REGULAR MEETING OF THE
MONTANA BOARD OF INVESTMENTS
DEPARTMENT OF COMMERCE
2401 Colonial Drive, 3rd Floor
Helena, Montana

November 19, 2013

AGENDA

COMMITTEE MEETINGS

A. **Audit Committee** — **8:30AM**
  1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
  2. Securities litigation update
  3. Financial Audit
  4. Performance Audit

B. **Human Resource Committee** — **9:00 AM**
  1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
  2. Executive Director Comments
  3. Annual Review of Exempt Staff (Executive Session)
  4. Timing of Exempt Staff Review

C. **Loan Committee** — **10:00 AM**
  1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
  2. INTERCAP Loan Program Request – ***Decision***
  3. In-State Loan Program Request – ***Decision***

Tab 1 CALL TO ORDER – Mark Noennig, Chairman — **10:30 AM**

A. Roll Call
B. Public Comment – *Public Comment on issues with Board Jurisdiction*
C. Approval of the August and October 2013 Meeting Minutes
D. Administrative Business
  1. Audit Committee Report
  2. Human Resource Committee Report
  3. Loan Committee Report – ***Decision***
E. Comments from TRS and PERS Board members
F. Comments from Board Legislative Liaisons

Tab 2 EXECUTIVE DIRECTOR REPORTS – David Ewer — **11:00 AM**

A. Member Requests from Prior Meeting
B. Quarterly Cost Report
C. Performance Audit update
D. Securities litigation update
E. Resolution 217-Authorization of Investment Vendors
F. Resolution 218-Delegation of Authority
G. Annual Report and Financial Statements - Status
H. Governor's Letter – Public Participation
I. Custodial Bank Contract Update
J. Draft 2014 Board meeting dates
K. Draft 2014 Work plan

The Board of Investments makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in public meetings. Persons needing an accommodation must notify the Board (call 444-0001 or write to P.O. Box 200126, Helena, Montana 59620) no later than three days prior to the meeting to allow adequate time to make needed arrangements.

Tab 3 MONTANA LOAN PROGRAM – Herb Kulow **11:30 AM**

A. Commercial and Residential Portfolios Report

Tab 4 BOND PROGRAM – Louise Welsh **11:45 AM**

A. INTERCAP
   1. Activity Report
   2. Staff Approved Loans Report
   3. Loan Committee Approved Loans Report

LUNCH SERVED **12:00 PM**

Tab 5 REVIEW ASSET ALLOCATION RANGES – Cliff Sheets, CFA, CIO and R.V. Kuhns and Associates **12:30 PM**

A. Asset Allocation Ranges – Staff Recommendations
B. Revised Pension Investment Policy Statement – ***Decision***

BREAK **2:00 PM**

QUARTERLY PERFORMANCE REPORT – R.V. Kuhns and Associates **2:15 PM**

Tab 6 INVESTMENT ACTIVITIES/REPORTS – Cliff Sheets, CFA, CIO **2:45 PM**

C. Retirement System Asset Allocation Report
D. Public Equity Pool Reports – **Rande Muffick, CFA**
   1. Domestic Equity (MDEP)
   2. International Equity (MTIP)
E. Fixed Income Reports
   1. Bond Pools (RFBP and TFIP) – **Nathan Sax, CFA**
   2. Below Investment Grade Holdings
   3. Short-term (STIP) and Other Fixed Income Portfolios – **Richard Cooley, CFA**
F. Private Asset Pool Reports – **Ethan Hurley, CAIA**
   1. Private Equity Pool (MPEP)
   2. Real Estate Pool (MTRP)
G. Investment Policy Statements – **Cliff Sheets, CFA, CIO**
   1. University of Montana (UM) – Revision - ***Decision***

RECAP OF STAFF TO DO LIST AND ADJOURNMENT – Mark Noennig, Chairman **4:45 PM**

Appendix

A. Annual Board Meeting Schedule
B. 24 Month Work Plan
C. Acronym Index
D. Terminology List
E. Public Market Manager Evaluation Policy
F. Educational Resources

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Return to Agenda

Call to Order

MONTANA BOARD OF INVESTMENTS
DEPARTMENT OF COMMERCE
2401 Colonial Drive, 3rd Floor
Helena, Montana

MINUTES OF THE MEETING
August 20 & 21, 2013

BOARD MEMBERS PRESENT:
Mark Noennig, Chairman
Quinton Nyman
Gary Buchanan
Sheena Wilson
Karl Englund
Jack Prothero
Marilyn Ryan
Jon Satre

BOARD MEMBER ABSENT:
Kathy Bessette

LEGISLATIVE LIAISONS PRESENT:
Senator Dave Lewis (August 21 only)
Representative Kelly McCarthy

STAFF PRESENT:
Jason Brent, CFA, Alternative Investments Analyst
Polly Boutin, Accountant
Geri Burton, Deputy Director
Richard Cooley, CFA, Portfolio Manager, Fixed Income/STIP
Dana Chapman, Board Secretary
Roberta Diaz, Accountant
David Ewer, Executive Director
Julie Flynn, Bond Program Officer
Tim House, Investment Operations Chief
Ethan Hurley, CAIA, Portfolio Manager, Alternative Equities
Ed Kelly, Alternative Investments Analyst
Teri Kolnik, CFA, Alternative Investments Analyst
Herb Kulow, MCMB, Portfolio Manager, In-State Loan Program
April Madden, Accountant
Gayle Moon, CPA, Financial Manager
Rande Muffick, CFA, Portfolio Manager, Public Equities
Mary Noack, Network Administrator
Chris Phillips, CFA, Investment Staff
Jon Putnam, CFA, FRM, Fixed Income Investment Analyst
John Romasko, CFA, CPA, Fixed Income Investment Analyst
Nathan Sax, CFA, Portfolio Manager, Fixed Income
Clifford A. Sheets, CFA, Chief Investment Officer
Steve Strong, Equity Investment Analyst
Louise Welsh, Senior Bond Program Officer
Dan Zarling, CFA, Director of Research

GUESTS:
Mark Higgins, CFA, R.V. Kuhns & Associates
Becky Gratsinger, CFA, R.V. Kuhns & Associates
John Harrington, Legislative Audit Division
Ross Johnson, Legislative Audit Division
Jenny Chambers, Department of Environmental Quality
Kathleen Coleman, Department of Justice
Mark Barry, Montana State Fund
Robert Collins, Department of Justice

Ryan Evans, Office of Budget and Program Planning
Julie Feldman, Department of Administration
Carolyn Fox, Department of Justice
Shawn Graham, Office of Budget and Program Planning
Russell Hill, Department of Administration
Laura Humberger, MSU Financial Services
Bill Kirley, Department of Environmental Quality
Anna Miller, Department of Natural Resources and Conservation
Christopher Watson, Office of Budget and Program Planning
Dan Villa, Office of Budget and Program Planning
Matt Gouras, Associated Press
Sharon Grubbs

CALL TO ORDER

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 10:49 AM. As noted above, a quorum of Board Members was present. Board Member Kathy Bessette was absent. Legislative Liaison Senator Dave Lewis was absent August 20 and present August 21.

Chairman Noennig asked for public comment. There was no public comment.

Chairman Noennig called for any corrections or revisions to the Board minutes from the May 29, 2013 meeting. Member Sheena Wilson noted a correction on page 3 of a missing zero in an INTERCAP loan amount.

> Board Member Karl Englund made a Motion to approve the Minutes of the Board meeting on May 29, 2013, as corrected. Member Wilson seconded the Motion. The Motion carried 8-0.

ADMINISTRATIVE BUSINESS

Human Resource Committee Report

Human Resource Committee Chairman Karl Englund stated the Committee had no business and did not meet.

Audit Committee Report

Audit Committee Chair Jon Satre reported on five items discussed at the Committee Meeting held prior to the regular Board Meeting.

The completed FY13 Internal Controls Review was presented by Galusha Higgins & Galusha, PC, to the Committee. The Review included 11 recommendations which were each addressed and incorporated by staff into the final Review report. The Committee approved the Internal Controls Review and staff responses.

Revisions to the Internal Control Policy were presented by staff and were approved by the Committee.

The FY13 Legislative Financial Audit is ongoing. The Audit team was on site for two weeks in June and tested 50 transaction items covering the prior 11 month period. The team will be on site again in October.

The Performance Audit status was reported to the Committee by Mr. Angus Maciver of the Legislative Audit Division. Mr. Maciver advised the next step is for Audit staff to meet next month with Executive Director Ewer and staff to discuss which issues are likely to come up during the audit process.

A recent adverse appellate court ruling has impacted the ongoing Pfizer lawsuit necessitating MBOI rejoining the larger class action going forward.

Loan Committee Report
The Loan Committee met prior to the Board meeting. Ms. Louise Welsh presented a loan request from the Department of Natural Resources and Conservation (DNRC) for an INTERCAP loan in the amount of $3 million. The loan will be in the form of a Bond Anticipation Note (BAN) and will be used either to refinance existing borrower debt in the Renewable Resource Grant & Loan (RRGL) Program or for rehabilitation of water and sewer facilities approved by the 2013 Legislature in House Bill 8. The loan will have a 2 year term.

Mr. Herb Kulow presented a participation (80%) loan request for $3,508,000 from Pheasant Run Apartments I, LLC for construction of a 58 unit apartment complex in Sidney.

Committee Chair Jack Prothero reported both loans were within the Loan Committee's approval limits and were approved.

Board Education Highlights – IFE Market Makers 2013 Conference
Board Members Marilyn Ryan, Sheena Wilson and Kathy Bessette attended the IFE Conference in June held at Dana Point, California. Member Wilson shared the high points of the conference. The most impressive speaker was the head of Global and International Equities at Schroders, Ms. Virginie Maisonneuve, CFA. Her overall message was that innovative ideas and addressing long term sustainability are the keys to improving the economy. Demographics, energy, water, climate and aging are all important considerations as we move forward. The participation of young, engaged presenters at the conference is a positive indicator when looking to future economic challenges.

Member Ryan agreed that Ms. Maisonneuve was the most dynamic speaker on the program. We are in an era where continued exploration of new options is necessary to open up investment opportunities and active management must consider the impact on resources. Looking ahead, innovation will lead the world out of the current slump; the U.S. leading the way, followed by Japan and Asia, with Europe lagging behind.

Legislative Liaisons Comments
Representative Kelly McCarthy reported nothing new on the legislative front; however, he added the infrastructure challenges in eastern Montana did not see much progress in the last session which was a disappointment. He responded to possible concerns regarding higher risks associated with loans under the Veterans' Home Loan Program by reporting the VA loans at First Interstate Bank have the highest performance level, so he is not concerned that there may be increased risk.

Member Gary Buchanan asked Representative McCarthy how the legislature would be fixing the problems with the pension legislation which was passed.

Representative McCarthy stated the legislature was aware that changes in the Guaranteed Annual Benefit Adjustment (GABA) would be problematic; however, the pension fix bill would not have passed without the GABA triggers. The issue is headed to the courts.

EXECUTIVE DIRECTOR'S REPORT

Overall Comments
Executive Director David Ewer presented his executive director's memo. Per member requests from the last meeting, R.V. Kuhns will show the fiscal year to date figures for private equity (MPEP) as well as for the other asset classes.

The quarterly cost report is included in the Board packet. Total fiscal year costs and a budget update will be presented later in the agenda.

Following the recommendation of legal counsel, MBOI is rejoining the larger general class action in the Pfizer lawsuit due to an unexpected federal appellate ruling regarding changes in the statute of limitations.

The custodial bank contract for State Street Bank of Boston expires at the end of October, 2014. The Department of Administration, Board staff and R.V. Kuhns and Associates will soon begin working on the required Request for Proposal (RFP). Review and selection are expected to be completed by summer 2014.

Member Jon Satre inquired how many banks qualify as competition to State Street Bank, given the unique and complex services required by MBOI.

Executive Director Ewer advised there are a few. Northern Trust, BNY Mellon and JPMorgan Chase are all contenders. Ms. Becky Gratsinger added it is a very small universe of banks that are able to handle the task. Mr. Ewer stated State Street Bank has been renewed the maximum time periods allowed by contract, requiring the issuance of a new RFP at the expiration of the current contract extension. Ms. Gratsinger added the selection process can vary, although often a staff recommendation is brought before a Board, with or without a finalist presentation. R.V. Kuhns will be assisting in the process and all four qualified banks are expected to respond to the RFP.

Executive Director Ewer presented the newly compiled glossary of terms commonly used at the Board.

Staff recommends cancelling the scheduled one day October Board Meeting. The items assigned on the Work Plan for the October meeting have been completed at other meetings. Chairman Noennig concurred, since Board agenda items and educational presentations are up to date and on schedule. The next Board meeting will be November 19 and 20, in Helena.

MONTANA LOAN PROGRAMS

In-State Loan Program

Mr. Herb Kulow presented an update of the commercial and residential loan program portfolios. As of June 30, 2013 the commercial loan program had 122 outstanding loans totaling $110,397,710; down $24,706,743 from a year ago and down approximately $82,500,000 since 2007. There were 10 reservations as of June 30, 2013 totaling $25,063,704 and three committed loans totaling $2,414,217. There is one past due loan, with a $634,111 balance. No other loans are past due as of June 30, 2013.

The residential loan program has 347 loans totaling $14,849,085, as of June 30, 2013, a decrease of $5,269,216 since June 2012. There are 12 loans past due totaling $664,438 or 4.47% of the total portfolio. Seven loans or 2.70% of the portfolio, were past due 90 days or greater, of which five loans were guaranteed, representing $337,743 or 2.27% of the portfolio and two loans are conventional financing totaling $92,729 or 0.62%.

The Veterans' Home Loan Mortgage Program has grown to 68 loans totaling $11,782,153 as of June 30, 2013 and 21 outstanding reservations totaling $4,017,701. The current portfolio yield is 1.41%. The current interest rate for new reservations is 2.50%. Net yield to MBOI is 1.75% after deducting the Board of Housing (BOH) service and administration fees of .375 each. The Board of Housing is receptive to lowering fees charged to MBOI. The Program requires a down payment in the amount of $2,500, therefore the potential for future problem loans exists; however, any loan overdue past 30 days requires the bank to repurchase the loan.

BOND PROGRAM REPORTS

Activity Report

Ms. Louise Welsh reviewed the quarterly Activity Summary Report and presented the staff approved loans and the Annual INTERCAP Loan Detail Report.

Member Satre observed on the detail report that state agencies now account for 12.56% of the outstanding loan total compared to 23.49% for the fiscal year ending June 30, 2012.

Ms. Welsh advised the state agency reductions in total were due to Governor Schweitzer placing a freeze on the purchasing of state replacement vehicles for the Montana Department of Transportation and a large loan prepayment made by the Department of Justice.

Staff approved loans are listed below:

Borrower:	Choteau County District Hospital dba Missouri River Medical Center (Fort Benton)
Purpose:	Purchase imaging, lab and patient equipment
Staff Approval Date:	April 10, 2013
Board Loan Amount:	$ 31,491
Other Funding Sources:	$ 0
Total Project Cost:	$ 31,491
Term:	5 years

Borrower:	Eureka Fire Service Area
Purpose:	Purchase a new water tender
Staff Approval Date:	April 10, 2013
Board Loan Amount:	$ 100,000
Other Funding Sources:	$ 110,000
Total Project Cost:	$ 210,000
Term:	4 years

Borrower:	Ravalli County
Purpose:	Refinance County Parks land/building loan
Staff Approval Date:	April 16, 2013
Board Loan Amount:	$ 267,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 267,000
Term:	15 years

Borrower:	City and County of Butte-Silver Bow
Purpose:	Purchase an asphalt crusher
Staff Approval Date:	April 17, 2013
Board Loan Amount:	$ 700,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 710,000
Term:	10 years

Borrower:	City and County of Butte-Silver Bow
Purpose:	Purchase a fire rescue unit
Staff Approval Date:	April 17, 2013
Board Loan Amount:	$ 175,613
Other Funding Sources:	$ 0
Total Project Cost:	$ 175,613
Term:	4 years

Borrower:	Lockwood Rural Fire District #8 (Billings)
Purpose:	Purchase an ambulance
Staff Approval Date:	April 24, 2013
Board Loan Amount:	$ 170,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 170,000
Term:	7 years

Borrower:	Valley County
Purpose:	Construct county airport hangar
Staff Approval Date:	April 24, 2013
Board Loan Amount:	$ 400,000
Other Funding Sources:	$ 100,000
Total Project Cost:	$ 500,000
Term:	15 years

Borrower:	Columbus Rural Fire District #3
Purpose:	Purchase a new wild land fire engine
Staff Approval Date:	April 25, 2013
Board Loan Amount:	$ 140,000
Other Funding Sources:	$ 20,000
Total Project Cost:	$ 160,000
Term:	10 years

Borrower:	Lone Rock School District #13 (Stevensville)
Purpose:	Purchase a new phone system
Staff Approval Date:	May 3, 2013
Board Loan Amount:	$ 30,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 30,000
Term:	10 years

Borrower:	Stillwater County/Stillwater County Solid Waste District
Purpose:	Purchase a roll-off truck
Staff Approval Date:	May 2, 2013
Board Loan Amount:	$ 165,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 165,000
Term:	15 years

Borrower:	Choteau County Hospital District dba Missouri River Medical Center (Fort Benton)
Purpose:	Purchase Medical Management Software
Staff Approval Date:	May 7, 2013
Board Loan Amount:	$ 203,900
Other Funding Sources:	$ 0
Total Project Cost:	$ 203,900
Term:	2 years

Borrower:	Fisher River Valley Fire Service Area (Libby)
Purpose:	Purchase a new fire engine
Staff Approval Date	May 9, 2013
Board Loan Amount:	$ 70,000
Other Funding Sources:	$ 20,000
Total Project Cost:	$ 90,000
Term:	10 years

Borrower:	Powder River County
Purpose:	Purchase a gravel crusher
Staff Approval Date	May 15, 2013
Board Loan Amount:	$ 800,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 800,000
Term:	10 years

Borrower:	Custer County School District #1 (Miles City)
Purpose:	Repair/expand Lincoln Elementary School
Staff Approval Date	May 16,2013
Board Loan Amount:	$ 1,000,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 1,000,000
Term:	5 years

Borrower:	Shields Valley School Districts #J12-5 (Wilsall and Clyde Park)
Purpose:	Replace boiler
Staff Approval Date	May 21, 2013
Board Loan Amount:	$ 197,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 197,000
Term:	5 years

Borrower:	Frenchtown Rural Fire District
Purpose:	Purchase a new fire truck
Staff Approval Date	May 23, 2013
Board Loan Amount:	$ 34,000
Other Funding Sources:	$ 16,000
Total Project Cost:	$ 50,000
Term:	3 years

Borrower:	Hamilton School District #3
Purpose:	Replace boiler/remodel at Daly Elementary School
Staff Approval Date	June 6, 2013
Board Loan Amount:	$ 350,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 350,000
Term:	15 years

CONSULTANT PRESENTATION – ASSET ALLOCATION INTRODUCTION

R.V. Kuhns & Associates – Ms. Becky Gratsinger, CFA and Mr. Mark Higgins, CFA
Mr. Mark Higgins and Ms. Becky Gratsinger presented the Asset Allocation Introduction. The 10-year annualized total fund returns compared to the public fund universe of 77 funds at December 31, 2012, shows that on a gross of fees basis, the MBOI returned 7.41%, which is just shy of the 7.75% actuarial assumed rate of return and slightly below the fund median of 7.69%. Ms. Becky Gratsinger added the MBOI 5-year return of 2.75% reflects the impact of the financial crisis, but there has been a lot of improvement over the last five years.

Actuarial Assumed Rate of Return

The median actuarial assumption rate, which is based on 68 survey respondents, was 7.75% as of December 31, 2012. In addition, 74% of survey respondents used an assumption rate of 7.75% or below. Finally, 97.5% of respondents reported being significantly underfunded.

Asset Allocation

MBOI has more U.S. equities and less global investments in comparison to other funds in the universe with assets of $1-5 billion. Alternative and real estate holdings are higher than the universe by about 1%. Responding to a question from Member Karl Englund, Ms. Gratsinger stated historical trends over time are evaluated. For instance international, emerging global and fixed income assets have all grown over time.

Ms. Gratsinger reviewed the objectives of different asset classes. Of the broad spectrum of assets to choose from, cash is yielding very low returns but provides liquidity, fixed income provides the anchor of a portfolio with moderate risk and return, and domestic equity comes with a fair amount of risk and volatility but is expected to produce higher returns. Alternatives and international equities provide diversification with a bit more volatility. Private equity and real estate are limited by liquidity constraints, but provide diversification from traditional assets. Ms. Gratsinger noted that asset allocation drives returns, and has a much greater impact than manager selection on long term fund performance.

Ms. Gratsinger explained that analysis using Mean Variance Optimization (MVO) which helps determine maximum returns while minimizing risk, are usually done every 2-3 years, although it is becoming more common to conduct them annually. She stated that asset allocation structure should be revisited annually to see if adjustments are needed. She also noted that while models, such as MVO, are valuable tools, there are no perfect models and all must be informed with qualitative judgment. The last formal asset liability study was completed two years ago.

Mr. Cliff Sheets reminded the Board members that the work plan has a review of the asset allocation policy ranges scheduled for the November Board meeting. The MVO will be run based on R.V. Kuhn's data and presented to the Board. Executive Director Ewer noted asset allocation is on the schedule twice a year, once as an educational presentation, and again as a formal review which will be at the November Board meeting. Staff will present recommended changes, if any, for Board consideration at that time.

Responding to a question from Member Buchanan, Ms. Gratsinger stated that data for June 30, 2013 were not used in the survey as they were not available yet, but it is important to note while data from all periods is looked at, the longest time period is the most useful. The unproductive decade impacts all of the data. She also noted all data is gross of fees, as net of fees data are not available for the universe and fees vary widely from fund to fund.

Mr. Cliff Sheets added time perspective is critical. The rally was robust and the unproductive years have been left behind; three to four years ago, figures were zero to negative, but looking at the longest time frame, returns over the past 19 years are at 7.46%. As of July 31, 2013, that number jumps to 7.59% due to the market rally. Even 19 years is a short time period from an actuarial standpoint and short term figures tend to be volatile.

NON-PENSION LONG TERM INVESTMENT CLIENTS ACTIVITIES/REPORTS

General Session – Executive Director David Ewer

Executive Director David Ewer introduced staff's presentation on Separate Account Fixed Income Investing, detailing how MBOI manages money for the state's many trusts and various funds. Invited guests from the various state agencies were in attendance.

Mr. Ewer introduced Dan Villa, Budget Director for Governor Steve Bullock. Mr. Villa stated the Budget Office manages a collective $2 billion general fund and a roughly $12 million operating budget, along with overseeing about 12,000 state employees who are covered in one way or another under the state pension systems, the state's health care funds or self-insured funds, and also under the state Worker's Compensation system. Mr. Villa introduced Mr. Ryan Evans, Finance Manager at the Budget Office, who is responsible for the balance sheet; Mr. Shawn Graham, Operations Manager and Mr. Chris Watson, a new analyst overseeing the natural resource budget. Mr. Villa stated he is very pleased with the Board and all the hard work on the PERS and TRS pension fixes, which could not have been accomplished without the Board's hard work.

Member Buchanan asked Mr. Villa about the pension bills passed at the end of the legislative session.

Mr. Villa responded there are a couple of different issues, the 1% employee/employer contribution and the reduction in the Guaranteed Annual Benefit Adjustment (GABA) which is expected to be challenged in court. Mr. Villa believes the GABA language will be struck down as it is guaranteed by contract, but that the 1% Employee/Employer metric will remain in place.

Member Englund asked Mr. Villa if there were things the Board could be doing better to improve the relationship with the Budget Office.

Mr. Villa responded given the recent major pension overhaul, a little time for the dust to settle is in order. Given some time, a review of any adjustment to the assumption rate can be addressed.

Mr. Ewer next introduced Ms. Carol Fox, Restoration Chief and Mr. Rob Collins, Supervising Attorney General, with the Department of Justice. Ms. Fox commended MBOI for the great returns and particularly thanked Mr. John Romasko who assisted with decisions regarding recent separations into subaccounts. Mr. Collins added they started out with just $5 million in the 1990's to file litigation against ASARCO, and received settlements in 1999 and again in 2008, all funds which had to be managed. There are many different accounts covering different sites such as the Clark Fork River and Butte. Working with initial settlement grants, programs were set up to serve the different entities and have been working off of the interest most of the time since. Mr. Collins added Arco has settled, and the Exxon Oil spill is still a pending suit.

Ms. Jenny Chambers, Remediation Division Administrator and Mr. Bill Kirley, Attorney Specialist with the Montana Department of Environmental Quality were introduced. Ms. Chambers stated litigation was undertaken to facilitate restoration needs. Funds for remediation restoration have been well invested, and with more money available, progress can move forward on more projects such as Streamside Tailings, Montana Pole, Upper Blackfoot and Abandoned Mines.

Mr. Ewer introduced Ms. Anna Miller, Bureau Chief of the Department of Natural Resources and Conservation (DNRC). Ms. Miller stated as the conservator of the state's natural resources and a touchstone with local governments, the Department manages $40-70 million worth of water and wastewater projects each year. Ms. Miller commended staff members Ms. Louise Welsh, Deputy Director Geri Burton and Ms. Julie Flynn, all of whom have been very helpful implementing funds for the various projects. Current projects include eastern Montana wastewater treatment, projects with the cities of Glendive and Laurel and a drinking water project in Great Falls. Projects are funded by Coal Severance Tax Fund bonds which generate interest. There have been no defaults.

Mr. Ewer introduced Ms. Julie Feldman, Accounting Acting Administrator, and Mr. Russ Hill, Health Care and Benefits Division Administrator, from the Department of Administration. He also introduced Mr. Mark Barry, Corporate Support Vice President of Montana State Fund, noting that State Fund comprises approximately 10% of MBOI's invested funds.

Ms. Feldman stated the comprehensive financial report for all agencies is made up of a considerable amount of information provided by MBOI. The Treasury Unit has daily contact with MBOI through the warrant writer units, as well as ACH cash management of the General Fund.

Mr. Mark Barry, who has been Chief Financial Officer of State Fund since 1994, stated they insure 26,000 businesses across the state and have $1.3 billion under investment with MBOI. Staff meets on a quarterly basis with Mr. Sheets and Mr. Cooley to review portfolio activity and any other issues.

Mr. Russ Hill explained the self-funded health care pool has $150 million per year in expenditures. The underwriting process depends on how well costs are calculated and how well the funds are invested. Division personnel meet quarterly with Mr. Cooley, and Mr. Cooley serves on the advisory board.

Ms. Laura Humberger, Associate Vice President of MSU Financial Services, commended Ms. Louise Welsh, Deputy Director Geri Burton, Ms. Gayle Moon and Ms. April Madden for all of their assistance. MSU has $15 million in the Trust Fund Investment Pool (TFIP) and $120 million in the Short Term Investment Pool (STIP). They are looking into more medium term investments.

Separate Accounts Fixed Income Presentation – Mr. Cliff Sheets, CFA, CIO, Mr. Richard Cooley, CFA and Mr. John Romasko, CFA, CPA

Mr. John Romasko detailed the four different categories of separate accounts:

- Permanent funds are constitutionally or legislatively mandated funds where only interest is dispersed, the principal is retained. The Coal Tax Trust Fund is the main permanent fund.
- Insurance funds are perpetual, but balances fluctuate; Montana State Fund is the main insurance fund.
- Expendable funds are created for a special project with a finite end of when the fund will be depleted and can vary in duration from very short to very long. Expendable funds require a reasonable estimate of cash flow needs, but cash flow needs are also subject to revision. Most expendable funds are pollution mitigation funds such as the Upper Clark Fork Fund. The most recently created fund is the East Helena Restoration Fund.

- Operating funds provide liquidity needs for operation expenses, such as the Treasurer's Fund.

Liquidity balances fluctuate significantly; the type of fund determines how the funds are allocated.

Mr. Romasko added insurance funds function to match client needs; expendable funds allocate to the fund needs. All funds have STIP for liquidity and operating funds contain almost entirely STIP.

Executive Director Ewer added the individual fund investment policy statements set the guidelines followed by staff for the investments of each fund.

Mr. Rich Cooley reviewed the different types of fixed income investments. STIP is the default fund for investments not otherwise allocated, securities are invested by client preferences and increase yield, the Trust Fund Investment Pool (TFIP) is broadly diversified and offers more yield. Client cash flow requirements, risk tolerance and client preferences or constraints are all considered to best meet the needs of clients when investing.

<u>Fixed Income Management Review – Mr. Cliff Sheets, CFA, CIO, Mr. Nathan Sax, CFA, Mr. Richard Cooley, CFA,</u>
Mr. Cliff Sheets introduced the topic and the fixed income team, and noted Mr. John Romasko and Mr. Jon Putnam also work with Mr. Sax and Mr. Cooley in managing all the fixed income assets, and each has responsibility for some separate accounts. Mr. Sheets began by describing the fixed income asset class in general. Fixed income encompasses a broad array of security types which can be thought of as representing a set of future cash flows. This cash flow is more certain and typically less volatile than those offered by equity assets.

As of fiscal year end, MBOI had $7.64 billion in fixed income assets, roughly half of the total assets. Fixed income is held primarily in two large internal bond pools, Montana State Fund, externally managed specialty funds and STIP. Fixed income management is a core competency and MBOI has the expertise to manage the assets and choose outside managers. Internally managed assets account for 90% of the $7.64 billion total.

Mr. Nathan Sax detailed the objectives of fixed income as generating income and total return, providing diversification with less volatility than stocks and providing liquidity with ease of sale to raise cash when needed. Mr. Sax noted the fixed income benchmark, the Barclays Aggregate, has changed considerably since 2008. Treasuries are up from 25.1% to 36.5%; corporates have increased from 17.7% to 21.47% and securitized mortgage backed securities decreased from 43.7% to 31.5%.

Responding to a question from Member Englund, Mr. Sax noted all non-core assets are externally managed except in cases where an asset has been downgraded since purchase. Core fixed income is managed internally with a risk constrained process to manage risk and volatility. The internal management philosophy is to diversify and limit risk; the Core Internal Bond Portfolio (CIBP) has been less volatile in recent years. MBOI holdings comprise a different mix than the index, and only investment grade assets are purchased for the internally-managed portfolios. The investment grade index is used as a benchmark for the internal portfolios, rather than a hybrid index. In response to regulation and capital constraints, broker dealers no longer provide very much liquidity. Having liquidity within our fixed income holdings provides flexibility in pension rebalancing or shifts in strategy and provides necessary cash for benefit needs when the other markets are stressed.

The fixed income team meets weekly and monthly strategy sessions are held with the team which Mr. Dan Zarling and Mr. Sheets attend. A consensus approach is used to make decisions and the analysts are engaged in the strategy and portfolio management.

Fixed income resources include Wilshire Axiom, a portfolio analytics system; the external managers also offer their insights; and several credit research sources are utilized. Internally, accounting clears trades and fixes any trade errors. The internally managed costs are low when compared to other asset classes.

Short Term Investment Pool Review (STIP), Mr. Richard Cooley, CFA
Mr. Rich Cooley gave an overview of the Short Term Investment Pool (STIP). The three objectives of STIP are preservation of principal, liquidity and return. The total value of STIP has been consistent at approximately $2.6 billion and performance is competitive compared to money market funds. Trades for STIP settle the same day. Mr. Putnam and Mr. Romasko act as back up when Mr. Cooley is out of the office. The STIP reserve account was implemented to provide an offset to prevent any realized losses. Currently $17,000 is added per day to the reserve out of a portion of income, and realized gains on sales are also added to the reserve. Mr. Sheets added fixed income provides relative stability and diversification for the pensions, and is managed efficiently.

Mr. Cooley explained the reserve fund was started due to a realized loss. Previously there was no reserve fund and credit issues do come up occasionally, so having a reserve fund is a good idea. Mr. Sheets further explained a reserve fund acts as a safety valve. There is no size limit on the reserve and one has not been established in policy as the reserve is not yet viewed as too large. Placing a size limit in the STIP investment policy statement will be revisited at a later date as the fund grows larger. If yield becomes less competitive, contributions to the fund can also be scaled back.

Executive Director Ewer added the Board discussed the reserve fund at the April Board meeting and it was decided to continue growing the fund for the near term. The fund was created only after a loss, and it provides more flexibility going forward in dealing with any future problems.

The daily STIP statement and yield is posted on the web site daily. Ms. Gayle Moon added the participants also receive electronic statements.

CEM BENCHMARKING ANALYSIS

CEM Benchmarking Presentation – Mr. Mike Heale
Mr. Mike Heale presented the CEM Benchmarking Results report for the 3-year period ending December 31, 2012. He first thanked staff for providing all the needed MBOI data to compile the report. CEM data collected covers $2.7 trillion in invested assets. The U.S. Public Fund Universe utilized for the MBOI report is compiled of 58 public funds representing $1.8 trillion in assets. Cost analysis is based on a custom peer group with funds sized from $3.4 to $14 billion. The report compares cost and return performance relative to peers by measuring policy return, value added, costs and whether the costs paid are adding net value. The MBOI 3-year return of 10.0% was above the U.S. median of 9.3% and above the peer median of 9.1%.

MBOI policy return, or investing in the index according to policy mix, was 9.3%, compared with U.S. public median at 8.8% and the peer median at 8.6%. The net value added of zero, after adjusting for fees, outperformed the median which had a net value added of -0.2% for the U.S. public universe and -0.1% for peers.

Policy returns for the 3-year period reflect a favorable return for private equity at 11.0% and a relatively poor return of 3.3% for hedge funds. MBOI's overweight position in private equity and no assets invested in hedge funds proved beneficial over the period. Mr. Heale noted policy returns are based on policy mix, not the actual portfolio holdings. Mr. Mark Higgins added, however, that the policy mix of MBOI reflects closely the actual asset allocation of the portfolio. Mr. Heale stated the net gain of zero was positive compared to peers who were -(0.10) percentage points. He added over a 22 year time frame, active management does generate net added value, although modest at 0.18 percentage points for all US funds.

Asset management costs for 2012 were 61.5 basis points, or $48.0 million, down from 68.7 basis points in 2010. The benchmark cost, or the cost using the median costs incurred by peers for similar services, based on actual asset mix was 65.3 basis points, compared to actual costs of 61.5 basis points, resulting in a cost savings of 3.8 basis points. Utilizing less external active management than peers, 55% versus peers at 69%, accounts for some of the cost reduction as external management costs more. MBOI paid slightly more than peers for external manager costs for some services; however, differences in implementation style saved 4.3 basis points relative to peers. In addition to the comparison of asset management costs, the analysis of costs for oversight, custodial, and consulting showed a net cost savings of 0.9 basis points, or $713,000 vs. peers.

MBOI benefits by having fewer investments in fund-of-funds which will continue to decrease over time. Peers generally are paying less in fees for U.S. large cap stocks, and higher fees on private equity investments. Mr. Rande Muffick added holdings for large cap active stocks include 130/30 managers which are higher cost. Mr. Ewer clarified the CEM data is calculated on calendar years while MBOI reporting is on a fiscal year basis ending June 30. Mr. Heale added the implementation style changes have had an impact on overall costs but next year should show a larger impact. Mr. Sheets stated the restructuring of domestic stocks which increased passive management occurred in May, and in October for international holdings, so the complete effect is not reflected in one year's timeframe. The expectation is that net savings will be realized once the full restructuring is complete.

Mr. Heale summarized some of the key market trends. Total U.S. fund costs have increased from 39 to 60 basis points over the last 10 years due to changes in asset mix such as an increase in more expensive asset classes, including hedge funds and private equity and changes in style. The style trend towards external active management, which is the most expensive by far, has increased from 66% to 73% over time. Asset mix is the most important decision for fund management and value added net of costs is possible, but is modest with no large margin of error. U.S. funds over a period of 22 years averaged net added value of 18 basis points. Large funds generally fare better than small funds and realize substantial savings when more assets are managed internally due to lower costs. For instance a $20 billion fund will do better than a $1 billion fund. Investments in emerging market equities, small cap equities, and private equity have been rewarded given the high absolute returns for these asset classes over this 22 year timeframe.

Responding to a question from Member Buchanan regarding pension fund management costs for 2012 of $48.0 million, Executive Director David Ewer clarified that amount is the total for the pension fund management costs only, and the CEM report is for the calendar year. The MBOI annual report details custodial, management and operational fees for each fiscal year ending June 30 for all funds managed by MBOI. Ms. Gayle Moon explained generally accepted accounting principles (GAAP) dictate how financial statements are presented in the annual report.

Member Buchanan inquired about the possibility of including CEM cost data into the annual report. Executive Director Ewer noted that the narrative section of the annual report offers more flexibility of format for such inclusion than the financial section and he will discuss with staff the possibility of including the CEM results in some manner in the narrative section.

Responding to a question from Member Karl Englund whether MBOI is meeting the benchmarks over this time period when calculating actual returns minus actual costs, Mr. Heale stated yes, we are.

Mr. Mark Higgins added that while private equity is an expensive asset to invest in, the consensus is it has been a valuable investment for MBOI.

The meeting adjourned for the day at 4:34 PM.

Chairman Mark Noennig called the meeting to order at 8:30 AM and called for public comment. There was no public comment.

Public Employees' Retirement System and Teachers' Retirement System Update
Member Marilyn Ryan reported the Teachers' Retirement Board has narrowed down the search for the new executive director to two applicants to replace Mr. Dave Senn who is retiring. The two remaining applicants are Ms. Denise Pizzini and Mr. Shawn Graham. The TRS Board meets this coming Friday to make a final decision. Several applicants were interviewed. Two new Board members have been appointed to the TRS Board, Ms. Janice Muller and Ms. Lisa Cordingley. Mr. Scott Dubbs was reappointed. The computer system which runs all benefits payments is being replaced. The process will take two years to complete.

Member Sheena Wilson reported on the Public Employees' Retirement Board. The legislature enacted a new post-tax Roth IRA program in deferred comp. PERS is also replacing its computer system. The long process of digitizing the system will take years to complete. The system must be capable of accurately determining any estimates or buy backs for members. The process of implementing the pension bill, HB454, is underway.

FY 2013 Budget Review - Executive Director David Ewer and Deputy Director Geri Burton
Mr. Ewer presented a summary of the budget. The way we account for and manage costs includes several line items. For the "investment program" costs, the legislature sets a maximum charge within the internal service fund to the investment pools to cover operational costs and working capital within permissible levels. The Bond Program Office is a little different and is funded by the Board's enterprise fund through lending rates.

Secondly the legislature allows the MBOI, the Department of Administration (DOA) and the Treasurer as designated users of the custodial banking services. The state's depository bank is U.S. Bank in downtown Helena; when the state writes warrants, or checks, they are drawn on U.S. Bank. The custodial bank, State Street Bank of Boston (SSB), handles the cash flow through MBOI staff and staff at the DOA. Custodial banking is not paid under HB2 but is determined by statutory authority set by the legislature. Custodial fees are paid through a perpetual expenditure granted by statute, which can be repealed by statute as well. Custodial fees are paid by charges against the Board's investment pools and All Other Funds.

External management fee costs are a very important function and closely monitored by the Board. They are within the purview of the Board, and currently run about $40 million per year. Operational costs are budgeted at about $5 million per year, custodial services are budgeted at about $1.6 million per year. Custodial service costs are somewhat offset by our share of security lending income through State Street Bank. The Bond Program Office is not in HB2 but is paid through the enterprise fund granted by statutory authority. Participation in the Bond Program is voluntary and income depends on the gains, or the difference between revenues and costs, the spread between the users of INTERCAP and our costs. We are allowed statutorily to pay for bond interest under law.

The main driver of the budget is the director of the Department of Commerce (Commerce) who submits it to the governor's budget director. MBOI's final budget was very close to the budget estimate. The budget is on a two year cycle; however, the budget status is reported to the Board annually at the August Board meeting.

Member Jack Prothero asked if there were any items which stood out on the budget.

Deputy Director Geri Burton explained the personal services line item included non-budgeted compensated absences; the new executive director came on board and all his accumulated leave balance was attributed to the enterprise fund, rather than split between the internal service fund and the enterprise. Other contracted services in the FY14 budget are attributed to hiring Jackson & Walker, with the approval of the budget office, to handle private equity and certain real estate investment legal services. Jackson & Walker is a Houston firm and the bulk of their clients are investors such as MBOI, working specifically in private asset transactions, which are very complex.

Luxan & Murfitt, LLP, continues to handle some of the Board's private asset legal services; however, Jackson & Walker offer more specialized experience in this area when needed.

Research services are a large budget item and fluctuate from year to year. Increases are due to the timing of invoices and increases in the cost of services. Credit Sights is up due to service add-ons we have implemented. Other increases are due to the regular yearly increases.

The Department of Commerce charges its divisions, including MBOI, a fee for human resource and legal services and increased this fee from 12.95% to 14.65% for FY14 and FY15.

Member Buchanan asked if the reduction in total fees from $46 million in FY12 to $43.4 million in FY13 is due in part to the transition from active to passively managed stocks. Executive Director Ewer stated yes, going to more passive management has saved costs.

Representative Kelly McCarthy advised he was on the legislative committee that granted the Department of Commerce the service fee increase. Ms. Burton added in the past when the Department of Commerce collected fees in excess of expenses, they would eliminate the fee for a month, or more if needed, but the decrease was not based on use.

CONSULTANT REPORT

R.V. Kuhns & Associates – Mr. Mark Higgins, CFA

Mr. Mark Higgins presented a market overview for the quarter ending June 30, 2013. Returns for the second quarter were mixed. Real gross domestic product (GDP) grew at 1.5% accompanied by moderate employment growth. Strong housing and shrinking deficits as a result of sequestration and added tax revenues helped, but the Fed is hinting at cutting back on quantitative easing which may continue to put upward pressure on interest rates. Fixed income has seen losses for the quarter but the S&P 500 was up 3%. MBOI's overweight in U.S. equities was beneficial; emerging markets were down almost 8% and China remains a concern. MBOI's slight overweight in emerging markets, while good over the long term, has hurt in the short term. Private equity has continued to perform well on a relative basis, but has trailed (as expected) behind public equities in a strong bull market.

Overall Fund Performance

Over the previous 5 and 7 year period, the retirement plan has trailed the index, but is improving in more recent periods. In addition, relative to peers, the fund has performed well, ranking in the 35th percentile over 7 years and 43rd percentile over 5 years. Mr. Higgins also noted that performance relative to benchmarks has trailed due to the lagging nature of private equity. Compared to the peer median in terms of risk versus relative return, taking less risk with higher return is the ideal outcome. Over 5 years, MBOI accomplished this and achieved a higher return with less risk. Over the 10 year time frame, MBOI had less risk but also less return; however, the intent is to continue to improve this over time as underperforming years extend beyond 10 years.

Asset Class-Level Performance

Looking at the asset class pools, domestic and international equity one year returns look good relative to the benchmark. Three year returns are slightly above for international equities and slightly below for domestic equities versus the benchmark. The move to passive management is expected to continue to be beneficial over the long term, and while the one year period is too soon to offer a definitive verdict on these efforts, the trend is positive. Mr. Higgins noted that small and mid-cap managers have recently been added to the portfolio, and the process is underway for international managers.

Member Buchanan asked that if passive management has been a positive move, would it be beneficial to increase the passive management even more. Mr. Higgins responded international assets are less efficient so hiring managers can be beneficial. He also noted that passive management is not an option for real estate and private equity. Outside managers have been utilized well for fixed income in the Retirement Fund Bond Pool (RFBP) and Trust Funds Investment Pool (TFIB) and both ranked favorably to peers in the top quartile.

Mr. Higgins noted that a conference call was conducted with Post Advisory due to concerns with the main partner retiring from the company. Mr. Nathan Sax has also followed up and both teams are comfortable with the changes.

The Montana Real Estate Pool (MTRP) is trailing the benchmark by 359 basis points over 7 years which raises concern. Timing is an issue, and the inclusion of timber is a consideration. Market entry in 2007 was not the best starting point and the effects are still being felt. That said, Mr. Higgins noted that focusing in on real estate for a potential Board member educational session could be helpful.

Private equity is benchmarked against the S&P 1500 plus 4% and is underperforming the benchmark for the first time for the 7 and 10 year periods. Mr. Higgins reminded the Board members that private equity tends to lag the benchmark, and the strong bull market has had a substantial impact on relative returns. Responding to a question from Member Buchanan, Mr. Higgins clarified, with such a strong bull market over the short term, even short term returns have a material impact on the long term returns. Mr. Cliff Sheets added the strong returns of the past quarter had an impact on the 10 year numbers. He also noted that private equity is tracked against the public equity returns and we now have 19 year returns; private equity has returned 16% versus 8% for domestic equity so the asset class is earning its way. Mr. Higgins noted that while fees are high and returns may not have reached the 4% premium of the benchmark, private equity has earned millions relative to public equity over the 19 year asset history.

Member Karl Englund noted at each Board meeting there is discussion regarding the private equity benchmark of S&P 1500 plus 4%. Mr. Sheets stated there is no appropriate private equity benchmark, so it must be approximated using Private Edge and the public equity benchmark. The asset class has a lot of unique characteristics. CEM uses our benchmark as it was a better fit. The need for a timely benchmark to measure quarterly returns when using peer comparisons is not a viable option due to the lag in returns.

Executive Director Ewer added discussion explaining the justification for how the benchmarks are used and determined is beneficial for the Board. For instance why has STIP never underperformed? The fund has a longer duration than the corresponding benchmark to increase yield, and in bonds we have consistently over-weighted corporates, so we always realize a difference from the benchmark. Each benchmark carries nuanced aspects and it is important to understand the characteristics of each and how they compare to our holdings.

Senator Dave Lewis inquired if when reporting to the legislative caucus leadership if it is fair to say MBOI is middle of the road when analyzing returns. Mr. Higgins noted MBOI has slightly better performance than peers, net of fees and the CEM report showed slightly lower costs with slightly better returns. Mr. Higgins concluded by offering some thoughts on the market outlook going forward. Global markets are hitting some uncertainty and markets tend to get more volatile with the threat of higher interest rates which could impact markets adversely.

INVESTMENT ACTIVITIES/REPORTS

Retirement System Asset Allocation Report, Mr. Cliff Sheets, CFA

Mr. Sheets presented the asset allocation report detailing changes in allocation and performance for the fiscal year and quarter ending June 30, 2013. For the calendar quarter, pension funds returned just 1%. Returns on private equity, real estate, and domestic equities were positive, while fixed income and international returns were negative. The allocation to total equity was unchanged; domestic allocation increased by 0.2% due to strong returns, international equity shrank by (0.3)%, and the allocation to private equity went up by 0.1% Sales of $40 million were made from private equity during the quarter to remove excess liquidity due to net positive distributions received from the underlying funds. The allocation to fixed income has since slipped below the 22.1% allocation on June 30 due to strong public equity returns diluting fixed income. Cash flow for pensions remains negative on balance overall, however the new pension laws in place should help mitigate the imbalance.

Member Jon Satre asked if a $15-20 million negative cash flow is normal. Mr. Sheets advised that cash outflow for all nine pension plans for fiscal year 2012 averaged $6.6 million monthly, while fiscal year 2013 averaged $10.5 million per month, so a substantial increase. Sales from pools must be made to cover cash needs for the payment of benefits, rather than holding excess cash given its low return; new contributions coming in should help.

Fiscal year 2013 was a period of strong returns in all asset classes except fixed income. Public equity returns were dramatic and total equity allocation was up to 67.4% compared to 66.1% a year ago. The allocations to international and domestic equities are up over last fiscal year; the private equity allocation was reduced due to the dilution effect of strong public equity performance and private equity pool sales. The private equity pool had weaker relative returns compared to public stocks, but still a strong 12.55% for the fiscal year. The real estate allocation was up a meaningful amount, 1.1%, over a year ago and had a return of 8.55% for the fiscal year. Fixed income allocation dipped from 24.9% a year ago to 22.1% at fiscal yearend, nearing the low end of the approved range; returns were weak but still positive at 1.6%. Allocation to the Retirement Fund Bond Pool (RFBP) will be increased if it remains below the range, as occurred subsequent to quarter-end. Overall, all asset class returns paled in comparison to domestic stocks.

Allocation comparisons versus public fund peers having assets in the $3-20 billion range with at least 30% equity are comparable for overall public equity exposure. We are at a 38.3% domestic equity allocation which is very similar to the peer median, though our allocation is lower than peers in international equity by 2.5% which has helped our relative performance. Fixed income holdings are comparable to the peer median. Only 26 peer plans have real estate exposure and here we are above the median, likely in the 2nd quartile. We are also above the median for private equity.

Mr. Sheets stated it is important to take comfort in how our plan is doing in both comparisons to peers and benchmarks. Looking at the 5-year returns, while we underperformed the custom benchmark by 42 basis points, it is important to remember the custom benchmark used for private equity is rolled up into the custom benchmark. This effect alone had a notable impact and accounts for more than the 42 basis points shortfall. Overall, benchmark comparisons are good and getting better. Costs do matter and we are efficient and improving; costs are driven by asset allocation. The returns corroborate that the changes we've made have been beneficial. We have made institutional improvements over the last seven years and it is showing in a revealing way. More diversification has helped us during a time when the market volatility has been severe; on a risk adjusted basis we are doing well. Pension returns were in a big hole, yet now the actuarial effect of smoothing is positive. Staff and the Board should be commended.

Chairman Mark Noennig added the agencies presenting today showed appreciation for MBOI and were very complimentary to staff. Thank you to staff.

Private Asset Pool Reviews

Montana Private Equity Pool (MPEP)

Mr. Ethan Hurley presented the private equity report for the quarter ended March 31, 2013. New commitments totaled $190 million in the past year. Cash flow was positive through fiscal year end; the 4th quarter of 2011 was the only negative cash flow quarter in recent history. Total exposure by industry is broadly diversified; we leave individual underlying investment decisions up to manager discretion. Geographic exposure is mostly within North America. We continue to focus on direct investments and generally avoid fund of funds investments, which will continue to decrease over time. Responding to a question from Member Buchanan, Mr. Hurley confirmed fees for fund of funds have decreased over last year from 110 basis points to 98 basis points.

Executive Director Ewer explained when the Board started investing in private equity many years ago, it hired fund of funds managers mostly, and there is still a place for them when direct investment is not feasible. Mr. Hurley added there is a need, mostly in venture capital and for investments in Asia; we did re-up with Axiom Asia, a fund of funds manager. So in niche markets, there is a place for them. The snapshot of returns for the overall portfolio looks good at a net multiple 1.46 times since inception in 1988, so for every dollar invested, $1.46 has been returned.

Responding to a request from Member Buchanan to add the 10 year return numbers, Mr. Hurley stated they will be included going forward.

Member Jack Prothero asked if there were any notable changes in the portfolio. Mr. Hurley said no, most returns were in line with last quarter.

Two new commitments were made since the last Board meeting; $20 million to Trilantic Capital Partners V (North America), LP, a top quartile manager for us in the last fund and $15 million to Southern Capital Fund III, LP a small SE Asian fund, a control oriented manager. Southern Capital is an attractive fund and the general partners made large contributions of their own.

Fund Name	Vintage	Subclass	Sector	Amount	Date
Trilantic Capital Partners V (North America), LP	2013	Buyout	Diversified	$20M	5/22/13
Southern Capital Fund III, LP	2013	Buyout	Diversified	$15M	6/7/13

Member Jon Satre asked Mr. Hurley how he became aware of the new fund.

Mr. Hurley stated he was aware of Southern Capital and had been tracking them for the past year or so. The fund was highly over-subscribed but we managed to secure an allocation.

Mr. Hurley clarified how we receive payment from private equity investments. Before general partners get any profits they must pay us all expenses and capital back, then typically a minimum percent to us called a preferred return, then they can take a share of any profits. Looking at the State Street Bank comparison for private equity, MBOI has outperformed, paying in less and receiving more back when compared to peers.

Montana Real Estate Pool (MTRP)

Mr. Ethan Hurley presented the real estate report for the quarter ended March 31, 2013. An additional commitment of $40 million was made in TIAA-CREF Asset Management Core Property Fund, LP, since the last Board meeting. They are already included in the Trust Fund Investment Pool and the Montana State Fund portfolio. They are a known entity among our core funds and they were able to put equity to work right away. For the fiscal year, we committed $130M to a total of 5 real estate managers: two new managers and three existing managers. Real estate is recovering slowly; vintage funds are not distributing a lot of capital, so withdrawals are still outpacing contributions.

Fund Name	Vintage	Subclass	Sector	Amount	Date
TIAA-CREF Asset Management Core Property Fund, LP	N/A	Core	Diverse	$40M	5/1/13

Geographically the pool is diverse, and as with private equity we leave it up to the managers to make individual investment decisions. Property type is also well diversified; timber has been a nice addition. Core timber adds value and so far the numbers have been positive. Responding to a request from Member Buchanan, Mr. Hurley noted the 7 year numbers will be added to the report.

Partnership Focus List
There were no changes to the MPEP or MTRP Focus lists since the last Board Meeting, although some additions may be coming.

Montana Domestic Equity Pool (MDEP)
Mr. Rande Muffick reported on the Montana Domestic Equity Pool (MDEP) for the fiscal year ending June 30, 2013. Public equity returns have been very good for the fiscal year and the market as a whole has done well. The Federal Reserve has been signaling possible easing. The market has done well on all style and cap sizes overall with mid and small cap leading the way. The Montana Domestic Equity Pool (MDEP) had a good year of relative performance; active managers performed well and the overweight of mid and small cap added value as they did better than large cap stocks. Our managers did well overall; six managers outperformed and three underperformed the benchmarks for the fiscal year. Of the four new managers added May 1, 2013, three, Iridian, Nicholas and Met West are outperforming so far, which would be expected in an up market. The fourth, ING, a downside manager characteristically, is slightly down, but actually did better than we expected. In the brief two month history since they were hired, all managers are performing as expected and added diversification. At some point in the future we will look at adding more funds with these new managers to further complement our old managers and add further diversification; for now we will let things settle in with the recently added managers.

Montana International Equity Pool (MTIP)
Mr. Rande Muffick reported international markets also performed well for the fiscal year, however not as well as the domestic markets due to struggles with the emerging markets and continued concern over China. Emerging markets, some with double digits negative returns for the second quarter, dragged markets down for the fiscal year, particularly value stocks. The Montana International Investment Pool (MTIP) outperformed the benchmark by 59 basis points for the fiscal year ending June 30, 2013. Active management did add value for the fiscal year.

All three style buckets did well and outperformed for the fiscal year. The manager search for emerging markets and international small cap is in the final stages. We are looking at three managers and legal is looking over the contracts. Emerging market manager interviews will be done after the final review of contracts is completed and is the final phase of the MTIP restructuring. Both emerging market and small cap manager decisions should be made by this fall. Emerging market exposure was added in the second quarter; the all country world index also has some exposure. Emerging markets do carry risk, but now is a good time to add on. The Board has approved the index change which will occur when the new small cap managers are funded. The MSCI ACWI IMI Index is better suited to the portfolio changes that will be made in the near future.

Member Karl England asked why invest in emerging markets if it adds volatility.
Mr. Muffick responded we will invest close to the benchmark and when looking at the 20 year history of emerging markets in the CEM report, emerging markets outperform. Additionally, emerging markets are less correlated to U.S. stocks.

Mr. Sheets noted the emerging market component can be volatile, but broad country diversification is desired and over time the higher relative growth of these economies will help their markets do well. Mr. Sheets added a cautionary note regarding the performance of public stocks; they are not expected to continue as they have with such magnificent returns. Over the long term, expect 8%. The S&P 1500 has been up 18% annually over the last three years which will not continue uninterrupted. As the Federal Reserve backs off, there could be market setbacks, especially in the latter part of the year. The economy continues to grow and is fundamentally positive. The question is can the market survive an interest rate increase? Policy uncertainty may also affect the market going forward, although at this point we are not expecting a major setback.

Public Equity External Manager Watch List

Mr. Muffick stated there were no changes to the watch list this quarter. Hansberger and Alliance Bernstein have both shown improvement but are still lagging a bit.

PUBLIC EQUITIES MANAGER WATCH LIST

August 2013

Manager	Style Bucket	Reason	$ Invested (mil)	Inclusion Date
Alliance Bernstein	International – LC Value	Performance	$99.3	August 2012
Hansberger	International – LC Growth	Performance	$103.0	May 2013

Fixed Income

Mr. Nathan Sax presented the Fixed Income overview and strategy. Interest rates rose dramatically during the last quarter due to comments by Federal Reserve Chairman Ben Bernanke that the Fed would start tapering back on monthly Treasury and mortgage backed securities purchases.

For the fiscal year ending June 30, 2013, Reams Asset Management outperformed the universal index and their performance over three years puts them in the 34th percentile vs. similar managers; Artio Global also outperformed their benchmark, by 120 basis points, and is in the 44th percentile over three years; Post Advisory outperformed over three years and is in the 15th percentile for this timeframe and Neuberger Berman outperformed as well and is in the 37th percentile over three years.

The Core Internal Bond Pool (CIBP) and Trust Fund Bond Pool (TFBP) had relative good performance for the fiscal year. The Retirement Fund Bond Pool (RFBP) has outperformed the benchmark 196 basis points per year over the past three years and the Trust Fund Investment Pool (TFIP) has outperformed the benchmark by 190 basis points over the past three years. Staff manages 72% of the fixed income assets internally. The investment grade fixed income benchmark returned -(69) basis points over the fiscal year but high yield had a strong return of over 9% which helped our overall fixed income performance. It's difficult to predict changes in interest rates in the next year. There were no changes in the below investment grade holdings.

Member Jack Prothero asked if problem bonds were generally sold off. Mr. Sax responded since we do not have a "must sell" policy on downgraded bonds, each is looked at on a case by case basis. Mr. Sheets stated if it's a hopeless case the bond is sold, but if there is a possibility for recovery, even downgrades are sometimes held. Mr. Sax noted that Post Advisory was added to the watch list due to the upcoming retirement of Larry Post as head of the company for over 45 years. They have lost three key personnel with the exit of Mr. Post and while performance remains good, we want to be sure staff will stabilize after his departure so are watching them closely.

Short Term Investment Pool (STIP), State Fund Insurance and Treasurer's Fund Report

Mr. Richard Cooley presented the STIP report for the quarter ending June 30, 2013. Money markets remain unchanged, while credit conditions have improved; spreads are more compressed and rates are lower in the 30-60 day range. The net daily yield on STIP is 18-19 basis points. The portfolio has the built in advantage of buying longer duration securities. The STIP is well diversified and the fund balance remains at $2.6 billion, the same as last quarter.

The Treasurer's Fund was valued at $1.27 billion at fiscal yearend. There was a purchase of $10 million in securities in the last quarter. Rates are gradually creeping up in the 2-3 year maturity periods.

Montana State Fund was five basis points below benchmark for the quarter, but outperformed the benchmark by 119 basis points for the fiscal year ending June 30, 2013. The portfolio has performed above the benchmark by 110 basis points for the past five years. The purchase of real estate which was approved at the February 2013 Board meeting was completed on July 1, 2013, completing the $70 million allocation. S&P 500 Index fund units were sold to bring the equity holdings allocation down below the client preference of 12%. Due to strong equity markets and weak bond performance, equities allocation had increased to 11.65% at fiscal yearend.

Recap and To Do List
Staff will consider including the CEM report findings in the narrative of the Board's annual report;
R. V. Kuhns will have another educational presentation for an upcoming Board meeting;
Private equity reports will include the ten year performance data;
Member Satre asked if R.V. Kuhns would review past terminated managers; and
Member Buchanan asked for the Human Resource Committee to consider reviewing exempt staff performance in August when year-end performance is also reviewed.

ADJOURNMENT

There being no further business, the meeting was adjourned at 12:07 PM.

Next Meeting
The next regular meeting of the Board will be Tuesday November 19, 2013 in Helena, Montana.

Complete copies of all reports presented to the Board are on file with the Board of Investments.

BOARD OF INVESTMENTS

APPROVE: ______________________________
Mark Noennig, Chairman

ATTEST: ______________________________
David Ewer, Executive Director

DATE: ______________________________

MBOI:drc
10/21/13

MONTANA BOARD OF INVESTMENTS
DEPARTMENT OF COMMERCE
2401 Colonial Drive, 3rd Floor
Helena, Montana

SPECIAL CONFERENCE CALL BOARD MEETING
MINUTES OF THE MEETING
October 9, 2013
2:00 PM

BOARD MEMBERS PRESENT:
Mark Noennig, Chairman
Gary Buchanan
Karl Englund
Quinton Nyman
Jack Prothero
Jon Satre
Sheena Wilson
Marilyn Ryan

BOARD MEMBERS ABSENT
Kathy Bessette

LEGISLATIVE LIAISONS PRESENT:
Senator Dave Lewis
Representative Kelly McCarthy

STAFF PRESENT

Geri Burton, Deputy Director
Dana Chapman, Board Secretary
David Ewer, Executive Director
Julie Flynn, Bond Program Officer
Louise Welsh, Senior Bond Program Officer

CALL TO ORDER

Chairman Mark Noennig called the Special Conference Call Meeting of the Board of Investments (Board) to order at 2:03 PM in the Small Conference Room on the third floor at 2401 Colonial Drive, Helena, Montana. As noted above, a quorum of Board Members was present.

ADMINISTRATIVE BUSINESS

Public Comment
Chairman Noennig called for public comment on Board issues. There was no public comment.

QUALIFIED ZONE ACADEMY BONDS – Resolution No. 232 & No. 233

Qualified Zone Academy Bonds (QZAB) – Kalispell Elementary and High School Districts – Geri Burton, Deputy Director
Deputy Director Geri Burton presented two proposed Qualified Zone Academy Bonds submitted for Board Approval. Kalispell Elementary School District and Kalispell High School District are requesting the Board to purchase its $619,800 and $1,587,228, respectively, limited obligation school district bonds by issuing two QZABs in the same amounts.

The federal QZAB program was created by Congress in 1997 to promote public/private partnerships exclusively for schools. To qualify, 35% of a school's student population has to be eligible for the free or reduced cost lunch program. Additionally, a private entity must contribute at least 10% of the bond proceeds to the project. The QZAB rate is set by the U.S. Treasury Department on the date an agreement to purchase the QZAB is signed. Today that rate is 5.11%. Congress allocates the amount of QZABs that can be issued and $400 million has been allocated each year for 2012 and 2013. The allocations are divided among each state based on populations of individuals below the poverty line. Montana's allocation for 2012 and 2013 is $1.179 million per year. Montana's Office of Public Instruction (OPI) must authorize a school district's request for a QZAB allocation. Most capital projects, except new construction, qualify as acceptable expenditures under the program.

The Montana QZAB Program is administered under the Municipal Finance Consolidation Act. Since inception, the Board has issued eight QZABs totaling over $10 million.

The Kalispell Elementary School District is requesting the Board to purchase its $619,800 limited obligation school district bonds by issuing a QZAB in the same amount. Bond proceeds will be used to finance costs for various energy conservation measures at several elementary schools and the middle school.

The Kalispell High School District is requesting the Board to purchase its $1,587,228 limited obligation school district bonds by issuing a QZAB in the same amount. Bond proceeds will be used for various energy conservation measures at Flathead High School.

The private entity providing the 10% commitment is Ameresco, a provider of cost-saving energy management, energy efficiency and renewable energy solutions. The contribution will be in the form of in-kind energy auditing and engineering services in the amount of $61,980 for the Elementary School District and $158,723 for the High School District. The term of both QZABs will be 15 fiscal years.

The districts worked with D. A. Davidson & Co. to coordinate the purchase of the QZABs; Rocky Mountain Bank of Kalispell will purchase the QZABs.

Ms. Burton added that the School Districts have been working with Ameresco for over a year to complete an investment grade energy audit. Ameresco completed a review of the school facilities and determined energy cost measures that could generate energy savings and efficiency. MBOI required the Montana Department of Environmental Quality (DEQ) to conduct a review of the Ameresco audit. DEQ's analysis agreed with Ameresco's cost savings estimates.

Ms. Burton clarified some of the questions brought up by Board members:

- State law authorizes school districts to issue and sell their bonds directly to MBOI, without a vote of the District voters. The School Districts did not require additional funds from the voters; therefore, it was determined to request MBOI to purchase their bonds;
- MBOI acts as a conduit (pass-through) issuer and is not financially liable for the bonds;
- Rocky Mountain Bank of Kalispell is the purchaser of the bonds and as such they are required to do their due diligence; in addition, they receive the allowable tax credits associated with the bonds;
- The resolutions create a debt service sinking fund which the school districts pay into annually. MBOI pledges the sinking funds to Rocky Mountain Bank of Kalispell, the holder of the QZAB bonds.

Staff is recommending approval of Resolution Nos. 232 and 233; authorizing staff to proceed and complete the QZAB financings and authorizing staff to execute the bond closing documents.

Board Member Marilyn Ryan made a motion to approve Resolution No. 232 relating to up to $619,800 Municipal Finance Consolidation Act Bonds, Taxable Series 2013 (Qualified Zone Academy Bonds/Tax Credit Bonds – Kalispell Elementary School District project); authorizing and approving the sale and issuance thereof and pledges and assignments of the board's interest in the school district bonds and payments thereunder, fixing the form and details, providing for the payment and security and authorizing the execution and delivery of certain documents in connection therewith. Board Member Sheena Wilson seconded. The motion passed unanimously.

Board Member Karl Englund made a motion to approve Resolution No. 233 relating to up to $1,587,228 Municipal Finance Consolidation Act Bonds, Taxable Series 2013 (Qualified Zone Academy Bonds/Tax Credit Bonds – Kalispell High School District project); authorizing and approving the sale and issuance thereof and pledges and assignments of the board's interest in the school district bonds and payments thereunder, fixing the form and details, providing for the payment and security and authorizing the execution and delivery of certain documents in connection therewith. Board Member Jon Satre seconded. The motion passed unanimously.

Board member Marilyn Ryan thanked Deputy Director Geri Burton for all of her time and hard work.

ADJOURNMENT

There being no further business, Chairman Mark Noennig adjourned the meeting at 2:25 PM.

Next Meeting

The next regular meeting of the Board will be November 19, 2013 in Helena, Montana.

Complete copies of all reports presented to the Board are on file with the Board of Investments.

BOARD OF INVESTMENTS

APPROVE:______________________________
Mark Noennig, Chairman

ATTEST:______________________________
David Ewer, Executive Director

DATE: ______________________________

MBOI:drc
10/21/13

Return to Agenda

Executive Director Reports

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: David Ewer, Executive Director

Date: November 19, 2013

Subject: Executive Director Reports

1. Member or Other Requests from August's Prior Meeting
   a. As per Member Buchanan's request, the Human Resource Committee will discuss timing of exempt staff pay, their performance review and investment returns; this may be taken up at the November meeting.
   b. As per Member Buchanan's request, staff will consider including CEM Benchmarking data in the annual report. Staff will reference the CEM executive analysis in the body of the 2013 Annual Report, not in the financial section, and include it under a new Appendix C.
   c. 10-year Private Equity IRR return data should be available for inclusion in the Private Edge Report for the Board's February meeting.
   d. 7-year real estate return data as calculated by State Street Private Edge will be included in the Staff report on the real estate pool holdings beginning in the Board's February Meeting.
   e. As per Member Satre, R.V. Kuhns will perform a "look-back" on terminated public equity managers; a report has been scheduled for the April meeting.
   f. R.V. Kuhns will prepare an education presentation on real estate and which has tentatively been scheduled for the February 2014 Board meeting.

2. Quarterly Cost Report – included in this Tab

3. Performance Audit – Verbal Update

4. Securities Litigation Update – see separate memo on this matter in this Tab

5. Resolution 217 – Authorization of Investment Vendors
   Board Governance requires staff to annually update the Board with a list of approved investment managers and broker accounts and any changes made since the last review; the update is included in this Tab.

6. Resolution 218 – Delegation of Authority
   Resolution 218 authorizes the Deputy Director to perform all functions and duties of the Executive Director if the situation, such as incapacitation requires; no action needed.

7. Annual Report and Financial Statements Status
   State law requires this report to be finalized by each December 31st and submitted to the Governor, the legislature and the public.

8. Governor's Letter – Public Participation
   A reminder as to the importance of complying with public participation and open-government requirements. The Board's agenda explicitly calls for public participation and substantive decision actions by the Board are noted in all agendas.

9. Custodial Bank Contract Update
   The proposed 2014 Work Plan calls for a request for proposal to be prepared and ready for Board review at its April meeting.

10. Draft 2014 Board Meeting Dates
    The suggested Board meeting dates, following past practices, is included. While six meetings are contemplated, the Work Plan below contemplates leaving the October meeting open for possible use or cancellation.

11. Draft 2014 Work Plan
    A key management objective remains to systematically expose Board Members to its missions, programs, and operations. The draft 2014 Work Plan is attached along with a spreadsheet reflecting the topics covered during the previous 24 months. The October meeting remains a placeholder with no scheduled items. The recommendation regarding custodial banking may require a special meeting, given the timing constraints. In 2014 we begin a second 24-month cycle for many subjects.

Management Fees (Unaudited)
for the Quarters ended September 30, 2013 and 2012

Board Fees

Pool		Q1 9/30/2013		Q1 9/30/2012		Change[1]
Retirement Funds Bond Pool (RFBP)	$	168,798	$	111,690	$	57,108
Trust Funds Investment Pool (TFIP)		111,288		73,472		37,816
Montana Domestic Equity Pool (MDEP)		153,237		97,880		55,357
Montana International Equity Pool (MTIP)		137,121		87,758		49,363
Montana Private Equity Pool (MPEP)		245,937		133,022		112,915
Montana Real Estate Pool (MTRP)		148,080		81,580		66,500
Short Term Investment Pool (STIP)		137,103		92,286		44,817
All Other Funds (AOF) Investments Managed		189,498		135,612		53,886
Total	**$**	**1,291,062**	**$**	**813,300**	**$**	**477,762**

[1] Board Fees: To maintain working capital at appropriate levels, no Board fees were charged in July 2012. This action resulted in lower fees for Q1-9/30/2012.

Custodial Bank Fees

Pool		Q1 9/30/2013		Q1 9/30/2012		Change[2]
Retirement Funds Bond Pool (RFBP)	$	49,446	$	56,703	$	(7,257)
Trust Funds Investment Pool (TFIP)		29,364		39,519		(10,155)
Montana Domestic Equity Pool (MDEP)		152,457		133,731		18,726
Montana International Equity Pool (MTIP)		34,236		31,317		2,919
Montana Private Equity Pool (MPEP)		29,640		31,116		(1,476)
Montana Real Estate Pool (MTRP)		22,047		19,305		2,742
Short Term Investment Pool (STIP)		50,982		52,776		(1,794)
All Other Funds (AOF) Investments Managed		34,728		37,983		(3,255)
Total	**$**	**402,900**	**$**	**402,450**	**$**	**450**

[2] Custodian Bank Fees: Net increase for Private Edge investment managers from previous year.

External Manager Fees

Pool		Q1 9/30/2013		Q1 9/30/2012		Change[3]
Retirement Funds Bond Pool (RFBP)	$	377,181	$	375,350	$	1,831
Trust Funds Investment Pool (TFIP)		412,924		391,247		21,677
Montana Domestic Equity Pool (MDEP)		1,981,664		1,462,249		519,415
Montana International Equity Pool (MTIP)		720,792		771,879		(51,087)
Montana Private Equity Pool (MPEP)		4,024,147		3,160,997		863,150
Montana Real Estate Pool (MTRP)		1,321,547		931,273		390,274
Short Term Investment Pool (STIP)		-		-		-
All Other Funds (AOF) Investments Managed		81,251		6,188		75,063
Total	**$**	**8,919,506**	**$**	**7,099,183**	**$**	**1,820,323**

[3] TFIP: The increase reflects additions made during the prior quarter to the two core real estate funds held in the pool.

MDEP: Fees are higher due to the hiring and funding of four new small and mid cap asset managers in the prior quarter and a rise in the market values.

MTIP: Fees are lower due to changes in the pool structure in Oct. '12 which increased the proportion of passive vs. active large cap holdings. This savings was offset in part by higher market values.

MPEP: Fees are higher vs. the previous year due to the addition of five new investment managers. Because reported fees are subject to a lag, quarterly fee comparisons are less meaningful.

MTRP: Fees are higher vs. the previous year due to the addition of four new investment managers. Increase also reflects higher market values of core funds due to positive returns. Because reported fees are subject to a lag, quarterly fee comparisons are less meaningful.

AOF: Increase in manager fees due to State Fund's addition of core real estate investments in the quarter ended June 30, 2013.

Total Fees

Pool		Q1 9/30/2013		Q1 9/30/2012		Change
Retirement Funds Bond Pool (RFBP)	$	595,425	$	543,743	$	51,682
Trust Funds Investment Pool (TFIP)		553,576		504,238		49,338
Montana Domestic Equity Pool (MDEP)		2,287,358		1,693,860		593,498
Montana International Equity Pool (MTIP)		892,149		890,954		1,195
Montana Private Equity Pool (MPEP)		4,299,724		3,325,135		974,589
Montana Real Estate Pool (MTRP)		1,491,674		1,032,158		459,516
Short Term Investment Pool (STIP)		188,085		145,062		43,023
All Other Funds (AOF) Investments Managed		305,477		179,783		125,694
Total	**$**	**10,613,468**	**$**	**8,314,933**	**$**	**2,298,535**

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: David Ewer, Executive Director

Date: November 19, 2013

Subject: Securities Litigation Review

The Board has policies specific to securities litigation (Appendix F of the Governance Manual). In general, the executive director is responsible for overseeing the ***process*** involving securities litigation matters, which generally fall into two possible subsets: class actions ***or*** other actions where the Board takes a lead. The Board directs how its staff, attorneys and other agents are to operate depending on class action or other action such as in a lead plaintiff status.

Board policy states, in part: "The Board will delegate to qualified service providers the responsibility to take steps to identify, analyze, pursue and collect upon securities law claims. The duties of each service provider shall be clearly articulated as a matter of contract and the Board shall adopt prudent, documented procedures to monitor the implementation of its policies."

In meeting this requirement, the Board's contract with State Street Bank requires: "Contractor will track all necessary Board transaction data that will permit the Board to participate in class action litigation and will file as appropriate on behalf of the Board to participate in class action litigation. Contractor will also be required to feed such data to the Board's litigation monitoring providers."

State Street Bank files on the Board's behalf the necessary documentation to join a class action lawsuit. It provides litigation information updated daily through its web portal. A sample of a partial litigation status report is in Exhibit A (the full report is many pages) along with an explanation of the stages of a class action, class action statuses and a glossary of terms provided by State Street.

For larger claims and as a cross check on securities litigation matters, the Board has two securities class action monitoring firms (as Board policy describes these law firms) to identify and evaluate potential claims that may merit commencing separate litigation or filing motions as lead or co-lead plaintiff, or opting out of a class action settlement. The Board has selected two such "Monitoring Firms," Barrack, Rodos & Bacine and Bernstein, Litowitz, Berger & Grossmann LLP.

The Board requires that "The Executive Director, the Chief Investment Officer, the Board's General Legal Counsel, and the Board's Investment Consultant shall receive reports from the Monitoring Legal Firm, regarding the status of all securities class action litigation matters in which the Board is or could be a member. The Executive Director shall receive such reports at least monthly and upon each filing of proofs of claim."

Both law firms provide reports to the Executive Director monthly and will recommend higher involvement than just joining in a blanket class action in certain cases.

Notable Pending Actions

The Board continues to be a plaintiff, among many other parties, to recover investment losses from Pfizer. Recent changes in the area of statute of limitation law has caused the Board to leave its 'large investor' class action suit and rejoin the larger general class action suit, which likely lowers the potential size of recovery. In the matter of the Tribune class action, the Board among literally thousands of others is in the odd situation of being a *defendant* (simply by owning stock in this company). While it's impossible to predict the outcome, it's difficult to see how any adverse outcome would be material.

Amounts Recently Received

Settlement amounts from securities litigation are sporadic and in some years, nominal.

	FY 2013	FY 2012	FY 2011
Montana Domestic Equity	$146,222	$149,429	$617,009
Montana International Equity	$ 56,937	$ 64	$233,840
Trust Fund Bond Pool		$ 8,564	$118,449
State Fund		$ 9,665	$149,643
Total	$203,159	$167,722	$1,118,941

Stages of a Class Action

Aggrieved Party – A party of investors decides they have been “wronged” and decide to file a class action.

Publication – A public announcement is made stating the background, reasons, securities involved, etc. in the class action.

Class Determination – Data is gathered to determine the size of the class action and the eligible parties. Towards the end of the class determination period, a listing of willing participants is issued.

Court issues an opinion and order relating to the pending motion(s) – The court reviews the scenario or events concerning the need for the class action. The court would issue a legal opinion and order relating to the pending motion(s). A hearing or trial would be scheduled. Subsequently a judgment may be made.

Proposed settlement hearing – Settlement proposal(s) are established and possibly argued.

Settlement hearing – Settlement is finalized and communicated.

Class Action Statuses

Seeking Interest – Notification informing all eligible parties of a potential class action. For clients electing notifications, State Street will pass the notification along to the client.

Dismissed – The courts have dismissed the case, the case as it currently stands will not progress into a class action.

Lead Plaintiff – Solicitation by law firm for parties interested in becoming lead plaintiff for a given case.

Objection Date – Notification requiring a client response if the client wishes to object to the proceedings. For clients electing notifications, State Street will pass the notification along to the client. If they wish to object they should respond through their own legal council.

Exclusion Date – Notification requiring a client response if the client does not wish to be included as part of the class. For clients electing notifications, State Street will pass the notification along to the client. If they wish to object they should respond through their own legal council.

Derivative Action – Informational notification only. No monetary settlement will be available to the petitioners. For clients electing notifications, State Street will pass the notification along to the client.

Notice of Settlement – One of the initial published communications announcing the class action. It serves as a notice to advise members of the purported class. It also informs members of a proposed settlement of the action, the claims asserted, the hearing date and possibly the plan of allocation.

Funding Agreement – Document pertaining to an action where funding will be provided by an outside party to bring the case forward. In order to participate, clients must sign a contract with the funding company and the attorney.

Proof of Claim – Notification requiring SSB to submit proof that a fund is eligible to participate and determine the number of shares owned by the client during the action's time period. State Street will submit the claim electronically by the deadline date in accordance with the client's filing procedure.

Direct Payment – Class action team received in proceeds for an action that was not filed by the team.

*Corporate Governance Status and Notification View

Glossary of Terms

Attestation – Certifies that the nominee is registered with State Street and that State Street and the officer in charge of the fund are authorized to sign on their behalf

CDS – Canadian Depository for Securities

Class Action – A Class Action provides a means whereby large numbers of claimants may have their causes involving common questions of fact or law adjudicated in a unitary proceeding. Prior to certification of a class, the court must find a sufficiently large number of class members exist to make joining impractical. Therefore, since all claimants cannot be named parties in the lawsuit, the action is by its very nature a representative proceeding. The named class plaintiff representatives in addition to prosecuting their own claims serve on behalf of and pursue claims belonging to the absent class members. Further, the attorneys and named plaintiffs representing the ostensible plaintiff class assume fiduciary responsibilities to protect the interests of the absent class members

CLAC Reports – CLAC Purchase Report, CLAC Sales Report, and CLAC Position. These reports provide the purchase and sale transactions for class action periods as well as the full position held during the class period

DTCC – Depository Trust and Clearing Corporation

IIS – Institutional Investor Services is a Division at State Street

ISS – Institutional Shareholder Services is a vendor that offers class action services through its subsidiary "Securities Class Action Services"

Notice of Pendency – One of the initial published communications announcing the class action. It serves as a notice to advise members of the purported class. It also informs members of a proposed settlement of the action, the claims asserted, and the hearing date

Notice of Proposed Settlement – Notification of the possible terms/proceeds that may occur as a result of the class action

Docket #	Event Name	Class Period Start Date	Class Period End Date	Event Status	Expiration Date	Claims Administrator
PRELIM FOR MEMC ELECTR. MTRLS.	MEMC ELECTR MATLS INC	06/13/2008	07/23/2008	LEAD PLAINTIFF	11/10/2008	SCOTT + SCOTT, LLP
PRELIM FOR NOVATEL WIRELESS	NOVATEL WIRELESS INC	02/05/2007	08/19/2008	LEAD PLAINTIFF	11/10/2008	SCOTT + SCOTT, LLP
PRELIM FOR OSHKOSH CORP	OSHKOSH CORP	11/01/2007	06/25/2008	LEAD PLAINTIFF	11/11/2008	COUGHLIN STOIA GELLER RUDMAN &
PRELIM FOR CONSTELLATION E. G.	CONSTELLATION ENERGY GROUP INC	01/30/2008	09/16/2008	LEAD PLAINTIFF	11/14/2008	SCOTT + SCOTT, LLP
2213-CC	MAXIM INTEGRATED PRODS INC	09/18/2008	10/24/2008	OBJECTION	11/14/2008	KRISLOVE & ASSOCIATES, LTD
04-374 (JAP)	SHELL TRNSPT+TRDG	04/08/1999	03/18/2004	PROOF OF CLAIM	11/18/2008	BREEDEN CO
DERIV ACT ON NAVTEQ CORP	NAVTEQ CORP	07/30/2007	07/30/2007	DERIVATIVE ACTION	11/19/2008	COUGHLIN STOIA GELLER RUDMAN
3694-VCN	TRIZETTO GROUP INC	04/11/2008	08/05/2008	OBJECTION	11/24/2008	RIGRODSKY & LONG, P.A.
03 CV 1546 (WHP)	Bayer AG	08/04/2000	02/21/2003	PROOF OF CLAIM	11/25/2008	ANALYTICS INCORPORATED
366-01078-2008	ELECTONIC DATA SYSTEMS CORP	05/09/2008	08/26/2008	OBJECTION AND EXCLUSION	12/08/2008	GILARDI & CO.
BANCA ITALEASE ITALIAN ACTION	BANCA ITALEASE EUR5.16	06/10/2005	09/12/2008	COLLECTIVE ACTION	12/15/2008	S.I.T.I.
07 CV 6709 (S.D.N.Y.)	CARDINAL HEALTH INC	10/24/2000	07/26/2004	PROOF OF CLAIM	12/23/2008	GILARDI AND CO LLC
3851-VCP	ANHEUSER BUSCH COS INC	05/23/2008	11/14/2008	OBJECTION	12/26/2008	GRANT & EISENHOFER, P.A.
24712/07	ENERGY EAST CORP	06/25/2007	09/16/2008	OBJECTION	12/29/2008	COMPLETE CLAIM SOLUTIONS, LLC.
07-CV-02237 (JSR)	MONSTER WORLDWIDE INC	05/06/2005	06/09/2006	PROOF OF CLAIM	01/05/2009	BERDON CLAIMS ADMINISTRATION LLC
HYPO REAL ESTATE GERMAN CA	HYPO REAL ESTATE	10/02/2007	09/28/2008	SEEKING INTEREST	01/15/2009	WINHELLER RECHTANWALTE
06-03403	AFFILIATED COMPUTER SVCS INC	04/07/2006	12/22/2008	DERIVATIVE ACTION	01/23/2009	BERDON CLAIMS ADMINISTRATOR
04 CIV. 8141 (JES) (AJP)	AIG MATCHED FUNDING CORP	10/28/1999	04/01/2005	PROOF OF CLAIM	01/28/2009	COMPLETE CLAIMS SOLUTIONS
3561-CC	YAHOO INC	01/31/2008	12/07/2008	DERIVATIVE ACTION	02/09/2009	US BANK - INFORMATION CONSULT
OZ MINERALS FUNDING AGREEMENT	OZ MINERALS LTD	02/28/2008	11/27/2008	FUNDING AGREEMENT	02/27/2009	MAURICE BLACKBURN
C-06-06110-SBA (JCS)	NVIDIA CORP	01/29/2009	01/29/2009	DERIVATIVE ACTION	03/01/2009	HEFFLER, RADETICH & SAITTA LLP
MDL NO. 1749	GENERAL MTRS ACCEP CORP MTN	04/13/2000	03/30/2006	PROOF OF CLAIM	03/06/2009	EPIQ
2008 CV 990	GEHL CO	07/01/2006	10/30/2008	OBJECTION	03/13/2009	DF KING
2587	SOVERIGN BANCORP INC	10/13/2008	02/04/2009	OBJECTION	03/13/2009	STRATEGIC CLAIMS SERVICES
07MD-1	DOLLAR GEN CORP	03/12/2007	07/06/2007	PROOF OF CLAIM	03/26/2009	GARDEN CITY GROUP INC
SEC EVT	ENRON CORP	01/20/1998	11/07/2001	PROOF OF CLAIM	04/06/2009	BREEDEN CO
05-CV-2827-RMB POC	FOREST LABS INC	08/15/2002	07/02/2004	PROOF OF CLAIM	04/07/2009	GILARDI AND CO LLC
06-CV-11515 (WHP)	WARNER CHILCOTT PLC	09/20/2006	09/26/2006	PROOF OF CLAIM	04/07/2009	A B DATA LTD
1:02-CV-386	UNUM GROUP	08/29/2008	08/29/2008	DERIVATIVE ACTION	04/17/2009	THE GARDEN CITY GROUP
4123-CC	NATIONAL CITY CORP CONV COMMON	10/23/2008	12/31/2008	OBJECTION	04/20/2009	THE GARDEN CITY GROUP
3:01-0017	BRIDGESTON	03/30/2000	08/31/2000	PROOF OF CLAIM	04/21/2009	HEFFLER RADETICH AND SAITTA LLP
0:06-CV-01691-JMR-FLN	UNITEDHEALTH GROUP INC	01/20/2005	05/17/2006	PROOF OF CLAIM	04/22/2009	GILARDI AND CO LLC
C-260-08	BARR PHARMACEUTICALS INC	07/18/2008	12/23/2008	OBJECTION	04/28/2009	GARDY & NOTIS, LLP
SEEKING INTEREST FOR HYPO RE	HYPO REAL ESTATE	01/16/2008	09/28/2008	SEEKING INTEREST	04/30/2009	ROTTER RECHTSANWAELTE
08-41909 (07)	REPUBLIC SVCS INC	06/12/2008	12/05/2008	OBJECTION	05/05/2009	THE GARDEN CITY GROUP
07-416-GMS	3M CO	01/06/2009	01/06/2009	DERIVATIVE ACTION	05/07/2009	RIGRODSKY & LONG
1:06-CV-00722 (RPP)	JARDEN CORP	06/29/2005	01/11/2006	PROOF OF CLAIM	05/14/2009	GILARDI AND CO LLC
FUNDING AGREEEMENT OZ MINERALS	OXIANA LTD	02/28/2008	12/01/2008	FUNDING AGREEMENT	05/27/2009	SLATER GORDON
NAB FUNDING AGREEMENT	NATL AUSTRALIA BK	01/01/2008	07/25/2008	OBJECTION	05/29/2009	MAURICE BLACKBURN
2:08CV249	NATIONWIDE CR INC	03/10/2008	01/01/2009	OBJECTION	06/08/2009	ADMINISTAR SERVICES GROUP
01-CV-0829 (KSH/MF)	SCHERING AG	05/09/2000	02/15/2001	PROOF OF CLAIM	06/18/2009	HEFFLER RADETICH AND SAITTA LLP
4287-CC	AES TIETE SA	06/04/2009	06/04/2009	OBJECTION	06/26/2009	ADMINISTAR SERVICES GROUP, LLP
3911-VCS	GENENTECH INC	07/21/2008	03/26/2009	OBJECTION	06/29/2009	BARROWAY TOPAZ KESSLER MELTZER
4362-VCL	INTERWOVEN INC	01/22/2009	03/17/2009	OBJECTION	07/01/2009	FARUQI & FARUQI LLP
07-2171	STERLING FINL CORP IL	04/27/2004	05/24/2007	PROOF OF CLAIM	07/16/2009	A B DATA LTD

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Board Members

From: David Ewer, Executive Director

Date: November 19, 2013

Subject: Resolution 217 Update

At the November 2007 Board meeting, the Board unanimously approved Resolution No. 217.

Resolution No. 217 *"designates its Executive Director as agent of the Board to deal with investment firms in connection with Board accounts with such firms; and that the investment firms are hereby authorized to deal with the Executive Director or the Executive Director's designated staff as agents of the Board; to accept all orders for purchases and sales and all instructions given by any of them on behalf of the Board as and for the action of the Board without further inquiry as to their authority; to receive any funds, securities or property for the account of the Board; to sell, assign, transfer or deliver either in bearer form, in street certificates or in such names as said persons or any of them shall direct, any funds, securities or other property held for the account of the Board, to said persons or any of them or as they or any of them shall in writing, or verbally with subsequent confirmation in writing, order; and to send or communicate all confirmation, notices, demands and other communications to them or any of them and to the Attention of the Board of Investments, P.O. Box 200126, Helena, MT 59620-0126."*

When Resolution 217 was passed, Appendix "A" was created to show all vendors authorized to conduct financial transactions with the Board and all staff authorized to conduct financial transactions with the vendors.

The Board authorized its Executive Director to close any of the accounts listed in the original Appendix "A", to open new accounts, to designate additional staff members to act on behalf of the Board for the purpose of dealing with investment firms regarding any account, and to remove the authority of any of the named staff members or other staff members designated by him/her to act on behalf of the Board for purposes of dealing with investment firms regarding any account.

The Executive Director shall annually, on or around the regularly scheduled October Board Meeting, provide a report to the Board showing the staff members and the accounts added to or deleted from Appendix A, which information shall include the date on which the addition or deletion occurred.

No staff members were added or removed during this time period.

For the time period of November 2012 to November 2013 the following changes were made to Resolution No. 217, Appendix A:

Broker/Dealer (Fixed Income/STIP) – Brokers added:
- None

Broker/Dealer (Fixed Income/STIP) – Brokers no longer used by staff and removed from Appendix A:
- None

Public Equity Brokers – Brokers added:
- None

Public Equity Brokers – Brokers no longer used by staff and removed from Appendix A:
- None

Public Equity Managers – Managers added:
- Metropolitan West Capital Management, LLC
- ING Investment Management Co. LLC
- Nicholas Investment Partners
- Iridian Asset Management LLC

Public Equity Managers – Managers no longer used by staff and removed from Appendix A:
- None

Private Equity Managers – Managers added:
- White Deer Management LLC
- Pine Brook Road Partners, LLC
- Southern Capital Group Pte. Ltd.

Private Equity Managers – Managers no longer used by staff and removed from Appendix A:
- None

Private Real Estate Managers – Investment Managers added:
- Equus Capital Partners, Ltd.

Private Real Estate Managers – Managers no longer used by staff and removed from Appendix A:
- None

Fixed Income Managers – Managers no longer used by staff and removed from Appendix A:
- None

Fixed Income Managers – Investment Managers added:
- None

RESOLUTION 217 - APPENDIX A - UPDATED 11/1/13

Brokers

Designated/Authorized MBOI Staff - Fixed Income				
	Name & Title		***Email***	***Phone***
MBOI	David Ewer, Executive Director	Dec-11	dewer@mt.gov	406/444-1285
MBOI	Clifford A. Sheets, Chief Investment Officer	Nov-07	csheets@mt.gov	406/444-0058
MBOI	Nathan Sax, Portfolio Manager	May-08	nsax@mt.gov	406/444-0049
MBOI	Richard Cooley, Portfolio Manager	Nov-07	rcooley@mt.gov	406/444-1213
MBOI	John Romasko, Investment Analyst	Nov-07	jromasko@mt.gov	406/444-0258
MBOI	Jon Putnam, Investment Analyst	Nov-07	jputnam@mt.gov	406/444-0568
MBOI	Geri Burton, Deputy Director	Nov-07	gburton@mt.gov	406/444-1365
Approved Fixed Income Brokers				
B/D	Barclays Capital, Inc.	Apr-09		
B/D	Bank of America Merrill Lynch	Aug-09		
B/D	CRT Capital Group, LLC	Dec-10		
B/D	Cantor Fitzgerald	Apr-09		
B/D	Citigroup Global Markets	May-08		
B/D	Credit Suisse (CSFB)	Apr-09		
B/D	D.A. Davidson & Co.	Jun-08		
B/D	FTN Financial	Jun-08		
B/D	Goldman Sachs & Co.	May-08		
B/D	Jefferies & Co., Inc.	Jun-08		
B/D	J.P. Morgan Securities, Inc.	May-08		
B/D	KeyBanc Capital Markets	May-08		
B/D	Morgan Keegan	Aug-08		
B/D	Morgan Stanley	May-08		
B/D	RBC Capital Markets, LLC	Jun-08		
B/D	Raymond James Financial, Inc.	Dec-08		
B/D	State Street Capital	Jun-08		

Designated/Authorized MBOI Staff - Public Equity				
	Name & Title		***Email***	***Phone***
MBOI	David Ewer, Executive Director	Dec-11	dewer@mt.gov	406/444-1285
MBOI	Clifford A. Sheets, Chief Investment Officer	Jul-10	csheets@mt.gov	406/444-0058
MBOI	Rande Muffick, Portfolio Manager	Jul-10	ramuffick@mt.gov	406/444-0586
MBOI	Daniel Zarling, Research Director	Jul-10	dzarling@mt.gov	406/444-0086
MBOI	Richard Cooley, Portfolio Manager	Nov-07	rcooley@mt.gov	406/444-1213
MBOI	Geri Burton, Deputy Director	Jul-10	gburton@mt.gov	406/444-1365
Approved Public Equity Brokers				
B/D	State Street Global Markets	Jul-10		
B/D	Morgan Stanley Capital Markets	Jun-12		

RESOLUTION 217 - APPENDIX A - UPDATED 9/10/13			
Public Asset Managers			
Designated/Authorized MBOI Staff			
	Name & Title	***Email***	***Phone***
MBOI	David Ewer, Executive Director	dewer@mt.gov	406/444-1285
MBOI	Clifford A. Sheets, Chief Investment Officer	csheets@mt.gov	406/444-0058
MBOI	Rande R. Muffick, Portfolio Manager	ramuffick@mt.gov	406/444-0586
MBOI	Daniel Zarling, Research Director	dzarling@mt.gov	406/444-0086
MBOI	Nathan Sax, Portfolio Manager	nsax@mt.gov	406/444-0049
MBOI	Richard Cooley, Portfolio Manager	rcooley@mt.gov	406/444-1213
MBOI	Geri Burton, Deputy Director	gburton@mt.gov	406/444-1365
Approved Public Equity Managers			
Equity	Acadian Asset Management, Inc.	Sep-06	
Equity	AllianceBernstein LP	Sep-06	
Equity	Analytic Investors, Inc.	Feb-08	
Equity	Artisan Partners Limited Partnership	Jan-07	
Equity	Blackrock	Jan-07	
Equity	Dimensional Fund Advisors	Dec-05	
Equity	Hansberger Global Investors, Inc.	Aug-08	
Equity	ING Investment Management Co. LLC	May-13	
Equity	INTECH	Aug-09	
Equity	Iridian Asset Management LLC	May-13	
Equity	J.P. Morgan Investment Management, Inc.	Feb-08	
Equity	Martin Currie Inc.	Sep-06	
Equity	Metropolitan West Capital Management, LLC	May-13	
Equity	Nicholas Investment Partners	May-13	
Equity	State Street Global Advisors	Jun-07	
Equity	TimeSquare Capital Management, LLC	Jan-07	
Equity	T. Rowe Price Associates, Inc.	May-06	
Equity	Vaughan Nelson Investment Management, LP	Jan-07	

Approved Fixed Income Managers		
FI	Aberdeen Asset Management, Inc. (fka Artio Global)	Aug-08
FI	Blackrock	Jan-09
FI	Fidelity Investments	Jun-08
FI	Neuberger Berman, LLC	Jan-09
FI	Post Advisory Group, LLC.	Aug-08
FI	Reams Asset Management Company, LLC.	Aug-08
FI	State Street Global Advisors	Jun-08

RESOLUTION 217 - APPENDIX A - UPDATED 9/18/13

Private Equity Managers

	Designated/Authorized MBOI Staff			
	Name & Title		***Email***	***Phone***
MBOI	David Ewer, Executive Director	Dec-11	dewer@mt.gov	406/444-1285
MBOI	Clifford A. Sheets, Chief Investment Officer	Nov-07	csheets@mt.gov	406/444-0058
MBOI	Daniel Zarling, Research Director	Apr-09	dzarling@mt.gov	406/444-0086
MBOI	Ethan Hurley, Portfolio Manager-Alternative Inv	Oct-11	ehurley@mt.gov	406/444-0250
MBOI	Geri Burton, Deputy Director	Nov-07	gburton@mt.gov	406/444-1365

Private Equity Managers

PE	Adams Street Partners	Oct-02
PE	Affinity Equity Partners/Affinity Asia	Jan-07
PE	American Securities LLC	May-11
PE	Arclight Capital Partners	Sep-04
PE	Audax Management Company, LLC	Sep-12
PE	Avenue Capital Group	Aug-09
PE	Axiom Asia Private Capital	Nov-09
PE	Black Diamond Capital Management L.L.C.	Apr-10
PE	Cartesian Capital Group, LLC	Apr-12
PE	Centerbridge Capital Partners	Jun-09
PE	CCMP Capital Advisors, LLC	Aug-06
PE	CIVC Partners	Sep-10
PE	Carlyle Group (The)	Jan-05
PE	EIF Management, L.L.C.	Apr-10
PE	First Reserve Corporation	Aug-09
PE	Gridiron Capital	Dec-11
PE	GTCR Partners	Dec-10
PE	HarbourVest Partners	Apr-07
PE	HCI Equity Partners (formerly Thayer Hidden Creek Management)	Sep-10
PE	Hellman & Friedman	Apr-09
PE	Highway 12 Ventures	Mar-07
PE	Industry Ventures	Oct-09
PE	JC Flowers	Jul-06
PE	JLL Partners	Nov-05
PE	KKR	Oct-02
PE	Lexington Capital Partners	Mar-09
PE	Madison Dearborn Partners	Oct-02
PE	Matlin Patterson	Apr-07
PE	MHR Institutional Partners	Apr-07
PE	Montlake Capital (formerly Buerk Dale Victor)	Mar-07
PE	NB Alternatives Advisors LLC (formerly Lehman Brothers)	May-09
PE	Northgate Capital, LLC	Mar-11
PE	Oak Hill Capital Partners	Feb-08
PE	Oaktree Capital Management	Jul-09
PE	Odyssey Investment Partners	Dec-04
PE	Opus Capital Group, L.L.C.	Mar-10
PE	Performance Equity Management	May-08
PE	Pine Brook Road Partners, LLC	Sep-13
PE	Portfolio Advisors	May-06
PE	Quintana Energy	Mar-07
PE	Siguler Guff Advisers LLC	Aug-07
PE	Southern Capital Group Pte. Ltd.	Jun-13
PE	Sterling Capital Partners	Sep-12
PE	Summit Partners	Jul-11
PE	TA Associates	May-09
PE	Tenaya Capital, LLC	Mar-12
PE	Tenex Capital Management	Jun-12
PE	Terra Firma Capital Partners	Jan-07
PE	The Catalyst Capital Group, Inc.	Jun-12
PE	Trilantic Capital Partners LLC (formerly Lehman Brothers)	May-09
PE	Veritas Capital Management, LLC	May-10
PE	Welsh Carson Anderson Stowe	Oct-02
PE	White Deer Management LLC	Feb-13

RESOLUTION 217 - APPENDIX A - UPDATED 10/3/2013				
Private Real Estate Managers				
Designated/Authorized MBOI Staff				
	Name & Title		***Email***	***Phone***
MBOI	David Ewer, Executive Director	Dec-11	dewer@mt.gov	406/444-1285
MBOI	Clifford A. Sheets, Chief Investment Officer	Nov-07	csheets@mt.gov	406/444-0058
MBOI	Daniel Zarling, Research Director	Apr-09	dzarling@mt.gov	406/444-0086
MBOI	Ethan Hurley, Portfolio Manager-Alternative Inv	Oct-11	ehurley@mt.gov	406/444-0250
MBOI	Geri Burton, Deputy Director	Nov-07	gburton@mt.gov	406/444-1365
Private Real Estate Managers				
RE	Alex Brown Realty Chesapeake Investors		Sep-06	
RE	American Realty Advisors		Nov-09	
RE	Angelo Gordon Company		Aug-06	
RE	AREA Property Partners (formerly Apollo Real Estate)		Dec-06	
RE	Beacon Capital Partners		Mar-07	
RE	The Carlyle Group		Jul-07	
RE	CBRE Global Investors		Oct-12	
RE	CIM Group		Mar-07	
RE	Clarion Partners (formerly ING Clarion)		Oct-06	
RE	DRA Advisors, LLC		Aug-07	
RE	Equus Capital Partners, Ltd.		Sep-13	
RE	GEM Realty Capital, Inc.		Jun-10	
RE	Hudson Realty Capital		Feb-08	
RE	INVESCO Core Real Estate - USA, LLC		Sep-06	
RE	JER Partners		Nov-06	
RE	J.P. Morgan Asset Management, Strategic Property Fund		Oct-06	
RE	Landmark Partners		Mar-11	
RE	Liquid Realty Partners		Mar-07	
RE	Macquarie Global Property Advisors, Ltd.		Aug-07	
RE	Molpus Woodlands Group, LLC		Feb-11	
RE	Morgan Stanley - Real Estate Fund International		Nov-06	
RE	O'Connor Capital Partners		May-08	
RE	Olympic Resource Management, LLC		Jun-12	
RE	Resource Management Service LLC		Mar-11	
RE	Almanac Realty Investors, LLC, (fka Rothschild Realty Managers)		Mar-07	
RE	Stockbridge Capital Group, LLC		Jun-12	
RE	Strategic Capital Partners		Nov-06	
RE	TIAA CREF Asset Management - Core Property Fund		Oct-09	
RE	TA Associates Realty		Sep-06	
RE	UBS Realty Investors LLC - Trumbull Property Fund		Nov-09	

RESOLUTION 218

WHEREAS, the Montana Board of Investments (Board) has delegated certain critical authority and duties to its Executive Director that must be exercised and performed in the absence of the Executive Director; and

WHEREAS, the Executive Director may be incapacitated or temporarily absent from the office under circumstances that render the Executive Director unavailable to exercise such authority and perform such duties,

NOW, THEREFORE:

RESOLVED, that the Executive Director or the Deputy Director shall notify the Board Chairperson immediately at any time the Executive Director, due to incapacity or a temporary absence from the office, is unable to perform his/her duties; and

FURTHER RESOLVED, that "incapacity" means the occurrence of a mental or physical disability rendering the Executive Director incapable of exercising his/her authority and carrying out his/her duties; and

FURTHER RESOLVED, that during an incapacity of the Executive Director, the Deputy Director is hereby designated Acting Executive Director; and

FURTHER RESOLVED, that the Executive Director may, after notifying the Board Chairperson, delegate his/her executive authority to the Deputy Director to serve as Acting Executive Director during periods of official travel or authorized leave away from the Board's office, if in the judgment of the Executive Director, such delegation would be in the best interest of the Board; and

FURTHER RESOLVED, that during any period that the Deputy Director is not available to assume the role of Acting Executive Director pursuant to the provisions of this Resolution, the Chief Investment Officer shall serve as Acting Executive Director; and

FURTHER RESOLVED, that the Acting Executive Director shall operate only within the authority and parameters established in the Board's Governance Policy.

Dated and approved this 6th day of November 2007.

ATTEST

By: ______________________

Chairman

2014 CALENDAR

Potential Board Dates Board Packet Mailing

01 New Year's Day
20 M L King Day

JANUARY

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

17 President's Day

FEBRUARY

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

MARCH

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

18 Good Friday
20 Easter Sunday

APRIL

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

11 Mother's Day
26 Memorial Day

MAY

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

15 Father's Day

JUNE

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

04 Independence Day

AUGUST

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

1 Labor Day

OCTOBER

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

13 Columbus Day
31 Halloween

NOVEMBER

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

04 Election Day
11 Veterans Day
27 Thanksgiving Day

DECEMBER

S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

25 Christmas Day

Proposed Work Plan 2014

Feb. 25-26	**Quarterly Meeting's standard business and subcommittee meetings** Annual Report and Financial Statements Financial Audit Performance Audit Ethics Domestic equities Real estate and timberland - staff Real estate - RVK
April 8	**Semi-Annual (non-quarterly) Meeting** All policy review International equities Emergency/Disaster preparedness Intercap program Custodial bank RFP Web site Look-back on terminated managers (RVK) Board education and possible conferences (IFE usually in June)
May 20-21	**Quarterly Meeting standard business and subcommittee meetings** Private equity Proxy voting public equities Cash management Internal controls Staffing level review
August 19-20	**Quarterly Meeting standard business and subcommittee meetings** Costs (including reviewing CEM Benchmarking Inc. results) MBOI Budget and legislative-related action-decision Accounting and internal control systems Fiscal Year performance through June 30th
October 7 (Or earlier)	**Semi-Annual (non-quarterly) Meeting** TBD Custodial bank recommendation (sometime between August and late Sept)
Nov. 18-19	**Quarterly Meeting standard business and subcommittee meetings** Actuarial Status & Asset Allocation Implications Affirm or Revise Asset Allocation Resolution 217 PERS/TRS annual update Securities litigation status Exempt staff annual review

Work Plan - 2012 through 2014			
2012	**2013**	**2014 tent.**	
X	X	X	Annual report and financial statements
X	X	X	Asset Allocation Range Approval (Board must review/approve annually as per policy)
X	X		Capital Market/Asset Allocation
X	X	X	Audit (Financial)
	X		Board as a rated investment credit, a bond issuer and a credit enhancer
X	X	X	Board member education
X	X	X	Board's budget
	X		Board as landlord/tenant holdings
	X		Board's website
X		X	Cash Management of state monies
X	X	X	Cost reporting including CEM, Inc. analysis
		X	Custodial bank relationship, performance, continuity
	X		Customer relationships (State government)
	X	X	Disaster Recovery and other emergency preparedness
X	X	X	Exempt staff performance and raises (HR policy requires annual consideration)
X	X	X	Ethics policy – (Board policy requires annual affirmations)
X	X		Fixed Income
	X		In-state Loan program
X		X	INTERCAP program
X	X	X	Internal controls
X	X	X	Investment Policy Statements Review (Governance policy requires annual review)
X	X	X	Legislative session and interim matters
	X	X	Outreach efforts for Board - loan and municipal programs
X	X	X	PERS and TRS relationship
X		X	Private Equities
		X	Proxy voting public equities
X		X	Public Domestic Equities
X		X	Public International Equities
X		X	Real Estate and timber
X	X	X	Resolution 217 update of current Investment Firms (Board policy requires annual update)
X	X	X	Resolution 218, role of deputy director to serve as acting executive if necessary
	X		Securities Lending
X	X		Securities Litigation
	X		Staffing levels (required biannually in board policy)
	X		State Fund as major client

Return to Agenda

Montana Loan Program

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Board of Directors

From: Herb Kulow, CMB
Senior Portfolio Manager

Date: November 19, 2013

Subject: Commercial and Residential Portfolios

As of October 31, 2013 the commercial loan portfolio had 122 individual loans totaling $105,227,226. The portfolio is currently yielding 4.85%. There were 6 reservations as of October 31, 2013, totaling $34,585,175 and two committed loans totaling $3,758,000.

There is one loan, with a $97,048 outstanding balance, which is currently 31 days past due and guaranteed by the SBA. One loan will be placed into other real estate owned and has a MBOI balance of $634,111 and currently appears on the past due report.

Residential mortgages were comprised of 325 loans totaling $14,063,523, as of October 31, 2013. There were no outstanding reservations.

There were ten loans past due totaling $595,857 or 4.247% of the total portfolio. Five loans were over 90 days past due totaling 2.85% of the portfolio, of which four loans were guaranteed, $280,088 or 1.99%, and one loan was conventional financing, $82,575 or 0.59%.

The Veterans Home Loan Mortgage (VHLM) program continues to grow with 96 loans funded since January 2012 totaling $17,005,110, as of October 31, 2013. There were 18 loans reserved totaling $3,449,670. Staff has negotiated the service fee to the Board of Housing from 75 basis points down to 50 basis points for all VA loans funded in the future under this program.

I have been asked by representatives of the U.S. Treasury to be a co-chairman of a national committee for the State Small Business Credit Initiative (SSBCI) dealing with the use of the SSBCI programs to increase access to capital for underserved communities. I have accepted.

Return to Agenda

Bond Program

INTERCAP Loan Program

Activity Summary

As of September 30, 2013

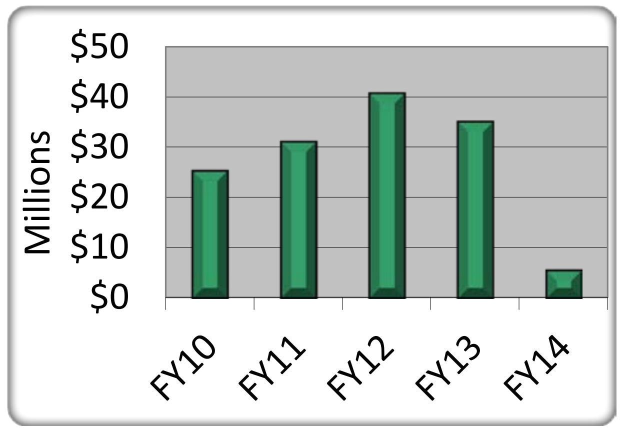
Since Inception 1987 - September 2013

Total Bonds Issued	**148,000,000**
Total Loan Commitments	**439,665,089**
Total Loans Funded	**407,764,736**
Total Bonds Outstanding	**106,615,000**
Total Loans Outstanding	**71,298,751**
Loan Commitments Pending	**31,900,353**

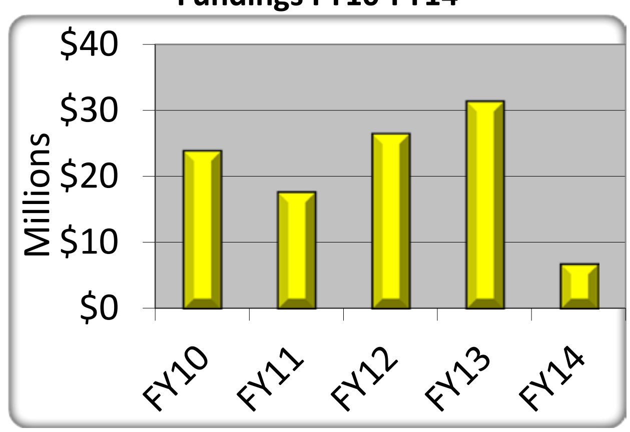
FY2014 To Date

Month	Commitments	Fundings
July-13	$ 950,000	$ 2,786,539
August	3,801,900	1,813,528
September	795,067	2,230,551
October	-	-
November	-	-
December	-	-
January	-	-
February	-	-
March	-	-
April	-	-
May	-	-
June-14	-	-
To Date	$ 5,546,967	$ 6,830,618

Commitments FY10-FY14



Fundings FY10-FY14



Note: Commitments include withdrawn and expired loans.

Variable Loan Rate History February 16, 2006 - February 15, 2014

February 16, 2006 - February 15, 2007	**4.75%**	February 16, 2010 - February 15, 2011	**1.95%**
February 16, 2007 - February 15, 2008	**4.85%**	February 16, 2011 - February 15, 2012	**1.95%**
February 16, 2008 - February 15, 2009	**4.25%**	February 16, 2012 - February 15, 2013	**1.25%**
February 16, 2009 - February 15, 2010	**3.25%**	February 16, 2013 - February 15, 2014	**1.00%**

L:\INTERCAP\BOARD\ACTIVITY SUMMARY1.xlsx

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
(406) 444-0001

To: Members of the Board

From: Louise Welsh, Sr. Bond Program Officer

Date: November 19, 2013

Subject: INTERCAP Staff Approved Loans Committed

Staff approved the following loans between July 1, 2013 and September 30, 2013.

Borrower:	Lewistown Rural Fire District
Purpose:	Purchase a new rescue/pumper fire engine
Staff Approval Date:	July 8, 2013
Board Loan Amount:	$ 175,000
Other Funding Sources:	$ 78,425
Total Project Cost:	$ 253,425
Term:	10 years

Borrower:	Town of Valier
Purpose:	Interim loan in anticipation of Rural Development (RD) long-term financing for wastewater treatment facility improvements
Staff Approval Date:	July 31, 2013
Board Loan Amount:	$ 775,000
Other Funding Sources:	$1,289,000
Total Project Cost:	$2,064,000
Term:	1 year

Borrower:	North Havre County Water District
Purpose:	Interim loan in anticipation of Rural Development (RD) long-term financing for water system improvements project
Staff Approval Date:	August 6, 2013
Board Loan Amount:	$ 783,000
Other Funding Sources:	$1,162,000
Total Project Cost:	$1,945,000
Term:	2 years

Borrower:	Vaughn Cascade County Water & Sewer District
Purpose:	Finance a service truck
Staff Approval Date:	August 6, 2013
Board Loan Amount:	$18,900
Other Funding Sources:	$ 0
Total Project Cost:	$18,900
Term:	7 years

Borrower:	Town of Kevin
Purpose:	Repair and improve a portion of the water system
Staff Approval Date:	September 6, 2013
Board Loan Amount:	$65,000
Other Funding Sources:	$ 0
Total Project Cost:	$65,000
Term:	15 years

Borrower:	Lewis & Clark County
Purpose:	Road improvements within the Crestwood Green Estates Rural Improvement District (RID)
Staff Approval Date:	September 18, 2013
Board Loan Amount:	$ 130,067
Other Funding Sources:	$ 0
Total Project Cost:	$ 130,067
Term:	10 years

Borrower:	City of Helena
Purpose:	Upgrade municipal golf course irrigation system
Staff Approval Date:	September 20, 2013
Board Loan Amount:	$ 600,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 600,000
Term:	15 years

Borrower:	City of Livingston
Purpose:	Repair the City/County Building
Staff Approval Date:	September 27, 2013
Board Loan Amount:	$ 125,000
Other Funding Sources:	$ 0
Total Project Cost:	$ 125,000
Term:	3 years

Montana Board of Investments
Loan Committee
INTERCAP Loan Summary and Approval

Amsterdam-Churchill County Sewer District

Borrower Amsterdam Churchill County Sewer District **Date** September 6, 2013

Approval Date:____________

The District requests a $2,200,000 interim loan in anticipation of the United States Department of Agriculture (USDA) Rural Development Services (RD)[1] long-term financing for its wastewater treatment facility improvements project. The loan will be for up to one (1) year and in the form of a bond anticipation note (BAN). The projected drawdown schedule for the loan is January through June 2014 at which point the District anticipates closing on its RD loan. The funding package for the $3,150,000 total project cost is as follows:

Borrower Portion		$ 100,000
Treasure State Endowment Program (TSEP) Grant		750,000
Department of Natural Resources & Conservation – Renewable Resource Grant & Loan Program (RRGL) Grant		100,000
INTERCAP Interim loan	**2,200,000**	
Rural Development (RD) Loan		2,200,000
Total		$3,150,000

[1]http://www.rurdev.usda.gov/

Authorization

7-7-109 Montana Code Annotated (MCA) (2) (a) When all conditions exist precedent to the offering for sale of bonds of a political subdivision in any amount and for any purpose authorized by law or the political subdivision has applied for and received a commitment for a grant or loan of state or federal funds, its governing body may by resolution issue and sell, in anticipation of the receipt of the grant, loan, or bonds in an amount not exceeding the total amount of bonds authorized or the total amount of the loan or grant that is committed, notes maturing within not more than three years from the date on which the notes are issued.

INTERCAP Debt The District is a new borrower to INTERCAP.

Repayment

The bond proceeds from the District's issuance and sale of a revenue bond to RD will repay the BAN. Special conditions to the Board's commitment to ensure the revenue bond takes out the BAN are as follows:

1. Prior to disbursing funds, the Board requires evidence of RD's commitment to pay off the BAN with a long-term loan. Copies of the following will provide sufficient evidence:

   ☒ RD Letter of Conditions **(MBOI has on file)**
   ☐ USDA Office of General Council (OGC) Loan Closing Instruction
   ☐ RD Letter of Intent to Fund ("I" Letter)

2. The Board will require approval from RD for each specific draw on the loan.

3. The Board requires the District to hire Bond Counsel to prepare the necessary BAN documents and provide the opinion at closing. The Bond Counsel needs to be nationally recognized and rendering a bond counsel opinion in the last ten years.

Recommendation

Approval recommended.

Staff Loan Committee - Recommendation

David Ewer, Executive Director	D Ewer	Date: 9/10/13
Geri Burton, Deputy Director	Geri Burton	Date: 9-9-13
Louise Welsh, Sr. Bond Program Officer	Louise Welsh	Date: 9/6/13
Julie Flynn, Bond Program Officer	Julie Flynn	Date: 9-6-13

Board Loan Committee – November 19, 2013

	Approval
Jack Prothero, Chairperson – Loan Committee	☐ Yes ☐ No ☐ Abstain
Kathy Bassette, Member	☐ Yes ☐ No ☐ Abstain
Gary Buchanan, Member	☐ Yes ☐ No ☐ Abstain

Approval Date: ____________

Montana Board of Investments
Loan Committee
INTERCAP Loan Summary and Approval

Borrower Montana Department of Transportation (MDT) **Date** October 3, 2013

Approval Date ____________

MDT requests to borrow $3,700,000 to finance vehicle purchases for the State Motor Pool (SMP). The loan will be in the form of a general promise to pay of the MDT with a seven (7) year term. MDT estimates it will draw funds in February 2014. MDT plans to purchase 183 vehicles as summarized in the following table. Most of the vehicles (133) will be replacements to the motor pool fleet. State agencies have requested 50 additional vehicles for lease during the 2015 biennium.

Quantity	Type	Estimated Cost
88	Mid-Size 4 Door Sedan	$ 1,395,944
31	Small SUV 4WD	659,463
24	Large Pickup 4WD	491,256
23	Passenger Mini Van	481,919
16	Large SUV 4WD	460,864
1	Handicap Passenger Van	48,388
Total 183		$ 3,537,834 [1]

[1] Note this is an estimated cost of the vehicles to be purchased. MDT is requesting $3.7M in the event actual bids are higher than this estimate.

Authorization

17-5-2001 Montana Code Annotated (MCA) (1) An agency responsible for the procurement and provision of vehicles, ...using an enterprise fund or an internal service fund...is authorized to enter into contracts, loan agreements, or other forms of indebtedness payable over a term not to exceed seven (7) years for the purpose of financing the cost of the vehicles and equipment and to pledge to the repayment of the indebtedness the revenue of the enterprise fund or internal service fund if: (a) the term of the indebtedness does not exceed the useful life of the items being financed; and (b) at the time that the indebtedness is incurred, the projected revenue of the fund, based on the fees and charges approved by the legislature and other available fund revenue, will be sufficient to repay the indebtedness over the proposed term and to maintain the operation of the enterprise.

INTERCAP Debt

The MDT has been an INTERCAP borrower since 1997 financing over $37 million for SMP vehicles. The Board has authorized loans outstanding not to exceed $10.5 million to the MDT. If approved, this request will raise MDT's current ~$1.3 million outstanding loan balance to ~$5.0 million. MDT has two (2) outstanding INTERCAP loans that are current and fully funded.

Repayment

There will be approximately $626,000 annual debt service on the proposed loan. Each biennium the Legislature approves SMP fees charged to agencies that either lease cars or use the daily-use fleet that is available on a first-come, first-served basis. MDT pledges these fees to repay its INTERCAP loans. The user fees include a loan repayment cost based on INTERCAP's average variable interest rate.

For the 2015 biennium, the Legislature in HB2 reauthorized the "tiered" fee created during the 2009 session that ensures generation of sufficient SMP revenues to maintain operations and pay debt service in accordance with 17-5-2001 MCA. Since the fees approved by the Legislature are the maximum that the SMP can charge its users for the biennium, the tiered fee allows the SMP flexibility to respond to changing gasoline prices.

Collateral

Due to the large transactions with the MDT and its fleet rotation, these loans do not use titles as security as is typical with vehicle loans. In lieu of placing liens on individual vehicles, the MDT covenants that there are no liens on its entire fleet and they are available for sale to satisfy loan obligations, if necessary. Currently, the SMP fleet collateral book value is $5.8 million, which provides the Board 4.48 collateral coverage in relation to MDT's ~$1.3 million outstanding INTERCAP debt. If the full amount of the proposed loan is drawn, MDT will still have sufficient collateral coverage of ~1.90.

Financial Report

	FY13	FY12-audited	FY11-audited
Beginning Fund Balance	$ 5,232,000	$ 4,996,000	$ 3,277,000
Revenues	5,147,000	5,040,000	6,630,000
Expenditures	4,322,000	4,804,000	4,911,000
Ending Fund Balance	$ 6,057,000	$ 5,232,000	$ 4,996,000
Net Change in Fund Balance	$ 825,000	$ 236,000	$ 1,719,000
Fund Balance Cash	$ 1,330,000	$ 1,208,000	$ 1,301,000
Fund Balance *Unrestricted*	$ 6,057,000	$ 5,232,000	$ 4,996,000

COMMENTS:

FY11: Without the $211,000 one-time revenue and ($2,038,000) depreciation expense, the net change in fund balance would have been $3,546,000.

FY12: Without the $140,000 one-time revenue and ($1,756,000) depreciation expense, the net change in fund balance would have been $1,852,000. The remaining increase in expenses over FY11 was due to a 14% increase in fuel prices. The drop in FY12 revenue was due to MDT decreasing its SMP rates after retiring $1.3M in debt service on a 2006 loan from the state general fund. The loan was required at that time because fuel prices had begun to rise and SMP rates were not flexible enough to cover the increased expenses, so MDT borrowed from the state general fund to cover operating expenses. Without that debt service expense, MDT was able to lower its SMP rates in FY12, which decreased its revenue.

FY13: Without the $190,000 one-time revenue and ($1,345,000) depreciation expense, the net change in fund balance would have been $1,980,000. After accounting for one-time revenue and changes in depreciation expense, remaining operating revenue and expenses varied little from FY12 levels.

Recommendation

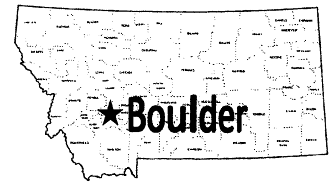
The MDT has the resources to service the debt. Approval recommended.

Staff Loan Committee - Recommendation

David Ewer, Executive Director	D Ewer	Date:	10/21/13
Geri Burton, Deputy Director	Geri Burton	Date:	10-21-13
Louise Welsh, Sr. Bond Program Officer	Louise Welsh	Date:	10/18/13
Julie Flynn, Bond Program Officer	Julie Flynn	Date:	10·3·13

Board Loan Committee – November 19, 2013

	Approval		
Jack Prothero, Chairperson – Loan Committee	☐ Yes	☐ No	☐ Abstain
Kathy Bassette, Member	☐ Yes	☐ No	☐ Abstain
Gary Buchanan, Member	☐ Yes	☐ No	☐ Abstain



Montana Board of Investments
Loan Committee
INTERCAP Loan Summary and Approval

<u>Borrower</u> City of Boulder

<u>Date</u> October 16, 2013

Approval Date___________

The City requests a $3,550,000 interim loan in anticipation of the United States Department of Agriculture (USDA) Rural Development Services (RD)[1] long-term financing for its wastewater treatment facility project. The loan will be for up to one (1) year and in the form of a bond anticipation note (BAN). The projected drawdown schedule for the loan is April through December 2014 at which point the City anticipates closing on its RD loan. The funding package for the $6,166,500 total project cost is as follows:

Borrower Portion			$ 148,000
Treasure State Endowment Program (TSEP) Grant			625,000
Department of Natural Resources & Conservation – RRGL[2] Grant			100,000
Rural Development (RD) Grant			1,691,500
INTERCAP Interim loan	**$ 3,550,000**		
Rural Development (RD) Loan			3,550,000
		Total	$ 6,114,500

[1]http://www.rurdev.usda.gov/
[2]Renewable Resource Grant & Loan Program

Authorization

7-7-109 Montana Code Annotated (MCA) (2) (a) When all conditions exist precedent to the offering for sale of bonds of a political subdivision in any amount and for any purpose authorized by law or the political subdivision has applied for and received a commitment for a grant or loan of state or federal funds, its governing body may by resolution issue and sell, in anticipation of the receipt of the grant, loan, or bonds in an amount not exceeding the total amount of bonds authorized or the total amount of the loan or grant that is committed, notes maturing within not more than three years from the date on which the notes are issued.

INTERCAP Debt

The City has borrowed $75,000 through two INTERCAP loans in 2006 and 2010. Both loans were fully drawn. The City has $36,000 outstanding on one loan that is current and will mature August 2020.

Repayment

The bond proceeds from the City's issuance and sale of a revenue bond to RD will repay the BAN. Special conditions to the Board's commitment to ensure the revenue bond takes out the BAN are as follows:

1. Prior to disbursing funds, the Board requires evidence of RD's commitment to pay off the BAN with a long-term loan. Copies of the following will provide sufficient evidence:

   - ☒ RD Letter of Conditions **(MBOI has on file)**
   - ☐ USDA Office of General Council (OGC) Loan Closing Instruction
   - ☐ RD Letter of Intent to Fund ("I" Letter)

2. The Board will require approval from RD for each specific draw on the loan.

3. The Board requires the City to hire Bond Counsel to prepare the necessary BAN documents and provide the opinion at closing. The Bond Counsel needs to be nationally recognized and rendering a bond counsel opinion in the last ten years.

Recommendation

Approval recommended.

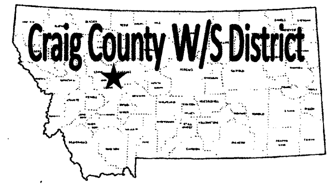
Staff Loan Committee – Recommendation

David Ewer, Executive Director	[signature]	Date: 10/21/13
Geri Burton, Deputy Director	[signature]	Date: 10-21-13
Louise Welsh, Sr. Bond Program Officer	[signature]	Date: 10/19/13
Julie Flynn, Bond Program Officer	[signature]	Date: 10-16-13

Board Loan Committee – November 19, 2013

	Approval
Jack Prothero, Chairperson – Loan Committee	☐ Yes ☐ No ☐ Abstain
Kathy Bassette, Member	☐ Yes ☐ No ☐ Abstain
Gary Buchanan, Member	☐ Yes ☐ No ☐ Abstain

Approval Date: ____________



Montana Board of Investments
Loan Committee
INTERCAP Loan Summary and Approval

Borrower Craig County Water and Sewer District

Date November 5, 2013

Approval Date ___________

The District requests a $1,300,000 interim loan in anticipation of the United States Department of Agriculture (USDA) Rural Development Services (RD)[1] long-term financing for its wastewater collection and treatment facility project. The loan will be for up to one (1) year and in the form of a bond anticipation note (BAN). The projected drawdown schedule for the loan is April through December 2014 at which point the District anticipates closing on its RD loan. The funding package for the $3,215,000 total project cost is as follows:

Borrower Portion			$ 67,000
Treasure State Endowment Program (TSEP) Grant			750,000
Department of Natural Resources & Conservation – RRGL[2] Grant			100,000
Rural Development (RD) Grant			998,000
INTERCAP Interim loan	**$ 1,300,000**		
Rural Development (RD) Loan			1,300,000
		Total	$ 3,215,000

[1]http://www.rurdev.usda.gov/
[2]Renewable Resource Grant & Loan Program

Authorization

7-7-109 Montana Code Annotated (MCA) (2) (a) When all conditions exist precedent to the offering for sale of bonds of a political subdivision in any amount and for any purpose authorized by law or the political subdivision has applied for and received a commitment for a grant or loan of state or federal funds, its governing body may by resolution issue and sell, in anticipation of the receipt of the grant, loan, or bonds in an amount not exceeding the total amount of bonds authorized or the total amount of the loan or grant that is committed, notes maturing within not more than three years from the date on which the notes are issued.

INTERCAP Debt

The District was approved for, but did not draw on a loan in 2010.

Repayment

The bond proceeds from the District's issuance and sale of a revenue bond to RD will repay the BAN. Special conditions to the Board's commitment to ensure the revenue bond takes out the BAN are as follows:

1. Prior to disbursing funds, the Board requires evidence of RD's commitment to pay off the BAN with a long-term loan. Copies of the following will provide sufficient evidence:

   - ☒ RD Letter of Conditions **(MBOI has on file)**
   - ☐ USDA Office of General Council (OGC) Loan Closing Instruction
   - ☐ RD Letter of Intent to Fund ("I" Letter)

2. The Board will require approval from RD for each specific draw on the loan.

3. The Board requires the District to hire Bond Counsel to prepare the necessary BAN documents and provide the opinion at closing. The Bond Counsel needs to be nationally recognized and rendering a bond counsel opinion in the last ten years.

Recommendation

Approval recommended.

Staff Loan Committee – Recommendation

David Ewer, Executive Director	D. Ewer	Date: 11/6/13
Geri Burton, Deputy Director	Geri Burton	Date: 11-6-13
Louise Welsh, Sr. Bond Program Officer	Louise Welsh	Date: 11/5/13
Julie Flynn, Bond Program Officer	Julie Flynn	Date: 11-5-13

Board Loan Committee – November 19, 2013

	Approval
Jack Prothero, Chairperson – Loan Committee	☐ Yes ☐ No ☐ Abstain
Kathy Bassette, Member	☐ Yes ☐ No ☐ Abstain
Gary Buchanan, Member	☐ Yes ☐ No ☐ Abstain

Approval Date: ____________

Return to Agenda

Asset Allocation

RVKuhns & ASSOCIATES, INC.

Asset Allocation Discussion

Montana Board of Investments

November 19, 2013

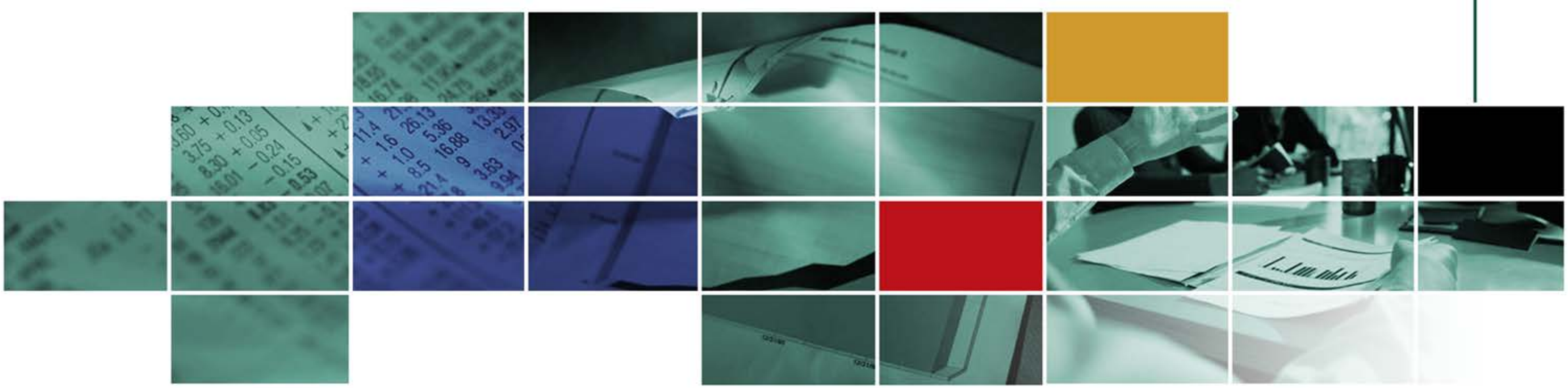


Table of Contents

RVK Capital Market Assumptions

Figure 1: Historical Asset Allocation Assumptions
(2011-2013)

	2011			2012			2013		
Asset Class	**Return (Arithmetic)**	**Standard Deviation**	**Return (Compound)**	**Return (Arithmetic)**	**Standard Deviation**	**Return (Compound)**	**Return (Arithmetic)**	**Standard Deviation**	**Return (Compound)**
Large/Mid Cap US Equity	8.00%	17.75%	6.57%	7.75%	17.75%	6.32%	7.75%	17.75%	6.32%
Small Cap US Equity	8.75%	21.75%	6.64%	8.50%	21.25%	6.48%	8.50%	21.25%	6.48%
Broad US Equity	8.15%	18.10%	6.67%	7.90%	17.95%	6.44%	7.90%	17.95%	6.44%
Dev'd Large/Mid Cap Int'l Equity	8.00%	18.75%	6.41%	8.00%	19.00%	6.37%	8.00%	19.00%	6.37%
Dev'd Small Cap Int'l Equity	8.75%	22.75%	6.45%	8.75%	23.00%	6.40%	8.75%	23.00%	6.40%
Emerging Markets Equity	10.50%	28.50%	7.00%	10.50%	29.00%	6.88%	10.50%	29.00%	6.88%
Broad International Equity	8.65%	20.10%	6.84%	8.65%	20.80%	6.71%	8.65%	20.80%	6.71%
Intermediate Duration Fixed Income	4.50%	5.50%	4.36%	4.25%	5.75%	4.09%	3.50%	5.75%	3.34%
Non-US Dev'd Sovereign Fixed Income UH	4.25%	9.75%	3.80%	4.00%	10.00%	3.52%	3.25%	10.25%	2.74%
High Yield Fixed Income	6.75%	14.50%	5.78%	7.25%	15.00%	6.22%	6.25%	15.00%	5.21%
Core Real Estate	7.00%	12.50%	6.28%	7.00%	12.50%	6.28%	7.00%	12.50%	6.28%
Non-Core Real Estate	10.00%	21.50%	7.96%	10.00%	22.50%	7.77%	10.00%	22.50%	7.77%
Private Equity	12.25%	30.25%	8.38%	11.75%	30.25%	7.87%	11.75%	30.25%	7.87%
Timber	8.25%	14.50%	7.29%	8.00%	14.50%	7.04%	7.75%	14.50%	6.79%
Cash Equivalents	2.25%	3.00%	2.21%	2.25%	3.00%	2.21%	2.25%	3.00%	2.21%
US Inflation	2.50%	3.00%	2.46%	2.50%	3.00%	2.46%	2.50%	3.00%	2.46%

Sharp reduction in expected Fixed Income returns was by far the largest change in RVK assumptions over the past two years

RVK Capital Market Assumptions

Figure 2: Correlation Matrix

(2013)

	Large/Mid Cap US Equity	Small Cap US Equity	Broad US Equity	Dev'd Large/Mid Int'l Equity	Dev'd Small Int'l Equity	Emerging Market Equity	Broad International Equity	Int. Duration Fixed Income	Non-US Dev'd Sov'n Fixed UH	High Yield Fixed Income	Core Real Estate	Non-Core Real Estate	Private Equity	Timber	Cash Equivalents
Large/Mid Cap US Equity	1.00	0.85	0.99	0.84	0.77	0.75	0.83	0.21	0.07	0.60	0.27	0.24	0.70	0.05	0.01
Small Cap US Equity	0.85	1.00	0.89	0.77	0.76	0.74	0.79	0.11	0.00	0.62	0.21	0.16	0.69	0.06	-0.02
Broad US Equity	0.99	0.89	1.00	0.85	0.79	0.77	0.85	0.20	0.06	0.62	0.28	0.23	0.72	0.05	0.00
Dev'd Large/Mid Int'l Equity	0.84	0.77	0.85	1.00	0.92	0.82	0.99	0.01	0.33	0.65	0.36	0.24	0.70	0.01	-0.08
Dev'd Small Int'l Equity	0.77	0.76	0.79	0.92	1.00	0.86	0.94	0.07	0.36	0.70	0.38	0.25	0.66	0.05	-0.15
Emerging Markets Equity	0.75	0.74	0.77	0.82	0.86	1.00	0.89	-0.02	0.16	0.65	0.26	0.16	0.63	0.05	-0.15
Broad International Equity	0.83	0.79	0.85	0.99	0.94	0.89	1.00	0.00	0.31	0.68	0.34	0.23	0.71	0.02	-0.11
Int. Duration Fixed Income	0.21	0.11	0.20	0.01	0.07	-0.02	0.00	1.00	0.43	0.28	-0.04	-0.03	-0.18	-0.05	0.24
Non-US Dev'd Sov'n Fixed UH	0.07	0.00	0.06	0.33	0.36	0.16	0.31	0.43	1.00	0.09	0.01	-0.06	-0.03	-0.02	0.11
High Yield Fixed Income	0.60	0.62	0.62	0.65	0.70	0.65	0.68	0.28	0.09	1.00	0.14	0.09	0.48	-0.04	-0.08
Core Real Estate	0.27	0.21	0.28	0.36	0.38	0.26	0.34	-0.04	0.01	0.14	1.00	0.91	0.50	-0.02	0.09
Non-Core Real Estate	0.24	0.16	0.23	0.24	0.25	0.16	0.23	-0.03	-0.06	0.09	0.91	1.00	0.45	-0.05	-0.02
Private Equity	0.70	0.69	0.72	0.70	0.66	0.63	0.71	-0.18	-0.03	0.48	0.50	0.45	1.00	0.07	0.09
Timber	0.05	0.06	0.05	0.01	0.05	0.05	0.02	-0.05	-0.02	-0.04	-0.02	-0.05	0.07	1.00	0.36
Cash Equivalents	0.01	-0.02	0.00	-0.08	-0.15	-0.15	-0.11	0.24	0.11	-0.08	0.09	-0.02	0.09	0.36	1.00

MVO Analysis

Efficient Portfolios – Current Ranges

Figure 3: Asset Allocation Analysis – Current Ranges

(Current Allocation as of September 30, 2013)

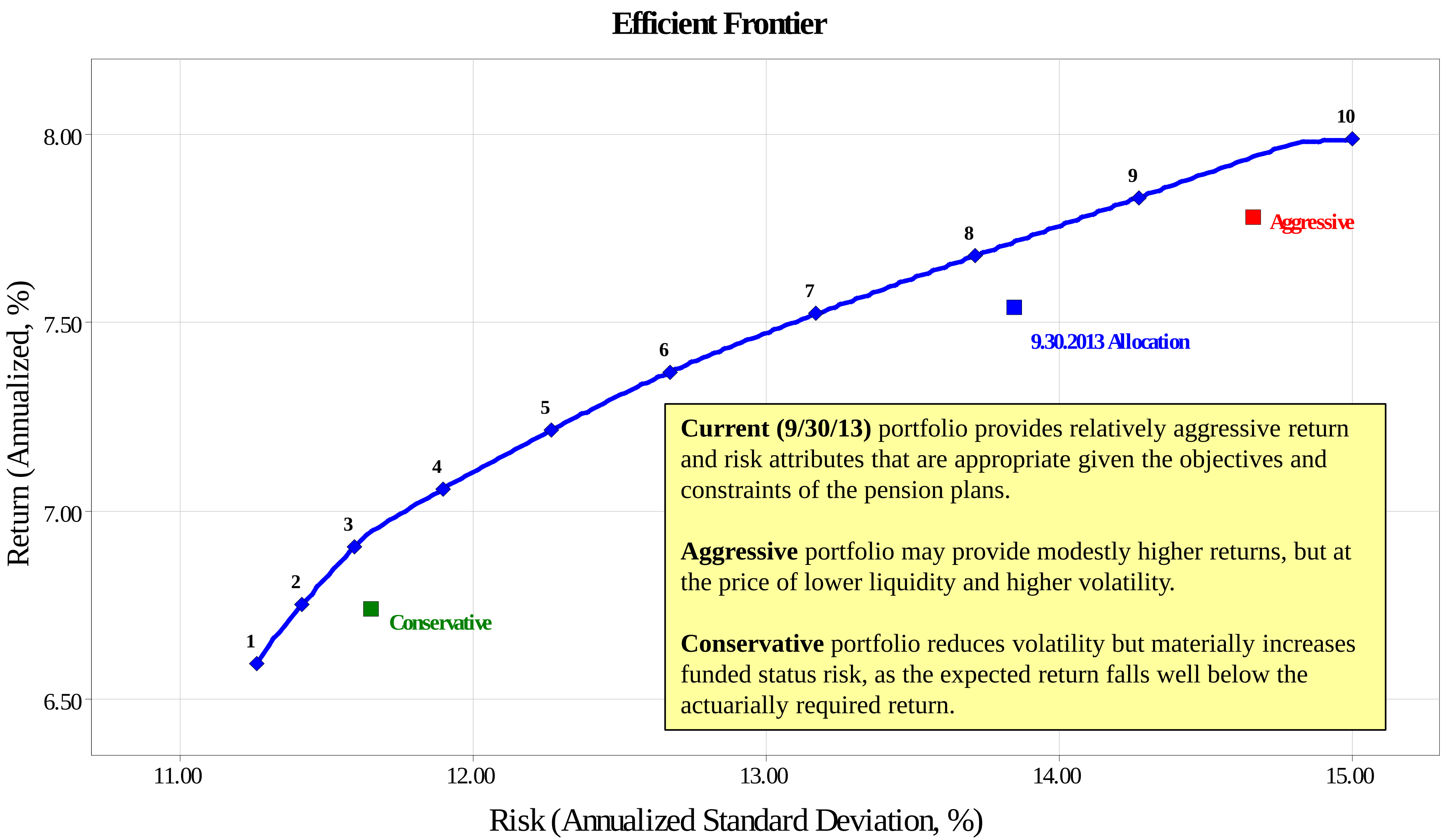
	Min	Max	9.30.2013 Allocation	Conservative	Aggressive
Large/Mid Cap US Equity	24.5	50	35.0	34.0	27.0
Small Cap US Equity	0	10	2.8	0.0	7.0
Dev'd Large/Mid Int'l Equity	7	30	12.5	12.0	15.0
Dev'd Small Int'l Equity	0	5	1.2	0.0	1.0
Emerging Markets Equity	0	7	4.0	3.0	6.0
Int. Duration Fixed Income	14	32	18.4	28.0	17.0
Non-US Dev'd Sov'n Fixed UH	0	3	0.9	1.0	1.5
High Yield Fixed Income	0	5	2.4	1.0	3.5
Core Real Estate	1.5	6.5	3.4	3.5	1.5
Non-Core Real Estate	1	7.5	5.0	3.0	5.0
Private Equity	9	15	12.0	9.0	14.0
Timber	0	2	0.7	0.5	0.5
Cash Equivalents	1	5	1.7	5.0	1.0
Total			100	100	100
Capital Appreciation			75	62	79
Capital Preservation			21	34	20
Alpha			0	0	0
Inflation			4	4	2
Expected Return			7.54	6.74	7.78
Risk (Standard Deviation)			13.85	11.66	14.66
Return (Compound)			6.66	6.11	6.80
Return/Risk Ratio			0.54	0.58	0.53
RVK Expected Eq Beta (LC US Eq = 1)			0.74	0.63	0.78
RVK Liquidity Metric (T-Bills = 100)			72	77	70

Total Equities have a range from 58% to 72%. Total Domestic Equity has a range from 28% to 44%. Total International Equity has a range from 14% to 22%. Total Fixed Income has a range of 22% to 30%. Total Real Estate has a range of 6% to 10%.

Efficient Frontier – Current Ranges

Figure 4: Portfolio Efficient Frontier – Current Ranges

(Current Allocation as of September 30, 2013)



Efficient Portfolios – Broad Ranges

Figure 5: Asset Allocation Analysis – Broad Ranges

(Current Allocation as of September 30, 2013)

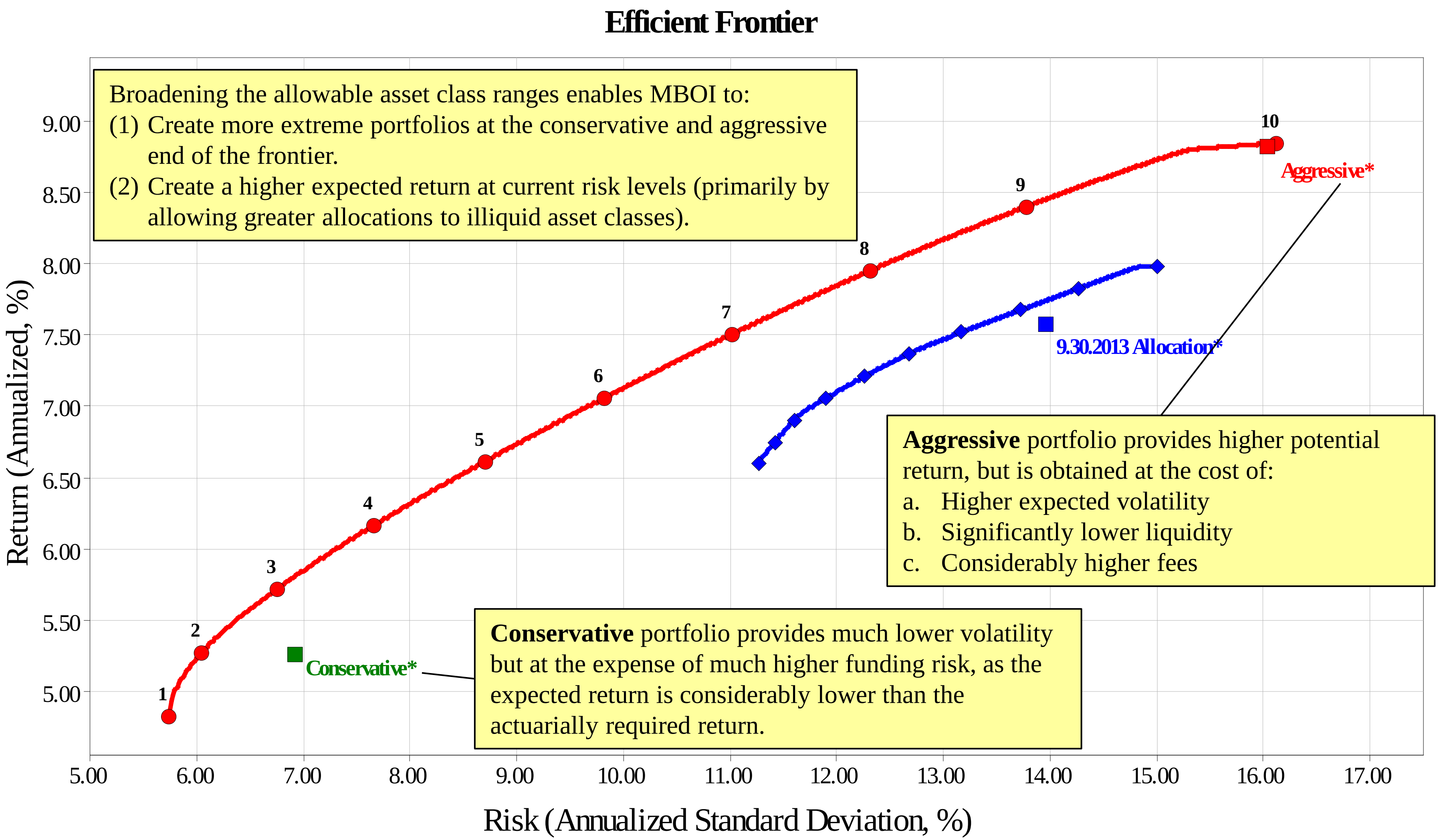
	Min	Max	9.30.2013 Allocation*	Conservative*	Aggressive*
Broad US Equity	10	50	37.8	15.0	10.0
Broad International Equity	10	50	17.7	15.0	23.0
Int. Duration Fixed Income	15	75	18.4	55.0	15.0
Non-US Dev'd Sov'n Fixed UH	0	10	0.9	0.0	0.0
High Yield Fixed Income	0	10	2.4	0.0	1.0
Core Real Estate	0	10	3.4	5.0	0.0
Non-Core Real Estate	0	25	5.0	0.0	25.0
Private Equity	0	25	12.0	0.0	25.0
Timber	0	5	0.7	5.0	0.0
Cash Equivalents	1	5	1.7	5.0	1.0
Total			100	100	100
Capital Appreciation			75	30	84
Capital Preservation			21	60	16
Alpha			0	0	0
Inflation			4	10	0
Expected Return			7.58	5.26	8.83
Risk (Standard Deviation)			13.96	6.93	16.04
Return (Compound)			6.69	5.03	7.67
Return/Risk Ratio			0.54	0.76	0.55
RVK Expected Eq Beta (LC US Eq = 1)			0.74	0.35	0.72
RVK Liquidity Metric (T-Bills = 100)			73	81	47

*Used to differentiate different model portfolios with the same name.

Efficient Frontier – Broad Ranges

Figure 6: Portfolio Efficient Frontier – Broad Ranges

(Current Allocation as of September 30, 2013)



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Monte Carlo Analysis

Monte Carlo Simulation Results – Current Ranges

1 Year	9.30.2013 Allocation	Conservative	Aggressive
Target 0%	73	74	72
Target 2%	67	68	67
Target 4%	62	61	62
Target 6%	56	54	56
Target 7.75%	**50**	**47**	**51**
Target 10%	44	40	45

3 Years	9.30.2013 Allocation	Conservative	Aggressive
Target 0%	81	83	80
Target 2%	74	75	74
Target 4%	66	65	66
Target 6%	56	53	57
Target 7.75%	**47**	**43**	**49**
Target 10%	37	31	38

5 Years	9.30.2013 Allocation	Conservative	Aggressive
Target 0%	85	87	84
Target 2%	78	78	77
Target 4%	68	67	68
Target 6%	57	53	57
Target 7.75%	**45**	**40**	**47**
Target 10%	32	25	34

10 Years	9.30.2013 Allocation	Conservative	Aggressive
Target 0%	91	92	90
Target 2%	83	85	83
Target 4%	72	71	72
Target 6%	57	52	57
Target 7.75%	**42**	**35**	**43**
Target 10%	25	17	27

Monte Carlo Simulation – Current Ranges

Figure 7: 1-Year Return

Metric	Probability of ≥ 0% Return	Probability of ≥ 7.75% Return
Conservative	74%	47%
Current (9/30/2013)	73%	50%
Aggressive	72%	51%

Figure 8: 10-Year Annualized Return

Metric	Probability of ≥ 0% Return	Probability of ≥ 7.75% Return
Conservative	92%	35%
Current (9/30/2013)	91%	42%
Aggressive	90%	43%

Highlights

- Each portfolio presents minimal trade-offs due to relatively narrow constraints.
- All portfolios provide a reasonable probability of achieving a 7.75% annual return over 10 years.

Monte Carlo Simulation Results – Broad Ranges

1 Year	9.30.2013 Allocation	Conservative*	Aggressive*
Target 0%	73	81	75
Target 2%	67	72	70
Target 4%	62	60	65
Target 6%	56	48	60
Target 7.75%	**50**	**37**	**55**
Target 10%	44	25	48

3 Years	9.30.2013 Allocation	Conservative*	Aggressive*
Target 0%	81	90	84
Target 2%	74	80	78
Target 4%	66	64	71
Target 6%	56	44	62
Target 7.75%	**47**	**27**	**54**
Target 10%	37	11	43

5 Years	9.30.2013 Allocation	Conservative*	Aggressive*
Target 0%	85	93	88
Target 2%	78	83	82
Target 4%	68	66	74
Target 6%	57	41	64
Target 7.75%	**45**	**21**	**54**
Target 10%	32	6	40

10 Years	9.30.2013 Allocation	Conservative*	Aggressive*
Target 0%	91	97	93
Target 2%	83	90	87
Target 4%	72	69	79
Target 6%	57	36	66
Target 7.75%	**42**	**12**	**53**
Target 10%	25	1	35

Monte Carlo Simulation – Broad Ranges

Figure 9: 1-Year Return

Metric	Probability of ≥ 0% Return	Probability of ≥ 7.75% Return
Conservative*	81%	37%
Current (9/30/2013)	73%	50%
Aggressive*	75%	55%

Figure 10: 10-Year Annualized Return

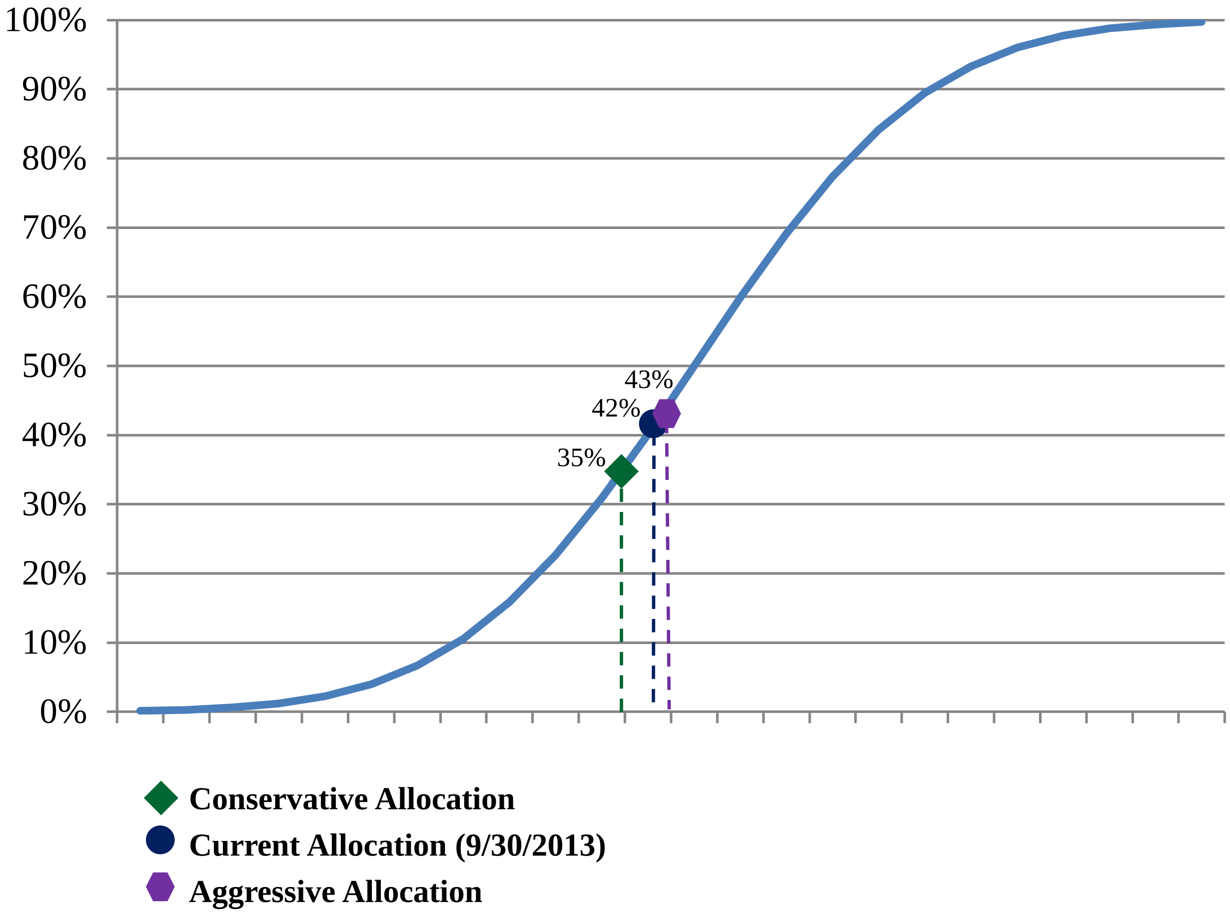
Metric	Probability of ≥ 0% Return	Probability of ≥ 7.75% Return
Conservative*	97%	12%
Current (9/30/2013)	91%	42%
Aggressive*	93%	53%

Highlights

- Each portfolio presents significant trade offs (particularly over a 10-year horizon)
- A more aggressive risk profile creates a higher likelihood of meeting the 7.75% return objective, but at the cost of lower liquidity and reduced diversification.
- A more conservative risk profile provides less risk over the short term, but renders it highly unlikely that the plan will achieve a long-term return exceeding 7.75%.

MVO Analysis – Monte Carlo Simulation

Figure 11: Cumulative Probability Distribution for Achieving 7.75% Return over 10 Years – Current Ranges

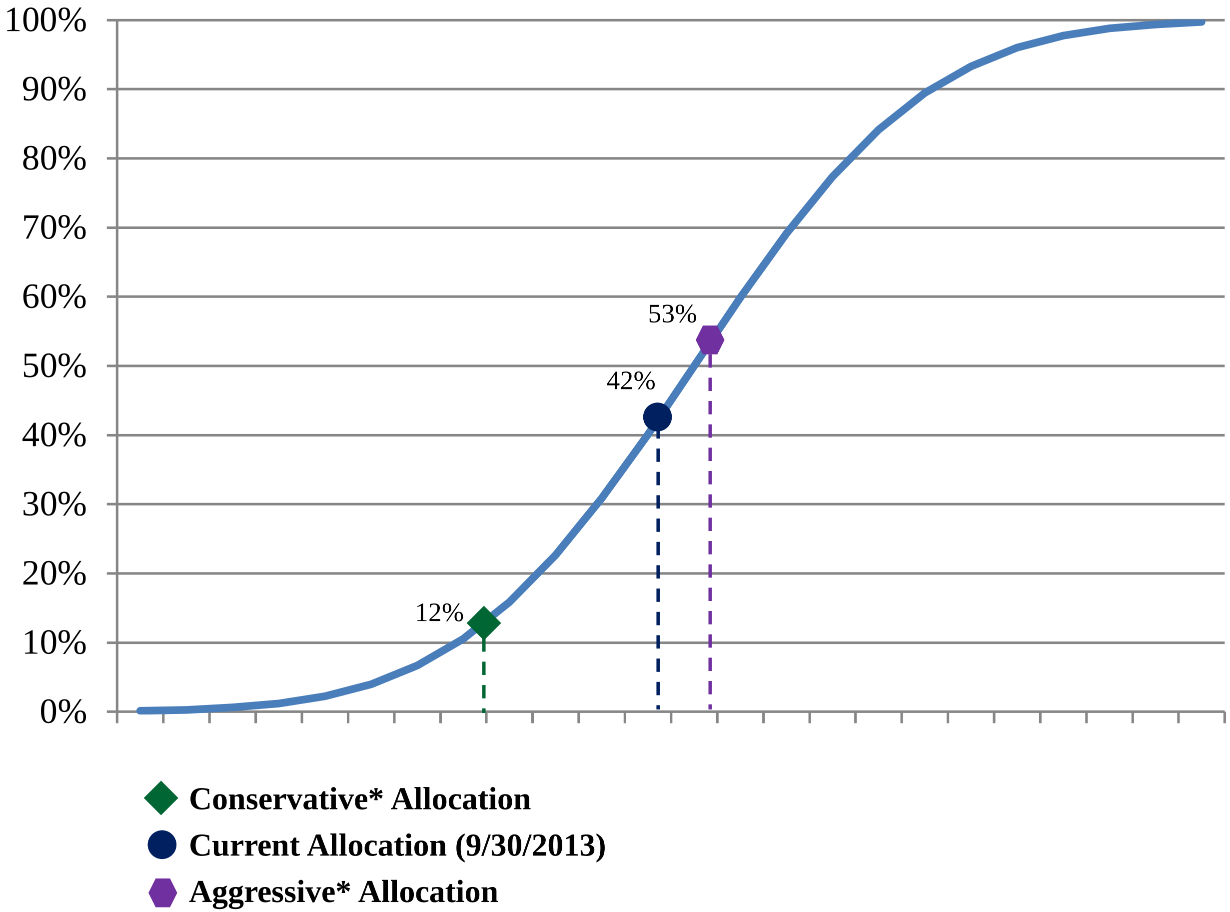


One Year Downside Risk (5% Chance)	
Conservative Allocation	-12.31%
Current Allocation	-15.01%
Aggressive Allocation	-15.85%

RVK Assessment of Liquidity (100=Highest; 0=Lowest)	
Conservative Allocation	77
Current Allocation	72
Aggressive Allocation	70

MVO Analysis – Monte Carlo Simulation

Figure 12: Cumulative Probability Distribution for Achieving 7.75% Return over 10 Years – Broad Ranges



One Year Downside Risk (5% Chance)

Conservative* Allocation	-6.17%
Current Allocation	-14.39%
Aggressive* Allocation	-14.96%

RVK Assessment of Liquidity (100=Highest; 0=Lowest)

Conservative* Allocation	81
Current Allocation	73
Aggressive* Allocation	47

Appendix

What is Risk?

Risk is the Probability of Incurring a Permanent Impairment of Capital

Key Concepts

- **Investors expect to be compensated with higher returns in exchange for taking greater amounts of risk.**
- **While admittedly imperfect, risk metrics seek to describe investment attributes that may raise or lower the probability of capital impairment. Common descriptions of risk include:**

Volatility	Describes the expected variation in asset values over time.
Equity Beta	Measures embedded equity risk (i.e., the extent to which asset values move in sync with overall equity markets).
Liquidity	Measures the extent to which assets can be bought or sold (and the required pricing concessions to execute such transactions) in various market conditions.
Valuation	Measures the relative attractiveness of asset values based on historical parameters and future projections.
Headline Risk	Chance that an unexpected loss event could cause reputational damage.

Risk, Return, and Mean Variance Optimization (MVO)

- Introduced by Nobel Laureate, Harry Markowitz in 1952.
- MVO uses return VOLATILITY as the primary proxy for investment risk.
- Using inputs of expected return, volatility, and correlation for various asset classes, MVO enables investors to identify combinations of asset class allocations that maximize portfolio return for a given level of risk.
- By incorporating multiple assets with less than perfect correlation, investors can increase the expected long-term returns of the portfolio.

Why Does Volatility Matter?

Key Concepts

- Average returns are not equivalent to compound returns (i.e., geometric return) in the presence of return volatility.
- Difference between arithmetic and compound return stems primarily from the asymmetrical impact of negative returns.

Figure A-1: Sample Return Stream and Resulting Returns

Year	Beginning Value	Return	Ending Value
Year 1	$100.00	15%	$115.00
Year 2	$115.00	(10%)	$103.50
Year 3	$103.50	(25%)	$77.63
Year 4	$77.63	20%	$93.15

Average Return	**= 0%**
Actual Loss	**= ($6.85)**
Effective Annualized Return	**= (1.76%)**

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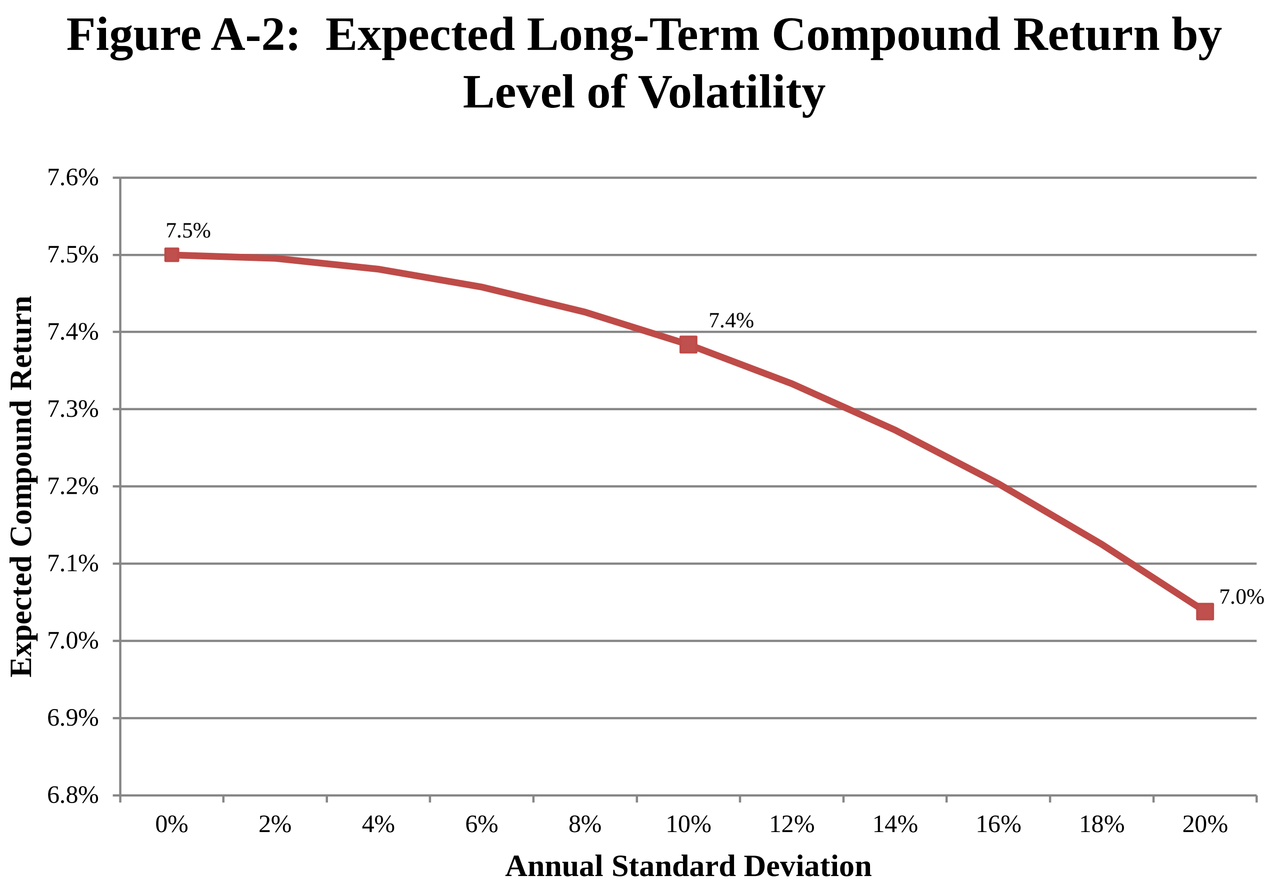
Volatility Reduces Expected Compound Returns



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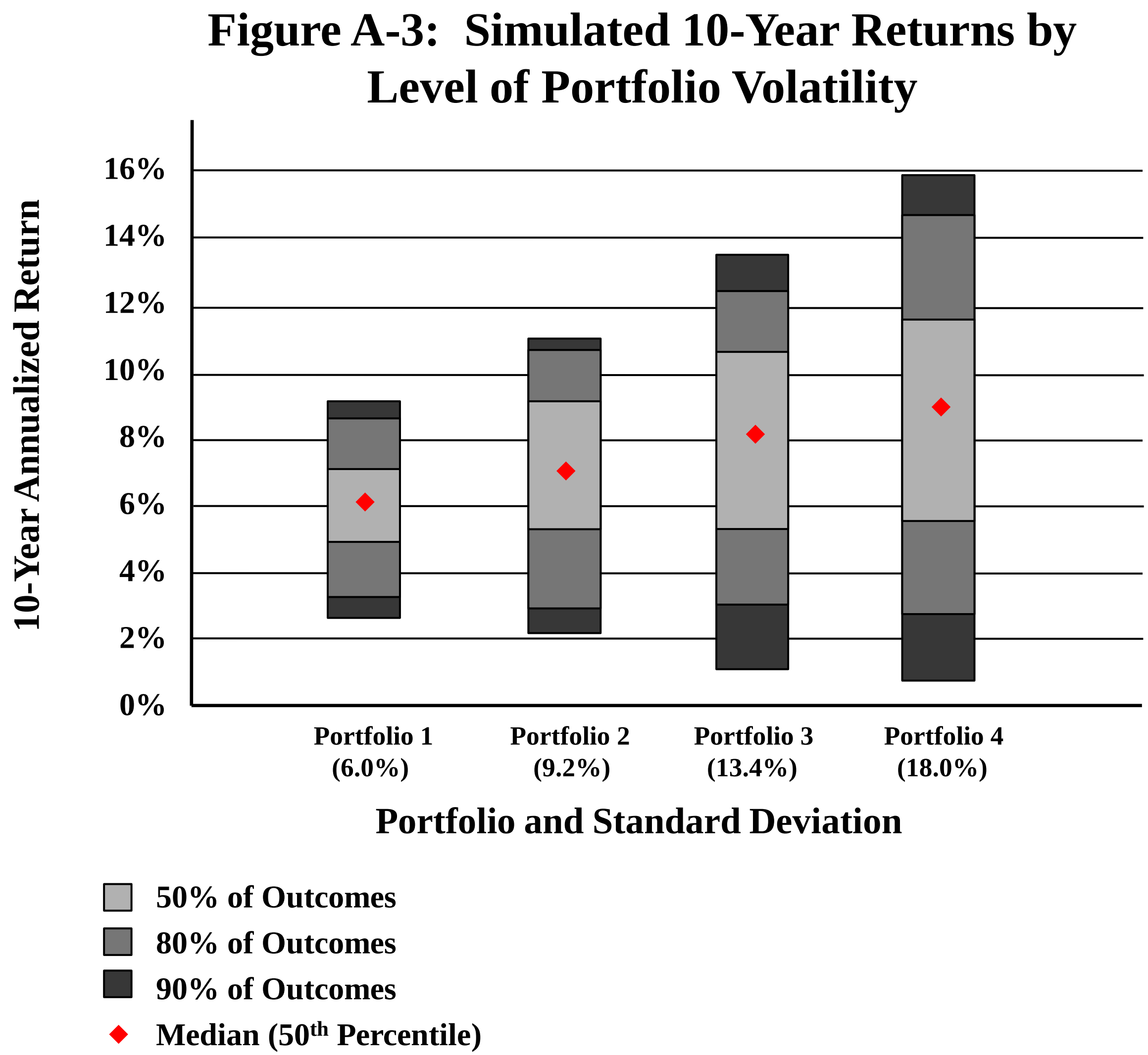
Volatility Also Widens the Distribution of Returns



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How Do Asset Class Correlations Impact Returns?

Highlights

- Correlations of less than 1.0 enable investors to reduce portfolio risk without sacrificing return.
- Figure 4 illustrates a risk reduction of approximately 2.56%, which is generated by a two-asset portfolio with a 0.10 correlation.

Figure A-4: Risk/Return Plot

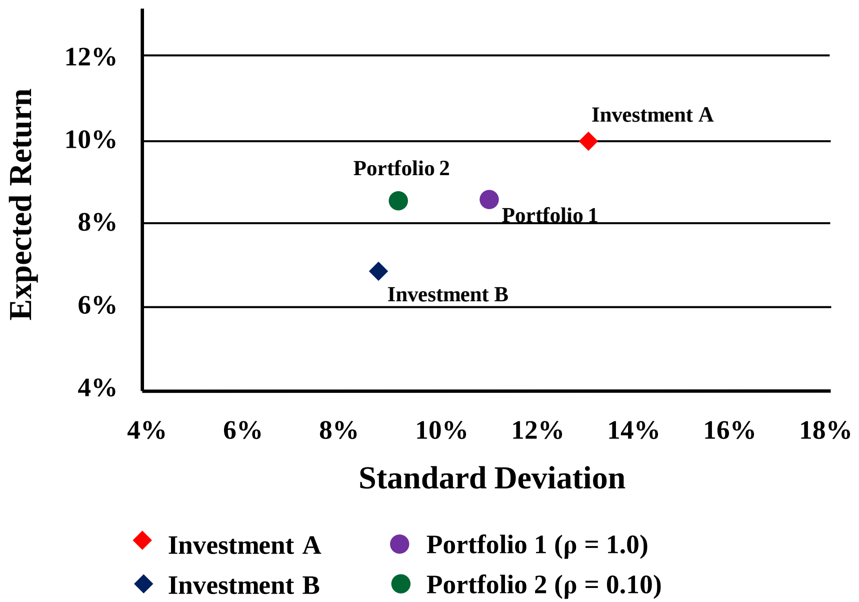

Figure A-5: Investment Risk/Return Attributes

Metric	Investment A	Investment B
Return	10.00%	7.00%
Standard Deviation	13.20%	8.80%
Portfolio Weight	56%	44%

Figure A-6: Portfolio Risk/Return Attributes

Metric	Portfolio 1	Portfolio 2
Correlation ($\rho_{A,B}$)	1.00	0.10
Return	8.68%	8.68%
Standard Deviation	11.26%	8.70%

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MVO Shortcomings

1. Views volatility as the sole proxy for risk
2. Simplified assumption of risk/return trade-off fails to capture how real world investors weight gains versus losses
3. Ignores non-normal attributes of return distributions, and assumes returns are symmetrical
4. Treats correlation as a constant rather than a variable
5. Shows high sensitivity to small changes to input values
6. Unconstrained output yields highly concentrated portfolios rather than intended diversification
7. Ignores liquidity risks and corresponding rebalancing constraints

Monte Carlo Simulation

- Monte Carlo simulation uses random sampling of asset class returns, based on the probability of distribution implied by the asset class assumptions, to create several thousand estimates of portfolio performance.

- A Monte Carlo simulation procedure involves generating a large number of potential return scenarios and then measuring and evaluating the distribution of portfolio returns implied by these scenarios.

- The results of this model indicate the probability of meeting or exceeding a target geometric (compound) return as used in asset allocation analysis.
  - The geometric return of a portfolio will always be less than or equal to its arithmetic return, either assumed or realized, because geometric return accounts for the dampening effect of volatility on portfolio compound returns.

Importance of Asset Allocation

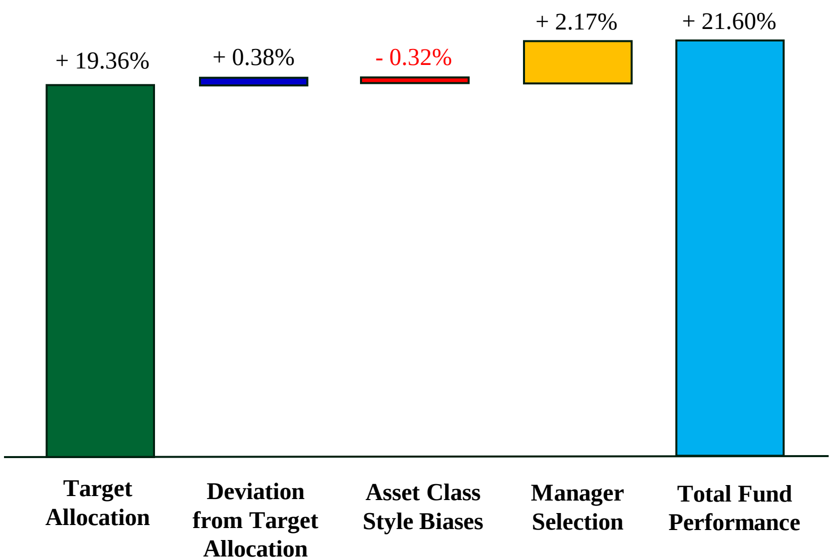
Asset Allocation is the Primary Driver of Portfolio Returns

- Multiple studies conclude that asset allocation is the most important determinant of total fund performance in the long run.
- Studies estimate that 90% of the volatility in annual fund returns is attributable to asset allocation (as opposed to individual manager selection).
- Manager selection, while potentially valuable, cannot compensate an investor for a poorly diversified or inappropriately allocated portfolio.

Source: Ibbotson, Roger G. and Paul D. Kaplan, 2000. "Does Asset Allocation Policy Explain 40%, 90%, or 100% of Performance?". Financial Analysts Journal. January/February 2000, Vol.56, No.1, pp.26-33.

Theory is Confirmed in Practice

Figure A-7: Total Portfolio Return Attribution
(July 1, 2010 – June 30, 2011)



Highlights

- Each quarter, RVK completes an analysis of total portfolio return attribution for an endowment with ~$400 million in assets.
- Analysis decomposes return into:
  - Target Allocation (i.e., return of underlying benchmarks)
  - Deviation from Target Allocation
  - Style biases within each asset class (e.g., small cap U.S. equity overweight)
  - Manager selection (i.e., excess return)
- For the one-year period of analysis, 90% of portfolio performance is determined by the portfolio asset allocation.

Summary of Insights on Risk, MVO & Asset Allocation

- **Risk is best defined as the probability of suffering permanent capital impairment (i.e., losses that cannot be reversed with reference to target returns).**

- **Asset allocation is the most critical driver of long-term returns and return volatility (a key metric of risk).**

- **While admittedly imperfect, MVO is a powerful tool that can help the Board create a portfolio that is well-diversified and optimizes the expected risk/return trade-off.**

- **The Board has several additional tools available to manage other forms of risk**
  1. **Valuation Risk –** Measured tactical allocation provides flexibility to alter allocations to asset classes during periods of misvaluation.
  2. **Liquidity Risk –** Private equity and real estate pacing tools help maintain desired exposure to illiquid asset classes.
  3. **Manager Risk –** Monitoring by staff and third-party consultant reduces risk of and ensures timely response to manager underperformance.

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: Clifford A. Sheets, CFA, Chief Investment Officer

Date: November 19, 2013

Subject: Pension Asset Allocation Recommendation

According to the retirement plans investment policy, the Board must, at least annually, review the asset allocation and ranges and address the need for any potential changes. That is the purpose for this memo.

Cash Flow Analysis

In preparation for this review, Staff did an extensive analysis of the cash flow status of the two large plans, PERS and TRS. The negative cash flow status (benefit distributions higher than contributions) of these plans has generally been known for years, but this status became noticeably worse over the past couple of years. This is the first time an in-depth examination of the cash flow history and the creation of a model to forecast the outlook has been done by Staff. Understanding the cash flow needs of the plans is important given the implications this can have on asset allocation. This analysis focused on the two largest of the nine plans because they represent 87% of total pension assets and therefore dominate any actions taken with respect to asset management. Staff did review the forecasted contributions and distributions for the other seven plans, but did not find any material impact on the dollar amount of assets or percentage of assets in this analysis.

This cash flow analysis is also important given recent pension legislation which changed the contributions and benefits for the PERS and TRS plans. The inputs into the five year forecast included contributions from all sources – general fund or coal tax-related items, as well as employee and employer contributions. To be conservative, the existing GABA rates were left unchanged given the uncertainty posed by pending lawsuits on this issue. Staff received five year forecasts from both PERS and TRS on contributions and benefits and hope to continue to involve PERS and TRS staff in future years when the cash forecast is refreshed. It is Staff's intention that the cash flow history and five year forecast be updated each year going forward based on the information available at the time. This will be important given the changing dynamics that can impact the actual cash flow and the forecast each year. These variables include:

- Actual plan returns earned
- GABA changes
- Portfolio income levels
- Actual growth in contributions and distributions (benefits)

In addition, potential future legislative changes must be considered should they have an impact on benefits or contributions.

The cash flow forecast model shows a notable improvement in the negative cash flow status of the two large plans. The improvement begins this fiscal year in connection with the legislated increase in contribution amounts in both plans. However, both plans remain cash flow negative and over the next few fiscal years the negative cash flow returns to similar levels seen in fiscal 2013. There are two charts attached for reference which show the history and forecasted outlook. The first chart shows the negative cash flow in dollar amounts by plan for the last three fiscal years and for the five year forecast period, fiscal 2014-2018. The right axis shows the sales needed to pay benefits as a percent of invested assets for the prior three fiscal years and forecasted sales for the next five years.

The second graph looks at this same concept for three different scenarios in the forecast period. The base case shown is the same as on the first graph. It reflects Staff's best estimate of what the implied sales will be each year over the next five years to source the cash needed to pay benefits. In addition to the base case there are two other lines – a best case and worst case scenario. The five-year cumulative percent of assets sold is also noted for each forecasted scenario. The material changes made to the base case assumptions for the best case and worst case were not symmetrical. The changes reflect alternative assumed asset growth rates, portfolio yield levels, and distribution (benefit) growth rates. The worst case is especially bad in that it incorporates large negative returns early in the period, followed by improvement, similar to the plan returns experienced in fiscal 2008 – 2012, during the Great Recession, and the extreme bear market in all risk assets. The probability of this extreme scenario is very low in my judgment, but not impossible.

In summary, with respect to the forecasted cash flow status of the plans, at this time I do not see a change meaningful enough to suggest we need to alter our risk appetite or liquidity preferences in terms of the allocation to illiquid private assets. Nevertheless, some changes to the existing asset allocation ranges are recommended, for the reasons discussed below.

Asset Allocation Ranges

In reviewing the current asset allocation ranges it is important to consider several aspects, remembering that asset allocation is the principal driver of returns. Thus, a primary consideration is to assess the returns that are available to us given the expected long term returns for each asset class, and consider these in the context of the returns needed by the plans. There is a tradeoff, however, in that higher returning assets typically present more risk, and so we must balance our risk appetite along with our return appetite. Risk here can be thought of in terms of the volatility of returns, though we know there are other definitions of risk which are perhaps less quantitative in nature but still real. In addition to the balancing issues of risk and return, there are liquidity considerations given the need to source cash to pay plan benefits each month. Liquidity is an issue that pertains not just to the most obvious aspect, whether an asset is publicly traded, but also the overall exposure to volatility and the risk of being forced into selling volatile assets at the worst possible time, after falling significantly in value.

In considering the ranges for each individual asset class, one objective is to provide a range that will accommodate the inherent volatility of that particular asset class. In addition we need to consider the fact that an asset class weighting can be impacted significantly at any time by the movement of other asset classes, even when the asset class itself changes very little. This can be thought of as the denominator effect, and is mostly driven by public equity volatility, in both directions. The individual ranges should also be sufficiently wide to allow for preferences across asset classes given market circumstances, while respecting the longer term minimum and maximum exposure constraints. In addition, there is a broader range consideration in terms of "total equities" which sums the exposure of both public and private equity. This is designed to maintain a discipline around our total exposure to equities which is generally the most volatile component of the overall portfolio.

Below is a table which shows the current allocation ranges and the proposed ranges by asset class, identified by their pool acronyms. Also shown is the actual allocation as of the most recent quarter end.

	MDEP	**MTIP**	**MPEP**	**Total Equity**	**RFBP**	**MTRP**	**STIP**
Current Approved Range	30-50%	15-30%	9-15%	60-70%	22-32%	4-10%	1-5%
Mid point	40%	23%	12%	65%	27%	7%	3%
As of 9/30/13	37.8%	17.7%	12.0%	67.4%	21.7%	9.2%	1.7%
Proposed Range	28-44%	14-22%	9-15%	58-72%	22-30%	6-10%	1-5%
Mid point	36%	18%	12%	65%	26%	8%	3%

The recommended changes reflect more of an adjustment than a fundamental change in the status quo. The changes at the individual asset class level reflect a narrowing, although at the total equity level the range has been expanded slightly.

The two public equity ranges were each narrowed, and the relationship to each other reflects a two-to-one preference for domestic vs. international equities based on their respective mid-points. The prior ranges were artificially broad to accommodate a contemplated move to a mix that would reflect a global market weighting in which case the allocation to domestic stocks would fall to around half of total public equities. That objective was never really clarified or rationalized, and, in my view, no longer exists. The new ranges reflect a mix of domestic vs. international stocks that is not unusual in our peer group, though our actual weights at quarter end reflect an exposure that is more tilted to domestic stocks than the average exposure of our peers at this time.

Prior to a revision to the asset allocation ranges in August 2006, the range for domestic equities was 40-50% and for international equities was 12-18%. Now both ranges reflect a variance vs. mid-point of 22%, or a little over a one standard deviation move for each asset class. Thus, the objective of accommodating the inherent volatility of the asset class under most instances is met.

There is no change being recommended in the allocation range for private equity. It remains at a 12% mid-point and the variance, +/- 3%, represents a 25% move vs. the mid-point. The range for the total of all three equity categories is set at 58% to 72%, or slightly wider than the current range. The 7% variance from the mid-point of the total equities range represents only an 11% variance. This recognizes that while the underlying equity asset classes by themselves are highly volatile, they do not always move in tandem or in the same magnitude, so there is some diversification benefit. However, the range is primarily designed to reflect an overall risk appetite for equities and force the discipline of maintaining this overall exposure by rebalancing as needed to stay within a reasonable band while acknowledging the inherent volatility of equity-related assets.

The narrower fixed income range reflects an inherently less volatile asset class with a variance vs. mid-point of 15%. It also recognizes the importance of keeping a minimum exposure of 22% to fixed income given the need to hold bonds as a diversifier to the dominant equity exposure in the total portfolio. Bonds can also serve as a liquidity resource under most market conditions.

The real estate allocation range was narrowed to 6-10%, with a mid-point of 8%. The narrower range reflects the fact this asset class is now a larger portion of the portfolio than it was a few years ago, with a primary objective of providing diversification, and the likelihood its weight will be maintained at 6% or higher. The range still reflects a variance vs. mid-point of 25%, similar to that for private equity. While this variance vs. mid-point may seem high for real estate itself given its lower volatility in comparison to public equities, both real estate and private equity are two asset class weightings that are difficult to adjust quickly, given their low liquidity. Thus we should have a broader range to accommodate moves in the denominator that are not as easy to adjust for in the short run with these two asset classes.

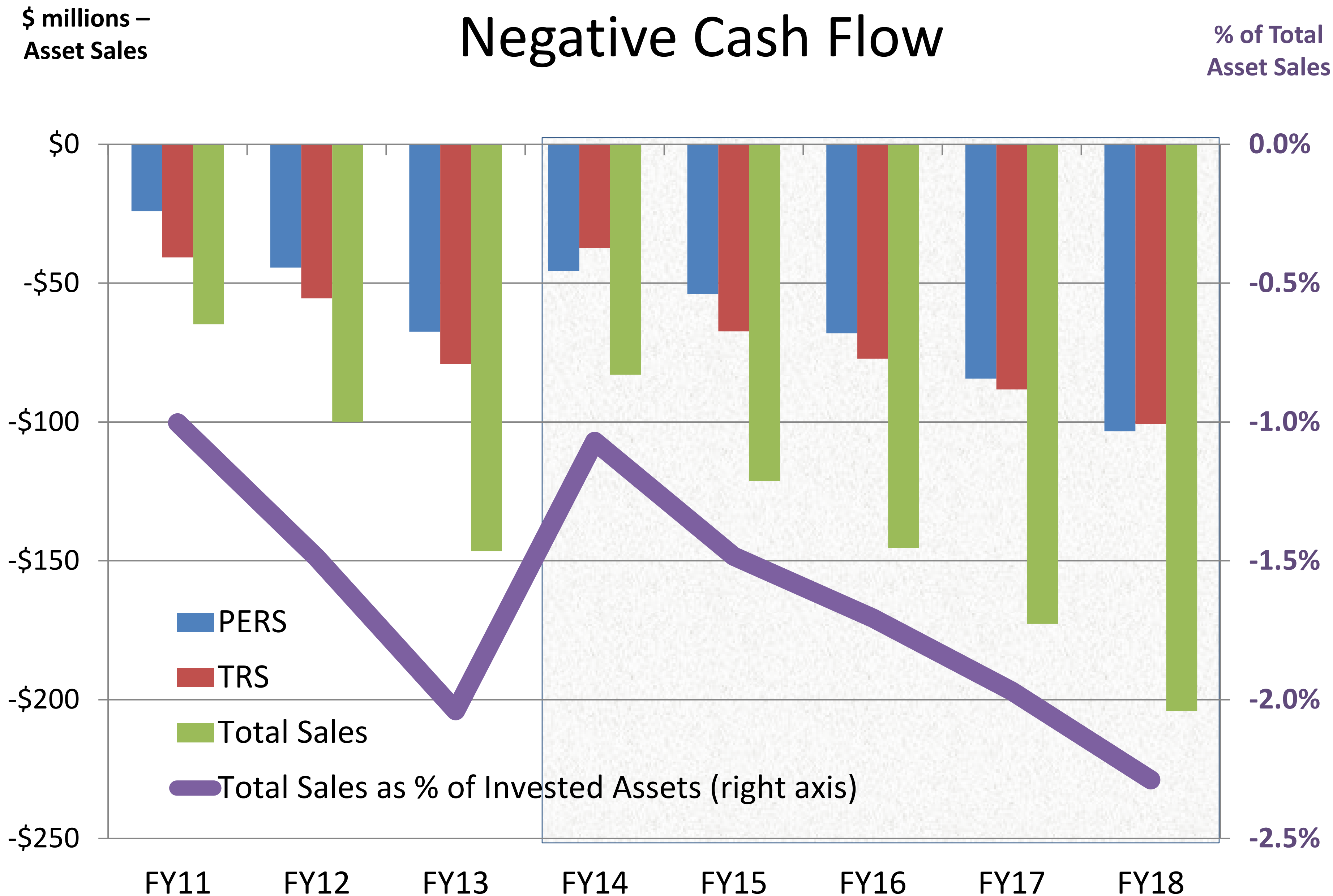
Summary

The recommended modifications to the asset allocation ranges reflect an allocation framework that balances risk with the return objectives of the pension plans. They also reflect the expected cash flows for the plans and their impact on asset management. The changes are a recognition of the current realities of the portfolio composition and do not reflect any material change in the risk profile of the portfolio. They also allow for the potential volatility that is inherent in these asset classes while providing some flexibility for tilting allocation preferences in light of market conditions and expectations.

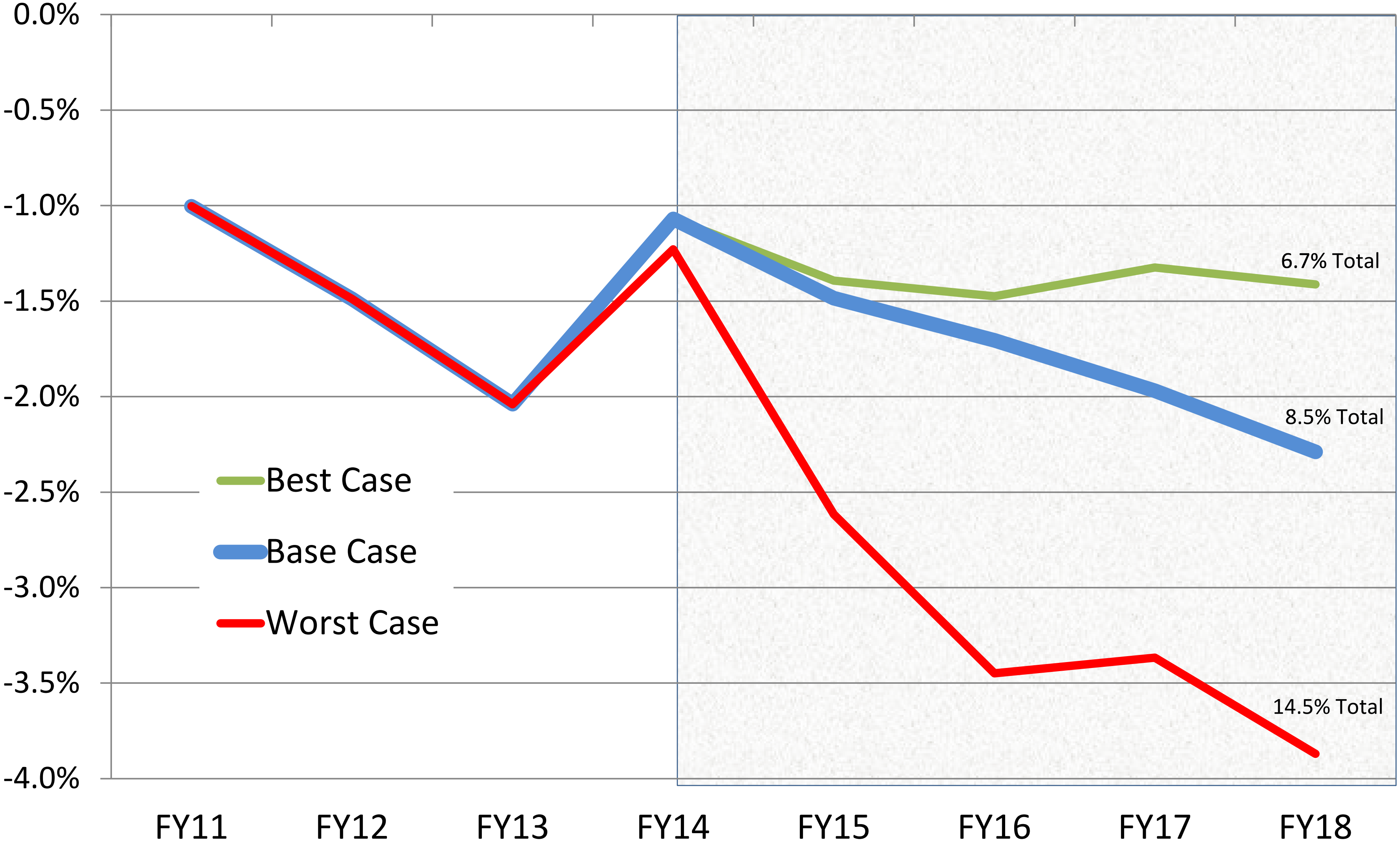
Following this memo is a marked copy of the allocation ranges that are part of our pension policy statement. Staff recommends that the Board approve the changes to the asset allocation ranges that are discussed above by approving this revised policy.

PERS/TRS Cash flow forecast

Negative Cash Flow



PERS/TRS Cash flow forecast
Sales needed for benefits as % of assets



LEGAL AND CONSTITUTIONAL AUTHORITY

The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds. Section 17-6-201, MCA established the Unified Investment Program, created the Montana Board of Investments (the "Board") and gave the Board sole authority to invest state funds, including the public retirement plans (Plans) in accordance with state law and the state constitution. The Board finds that it is in the best interest of the state's nine retirement Plans to set out investment policies for the Plans in one comprehensive document utilizing the same asset allocation. In the future, individual Plan requirements may vary and this common approach could change. The Board intends to keep this policy updated as it modifies or amends underlying investment related policies. **Click on the links below to view the Board's Governing Law/Constitution and its Governance Policy.**

Governing Law/Constitution

Governance Policy

INTRODUCTION

The purpose of this policy statement is to provide a broad strategic framework for the Plans' investments under the guidance of the Board. The Board manages the assets under the prudent expert principle (Section 17-6-201 MCA), which provides:

> ***that the Board shall manage a portfolio***
> ***a) with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;***
> ***b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and***
> ***(c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.***

Plan assets are commingled for investment purposes into six investment pools created by the Board. The pools are shared, that is co-mingled funds, which operate similar to mutual funds. The use of pools allows for simplified investing and accounting, broader diversification and thus less risk than would otherwise be available for the smaller Plans and provides additional opportunities for fee savings. Each investment pool has an underlying governing investment policy statement providing additional investment guidelines. Each of the nine Plans forming a part of the investment pools are separately identified for accounting and record keeping purposes. **Click on the links below to view the Investment Policy Statement for each pool.**

Montana Domestic Equity Pool (MDEP)

Montana International Equity Pool (MTIP)

Montana Retirement Funds Bond Pool (RFBP)

Montana Real Estate Pool (MTRP)

Montana Private Equity Pool (MPEP)

Short-Term Investment Pool (STIP)

Investment Objective

The Board's overall objective is to achieve the highest level of investment performance that is compatible with its risk tolerance and prudent investment practices. Because of the long-term nature of the state's various pension liabilities, the Board maintains a long-term perspective in formulating and implementing its investment policies, and in evaluating its investment performance. Investment performance is measured by three integrated long-term return objectives:

- The ***actuarial target rate of return*** is the key actuarial assumption affecting future funding rates and liabilities. Investment performance that exceeds or underperforms the target rate may materially impact future funding rates and liabilities. The Board seeks to generate long term investment performance that will exceed the actuarial annual target rate of return of 7.75%, net of all investment and administrative expenses. There may be years, or a period of years, when the Plans do not achieve this goal followed by years when the goal is exceeded. But over a long period of time, the Board seeks to achieve an average net rate of return of 7.75% at risk levels (measured by expected volatility) broadly consistent with other public fund peers.
- The ***investment policy benchmark*** is calculated by applying the investment performance of the asset class benchmarks to the Plans' actual asset allocation during the measurement period. The investment policy benchmark represents the return that would be achieved if the Plan implemented a passively managed portfolio. Deviations from the policy benchmark measure the contribution of active investment management throughout the fund, rebalancing policy and its execution, and investment implementation generally.
- The Board also compares each Plan's total performance, before all fees, to appropriate ***public plan sponsor universes***. This process permits the Board to compare its total performance to other public pension plans. While the Board seeks to rank consistently in the top half of comparable public pension plans, the Board recognizes that other plans may have investment objectives and risk tolerances that differ substantially from the Board's.

The Board expects to meet or exceed these objectives over a long-term investment horizon. Over shorter periods, the anticipated market volatility and specific actions, including risk mitigation efforts of the Board relative to other pension plans may lead to unfavorable, but expected, deviation from these objectives.

Asset Allocation

The Board, as the investment fiduciary of the Plans, is responsible for establishing the investment parameters for the Plans. The Board has the authority to allocate portfolios to any previously board-approved asset class in the proportions it considers prudent, under the prudent expert rule. There are currently no statutory or constitutional restrictions on the investment of the Plans. Asset allocation decisions made by the Board must be made in a public meeting.

The current asset allocation ranges for the Plans are attached as **exhibit A**. The asset allocation ranges are subject to change as modifications are adopted by the Board, at which time the attached **exhibit A** will be revised to reflect these changes. The Board will formally affirm or revise the asset allocation ranges for the Plans at least annually.

Rebalancing

The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance. Material deviations from the asset allocation ranges can alter the expected return and risk of the Plans. Rebalancing the Plans' assets to remain within the Board-approved allocation ranges is delegated to the Chief Investment Officer (CIO), in consultation with the Executive Director. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions. In addition to maintaining actual allocations within the ranges, the CIO will also consider contractual investment commitments to private equity and real estate partnerships, the liquidity necessary to meet benefit payments and administrative costs for the Plans, and current market conditions. This may prompt asset rebalancing when asset allocations fall within the established ranges. The CIO shall inform the Board of rebalancing activity at the Board's next regularly scheduled meeting.

Exercise of Shareholder Rights

The Board recognizes that publicly traded securities and other assets of the Plans include certain ancillary rights, such as the right to vote on shareholder resolutions at companies' annual shareholders' meetings, and the right to assert claims in securities class action lawsuits or other litigation. The Board will prudently manage these assets of the Plans for the exclusive purpose of enhancing the value of the Plans for its participating systems' members and beneficiaries through such means as adopting and implementing a proxy voting policy and undertaking productive, cost-effective action to exercise its rights as shareholders or claimants in litigation. The Board will participate in all class action securities litigation to which it is entitled and may, pursuant to its securities litigation policy, serve as lead or co-lead plaintiff for the benefit of the Plans. These policies are further described in the underlying investment policy statements appropriate for the respective investment pools and in the governance policy.

Securities Lending

Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities held in the investment pools, through an agent, to other market participants in return for compensation. Currently, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program. In addition, the Board requires that the risks assumed and the administrative resources committed to monitor those risks are commensurate with the program's income potential. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases. The Board's participation in securities lending may change over time given Plan activity, market conditions and the agent agreement.

Exhibit A

58~~60~~ -72~~70~~% Equities Range

Domestic Equity Pool (28~~30~~% - 44~~50~~%)

Investment Type	Range
Large Cap Core (passive)	45% - 70%
Large Cap Enhanced	8% - 12%
Partial Long/Short (130/30)	8% - 12%
Total Large Cap	72% - 91%
Mid Cap	6% - 17%
Small Cap	3% - 11%

Real Estate Pool (6~~4~~% - 10%)

Investment Type	Range
Core/Timberland *	35% - 65%
Value Added	20% - 45%
Opportunistic	10% - 30%

* Timberland may not exceed 2% of total pension assets

International Equity Pool (14~~15~~% - 22~~30~~%)

Investment Type	Range
Large Cap Passive	42% - 66%
Large Cap Active	22% - 32%
Small Cap	10% - 16%
Dedicated Emerging Markets	2% - 10%

Private Equity Pool (9% - 15%)

Investment Type	Range
Buyouts	40% - 75%
Venture Capital	10% - 25%
Debt Related	0% - 25%

Retirement Funds Bond Pool (22% - 30~~32~~%)

Investment Type	Range
Domestic High Yield	0% - 15%
International	0% - 10%
Total High Yield/International	0% - 20%
Domestic Core(investment grade)	80% - 100%

Short Term Investment Pool (1% - 5%)

Short-term liquid investments
High-quality Investments
24 Hour Liquidity for Participants

All nine Public Retirement Plans currently share the same asset allocation ranges but this may change in the future as conditions and liquidity requirements for each of the individual plans change.

Nine Public Retirement Plans

- Public Employees Retirement System
- Teachers Retirement System
- Police Officers Retirement
- Firefighters Retirement
- Sheriffs Retirement
- Highway Patrol Retirement
- Game Wardens Retirement
- Judges Retirement
- Volunteer Firefighters Retirement

LEGAL AND CONSTITUTIONAL AUTHORITY

The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds. Section 17-6-201, MCA established the Unified Investment Program, created the Montana Board of Investments (the "Board") and gave the Board sole authority to invest state funds, including the public retirement plans (Plans) in accordance with state law and the state constitution. The Board finds that it is in the best interest of the state's nine retirement Plans to set out investment policies for the Plans in one comprehensive document utilizing the same asset allocation. In the future, individual Plan requirements may vary and this common approach could change. The Board intends to keep this policy updated as it modifies or amends underlying investment related policies. **Click on the links below to view the Board's Governing Law/Constitution and its Governance Policy.**

Governing Law/Constitution

Governance Policy

INTRODUCTION

The purpose of this policy statement is to provide a broad strategic framework for the Plans' investments under the guidance of the Board. The Board manages the assets under the prudent expert principle (Section 17-6-201 MCA), which provides:

> ***that the Board shall manage a portfolio***
> ***a) with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;***
> ***b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and***
> ***(c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.***

Plan assets are commingled for investment purposes into six investment pools created by the Board. The pools are shared, that is co-mingled funds, which operate similar to mutual funds. The use of pools allows for simplified investing and accounting, broader diversification and thus less risk than would otherwise be available for the smaller Plans and provides additional opportunities for fee savings. Each investment pool has an underlying governing investment policy statement providing additional investment guidelines. Each of the nine Plans forming a part of the investment pools are separately identified for accounting and record keeping purposes. **Click on the links below to view the Investment Policy Statement for each pool.**

Montana Domestic Equity Pool (MDEP)

Montana International Equity Pool (MTIP)

Montana Retirement Funds Bond Pool (RFBP)

Montana Real Estate Pool (MTRP)

Montana Private Equity Pool (MPEP)

Short-Term Investment Pool (STIP)

Investment Objective

The Board's overall objective is to achieve the highest level of investment performance that is compatible with its risk tolerance and prudent investment practices. Because of the long-term nature of the state's various pension liabilities, the Board maintains a long-term perspective in formulating and implementing its investment policies, and in evaluating its investment performance. Investment performance is measured by three integrated long-term return objectives:

- The ***actuarial target rate of return*** is the key actuarial assumption affecting future funding rates and liabilities. Investment performance that exceeds or underperforms the target rate may materially impact future funding rates and liabilities. The Board seeks to generate long term investment performance that will exceed the actuarial annual target rate of return of 7.75%, net of all investment and administrative expenses. There may be years, or a period of years, when the Plans do not achieve this goal followed by years when the goal is exceeded. But over a long period of time, the Board seeks to achieve an average net rate of return of 7.75% at risk levels (measured by expected volatility) broadly consistent with other public fund peers.
- The ***investment policy benchmark*** is calculated by applying the investment performance of the asset class benchmarks to the Plans' actual asset allocation during the measurement period. The investment policy benchmark represents the return that would be achieved if the Plan implemented a passively managed portfolio. Deviations from the policy benchmark measure the contribution of active investment management throughout the fund, rebalancing policy and its execution, and investment implementation generally.
- The Board also compares each Plan's total performance, before all fees, to appropriate ***public plan sponsor universes***. This process permits the Board to compare its total performance to other public pension plans. While the Board seeks to rank consistently in the top half of comparable public pension plans, the Board recognizes that other plans may have investment objectives and risk tolerances that differ substantially from the Board's.

The Board expects to meet or exceed these objectives over a long-term investment horizon. Over shorter periods, the anticipated market volatility and specific actions, including risk mitigation efforts of the Board relative to other pension plans may lead to unfavorable, but expected, deviation from these objectives.

Asset Allocation

The Board, as the investment fiduciary of the Plans, is responsible for establishing the investment parameters for the Plans. The Board has the authority to allocate portfolios to any previously board-approved asset class in the proportions it considers prudent, under the prudent expert rule. There are currently no statutory or constitutional restrictions on the investment of the Plans. Asset allocation decisions made by the Board must be made in a public meeting.

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Rebalancing

The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance. Material deviations from the asset allocation ranges can alter the expected return and risk of the Plans. Rebalancing the Plans' assets to remain within the Board-approved allocation ranges is delegated to the Chief Investment Officer (CIO), in consultation with the Executive Director. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions. In addition to maintaining actual allocations within the ranges, the CIO will also consider contractual investment commitments to private equity and real estate partnerships, the liquidity necessary to meet benefit payments and administrative costs for the Plans, and current market conditions. This may prompt asset rebalancing when asset allocations fall within the established ranges. The CIO shall inform the Board of rebalancing activity at the Board's next regularly scheduled meeting.

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Exhibit A

58 -72% Equities Range

Domestic Equity Pool

28% - 44%

Investment Type	Range
Large Cap Core (passive)	45% - 70%
Large Cap Enhanced	8% - 12%
Partial Long/Short (130/30)	8% - 12%
Total Large Cap	72% - 91%
Mid Cap	6% - 17%
Small Cap	3% - 11%

Real Estate Pool

6% - 10%

Investment Type	Range
Core/Timberland *	35% - 65%
Value Added	20% - 45%
Opportunistic	10% - 30%

* Timberland may not exceed 2% of total pension assets

International Equity Pool

14% - 22%

Investment Type	Range
Large Cap Passive	42% - 66%
Large Cap Active	22% - 32%
Small Cap	10% - 16%
Dedicated Emerging Markets	2% - 10%

Private Equity Pool

9% - 15%

Investment Type	Range
Buyouts	40% - 75%
Venture Capital	10% - 25%
Debt Related	0% - 25%

Retirement Funds Bond Pool

22% - 30%

Investment Type	Range
Domestic High Yield	0% - 15%
International	0% - 10%
Total High Yield/International	0% - 20%
Domestic Core(investment grade)	80% - 100%

Short Term Investment Pool

1% - 5%

Short-term liquid investments
High-quality Investments
24 Hour Liquidity for Participants

All nine Public Retirement Plans currently share the same asset allocation ranges but this may change in the future as conditions and liquidity requirements for each of the individual plans change.

Nine Public Retirement Plans

Public Employees Retirement System
Teachers Retirement System
Police Officers Retirement
Firefighters Retirement
Sheriffs Retirement
Highway Patrol Retirement
Game Wardens Retirement
Judges Retirement
Volunteer Firefighters Retirement

Return to Agenda

Investment Activity

ALLOCATION REPORT

Retirement Systems Asset Allocations as of 6/30/13

Pension Fund	MDEP	MTIP	MPEP	Total Equity	RFBP	MTRP	STIP	Total Assets
PUBLIC EMPLOYEES	38.3%	16.6%	12.5%	67.4%	22.1%	9.2%	1.3%	$ 4,290,306,086
TEACHERS	38.3%	16.6%	12.5%	67.4%	22.2%	9.2%	1.3%	$ 3,153,447,617
POLICE	38.3%	16.6%	12.5%	67.5%	22.2%	9.2%	1.1%	$ 257,931,552
SHERIFFS	38.1%	16.6%	12.5%	67.1%	22.1%	9.1%	1.7%	$ 243,520,912
FIREFIGHTERS	38.3%	16.6%	12.5%	67.5%	22.2%	9.2%	1.2%	$ 258,910,031
HIGHWAY PATROL	38.3%	16.6%	12.5%	67.4%	22.2%	9.2%	1.3%	$ 109,363,561
GAME WARDENS	38.1%	16.5%	12.5%	67.1%	22.0%	9.2%	1.7%	$ 115,561,406
JUDGES	38.2%	16.6%	12.5%	67.3%	22.1%	9.1%	1.5%	$ 72,632,146
VOL FIREFIGHTERS	36.2%	15.7%	11.8%	63.7%	20.9%	8.6%	6.8%	$ 29,096,619
TOTAL	**38.3%**	**16.6%**	**12.5%**	**67.4%**	**22.1%**	**9.2%**	**1.3%**	**$ 8,530,769,930**
Approved Range	30 - 50%	15 - 30%	9 - 15%	60 - 70%	22 - 32%	4-10%	1 - 5%	

Retirement Systems Asset Allocations as of 9/30/13

Pension Fund	MDEP	MTIP	MPEP	Total Equity	RFBP	MTRP	STIP	Total Assets
PUBLIC EMPLOYEES	37.8%	17.7%	12.0%	67.5%	21.7%	9.2%	1.6%	$ 4,465,997,227
TEACHERS	38.0%	17.7%	12.1%	67.8%	21.8%	9.2%	1.1%	$ 3,296,956,518
POLICE	36.2%	16.9%	11.5%	64.6%	20.8%	8.8%	5.8%	$ 280,012,677
SHERIFFS	37.7%	17.6%	12.0%	67.3%	21.7%	9.1%	1.9%	$ 254,652,954
FIREFIGHTERS	36.2%	16.9%	11.5%	64.6%	20.8%	8.8%	5.8%	$ 281,297,045
HIGHWAY PATROL	37.8%	17.7%	12.0%	67.5%	21.7%	9.2%	1.6%	$ 113,932,943
GAME WARDENS	37.7%	17.5%	12.0%	67.2%	21.6%	9.1%	2.1%	$ 121,832,772
JUDGES	37.7%	17.6%	12.0%	67.3%	21.7%	9.2%	1.9%	$ 75,846,539
VOL FIREFIGHTERS	38.0%	17.8%	12.1%	67.9%	21.7%	9.1%	1.4%	$ 29,788,678
TOTAL	**37.8%**	**17.7%**	**12.0%**	**67.4%**	**21.7%**	**9.2%**	**1.7%**	**$ 8,920,317,354**
Approved Range	30 - 50%	15 - 30%	9 - 15%	60 - 70%	22 - 32%	4-10%	1 - 5%	

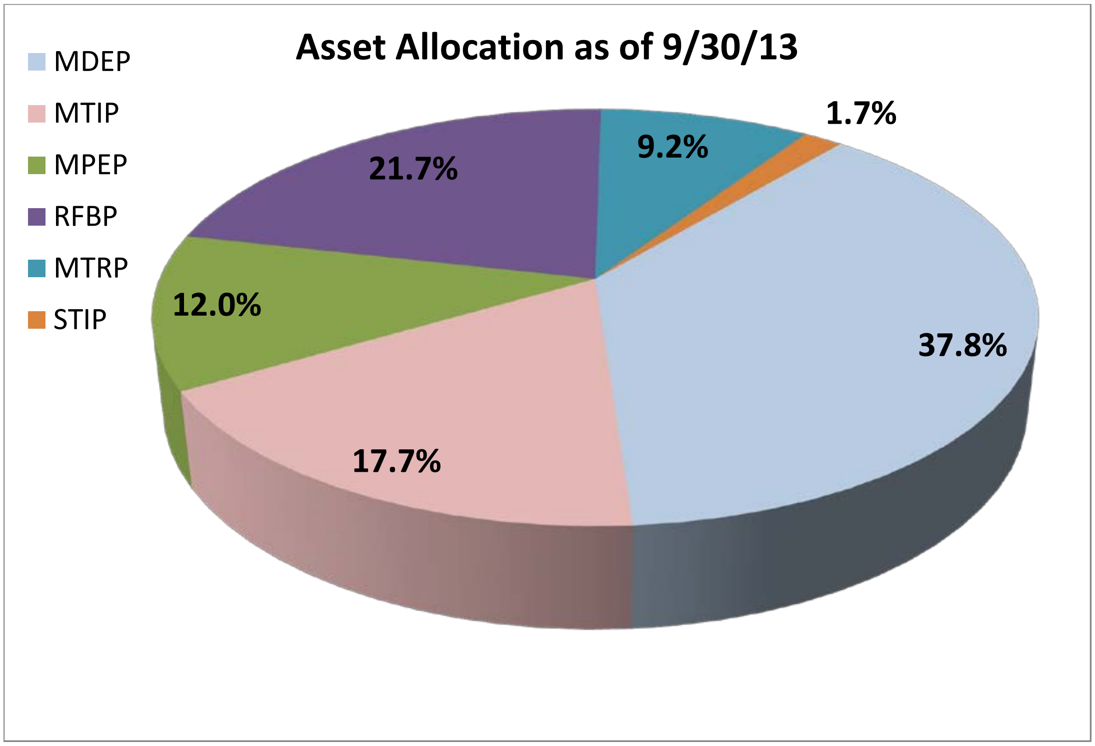
Change From Last Quarter

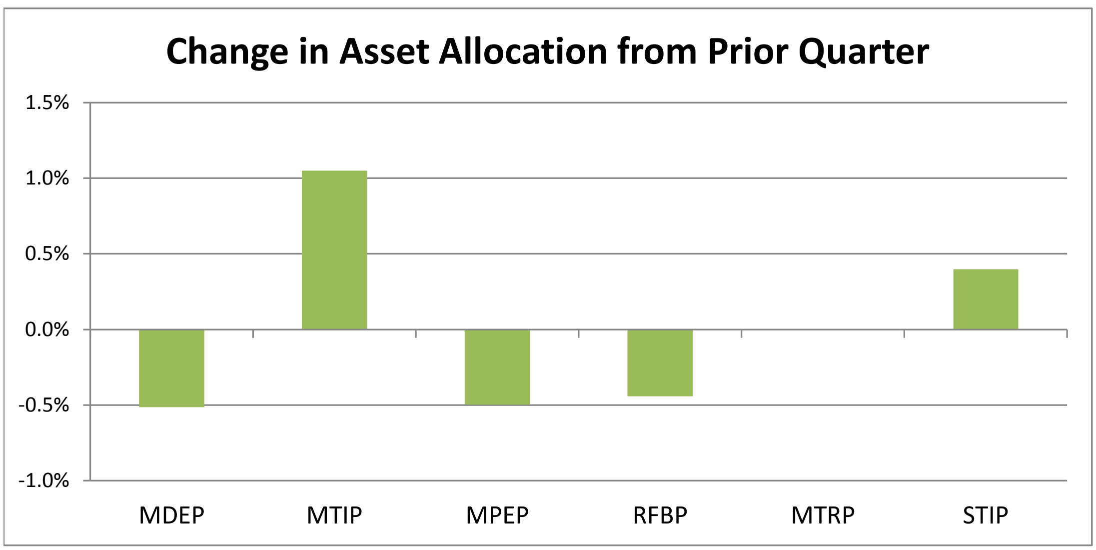
Pension Fund	MDEP	MTIP	MPEP	Total Equity	RFBP	MTRP	STIP	Total Assets
PUBLIC EMPLOYEES	-0.5%	1.1%	-0.5%	0.1%	-0.4%	0.0%	0.3%	175,691,141
TEACHERS	-0.3%	1.1%	-0.4%	0.4%	-0.3%	0.1%	-0.1%	143,508,901
POLICE	-2.2%	0.3%	-1.0%	-2.9%	-1.4%	-0.4%	4.7%	22,081,125
SHERIFFS	-0.4%	1.1%	-0.5%	0.2%	-0.4%	0.0%	0.2%	11,132,043
FIREFIGHTERS	-2.1%	0.3%	-1.0%	-2.8%	-1.3%	-0.4%	4.6%	22,387,014
HIGHWAY PATROL	-0.5%	1.1%	-0.5%	0.1%	-0.4%	0.0%	0.3%	4,569,382
GAME WARDENS	-0.5%	1.0%	-0.5%	0.1%	-0.5%	-0.1%	0.5%	6,271,367
JUDGES	-0.5%	1.1%	-0.5%	0.0%	-0.4%	0.0%	0.3%	3,214,394
VOL FIREFIGHTERS	1.8%	2.1%	0.3%	4.1%	0.8%	0.5%	-5.4%	692,058
TOTAL	**-0.5%**	**1.0%**	**-0.5%**	**0.0%**	**-0.4%**	**0.0%**	**0.4%**	**389,547,424**

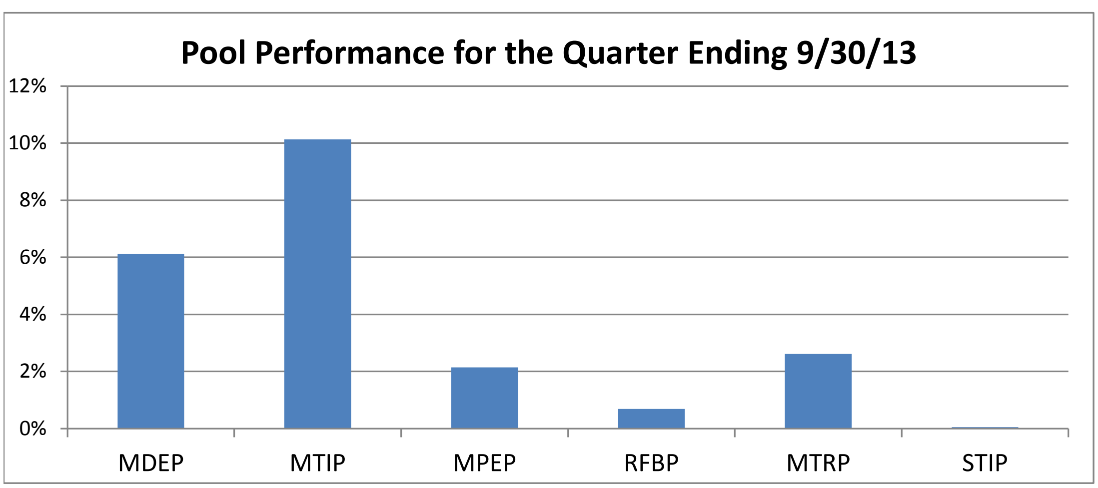
Allocations During Quarter

MDEP	MTIP	MPEP	Total Equity	RFBP	MTRP
($91,000,000)	$15,000,000	($15,500,000)	($91,500,000)	$50,000,000	$18,300,000

Net New Investments for Quarter → **($23,200,000)**


Asset Allocation as of 9/30/13
MDEP
MTIP
MPEP
RFBP
MTRP
STIP
21.7%
9.2%
1.7%
12.0%
37.8%
17.7%


Change in Asset Allocation from Prior Quarter
1.5%
1.0%
0.5%
0.0%
-0.5%
-1.0%
MDEP
MTIP
MPEP
RFBP
MTRP
STIP


Pool Performance for the Quarter Ending 9/30/13
12%
10%
8%
6%
4%
2%
0%
MDEP
MTIP
MPEP
RFBP
MTRP
STIP

Montana Board of Investments

Asset Allocation - Public Funds (DB) $3B to $20B & >30% Equity

Periods Ending September 30, 2013

	% Tot Equity	% US Equity	% Int'l Equity	% Fixed Inc.	% Cash Equiv	% Real Estate	% Pvt. Equity
High	82.28	67.50	75.40	32.25	34.75	11.39	26.14
Median	57.79	35.40	20.80	21.75	4.73	4.74	7.95
Low	34.14	6.86	0.41	8.23	0.79	0.10	0.08
Observations	28	28	28	28	26	21	25
PUBLIC EMPLOYEES RET SYS	55.43	37.77	17.66	21.75	1.59	9.16	12.01
TEACHERS RETIREMENT SYS	55.65	37.93	17.72	21.85	1.14	9.22	12.06

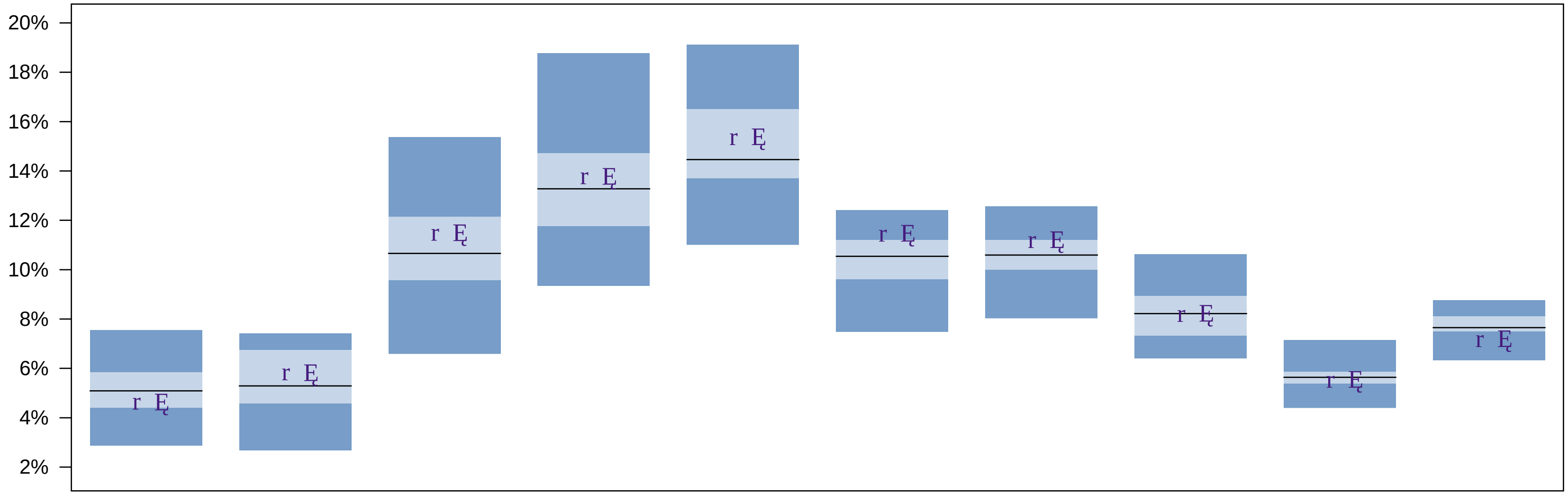
Note: all zero allocations to an asset class have been removed.

Montana Board of Investments

Public Funds (DB) $3B to $20B & >30% Equity (SSE)

PERIOD ENDING September 30, 2013

STATE STREET.



	1 Qtr		2 Qtrs		3 Qtrs		1 Yr		2 Yrs		3 Yrs		4 Yrs		5 Yrs		7 Yrs		10 Yrs	
5th Percentile	7.56		7.42		15.38		18.78		19.12		12.41		12.57		10.62		7.15		8.77	
25th Percentile	5.86		6.75		12.16		14.73		16.51		11.22		11.21		8.94		5.88		8.13	
50th Percentile	5.09		5.29		10.66		13.28		14.46		10.54		10.59		8.22		5.64		7.65	
75th Percentile	4.41		4.57		9.57		11.76		13.70		9.61		9.99		7.32		5.37		7.50	
95th Percentile	2.88		2.68		6.59		9.35		11.01		7.49		8.03		6.41		4.40		6.33	
No. of Obs	30		30		30		30		31		31		30		30		30		26	
r PUBLIC EMPLOYEES RE	4.78	62	5.97	31	11.63	36	13.92	39	15.50	35	11.59	19	11.33	20	8.34	34	5.67	47	7.32	78
Ę TEACHERS RETIREMEN	4.75	63	5.94	36	11.61	37	13.90	40	15.50	35	11.59	19	11.33	20	8.35	33	5.67	49	7.32	78

Provided by State Street Investment Analytics

MONTANA DOMESTIC EQUITY POOL
Rande R. Muffick, CFA, Portfolio Manager
November 19, 2013

9/30/2013 Domestic Stock Pool By Manager			
			Approved
Manager Name	Market Value	%	Range
BLACKROCK EQUITY INDEX FUND	1,872,625,466	56.06%	
STATE STREET SPIF ALT INV	7,452,022	0.22%	
LARGE CAP PASSIVE Total	**1,880,077,488**	**56.28%**	**45-70%**
ENHANCED INVEST TECHNOLOGIES	102,495,756	3.07%	
T ROWE PRICE ASSOCIATES INC	296,235,881	8.87%	
LARGE CAP ENHANCED Total	**398,731,637**	**11.94%**	**8-12%**
ANALYTIC INVESTORS MU3B	102,485,705	3.07%	
JP MORGAN ASSET MGMT MU3E	299,412,446	8.96%	
130-30 Total	**401,898,151**	**12.03%**	**8-12%**
COMBINED LARGE CAP Total	**2,680,707,276**	**80.25%**	**72-91%**
ARTISAN MID CAP VALUE	123,887,380	3.71%	
BLACKROCK MIDCAP EQUITY IND FD	74,445,332	2.23%	
IRIDIAN ASSET MANAGEMENT MU3V	45,762,857	1.37%	
NICHOLAS INVESTMENT PARTNERS	47,241,685	1.41%	
TIMESSQUARE CAPITAL MGMT	122,640,524	3.67%	
MID CAP Total	**413,977,777**	**12.39%**	**6-17%**
ALLIANCE BERNSTEIN SMALL CAP3R	32,917,218	0.99%	
DIMENSIONAL FUND ADVISORS INC	82,521,564	2.47%	
ING INVESTMENT MGT MU3U	29,996,631	0.90%	
ISHARES CORE S+P SMALL CAP ETF	5,427,488	0.16%	
MET WEST CAPITAL MGT MU3W	23,161,358	0.69%	
VAUGHAN NELSON INV	71,936,078	2.15%	
SMALL CAP Total	**245,960,338**	**7.36%**	**3-11%**
MDEP Total	**3,340,645,391**	**100.00%**	

The table above displays the Montana Domestic Equity Pool (MDEP) allocation at quarter end across market cap segments and manager styles. At this time, all weightings are within the approved ranges. Allocations within mid caps and small caps have increased slightly as a result of outperformance versus large caps and as a result of $50 million of cash outflows from the pool having reduced the large cap passive allocation. Of the $50 million outflow, the BlackRock 500 Index Fund was reduced by $40 million. The BlackRock Mid Cap Index Fund was reduced by $5 million, and the BlackRock Small Cap iShares was reduced by $5 million.

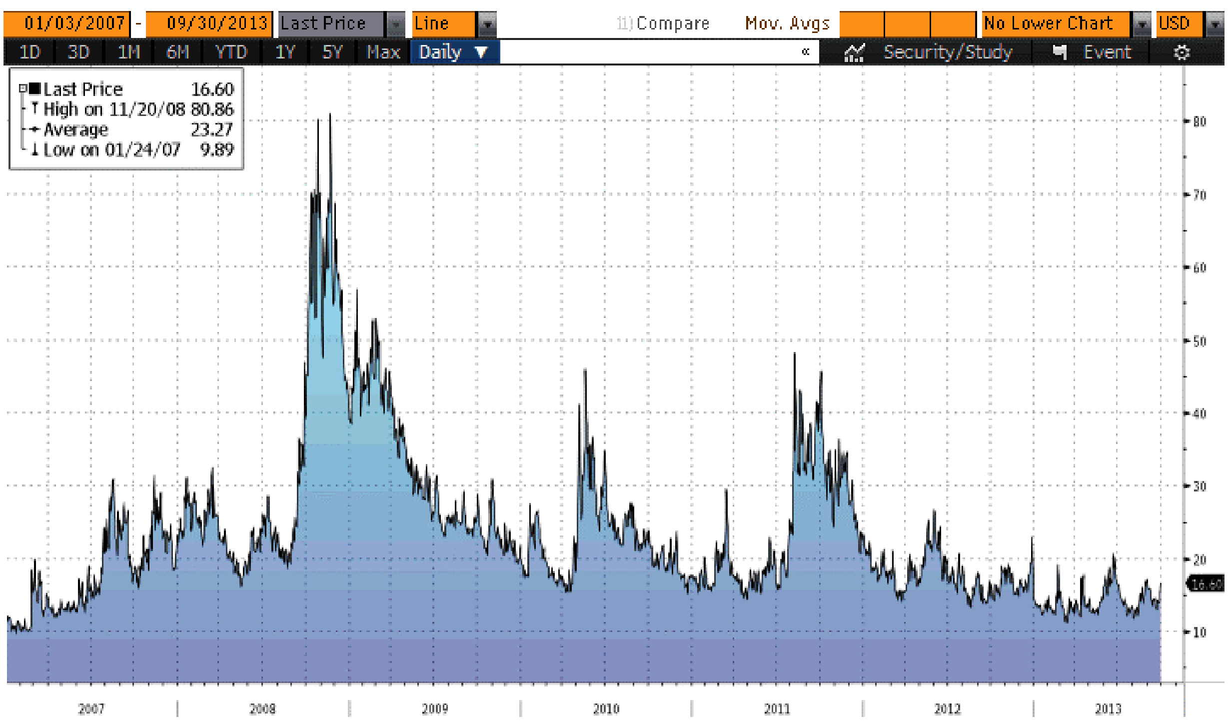
Domestic stocks continued their upward move in the third quarter, largely shrugging off a looming federal government shutdown and the typical dysfunction in the national political system. A general sense that the Federal Reserve will be on hold with its “tapering” plans until next spring encouraged investors to purchase stocks.

US Market Environment

	3Q 2013			Last Twelve Months		
	Value	Neutral	Growth	Value	Neutral	Growth
Large	4.2%	6.4%	8.5%	22.7%	21.6%	20.3%
Mid	5.9%	7.7%	9.3%	27.8%	27.9%	27.5%
Small	7.6%	10.2%	12.8%	27.0%	30.1%	33.1%

For the quarter, stocks in all cap sizes posted strong gains. Small caps led the way by a significant margin with a return of 10.2%. Mid caps gained 7.7% and large caps added 6.4%. Returns for the twelve months ended in September were sizeable. Small caps and mid caps returned around 28%, with large caps returning 21.6%.

Looking at returns by style, growth stocks bested value stocks within all three cap sizes in the quarter. However, the last twelve months displayed a more even performance between growth and value. The exception was small cap growth which returned 33.1%, far outdistancing small cap value as well as the other style categories.



Volatility in the domestic equity market remained subdued as indicated by the VIX measure spending most of the quarter in the teens, touching a low of 11.8 in early August. It seems as long as the Fed refrains from “tapering,” the equity markets have no worries, even though they are at much loftier levels than just a year ago.

MDEP outperformed the S&P 1500 Index by 49 basis points for the quarter and by 140 basis points for the past twelve months. The overweight allocations to mid caps and small caps along with the actively managed portfolio performances, led to the success of the pool.

Actively managed portfolio performances for the quarter were quite good as 10 of 13 actively managed portfolios outperformed their respective benchmarks. The enhanced index, 130/30, mid cap value, small cap growth, and small cap value style buckets all outperformed. Only the mid cap growth bucket underperformed and even so underperformed only slightly.

The strategy going forward is to continue the overweight positions in mid caps and small caps at the expense of large caps. Rebalancings have reduced the large cap allocation during the past few quarters, adding to the overweights in mid caps and small caps.

DOMESTIC EXPOSURE-MARKET CAP %

September 30, 2013

MANAGERS	MEGA $200B+	GIANT $100-$200B	LARGE $50-$100B	$20-$50B	$10-$20B	MID $2.5-$10B	SMALL $500MM-$2.5B	MICRO < $500MM	WTD AVG MARKET CAP ($B)
Alliance Bernstein	--	--	--	--	0.4	56.6	41.2	1.7	3,062.8
Analytic Investors, Inc	17.0	16.8	18.8	17.6	19.1	8.9	-0.7	--	94,992.3
Artisan Partners	--	--	--	12.3	32.8	50.6	4.3	--	10,590.9
Dimensional Fund Advisors	--	--	--	--	--	15.8	68.5	15.8	1,547.0
ING Investment Mgt	--	--	--	--	--	39.9	58.7	1.4	2,451.7
INTECH Investment Management	11.1	9.4	16.5	25.0	23.5	14.5	--	--	73,316.3
Iridian Asset Mgmt	--	--	--	10.2	19.6	66.5	3.6	--	10,111.5
J.P. Morgan	20.6	18.7	27.5	20.1	8.9	2.3	-0.3	--	114,647.3
Met West Capital Mgt	--	--	--	--	--	52.3	43.0	4.7	2,717.9
Nicholas Investment Partners	--	--	--	8.2	18.1	67.2	6.4	--	8,742.0
T. Rowe Associates	17.8	17.9	19.0	21.2	14.9	9.2	0.0	--	104,244.7
TimesSquare Cap Mgmt	--	--	--	2.6	34.7	60.6	2.2	--	9,261.8
Vaughan Nelson Mgmt	--	--	--	--	--	58.2	41.0	0.8	2,981.5
BlackRock S&P 500 Index Fund	18.4	17.8	20.9	21.3	14.8	6.8	--	--	106,635.5
BlackRock Midcap Equity Index Fund	--	--	--	--	1.4	80.0	16.0	0.0	4,727.4
ALL DOMESTIC EQUITY PORTFOLIOS	**15.3**	**14.8**	**17.8**	**18.4**	**14.9**	**14.2**	**3.8**	**0.5**	**89.8**
Benchmark: S&P Composite 1500	**16.2**	**15.7**	**18.3**	**18.7**	**13.1**	**3.4**	**4.2**	**0.2**	**94.2**
Over/underweight(-)	**-0.8**	**-0.9**	**-0.5**	**-0.4**	**1.8**	**10.8**	**-0.4**	**0.3**	

DOMESTIC EXPOSURE-SECTOR %

September 30, 2013

MANAGERS	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Technology	Materials	Telecom Services	Utilities
Alliance Bernstein	16.4	1.0	5.3	5.2	22.3	21.0	27.0	1.8	--	--
Analytic Investors, Inc	13.6	12.6	11.0	14.2	11.3	10.4	17.3	3.8	1.0	2.4
Artisan Partners	12.6	3.1	13.0	22.8	4.1	15.6	25.9	1.3	--	1.8
Dimensional Fund Advisors	18.1	5.3	4.2	17.8	9.2	18.7	17.5	5.5	0.6	3.2
Iridian Asset Mgmt	15.4	--	5.2	--	18.0	17.2	18.3	26.0	--	--
ING Investment Mgt	18.7	2.4	5.7	11.7	17.4	15.3	24.5	4.4	--	--
INTECH Investment Management	15.8	13.3	8.0	17.6	13.3	7.5	12.0	5.5	2.5	4.6
Met West Capital Mgt	16.7	4.8	4.9	23.6	5.8	23.3	14.4	1.8	0.6	1.3
Nicholas Investment Partners	22.3	3.8	6.6	11.0	12.8	20.4	19.6	2.8	0.8	--
J.P. Morgan	15.8	5.3	11.2	15.3	13.9	9.1	23.0	2.6	0.8	0.9
T. Rowe Associates	13.5	9.9	9.9	15.5	12.9	10.4	18.4	4.3	2.3	2.8
TimesSquare Cap Mgmt	18.6	3.9	6.4	9.6	9.7	23.1	20.9	3.7	4.1	--
Vaughan Nelson Mgmt	13.7	2.9	5.6	27.7	5.3	18.3	17.9	7.4	--	1.2
BlackRock S&P 500 Index Fund	12.5	10.0	10.5	16.2	13.0	10.7	17.9	3.5	2.4	3.2
BlackRock Midcap Equity Index Fund	13.7	3.7	5.6	21.9	8.7	15.8	15.9	6.8	0.5	4.8
All Domestic Equity Portfolios	**13.5**	**8.7**	**9.9**	**16.4**	**12.3**	**11.7**	**18.7**	**3.7**	**2.0**	**2.7**
Benchmark: S&P Composite 1500	**12.7**	**9.3**	**9.9**	**17.0**	**12.6**	**11.4**	**17.8**	**3.9**	**2.2**	**3.3**
Over/underweight(-)	**0.8**	**-0.6**	**0.1**	**-0.6**	**-0.3**	**0.3**	**0.9**	**-0.2**	**-0.2**	**-0.6**

DOMESTIC PORTFOLIO CHARACTERISTICS

September 30, 2013

MANAGERS	Market Value	Number of Securities	3Yr Historical EPS Growth	Price/ Earnings	Price/ Book	Dividend Yield
Alliance Bernstein	32,692,186	104	29.2	31.1	3.9	0.2
Analytic Investors, Inc	105,246,837	175	19.0	14.2	2.6	2.8
Artisan Partners	127,328,166	58	20.5	15.1	1.9	1.6
Dimensional Fund Advisors	82,507,427	2,214	26.8	19.1	2.0	1.2
ING Investment Mgt	30,036,776	149	29.1	26.1	2.8	0.7
INTECH Investment Management	102,588,718	351	16.5	17.1	2.5	1.9
Iridian Asset Mgmt	45,825,574	37	21.6	19.7	3.5	1.2
J.P. Morgan	306,634,782	258	14.4	17.3	2.2	1.6
Met West Capital Mgt	23,007,266	69	41.3	14.2	1.8	1.4
Nicholas Investment Partners	47,211,855	98	37.1	19.3	3.5	0.3
T. Rowe Associates	296,520,418	255	18.9	17.5	2.5	1.8
TimesSquare Cap Mgmt	123,576,706	78	33.0	22.3	3.3	1.0
Vaughan Nelson Mgmt	72,608,278	79	33.9	19.2	2.0	1.3
BlackRock S&P 500 Index Fund	1,872,640,256	502	17.7	17.0	2.4	2.0
BlackRock Midcap Equity Index Fund	74,447,373	403	24.7	20.7	2.3	1.4
All Domestic Equity Portfolios	**3,209,670,142**	**3,133**	**18.9**	**17.3**	**2.4**	**1.9**
BENCHMARKS						
S&P Composite 1500		1,500	18.4	17.4	2.4	1.9
S&P/Citigroup 1500 Pure Growth		347	49.7	20.8	2.9	0.8
S&P/Citigroup 1500 Pure Value		359	4.5	14.9	1.2	1.2
S&P 500		500	17.7	17.0	2.4	2.0
Russell 1000		1,003	18.5	17.2	2.4	1.9
Russell 1000 Growth		610	20.1	20.4	4.5	1.6
Russell 1000 Value		648	16.7	14.9	1.7	2.3
Russell Midcap		808	21.6	19.2	2.5	1.6
Russell Midcap Growth		488	26.0	23.6	4.6	1.1
Russell Midcap Value		520	16.3	15.8	1.6	2.2
Russell 2000		1,962	24.7	19.5	2.1	1.4
Russell 2000 Growth		1,117	25.9	25.1	3.9	0.7
Russell 2000 Value		1,343	23.4	15.8	1.4	2.1

MONTANA INTERNATIONAL EQUITY POOL
Rande R. Muffick, CFA, Portfolio Manager
November 19, 2013

9/30/2013 International Stock Pool By Manager			
			Approved
Manager Name	**Market Value**	**%**	**Range**
BLACKROCK ACWI EX US SUPERFUND	961,009,019	61.03%	
BLACKROCK MSCI EM MKT FR FD B	41,940,718	2.66%	
EAFE STOCK PERFORMANCE INDEX	27,741,537	1.76%	0-10%
CORE Total	**1,030,691,273**	**65.46%**	**50-70%**
ACADIAN ACWI EX US VALUE	99,934,099	6.35%	
BERNSTEIN ACWI EX	108,606,450	6.90%	
VALUE Total	**208,540,550**	**13.24%**	**10-20%**
HANSBERGER INTL EQUITY GROWTH	114,662,547	7.28%	
MARTIN CURRIE ACWI X	117,055,633	7.43%	
GROWTH Total	**231,718,180**	**14.72%**	**10-20%**
BLACKROCK ACWI EX US SMALL CAP	26,413,248	1.68%	
DFA INTERNATIONAL SMALL COMPAN	77,201,980	4.90%	
SMALL CAP Total	**103,615,228**	**6.58%**	**5-15%**
MTIP Total	**1,574,565,231**	**100.00%**	

The table above displays the Montana International Equity Pool (MTIP) allocation at quarter end across market cap segments and manager styles. At this time, all weightings are within the approved ranges. The table reflects a $5 million cash flow into the pool during the quarter which was invested in the BlackRock Emerging Markets Index Fund.

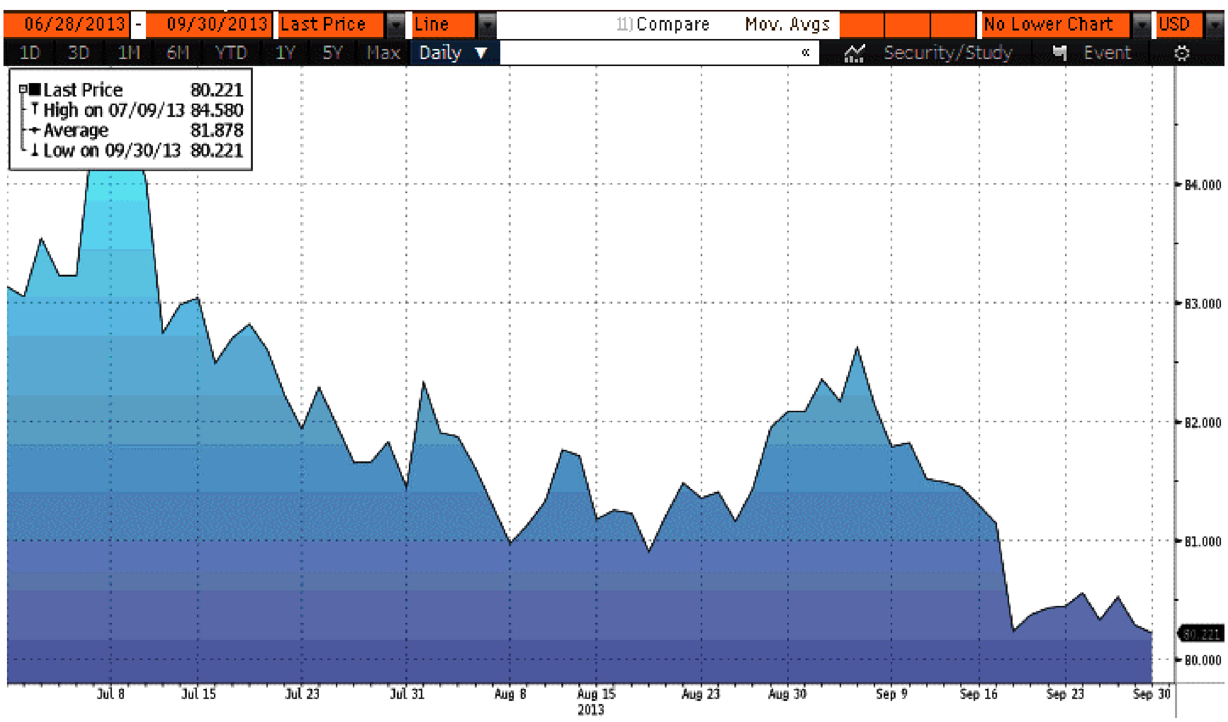
International stocks posted improved returns in the third quarter as developed market stocks returned 11.7% in the quarter. Concerns about higher U.S. interest rates and slowing economic growth in the emerging countries initially plagued the international markets, but as it became apparent that the Fed may be on hold with its "tapering" plans until next year, the markets rallied. Emerging markets (EM) which had sold off at the end of August for the second time this year, rallied strongly through the end of the quarter to post returns of 5.8%. And although trailing developed markets, seemed to put in a bottom.

Non-US Developed Market Environment									
	3Q 2013						Last Twelve Months		
	Value	Neutral	Growth				Value	Neutral	Growth
Large	12.6%	11.2%	9.8%			Large	22.8%	13.5%	20.6%
Mid	12.2%	11.7%	11.3%			Mid	29.1%	22.8%	18.3%
Small	15.1%	15.0%	14.8%			Small	29.5%	24.8%	20.1%

Emerging Market Environment									
	3Q 2013						Last Twelve Months		
	Value	Neutral	Growth				Value	Neutral	Growth
Large	7.3%	6.0%	4.6%			Large	-1.5%	1.1%	3.5%
Mid	6.3%	4.6%	3.3%			Mid	0.4%	0.5%	0.6%
Small	3.3%	3.5%	3.7%			Small	3.5%	4.9%	6.3%

A look at the style performance matrices shows that returns in the quarter were positive across the board. Small caps continued to outperform large caps within developed markets while lagging their larger brethren in emerging markets. Within developed markets, value stocks posted higher returns than growth stocks among all cap sizes. The same was true within emerging markets except for small caps where growth stocks had a slight edge. Recall that the underperformance of value to growth in emerging markets was at historical levels last quarter. A reversal in that relative performance seemed to take hold in the third quarter.

For the twelve months ended in September, it was much the same in developed markets with smaller caps leading and value stocks outperforming. Within emerging markets, the yearly returns were in the single digits with small caps outperforming while value lagged growth.



The currency effect on international investments added to international equity returns for U.S. investors as the dollar declined about three percent compared to the basket of six major currencies which constitute the DXY Index, shown in the graph above.

MTIP underperformed the pool benchmark by 13 basis points for the quarter but outperformed by 67 basis points for the twelve months through September. The quarterly under performance was largely a result of the performance of the actively managed portfolios although the slight overweight in small caps did add to the performance of the pool.

Performance of the actively managed portfolios was mixed in the quarter as two of the five active portfolios outperformed their respective benchmarks. Large cap growth and small cap style buckets added to the relative return of the pool while the large cap value bucket underperformed.

Going forward, further diversification of the active management portion of the small cap allocation and the addition of dedicated active management within the emerging markets allocation is expected. Staff has completed manager searches in both areas and funding of the new managers is expected to be completed sometime in the first quarter.

INTERNATIONAL EXPOSURE-MARKET CAP %

September 30, 2013

Managers	MEGA $200B+	GIANT $100-$200B	LARGE $50-$100B	$20-$50B	$10-$20B	MID $2.5-$10B	SMALL $500MM-$2.5B	MICRO < $500MM	WTD AVG MARKET CAP ($B)
Acadian Asset Management	2.3	11.7	12.2	23.6	16.4	13.3	14.3	6.2	27.2
Bernstein Inv Mgt & Research with look throughs	3.7	9.6	13.2	20.3	13.5	17.1	4.2	0.1	43.8
DFA International Small Cap	0.0	0.0	0.0	0.0	0.1	27.8	56.7	15.4	1.6
Hansberger Global Investors	7.7	7.4	19.3	30.8	8.1	21.4	5.3	0.0	44.7
Martin Currie	5.4	12.6	19.1	29.7	17.3	13.7	2.2	0.0	48.5
BlackRock ACWI Ex US Superfund A	4.8	10.2	20.3	25.8	16.7	19.1	1.7	0.0	44.8
BlackRock Intl Small Cap Index look through	0.0	0.0	0.0	0.0	0.0	26.1	60.7	12.3	1.4
BlackRock ACWI Ex US Superfund A	1.8	6.7	11.8	20.5	23.1	28.9	6.6	0.1	21.4
BlackRock Emerging Market Fund look through	4.5	9.7	17.8	24.4	15.2	19.4	6.9	1.4	40.7
ALL INTERNATIONAL EQUITY PORTFOLIOS	**4.5**	**9.7**	**17.8**	**24.4**	**15.2**	**19.4**	**6.9**	**1.4**	**40.7**
International Custom Benchmark	**4.8**	**10.3**	**20.5**	**25.8**	**16.7**	**19.3**	**2.4**	**0.2**	-
Over/underweight(-)	**-0.3**	**-0.6**	**-2.7**	**-1.5**	**-1.6**	**0.1**	**4.4**	**1.2**	

INTERNATIONAL EXPOSURE-SECTOR %

September 30, 2013

MANAGERS	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Technology	Materials	Telecom. Services	Utilities
Acadian Asset Management	8.0	1.4	17.4	30.3	4.5	10.8	9.6	4.9	8.6	4.4
Bernstein Inv Mgt & Research with look throughs	15.3	6.6	9.6	26.9	7.8	11.3	6.2	7.3	5.7	2.8
DFA International Small Cap	20.2	5.9	5.8	14.1	5.6	25.1	8.8	10.4	1.8	2.3
Hansberger Global Investors	20.2	11.6	3.0	14.2	11.3	12.9	11.0	7.8	5.9	1.9
Martin Currie with look throughs	16.6	18.1	5.6	18.0	8.1	12.5	6.3	9.5	4.0	1.3
BlackRock ACWI Ex US Superfund A	10.6	10.0	9.2	26.2	7.6	11.0	6.3	8.7	5.7	3.4
BlackRock Intl Small Cap Index look through	18.2	5.9	5.5	19.1	5.6	19.6	10.5	11.7	1.0	2.1
BlackRock Emerging Market Fund look through	8.8	8.7	11.9	26.8	1.5	6.2	15.0	9.8	7.5	3.2
All International Equity Portfolios	**12.1**	**9.7**	**8.8**	**24.4**	**7.5**	**12.0**	**7.6**	**8.5**	**5.5**	**3.1**
International Custom Benchmark	**10.8**	**10.1**	**9.3**	**26.5**	**7.7**	**11.2**	**6.4**	**8.8**	**5.7**	**3.4**
Over/underweight(-)	**1.3**	**-0.5**	**-0.5**	**-2.2**	**-0.2**	**0.8**	**1.2**	**-0.3**	**-0.2**	**-0.3**

INTERNATIONAL PORTFOLIO CHARACTERISTICS

September 30, 2013

	Market Value	Number of Securities	3Yr Hist EPS Growth	Price/ Earnings	Price/ Book	Dividend Yield
International Accounts with look throughs	**1,574,880,298**	**8,333**	**16.1**	**14.1**	**1.6**	**2.87**
International Equity Managers						
Acadian Asset Management	100,164,948.2	362	17.2	9.7	1.2	3.38
Bernstein Inv Mgt & Research with look throughs	109,048,086	224	15.1	12.7	1.4	3.05
DFA International Small Cap	77,197,544	4,228	18.0	15.0	1.3	2.50
Hansberger Global Investors	114,679,539	60	21.5	18.5	2.5	1.81
Martin Currie with look throughs	116,689,568	58	18.0	17.4	2.3	2.31
BlackRock ACWI Ex US Superfund A	961,013,227	1,846	14.9	14.2	1.6	3.01
BlackRock Intl Small Cap Index look through	26,404,032	4,207	19.1	15.0	1.4	2.48
BlackRock Emerging Market Fund look through	41,941,381	826	18.9	11.3	1.5	2.73
Benchmarks						
MSCI All Country World Ex-United States		1,822	14.9	14.2	1.6	3.01
MSCI All Country World Ex-United States Growth		1,033	18.7	17.7	2.4	2.23
MSCI All Country World Ex-United States Value		1,027	11.0	11.8	1.2	3.78
MSCI EAFE Small Cap		2,145	18.0	15.8	1.4	2.40
MSCI World Ex-United States Small Cap		2,377	19.4	15.7	1.4	2.47
MSCI All Country Pacific		929	20.3	14.1	1.5	2.49
MSCI Europe		437	9.6	14.7	1.7	3.39

INTERNATIONAL EQUITY
Region and Market Exposure
September 30, 2013

Developed Countries	**Aggregate Int'l Portfolio Weight (%)**	**International Custom Benchmark Weight**	**difference**	**3 Month Return**	**FYTD Return**	**Calendar YTD Return**	**1 yr Return**
Asia/Pacific	**24.1%**	**24.6%**	-0.51%				
Australia	5.21%	5.71%		10.9%	10.9%	0.3%	5.9%
Hong Kong	1.99%	2.12%		8.2%	8.2%	6.0%	11.9%
Japan	15.59%	15.55%		6.7%	6.7%	22.7%	28.8%
New Zealand	0.12%	0.09%		13.8%	13.8%	12.0%	16.1%
Singapore	1.19%	1.12%		3.5%	3.5%	-1.6%	1.5%
European Union	**23.4%**	**24.2%**	-0.81%				
Austria	0.29%	0.21%		18.6%	18.6%	8.9%	26.8%
Belgium	0.98%	0.84%		12.9%	12.9%	14.2%	21.4%
Denmark	0.91%	0.81%		15.6%	15.6%	18.5%	22.1%
Finland	0.59%	0.63%		24.6%	24.6%	23.8%	38.2%
France	6.62%	7.00%		15.8%	15.8%	17.8%	30.3%
Germany	5.88%	6.23%		12.9%	12.9%	13.9%	23.8%
Greece	0.08%	0.03%		26.1%	26.1%	4.7%	23.4%
Ireland	0.32%	0.24%		15.6%	15.6%	31.4%	41.8%
Italy	1.52%	1.54%		18.9%	18.9%	9.7%	19.9%
Netherlands	1.82%	1.89%		14.6%	14.6%	18.0%	29.1%
Portugal	0.16%	0.13%		11.4%	11.4%	10.5%	24.3%
Spain	1.80%	2.27%		25.3%	25.3%	16.6%	26.6%
Sweden	2.38%	2.33%		15.8%	15.8%	16.9%	22.7%
Non-EU Europe	**7.5%**	**7.0%**	0.43%				
Norway	0.88%	0.59%		8.2%	8.2%	0.5%	1.6%
Switzerland	6.59%	6.45%		9.8%	9.8%	18.9%	28.3%
North America	**5.8%**	**7.2%**	-1.36%				
Canada	5.76%	7.19%		8.5%	8.5%	-0.6%	-1.0%
USA	0.06%	0.00%		5.7%	5.7%	19.3%	18.8%
United Kingdom	**15.3%**	**15.6%**	-0.34%				
United Kingdom	15.26%	15.60%		11.8%	11.8%	10.5%	14.6%
Other							
Other	0.61%	0.32%					
DEVELOPED TOTAL	**76.60%**	**78.91%**	-2.31%				
Emerging & Frontier Market Countries							
Asia/Pacific	**14.5%**	**13.1%**	1.42%				
China	5.06%	4.09%		11.0%	11.0%	-2.0%	11.4%
India	1.28%	1.23%		-6.2%	-6.2%	-16.3%	-15.7%
Indonesia	0.50%	0.50%		-24.7%	-24.7%	-20.5%	-20.0%
South Korea	3.83%	3.37%		14.4%	14.4%	-0.3%	3.8%
Malaysia	0.81%	0.79%		-3.8%	-3.8%	0.8%	3.4%
Philippines	0.15%	0.19%		-6.2%	-6.2%	-2.8%	8.3%
Taiwan	2.22%	2.44%		2.0%	2.0%	4.2%	5.3%
Thailand	0.71%	0.52%		-6.0%	-6.0%	-6.7%	-0.5%
European Union	**0.4%**	**0.5%**	-0.01%				
Czech Republic	0.06%	0.05%		14.0%	14.0%	-12.4%	-15.2%
Hungary	0.05%	0.04%		-3.3%	-3.3%	-0.7%	-2.1%
Poland	0.33%	0.36%		14.8%	14.8%	-4.1%	7.3%
Non-EU Europe	**1.5%**	**1.3%**	0.19%				
Russia	1.49%	1.30%		12.8%	12.8%	-3.0%	-1.0%
Latin America/Caribbean	**4.2%**	**4.2%**	-0.07%				
Brazil	2.43%	2.44%		7.3%	7.3%	-13.7%	-11.6%
Chile	0.32%	0.36%		-5.9%	-5.9%	-17.9%	-18.1%
Colombia	0.19%	0.25%		9.0%	9.0%	-14.1%	-3.9%
Mexico	1.08%	1.08%		-2.0%	-2.0%	-8.5%	-3.3%
Peru	0.14%	0.09%		-3.5%	-3.5%	-33.4%	-30.6%
Mid East/Africa	**1.9%**	**2.0%**	-0.09%				
Egypt	0.03%	0.04%		18.0%	18.0%	-8.2%	-18.3%
Morocco	0.01%	0.02%		-0.2%	-0.2%	-9.4%	-7.7%
South Africa	1.38%	1.58%		7.5%	7.5%	-9.7%	-5.1%
Turkey	0.49%	0.37%		-0.7%	-6.7%	-15.7%	-0.8%
Frontier	0.07%	0.00%	0.07%				
EMERGING & FRONTIER TOTAL	**22.6%**	**21.1%**	1.51%				

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: Rande R. Muffick, CFA
Portfolio Manager – Public Equities

Date: November 19, 2013

Subject: Public Equity External Managers Watch List - Quarterly Update

There were no changes to the Watch List this quarter.

PUBLIC EQUITIES
MANAGER WATCH LIST
November 2013

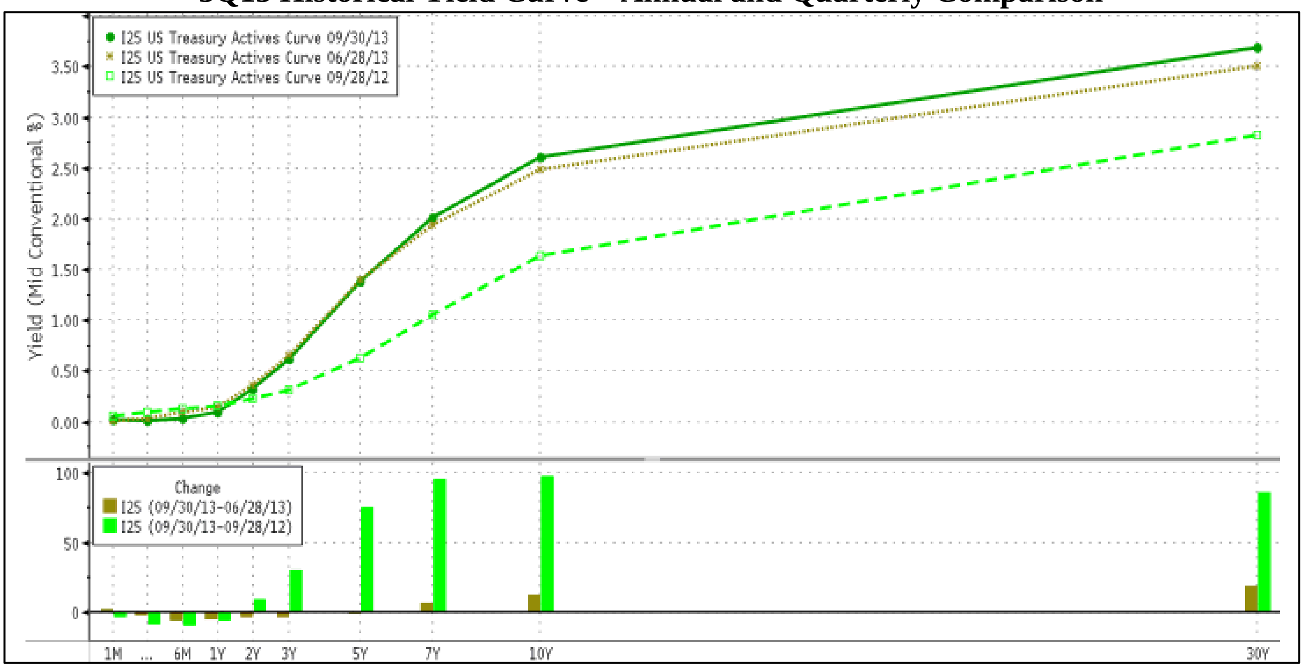
Manager	**Style Bucket**	**Reason**	**$ Invested (mil)**	**Inclusion Date**
Alliance Bernstein	**International – LC Value**	**Performance**	**$108.6**	**August 2012**
Hansberger	**International – LC Growth**	**Performance**	**$114.7**	**May 2013**

FIXED INCOME OVERVIEW & STRATEGY
Nathan Sax, CFA, Portfolio Manager
November 19, 2013

RETIREMENT & TRUST FUND BOND POOLS

The bond market was rocked in May and June when interest rates rose in reaction to Fed statements indicating that the central bank was ready to start cutting back on its monthly bond purchases. That changed in the third quarter when economic growth and inflation slowed. Following its September 17-18 meeting, the Federal Reserve surprised the capital markets by delaying the start of tapering. The yield to maturity on the U.S. Treasury 10-year note continued rising through much of the third quarter, peaking at 3.00% on September 5th. However, yields then began falling to end the quarter on September 30th at a yield of 2.61%. The Barclays Capital Aggregate index returned +0.57% for the third quarter and posted a return of -1.89% for the calendar year through three quarters.

3Q13 Historical Yield Curve – Annual and Quarterly Comparison



Economic growth, the rate of inflation and hiring have all have been slowing. A partial shutdown of the federal government began October 1st and lasted 16 days. Estimates are that the shutdown trimmed about 0.3% from fourth quarter GDP. Economists are forecasting real GDP growth for all of 2013 at a rate of approximately 1.6%, according to the *Blue Chip Economic Indicators*. CPI is estimated to grow at 1.5% year-over-year for 2013 and 1.9% in 2014. While non-farm payrolls grew at a monthly average of 207,000 in the first quarter, they slowed to 182,000 in the second quarter and 143,000 in the third quarter.

The following table shows the sector weightings of our internally and externally managed funds. It also shows a comparison to policy constraints:

RFBP/TFBP vs. Barclays Aggregate – 09/30/13

	RFBP Combined	Retirement Fund Bond Pool: External Management				Retirement Fund Bond Pool: Internal Management			
		Reams	Artio	Post	Neuberg Berman	CIBP	TFBP	CIBP/TFIP Policy Range	Barclays Aggregate
Treasuries	16.95	33.52	3.63	0.00	0.00	15.94	15.84	15-45	36.14
Agencies & Govt Related	4.91	0.00	22.04	0.00	0.00	5.48	5.32	5-15	10.34
Total Government	**21.86**	**33.52**	**25.67**	**0.00**	**0.00**	**21.42**	**21.16**	**20-60**	**46.48**
Mortgage Backed	21.17	9.54	20.93	0.00	0.00	25.24	26.12	20-40	29.46
Asset Backed	4.85	1.08	6.08	0.00	0.00	5.88	5.66	0-7	0.44
CMBS	10.20	7.08	8.62	0.00	0.00	11.82	11.91	0-12	1.73
Total Securitized	**36.21**	**17.70**	**35.63**	**0.00**	**0.00**	**42.94**	**43.69**	**20-59**	**31.63**
Financial	13.52	22.47	10.23	10.95	6.00	12.60	11.91		7.11
Industrial	21.56	14.01	17.21	74.53	86.60	16.38	16.37		12.39
Utility	3.77	0.01	1.21	0.00	3.03	4.76	4.76		2.39
Total Corporate	**38.85**	**36.49**	**28.65**	**85.48**	**95.63**	**33.74**	**33.04**	**10-40**	**21.89**
Other	0.62	0.00	0.00	3.49	0.92	0.00	0.00		0.00
Cash	2.46	12.28	10.05	11.03	3.45	1.90	2.11		0.00
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

RFBP Fixed Income Sector	**Policy Range**	**RFBP on 09/30/13**
U.S. High Yield	0-15%	11.23%
Non-US (incl. EM)	0-10%	4.17%
Total "Plus" sectors	0-20%	15.40%
Core (U.S. Investment Grade)	80-100%	84.60%

TFIP Fixed Income Sector	**Policy Range**	**TFIP on 09/30/13**
High Yield	0-10%	7.34%
Core Real Estate	0-8%	7.12%
Core (U.S. Investment Grade)	0-100%	85.54%

Option-adjusted spreads tightened by 31 basis points in the third quarter within the High Yield sector. By November 1st, spreads had tightened an additional 50 basis points. Investment grade corporate bonds tightened as well, with OAS going from 152 basis points on June 28th to 141 on September 30th. Investment grade yield spreads tightened to 132 basis points by November 1st.

Barclays U.S. High Yield 2% Issuer Cap, Average OAS – 09/30/12 to 11/04/13

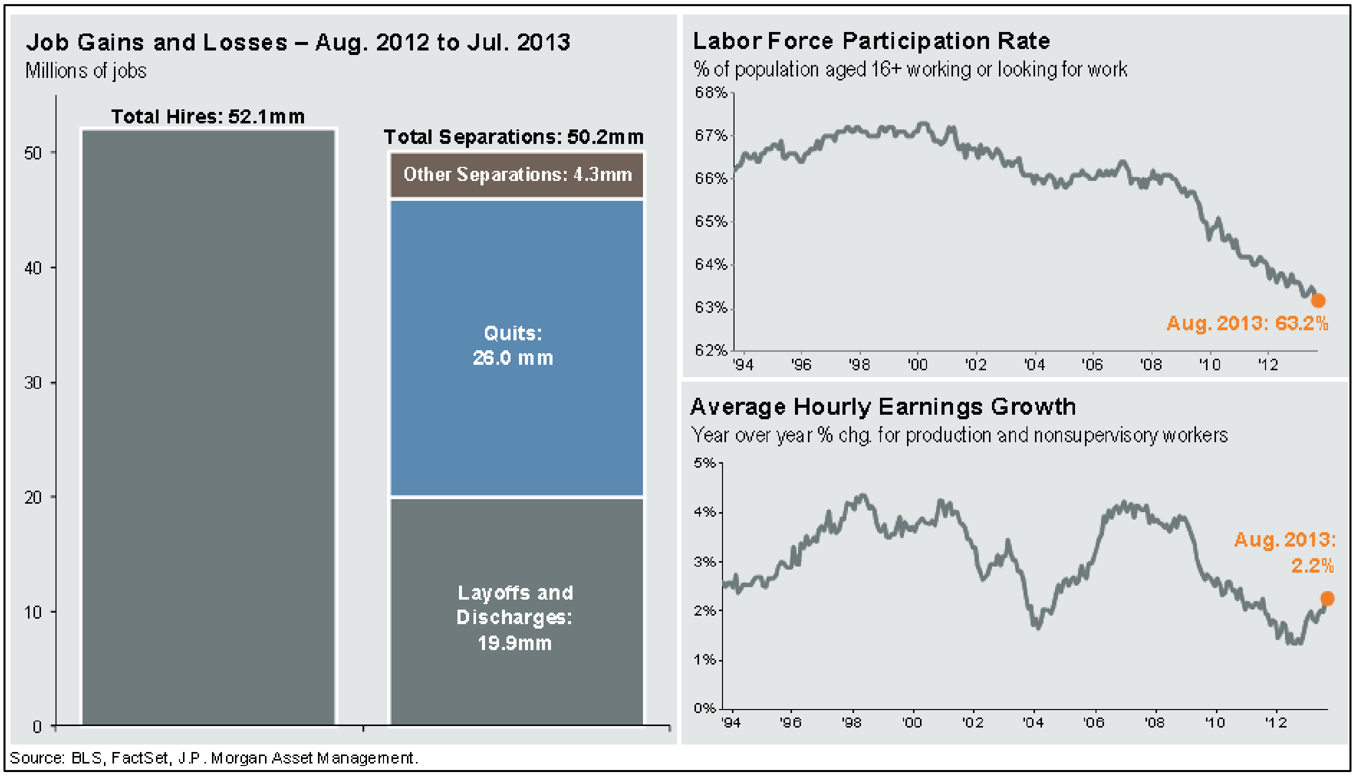
The bond portfolios as compared to the benchmark are shown below. The Merrill index shown here is used as a proxy for the actual benchmark, the Barclays Capital Aggregate Bond Index.

Benchmark Comparison Analysis CIBP vs. Merrill US Broad Market Index on 09/30/13						
Summary Characteristics						
	Price	Coupon	Current Yield	Yield to Maturity	Effective Duration	Effective Spread
Portfolio	102.96	3.58	3.50	2.85	5.31	1.01
Benchmark	105.58	3.46	3.31	2.31	5.25	0.54
Difference	-2.62	0.12	0.19	0.55	0.06	0.47

Benchmark Comparison Analysis RFBP vs. Merrill US Broad Market Index on 09/30/13						
Summary Characteristics						
	Price	Coupon	Current Yield	Yield to Maturity	Effective Duration	Effective Spread
Portfolio	103.74	3.69	3.70	3.06	5.17	1.34
Benchmark	105.58	3.46	3.31	2.31	5.25	0.54
Difference	-1.84	0.23	0.39	0.75	-0.08	0.80

Benchmark Comparison Analysis TFBP vs. Merrill US Broad Market Index on 09/30/13						
Summary Characteristics						
	Price	Coupon	Current Yield	Yield to Maturity	Effective Duration	Effective Spread
Portfolio	104.22	3.99	3.91	2.82	5.28	1.00
Benchmark	105.58	3.46	3.31	2.31	5.25	0.54
Difference	-1.36	0.53	0.60	0.51	0.03	0.46

The graph below shows the decline in the labor force participation rate and recent gains in hourly earnings. New hires outpaced job losses.



Concluding Comments

Janet Yellen was nominated to be the next chairman of the Federal Reserve, replacing Ben Bernanke when his term expires on January 31st. Ms. Yellen is believed by economists to be dovish on monetary policy. Thus, many believe that easy monetary conditions will persist into 2014. Investors believe that the earliest tapering of monthly bond purchases will begin is following the FOMC meeting of March 2014.

Negative returns thus far in 2013 can be widely attributed to perceived changes in monetary policy. Economic fundamentals should have been supportive of lower interest rates. Nevertheless, the credit markets may already have built in an allowance for future changes in policy toward tighter conditions.

	BELOW INVESTMENT GRADE FIXED INCOME HOLDINGS (INTERNALLY MANAGED)								
	September 30, 2013								
	(in millions)								
	Par	**Book**	**Market**	**Price**	**Name**	**Coupon %**	**Maturity**	**Rating M/S&P**	**Comments**
	$8.000	$7.954	$8.115	$101.44	Zions Bancorporation	5.650	05/15/14	BA2/BB+	Zions credit quality has been severely stressed but they were able to issue debt and equity in 2009 and remain relatively well capitalized. Repaid TARP in 2012.
	$50.000	$50.000	$54.120	$108.24	DOT Headquarters II Lease	6.001	12/07/21	NR/BB+	The bond was insured by XL Capital which has defaulted. However, lease payments are guaranteed by the US govt and the bond is collateralized by the building.
	$5.000	$4.859	$4.676	$93.52	American Presidents Co	8.000	01/15/24	NR/NR	Downgraded to below investment grade in December of 1997 due to high leverage and overall stress in the industry. The rating was dropped in August of 1999 when the company was acquired by NOL. NOL is wholly owned by AAA rated TEMASEK which will likely continue support.
	$10.000	$0.519	$2.588	$25.88	Lehman Brothers	5.500	05/25/10	NR/NR	Currently in default and liquidation
	$73.000	$63.332	$69.499						
A	= Additions since 6/30/13								
	None								
D	= Deletions since 6/30/13								
	$4.630	$4.630	$4.914	$106.13	America West Air1999 - 1	7.930	01/02/20	B1/BBB-	S&P upgraded to BBB- on 9/23/13
	In default								
	$10.000	$0.519	$2.588	$25.880	Lehman Brothers	5.500	05/25/10	NR/NR	Currently in default and liquidation

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: Nathan Sax, CFA
Portfolio Manager – Fixed Income

Date: November 19, 2013

Subject: Fixed Income External Managers Watch List

Post Advisors, a High Yield manager in both the Retirement Funds Bond Pool and the Trust Funds Investment Pool remains on the watch list. Performance has continued to be fine; however, the firm announced several recent personnel changes, including the resignation of the firm's COO following organizational changes proposed by the majority owner, Principal Financial Group. As stated in August, while we remain confident in the manager, we think the changes merit listing until we have more time to observe the manager following recent organizational changes.

MANAGER WATCH LIST

Manager	**Strategy**	**Reason**	**Amount Invested ($ millions) as of July 31, 2013**	**Inclusion Date**
Post Advisors	**Public High Yield**	**Organizational stability**	**$60.2 RFBP** **$107.9 TFIP**	**Aug 2013**

Short Term Investment Pool (STIP)

Richard Cooley, CFA, Portfolio Manager
November 19, 2013

During the third quarter money market yields were lower as the Federal Reserve continued its four and a half year-old policy of low fed funds rates. Three month Libor rates decreased by 2.4 basis points and one month Libor rates decreased by 2.1 basis points during the quarter. The improvement in Libor rates reflects the continuation of better market tone and funding conditions for the large international banks. Credit spreads were unchanged during the quarter, as depicted by the spread between three month Treasury bills and three month Libor rates (TED spread). This spread ended the third quarter at about 24 basis points, unchanged for the quarter.

TED Spread (09/30/12 – 09/30/13)

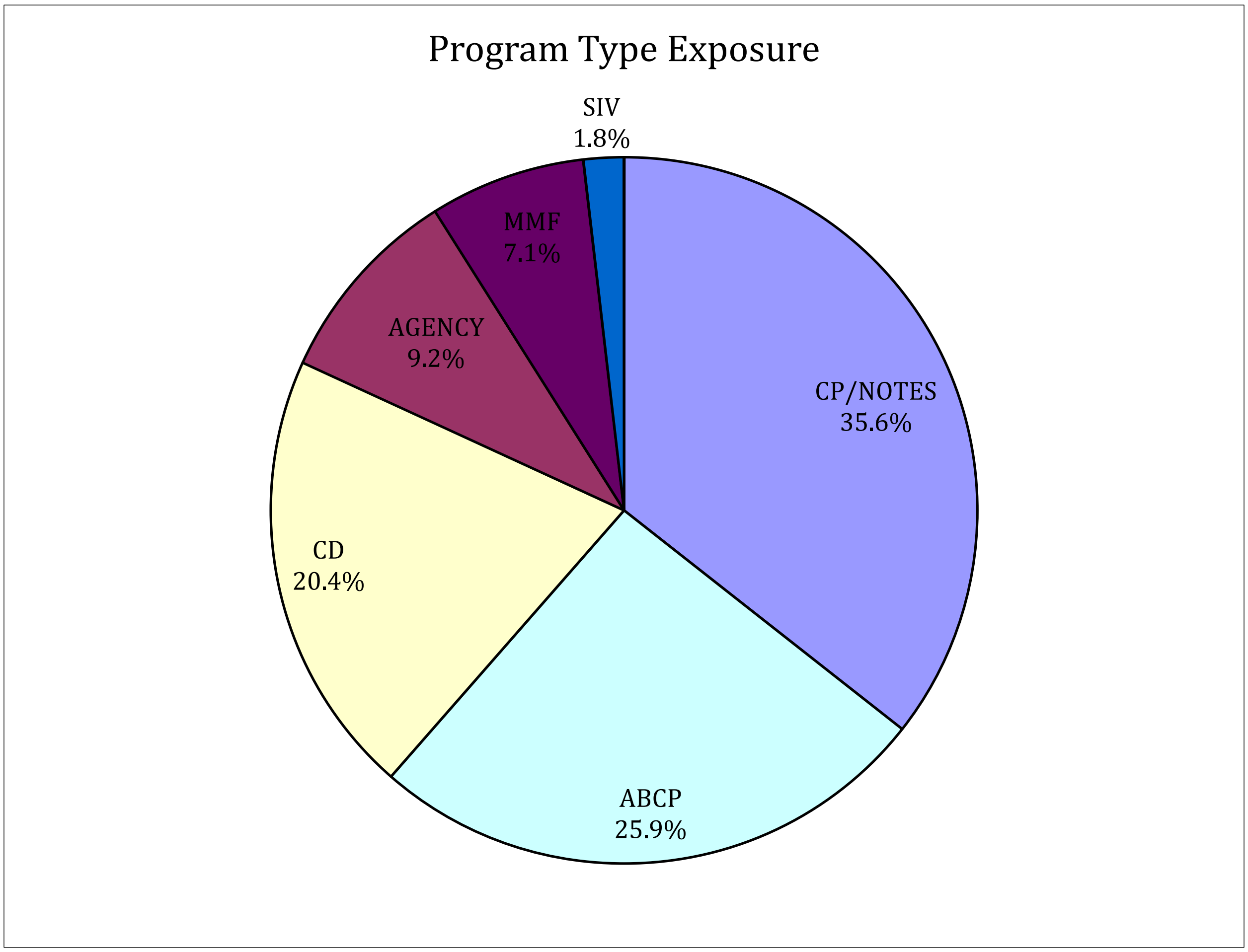
The STIP portfolio is currently well diversified and is operating within all the guidelines adopted by the Board at the November 2012 meeting. Daily liquidity is at a minimum of \$150 million and weekly liquidity is at a minimum of \$250 million. The average days to maturity is 47 days as compared to a policy maximum of 60 days. Asset-backed commercial paper is 26% of holdings (40% max) and corporate exposure is 35% (40% max). We currently have approximately 9% in agency paper, 20% in Yankee CD's (30% max) and 7% in four institutional money funds.

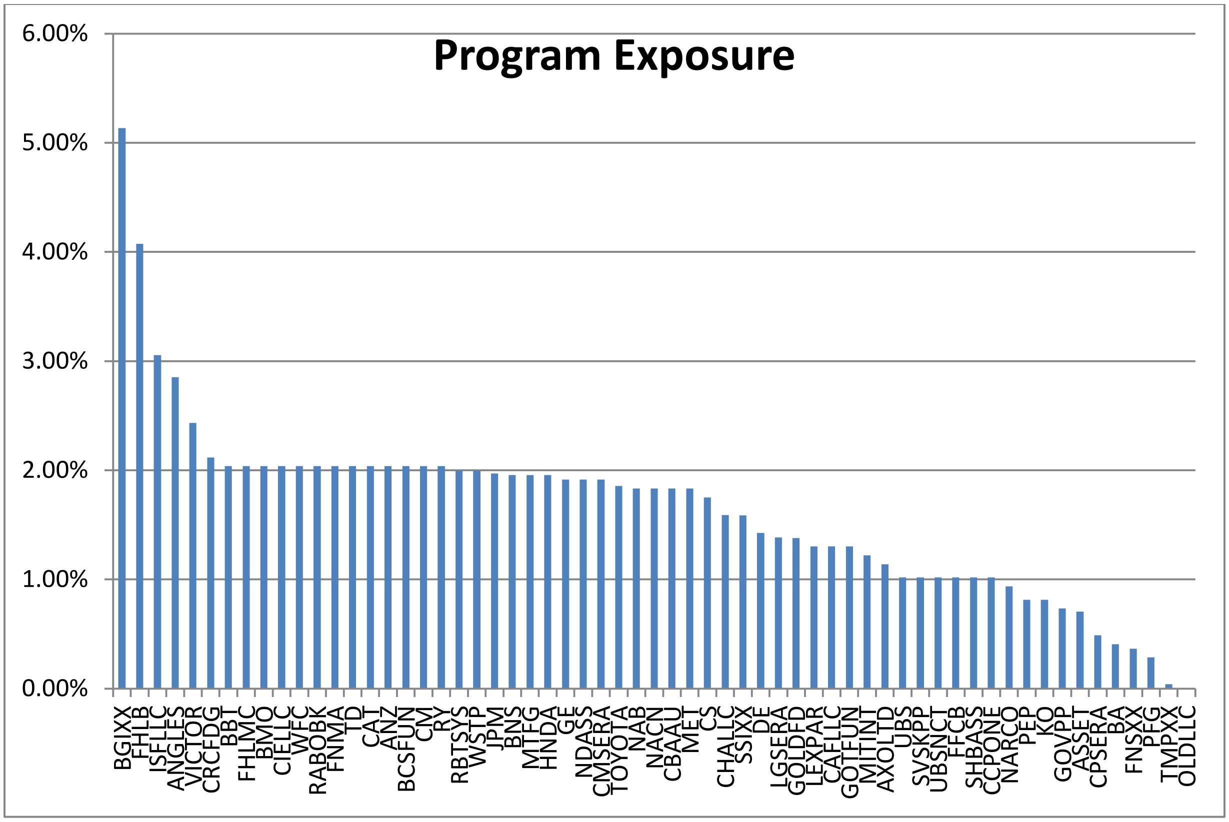
During the third quarter we purchased \$120 million of floating rate corporate notes. We also purchased \$105 million of floating rate Yankee CD's and \$25 million of floating rate agencies. Lower three month Libor rates detracted from the portfolio yield during the quarter.

The net daily yield on STIP is currently 0.16% as compared with the current one-month LIBOR rate of 0.168% and current fed funds target rate of 0.0%-0.25%. The portfolio asset size is currently \$2.45 billion, down from three months ago. All charts below are as of October 29, 2013.

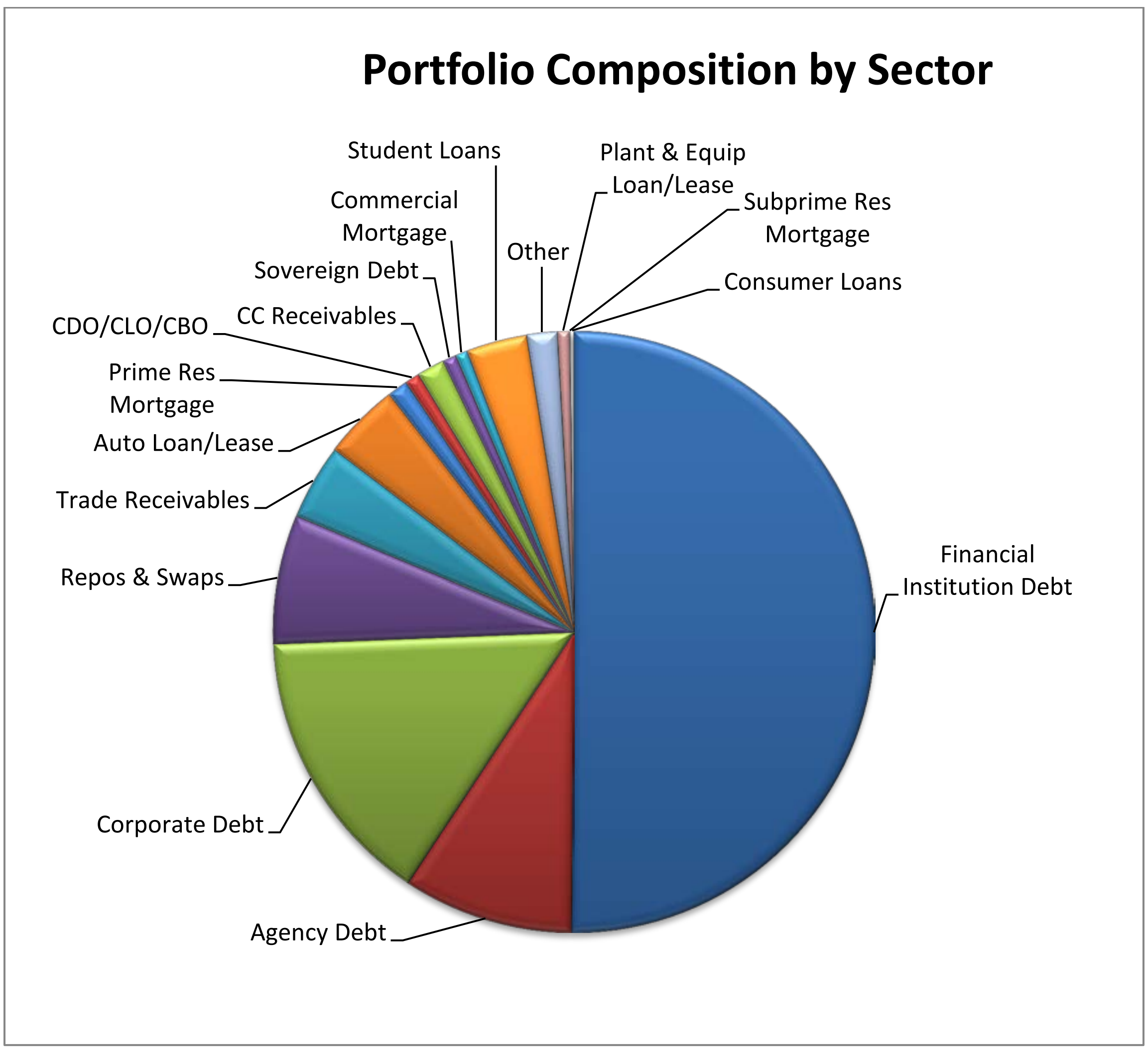
STIP Performance (9/30/13)

	1 Year	3 Year	5 Year	10 Year
STIP Net of Fees/Reserve	0.22%	0.27%	0.46%	1.99%
iMoneynet First Tier Instit. (Gross)	0.25%	0.28%	0.47%	2.02%
LIBOR 1 Month Index	0.20%	0.23%	0.32%	1.95%





Program Exposure
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
BGIXX
FHLB
ISFLLC
ANGLES
VICTOR
CRCFDG
BBT
FHLMC
BMO
CIELLC
WFC
RABOBK
FNMA
TD
CAT
ANZ
BCSFUN
CM
RY
RBTSYS
WSTP
JPM
BNS
MTFG
HNDA
GE
NDASS
CMSERA
TOYOTA
NAB
NACN
CBAAU
MET
CS
CHALLC
SSIXX
DE
LGSERA
GOLDFD
LEXPAR
CAFLLC
GOTFUN
MITINT
AXOLTD
UBS
SVSKPP
UBSNCT
FFCB
SHBASS
CCPONE
NARCO
PEP
KO
GOVPP
ASSET
CPSERA
BA
FNSXX
PFG
TMPXX
OLDLLC



Portfolio Composition by Sector
Student Loans
Plant & Equip Loan/Lease
Commercial Mortgage
Subprime Res Mortgage
Other
Sovereign Debt
Consumer Loans
CC Receivables
CDO/CLO/CBO
Prime Res Mortgage
Auto Loan/Lease
Trade Receivables
Repos & Swaps
Financial Institution Debt
Corporate Debt
Agency Debt

Treasurer's Fund

Richard Cooley, CFA, Portfolio Manager

November 19, 2013

The fund totaled $971 million as of September 30, 2013, consisting of approximately one half general fund monies and the balance in various other state operating accounts. There were two security purchases in the third quarter. Current securities holdings total $40 million. The investment policy for the fund limits security holdings to 50% of the projected General Fund FYE balance of the current period. The September projected General Fund FYE balance was $440 million.

State Fund Insurance

Richard Cooley, CFA, Portfolio Manager
November 19, 2013

The table below lays out the basic characteristics of the State Fund fixed income portfolio in comparison to a Merrill Lynch index. The Merrill Lynch index serves as a proxy for the account's actual benchmark, the Barclays Capital Government/Credit Intermediate Index.

Benchmark Comparison Analysis State Fund vs. Merrill US Corp and Govt, 1-10 Yrs on 09/30/2013						
Summary Characteristics						
	Price	Coupon	Current Yield	Yield to Maturity	Effective Duration	Effective Spread
Portfolio	105.51	3.63	3.46	1.71	3.59	0.67
Benchmark	104.72	2.82	2.72	1.61	3.96	0.48
Difference	0.79	0.81	0.74	0.10	-0.37	0.19

The portfolio has an overweight in agencies, asset backed securities (ABS) and corporate bonds and is underweighted in Treasuries. The sector table on the following page provides more detail on the differences between the portfolio and the benchmark. The portfolio has a slightly shorter duration than the benchmark.

Spread product ended the third quarter mixed as compared to the end of the previous quarter. Agencies spreads were 6 basis points wider at 21 basis points and corporate spreads tightened by 11 basis points from 152 basis points to 141 basis points. During the quarter, the ten year Treasury yield increased by 12 basis points from 2.49% to 2.61%.

The total fixed income (including STIP) portion of the account outperformed the benchmark by 17 basis points during the September quarter and outperformed by 67 basis points over one year. Longer term performance is +99 basis points for the past three years, +174 basis points for the past five years and +53 basis points for the past ten years (ended September 30).

As a reminder, the primary investment objective is to maximize investment income consistent with safety of principal.

During the September quarter, there were purchases of $18 million of corporate bonds spread across the curve. We also purchased $5 million of 7 year Treasuries. We sold $11 million of equity fund units during the quarter.

The portfolio has a 10 basis point yield advantage over the benchmark. Client preferences include keeping the STIP balance in a 1-5 percent range (2.9% on 9/30) and limiting holdings rated lower than A3 or A- to 25 percent of fixed income, at the time of purchase, (25.0% on 9/30).

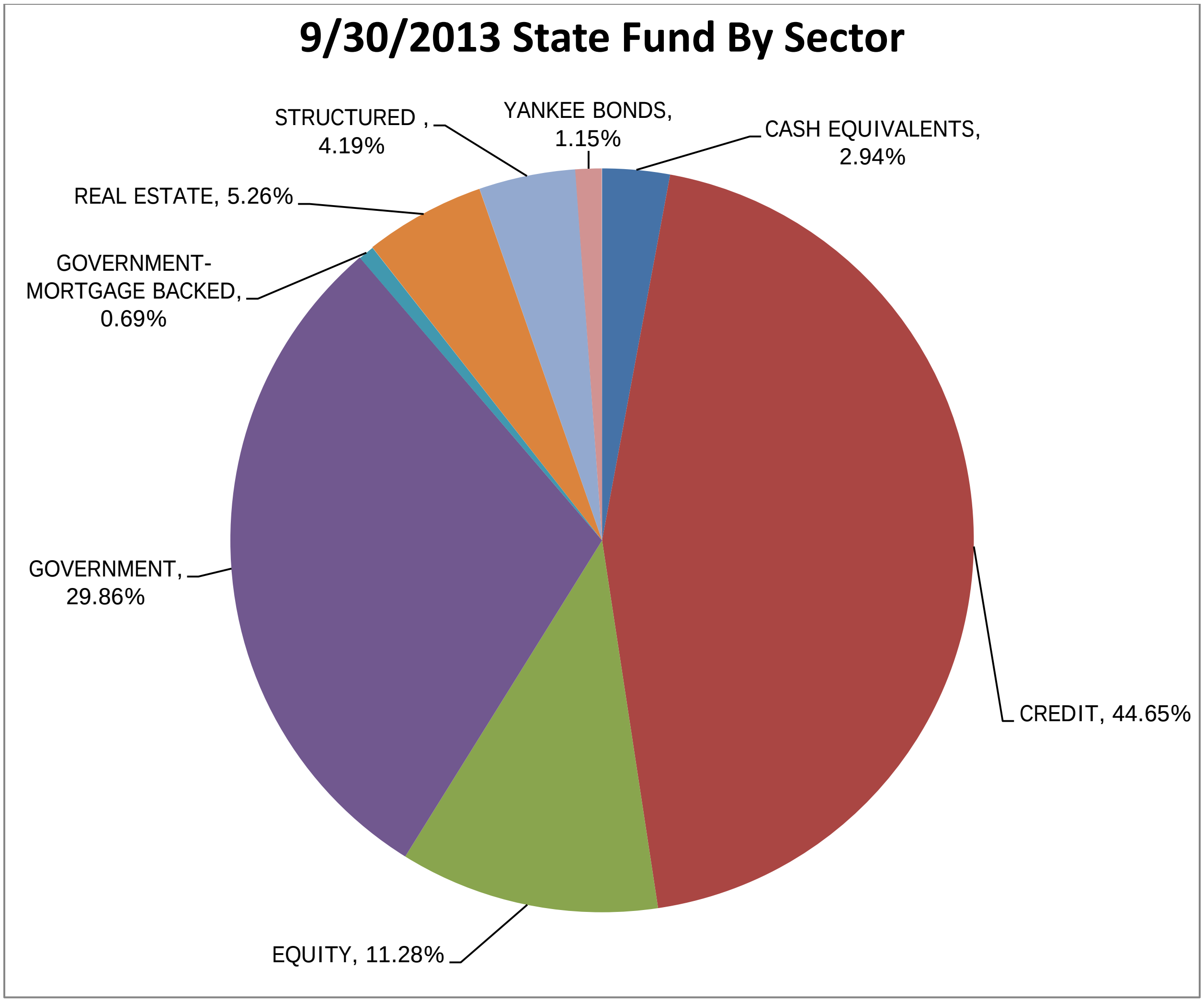
State Fund vs. Merrill US Corp and Govt, 1-10 Yrs on 09/30/2013

	SFBP Portfolio (%)	Benchmark (%)	Difference
Treasuries	16.30	58.15	-41.85
Agencies & Govt Related	20.74	13.25	7.49
Total Government	**37.04**	**71.40**	**-34.36**
Mortgage Backed	0.82	0.00	0.82
Asset Backed	4.95	0.00	4.95
CMBS	0.04	0.00	0.04
Securitized	**5.81**	**0.00**	**5.81**
Financial	24.91	10.12	14.79
Industrial	22.99	16.93	6.06
Utility	5.76	1.55	4.21
Total Corporates	**53.66**	**28.60**	**25.06**
Other	0.00	0.00	0.00
Cash	3.49	0.00	3.49
Total	**100.00**	**100.00**	

The following sector breakout is a look at the entire State Fund account including the S&P 500 and ACWI ex-U.S. equity holdings. The policy range for equities is currently 8%-12%. This is a client preference as the maximum allowed by statute is 25% of book value.

The last page is the monthly performance report from State Street. The custom composite index is an asset-weighted index that holds the same weights as the portfolio in each of the underlying benchmarks. The fixed income returns have been over the benchmark due to an overweight in spread product versus the benchmark.

9/30/2013 State Fund By Sector			
	Security Name	**Market Value**	**%**
	CASH	39,788,797	2.94%
CASH EQUIVALENTS		**39,788,797**	**2.94%**
	BANKS	116,302,741	8.59%
	COMMUNICATIONS	24,641,518	1.82%
	ENERGY	32,449,254	2.40%
	GAS/PIPELINES	6,072,386	0.45%
	INSURANCE	67,152,411	4.96%
	OTHER FINANCE	112,846,759	8.34%
	RETAIL	17,817,751	1.32%
	TRANSPORTATION	43,200,474	3.19%
	UTILITIES	68,977,223	5.10%
	ENERGY	5,082,627	0.38%
	INDUSTRIAL	109,665,741	8.10%
CREDIT		**604,208,884**	**44.65%**
	EQUITY	152,592,270	11.28%
EQUITY		**152,592,270**	**11.28%**
	TITLE XI	880,441	0.07%
	TREASURY NOTES/BONDS	184,384,898	13.62%
	AGENCY	218,786,023	16.17%
GOVERNMENT		**404,051,362**	**29.86%**
	FHLMC	5,113,374	0.38%
	FNMA	4,224,658	0.31%
GOVERNMENT-MORTGAGE BACKED		**9,338,032**	**0.69%**
	REAL ESTATE	71,170,519	5.26%
REAL ESTATE		**71,170,519**	**5.26%**
	OTHER STRUCTURED	56,181,671	4.15%
	CMBS	505,541	0.04%
STRUCTURED		**56,687,212**	**4.19%**
	OTHER	15,516,187	1.15%
YANKEE BONDS		**15,516,187**	**1.15%**
STATE FUND BY SECTOR		**1,353,353,264**	**100.00%**


9/30/2013 State Fund By Sector
STRUCTURED , 4.19%
YANKEE BONDS, 1.15%
CASH EQUIVALENTS, 2.94%
REAL ESTATE, 5.26%
GOVERNMENT-MORTGAGE BACKED, 0.69%
GOVERNMENT, 29.86%
CREDIT, 44.65%
EQUITY, 11.28%

MONTANA BOARD OF INVESTMENTS

SUMMARY OF INDIVIDUAL PLAN PERFORMANCE

Rates of Returns

Periods Ending September 30, 2013

STATE STREET.

	MKT VAL $(000)	ALLOC	MONTH	QTR	FYTD DATE	1 Year	3 Years	5 Years	10 Years	ITD	INCEPT.
STATE FUND INSURANCE											
TOTAL	1,362,584	100.0	1.16	1.44	1.44	2.36	4.76	7.25	5.28	6.03	12/01/1993
EQUITIES	152,592	11.2	3.56	5.78	5.78	19.14	15.15	9.93	7.54	3.66	01/01/2001
Domestic	134,400	9.9	3.13	5.24	5.24	19.46	16.36	10.58	7.86		
Foreign	18,192	1.3	6.95	10.09	10.09	16.57	6.06				
TOTAL FIXED INCOME	1,138,821	100.0	0.85	0.79	0.79	0.17	3.41	6.69	4.62	5.87	12/01/1993
CASH EQUIVALENTS	39,794	3.5	0.01	0.04	0.04	0.21	0.27	0.45	2.46	3.64	
FIXED INCOME	1,099,027	96.5	0.88	0.80	0.80	0.13	3.48	6.85	4.90	6.11	
REAL ESTATE	71,171	100.0	0.76	2.21	2.21					2.59	04/01/2013
STATE FUND INSURANCE CUSTOM COMPO			1.11	1.22	1.22	1.70	3.80	5.51	4.52		
S&P 500			3.14	5.24	5.24	19.34	16.27	10.02	7.57		
MSCI AC WORLD ex US (NET)			6.95	10.09	10.09	16.48	5.95	6.26	8.77		
Barclays Gov/Credit Intermediate			0.81	0.62	0.62	-0.50	2.42	4.95	4.09		
LIBOR 1 MONTH INDEX NCREIF			0.01	0.05	0.05	0.20	0.23	0.32	1.95		
ODCE 1 QTR LAG (NET)			3.60	3.60	3.60	11.08	13.85	-1.07	5.95		

Return to Agenda

Private Equity & Real Estate

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: Ethan Hurley, Portfolio Manager – Alternative Investments

Date: November 19, 2013

Subject: Montana Private Equity Pool (MPEP)

Following this memo are the items listed below:

(i) **Montana Private Equity Pool Review:**
Comprehensive overview of the private equity portfolio for the quarter ended June 30th.

(ii) **New Commitments:**
The table below summarizes the investment decisions made by staff since the last Board meeting. Two commitments of $25M each were made to Pine Brook Capital Partners II, LP and HCI Equity Partners IV, LP, respectively. Staff also committed an additional $5M to White Deer Energy II, LP through the acquisition of a secondary LP interest. Investment briefs summarizing these funds and the general partners follow.

Fund Name	Vintage	Subclass	Sector	Amount	Date
Pine Brook Capital Partners II, LP	2013	Growth Equity	Energy & Financial Services	$25M	9/16/13
White Deer Energy II, LP	2013	Buyout	Energy	$5M	9/13/13
HCI Equity Partners IV, LP	2013	Buyout	Diversified	$25M	9/6/13

(iii) **Portfolio Index Comparison:**
Table comparing the performance of the private equity portfolio to the State Street Private Equity Index™.

(iv) **Comparison to other state funds:**
This data reflects a separate survey conducted by CEM Benchmarking of other states' private equity programs as of year-end 2012. Although this peer comparison survey is not likely to be repeated, it is included as additional benchmarking data this time in addition to the index comparison noted above.

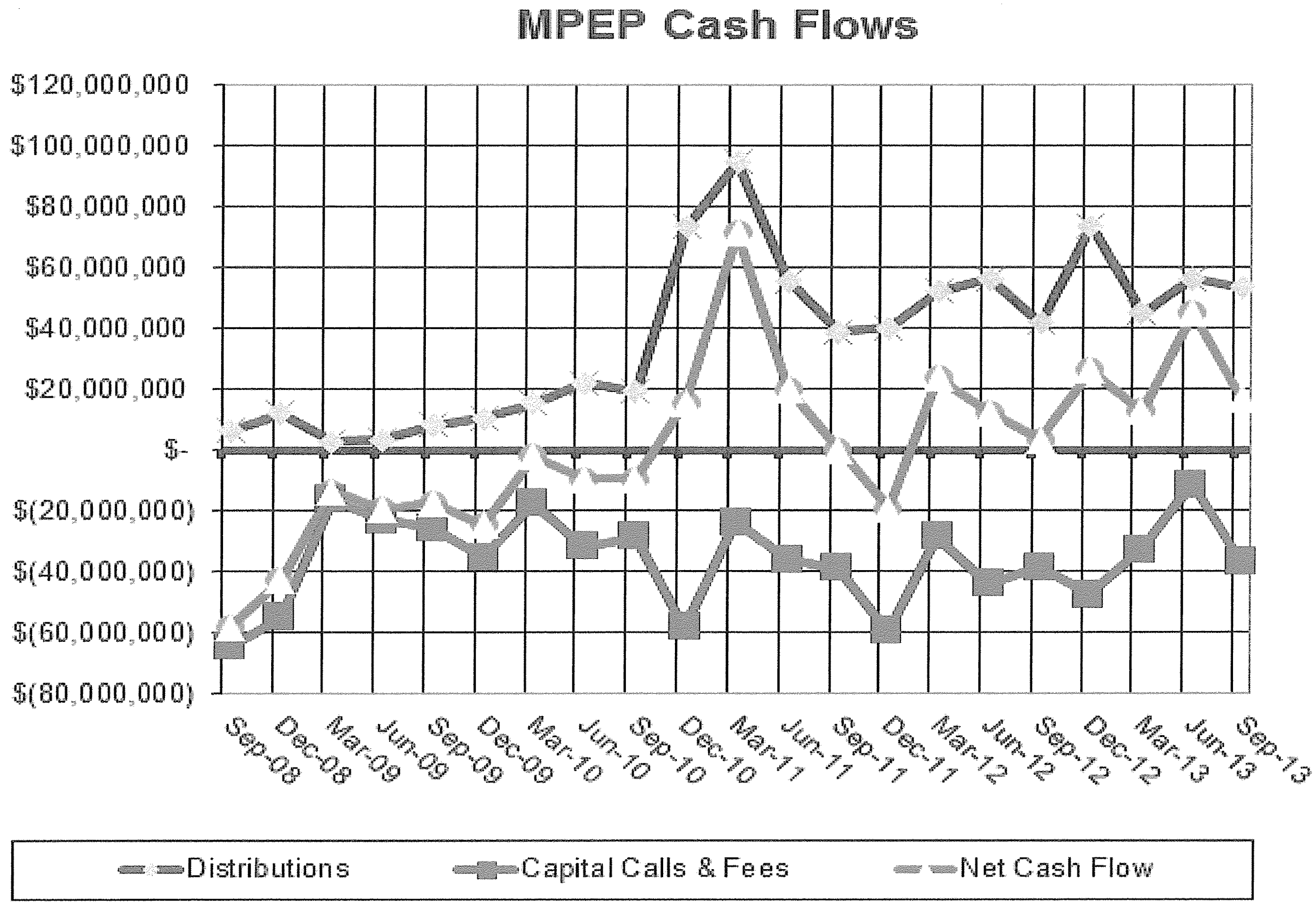
Montana Board of Investments

Private Equity Board Report

Q2 2013

Contents

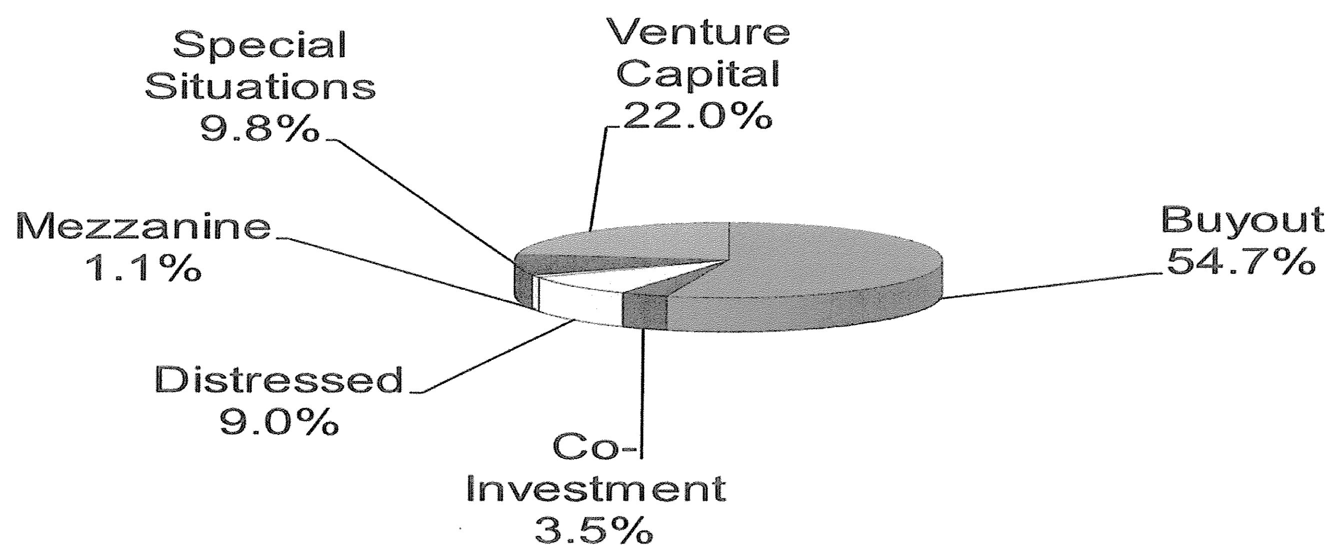
MPEP Quarterly Cash Flows
September 30, 2008 through September 30, 2013



Net cash flow for the quarter ending 9/30/13 remained positive as distributions continued to outpace capital calls. Broadly speaking relative to 2Q13, US leveraged buyout activity for the period ending 3Q13 was up over 300% on a dollar volume basis and up 45% based on number of transactions. In terms of the US IPO market, total proceeds raised during 3Q13 were $11.3 billion, compared to $13.1 billion in 2Q13, representing a decrease of 13.7%. There were a total of 61 IPOs in 3Q13, which represent a slight decrease compared to 62 listings in 2Q13, and an increase of 134.6% compared to 26 listings in 3Q12.

Q2 2013 Strategy – Total Exposure

(Since inception through June 30, 2013)

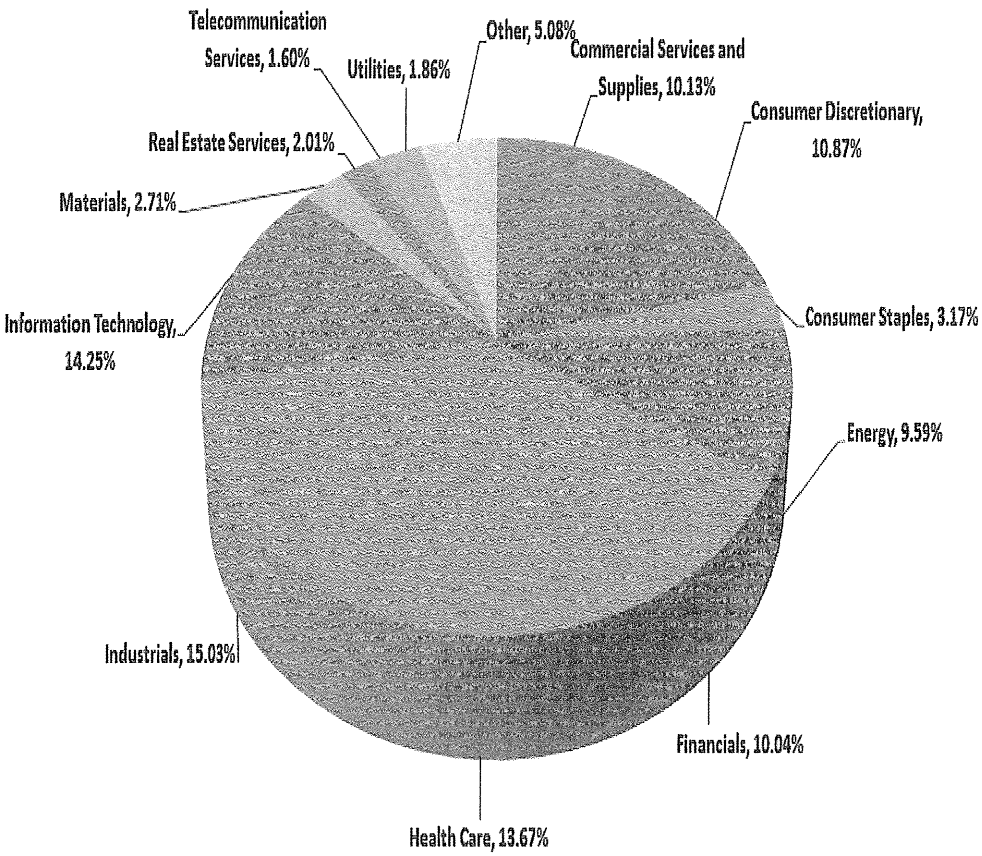


Strategy	Remaining Commitments	Percentage	Market Value	Percentage	Total Exposure	Percentage
Buyout	$383,840,593	57.1%	$561,522,163	53.2%	$945,362,756	54.7%
Co-Investment	$20,215,877	3.0%	$40,992,729	3.9%	$61,208,606	3.5%
Distressed	$60,760,043	9.0%	$94,608,527	9.0%	$155,368,569	9.0%
Mezzanine	$1,615,585	0.2%	$17,535,779	1.7%	$19,151,365	1.1%
Special Situations	$66,183,239	9.9%	$91,120,720	8.6%	$157,303,960	9.1%
Venture Capital	$139,269,968	20.7%	$250,519,154	23.7%	$389,789,122	22.6%
Total	$671,885,304	100.0%	$1,056,299,072	100.0%	$1,728,184,377	100.0%

The portfolio is well diversified by strategy, with the most significant strategy weight consisting of Buyout at 54.7% of total exposure. When combined with Co-Investment and Special Situations, the overall exposure to Buyout strategies is approximately 67%. Strategic allocations are expected to remain relatively stable going forward. That said, the Distressed allocation should continue to decline marginally in the near-term given the ongoing liquidation of mature funds in this category.

Q2 2013 Industry – Market Value Exposure

(Since inception through June 30, 2013)

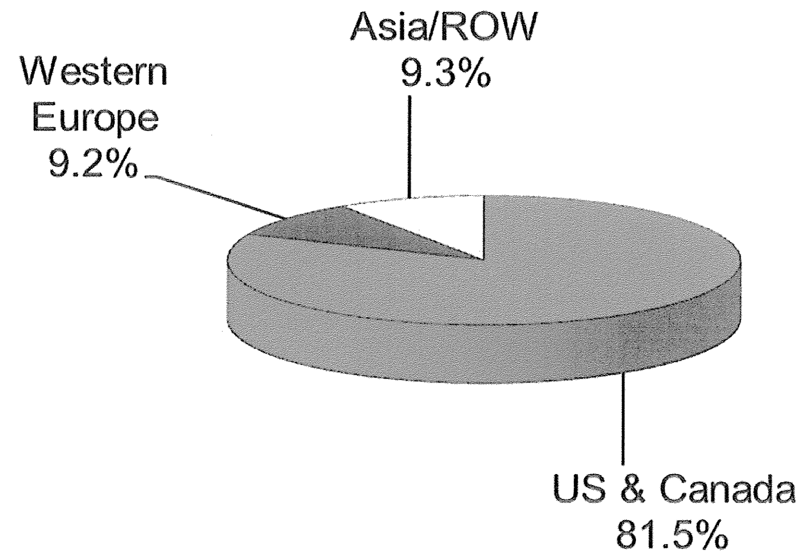


Industry	Investments, At Market Value	Percentage
Commercial Services and Supplies	105,813,469.22	10.1%
Consumer Discretionary	113,538,856.19	10.9%
Consumer Staples	33,140,410.01	3.2%
Energy	100,214,303.56	9.6%
Financials	104,960,623.53	10.0%
Health Care	142,833,901.37	13.7%
Industrials	157,016,224.83	15.0%
Information Technology	148,953,054.62	14.3%
Materials	28,309,206.41	2.7%
Real Estate Services	20,990,507.13	2.0%
Telecommunication Services	16,691,461.97	1.6%
Utilities	19,424,769.46	1.9%
Other	53,054,711.43	5.1%
Total	1,044,941,499.72	100%

The portfolio is broadly diversified by industry with the commercial services and supplies, consumer discretionary, healthcare, industrials and information technology sectors representing the five largest industry exposures at approximately 64% of total assets. With the exception of energy and the information technology-related industries, the portfolio's underlying managers tend to be multi-sector investors. Therefore, composition of the portfolio by industry is and will continue to primarily be a function of a manager's industry expertise and success in sourcing deals rather than a function of staff's desire to over or underweight a specific industry.

Q2 2013 Geography – Total Exposure

(Since inception through June 30, 2013)



The portfolio's predominate geographic exposure is to developed North America, representing 81.5% of the market value and uncalled capital domiciled in or targeted for the US and Canada. No significant divergence from this is expected in the near-term. Targeted international investments will continue to be made largely through fund-of-funds given existing constraints on internal resources.

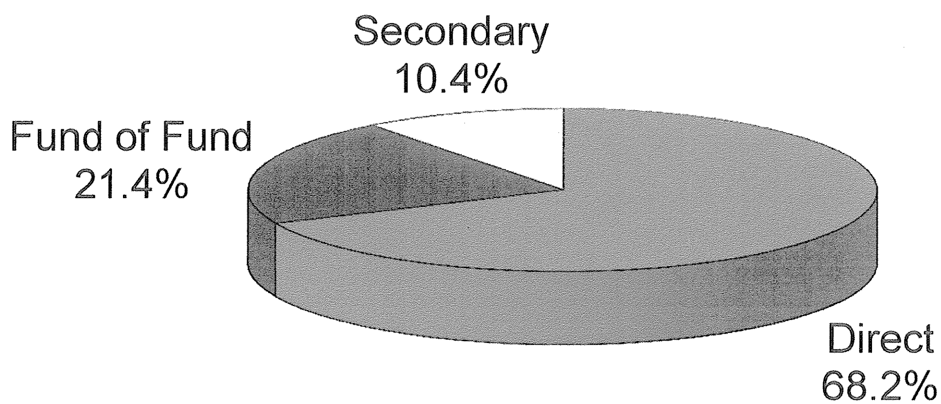
Geography	Remaining Commitments [1]	Percentage	Market Value [2]	Percentage	Total Exposure	Percentage
US & Canada	$ 593,033,889	88.3%	$ 805,335,219	77.1%	$ 1,398,369,108	81.5%
Western Europe	$ 21,466,837	3.2%	$ 137,055,789	13.1%	$ 158,522,626	9.2%
Asia/ROW	$ 57,384,578	8.5%	$ 102,550,492	9.8%	$ 159,935,070	9.3%
Total	$ 671,885,304	100.0%	$ 1,044,941,500	100.0%	$ 1,716,826,804	100.0%

(1) Remaining commitments are based upon the investment location of the partnerships.

(2) Market Value represents the agrregate market values of the underlying investment companies of the partnerships.

Q2 2013 Investment Vehicle – Total Exposure

(Since inception through June 30, 2013)



Investment Vehicle	Remaining Commitments	Percentage	Market Value	Percentage	Total Exposure	Percentage
Direct	$ 479,744,171	71.4%	$ 698,461,500	66.1%	$ 1,178,205,670	68.2%
Fund of Fund	$ 138,270,753	20.6%	$ 231,903,701	22.0%	$ 370,174,453	21.4%
Secondary	$ 53,870,381	8.0%	$ 125,933,872	11.9%	$ 179,804,253	10.4%
Total	$ 671,885,304	100.0%	$ 1,056,299,072	100.0%	$ 1,728,184,376	100.0%

The portfolio is invested primarily through direct private equity commitments. To the extent the quality of managers invested with directly is comparable to the quality of managers available through a fund-of-funds, a direct strategy should outperform fund-of-funds due to a reduced fee burden. In the medium-term, the portfolio is likely to continue to depend upon fund-of-funds managers for targeted international investments as well as for maintaining its core allocation to domestic venture capital. Longer term it is the intention of staff to leverage the fund-of-funds relationships to slowly, but not entirely move away from this model in order to access more of these specialized managers directly and to reduce overall costs. Non-venture domestic exposure will be accessed directly.

Q2 2013 1 – 3 – 5 Year Periodic Return Comparison

Montana Board of Investments
Periodic Return Comparison

For the Period Ended June 30, 2013

Description	Current					1 Year Return	3 Year Return	5 Year Return
	Count	Ending Market Value	Investment Multiple	Inception to Date IRR	Contribution to IRR	IRR	IRR	IRR
Total	**146**	**1,056,299,072.26**	**1.47**	**12.47**	**12.47**	**14.17**	**15.77**	**6.96**
Adams Street Funds	34	140,275,094.00	1.54	12.10	2.60	9.23	14.51	4.25
ASP - Direct VC Funds	4	24,358,624.00	1.66	15.85	0.64	15.34	29.45	6.30
ASP - Secondary Funds	7	10,727,985.00	1.64	41.87	0.35	3.95	15.47	7.04
ASP - U.S. Partnership Funds	14	91,788,810.00	1.48	9.63	1.41	8.71	11.60	4.01
ASP Non-US Partnership Func	9	13,399,675.00	1.53	10.32	0.20	6.89	10.24	(0.70)
Buyout	40	391,077,456.00	1.61	12.43	5.57	21.08	19.57	9.55
Co-Investment	3	40,992,729.00	1.28	7.70	0.23	12.96	15.25	4.91
Distressed	11	93,922,121.00	1.50	24.66	1.67	23.09	17.74	12.84
Mezzanine	3	16,574,739.00	1.30	7.03	0.11	6.29	2.53	1.84
Non-US Private Equity	8	67,768,807.56	1.13	4.44	0.23	8.55	12.31	(2.62)
Secondary	8	115,205,887.00	1.40	13.13	1.05	10.39	14.61	7.96
Special Situations	8	81,659,672.00	1.26	7.15	0.48	9.66	12.76	4.52
Venture Capital	30	108,822,566.70	1.29	15.09	0.54	2.25	10.72	7.20

1.) Due to, among other things, the lack of a valuation standard in the private equity industry, differences in the pace of investment across funds and the understatement of returns in the early years of a fund's life, the internal rate of return information does not accurately reflect current or expected future returns, and the internal rates of return and all other disclosures with respect to the Partnerships have not been prepared, reviewed or approved by the Partnerships, the General Partners, or any other affiliates.

As of 6/30/13, the portfolio's since inception net investment multiple and net IRR results were essentially flat relative to last quarter at 1.47x and 12.47% compared to 1.46x and 12.51% last quarter. As of quarter end, all strategy categories performed approximately in-line relative to last quarter's performance.

Q2 2013 LPs by Family of Funds

		Since Inception									
Description	Vintage Year	Commitment	Capital Contributed for Investment	Management Fees	Remaining Commitment	% Capital Contributed/Committed	Capital Distributed	Ending Market Value	Net IRR	Investment Multiple	Total Exposure
Active		**2,261,697,874**	**1,490,812,922.45**	**119,753,197.62**	**671,885,303.97**	**71.21**	**1,221,027,769.73**	**1,056,299,072.26**	**10.38**	**1.41**	**1,728,184,376.22**
Adams Street Partners		305,356,964	271,903,927.50	28,874,075.00	16,264,580.80	98.50	300,541,418.28	140,275,094.00	8.46	1.47	156,539,674.80
Adams Street Partners Fund - U.S.		94,000,000	80,017,560.00	6,792,085.20	7,190,354.80	92.35	61,191,047.00	60,172,175.00	7.34	1.40	67,362,529.80
Adams Street - 2002 U.S. Fund, L.P.	2002	34,000,000	29,556,896.00	2,635,249.20	1,807,854.80	94.68	29,151,619.00	19,271,774.00	8.56	1.50	21,079,628.80
Adams Street - 2003 U.S. Fund, L.P.	2003	20,000,000	17,062,500.00	1,417,500.00	1,520,000.00	92.40	13,480,762.00	12,789,825.00	7.60	1.42	14,309,825.00
Adams Street - 2004 U.S. Fund, L.P.	2004	15,000,000	12,663,165.00	1,061,835.00	1,275,000.00	91.50	8,725,171.00	9,886,709.00	6.62	1.36	11,161,709.00
Adams Street - 2005 U.S. Fund, L.P.	2005	25,000,000	20,734,999.00	1,677,501.00	2,587,500.00	89.65	9,833,495.00	18,223,867.00	5.22	1.25	20,811,367.00
Adams Street Partners Fund - Non-U.S.		16,000,000	13,843,868.00	1,140,132.00	1,016,000.00	93.65	11,117,305.00	10,315,419.00	8.61	1.43	11,331,419.00
Adams Street - 2002 Non-U.S. Fund, L.P.	2002	6,000,000	5,315,200.00	450,800.00	234,000.00	96.10	6,729,250.00	2,889,257.00	12.44	1.67	3,123,257.00
Adams Street - 2004 Non-U.S. Fund, L.P.	2004	5,000,000	4,308,231.00	357,269.00	334,500.00	93.31	2,745,563.00	3,433,913.00	6.50	1.32	3,768,413.00
Adams Street - 2005 Non-U.S. Fund, L.P.	2005	5,000,000	4,220,437.00	332,063.00	447,500.00	91.05	1,642,492.00	3,992,249.00	4.80	1.24	4,439,749.00
Brinson Partnership Trust - Non-U.S		9,809,483	9,620,796.00	1,141,903.01	267,414.00	109.72	15,296,596.00	3,166,185.00	12.95	1.72	3,433,599.00
Brinson Non-U.S. Trust-1999 Primary Fund	1999	1,524,853	1,507,418.00	177,505.37	96,162.00	110.50	2,590,285.00	211,681.00	10.95	1.66	307,843.00
Brinson Non-U.S. Trust-2000 Primary Fund	2000	1,815,207	1,815,207.00	211,305.13	0.00	111.64	3,064,747.00	448,282.00	12.15	1.73	448,282.00
Brinson Non-U.S. Trust-2001 Primary Fund	2001	1,341,612	1,341,612.00	156,174.94	0.00	111.64	2,077,126.00	312,057.00	11.38	1.60	312,057.00
Brinson Non-U.S. Trust-2002 Primary Fund	2002	1,696,452	1,696,452.00	197,480.23	0.00	111.64	2,165,537.00	795,231.00	8.98	1.56	795,231.00
Brinson Non-U.S. Trust-2002 Secondary	2002	637,308	601,542.00	74,187.67	35,766.00	106.03	1,447,011.00	81,929.00	26.23	2.26	117,695.00
Brinson Non-U.S. Trust-2003 Primary Fund	2003	1,896,438	1,802,863.00	220,760.68	93,575.00	106.71	3,161,768.00	818,720.00	20.70	1.97	912,295.00
Brinson Non-U.S. Trust-2004 Primary Fund	2004	897,613	855,702.00	104,488.99	41,911.00	106.97	790,122.00	498,285.00	7.13	1.34	540,196.00
Brinson Partnership Trust - U.S.		95,547,481	91,751,846.00	10,126,352.29	4,015,812.00	106.63	114,884,678.00	32,650,922.00	7.30	1.45	36,666,734.00
Brinson Partners - 1998 Primary Fund	1998	7,161,019	7,122,251.00	840,141.41	38,768.00	111.19	10,819,769.00	170,284.00	6.46	1.38	209,052.00
Brinson Partners - 1999 Primary Fund	1999	8,346,761	7,998,817.00	984,150.09	347,944.00	107.62	9,277,486.00	1,073,881.00	2.48	1.15	1,421,825.00
Brinson Partners - 2000 Primary Fund	2000	20,064,960	19,087,369.00	2,284,536.14	985,390.00	106.51	25,282,891.00	4,190,377.00	5.84	1.38	5,175,767.00
Brinson Partners - 2001 Primary Fund	2001	15,496,322	14,995,863.00	1,592,089.26	666,114.00	107.04	16,990,207.00	6,023,595.00	5.75	1.39	6,689,709.00
Brinson Partners - 2002 Primary Fund	2002	16,297,079	15,783,921.00	1,668,010.38	513,158.00	107.09	21,739,791.00	6,911,329.00	11.61	1.64	7,424,487.00
Brinson Partners - 2002 Secondary Fund	2002	2,608,820	2,545,315.00	261,739.34	110,228.00	107.60	3,985,679.00	743,800.00	12.59	1.68	854,028.00
Brinson Partners - 2003 Primary Fund	2003	15,589,100	14,784,432.00	1,566,968.26	804,668.00	104.89	16,278,127.00	7,582,957.00	9.12	1.46	8,387,625.00
Brinson Partners - 2003 Secondary Fund	2003	1,151,151	1,094,757.00	107,086.96	56,394.00	104.40	2,302,297.00	290,487.00	22.70	2.16	346,881.00
Brinson Partners - 2004 Primary Fund	2004	8,832,269	8,339,121.00	821,630.45	493,148.00	103.72	8,208,431.00	5,664,212.00	8.51	1.51	6,157,360.00
Remaining ASP Funds		90,000,000	76,669,857.50	9,673,602.50	3,775,000.00	95.94	98,051,792.28	33,970,393.00	10.66	1.53	37,745,393.00
Adams Street Global Oppty Secondary Fund	2004	25,000,000	19,850,320.00	1,374,680.00	3,775,000.00	84.90	21,562,950.00	9,611,769.00	11.25	1.47	13,386,769.00
Adams Street V, L.P.	2003	40,000,000	34,750,434.00	5,329,566.00	0.00	100.20	29,782,126.00	21,225,215.00	4.21	1.27	21,225,215.00
Brinson VPF III	1993	5,000,000	4,488,559.09	530,670.91	0.00	100.38	15,096,494.64	0.00	29.46	3.01	0.00
Brinson VPF III - Secondary Interest	1999	5,000,000	4,820,288.22	198,941.78	0.00	100.38	8,379,777.64	0.00	41.46	1.67	0.00
BVCF IV, L.P.	1999	15,000,000	12,760,256.19	2,239,743.81	0.00	100.00	23,230,444.00	3,133,409.00	7.28	1.76	3,133,409.00

Q2 2013 LPs by Family of Funds – Continued

		Since Inception									
Description	Vintage Year	Commitment	Capital Contributed for Investment	Management Fees	Remaining Commitment	%Capital Contributed/Committed	Capital Distributed	Ending Market Value	Net IRR	Investment Multiple	Total Exposure
Affinity Asia Capital		35,000,000	10,661,883.16	2,027,785.46	22,313,682.32	36.26	3,854,039.89	15,127,059.00	13.75	1.50	37,440,741.32
Affinity Asia Pacific Fund III, L.P.	2006	15,000,000	10,660,199.66	1,907,535.46	2,433,932.32	83.78	3,854,039.89	15,127,061.00	13.96	1.51	17,560,993.32
Affinity Asia Pacific Fund IV, L.P.	2013	20,000,000	1,683.50	120,250.00	19,879,750.00	0.61	0.00	-2.00	N/A	0.00	19,879,748.00
American Securities LLC		35,000,000	7,546,756.00	748,205.00	26,705,039.00	23.70	19,733.03	10,150,477.00	14.79	1.23	36,855,516.00
American Securities Partners VI, L.P.	2011	35,000,000	7,546,756.00	748,205.00	26,705,039.00	23.70	19,733.03	10,150,477.00	14.79	1.23	36,855,516.00
Arclight Energy Partners		70,000,000	46,008,579.24	3,611,291.53	20,380,152.23	70.89	50,669,125.69	22,380,734.00	11.78	1.47	42,760,886.23
ArcLight Energy Partners Fund II, L.P.	2004	25,000,000	20,448,882.86	1,245,679.00	3,305,438.14	86.78	33,705,857.79	2,106,604.00	17.59	1.65	5,412,042.14
ArcLight Energy Partners Fund III, L.P.	2006	25,000,000	19,851,199.52	1,810,099.53	3,338,723.95	86.65	16,745,237.04	13,662,157.00	7.18	1.40	17,000,880.95
ArcLight Energy Partners Fund V, L.P.	2011	20,000,000	5,708,496.86	555,513.00	13,735,990.14	31.32	218,030.86	6,611,973.00	9.80	1.09	20,347,963.14
Audax		25,000,000	4,097,741.00	0.00	20,902,259.00	16.39	0.00	4,289,307.00	4.67	1.05	25,191,566.00
Audax Private Equity Fund IV, L.P.	2012	25,000,000	4,097,741.00	0.00	20,902,259.00	16.39	0.00	4,289,307.00	4.67	1.05	25,191,566.00
Avenue Investments		35,000,000	33,123,011.00	2,086,886.00	0.00	100.60	45,544,442.00	812,743.00	11.01	1.32	812,743.00
Avenue Special Situations Fund V, LP	2007	35,000,000	33,123,011.00	2,086,886.00	0.00	100.60	45,544,442.00	812,743.00	11.01	1.32	812,743.00
Axiom Asia Private Capital		50,000,000	13,671,863.00	1,295,725.00	35,070,896.00	29.94	559,187.00	14,218,329.00	-0.77	0.99	49,289,225.00
Axiom Asia Private Capital II, LP	2009	25,000,000	12,788,937.00	1,110,616.00	11,138,931.00	55.60	559,187.00	13,459,767.00	0.49	1.01	24,598,698.00
Axiom Asia Private Capital III, LP	2012	25,000,000	882,926.00	185,109.00	23,931,965.00	4.27	0.00	758,562.00	-38.43	0.71	24,690,527.00
Black Diamond Capital Management		25,000,000	9,967,927.24	969,692.00	14,062,380.76	43.75	728,409.68	11,200,883.00	7.47	1.09	25,263,263.76
BDCM Opportunity Fund III, L.P.	2011	25,000,000	9,967,927.24	969,692.00	14,062,380.76	43.75	728,409.68	11,200,883.00	7.47	1.09	25,263,263.76
Carlyle Partners		60,000,000	50,849,974.00	4,743,899.00	4,505,129.00	92.66	56,875,312.14	35,777,821.00	11.19	1.67	40,282,950.00
Carlyle Partners IV, L.P.	2005	35,000,000	31,664,089.00	1,587,161.00	1,847,752.00	95.00	42,051,110.14	21,998,557.00	13.08	1.93	23,846,309.00
Carlyle U.S. Growth Fund III, L.P.	2006	25,000,000	19,185,885.00	3,156,738.00	2,657,377.00	89.37	14,824,202.00	13,779,264.00	6.34	1.28	16,436,641.00
Cartesian Capital Group, LLC		20,000,000	4,400,183.00	465,909.00	15,133,908.00	24.33	0.00	4,393,064.00	-12.72	0.90	19,526,972.00
Pangaea Two, L.P.	2012	20,000,000	4,400,183.00	465,909.00	15,133,908.00	24.33	0.00	4,393,064.00	-12.72	0.90	19,526,972.00
CCMP Associates		55,000,000	26,014,245.00	2,500,281.00	26,485,474.00	95.05	14,380,660.00	29,711,987.00	14.18	1.55	56,197,461.00
CCMP Capital Investors II, L.P.	2006	30,000,000	26,014,245.00	2,500,281.00	1,485,474.00	95.05	14,380,660.00	29,711,987.00	14.18	1.55	31,197,461.00
CCMP Capital Investors III, L.P	2013	25,000,000	0.00	0.00	25,000,000.00	0.00	0.00	0.00	N/A	0.00	25,000,000.00
Centerbridge		57,500,000	25,892,845.00	1,494,860.00	30,112,295.00	47.63	6,725,386.00	30,101,256.00	14.79	1.34	60,213,551.00
Centerbridge Capital Partners II, L.P.	2011	25,000,000	9,899,802.00	876,568.00	14,223,630.00	43.11	2,176.00	12,427,090.00	10.83	1.15	26,650,720.00
Centerbridge Special Credit Partners	2009	12,500,000	7,830,455.00	280,880.00	4,388,665.00	64.89	6,723,210.00	8,666,143.00	16.80	1.90	13,054,808.00
Centerbridge Special Credit Partners II	2012	20,000,000	8,162,588.00	337,412.00	11,500,000.00	42.50	0.00	9,008,023.00	8.16	1.06	20,508,023.00
CIVC Partners		25,000,000	11,057,894.43	1,685,703.39	12,444,718.12	50.97	11,599,964.45	9,695,990.00	42.54	1.67	22,140,708.12
CIVC Partners Fund IV, L.P.	2010	25,000,000	11,057,894.43	1,685,703.39	12,444,718.12	50.97	11,599,964.45	9,695,990.00	42.54	1.67	22,140,708.12
Energy Investors Funds		25,000,000	4,594,061.65	1,236,109.00	19,169,829.35	23.32	752,547.65	4,129,732.00	-12.33	0.84	23,299,561.35
EIF US Power Fund IV, L.P.	2011	25,000,000	4,594,061.65	1,236,109.00	19,169,829.35	23.32	752,547.65	4,129,732.00	-12.33	0.84	23,299,561.35

Q2 2013 LPs by Family of Funds - Continued

Description	Vintage Year	Commitment	Capital Contributed for Investment	Management Fees	Remaining Commitment	%Capital Contributed/Committed	Capital Distributed	Ending Market Value	Net IRR	Investment Multiple	Total Exposure
						Since Inception					
First Reserve		55,485,789	50,135,550.30	2,301,613.54	4,985,686.63	94.51	14,271,739.55	44,963,968.00	3.68	1.13	49,949,654.63
First Reserve Fund XI, L.P.	2006	30,000,000	30,256,529.75	1,047,014.25	38,940.00	104.35	11,990,761.71	25,296,410.00	4.78	1.19	25,335,350.00
First Reserve Fund XII, L.P.	2008	25,485,789	19,879,020.55	1,254,599.29	4,946,746.63	82.92	2,280,977.84	19,667,558.00	1.34	1.04	24,614,304.63
Gridiron Capital		15,000,000	7,281,771.89	425,756.00	7,352,094.11	51.38	141,564.00	7,106,455.00	-5.60	0.94	14,458,549.11
Gridiron Capital Fund II, LP	2011	15,000,000	7,281,771.89	425,756.00	7,352,094.11	51.38	141,564.00	7,106,455.00	-5.60	0.94	14,458,549.11
GTCR LLC		25,000,000	15,564,826.00	484,825.00	8,950,349.00	64.20	0.00	17,937,693.00	10.04	1.12	26,888,042.00
GTCR X, L.P.	2011	25,000,000	15,564,826.00	484,825.00	8,950,349.00	64.20	0.00	17,937,693.00	10.04	1.12	26,888,042.00
HarbourVest		86,823,772	43,707,852.49	1,896,010.64	41,239,639.21	52.52	11,696,109.84	45,655,803.51	9.57	1.26	86,895,442.72
Dover Street VII L.P.	2008	20,000,000	17,217,808.00	845,717.00	1,950,000.00	90.32	5,391,172.00	19,165,233.00	12.82	1.36	21,115,233.00
Dover Street VIII LP	2012	25,000,000	2,093,389.00	76,757.33	22,836,058.67	8.68	584,720.00	2,963,072.00	77.22	1.63	25,799,130.67
HarbourVest Direct 2007 Fund	2007	20,000,000	18,158,869.00	591,131.00	1,250,000.00	93.75	4,005,449.00	18,499,982.00	6.21	1.20	19,749,982.00
HarbourVest Intl Private Equity Fund VI	2008	21,823,772	6,237,786.49	382,405.31	15,203,580.54	30.33	1,714,768.84	5,027,516.51	1.42	1.02	20,231,097.05
Hellman & Friedman		40,000,000	26,470,929.00	1,860,113.00	11,668,958.00	70.83	16,905,490.00	20,274,299.00	8.02	1.31	31,943,257.00
Hellman & Friedman Capital Partners VI	2006	25,000,000	22,346,249.00	1,413,949.00	1,239,802.00	95.04	16,488,863.00	16,069,696.00	8.40	1.37	17,309,498.00
Hellman & Friedman Capital Partners VII	2011	15,000,000	4,124,680.00	446,164.00	10,429,156.00	30.47	416,627.00	4,204,603.00	0.79	1.01	14,633,759.00
Highway 12 Ventures		10,000,000	8,147,821.10	1,601,944.74	250,234.16	97.50	972,721.76	10,373,725.37	4.37	1.16	10,623,959.53
Highway 12 Venture Fund II, L.P.	2006	10,000,000	8,147,821.10	1,601,944.74	250,234.16	97.50	972,721.76	10,373,725.37	4.37	1.16	10,623,959.53
Industry Ventures		10,000,000	9,167,070.51	791,708.93	445,357.55	99.59	7,663,717.48	4,218,449.00	4.54	1.19	4,663,806.55
Industry Ventures Fund IV, L.P.	2005	10,000,000	9,167,070.51	791,708.93	445,357.55	99.59	7,663,717.48	4,218,449.00	4.54	1.19	4,663,806.55
JCF		25,000,000	23,673,977.00	1,074,320.00	306,310.00	98.99	1,997,698.00	7,103,490.00	-17.67	0.37	7,409,800.00
J.C. Flowers II, L.P.	2006	25,000,000	23,673,977.00	1,074,320.00	306,310.00	98.99	1,997,698.00	7,103,490.00	-17.67	0.37	7,409,800.00
Joseph Littlejohn & Levy		25,000,000	22,097,152.00	1,432,110.00	1,470,738.00	94.12	15,250,241.00	21,830,942.00	11.34	1.58	23,301,680.00
JLL Partners Fund V, L.P.	2005	25,000,000	22,097,152.00	1,432,110.00	1,470,738.00	94.12	15,250,241.00	21,830,942.00	11.34	1.58	23,301,680.00
KKR		50,000,000	50,000,000.00	3,846,882.60	1,672.00	107.69	118,058,342.78	337,295.00	10.58	2.20	338,967.00
KKR 1987 Fund	1987	25,000,000	25,000,000.00	2,101,164.00	0.00	108.40	56,620,963.78	0.00	8.92	2.09	0.00
KKR European Fund, L. P.	1999	25,000,000	25,000,000.00	1,745,718.60	1,672.00	106.98	61,437,379.00	337,295.00	19.81	2.31	338,967.00
Lexington Capital Partners		155,000,000	126,395,686.64	7,067,986.98	21,610,872.38	86.11	112,400,847.34	76,416,834.00	13.53	1.41	98,027,706.38
Lexington Capital Partners V, L.P.	2001	50,000,000	47,033,141.02	2,723,476.98	243,382.00	99.51	72,220,319.97	9,795,757.00	18.45	1.65	10,039,139.00
Lexington Capital Partners VI-B, L.P.	2005	50,000,000	46,011,720.46	2,634,157.00	1,354,122.54	97.29	29,166,096.21	31,526,688.00	6.02	1.25	32,880,810.54
Lexington Capital Partners VII, L.P.	2009	45,000,000	26,610,935.16	1,422,518.00	17,041,092.84	62.30	8,548,918.16	28,646,566.00	19.93	1.33	45,687,658.84
Lexington Middle Market Investors II, LP	2008	10,000,000	6,739,890.00	287,835.00	2,972,275.00	70.28	2,465,513.00	6,447,823.00	14.27	1.27	9,420,098.00
Madison Dearborn Capital Partners		75,000,000	58,727,001.19	3,116,150.70	13,266,723.74	82.46	54,174,304.00	40,759,428.00	11.07	1.54	54,026,151.74
Madison Dearborn Capital Partners IV, LP	2001	25,000,000	23,701,734.33	592,152.94	815,988.36	97.18	37,526,597.38	9,296,296.00	14.90	1.93	10,112,284.36
Madison Dearborn Capital Partners V, LP.	2006	25,000,000	22,265,829.76	1,085,900.86	1,648,269.38	93.41	7,870,136.62	21,892,796.00	4.88	1.27	23,541,065.38
Madison Dearborn Capital Partners VI, LP	2008	25,000,000	12,759,437.10	1,438,096.90	10,802,466.00	56.79	8,777,570.00	9,570,336.00	13.84	1.29	20,372,802.00
Matlin Patterson		30,000,000	22,625,829.00	2,439,747.00	4,934,424.00	83.55	12,626,024.72	20,273,423.00	7.19	1.31	25,207,847.00
MatlinPatterson Global Opps. Ptnrs. III	2007	30,000,000	22,625,829.00	2,439,747.00	4,934,424.00	83.55	12,626,024.72	20,273,423.00	7.19	1.31	25,207,847.00
MHR Institutional Partners		25,000,000	11,500,485.00	2,518,174.00	10,981,341.00	56.07	3,845,287.00	19,816,829.00	9.08	1.69	30,798,170.00
MHR Institutional Partners III, L.P.	2006	25,000,000	11,500,485.00	2,518,174.00	10,981,341.00	56.07	3,845,287.00	19,816,829.00	9.08	1.69	30,798,170.00
Montlake Capital		15,000,000	11,213,142.85	2,211,857.15	1,575,000.00	89.50	4,428,592.12	10,522,784.61	3.33	1.11	12,097,784.61
Montlake Capital II, L.P.	2007	15,000,000	11,213,142.85	2,211,857.15	1,575,000.00	89.50	4,428,592.12	10,522,784.61	3.33	1.11	12,097,784.61
Neuberger Berman Group, LLC		55,000,000	34,560,417.05	2,290,183.85	18,965,876.74	67.00	25,950,792.51	22,492,747.00	8.30	1.31	41,458,623.74
NB Co-Investment Partners, L.P.	2006	35,000,000	30,394,046.91	1,966,896.18	3,340,671.92	92.46	25,918,667.70	17,284,693.00	7.97	1.34	20,625,364.92
NB Strategic Co-Investment Partners II	2012	20,000,000	4,166,370.14	323,287.67	15,625,204.82	22.45	32,124.81	5,208,054.00	18.19	1.17	20,833,258.82
Northgate Capital Partners		45,000,000	13,830,000.00	270,000.00	30,900,000.00	31.33	0.00	13,695,282.00	-2.21	0.97	44,595,282.00
Northgate V, L.P.	2010	30,000,000	12,720,000.00	180,000.00	17,100,000.00	43.00	0.00	12,733,488.00	-0.93	0.99	29,833,488.00
Northgate Venture Partners VI, L.P.	2012	15,000,000	1,110,000.00	90,000.00	13,800,000.00	8.00	0.00	961,794.00	-33.95	0.80	14,761,794.00

Q2 2013 LPs by Family of Funds - Continued

Description	Vintage Year	Since Inception Commitment	Capital Contributed for Investment	Management Fees	Remaining Commitment	%Capital Contributed/Committed	Capital Distributed	Ending Market Value	Net IRR	Investment Multiple	Total Exposure
Oak Hill Capital Partners		45,000,000	35,407,900.20	3,954,447.90	5,719,005.49	87.47	26,928,582.04	32,131,223.00	9.30	1.50	37,850,228.49
Oak Hill Capital Partners II, L.P.	2005	25,000,000	22,570,972.65	2,116,457.60	312,569.75	98.75	26,499,747.43	13,063,678.00	9.82	1.60	13,376,247.75
Oak Hill Capital Partners III, L.P.	2008	20,000,000	12,836,927.55	1,837,990.30	5,406,435.74	73.37	428,834.61	19,067,545.00	7.84	1.33	24,473,980.74
Oaktree Capital Partners		120,000,000	111,811,076.00	4,744,650.00	3,560,677.00	97.13	169,519,358.00	20,307,676.00	41.89	1.63	23,868,353.00
Oaktree Opportunities Fund VIII, L.P.	2009	10,000,000	9,490,757.00	509,243.00	60,677.00	100.00	3,339,318.00	10,016,162.00	12.29	1.34	10,076,839.00
OCM Opportunities Fund IVb, L.P.	2002	75,000,000	73,086,225.00	1,913,775.00	0.00	100.00	121,554,428.00	145,485.00	44.89	1.62	145,485.00
OCM Opportunities Fund VIIb, L.P.	2008	35,000,000	29,234,094.00	2,321,632.00	3,500,000.00	90.16	44,625,612.00	10,146,029.00	18.19	1.74	13,646,029.00
Odyssey Partners Fund III		45,000,000	33,989,723.56	3,378,467.24	7,631,829.62	83.04	35,625,373.75	36,262,620.00	24.96	1.92	43,894,449.62
Odyssey Investment Partners III, L.P.	2004	25,000,000	21,950,780.90	1,813,222.53	1,235,996.57	95.06	35,599,948.09	14,262,967.00	25.52	2.10	15,498,963.57
Odyssey Investment Partners IV, L.P.	2008	20,000,000	12,038,942.66	1,565,244.71	6,395,833.05	68.02	25,425.66	21,999,653.00	22.02	1.62	28,395,486.05
Opus Capital Venture Partners		10,000,000	2,451,574.87	500,000.00	7,048,425.13	29.52	0.00	2,345,562.72	-19.19	0.79	9,393,987.85
Opus Capital Venture Partners VI, LP	2011	10,000,000	2,451,574.87	500,000.00	7,048,425.13	29.52	0.00	2,345,562.72	-19.19	0.79	9,393,987.85
Performance Venture Capital		25,000,000	14,254,285.17	1,306,189.22	9,439,525.61	62.24	857,364.92	16,764,983.00	6.47	1.13	26,204,508.61
Performance Venture Capital II	2008	25,000,000	14,254,285.17	1,306,189.22	9,439,525.61	62.24	857,364.92	16,764,983.00	6.47	1.13	26,204,508.61
Portfolio Advisors		70,000,000	51,369,973.00	2,950,698.00	15,926,180.00	77.60	10,435,467.48	60,228,683.00	7.06	1.30	76,154,863.00
Port. Advisors Fund IV (B), L.P.	2006	30,000,000	21,791,395.00	1,332,813.00	6,875,792.00	77.08	3,540,324.48	28,089,142.00	6.62	1.37	34,964,934.00
Port. Advisors Fund IV (E), L.P.	2006	15,000,000	10,985,639.00	807,950.00	3,206,411.00	78.62	1,059,504.00	11,678,798.00	1.93	1.08	14,885,209.00
Port. Advisors Fund V (B), L.P.	2008	10,000,000	6,907,849.00	415,625.00	2,793,273.00	73.23	1,325,908.00	8,018,444.00	8.32	1.28	10,811,717.00
Portfolio Advisors Secondary Fund, L.P.	2008	15,000,000	11,685,090.00	394,310.00	3,050,704.00	80.53	4,509,731.00	12,442,299.00	18.25	1.40	15,493,003.00
Quintana Energy Partners		15,000,000	12,735,231.81	1,616,574.38	668,565.11	95.68	6,895,186.58	10,187,535.00	3.89	1.19	10,856,100.11
Quintana Energy Partners Fund I, L.P.	2006	15,000,000	12,735,231.81	1,616,574.38	668,565.11	95.68	6,895,186.58	10,187,535.00	3.89	1.19	10,856,100.11
Siguler Guff & Company		50,000,000	26,231,594.72	1,406,610.97	22,494,081.81	55.28	9,103,919.41	29,222,721.00	10.52	1.39	51,716,802.81
Siguler Guff Small Buyout Opportunities	2007	25,000,000	19,671,541.64	1,216,664.05	4,244,081.81	83.55	9,103,919.41	21,917,292.00	11.32	1.49	26,161,373.81
Siguler Guff Small Buyout Opps Fund II	2011	25,000,000	6,560,053.08	189,946.92	18,250,000.00	27.00	0.00	7,305,429.00	4.23	1.08	25,555,429.00
Southern Capital		15,000,000	0.00	0.00	15,000,000.00	0.00	0.00	0.00	N/A	0.00	15,000,000.00
Southern Capital Fund III, L.P.	2013	15,000,000	0.00	0.00	15,000,000.00	0.00	0.00	0.00	N/A	0.00	15,000,000.00
Sterling Capital Partners		20,000,000	2,420,254.00	694,023.00	16,939,896.00	15.57	0.00	4,256,159.00	41.96	1.37	21,196,055.00
Sterling Capital Partners IV	2012	20,000,000	2,420,254.00	694,023.00	16,939,896.00	15.57	0.00	4,256,159.00	41.96	1.37	21,196,055.00
Summit Ventures		20,000,000	2,800,000.00	0.00	17,200,000.00	14.00	0.00	2,646,166.00	-10.68	0.95	19,846,166.00
Summit Partners Growth Equity Fund VIII	2011	20,000,000	2,800,000.00	0.00	17,200,000.00	14.00	0.00	2,646,166.00	-10.68	0.95	19,846,166.00
TA Associates, Inc.		10,000,000	4,665,167.00	384,833.00	4,950,000.00	50.50	550,000.00	5,565,537.00	11.73	1.21	10,515,537.00
TA XI, L.P.	2010	10,000,000	4,665,167.00	384,833.00	4,950,000.00	50.50	550,000.00	5,565,537.00	11.73	1.21	10,515,537.00

Q2 2013 LPs by Family of Funds - Continued

		Since Inception									
Description	Vintage Year	Commitment	Capital Contributed for Investment	Management Fees	Remaining Commitment	%Capital Contributed/Committed	Capital Distributed	Ending Market Value	Net IRR	Investment Multiple	Total Exposure
Tenaya Capital		20,000,000	5,265,927.00	289,777.01	14,444,295.99	27.78	0.00	5,233,379.00	-12.70	0.94	19,677,674.99
Tenaya Capital VI, L.P.	2012	20,000,000	5,265,927.00	289,777.01	14,444,295.99	27.78	0.00	5,233,379.00	-12.70	0.94	19,677,674.99
Tenex Capital Management		20,000,000	6,306,237.44	298,542.68	13,418,766.07	33.02	38,791.12	6,572,019.00	0.11	1.00	19,990,785.07
Tenex Capital Partners LP - Secondary	2012	20,000,000	6,306,237.44	298,542.68	13,418,766.07	33.02	38,791.12	6,572,019.00	0.11	1.00	19,990,785.07
Terra Firma Capital Partners		25,432,997	21,201,655.52	2,782,943.99	1,465,449.85	94.31	-1,345,584.58	14,276,318.05	-13.93	0.54	15,741,767.89
Terra Firma Capital Partners III, L.P.	2007	25,432,997	21,201,655.52	2,782,943.99	1,465,449.85	94.31	-1,345,584.58	14,276,318.05	-13.93	0.54	15,741,767.89
Thayer Hidden Creek Management, L.P.		20,000,000	11,882,131.00	1,542,338.00	6,902,229.00	67.12	3,482,417.00	18,192,227.00	28.82	1.61	25,094,456.00
HCI Equity Partners III, LP	2008	20,000,000	11,882,131.00	1,542,338.00	6,902,229.00	67.12	3,482,417.00	18,192,227.00	28.82	1.61	25,094,456.00
The Catalyst Capital Group		15,000,000	3,752,799.68	0.00	11,250,000.00	25.02	154,010.10	3,836,401.00	11.95	1.06	15,086,401.00
Catalyst Fund LP IV	2012	15,000,000	3,752,799.68	0.00	11,250,000.00	25.02	154,010.10	3,836,401.00	11.95	1.06	15,086,401.00
Trilantic Capital Partners		31,098,351	8,393,896.42	1,046,707.54	21,658,099.19	85.06	7,088,946.00	8,382,021.00	18.03	1.64	30,040,120.19
Trilantic Capital Partners IV L.P.	2007	11,098,351	8,393,896.42	1,046,707.54	1,658,099.19	85.06	7,088,946.00	8,382,021.00	18.03	1.64	10,040,120.19
Trilantic Capital Partners V L.P.	2013	20,000,000	0.00	0.00	20,000,000.00	0.00	0.00	0.00	N/A	0.00	20,000,000.00
Veritas Capital		25,000,000	13,443,952.00	184,781.00	11,371,267.00	54.51	0.00	18,676,704.00	16.92	1.37	30,047,971.00
The Veritas Capital Fund IV, L.P.	2010	25,000,000	13,443,952.00	184,781.00	11,371,267.00	54.51	0.00	18,676,704.00	16.92	1.37	30,047,971.00
Welsh, Carson, Anderson & Stowe		75,000,000	67,529,571.82	5,152,767.18	2,500,000.00	96.91	59,060,240.00	45,169,511.00	8.31	1.43	47,669,511.00
Welsh, Carson, Anderson & Stowe IV, LP	2004	25,000,000	21,901,756.82	1,598,243.18	1,500,000.00	94.00	13,013,894.00	16,574,739.00	5.31	1.26	18,074,739.00
Welsh, Carson, Anderson & Stowe IX, L.P.	2000	25,000,000	22,704,505.00	2,045,495.00	250,000.00	99.00	35,219,735.00	5,016,864.00	11.63	1.63	5,266,864.00
Welsh, Carson, Anderson & Stowe X, L.P.	2005	25,000,000	22,923,310.00	1,509,029.00	750,000.00	97.73	10,826,611.00	23,577,908.00	6.65	1.41	24,327,908.00
White Deer		20,000,000	9,568.00	149,041.00	19,841,391.00	0.79	0.00	-2,297.00	N/A	-0.01	19,839,094.00
White Deer Energy II L.P.	2013	20,000,000	9,568.00	149,041.00	19,841,391.00	0.79	0.00	-2,297.00	N/A	-0.01	19,839,094.00
Inactive		**160,665,300**	**158,349,833.18**	**9,571,145.04**	**0.00**	**104.52**	**334,272,863.94**	**0.00**	**19.11**	**1.99**	**0.00**

1.) Due to, among other things, the lack of a valuation standard in the private equity industry, differences in the pace of investment across funds and the understatement of returns in the early years of a fund's life, the internal rate of return information does not accurately reflect current or expected future returns, and the internal rates of return and all other disclosures with respect to the Partnerships have not been prepared, reviewed or approved by the Partnerships, the General Partners, or any other affiliates.

American Securities Partners VI experienced a material uplift in performance during 2Q13 reporting a 14.8% IRR and MOIC of 1.23x relative to the prior quarter's performance of an -6.49% IRR and 0.94x MOIC. BDCM Opportunity Fund III, while a standout to the upside last quarter, experienced a downdraft this quarter reporting an IRR and MOIC of 7.47% and 1.09x respectively relative to 1Q13 of 18.68% and 1.28x. Both NB Strategic Co-Investment Partners II and Sterling Capital Partners IV continue their strong performance and while it's still very early The Catalyst Fund Limited Partnership IV is now in positive territory reporting a 11.95% IRR and 1.06x MOIC. Virtually all other managers performed in-line with their prior quarter.

IRR Benchmark Comparison (Since 1980)
As of June 30, 2013

By Investment Focus

Description	PIC	Client	DPI	Client	RVPI	Client	TVPI	Client	IRR	Client
Buyout	0.82	0.66	0.83	0.93	0.63	0.65	1.46	1.58	12.44	12.29
Venture Capital	0.83	0.72	0.78	0.71	0.57	0.70	1.35	1.41	10.08	15.44
Mezz & Distressed	0.78	0.67	0.84	1.03	0.57	0.45	1.42	1.48	11.57	21.72
Pooled IRR	**0.81**	**0.73**	**0.83**	**0.87**	**0.61**	**0.59**	**1.44**	**1.47**	**11.97**	**12.47**

By Origin

Description	PIC	Client	DPI	Client	RVPI	Client	TVPI	Client	IRR	Client
US	0.82	0.78	0.87	0.90	0.60	0.59	1.47	1.49	12.16	12.80
Non-US	0.80	0.66	0.69	0.65	0.65	0.55	1.35	1.20	11.14	6.22
Pooled IRR	**0.81**	**0.75**	**0.83**	**0.88**	**0.61**	**0.59**	**1.44**	**1.47**	**11.97**	**12.45**

By Vintage Year

Description	PIC	Client	DPI	Client	RVPI	Client	TVPI	Client	IRR	Client
1990	1.01	1.04	2.46	2.41	0.00	0.00	2.46	2.41	18.07	27.63
1991	1.03	1.07	2.83	2.29	0.00	0.00	2.83	2.29	27.01	24.24
1992	0.99	N/A	2.28	N/A	0.00	N/A	2.28	N/A	23.50	N/A
1993	0.99	1.03	2.29	2.23	0.00	0.00	2.30	2.23	24.01	23.25
1994	0.96	N/A	2.50	N/A	0.00	N/A	2.50	N/A	26.10	N/A
1995	0.93	N/A	1.96	N/A	0.01	N/A	1.97	N/A	21.42	N/A
1996	1.00	1.12	1.67	1.65	0.01	0.00	1.68	1.65	13.18	14.80
1997	1.00	1.05	1.57	1.89	0.01	0.00	1.58	1.89	10.74	15.19
1998	1.00	1.11	1.33	1.33	0.03	0.02	1.36	1.35	7.02	6.02
1999	1.00	1.04	1.20	1.85	0.07	0.08	1.27	1.93	5.65	14.81
2000	1.00	1.03	1.35	1.32	0.20	0.20	1.55	1.52	10.45	8.77
2001	0.98	1.00	1.58	1.40	0.21	0.28	1.79	1.67	16.68	13.97
2002	0.98	1.00	1.50	1.38	0.21	0.23	1.72	1.60	19.40	25.50
2003	0.97	0.99	1.47	0.83	0.53	0.55	2.01	1.38	20.78	6.47
2004	0.98	0.91	1.20	1.05	0.45	0.52	1.66	1.57	13.69	12.70
2005	0.98	0.96	0.88	0.75	0.62	0.72	1.50	1.47	9.99	8.78
2006	0.93	0.89	0.50	0.44	0.77	0.82	1.27	1.26	5.83	5.61
2007	0.89	0.91	0.45	0.55	0.84	0.65	1.29	1.20	7.60	5.65
2008	0.77	0.71	0.43	0.43	0.90	0.95	1.33	1.38	10.88	13.36
2009	0.76	0.65	0.30	0.32	1.01	1.01	1.31	1.33	13.29	14.18
2010	0.63	0.49	0.11	0.27	1.04	1.05	1.16	1.33	8.79	18.87
2011	0.42	0.35	0.13	0.03	0.98	1.04	1.11	1.07	9.77	5.09
2012	0.26	0.20	0.07	0.02	0.95	1.05	1.02	1.06	6.25	10.32
2013	0.21	0.00	0.01	0.00	0.91	-0.01	0.92	-0.01	-11.75	N/A
Pooled IRR	**0.81**	**0.73**	**0.83**	**0.87**	**0.61**	**0.59**	**1.44**	**1.47**	**11.97**	**12.47**

Based on data compiled from 2,225 Private Equity funds, including fully liquidated partnerships, formed between 1980 to 2013.

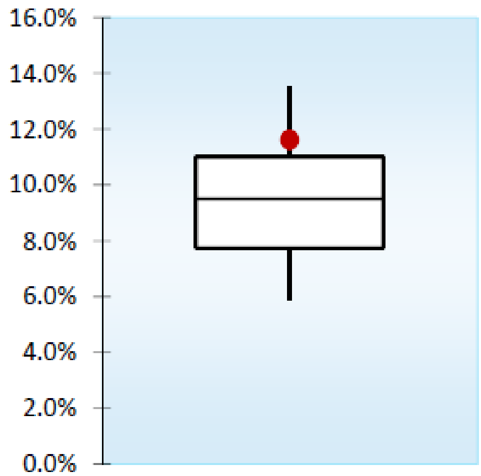
IRR: Pooled Average IRR is net of fees, expenses and carried interest.

Your peer group consists of the following 26 U.S. pension plans.

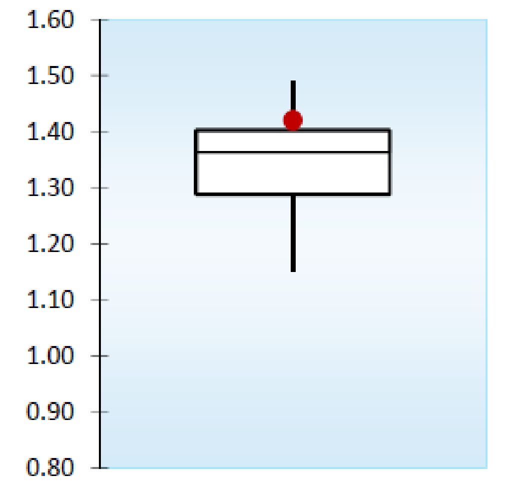
Peers	Total Plan Assets ($ billions)
California State Teachers' Retirement System	$157.8
Connecticut Retirement Plans and Trust Funds	$25.3
Fire and Police Pension Association of Colorado	$3.4
Florida Retirement System	$128.6
Hawaii Employees' Retirement System	$11.9
Indiana Public Retirement System	$21.6
Iowa Public Employees' Retirement System	$24.2
Kansas Public Employees' Retirement System	$13.8
Louisiana State Employees' Retirement System	$9.6
Missouri Local Government Employees Retirement System	$5.0
Missouri State Employees' Retirement System	$8.1
Montana Board of Investments	$8.2
Nebraska Investment Council	$17.8
New York State Teachers' Retirement System	$90.9
North Carolina Retirement System	$78.1
Oregon Public Employees Retirement Fund	$60.3
Pennsylvania Public School Employees' Retirement System	$49.5
Public Employee Retirement System of Idaho	$12.3
Public Employees Retirement Association of New Mexico	$12.4
Public Employees' Retirement System of Nevada	$27.2
Public School & Education Employee Retirement Systems of Missouri	$31.8
School Employees Retirement System of Ohio	$11.0
South Dakota Investment Council	$8.2
State of Michigan Retirement Systems	$51.5
State Universities Retirement System Illinois	$14.3
Washington State Investment Board	$58.8
Total	**$941.5**

Your net IRR of 11.6% was above the peer median of 9.5%. Your investment multiple of 1.42 was above the peer median of 1.36.

Net IRR*
(12/31/95 to 12/31/12)



Investment Multiple**
(12/31/95 to 12/31/12)

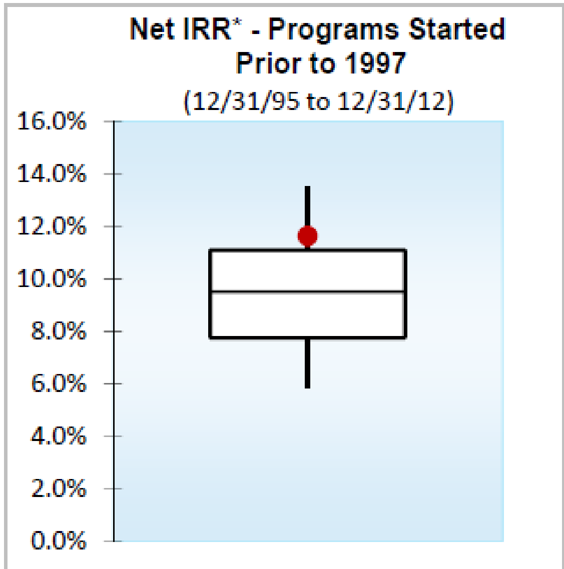


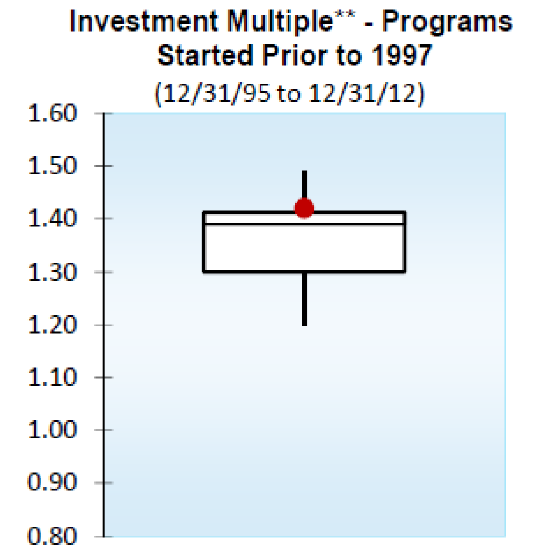
Maximum	13.5%	Maximum	1.49
75th %	11.0%	75th %	1.40
Median	9.5%	Median	1.36
25th %	7.8%	25th %	1.29
Minimum	5.9%	Minimum	1.15
Average	9.4%	Average	1.35
Count	20	Count	20
Montana Board of Investments		Montana Board of Investments	
Your value	11.6%	Your value	1.42
Percentile	89%	Percentile	84%

*Net IRR from 12/31/95 is the pooled IRR for all private equity investments beginning with investments made after 12/31/95. IRRs include cash flows from 12/31/95 to 12/31/12 and from funds that have been fully realized.

**Investment Multiple from 12/31/95 = (Net cash returned from investments made since 12/31/95 + NAV) / Total Contributions since 12/31/95. Included are cash flows from investments that have been fully realized.

Compared to peers that started private equity programs prior to 1997, your net IRR of 11.6% was above the median of 9.5% and your investment multiple of 1.42 was above the median of 1.39.



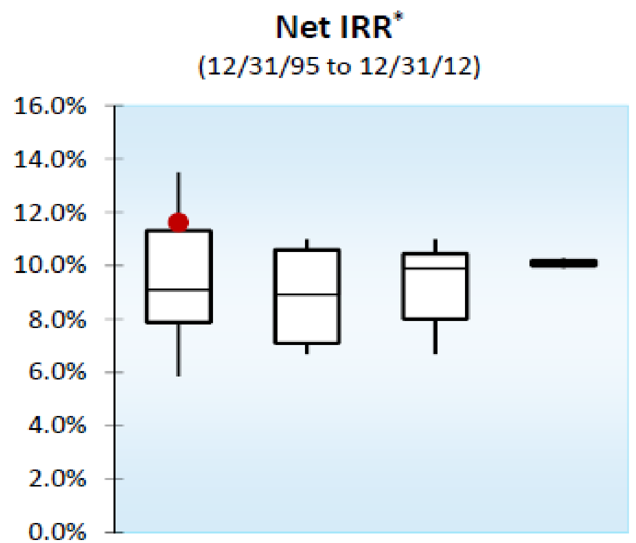


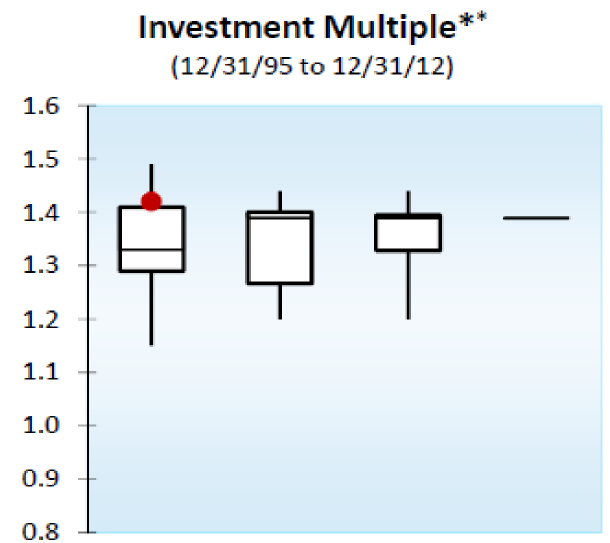
Maximum	13.5%	Maximum	1.49
75th %	11.1%	75th %	1.41
Median	9.5%	Median	1.39
25th %	7.8%	25th %	1.30
Minimum	5.9%	Minimum	1.20
Average	9.5%	Average	1.37
Count	16	Count	16
Montana Board of Investments		Montana Board of Investments	
Your value	11.6%	Your value	1.42
Percentile	87%	Percentile	80%

*Net IRR from 12/31/95 is the pooled IRR for all private equity investments beginning with investments made after 12/31/95. IRRs include cash flows from 12/31/95 to 12/31/12 and from funds that have been fully realized.

**Investment Multiple from 12/31/95 = (Net cash returned from investments made since 12/31/95 + NAV) / Total Contributions since 12/31/95. Included are cash flows from investments that have been fully realized.

Compared to peers with NAV of below $5 billion, your net IRR of 11.6% was above the median of 9.1% and your investment multiple of 1.42 was above the median of 1.33.





	< $5Bn	$5-15Bn	> $5Bn	> $15Bn
Maximum	13.5%	11.0%	11.0%	10.3%
75th %	11.3%	10.6%	10.4%	10.2%
Median	9.1%	8.9%	9.9%	10.1%
25th %	7.9%	7.1%	8.0%	10.0%
Minimum	5.9%	6.7%	6.7%	9.9%
Average	9.5%	8.9%	9.2%	10.1%
Count	13	5	7	2
Montana Board of Investments				
Your value	11.6%			
Percentile	83%			

	< $5Bn	$5-15Bn	> $5Bn	> $15Bn
Maximum	1.49	1.44	1.44	1.39
75th %	1.41	1.40	1.40	1.39
Median	1.33	1.39	1.39	1.39
25th %	1.29	1.27	1.33	1.39
Minimum	1.15	1.20	1.20	1.39
Average	1.34	1.34	1.35	1.39
Count	13	5	7	2
Montana Board of Investments				
Your value	1.42			
Percentile	83%			

*Net IRR from 12/31/95 is the pooled IRR for all private equity investments beginning with investments made after 12/31/95. IRRs include cash flows from 12/31/95 to 12/31/12 and from funds that have been fully realized.

**Investment Multiple from 12/31/95 = (Net cash returned from investments made since 12/31/95 + NAV) / Total Contributions since 12/31/95. Included are cash flows from investments that have been fully realized.

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601 (406) 444-0001

To: Members of the Board

From: Ethan Hurley, Portfolio Manager – Alternative Investments

Date: November 19, 2013

Subject: Montana Real Estate Pool (MTRP)

The table below summarizes the investment decisions made by staff since the last Board Meeting. Three commitments of $25M, $25M and $30M were made to Molpus Woodlands Fund IV, LP, DRA Growth and Income Fund VIII, LP and BPG Investment Partnership IX, LP, respectively. Investment briefs summarizing these funds and the general partners follow.

Fund Name	Vintage	Subclass	Property Type	Amount	Date
Molpus Woodlands Fund IV, LP	2013	Timberland	Diverse	$25M	9/6/13
DRA Growth and Income Fund VIII, LP	2013	Value-add	Diverse	$25M	8/23/13
BPG Investment Partnership IX, LP	2012	Value-add	Diverse	$30M	7/12/13

Following these fund descriptions is the comprehensive review of the real estate portfolio for the quarter ended June 30th.

Montana Board of Investments

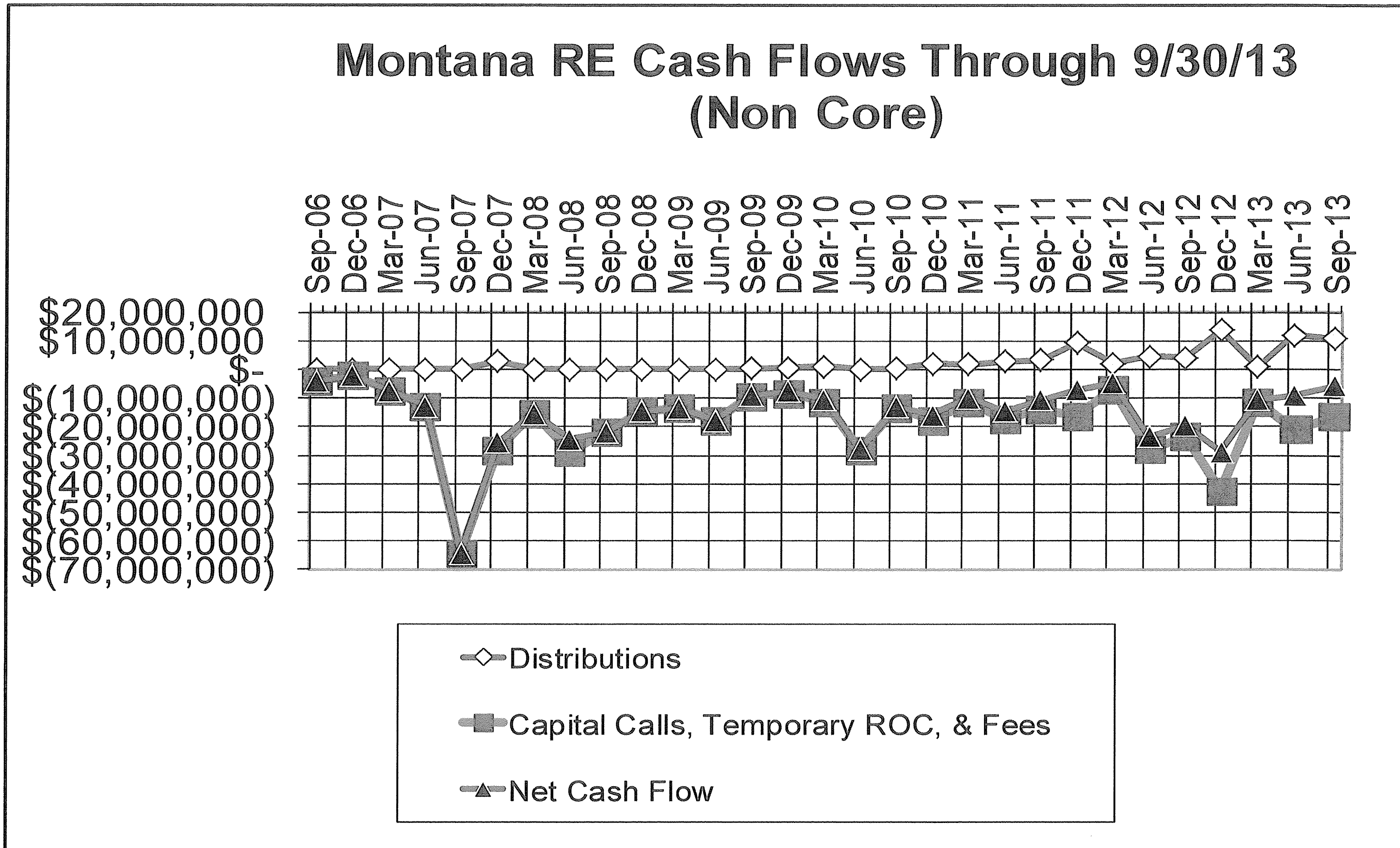
Real Estate Board Report

Q2 2013

Due to, among other things, the lack of a valuation standard in the real estate private equity industry, differences in the pace of investment across funds and the understatement of returns in the early years of a fund's life, the internal rate of return information may not accurately reflect current or expected future returns, and the internal rates of return and all other disclosures with respect to the Partnerships have not been prepared, reviewed or approved by the Partnerships, the General Partners, or any other affiliates.

Contents

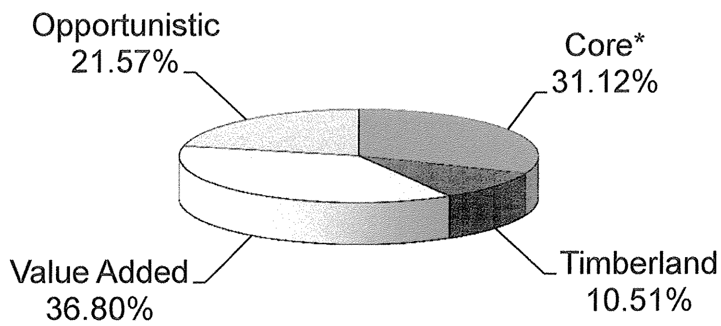
Quarterly Cash Flows through September 30, 2013



Both capital calls and distributions were down slightly for the quarter ending 9/30/13. While general market conditions seem to be improving, similar to prior quarters, net cash flow remains negative.

Q2 2013 Strategy – Total Exposure

Total Exposure



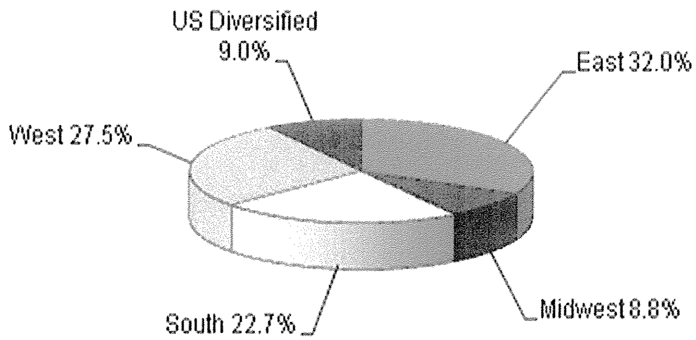
Strategy	Remaining Commitments	Percentage	Net Asset Value	Percentage	Total Exposure	Percentage
Core*	$0	0.00%	$323,167,450	41.02%	$323,167,450	31.12%
Timberland	$42,052,255	16.78%	$67,047,961	8.51%	$109,100,216	10.51%
Value Added	$131,038,621	52.29%	$251,167,378	31.88%	$382,205,999	36.80%
Opportunistic	$77,502,933	30.93%	$146,509,564	18.60%	$224,012,497	21.57%
Total	$250,593,809	100.00%	$787,892,353	100.00%	$1,038,486,162	100.00%

* Includes MT Office Portfolio

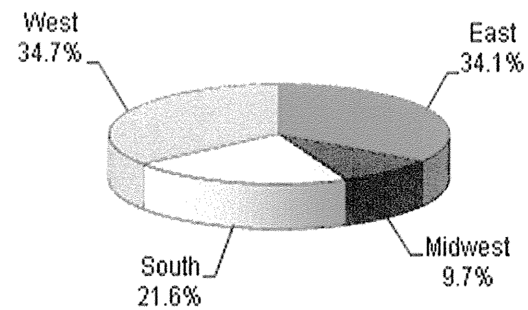
Core real estate dominates assets in the ground at approximately 41% and includes the directly owned Montana office buildings. Timberland, being the most recent addition to the real estate portfolio, represents approximately 9% of the total portfolio's NAV and approximately 11% of the aggregate exposure which includes unfunded commitments. Value Added and Opportunistic account for approximately 32% and 19% of NAV respectively.

Q2 2013 Geography – Total Exposure

Montana United States Portfolio



NCREIF Index



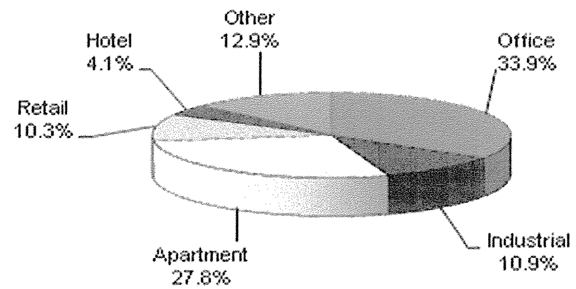
	East	Midwest	South	West	US Diverse	Non-US	Total
Montana US Value[2]	$368.5	$101.7	$261.0	$316.0	$103.5		$1,150.7
Montana US Total[1]	32.0%	8.8%	22.7%	27.5%	9.0%		100.0%
NCREIF Value[2,3]	114,782	31,809	71,170	118,571			$336,332
NCREIF[1]	34.1%	9.5%	21.2%	35.3%			100.0%
Difference	-2.1%	-0.7%	1.5%	-7.8%	9.0%		
Montana Total Value[2]	$368.5	$101.7	$261.0	$316.0	$103.5	$138.3	$1,289.0
Montana Total[1]	28.6%	7.9%	20.2%	24.5%	8.0%	10.7%	100.0%

1) Diversification percentages are based on the Gross Market Value, which represents the MBOI share of the partnerships' interests in properties exclusive of any underlying debt used to acquire each property.
2) Values shown are in Millions.
3) The NCREIF gross market values represent the total gross asset values of the participating funds exclusive of any underlying debt.

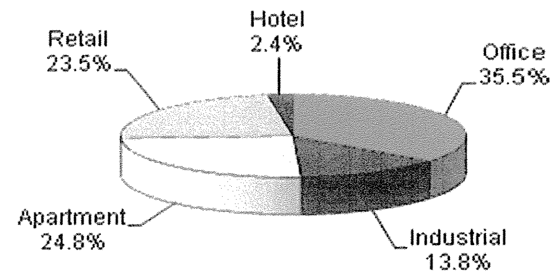
The geographic mix of the real estate portfolio is fairly aligned with NCREIF, although exposure in the West at 27.5% is 9% less than the index. 9% of the portfolio is broadly diversified across the remainder of the US and the portfolio's international exposure represents approximately 11% of the mix.

Q2 2013 Property Type – Market Value Exposure

Montana United States Portfolio



NCREIF Index



	Office	Industrial	Apartment	Retail	Hotel	Other[2]	Total
Montana US Value[3]	$390.4	$125.7	$320.4	$118.3	$47.3	$148.6	$1,150.7
Montana US Total	33.9%	10.9%	27.8%	10.3%	4.1%	12.9%	100.0%
NCREIF Value[3,4]	119,454	46,473	83,475	78,906	8,024		$336,332
NCREIF[1]	35.5%	13.8%	24.8%	23.5%	2.4%		100.0%
Difference	-1.6%	-2.9%	3.0%	-13.2%	1.7%	12.9%	
Montana Non-US Value[3]	$53.2	$0.0	$12.5	$9.1	$10.2	$53.3	$138.3
Montana Non-US Total	38.5%	0.0%	9.0%	6.6%	7.4%	38.6%	100.0%
Montana Total Value[3]	$443.6	$125.7	$332.8	$127.4	$57.5	$201.9	$1,289.0
Montana Total[1]	34.4%	9.8%	25.8%	9.9%	4.5%	15.7%	100.0%

Note: Due to limited GP reporting for Liquid Realty holdings values have been rolled forward from the prior reporting cycle.

1) Diversification percentages are based on the Gross Market Value, which represents the MBOI share of the partnerships' interests in properties exclusive of any underlying debt used to acquire each property.

2) Total U.S. Other includes $49,195,209 in mixed-use assets, $1,109,690 in healthcare/senior living, $8,244,239 in land, $210,203 in storage, $9,212,796 in debt assets, $201,736 in parking, $2,323,155 in manufactured assets, $65,640,136 in timber, $683,088 in other assets.

3) Values shown are in Millions.

4) The NCREIF gross market values represent the total gross asset values of the participating funds exclusive of any underlying debt. This amount differs from the index total due to rounding in the NCREIF report.

The real estate portfolio is well diversified across the major property types and is underweight relative to NCREIF in Office, Retail and Industrial and overweight in Apartments and Hotels. At 12.9%, Other represents the portfolio's exposure to Timberland, Mixed-Use properties, Land, Manufactured Housing, Storage, Parking, Senior Living and Healthcare related properties. As has been noted in the past, composition of the portfolio by property type is and will continue to be primarily a function of a manager's expertise and success in sourcing deals rather than a function of staff's desire to over or underweight a specific property type.

Q2 2013 Time Weighted & Internal Rates of Return

		Time Weighted Returns											
		Current Quarter		Year to Date		1 - Year		3 - Year		5 - Year		Inception	
	NAV	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross
Clarion Lion Properties Fund	37,128,959	4.11%	4.35%	5.91%	17.26%	10.78%	11.84%	16.16%	17.26%	-0.01%	0.24%	0.05%	1.09%
INVESCO Core Real Estate-USA	40,113,964	4.45%	4.68%	7.60%	8.08%	12.44%	13.45%	14.50%	15.52%	0.86%	1.08%	0.09%	1.00%
JP Morgan Strategic Properties Fund	121,834,143	3.60%	3.86%	6.59%	7.13%	13.26%	14.38%	14.03%	15.16%	-1.20%	-0.95%	1.76%	2.80%
TIAA-CREF Asset Management Core Property	40,751,826	-	-	-	-	-	-	-	-	-	-	-	-
UBS-Trumbull Property Fund	64,593,451	3.08%	3.35%	4.50%	5.05%	8.64%	9.78%	11.53%	12.60%	-	-	12.24%	13.30%
Core Total	**304,422,342**	**3.67%**	**3.92%**	**6.12%**	**6.65%**	**11.60%**	**12.71%**	**13.73%**	**14.83%**	**-0.28%**	**-0.04%**	**1.65%**	**2.67%**
Montana Office Portfolio [1]	**18,745,108**	**7.58%**	**7.58%**	**7.58%**	**7.58%**	**7.58%**	**7.58%**	-	-	-	-	**7.27%**	**7.27%**
Timberland Total	**67,047,961**	**4.96%**	**5.19%**	**5.36%**	**5.84%**	**7.49%**	**8.64%**	-	-	-	-	**5.09%**	**6.00%**
Value Added Total	**251,167,378**	**1.98%**	**2.48%**	**4.02%**	**5.07%**	**8.52%**	**11.47%**	**9.31%**	**11.70%**	**0.82%**	**1.42%**	**1.74%**	**4.99%**
Opportunistic Total	**146,509,564**	**1.06%**	**1.75%**	**4.35%**	**5.74%**	**9.87%**	**12.88%**	**16.83%**	**19.66%**	**-13.35%**	**-12.42%**	**-13.28%**	**-9.65%**
Total Portfolio	**787,892,353**	**2.79%**	**3.21%**	**5.04%**	**5.90%**	**9.81%**	**11.87%**	**12.53%**	**14.35%**	**-2.72%**	**-2.23%**	**-0.06%**	**2.19%**
Benchmark													
NCREIF	**336,332,120,173**		**2.87%**		**5.51%**		**10.73%**		**13.14%**		**2.79%**		**9.12%**
NFI-ODCE (NET)	**97,278,300,000**	**3.60%**		**6.12%**		**11.08%**		**13.85%**		**-1.07%**		**7.33%**	
		Internal Rates of Return (Net of Fees)											
Montana Office Portfolio	**18,745,108**	**7.58%**		**7.55%**		**7.53%**		-		-		**6.76%**	
Molpus Woodlands Fund III, LP	41,874,323	7.86%		7.98%		9.47%		-		-		5.74%	
ORM Timber Fund III, LLC	7,520,266	-0.41%		-0.76%		-		-		-		-2.22%	
RMS Forest Growth III LP	17,653,372	0.86%		2.17%		5.51%		-		-		5.13%	
Timberland	**67,047,961**	**4.96%**		**5.36%**		**7.62%**		-		-		**5.14%**	
ABR Chesapeake Fund III	18,014,312	4.37%		4.51%		8.83%		6.98%		2.51%		2.82%	
ABR Chesapeake Fund IV	11,964,090	0.50%		2.87%		8.64%		-		-		10.94%	
AG Core Plus Realty Fund II	9,076,070	1.10%		3.35%		15.95%		16.84%		8.47%		7.85%	
AG Core Plus Realty Fund III	18,214,870	4.15%		8.07%		14.35%		-		-		9.72%	
Apollo Real Estate Finance Corp.	4,994,028	1.31%		1.50%		2.10%		0.12%		-3.25%		-2.47%	
AREFIN Co-Invest	3,620,213	2.51%		5.58%		10.51%		14.00%		6.93%		7.01%	
BPG Investment Partnership IX	0	-		-		-		-		-		-	
CBRE Strategic Partners US Value Fund 6	10,100,453	0.84%		1.98%		-		-		-		4.17%	
DRA Growth & Income Fund VI	22,536,483	2.03%		6.40%		6.61%		14.42%		6.28%		6.15%	
DRA Growth & Income Fund VII	21,503,377	3.65%		8.08%		14.85%		-		-		15.17%	
Five Arrows Securities V, L.P.	29,387,607	1.98%		3.88%		10.86%		10.60%		9.60%		8.82%	
Hudson RE Fund IV Co-Invest	10,766,298	0.65%		1.56%		18.79%		7.95%		3.88%		3.71%	
Hudson Realty Capital Fund IV	8,730,242	-0.06%		0.06%		-13.76%		-4.40%		-9.87%		-8.21%	
Landmark Real Estate Partners VI	12,275,863	4.69%		11.44%		21.28%		-		-		35.63%	
Realty Associates Fund IX	20,716,852	2.06%		3.61%		8.34%		10.97%		-		9.92%	
Realty Associates Fund VIII	13,972,551	1.35%		2.95%		4.37%		2.31%		-6.85%		-5.36%	
Realty Associates Fund X	4,061,433	1.25%		1.25%		-		-		-		1.59%	
Stockbridge Value Fund, LP	16,505,867	0.98%		3.45%		-		-		-		12.66%	
Strategic Partners Value Enhancement Fund	14,726,769	-1.29%		-3.95%		-3.66%		8.94%		-3.43%		-2.05%	
Value Added	**251,167,378**	**1.98%**		**4.02%**		**8.29%**		**9.73%**		**2.94%**		**3.15%**	
AG Realty Fund VII L.P.	13,231,123	12.34%		14.77%		26.86%		16.22%		14.08%		12.18%	
AG Realty Fund VIII L.P.	9,215,175	2.78%		6.14%		22.62%		-		-		10.66%	
Beacon Capital Strategic Partners V	8,858,372	2.62%		3.68%		0.14%		9.56%		-13.38%		-12.37%	
Carlyle Europe Real Estate Partners III	21,101,855	-3.76%		-13.66%		-9.81%		4.03%		-5.19%		-6.14%	
CIM Fund III, L.P.	33,160,248	0.57%		18.21%		20.97%		21.87%		14.77%		12.34%	
GEM Realty Fund IV	10,778,773	2.17%		12.18%		19.74%		18.17%		-		16.55%	
GEM Realty Fund V	-134,849	-3.84%		-3.84%		-		-		-		-3.84%	
JER Real Estate Partners IV	2,487,870	0.23%		0.38%		2.43%		31.56%		-5.88%		-5.90%	
Liquid Realty IV	12,744,673	1.99%		4.27%		3.87%		10.88%		-2.49%		-2.62%	
MGP Asia Fund III, LP	21,558,280	-1.01%		0.44%		8.82%		29.87%		3.05%		2.70%	
MSREF VI International	6,254,690	-0.59%		2.49%		7.04%		13.95%		-24.28%		-25.23%	
O'Connor North American Property Partners II	7,253,354	-0.87%		-1.04%		11.82%		6.98%		-10.56%		-10.91%	
Opportunistic	**146,509,564**	**1.06%**		**4.35%**		**9.94%**		**15.70%**		**-2.70%**		**-3.55%**	
Total	**483,470,012**	**2.32%**		**4.48%**		**8.69%**		**11.10%**		**0.90%**		**0.63%**	

1) The value for the Montana Office Portfolio is provided by the MBOI and is taken "as-is" per their request.

The portfolio turned in another positive quarter as general real estate market conditions continue to stabilize and show some signs of improvement. Overall the portfolio outperformed relative to Q1 by 60bps. Core outperformed Q1 by 130bps and continues its positive momentum. Value-Added performed inline with Q1 and continues its upward trajectory. Opportunistic underperformed relative to Q1, but also continues its upward trajectory.

Q2 2013 Commitment Summary

	Vintage Year	Commitment	Capital Contributed [1]	Contributed %	Remaining Commitment	Since Inception Capital Distributed	Net Asset Value	NAV %	Total Exposure	Total Exposure%	Investment Multiple
Core		**278,236,254**	**278,236,254**	**100%**	**-**	**25,991,579**	**304,422,342**	**38.64%**	**304,422,342**	**29.31%**	**1.15**
Clarion Lion Properties Fund	2006	48,236,254	48,236,254	100%	-	10,556,576	37,128,959	4.71%	37,128,959	3.58%	0.95
INVESCO Core Real Estate-USA	2007	45,000,000	45,000,000	100%	-	6,767,521	40,113,964	5.09%	40,113,964	3.86%	1.00
JP Morgan Strategic Property Fund	2007	95,000,000	95,000,000	100%	-	1,759,599	121,834,143	15.46%	121,834,143	11.73%	1.25
TIAA-CREF Asset Management Core Property	2013	40,000,000	40,000,000	100%	-	-	40,751,826	5.17%	40,751,826	3.92%	1.02
UBS-Trumbull Property Fund	2010	50,000,000	50,000,000	100%	-	6,907,883	64,593,451	8.20%	64,593,451	6.22%	1.38
Montana Office Portfolio	**2011**	**17,674,045**	**17,674,045**	**100%**	**-**	**1,670,405**	**18,745,108**	**2.38%**	**18,745,108**	**1.81%**	**1.16**
Timberland		**105,000,000**	**62,947,745**	**60%**	**42,052,255**	**772,987**	**67,047,961**	**8.51%**	**109,100,216**	**10.51%**	**1.08**
Molpus Woodlands Fund III, LP	2011	50,000,000	38,764,311	78%	11,235,689	144,625	41,874,323	5.31%	53,110,012	5.11%	1.08
ORM Timber Fund III, LLC	2012	30,000,000	7,635,000	25%	22,365,000	-	7,520,266	0.95%	29,885,266	2.88%	0.98
RMS Forest Growth III LP	2011	25,000,000	16,548,434	66%	8,451,566	628,362	17,653,372	2.24%	26,104,938	2.51%	1.10
Value Added		**408,896,000**	**277,857,379**	**68%**	**131,038,621**	**57,782,093**	**251,167,378**	**31.88%**	**382,205,999**	**36.80%**	**1.09**
ABR Chesapeake Fund III	2006	20,000,000	20,000,000	100%	-	4,988,003	18,014,312	2.29%	18,014,312	1.73%	1.15
ABR Chesapeake Fund IV	2010	30,000,000	12,000,000	40%	18,000,000	1,637,713	11,964,090	1.52%	29,964,090	2.89%	1.11
AG Core Plus Realty Fund II	2007	20,000,000	16,742,334	84%	3,257,666	11,746,011	9,076,070	1.15%	12,333,736	1.19%	1.24
AG Core Plus Realty Fund III	2011	35,000,000	17,455,419	50%	17,544,581	1,109,984	18,214,870	2.31%	35,759,451	3.44%	1.11
Apollo Real Estate Finance Corp.	2007	10,000,000	10,000,000	100%	-	4,094,562	4,994,028	0.63%	4,994,028	0.48%	0.91
AREFIN Co-Invest	2008	10,000,000	8,336,000	83%	1,664,000	6,367,280	3,620,213	0.46%	5,284,213	0.51%	1.20
BPG Investment Partnership IX	2013	30,000,000	-	0%	30,000,000	-	-	-	30,000,000	2.89%	-
CBRE Strategic Partners US Value Fund 6	2012	20,000,000	9,737,014	49%	10,262,986	116,845	10,100,453	1.28%	20,363,439	1.96%	1.03
DRA Growth & Income Fund VI	2007	24,696,000	22,036,000	89%	2,660,000	7,525,985	22,536,483	2.86%	25,196,483	2.43%	1.23
DRA Growth & Income Fund VII	2011	30,000,000	20,523,000	68%	9,477,000	1,562,136	21,503,377	2.73%	30,980,377	2.98%	1.10
Five Arrows Securities V, L.P.	2007	30,000,000	28,246,344	94%	1,753,656	5,725,434	29,387,607	3.73%	31,141,263	3.00%	1.21
Hudson RE Fund IV Co-Invest	2008	10,000,000	10,000,000	100%	-	1,229,469	10,766,298	1.37%	10,766,298	1.04%	1.20
Hudson Realty Capital Fund IV	2007	15,000,000	15,000,000	100%	-	544,542	8,730,242	1.11%	8,730,242	0.84%	0.62
Landmark Real Estate Partners VI	2011	20,000,000	9,969,261	50%	10,030,739	3,186,511	12,275,863	1.56%	22,306,602	2.15%	1.54
Realty Associates Fund IX	2008	20,000,000	20,000,000	100%	-	4,322,363	20,716,852	2.63%	20,716,852	1.99%	1.25
Realty Associates Fund VIII	2007	20,000,000	20,000,000	100%	-	956,485	13,972,551	1.77%	13,972,551	1.35%	0.75
Realty Associates Fund X	2012	20,000,000	4,000,000	20%	16,000,000	1,965	4,061,433	0.52%	20,061,433	1.93%	1.02
Stockbridge Value Fund, LP	2012	25,000,000	14,612,007	58%	10,387,993	128,565	16,505,867	2.09%	26,893,860	2.59%	1.10
Strategic Partners Value Enhancement Fund	2007	19,200,000	19,200,000	100%	-	2,538,240	14,726,769	1.87%	14,726,769	1.42%	0.90
Opportunistic		**268,008,422**	**193,005,489**	**72%**	**77,502,933**	**25,011,530**	**146,509,564**	**18.60%**	**224,012,497**	**21.57%**	**0.86**
AG Realty Fund VII L.P.	2007	20,000,000	15,480,000	77%	4,520,000	8,191,864	13,231,123	1.68%	17,751,123	1.71%	1.38
AG Realty Fund VIII L.P.	2011	20,000,000	8,650,000	43%	11,350,000	577,282	9,215,175	1.17%	20,565,175	1.98%	1.14
Beacon Capital Strategic Partners V	2007	25,000,000	21,500,000	86%	3,500,000	3,131,188	8,858,372	1.12%	12,358,372	1.19%	0.56
Carlyle Europe Real Estate Partners III [3]	2007	30,994,690	25,982,879	84%	5,011,811	186,624	21,101,855	2.68%	26,113,666	2.51%	0.81
CIM Fund III, L.P.	2007	25,000,000	22,688,877	91%	2,311,123	540,577	33,160,248	4.21%	35,471,371	3.42%	1.35
GEM Realty Fund IV	2009	15,000,000	10,500,000	70%	4,500,000	1,376,576	10,778,773	1.37%	15,278,773	1.47%	1.15
GEM Realty Fund V [2]	2013	20,000,000	-	0%	20,000,000	-	(134,849)	-0.02%	19,865,151	1.91%	-
JER Real Estate Partners - Fund IV	2007	20,000,000	7,506,175	38%	12,493,825	1,320,854	2,487,870	0.32%	14,981,695	1.44%	0.51
Liquid Realty IV	2007	22,013,732	18,818,202	85%	3,195,530	5,829,013	12,744,673	1.62%	15,940,203	1.53%	0.90
MGP Asia Fund III, LP	2007	30,000,000	19,417,584	65%	10,582,416	35,146	21,558,280	2.74%	32,140,696	3.09%	1.11
MSREF VI International [4]	2007	25,000,000	27,500,000	110%	-	807,878	6,254,690	0.79%	6,254,690	0.60%	0.25
O'Connor North American Property Partners II	2008	15,000,000	14,961,772	100%	38,228	3,014,526	7,253,354	0.92%	7,291,582	0.70%	0.67
Montana Real Estate		**1,077,814,721**	**829,720,913**	**77%**	**250,593,809**	**111,228,593**	**787,892,363**		**1,038,486,162**		**1.06**

1) Capital contributed does not include contributions for expenses outside of the commitment amounts.
2) As of Q2 2013, this investment has not had its first cash flow and is not subject to performance. It is presented in this schedule because of its effect on the total portfolio commitment amount.
3) Carlyle Europe III's Commitment amount is converted to USD by using the EUR exchange rate from 10/9/2007, the date Montana commited to the fund. The current unfunded capital is based on this figure less the cumulative USD activity.
4) Morgan Stanley has the ability to call a 10% reserve from the investors. The full reserve, $2.5 million, was called on 5/21/2009.

A new $30M commitment to BPG Investment Partnership IX, LP was added during Q2 2013. As of quarter both GEM V and BPG IX had yet to draw capital

Q2 2013 Leverage

	Q3 2012	Q4 2012	Q1 2013	Q2 2013
Core	22.19%	22.34%	22.19%	22.12%
Timber	0.00%	0.00%	0.00%	0.00%
Non-Core (Total)	55.00%	54.87%	54.10%	55.12%
Total	**43.45%**	**43.06%**	**42.59%**	**42.11%**
Non-Core Breakout:				
Opportunistic	51.24%	46.79%	46.58%	45.25%
Value Add	57.11%	59.13%	57.83%	59.78%

The portfolio remains moderately leveraged and well within all policy constraints.

MEMORANDUM

Montana Board of Investments
Department of Commerce
2401 Colonial Drive, 3rd Floor
Helena, MT 59601
(406) 444-0001

To: Members of the Board

From: Clifford A. Sheets, CFA, Chief Investment Officer
Jon Putnam, CFA, FRM, Investment Analyst

Date: November 19, 2013

Subject: University of Montana Operating Funds Policy Statement Changes

Staff has updated the policy statement in consultation with U of M to more closely reflect current client preferences and allocation expectations. The policy statement has not been updated since 2002.

Staff recommends the Board approve the revised University of Montana Operating Funds Policy Statement, dated November 2013. The policy statement marked with changes follows this memo.

MONTANA BOARD OF INVESTMENTS
INVESTMENT POLICY STATEMENT
UNIVERSITY OF MONTANA OPERATING FUNDS MU79

INTRODUCTION

The purpose of this investment policy statement is to outline the account objectives, permissible investments and constraints that will guide the management of the portfolio. ~~The purpose of an investment policy statement is~~The policy is designed to give the investment manager guidance in developing an investment program to achieve the objectives ~~agreed upon and enable~~of the client, ~~the~~ University of Montana (UM), and to monitor the ~~progress of the plan~~portfolio.

OBJECTIVES

Return Requirement: To ~~increase the total rate of return by using the Trust Funds Bond Pool and U.S. Government securities.~~ maximize the income return of the portfolio by investing a portion of assets in Trust Fund Investment Pool (TFIP) and/or individual agency securities while still maintaining adequate liquidity to meet all current UM obligations. The portfolio seeks to diversify in order to maximize return at a level greater than the Short Term Investment Pool (STIP) over a 3 year period.

~~Current Income: To stabilize and increase the income yield to approximately 4-5 percent.~~

Risk Tolerance: ~~The UM estimates that up to $20 million of these accounts could be invested longer term. However, only $10 million will initially be invested in the TFIP. Part of the income yield from the TFIP will be held in reserve to offset potential losses.~~This account has an average ability to assume risk. The purpose of the account is to finance University operations. However, there are significantly more funds available than are required to pay annual expenses. Cash flows are predictable and fluctuate primarily in conjunction with tuition payments during the academic year.

A portion of the portfolio is viewed as stable and may be applied to longer dated investments with modest interest rate and credit risk. This portion of the portfolio is unlikely to be required for University funding needs within five years. This portion of the portfolio will be invested in TFIP to obtain exposure to a diversified investment pool and reduce idiosyncratic risk.

The second piece of the portfolio will be invested in 1-5 year U.S. Treasury/Agency securities. This portion of the portfolio can tolerate modest interest rate risk but has a low tolerance for credit risk. The objective is to earn a rate of return greater than STIP while maintaining a certain level of liquidity and avoiding credit risk. The U.S. Treasury/Agency securities will be laddered over a maximum maturity of 5 years. The client intends to maintain adequate cash so these securities may be held to maturity. However, a laddered maturity structure will ensure that some short term securities are available for liquidation without realizing a substantial loss/gain if securities need to be sold.

The final section of the portfolio is used to fund immediate operational needs and has low tolerance for liquidity, credit and interest rate risk. This part of the portfolio will be invested in STIP. The client intends to maintain a cash balance of at least $10 million. Cash includes both STIP and other University cash accounts.

MONTANA BOARD OF INVESTMENTS
INVESTMENT POLICY STATEMENT
UNIVERSITY OF MONTANA OPERATING FUNDS MU79

CONSTRAINTS

Time Horizon: The maturity horizon of the portfolio is designed to maximize income while providing funds to meet annual client liabilities. ~~Part of this account, $10-$20 million, has a time horizon of at least 5 years. The balance of the account will be held in STIP for liquidity needs.~~The total market value of the account fluctuates throughout the year as funds are deposited and withdrawn according to student payments and business needs. Based on the average monthly assets under management (AUM) approximately 35% of the portfolio is long term, 40% is intermediate term and 25% is short term.

Liquidity Needs: ~~Liquidity needs is high since these are operating funds.~~The client will provide regular reports to MBOI detailing current cash as well as expected income and expenses in order to ensure that adequate cash is available to meet current liabilities. The STIP portfolio will be used to manage immediate cash requirements. In addition, the intermediate portion of the portfolio will be invested in liquid U.S. Treasury and Agency securities that will be available for sale, if required. The intermediate segment of the portfolio will be laddered between 0-5 year securities which will provide additional near term maturities that can be used to fund operational needs.

Tax Considerations: This fund is tax-exempt; therefore, tax advantaged investments will not be used.

Legal Considerations: This Board of Investments (BOI) is governed by state regulations, specifically, the "prudent expert principle" which requires the BOI to: (a) discharge its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like manners exercises in the conduct of an enterprise of a like character with like aims; (b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return, unless under the circumstances, it is solely prudent not to do so; and (c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.

Unique Circumstances: The University of Montana maintains a reserve fund in the event securities need to be sold at a loss. The reserve fund was approximately $245K as of 08/06/13. These are not considered “state funds” so they don’t have to be managed by the BOI. ~~-~~Income above a certain level is used for student scholarships.

~~Client Preferences: To increase the income yield above current STIP yield.~~

MONTANA BOARD OF INVESTMENTS
INVESTMENT POLICY STATEMENT
UNIVERSITY OF MONTANA OPERATING FUNDS MU79

ASSET ALLOCATION
based on average market value over the fiscal year
~~(at market)~~

	Ranges
Trust Funds Investment Pool (TFIP)	0-~~30~~40%
U.S. Treasuries/U.S. Agencies	0-~~20~~45%
Short Term Investment Pool (STIP) & Cash	15~~60~~-100%
Total	100~~.0~~%

ADMINISTRATIVE

Securities Lending: –Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities held in the investment pools, through an agent, to other market participants in return for compensation. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases. In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor. From time to time, Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank. Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program.

~~**ADMINISTRATIVE**~~

~~**Securities Lending:** Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities held in the investment pools, through an agent, to other market participants in return for compensation. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases. In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor. From time to time, Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank. Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program.~~

MONTANA BOARD OF INVESTMENTS
INVESTMENT POLICY STATEMENT
UNIVERSITY OF MONTANA OPERATING FUNDS MU79

INTRODUCTION

The purpose of this investment policy statement is to outline the account objectives, permissible investments and constraints that will guide the management of the portfolio. The policy is designed to give the investment manager guidance in developing an investment program to achieve the objectives of the client, University of Montana (UM), and to monitor the portfolio.

OBJECTIVES

Return Requirement: To maximize the income return of the portfolio by investing a portion of assets in Trust Fund Investment Pool (TFIP) and/or individual agency securities while still maintaining adequate liquidity to meet all current UM obligations. The portfolio seeks to diversify in order to maximize return at a level greater than the Short Term Investment Pool (STIP) over a 3 year period.

Risk Tolerance: This account has an average ability to assume risk. The purpose of the account is to finance University operations. However, there are significantly more funds available than are required to pay annual expenses. Cash flows are predictable and fluctuate primarily in conjunction with tuition payments during the academic year.

A portion of the portfolio is viewed as stable and may be applied to longer dated investments with modest interest rate and credit risk. This portion of the portfolio is unlikely to be required for University funding needs within five years. This portion of the portfolio will be invested in TFIP to obtain exposure to a diversified investment pool and reduce idiosyncratic risk.

The second piece of the portfolio will be invested in 1-5 year U.S. Treasury/Agency securities. This portion of the portfolio can tolerate modest interest rate risk but has a low tolerance for credit risk. The objective is to earn a rate of return greater than STIP while maintaining a certain level of liquidity and avoiding credit risk. The U.S. Treasury/Agency securities will be laddered over a maximum maturity of 5 years. The client intends to maintain adequate cash so these securities may be held to maturity. However, a laddered maturity structure will ensure that some short term securities are available for liquidation without realizing a substantial loss/gain if securities need to be sold.

The final section of the portfolio is used to fund immediate operational needs and has low tolerance for liquidity, credit and interest rate risk. This part of the portfolio will be invested in STIP. The client intends to maintain a cash balance of at least $10 million. Cash includes both STIP and other University cash accounts.

CONSTRAINTS

Time Horizon: The maturity horizon of the portfolio is designed to maximize income while providing funds to meet annual client liabilities. The total market value of the account fluctuates throughout the year as funds are deposited and withdrawn according to student payments and business needs. Based on the average monthly assets under management (AUM) approximately 35% of the portfolio is long term, 40% is intermediate term and 25% is short term.

MONTANA BOARD OF INVESTMENTS
INVESTMENT POLICY STATEMENT
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Liquidity Needs: The client will provide regular reports to MBOI detailing current cash as well as expected income and expenses in order to ensure that adequate cash is available to meet current liabilities. The STIP portfolio will be used to manage immediate cash requirements. In addition, the intermediate portion of the portfolio will be invested in liquid U.S. Treasury and Agency securities that will be available for sale, if required. The intermediate segment of the portfolio will be laddered between 0-5 year securities which will provide additional near term maturities that can be used to fund operational needs.

Tax Considerations: This fund is tax-exempt; therefore, tax advantaged investments will not be used.

Legal Considerations: This Board of Investments (BOI) is governed by state regulations, specifically, the "prudent expert principle" which requires the BOI to: (a) discharge its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like manners exercises in the conduct of an enterprise of a like character with like aims; (b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return, unless under the circumstances, it is solely prudent not to do so; and (c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.

Unique Circumstances: The University of Montana maintains a reserve fund in the event securities need to be sold at a loss. The reserve fund was approximately $245K as of 08/06/13. These are not considered “state funds” so they don’t have to be managed by the BOI. Income above a certain level is used for student scholarships.

ASSET ALLOCATION
based on average market value over the fiscal year

	Ranges
Trust Funds Investment Pool (TFIP)	0-40%
U.S. Treasuries/U.S. Agencies	0-45%
Short Term Investment Pool (STIP) & Cash	15-100%
Total	100%

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ADMINISTRATIVE

Securities Lending: Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities held in the investment pools, through an agent, to other market participants in return for compensation. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases. In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor. From time to time, Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank. Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program.

Montana Board of Investments Meetings

All meetings

- Are public and duly noticed in advance
- Require that substantive decision items be scheduled, identified and publicized
- Will invite the public for comments at every meeting
- Have minutes taken and previous ones approved

Quarterly meetings - February, May, August, and November

- Standard business
    - Performance of prior period or year end
    - Activity of prior period
    - Investment consultant
    - Quarterly cost sheet
    - Board member education and training opportunities
- Actuarial Status & Asset Allocation implications
- Loan, Audit and Human Resource and any ad-hoc committees meet
- Rotation of topics to provide 24 month systematic review

Semi-Annual meetings - April and October

- In depth coverage on certain (to be determined) topics
- April - Asset Allocation at a strategic level
- Additional systematic review of topics to complete 24-month rotation
- Subcommittees meet only as needed

Additional Board Topics for 24-month Systematic Review, either (A) annually or at least (B) biennially

- Investment Policy Statements (A)
- Board's budget (A)
- Cost reporting including CEM, Inc. analysis (A)
- Accounting and internal data systems (A)
- Annual report and financial statements (A)
- Staffing levels and compensation (A)
- Securities Lending (A)
- Securities Litigation (A)
- Accounting, GAAP, audits and internal control standards, compliance and execution (A)
- PERS and TRS relationship (A)
- Ethics policy – affirmations (A)
- Resolution 217 update (typically November) (A)
- Board member training and staying current efforts (A)
- General operations (e.g. day to day, landlord, disaster recovery, vendor review) (A/B)
- BOI website (B)
- Custodial bank relationship, performance, continuity (B)
- Customer relationships especially large customers such as State Fund (B)
- Legislative session and interim matters (B)
- Outreach, especially commercial and municipal missions (B)
- The Board as a rated investment credit, a bond issuer and a credit enhancer (B)

Proposed Work Plan 2013

Feb. 26-27	(Pre-Board meeting new member orientation) **Quarterly Meeting's standard business and subcommittee meetings** Securities Lending Benchmark presentation (from RVK) State Fund-Investment Policy change and State Fund presentation - Decision Annual Report and Financial Statements Ethics Customer outreach INTERCAP Additional Bonds - Decision Legislative Update
April 2	**Semi-Annual (non-quarterly) Meeting** Asset allocation All policy review Economic development and other BOI loan programs Montana Facility Finance Authority Emergency/Disaster preparedness Web site Legislative update
May 29-30	**Quarterly Meeting (Billings) standard business and subcommittee meetings** Legislative update INTERCAP finance team follow-up Board's real estate holdings in Montana
August 20-21	**Quarterly Meeting standard business and subcommittee meetings** Costs (including reviewing CEM Benchmarking Inc. results) MBOI Budget Accounting and internal control systems Fiscal Year performance through June 30th Non-pension investment funds and agency user presence/presentations Custodial bank RFP and selection timetable for Oct. 2014 RVK – topic to be determined
October 8	**Semi-Annual (non-quarterly) Meeting**
Nov. 19-20	**Quarterly Meeting standard business and subcommittee meetings** Actuarial Status & Asset Allocation Implications Affirm or Revise Asset Allocation Resolution 217 PERS/TRS annual update Securities litigation status Exempt Staff Annual Performance

MONTANA BOARD OF INVESTMENTS
ACRONYM INDEX

ACH .... Automated Clearing House

ADR .... American Depository Receipts

AOF .... All Other Funds

ARC .... Actuarially Required Contribution

BOI .... Board of Investments

BP .... Basis Point

CFA .... Chartered Financial Analyst

EM .... Emerging Market

FOIA .... Freedom of Information Act

FWP .... Fish Wildlife and Parks

FX .... Foreign Exchange

IPS .... Investment Policy Statement

IRR .... Internal Rate of Return

LDI .... Liability-Driven Investing

MBOH .... Montana Board of Housing

MBOI .... Montana Board of Investments

MDEP .... Montana Domestic Equity Pool

MFFA .... Montana Facility Finance Authority

MPEP .... Montana Private Equity Pool

MPT .... Modern Portfolio Theory

MSTA .... Montana Science and Technology Alliance

MTIP .... Montana International Pool

MTRP .... Montana Real Estate Pool

MONTANA BOARD OF INVESTMENTS
ACRONYM INDEX

MTSBA .... Montana School Boards Association

MVO .... Mean-Variance Optimization

NAV .... Net Asset Value

PERS .... Public Employees' Retirement System

PFL .... Partnership Focus List

QZAB .... Qualified Zone Academy Bonds

QSCB .... Qualified School Construction Bonds

RFBP .... Retirement Funds Bond Pool

RFP .... Request for Proposal

SABHRS .... Statewide Accounting Budgeting and Human Resource System

SLQT .... Securities Lending Quality Trust

SSBCI .... State Small Business Credit Initiative

STIP .... Short Term Investment Pool

TFBP .... Trust Funds Bond Pool

TFIP .... Trust Funds Investment Pool

TIF .... Tax Increment Financing

TIFD .... Tax Increment Financing District

TRS .... Teachers' Retirement System

TUCS .... Trust Universe Comparison Service

VIX .... Volatility Index

Terminology Commonly Used and Generally Understood at the Montana Board of Investments
(And most typical context used at BOI)

Active management (typically with respect to stocks)
Investment method which involves hiring a manager to research securities and actively make investment decisions to buy and sell securities in an effort to outperform an assigned index, rather than purchasing a portfolio of securities that would simply replicate the index holdings (*'passive'* investing).

Actuarial assumed rate (pension concept)
The investment return rate used by actuaries that enables them to project the investment growth of retirement system assets into the future (typically perpetual).

Actuarial funding status (pension concept)
A measurement made by actuaries to measure a pension system's financial soundness (ratio of actuarial liabilities to the actuarial value of the assets available to pay the liabilities).

Alpha (investment term)
Return on an investment portfolio in excess of the market return or benchmark return; generally used in the context of *'active'* management (as passive management, by definition, does not seek excess returns, or 'alpha').

Alternative Investments
A wide range of investments, other than traditional assets such as publically traded stocks and bonds. The most common nontraditional or alternative investments are private equity, real estate, commodities, and hedge funds.

Arbitrage (bond program)
A structural or systematic difference between investment types which may allow profiting from the 'difference,' i.e., arbitrage. The most common context for the use of 'arbitrage' at the BOI is the federal law that prevents 'arbitrage,' i.e., the profiting of investing tax-exempt securities (e.g. INTERCAP) into taxable yields investments (such as U.S. Treasuries).

Asset Allocation and Asset Allocation Range (general investment principle)
The Board's invested assets are divided or allocated into various asset classes such as stocks and bonds, each with its own characteristics, with the objective of attaining an optimal mix of risk and return. The total expected return of a portfolio is primarily determined by the mix or allocation to its underlying assets classes. Given the importance of 'asset allocation,' the BOI Board sets the asset allocation 'range' for each broad investment type or asset class.

Average life (fixed income, particularly bonds)
The average time period the debt is expected to be outstanding. This is typically the maturity date for a traditional bond structure, however it will be shorter for bonds having a sinking fund or amortizing payment structure.

Barclay's Aggregate Index (fixed income)
A composite of outstanding bond issues, including corporate, structured, and government bonds whose overall investment features such as return and investment type are tracked over many years. This is the most common benchmark used for comparing the performance of a portfolio that invests in U.S. investment grade fixed income securities. Formerly known as the Lehman Aggregate bond index.

Basis points (investment jargon)
A basis point is 1 100th of a percentage. Ten basis points is one tenth of a percent, typically written as 10 bps.

Benchmark (standard investment concept)
The concept of employing a particular independent or market investment return as a measurement to judge an investment portfolio's return; typically chosen investment benchmarks have the following attributes: they are investible, quantifiable, chosen in advance, easily understandable, and have a long history; common examples are the S & P 500 Index and the Barclay's Aggregate Index.

Beta (investment jargon)
A measure of the risk (or volatility) of a security or a portfolio in comparison to the market as a whole. If the stock or portfolio moves identically to that market, its beta value is 1; if its price volatility (or movement) is greater than that market's price volatility, it is said to have beta greater than 1.

Cap, as in large 'cap' (generally for stocks, i.e., public equities)
'Cap' is short for capitalization, as a reference to the market value of a publically-traded company. The current stock price times the total shares outstanding of the company equals its market capitalization or market 'cap'; often used contextually such as 'large-cap,' 'mid-cap,' and 'small-cap' for different sized public companies.

Clawback (private equity)
A clause in the agreement between the general partner and the limited partners of a private equity fund. The clawback gives limited partners the right to reclaim a portion of distributions to a general partner for profitable investments based on significant losses from later investments in a portfolio which ultimately resulted in the general partner receiving more distributions than it was legally entitled to.

Core (context varies for equity, fixed income, real estate)
In equity and fixed income, 'core' refers to investments that are generally always found in the portfolio and normally expect to hold for a very long time e.g. 'core' holdings of the largest U.S. companies, or U.S. treasuries; in real estate, 'core' generally refers to the best quality of real estate holdings such as prime commercial property in major metropolitan cities that have low leverage and low levels of vacancy.

Correlation (common statistical concept)
A measure of how two or more investment values or two asset classes move relative to each other during the same time period. A central concept in portfolio construction is to seek investments whose values do not move *together* at the same time, i.e., are uncorrelated. A correlation of 1 means that two or more investments 'move' precisely together.

Custom benchmark (or sometimes custom index)
A way to measure investment performance using a tailor-made measurement versus a generic industry-standard benchmark. At the BOI, total pension performance is measured against the Board's 'custom index' or 'custom benchmark' which is a weighted blend of all the underlying asset class benchmarks used to measure the asset class returns.

Derivatives (investment jargon)
Investment securities whose performance itself depends (or is 'derived') from another underlying investment return. Examples include stock options, puts/calls, and forward currency contracts whose returns are based on the underlying stock or currency.

Developed markets (equity)
Countries having a long period of stable industrialization; or are the most economically developed.

Discount (fixed income, generally)
Used most often with respect to bonds, the price paid that is less than face (or 'par') value. A $1 million face-value of a bond purchased for less than a million is bought at a 'discount.' Described as the difference between a bond's current market price and its face or redemption value.

Diversification (standard investment concept)
The concept of spreading risk by putting assets in several investment categories, each having different attributes with respect to type, expected return, risk, and correlation, to best protect against the risk of loss.

Duration (bonds)
Almost exclusively used when discussing fixed income bonds, a measurement of how sensitive a bonds' change in price is to a change in general market interest rates, expressed in years (specifically calculated as a weighted average term to maturity of the bond's cash flows). The greater the duration of a bond, the greater the volatility of price for changes in market interest rates.

Efficiency (usually when discussing various stock markets)
Used to describe markets where it is very difficult to achieve return in excess of that of the overall market from individual stock selection. When information is widely available on a company and its securities are traded regularly the market is considered 'efficient.'

Emerging Markets (most often for public equities)
Certain international securities markets that are typically small, new, have low turnover, and are located in countries where below-average income prevails and is developing in response to the spread of capitalism.

Enhanced (pertaining to stocks)
Generally linked with 'index' as in enhanced index, an indexed investment management style that has been modified to include the portfolio manager's idea of how to outperform the index by omitting some stocks in the index and overweighting others in a limited manner designed to enhance returns but at minimal risk.

Enhancement (bond program)
At BOI, the term generally refers to credit support or a bond or loan guarantee. For example the Board's INTERCAP bonds are 'enhanced' by the BOI's performance guarantee bringing down the yearly interest rate.

Excess returns (standard investment concept)
Returns are 'excess' if they are more than the market or more than the benchmark they are measured against.

Exempt staff vs. classified staff (specific to Montana state government)
"Exempt" refers to the Board's seven employees who, under state law, do not fall under the state's standard employment rules (the 'classified' staff).

Fiduciary (from the Latin verb, fidere, to trust)
The concept of trust and watchfulness; a fiduciary is charged with the responsibility of investing the money wisely for the beneficiary's benefit. Board members are the ultimate 'fiduciaries' for the Board's assets and are obligated to be a good agent.

FTE (state government jargon)
An acronym in state government: "full time equivalent" as in full time employee. The concept is a slot or position, not the actual individuals. The BOI is currently authorized for 32 FTE's.

Fund of funds (private equity)
A concept used in alternative investments referring to using an investment manager to invest in ***other*** managers or funds, as opposed to making direct investments in funds.

GAAP/GASB (accounting terminology)
GAAP...Generally Accepted Accounting Principles; Montana state law uses GAAP accounting principles unless specifically allowed otherwise. GASB...Government Accounting Standards Board, the board that sets GAAP

standards for U.S. governments (FASB...Financial Accounting Standards Board, the entity for commercial and business accounting standards).

General obligation (municipal finance term)
Used to describe the promise that a government makes to bond holders, backed by taxing and further borrowing power, it is generally considered the highest level of commitment to bondholders. At the local government level, general obligation bonds typically require a vote of the residents.

General partner vs. limited partner (private equity)
In private equity, the general partner is responsible for the operations of the partnership and makes the actual underlying investment decisions; the limited partner is the investor, and therefore has limited liability for investment decisions; the BOI is the 'limited' partner in its private equity fund investments (and real estate funds as well).

Growth (as to style public equities)
An investment style that more heavily invests in companies whose earnings are expected to grow at an above average rate to the market. A growth stock usually does not pay a dividend, as the company would prefer to reinvest retained earnings in capital projects to grow the company (vs. *'value,'* which considers buying established companies they feel are trading at bargain prices to the fundamental analysis of the company's financial statements and internal competitive factors).

Indenture (bond and loan programs)
The central document describing the contract between investors and the borrower or user of the proceeds. The Board's INTERCAP program is structured around a bond indenture.

Hedge fund (as defined by *Investopedia*)
An aggressively managed portfolio of investments that uses advanced investment strategies such as *leverage*, long, short and *derivative* positions in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market *benchmark*).

Hurdle Rate (private equity)
a minimum return per annum that must be generated for limited partners of a private equity fund before the general partner can begin receiving a percentage of profits from investments.

Index (investment concept)
Typically a single measure of a broadly-based group of investments that can be used to judge, or be compared to the return performance of an individual investment or manager.

Indexing (investment concept)
Typically refers to investing in a portfolio to match a broad range of investments that are set within a pre-determined grouping, such as the S&P 500, so as to match its performance; such investing is generally labeled 'passive' or indexed investing; or buying shares in an Index Fund.

In-state loan program (Montana-specific)
Programs that are funded by the state's coal severance tax monies.

Internal service vs. enterprise fund (state accounting concept)
Within Montana state government: a program whose funding is dependent on ***mandatory participation*** by another state government program is labeled an 'internal' service fund; a program whose funding is dependent on voluntary participation is labeled an enterprise fund. At BOI, the investment program is an internal service fund because participation is not voluntary; the Board's bond and loan programs, because their use is voluntary, are accounted for as an enterprise.

Investment grade (bonds)
Bond ratings from Moody's, Standard and Poor's, and Fitch high enough to be considered secure enough for most investors (bonds rated AAA – BBB). Below investment-grade bonds (below BBB) are generally considered to have a more speculative outlook and carry more risk of default.

IRR (private equity)
A measure of investment performance, short for 'internal rate of return,' expressed as a percentage (the 'internal rate of return' number, or discount rate) that mathematically will equalize the total future cash flows of an investment to the initial cash outflow of the investment; the concept accounts for the time value of money.

Leverage (investment concept)
As an investment concept, a way to increase a return on an investment through a combination of one's own money and also by borrowing additional money to enhance such an investment; high 'leverage' is also associated with high risk.

Mean Variance Optimization Model ('Modern Portfolio Theory')
A theory that it is possible to construct a portfolio to maximize the return for the least amount of risk or volatility. This theory is based on various asset types and their level of expected return, risk (volatility) and their correlation with each other or how the asset values move with each other. The central idea of the model is to blend investments so that in total, they provide both the best expected return and optimal amount of diversification to minimize deep performance swings (volatility); a central tenant is that long term historical returns are indicative of future returns.

Mezzanine finance (private equity)
Subordinated debt with an equity 'kicker' or ability to share in the equity value of the company. It is typically lower quality because it is generally subordinated to debt provided by senior lenders such as banks, thus is considered higher risk.

Multiple (as in "multiple" of invested capital, private equity)
The ratio of total cash returned over the life of the investment plus the investment's residual value over the total cash expended in making the investment. A multiple of 2 means, regardless of the total investment time period, that total cash returned was twice the cash invested.

130/30 Strategy (public equities)
Also called 'partial long short,' this strategy involves the establishment of a short position in select stocks while taking the proceeds of those shorts and buying additional long positions in stocks. The net effect is an overall market position that is 100% long, but the active decisions on individual stock selections are amplified by this ability to short. If the stock selections are successful, the strategy enables the portfolio to profit more than if a stock had simply not been owned, as with traditional long-only portfolios.

Opportunistic (real estate)
In real estate, a euphemism for the most risky real estate investments, typically distressed, raw land, newly developed buildings or other high risk investments in the real estate sector, (versus, *'core,'* which are the best quality fully leased commercial properties).

Overweight or underweight (investment concept)
Generally the level of holdings of a certain type of investment that is above or below either a benchmark's weight (portion of total investment), or the percentage held of a particular asset class compared to the Board's asset allocation policy weight. Also used to describe an external investment manager's decision to have more (or less) of a particular investment than the percentage or weighting found in the benchmark.

Passive management or passive investment (most often in public equities, but not exclusively)
An investment style where a fund's portfolio mirrors a market index, such as the S&P 500, with limited selection decisions by the manager, resulting in market returns. Passive management is the opposite of active management in which a fund's manager attempts to beat the market with various investment strategies and buy/sell decisions of a portfolio of securities to enhance returns.

P/E ratio (equity)
The price of a publically traded stock divided by its estimated or actual earnings is the price/earnings or P/E ratio. This can also be calculated for a stock index or portfolio of stocks. Over the last 100 years, the S&P 500 has had an overall P/E ratio of about 15, or a total index price of about 15 times the annual earnings of its underlying companies.

Pacing study (private equity)
An analysis of the likely timing and amount of the drawdown of committed but yet uninvested monies and the estimated distributions or returns from the funds held in an alternative investment portfolio, generally used to judge the future size of the portfolio and its potential liquidity needs, i.e., cash funding demands.

Par (fixed income)
The initial principal amount designated by the issuer of the bond, or face value of a bond.

Passive
For investments, generally not materially participating in an investment decision, meaning an investment portfolio whose returns follows that of a broad market index, such as an investable stock index, i.e. the S & P 500.

Passive weight (generally equities)
The percentage of a stock held in a particular index portfolio, or percentage of an overall asset class that is held in passive portfolios.

Policy Portfolio
A fixed-target asset allocation, as opposed to asset allocation ranges, which theoretically allows gauging whether deviations from the target portfolio had a positive or negative impact on overall performance.

Portable alpha (public equities)
An investment strategy which involves the active selection of securities while neutralizing overall beta or market risk. This often involves the use of derivative investments such as futures to replicate the market return, either taking a short or long position, while then selecting securities which are expected to add return in an absolute sense or in addition to the market return. As an example, this strategy can be found with certain hedge funds where a market exposure is shorted while individual securities such as specific stocks are purchased that are expected to outperform the general market. The concept of portable applies when the ability to generate positive alpha can be overlaid or ported onto a portfolio. This is not a strategy employed by any of MBOI's existing managers.

Premium (fixed income)
Most often the amount paid over the stated face amount (often called 'par') of a bond, but also used in other contexts, typically paying more (the premium) than a market price (as in a take-over bid for a company).

Proxy (publically traded companies)
An agent legally authorized to act on behalf of another party. Shareholders not attending a company's annual meeting may choose to vote their shares by proxy by allowing someone else to cast votes on their behalf, but the word 'proxy' is used more frequently colloquially as a 'close approximation.'

Prudent expert, prudent person (a central fiduciary concept)
These legal terms have long histories of court-determined standards of care, deriving originally under English common law. The BOI is empowered to operate under the 'prudent expert rule,' which states that the Board shall manage a portfolio:
a) with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;
b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and
(c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.
At an 'expert' level; there is more room for accepting risk under the prudent expert rule than the prudent person rule.

Rebalancing (general investment term)
The process of realigning the weightings of the portfolio of assets. Rebalancing involves periodically buying or selling assets in the portfolio to maintain the original desired level of asset allocation and/or to stay within predetermined asset category range; it is part of a disciplined investment approach within modern portfolio theory.

Resolution (government term)
Generally a formal and written action by a governmental (or corporate) body that has long term significance and requiring a vote of the governing body. BOI uses 'resolutions' generally only for its most significant and long term actions and/or policies.

Securities lending (general investment)
Investments that are temporally borrowed by other investors for a fee; the BOI allows most of its publically traded investments to be loaned for additional marginal income.

Standard deviation (common statistical concept)
A specific statistic that measures the dispersion of returns from the mean over a specific time period to determine the "historical volatility" of returns for a stock, or portfolio, or asset class; more specifically a single unit (i.e., one standard deviation) of dispersion that accounts for approximately 66% of all data around a mean using a 'normal' (or 'uniform' or 'bell-shaped' curve; as opposed to a skewed or asymmetrical) distribution. The standard deviation is used as a gauge for the amount of expected future volatility.

SABHRS (accounting jargon)
Montana state government's State Accounting, Budgeting and Human Resource System; the State's central information management system. BOI investment and other financial data must tie and be reported on this system, which is the official book of record and includes the state's financial statements.

Style drift (often in reference to public equity managers, but applicable to other managers, too)
As the name implies, a divergence from an investor's professed investment bias or style or objective.

Tracking error (statistical concept in investments)
A measurement of the standard deviation of a portfolio's return versus the return of the benchmark it was attempting to outperform. The concept is often used when discussing investment managers. For example some styles are expected to have high 'tracking errors,' (e.g., deep 'value' investors who buy companies that may be dogs for years), versus passive managers, whose stock volatility is expected to be very close to their benchmark. Tracking error can either be intentional or unintentional; it can also be regarded as an accepted deviation or contrary to the management agreement. High *unexpected* tracking error is generally a serious concern to be examined and understood.

Underwriter (bond program)
In investments, the agent who buys investments to be resold to the public; at BOI, the investment firms that buy the Board's bonds to be resold to the public.

Unified Investment Program (Montana Constitution)
The Program in the State's constitution requiring a central investment program which the legislature has assigned to the BOI.

Value (as to style when discussing public equities)
An investment style that focuses on buying established companies that investors believe are undervalued and trading at bargain prices to the fundamental analysis of the company's financial statements and internal competitive factors.

Venture capital (private equity)
A higher-risk/high-return type of investing in startup firms and small businesses with perceived long-term growth potential. Sometimes these are already existing business ventures with limited operating history that need additional management expertise and access to capital. (For start-ups, 'seed capital,' or 'angel investor' are terms differentiating this even higher risk type of investment.)

Volatility (investment jargon)
A statistical measure of the dispersion of returns for a given security or market index. Volatility is typically measured by using the standard deviation of returns from the security or market index. Commonly, the higher the volatility, the riskier the security.

Yield (general investment, but most often within fixed income)
The amount returned to the investor above the original investment generally expressed as a percentage. Yield can be thought of as the expected return from the combination of interest and price accrual or amortization to maturity (in the case of a bond trading at a discount or premium to par).

Yield curve (fixed income)
A line that plots the prevailing interest rates at a given time for bonds ranging in maturity from as short as three months out to 30 years. When plotted across these various maturities (typically 2, 5, 7, 10 and 30 years), the resultant line is shaped like a curve with generally low interest rates (the yield) for shorter maturities and gradually higher interest rates for longer maturities, because generally investors demand higher interest rates for longer term investments. The yield curve for U.S. Treasury debt is the most common when referring to the prevailing level of interest rates.

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PUBLIC MARKETS MANAGER EVALUATION POLICY

INTRODUCTION

The purpose of this policy is to broadly define the monitoring and evaluation of external public markets managers. This policy also provides a basis for the retention and/or termination of managers employed within the Montana Domestic Equity Pool (MDEP), the Montana International Equity Pool (MTIP), the Retirement Funds Bond Pool (RFBP), and the Trust Funds Investment Pool (TFIP).

The costs involved in transitioning assets between managed portfolios can be significant and have the potential to detract from returns. Therefore it is important that the decision process be based on a thorough assessment of relevant evaluation criteria prior to implementing any manager changes. Staff will consider such costs when deciding to add or subtract to manager weights within the pools as well as in deciding to retain or terminate managers.

MONITORING PROCESS

Periodic Reviews: Staff will conduct periodic reviews of the external managers and will document such periodic reviews and subsequent conclusions. Periodic reviews may include quarterly conference calls on portfolio performance and organizational issues as well as reviews conducted in the offices of the Montana Board of Investments (MBOI) and on-site at the offices of the external managers. Reviews will cover the broad manager evaluation criteria indicated in this policy as well as further, more-detailed analysis related to the criteria as needed.

Continual Assessment: Staff will make a continual assessment of the external managers by establishing and maintaining manager profiles, monitoring company actions, and analyzing the performance of the portfolios managed with the use of in-house data bases and sophisticated analytical systems, including systems accessed through the Master Custodian and the Investment Consultant. This process culminates in a judgment which takes into account all aspects of the manager's working relationship with MBOI, including portfolio performance.

Staff will actively work with the Investment Consultant in the assessment of managers which will include use of database research, conference calls and discussions specific to each manager, and in any consideration of actions to be taken with respect to managers.

MANAGER EVALUATIONS

The evaluation of managers includes the assessment of the managers with respect to the following qualitative and quantitative criteria.

Qualitative Criteria:

- Firm ownership and/or structure
- Stability of personnel
- Client base and/or assets under management
- Adherence to investment philosophy and style (style drift)
- Unique macroeconomic and capital market events that affect manager performance

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- Client service, reporting, and reconciliation issues
- Ethics and regulatory issues
- Compliance with respect to contract and investment guidelines
- Asset allocation strategy changes that affect manager funding levels

Quantitative Criteria:

- Performance versus benchmark – Performance of managers is evaluated on a three-year rolling period after fees.
- Performance versus peer group – Performance of managers is evaluated on a three-year rolling period before fees.
- Performance attribution versus benchmark – Performance of managers is evaluated on a quarterly and annual basis.
- Other measures of performance, including the following statistical measures:
  - Tracking error
  - Information ratio
  - Sharpe ratio
  - Alpha and Beta

PERFORMANCE MEASUREMENT

Performance calculations and relative performance measurement compared to the relevant benchmark(s) and peer groups are based on a daily time-weighted rate of return. The official book of record for performance measurement is the Master Custodian.

The performance periods relevant to the manager review process will depend in part on market conditions and whether any unique circumstances are apparent that may impact a manager's performance strength or weakness. Generally, however, a measurement period should be sufficiently long to enable observation across a variety of different market conditions. This would suggest a normal evaluation period of three to five years.

ACTIONS

Watch List Status: Staff will maintain a "Watch List" of external managers that have been noted to have deficiencies in one or more evaluation criteria. An external manager may be put on the "Watch List" for deficiencies in any of the above mentioned criteria or for any other reason deemed necessary by the Chief Investment Officer (CIO). A manager may be removed from the "Watch List" if the CIO is satisfied that the concerns which led to such status have been remedied and/or no longer apply.

Termination: The CIO may terminate a manager at any time for any reason deemed to be prudent and necessary and consistent with the terms of the appropriate contract.

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ROLES AND RESPONSIBILITIES

CIO: The CIO is responsible for the final decision regarding retention of managers, placement on and removal of "Watch List" status, and termination of managers.

Staff: Staff is responsible for monitoring external managers, portfolio allocations and recommending allocation changes to the CIO, and recommending retention or termination of external managers to the CIO.

Investment Consultant: The consultant is responsible for assisting staff in monitoring and evaluating managers and for reporting independently to the Board on a quarterly basis.

External Managers: The external managers are responsible for all aspects of portfolio management as set forth in their respective contracts and investment guidelines. Managers also must communicate with staff as needed regarding investment strategies and results in a consistent manner. Managers must cooperate fully with staff regarding administrative, accounting, and reconciliation issues as well as any requests from the Investment Consultant and the Custodian.

RECOMMENDED EDUCATIONAL RESOURCES FOR MEMBERS OF THE MONTANA BOARD OF INVESTMENTS

August 2013

RVKuhns & ASSOCIATES, INC.

Periodicals			
Periodical	**Cost**	**Link**	**Description**
Pensions & Investments	$325/Year	www.pionline.com	Pensions and Investments is a bi-weekly publication that covers current events impacting defined benefit plans. The PI Online web site also provides a variety of research reports and databases to support the decision-making of defined benefit plan staff and board members.
The Economist	$134/Year	www.economist.com	The Economist is perhaps the most respected source of reporting and analysis on current events shaping the global economy. The Economist can help staff and board members stay familiar with the key factors and events that impact the performance of the portfolio.
Institutional Investor	$575/Year	https://www.institutionalinvestor.com	Institutional Investor provides a monthly magazine that serves as both a source of news and proprietary research. A subscription also provides varying degrees of access to proprietary data and research online. Subscriptions range from $575/year to $1,680/year depending on the desired level of access to online resources. We believe that the online research capabilities are most relevant to staff, and therefore would only recommend the $575 "silver" package for Board Members.

Books			
Book	**Cost**	**Link**	**Description**
Pioneering Portfolio Management	$24	http://tinyurl.com/3sa4c4u	This book was written by David Swensen, the Chief Investment Officer of the Yale Endowment. The book provides a blue print for Mr. Swensen's investing strategy, which has resulted in superior long term returns for decades. While the book is especially applicable to university endowments, many of the insights are relevant to public pension funds.
The Little Book of Behavioral Investing	$16	http://tinyurl.com/3dya98f	This book was written by a senior investment professional at GMO, a global asset management firm led by renowned investor Jeremy Grantham. The book provides a comprehensive overview of common behavioral biases that can negatively impact the investment decision-making process. The lessons are easily comprehensible to both expert and novice investors.

This Time is Different: Eight Centuries of Financial Folly	$15	**http://tinyurl.com/3nfft6x**	This book represents the most comprehensive overview of financial crises ever written. Time and again, insights from this book are cited by asset managers, economists, and politicians. Understanding some of the key insights helps put the global credit and sovereign debt crises into perspective.
End Game: The End of the Debt Supercycle and How it Changes Everything	$20	**http://tinyurl.com/3mepfcw**	This book builds on the lessons of "This Time is Different" and in fact cites many passages and tables throughout the book. In addition to putting the global credit crisis into perspective, it offers interesting forecasts of potential future outcomes and solutions.

Electronic Newsletters

Newsletter	Cost	Link	Description
CFA Financial Briefs	Free	**https://www.smartbrief.com/cfa/index.jsp**	Each day, this newsletter compiles the most notable headlines relating to economics, investment management, and major geopolitical events. Each headline has a link to the underlying article. This email serves as the daily newspaper for many in the investing community.
Thoughts from the Frontline	Free	**https://www.mauldineconomics.com/subscribe**	John Mauldin releases a daily newsletter that includes, as an attachment, his own analysis on major economic events and/or the analysis of other investment experts. The newsletter typically has a bearish bias, but provides invaluable perspective on macroeconomic events and emerging research in the investment profession.
JPMorgan Eye on the Market	Free	**Send Email Request to Thomas.j.fisher@jpmorgan.com**	Eye on the Market is released 2-3 times per week and provides in depth analysis on events shaping the global economy. The content is typically more balanced than John Mauldin's letter, but should be viewed with some skepticism given the role of JPMorgan as an asset manager.