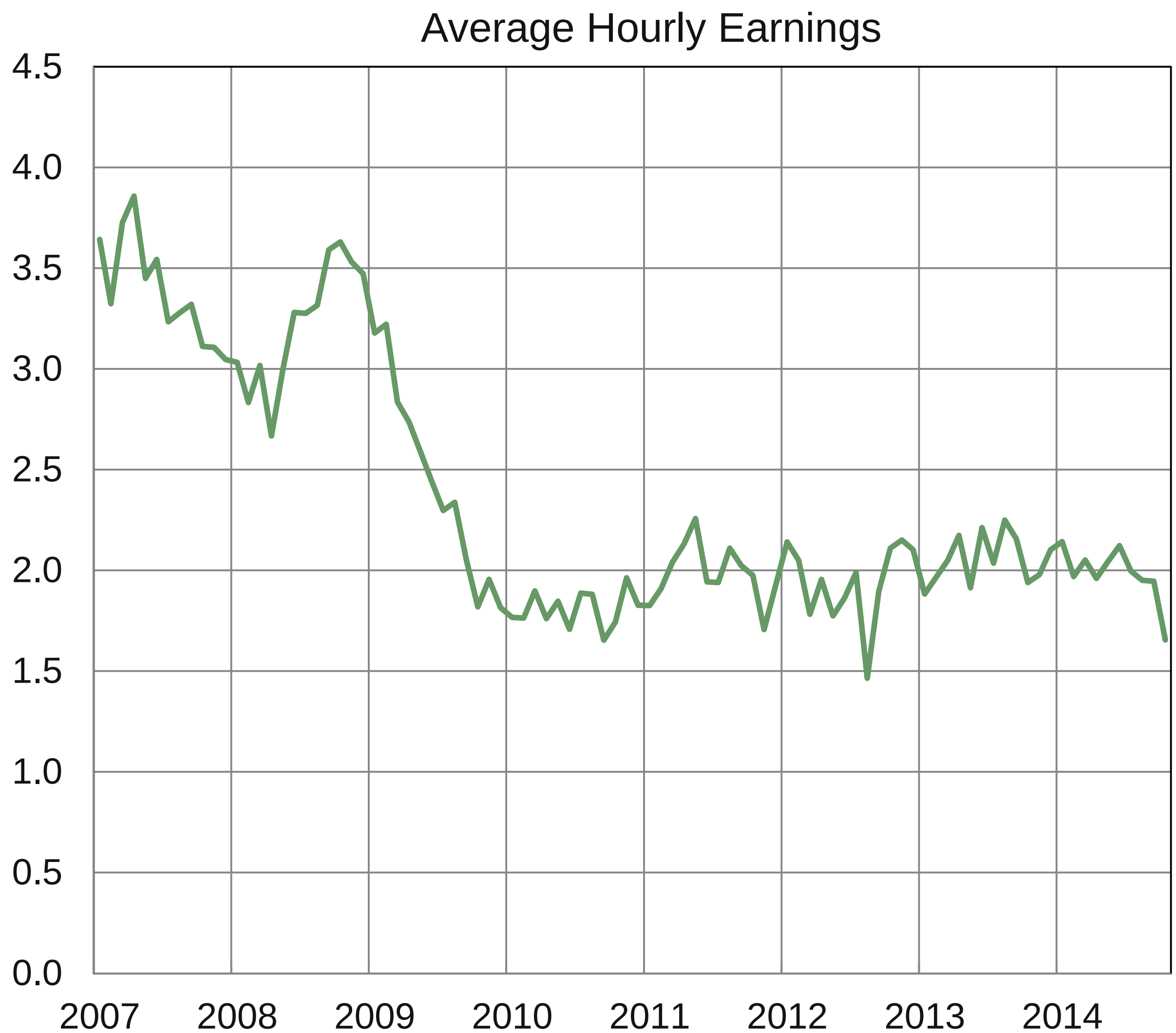


Source: IHS Global Insight

No Discernable Inflation Pressures From Wages

Why are wages not rising?

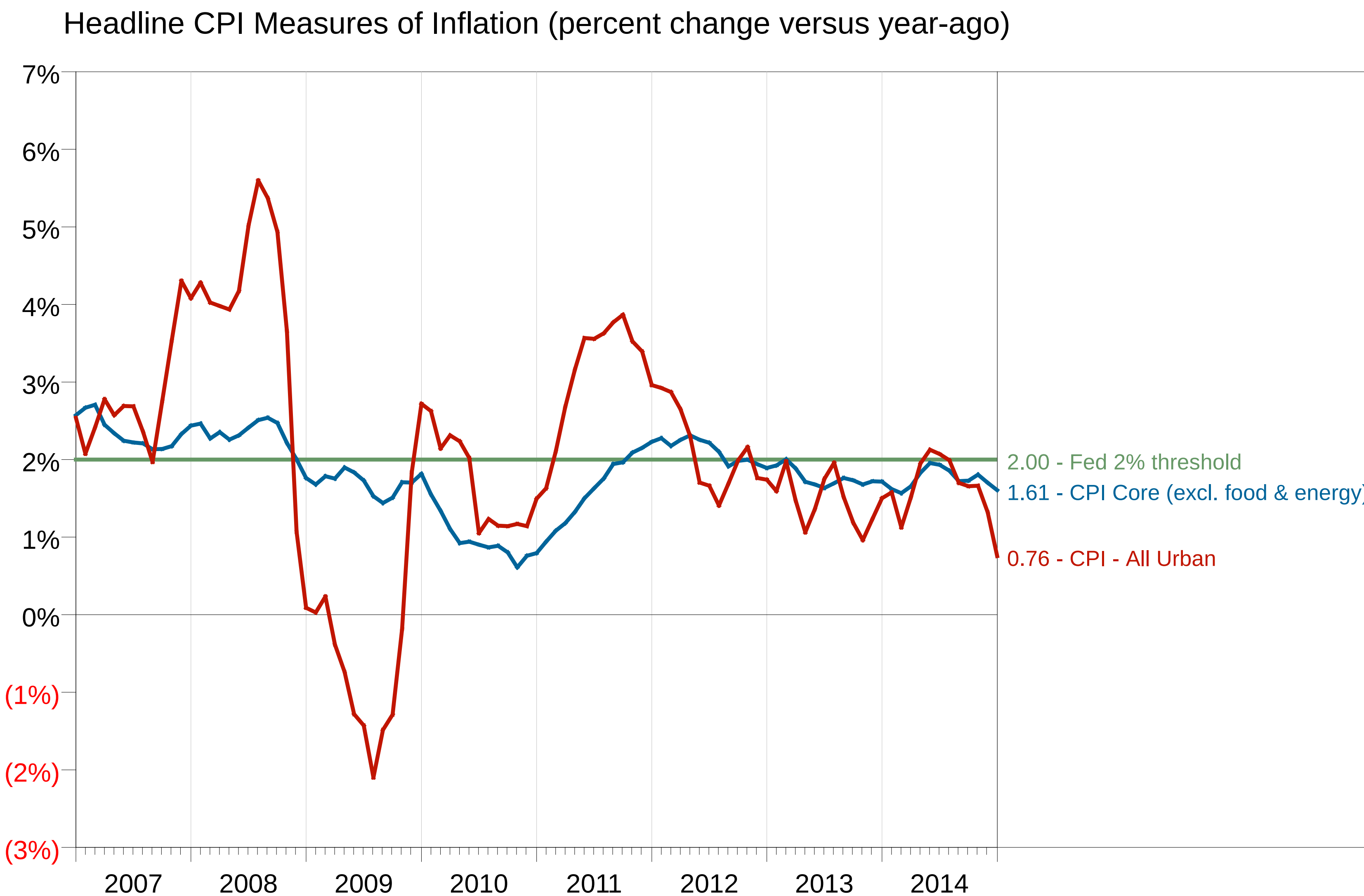
- Sector mix
  - new jobs created in lower-paying fields
- Experience displacement
  - more experienced employees being replaced by less experienced ones
- "Pent up wage deflation"
  - sticky wages prevented full wage adjustments from occurring during the recession



Source: IHS Global Insight

Are We Seeing the Start of Deflation?

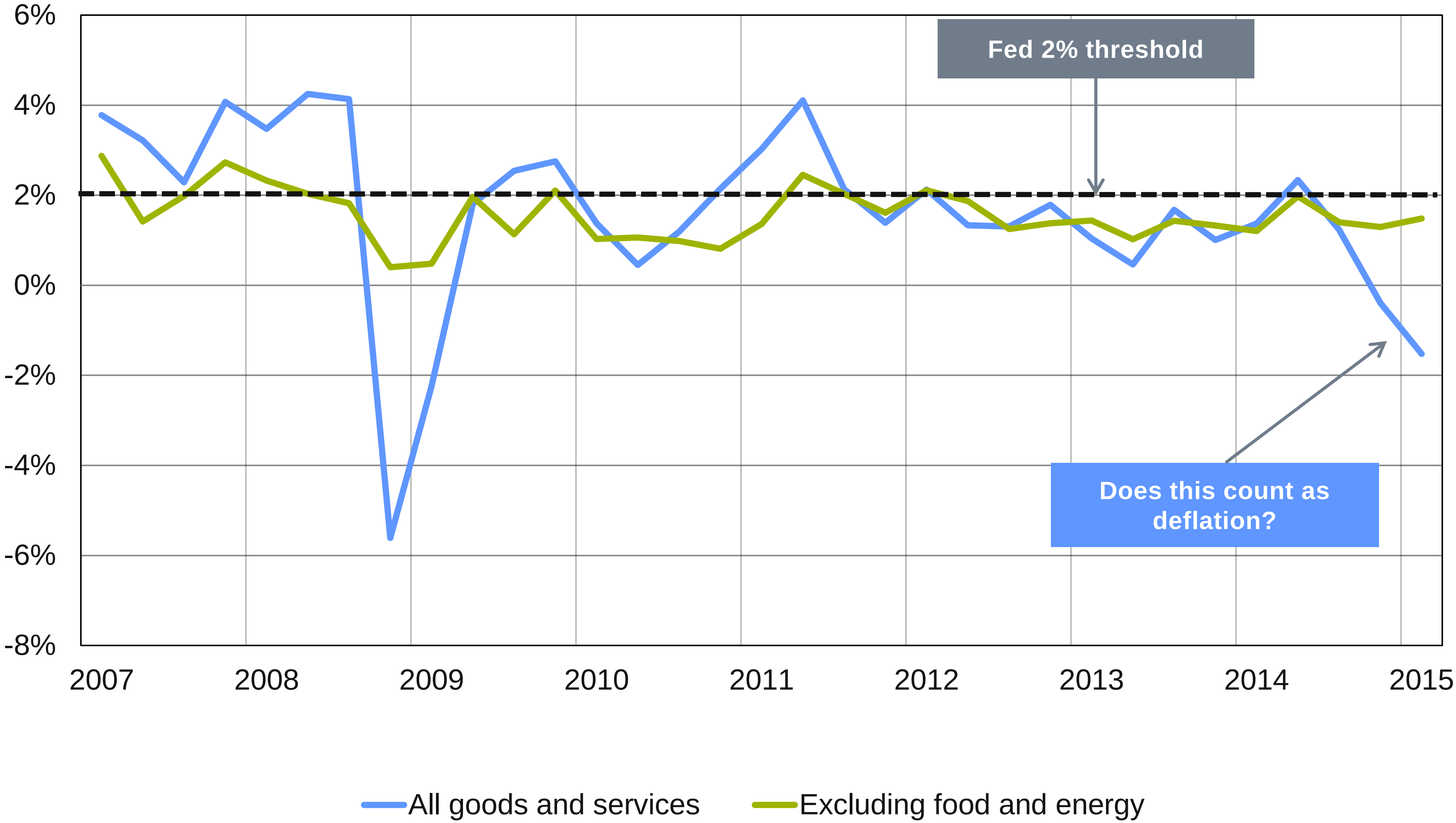
CPI Took a Dive With Oil Prices in the Second Half of 2014



Source: Bureau of Labor Statistics and Callan

What the Fed Looks at to Determine Inflation

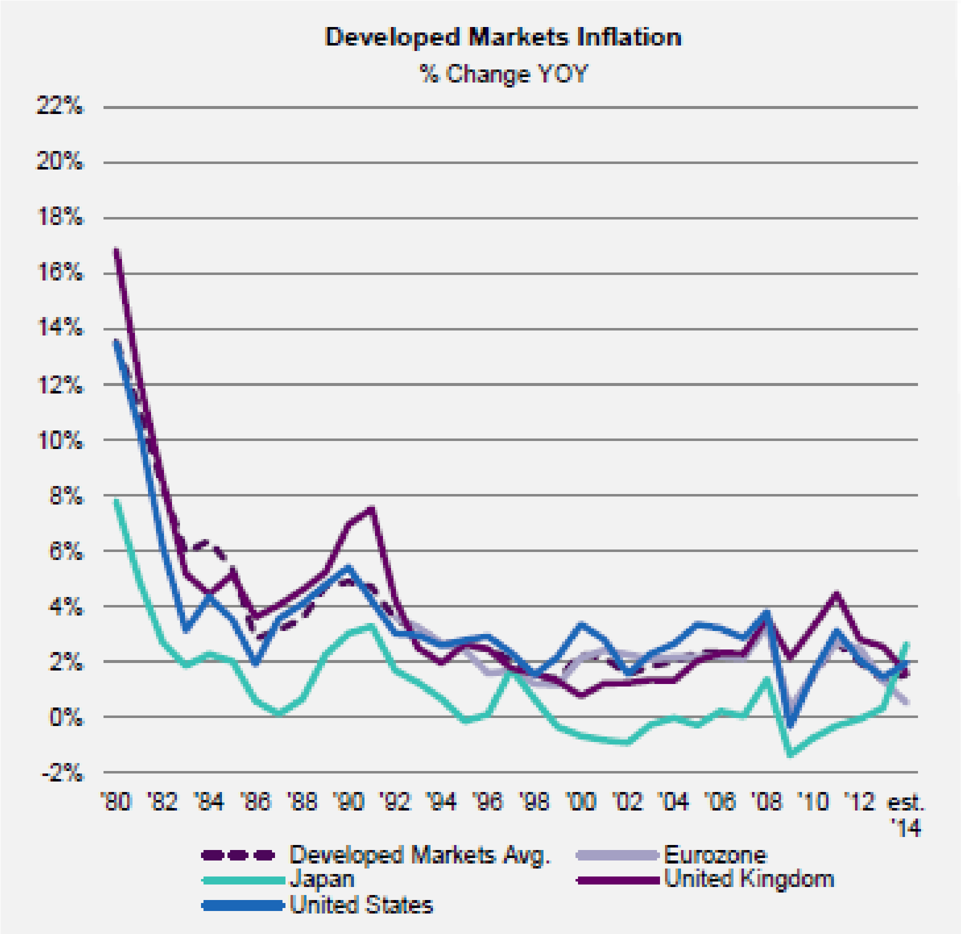
Personal Consumption Price Deflators (percent change vs. year-ago)

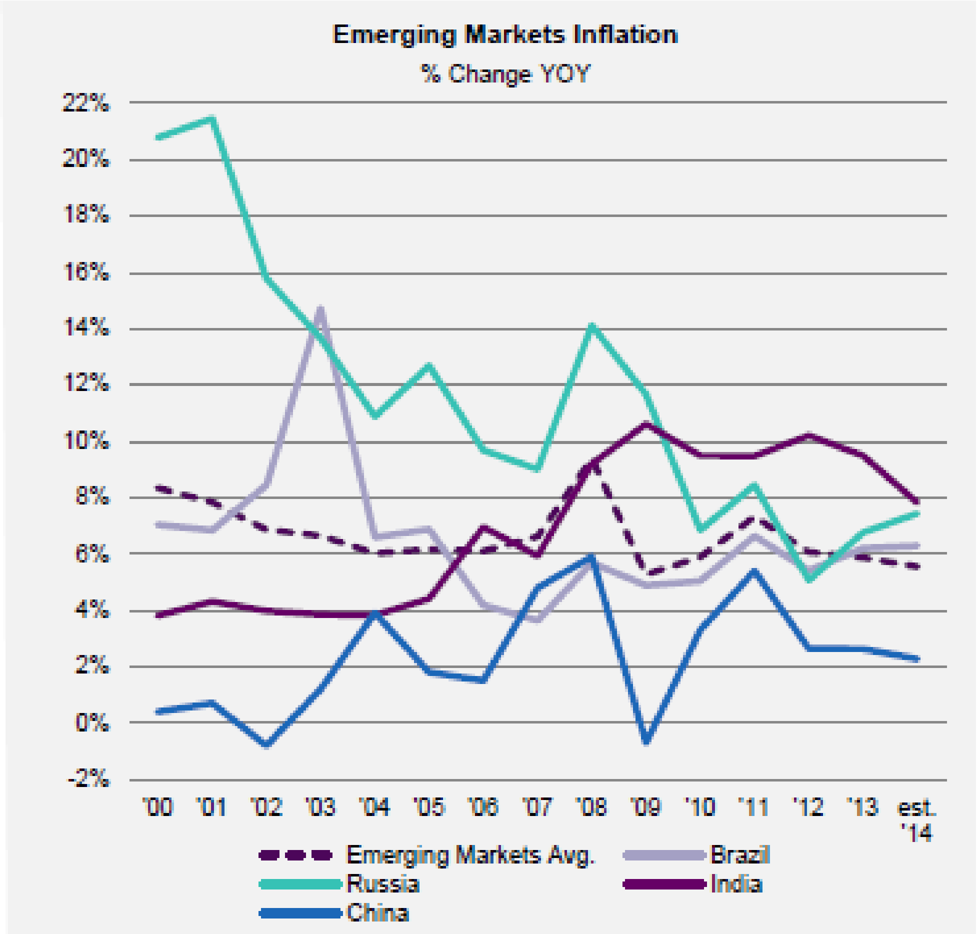


Source: IHS Global Insight

Global Inflation

6% in Emerging Markets; Hardly any in the Developed World

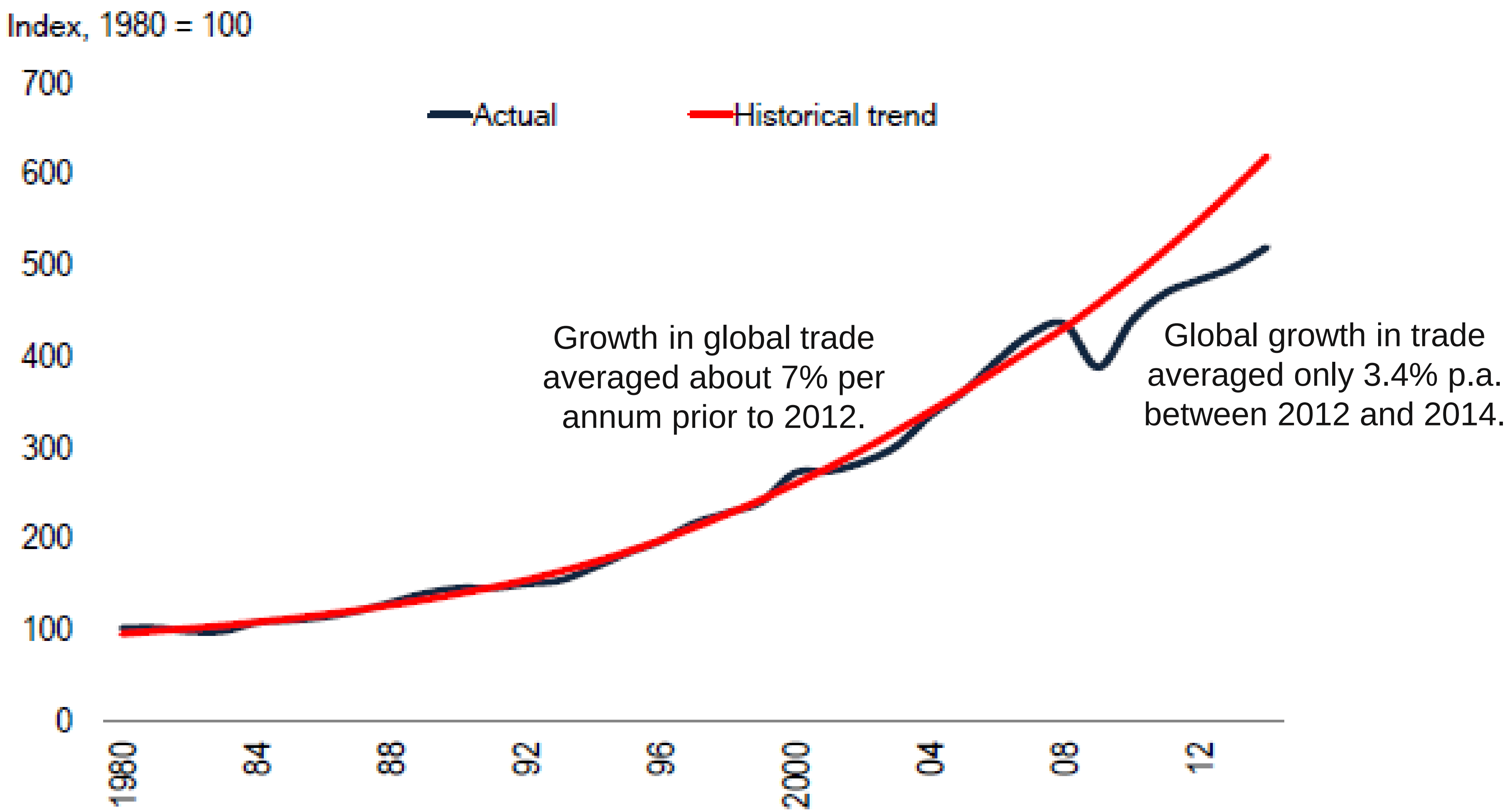




Sources: Eaton Vance, International Monetary Fund, Bureau of Labor Statistics

Sources: Eaton Vance, International Monetary Fund

World Trade: Growth Rates are Faltering



Source: World Bank

The Recovery in Housing Markets Should Be Here By Now…

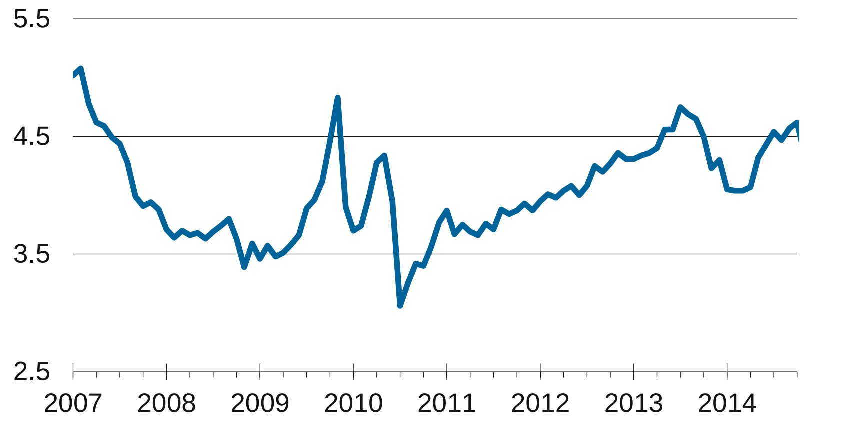
- Pluses:
  - Reasonable mortgage rates
  - Rates of mortgage default and foreclosure continue to decline
  - Good rate of job creation
  - Consumer de-leveraging helps with home price affordability
  - Recent home price appreciation in some (many?) markets
  - Rental markets tight, spurring multi-family starts

- Minuses:
  - Adverse household formation among under-35 and 35-44 y.o. households; overall HH formation has slowed
  - Greater perceived risk of holding real estate
  - Higher input prices for builders squeezing margins
  - Shortage of buildable lots
  - Very stringent lending standards for builders and buyers
  - Job mobility stuck at recession levels
  - Significant student loan burden
  - Lack of distressed properties for sale, especially impacting investor demand
  - Baby boomers are downsizing

Single-Family Housing Improving, But Slowly

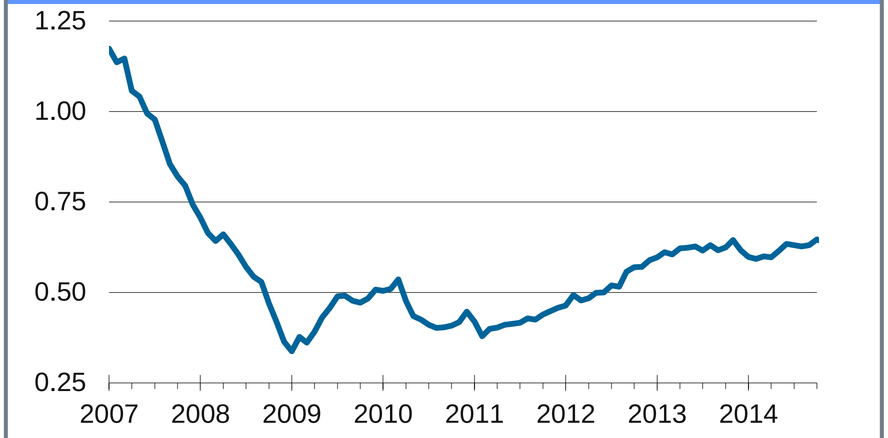
Sales, Permits and Starts Well Below Pre-Recession Levels

Existing Home Sales*



New Home Sales*

Housing Permits*



Housing Starts*

* Millions, Seasonal

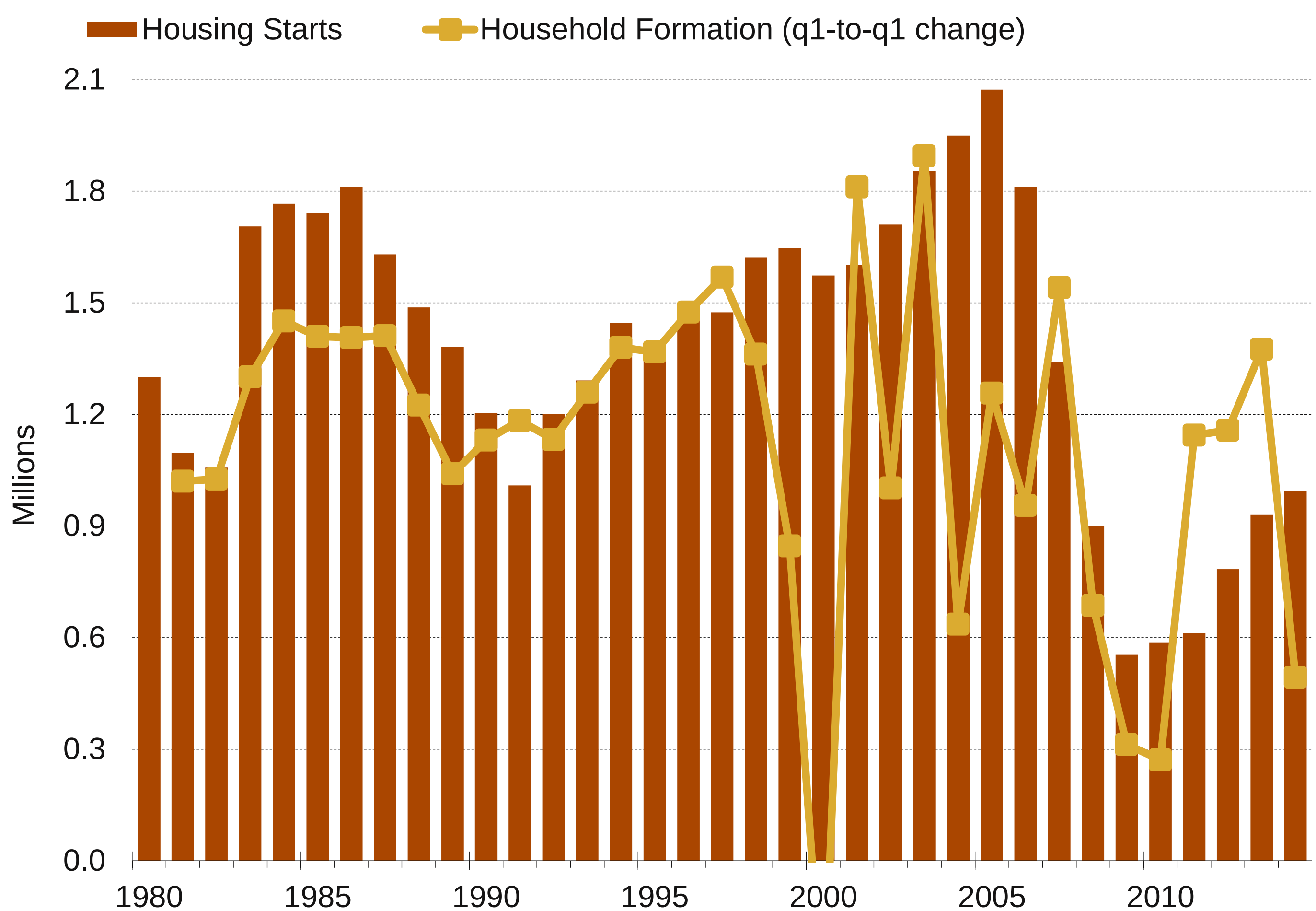
Source: IHS Global Insight

A Rebound Stalls in Household Formation

Required for Recovery in Housing Starts

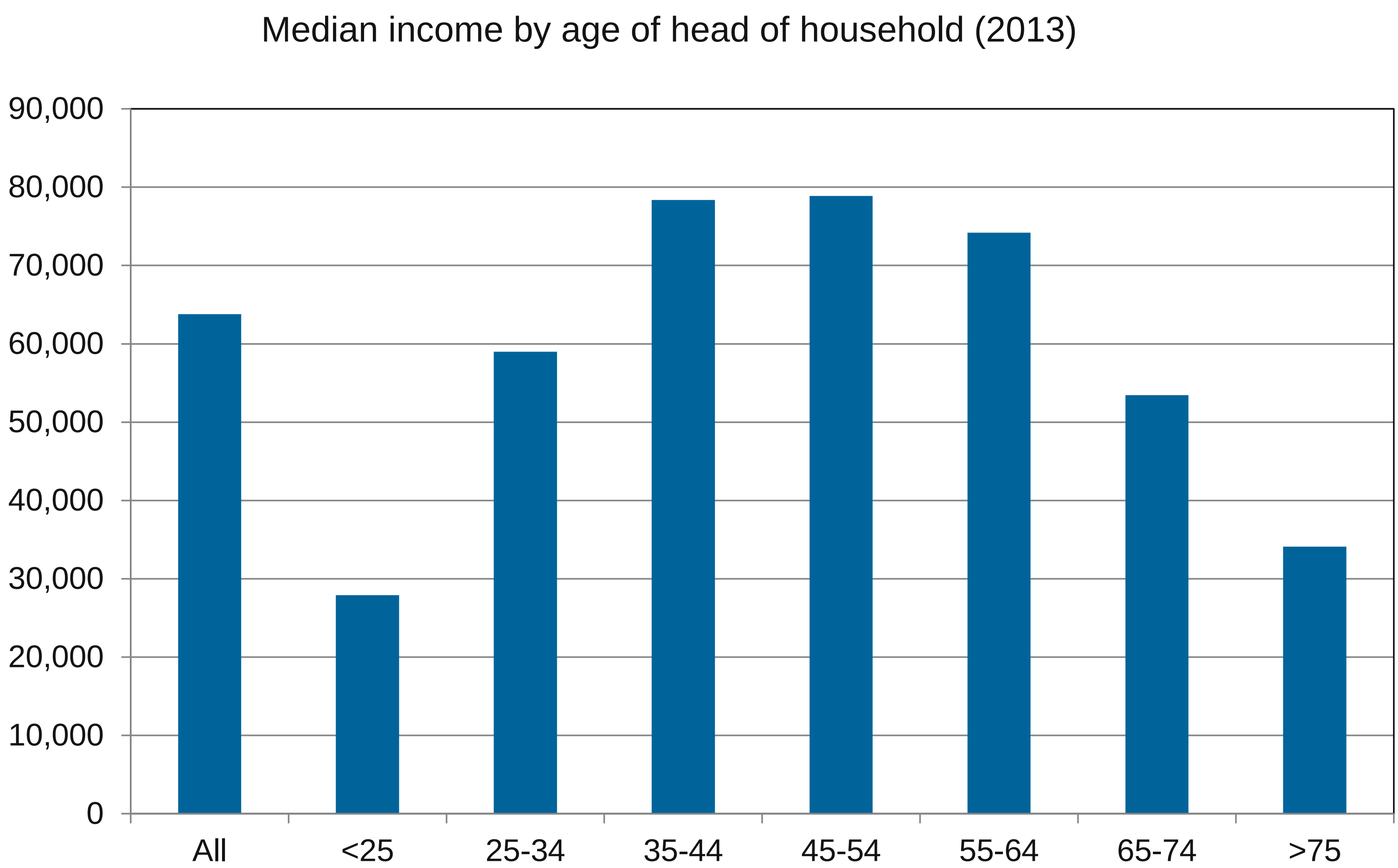
Why are households not forming?

- Weak wage growth
- Slower immigration
- Lower marriage rates
- Limited access to credit
- Degraded mobility
- Student loan burdens
- Measurement issues
- Household formation and home ownership declining for 35 – 44 year olds.



Source: IHS Global Insight

Household Earnings Peak in the 35-44 and 45-54 Age Cohorts



Source: IHS Global Insight

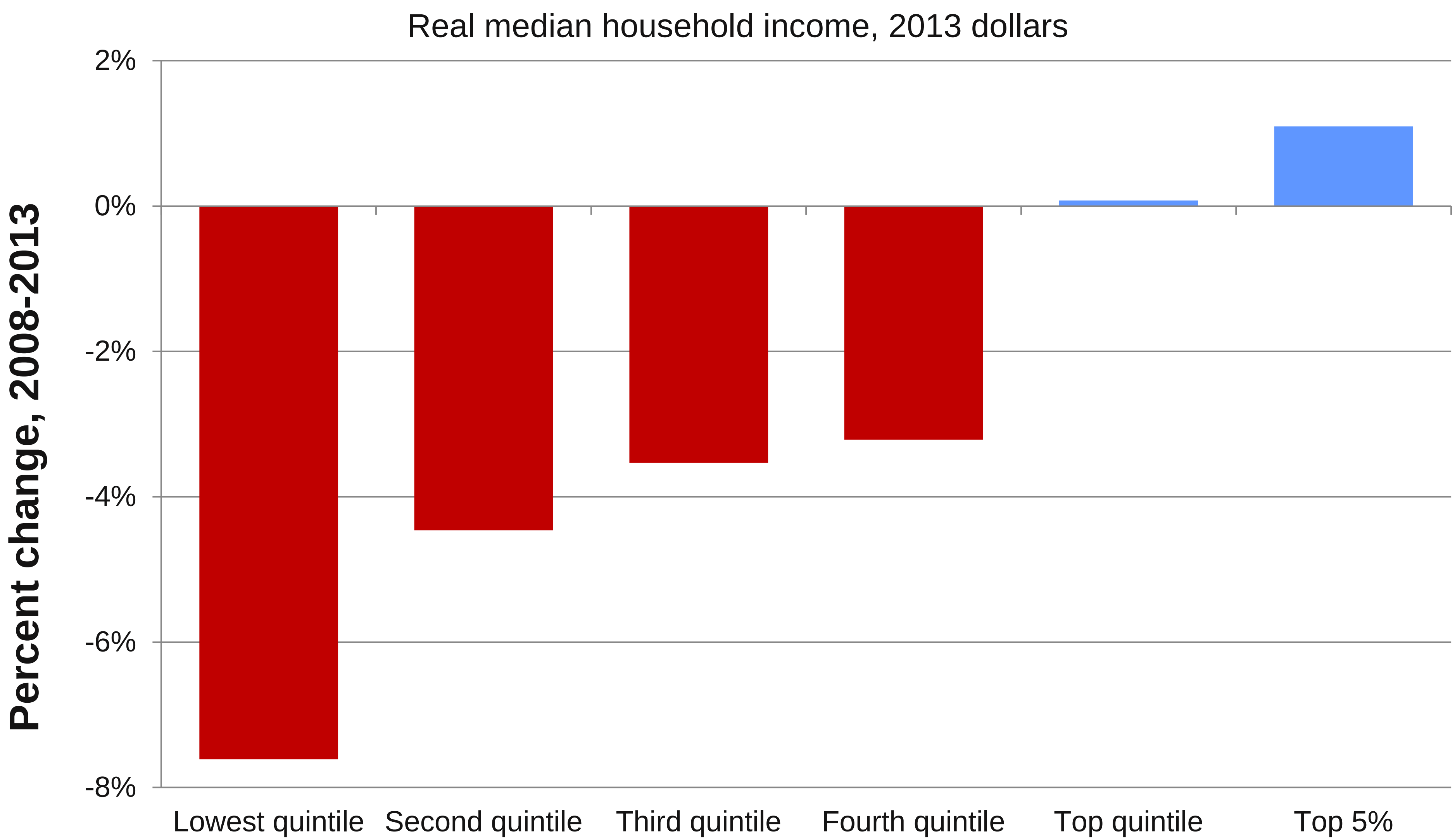
Consumer Spending: the Regaining the Leading Role

Positives Outweigh the Negatives

Negative Forces	Positive Forces
Slow wage growth	Pent-up demand for durable goods (autos)
Debt burdens still high	Jobs growth picking up
Student loan debt on the rise	Consumer confidence elevated
Low fertility rates and population growth rates	Pump price relief helping with higher food prices
Real median household income flat, income inequality up	Household asset values surpassed pre-crisis levels (for some)
Poverty rates elevated	E-commerce retail sales gaining share of retail trade
Food prices creeping up	2014 holiday retail sales growth best since 2011

Income Declines Have Challenged Most Consumers

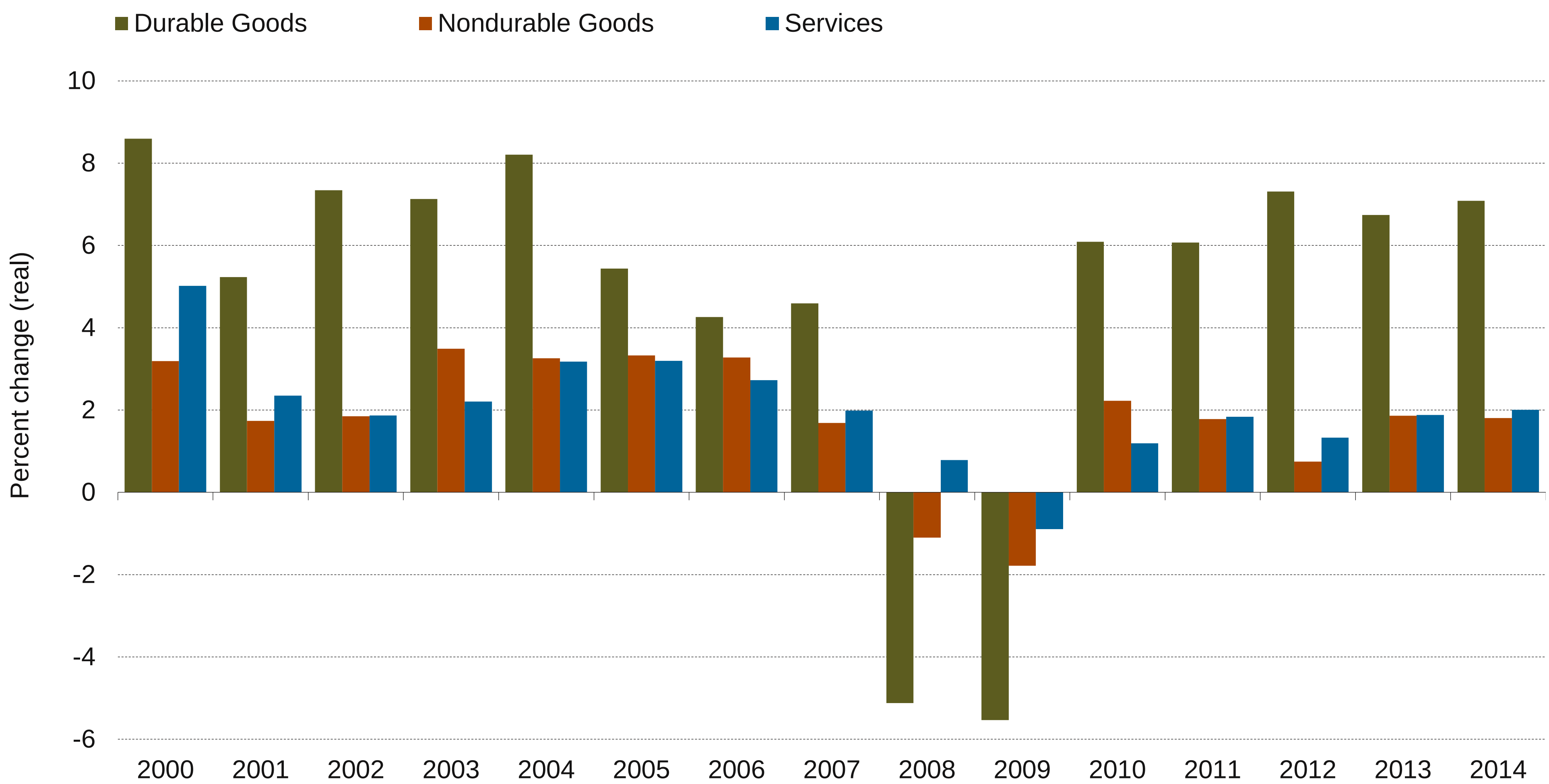
Percent Change Since the Start of the Financial Crisis



Source: US Census, Income, Poverty and Health Insurance Coverage in the United States

Pent-up Demand for Durable Goods

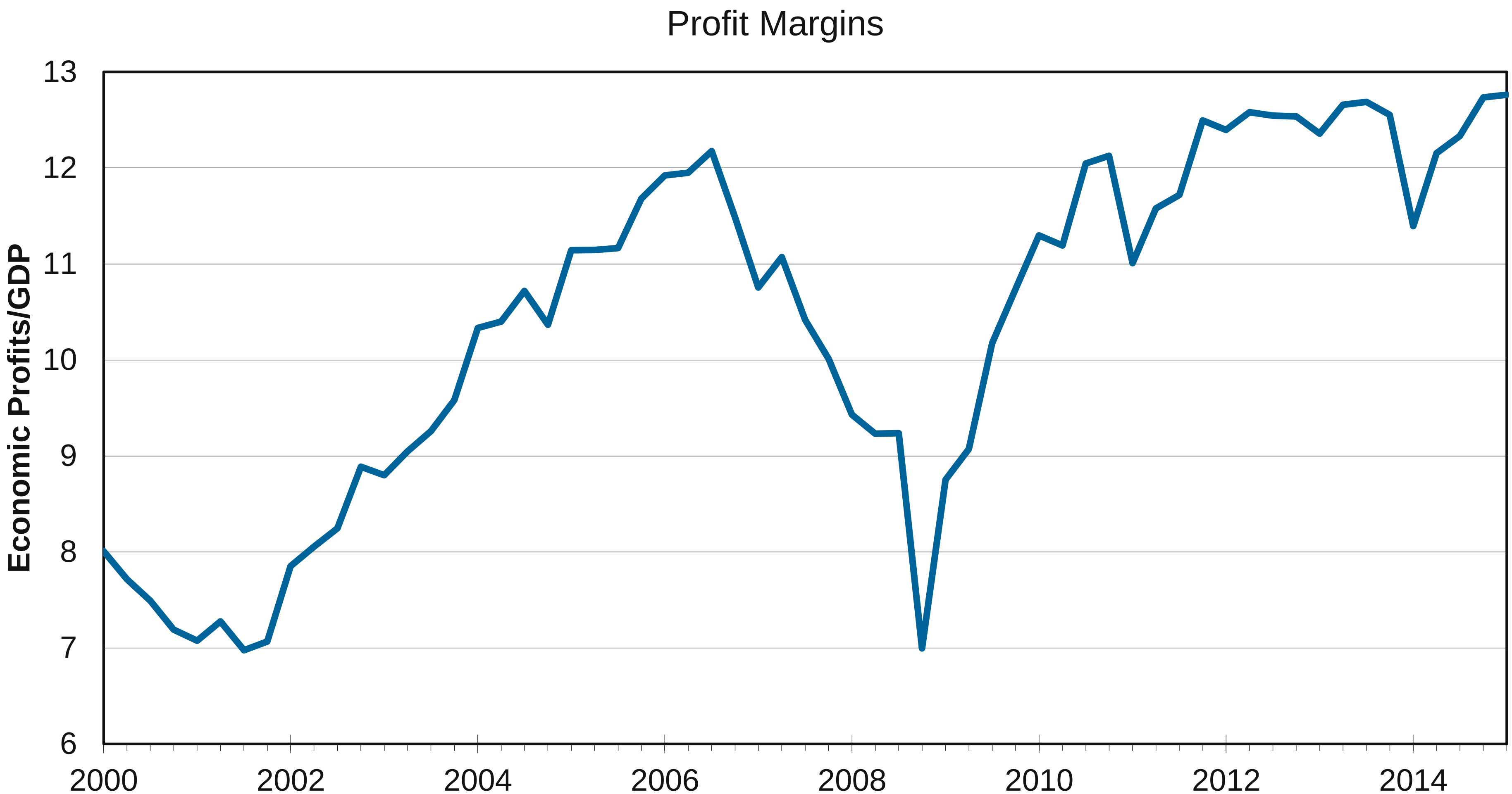
Drives Growth in Consumer Spending



Source: IHS Global Insight

Corporate Profit Margins Remain Near All-Time Highs

In Spite of Weather-Driven Drop in 2014Q1



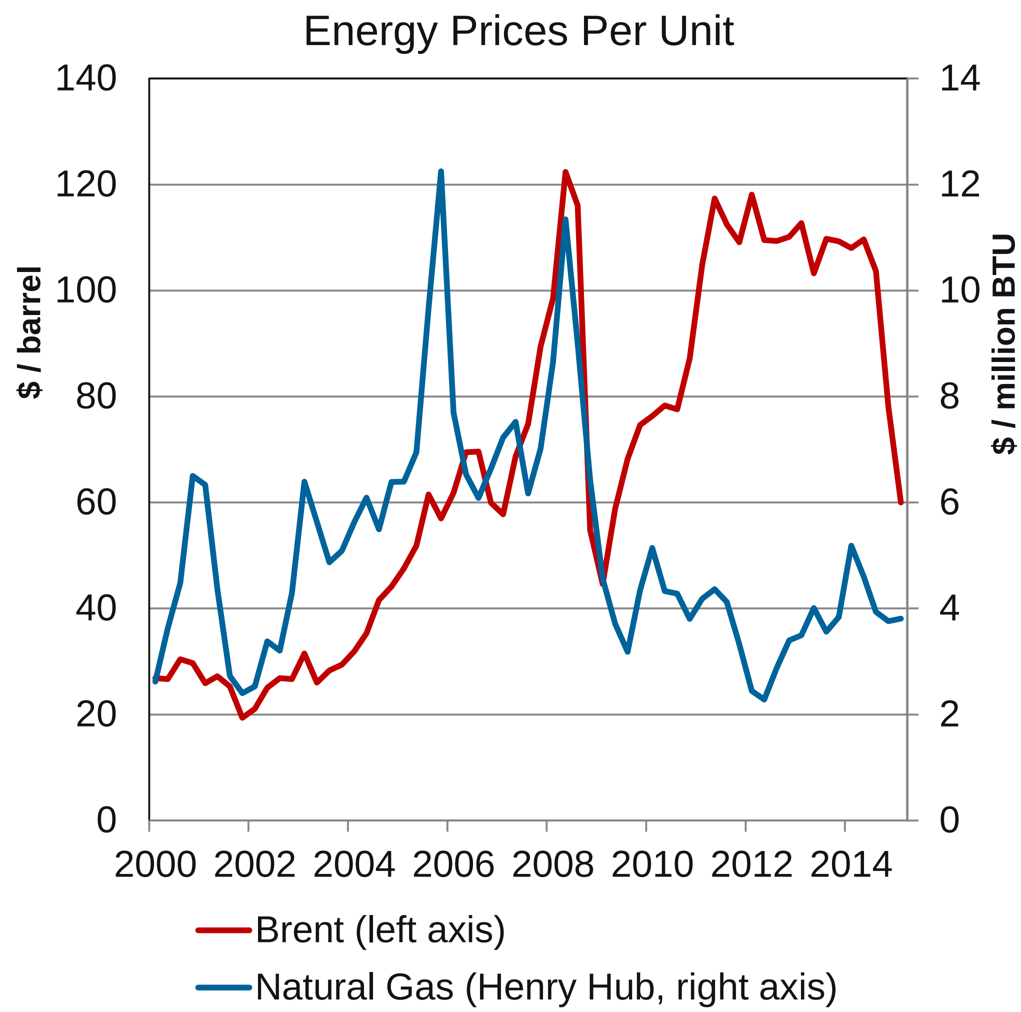
Source: IHS Global Insight

Oil Prices Have Plunged Since Mid-2014

End of the Energy Super-Cycle?

Impact of a drop in oil prices from $112 per barrel in June 2014 to $50-ish:

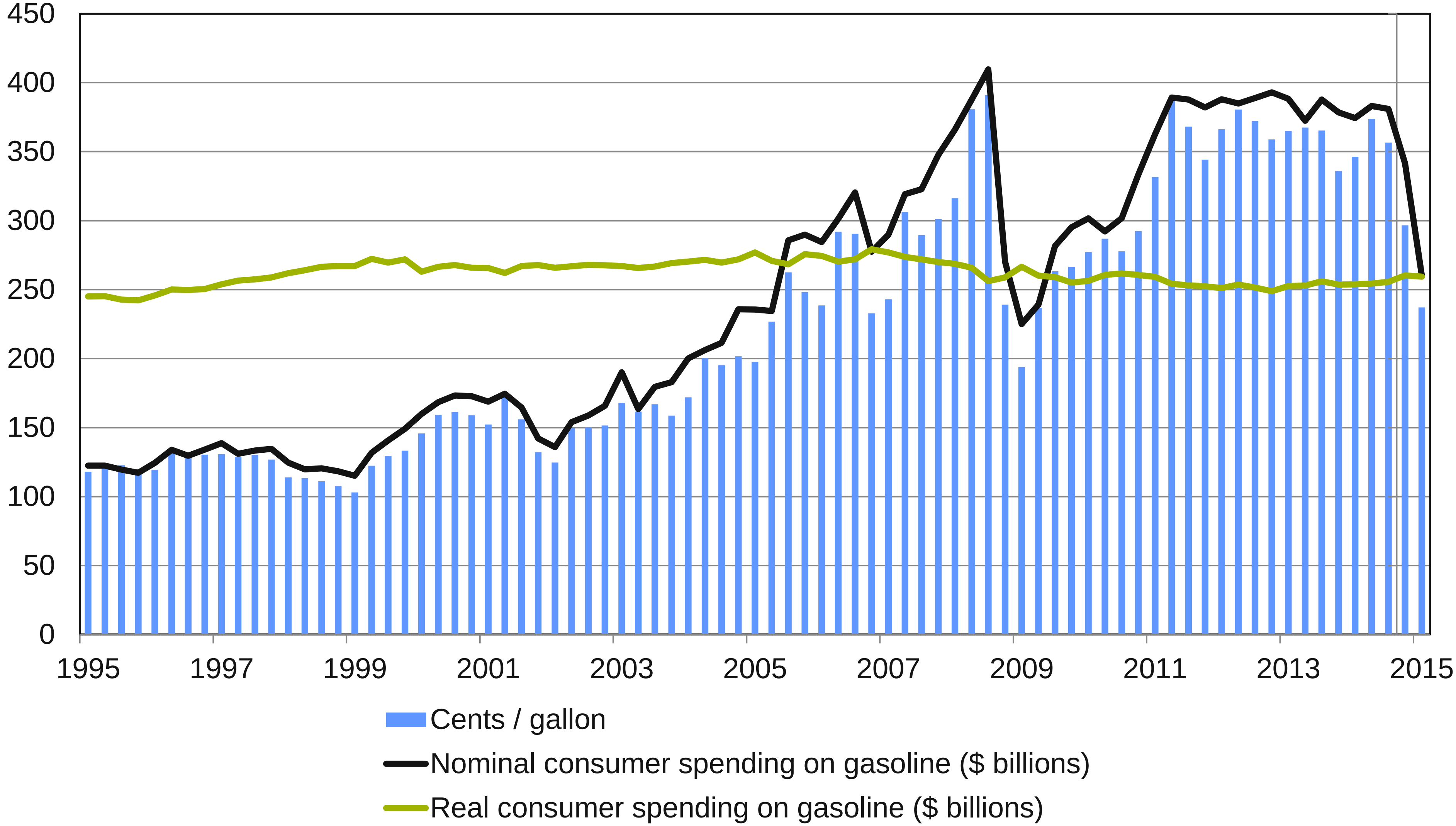
- Most from redeployed consumer spending, particularly to lower- and middle-income households
- Additional effects from improved consumer sentiment and reduced business costs
- Timing about evenly divided between 2014 and 2015
- Includes offsetting impact of reduced drilling investment and increased imports
- Economic benefits not linear as additional declines in prices will trigger disproportionate production impact



Source: Global Insight

Every $10/Barrel Decline In Oil Prices Creates a $23bn Gasoline Dividend for Consumers.

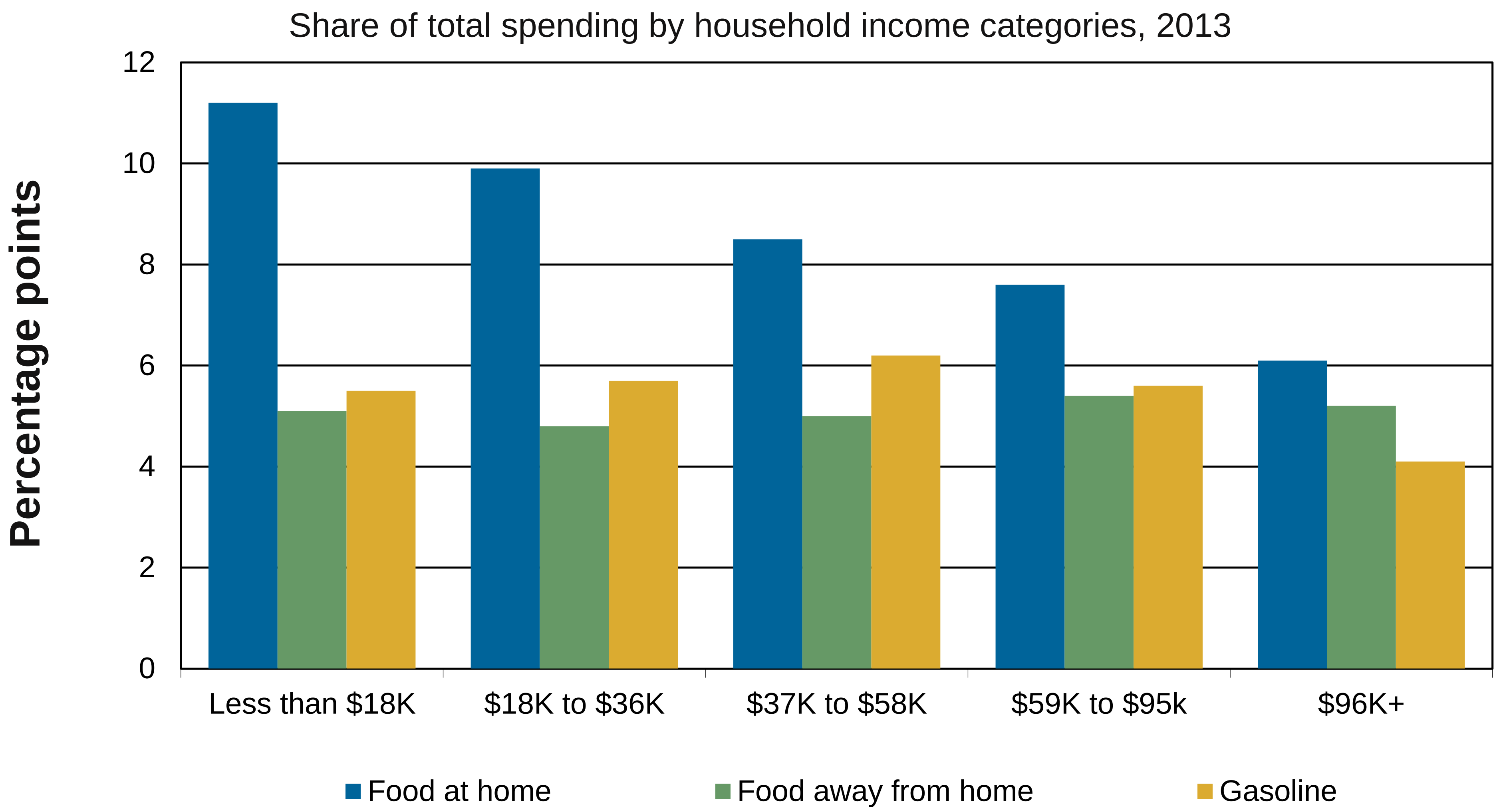
Gasoline Costs and Consumption Spending



Source: IHS Global Insight

Food Matters More Than Gasoline

Share of Household Spending By Income Before Recent Drop in Gasoline Prices



Source: Consumer Expenditure Survey, U.S. Bureau of Labor Statistics

Monetary Policy and Interest Rates

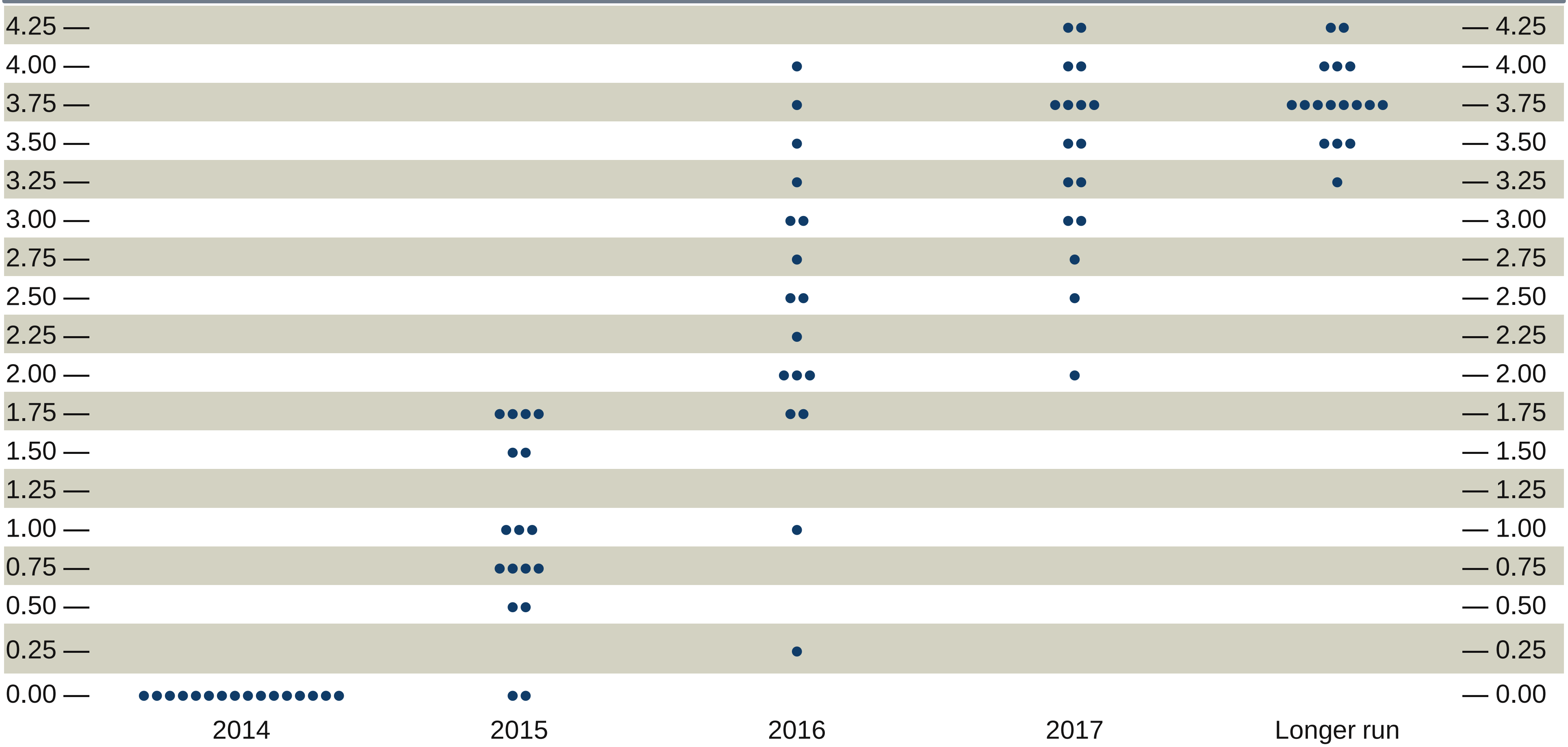
What Will the Fed Do Next?

- New forward guidance stresses that the timing and pace of rate hikes are data dependent in a symmetric way.
- Policymakers happy with progress in the labor market and see fewer downside risks to inflation even as inflation and inflation expectations have deteriorated.
- Oil prices a net positive for US and global economies – not a source of deflation.
- Labor market and inflation moving in different directions. What matters more for the Fed? Probably the labor market.
- Fed doesn’t have to achieve its 2% inflation goal to raise interest rates.
- Fed rate hike expected at June 2015 meeting (depending on whom you listen to). Expect the Fed to move slowly at first.
- Despite looming rate hike, long-term yields have fallen to multi-year lows:
  - Concern over Eurozone deflation and weak growth around the globe.
  - Concern about longer-run growth and inflation

The Infamous Dot Chart

2018 Target has Consensus Within the FOMC, But Not the Path to Get There

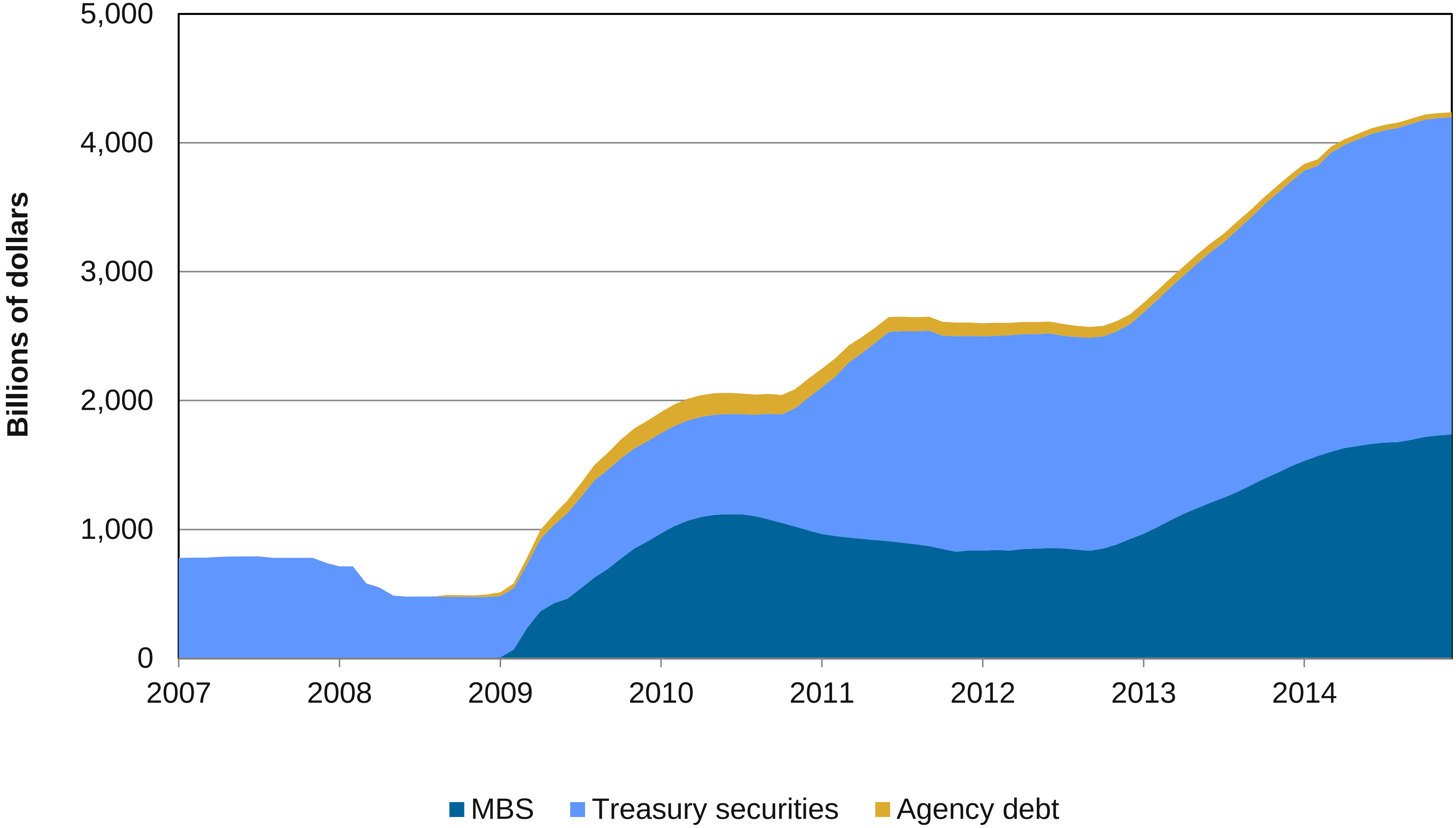
Target fed funds rate at year-end (December projections)



Each shaded circle indicates the value of an individual participant's judgment of the appropriate level of the target federal funds rate at the end of the specified calendar year and over the longer run. The number in each column represents the lower bound of an 0.25 percentage point range.

How Will the Fed Tighten With a Giant Balance Sheet?

Federal Reserve Assets



Source: IHS Global Insight

How Will the Fed Tighten, Continued . . .

Forgive the

- Fed has never managed short-term interest rates with such abundant liquidity in the financial system.
- Fed loses control over Fed Funds rate (“FFR”) with abundant bank reserves.
- Potential problem: draining reserves quickly introduces financial market risks.
- Solution: raise interest rate on bank reserves (“IOR”) - currently 0.25 bps
  - FFR trades close to IOR.
  - No bank will lend at rate below what it can earn risk-free from Fed.

- IOR has been “porous” floor for the FFR thanks to Government Sponsored Enterprises (“GSEs”).
  - Solution: interest rate on overnight reverse repurchase (repo) agreements to serve supporting role.

- Bottom Line:
  - Fed has the tools to tighten monetary policy without shrinking its balance sheet.
  - Fed Funds Rate will remain operational target, but Interest on bank reserves will be the tool for tightening.

U.S. Economic Growth by Sector

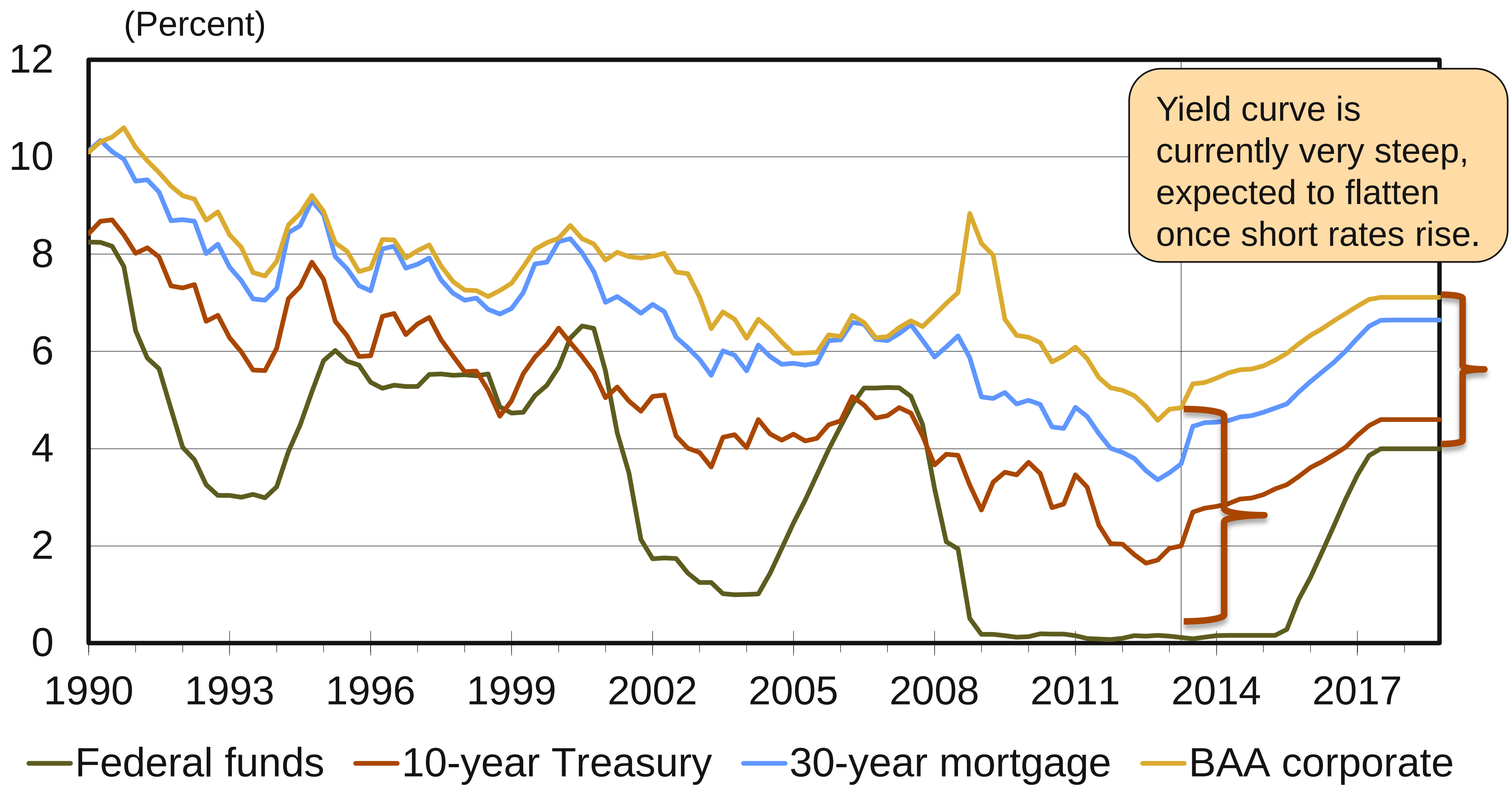
Annual Percentage Change

	12/31/2006 Share of GDP	12/31/2014 Share of GDP	2006	2007	2008	2009	2010	2011	2012	2013	2014	Direction of Change
Real GDP	100.0%	100.0%	2.7	1.8	-0.3	-2.8	2.5	1.6	2.3	2.2	2.4	Stable above 2% (reaching for 3%?)
Consumption	77.5%	68.1%	2.9	2.2	-0.3	-1.6	1.9	2.3	1.8	2.4	2.5	Back above GDP growth
Residential Investment	5.1%	3.1%	-7.3	-18.8	-24.0	-21.2	-2.5	0.5	13.5	11.9	1.6	Stumble in 2014
Bus Fixed Investment	12.7%	13.3%	8.0	5.9	-0.7	-15.6	2.5	7.7	7.2	3.0	6.3	Healthy growth
Federal Government	7.3%	6.8%	2.1	1.7	6.8	5.7	4.3	-2.7	-1.8	-5.7	-2.0	End of stimulus
State & Local Government	12.4%	10.9%	0.9	1.5	0.3	1.6	-2.7	-3.3	-1.2	0.5	0.9	See “Federal Government”
Exports	10.6%	13.0%	9.0	9.3	5.7	-8.8	11.9	6.9	3.3	3.0	3.2	Improved with global recovery
Imports	15.8%	15.8%	6.1	2.5	-2.6	-13.7	12.7	5.5	2.3	1.1	3.8	Consumption or energy prices?

- Recovery has been modest by historical standards. U.S. GDP suffered a hiccup in first quarter of 2014, but regained momentum as 2014 progressed.
- Housing market found a bottom, but new home construction stumbled in 2014. Consumer spending should move back into a driving force as the job market has solidified and consumer wealth rebounds. Housing remains challenged by demographics.
- Government spending as a percent of GDP peaked in 2011, receded in 2012-14 without further stimulus.
- Note: Imports are a negative number in the calculation of GDP.

Source: IHS Global Insight and Callan

Interest Rates Will Rise From Exceptionally Low Levels, With The Fed Expected to Boost Short Rates in 2015

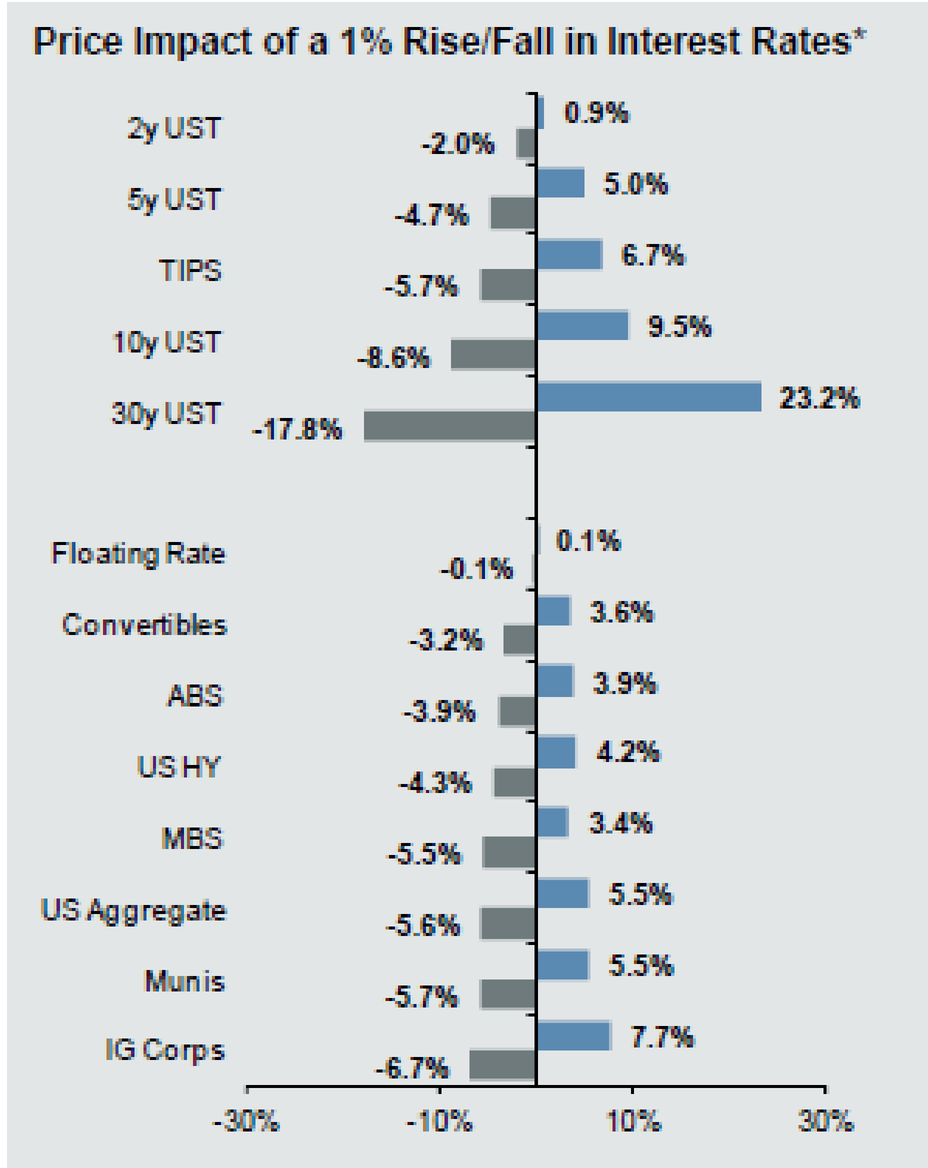


Source: IHS Global Insight

*** 2015-17 estimate - Global Insight**

Bond yields up? Bond prices down!

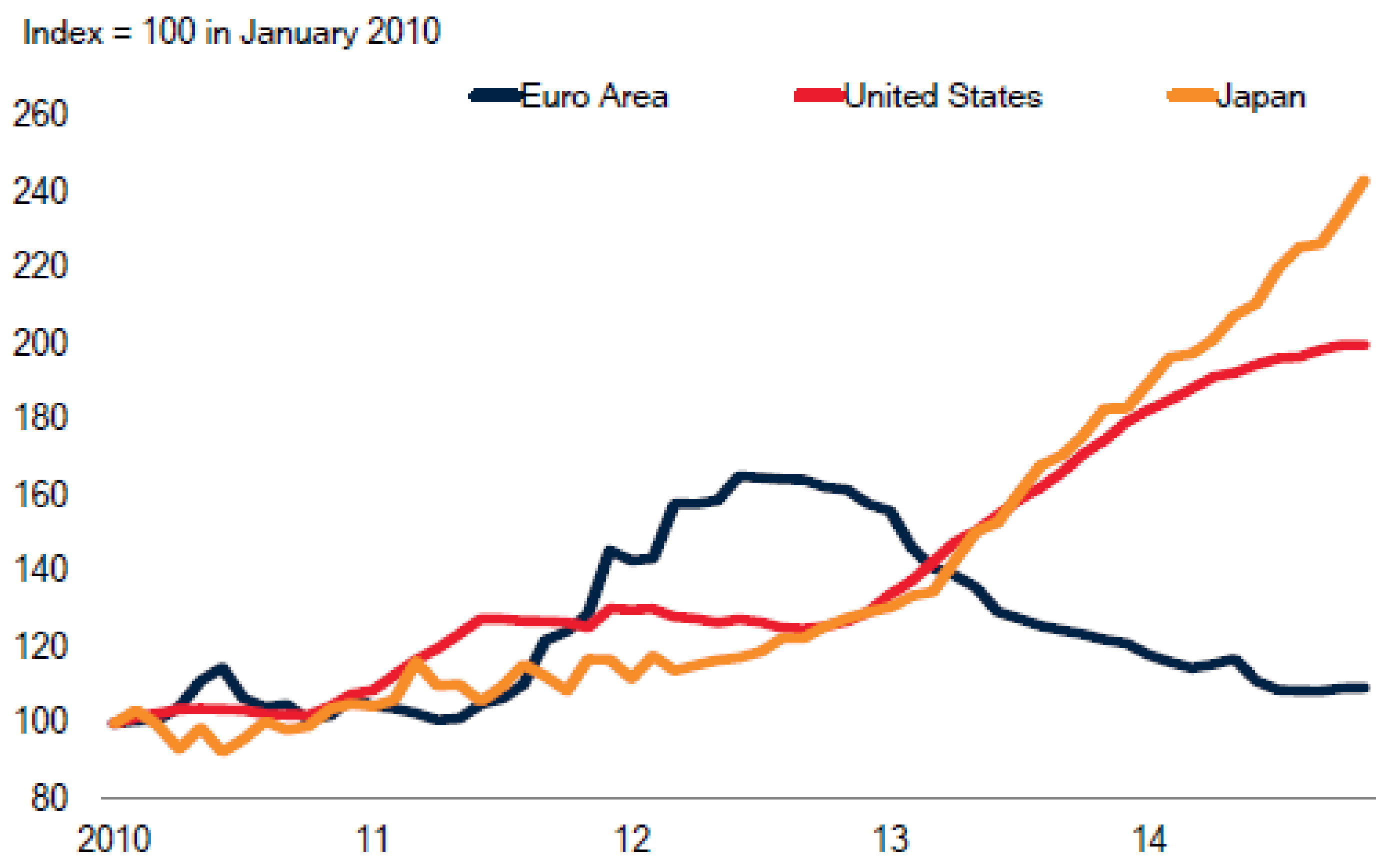
- While there is a growing expectation that the Fed will raise interest rates in mid – late 2015, there are countervailing factors that may restrain an imminent rise in interest rates.
- Bond prices generally decline when rates rise. However, the higher yields provide investors with better returns for subsequent investments within the asset class.



Source: JP Morgan

Non-US Central Bank expansion in 2015

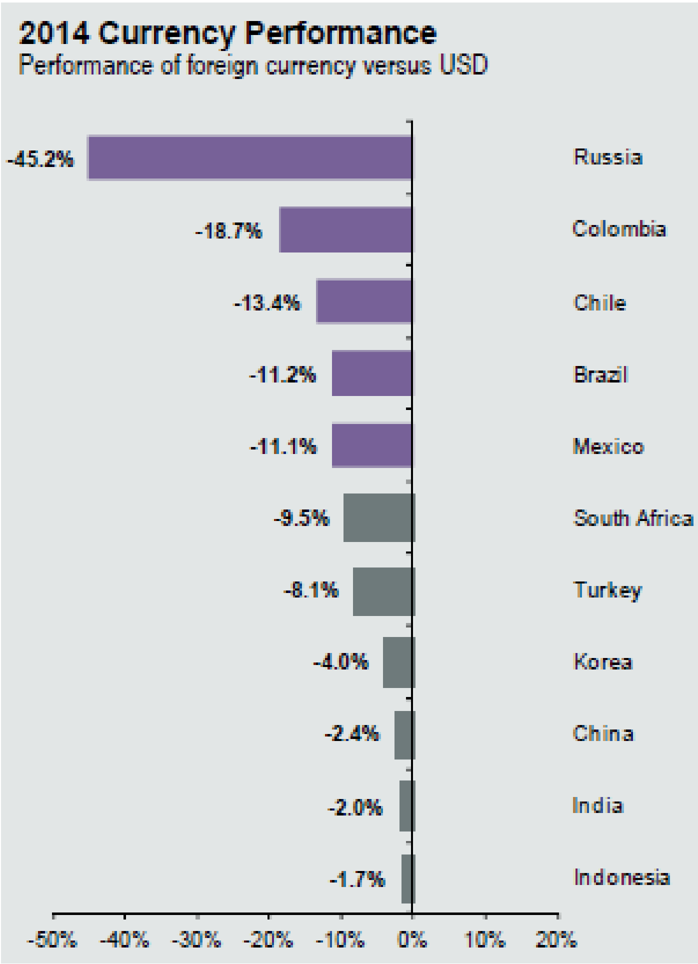
European Central Bank joins Japan in expanding its balance sheet



Sources: Dealogic, JP Morgan Chase, Barclays, Haver Analytics, and World Bank.
1. Based on latest 2014 data (foreign holdings of local bonds for China, the Philippines, and República Bolivariana de Venezuela are World Bank estimates). Foreign and foreign currency shares include non-resident holdings of all outstanding sovereign bonds.

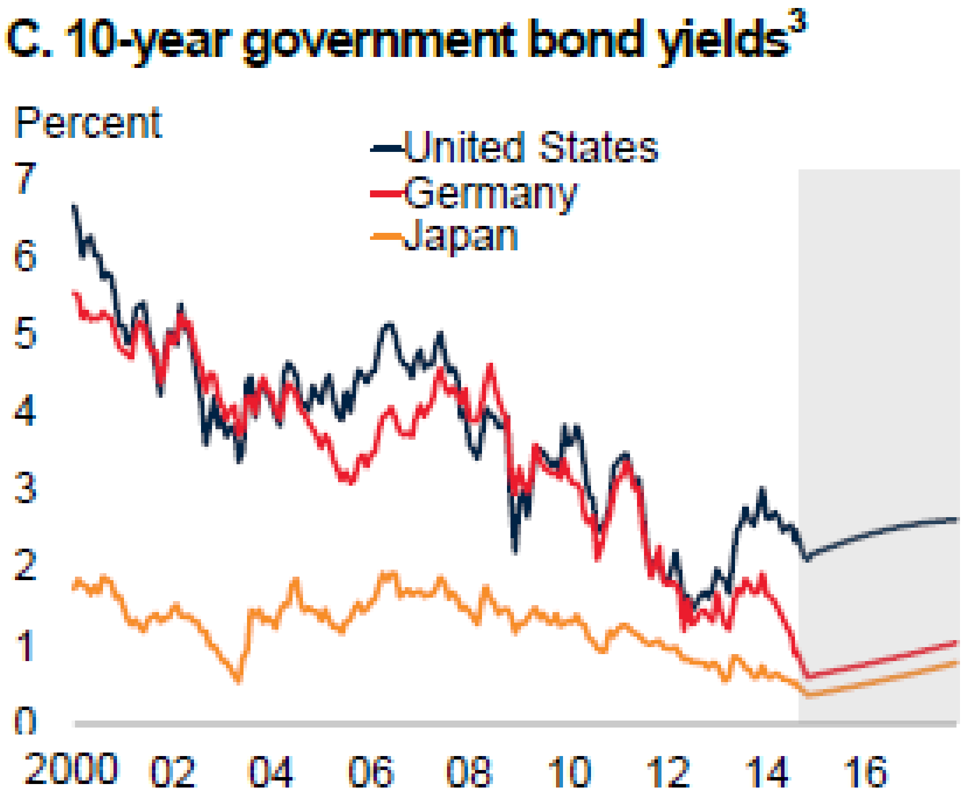
Currencies and government bond yields

Continued weakness in emerging market currencies versus the dollar during 2013-14 hurt both bond and equity returns in those markets for dollar-denominated investors.



Source: JP Morgan

Although rate rises are expected over the next two years, government bond yields in Europe and Japan are likely to stay lower than those of the US Treasuries due to continued weakness.



Sources: World Bank; Bloomberg

2015 Capital Market Expectations

- **Broad market bond returns held at 3.0%.**
  - We expect interest rates to rise, especially if the economy continues to expand and the Fed executes on its stated unemployment-rate-linked monetary policy. Bonds will suffer capital loss before higher yields kick in. We expect cash yields to move toward 3.0% and 10-year Treasury yields to reach 5% over the ten-year projection – a reversion to mean.
  - Project an upward sloping yield curve, but a very slim risk premium for bonds over cash (0.75%).
  - Cash returns nudged upward to 2.25% to reflect expected rise in Fed Funds rate.
  - Longer duration returns lowered, reflecting sharp reduction in yields in 2014.
- **Domestic Equity held at 7.60%, Non-U.S. Equity at 7.80%.**
  - US markets enjoyed robust returns, but the US economic outlook is now stronger and fundamentals remain reasonable.
  - Building equity returns from long-term fundamentals, we can build an expectation to just shy of 8%:
    - *2.5-3.5% real GDP growth, which means roughly 5-6% nominal earnings growth,*
    - *2.5 % dividend yield,*
    - *Expect something more from return on free cash flow, besides dividends (The "buyback yield" has been exceptional, one good use of all that cash), perhaps 50-100 bps,*
    - *Small premium for Non-US over Domestic, largely due to Emerging Markets.*
- **Real Estate return held at 6.15%.**
  - Reflects downward pressure on income returns at 4-5% with increased competition for investment.
  - Asset class eyed by those hungering for yield.
- **Hedge Fund return raised to 5.25%**
  - Expectations of T-bill plus 3%; reflects increase in cash.

2015 Capital Market Expectations—Return and Risk

Summary of Callan's Long-Term Capital Market Projections (2015 – 2024)

		PROJECTED RETURN			PROJECTED RISK			2014 - 2023		
Asset Class	**Index**	**1-Year Arithmetic**	**10-Year Geometric***	**Real**	**Standard Deviation**	**Sharpe Ratio**	**Projected Yield**	**10-Year Geometric***	**Standard Deviation**	**Geometric* Delta**
Equities										
Broad Domestic Equity	Russell 3000	9.15%	7.60%	5.35%	19.00%	0.363	2.00%	7.60%	19.00%	0.00%
Large Cap	S&P 500	8.90%	7.50%	5.25%	18.30%	0.363	2.20%	7.50%	18.30%	0.00%
Small/Mid Cap	Russell 2500	10.15%	7.85%	5.60%	22.95%	0.344	1.40%	7.85%	22.95%	0.00%
International Equity	MSCI World ex USA	9.25%	7.50%	5.25%	20.20%	0.347	3.00%	7.50%	20.20%	0.00%
Emerging Markets Equity	MSCI Emerging Markets	11.45%	7.90%	5.65%	27.95%	0.329	2.50%	7.90%	27.95%	0.00%
Global ex-US Equity	MSCI ACWI ex USA	9.80%	7.80%	5.55%	21.45%	0.352	2.90%	7.80%	21.45%	0.00%
Fixed Income										
Short Duration	Barclays G/C 1-3	2.40%	2.40%	0.15%	2.25%	0.067	2.80%	2.75%	2.25%	-0.35%
Domestic Fixed	Barclays Aggregate	3.05%	3.00%	0.75%	3.75%	0.213	4.00%	3.00%	3.75%	0.00%
Long Duration	Barclays Long G/C	4.10%	3.50%	1.25%	11.40%	0.162	5.50%	4.10%	11.40%	-0.60%
TIPS	Barclays TIPS	3.10%	3.00%	0.75%	5.30%	0.160	4.00%	3.00%	5.30%	0.00%
High Yield	Barclays High Yield	5.50%	5.00%	2.75%	11.10%	0.293	7.00%	5.05%	11.45%	-0.05%
Non-US Fixed	Barclays Global Aggregate ex US	2.70%	2.30%	0.05%	9.40%	0.048	3.80%	2.75%	9.40%	-0.45%
Emerging Market Debt	EMBI Global Diversified	5.10%	4.70%	2.45%	10.00%	0.285	6.40%	4.90%	10.65%	-0.20%
Other										
Real Estate	Callan Real Estate	7.35%	6.15%	3.90%	16.50%	0.309	5.00%	6.15%	16.50%	0.00%
Private Equity	TR Post Venture Cap	13.55%	8.50%	6.25%	33.05%	0.342	0.00%	8.50%	33.05%	0.00%
Hedge Funds	Callan Hedge FoF Database	5.55%	5.25%	3.00%	9.30%	0.355	0.00%	5.10%	8.85%	0.15%
Commodities	Bloomberg Commodity	4.40%	2.75%	0.50%	18.50%	0.116	2.00%	3.05%	18.25%	-0.30%
Cash Equivalents	90-Day T-Bill	2.25%	2.25%	0.00%	0.90%	0.000	2.00%	2.00%	0.90%	0.25%
Inflation	CPI-U		2.25%		1.50%			2.25%	1.50%	0.00%

** Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).*

Source: Callan Associates

2015 Capital Market Expectations—Correlation Coefficient Matrix

Key to Constructing Efficient Portfolios

		Broad	Lg Cap	Sm/Mid	Int'l Eq	Emerge	GlobxUS	Defensive	Dom Fix	Long D	TIPS	Hi Yield	NUS Fix	EMD	Real Est	Pvt Eqt	Hedge Fd	Comm	Cash Eq	Inflation
1	Broad Domestic Equity	1.000																		
2	Large Cap	0.997	1.000																	
3	Small/Mid Cap	0.965	0.940	1.000																
4	International Equity	0.852	0.850	0.820	1.000															
5	Emerging Markets Equity	0.861	0.855	0.840	0.860	1.000														
6	Global ex-US Equity	0.882	0.879	0.853	0.986	0.933	1.000													
7	Defensive	-0.240	-0.230	-0.260	-0.230	-0.280	-0.254	1.000												
8	Domestic Fixed	-0.107	-0.100	-0.125	-0.100	-0.145	-0.118	0.870	1.000											
9	Long Duration	0.096	0.099	0.082	0.108	0.069	0.099	0.530	0.909	1.000										
10	TIPS	-0.050	-0.045	-0.065	-0.045	-0.060	-0.051	0.530	0.580	0.490	1.000									
11	High Yield	0.605	0.605	0.575	0.570	0.565	0.586	-0.170	0.040	0.218	0.030	1.000								
12	Non-US Fixed	0.014	0.050	-0.100	0.060	-0.090	0.013	0.480	0.510	0.470	0.340	0.120	1.000							
13	EMD	0.587	0.590	0.550	0.530	0.550	0.553	-0.120	0.030	0.292	0.170	0.390	0.010	1.000						
14	Real Estate	0.735	0.730	0.715	0.650	0.645	0.669	-0.140	-0.020	0.214	0.005	0.540	-0.050	0.450	1.000					
15	Private Equity	0.943	0.940	0.910	0.900	0.895	0.927	-0.240	-0.180	0.081	-0.090	0.610	-0.060	0.560	0.715	1.000				
16	Hedge Funds	0.764	0.760	0.740	0.700	0.725	0.730	-0.120	0.095	0.245	0.070	0.540	-0.180	0.510	0.585	0.735	1.000			
17	Commodities	0.162	0.160	0.160	0.160	0.170	0.168	-0.220	-0.120	0.044	0.100	0.100	0.050	0.190	0.200	0.180	0.210	1.000		
18	Cash Equivalents	-0.042	-0.030	-0.080	-0.010	-0.100	-0.040	0.300	0.100	0.037	0.070	-0.110	-0.090	-0.070	-0.060	0.000	-0.070	0.070	1.000	
19	Inflation	0.161	0.150	0.190	0.190	0.170	0.190	-0.230	-0.280	-0.350	0.160	0.180	-0.150	0.040	0.180	0.180	0.310	0.400	0.050	1.000

- Relationships between asset classes is as important as standard deviation.
- To determine portfolio mixes, Callan employs mean-variance optimization.
- Return, standard deviation and correlation determine the composition of efficient asset mixes.

Source: Callan Associates

2015 Capital Market Expectations

Asset Mix Return and Risk

Asset Mix Alternatives
Optimization Set: 2015

Portfolio Component	Min	Max	Mix 1	Mix 2	Mix 3	Mix 4	Mix 5
Broad Domestic Equity	0%	100%	18%	22%	26%	30%	34%
Global ex-US Equity	0%	100%	15%	17%	21%	24%	27%
Domestic Fixed	0%	100%	39%	30%	22%	13%	4%
TIPS	0%	100%	6%	5%	3%	2%	1%
High Yield	0%	100%	5%	5%	5%	5%	5%
Real Estate	0%	100%	6%	8%	9%	10%	12%
Hedge Funds	0%	100%	7%	8%	8%	9%	9%
Private Equity	0%	100%	4%	5%	6%	7%	8%
Cash Equivalents	0%	100%	0%	0%	0%	0%	0%
Totals			100%	100%	100%	100%	100%
Projected Arithmetic Return			6.10%	6.75%	7.40%	8.00%	8.65%
10 Yr. Geometric Mean Return			5.82%	6.30%	6.74%	7.12%	7.48%
Projected Standard Deviation			9.22%	11.15%	13.11%	14.94%	16.95%
Allocation to Equity			33%	40%	47%	54%	61%
Allocation to Fixed			50%	40%	30%	20%	10%
Allocation to Alternatives			17%	20%	23%	26%	29%

- Arithmetic returns represent a single period return with no volatility
- Geometric returns incorporate expected volatility, showing the compounding rate of a portfolio.
- Fixed-income allocations decline significantly for portfolios targeting returns > 7.1%

Source: Callan Associates

Fallout of 2015 Capital Market Expectations

- **Three notable numbers:**
  - Bond yields currently less than 3% but those rates are expected to rise within the calendar year.
  - Stocks with projected returns below 8% (7%? 6%) after several very strong years or returns.
  - Volatility estimates that are higher than what investors have experienced over the last five years.

- Callan's 2015 projections reflect *optimism* about the economy, inflation, and the capital markets.

- The challenge for investors:
  - to refrain from using conservative return expectations as an excuse for taking on more risk in pursuit of return (and yield!).

- Fixed-income: How does one maintain an allocation to bonds—a prudent investor's anchor to windward—when we all KNOW they will decline in value when interest rates rise?

- We are working to finalize adjusted capital market projections to reflect ARMB's customized equity and fixed-income investment structures.

ALASKA RETIREMENT MANAGEMENT BOARD
M E M O R A N D U M

To: ARMB Trustees
From: Judy Hall
Date: February 2, 2015
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	1/22/15

Alaska Retirement Management Board
2015 Meeting Calendar

February 11 – Wednesday	Committee Meetings: Audit Legislative
February 12-13 Thursday-Friday Juneau	*Review Capital Market Assumptions *Manager Presentations
April 22 – Wednesday	Committee Meetings: Legislative
April 23-24 Thursday-Friday Anchorage	*Adopt Asset Allocation *Performance Measurement – 4th Quarter *Buck Consulting Actuary Report *GRS Actuary Certification *Review Private Equity Annual Plan *Manager Presentations
June 17 – Wednesday	Committee Meetings: Audit
June 18-19 Thursday-Friday Anchorage	*Final Actuary Report/Adopt Valuation/Contribution Rates *Performance Measurement – 1st Quarter *Manager Presentations
September 23 – Wednesday	Committee Meetings: Audit Budget Real Assets Salary Review
September 24-25 Thursday-Friday Fairbanks	*Audit Results/Assets – KPMG *Approve Budget *Performance Measurement – 2nd Quarter *Real Estate Annual Plan *Real Estate Evaluation – Townsend Group *Manager Presentations
October _____ New York City	Education Conference
October ___	Audit Committee
December 2 – Wednesday	Committee Meetings: Audit Legislative
December 3-4 Thursday-Friday Anchorage	Audit Report - KPMG Performance Measurement – 3rd Quarter Manager Review (Questionnaire) Private Equity Review *Manager Presentations