These minutes are Approved and Final. Full Board review and decision took place at the February 24, 2015 Regular Meeting of the Board.

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

MINUTES OF THE MEETING
November 18, 2014

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

LEGISLATIVE LIAISONS PRESENT:
Senator Dave Lewis
Representative Kelly McCarthy

STAFF PRESENT:

Polly Boutin, Associate Financial Manager
Jason Brent, CFA,
Alternative Investments Analyst
Geri Burton, Deputy Director
Dana Chapman, Board Secretary
Richard Cooley, CFA, Portfolio Manager,
Fixed Income/STIP
Frank Cornwell, CPA, Associate
Financial Manager
Craig Coulter, Alternative Investments Analyst
Roberta Diaz, Investment Accountant
David Ewer, Executive Director
Julie Flynn, Bond Program Officer
Tim House, Equity Analyst/Investment
Operations Chief
Ethan Hurley, CAIA, Portfolio Manager,
Alternative Equities
Eron Krpan, Investment Data Analyst
Herb Kulow, CMB,
Portfolio Manager, In-State Loan Program
Tammy Lindgren, Investment Accountant
April Madden, Investment Accountant
Savannah McCormack, Administrative Assistant
Gayle Moon, CPA, Financial Manager
Rande Muffick, CFA, Portfolio Manager,
Public Equities
Kelsey Poore, CPA, Investment Accountant
Jon Putnam, CFA, FRM, Fixed Income
Investment Analyst
John Romasko, CFA, 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
Maria Wise, Administrative Assistant
Dan Zarling, CFA, Director of Research

GUESTS:
Becky Gratsinger, CFA, RVK, Inc.
Jim Voytko, RVK, Inc.
Shawn Graham, Executive Director, TRS
Dore Schwinden, Executive Director, PERS

CALL TO ORDER

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 10:46 AM. As noted above, a quorum of Board Members was present.

Board 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 August 19-20, 2014 Board meeting. There were a few minor changes by staff to the Montana Domestic Equity Pool (MDEP) section, which were distributed to the Board at the start of the meeting.

> Board Member Jack Prothero made a Motion to approve the August 19-20, 2014, Board Meeting minutes as amended. Member Sheena Wilson seconded the Motion. The Motion carried.

Chairman Noennig called for any corrections or revisions to the Board minutes from the October 7, 2014 Board meeting.

> Board Member Jack Prothero made a Motion to approve the October 7, 2014, Board Meeting minutes. Member Jon Satre seconded the Motion. The Motion carried.

ADMINISTRATIVE BUSINESS

Audit Committee Report

The Audit Committee met prior to the Board meeting. Committee Chairman Jon Satre noted that most of the Board members attended the Committee meeting. Executive Director David Ewer reported on security litigation and noted there has been very little activity in the past few years. He noted the legislative auditors have completed their onsite analysis. Their fiscal year 2014 financial compliance report is due November 21. There were no anomalies and a clean report is anticipated.

Mr. Satre reported that Associate Financial Managers, Ms. Polly Boutin and Mr. Frank Cornwell, made a presentation to the Committee detailing the operational "back office duty" functions carried out by the accounting staff and preparation of the consolidated financial statements. The presentation was very informative and he thanked Ms. Boutin and Mr. Cornwell.
Accounting staff was asked what challenges they foresee in the near future and three items were identified:

1. Implementing the new Web Portal to facilitate easier access to STIP for state agency and local government participants;
2. The recent provisions in Governmental Accounting Standards Board (GASB) Statement No. 68 pertaining to accounting and financial reporting for pensions; and
3. New requirements for reporting fair value.

The Committee also reviewed the Audit Committee Charter. Each year the Committee is required to review and assess the Charter for accuracy and compliance with the duties set out in the Charter. This year staff compiled a checklist detailing the duties required of the Committee. The Committee determined the Charter is adequate and does not require any revisions. The Committee is in substantial compliance with the duties listed in the Charter and passed a motion reaffirming the Charter.

Human Resource Committee Report

The Human Resource Committee met prior to the Board meeting. Human Resource Committee Chairman Karl Englund stated the Committee closed the meeting to conduct the annual performance evaluation reviews of staff that are exempt from the state's pay plan. The evaluations are confidential; however, Chairman Englund reported all staff reviews were very good and once again Committee members had an opportunity to step back and appreciate staff's hard work and expressed their continued confidence in staff.

Chairman Mark Noennig asked for questions or comments.

Executive Director David Ewer stated staff did receive Board feedback encouraging staff to continue to strengthen and increase effectiveness. The Board continues to validate that staff consistently strives to do their best to serve the people of Montana.

Committee Chairman Englund stated Executive Director Ewer is asking staff to step outside of their job areas and help with other areas that are important to MBOI. The exempt staff is well qualified and capable and this will enhance contingency planning. Executive Director Ewer has worked on putting structures in place for strengthening succession and formulating contingency plans. Mr. Sheets is supportive and expressed staff has an interest to develop beyond their specific areas of responsibility.

The Loan Committee did not meet.

Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) Updates
TRS Representative Marilyn Ryan reported she did not attend the last TRS Board Meeting as she was traveling in China. She shared that the amount of construction occurring in China is overwhelming and at one point, her travel group counted 24 construction cranes within sight. Construction projects include infrastructure, highways, bridges, and even the little villages had old fashioned cement mixers scattered around. Around Beijing, some places looked like construction had been shut down; there were no active factories. Pollution is real; even on a good day it looked worse than a bad day in Missoula. All the hotel rooms had gas masks. At one tourist site stop by a river, there was a plant shut down and the reason given was too much pollution going into the river. Economically, the building of infrastructure seemed geared for promoting tourism. People spoke freely about the government, which was surprising. Concerns are much like those of the average U.S. citizen, better pay, car ownership and their own apartment so they are not forced to live with parents. They are very proud of their 4,000-year-old history,

Chairman Mark Noennig asked where the group found people willing to talk.

Member Ryan stated traveling on the high-speed train, there were many eager to talk and they all speak English. The older individuals were less open, but the young people were very open.

PERS Representative Sheena Wilson noted PERS Executive Director Dore Schwinden will be presenting in front of the Board later in the meeting. At the October 9, 2014 PERS Board Meeting, the Board implemented the switch to audio minutes, which are posted on the PERS website along with other Board materials. The audio file is divided into five sections, to enable easier navigation through the audio.

The actuarial report was positive and legislative activity is ongoing; the SAVA (State Administration and Veterans' Affairs Interim Committee) meeting was interesting. The ongoing IT project conversion to the new computer program has had some adjustments. Executive Director Schwinden terminated a contract with a group that had a small contract managing another contract. It was determined managing the contract internally would be much more effective, therefore the contract was cancelled. The conversion to the new system is proceeding at a very slow pace and is frustrating. The task of transferring 30-50 years of data is a painstaking process.

Legislative Liaisons Comments
Senator Dave Lewis stated since his term is up in January, this is his last Board meeting. He has taken a job working for Senator Debbie Barrett, the new senate president. Senator Barrett will make the new senate legislative liaison appointment to the MBOI Board. Senator Lewis reported the SAVA meeting was a reminder that the PERS Board has moved into the 21st century by switching to audio meeting minutes and he is looking forward to getting some of these meetings televised. Senator Lewis added that televised public meetings are widely viewed; the MBOI Board is an important Board and generates a lot of public interest.

Chairman Noennig stated although he has no objection to televising meetings, the logistics involved could be problematic.

Senator Lewis noted the feedback received from televised meetings is robust.

Representative Kelly McCarthy advised he missed the SAVA meeting, and would like a quick synopsis.

Executive Director Ewer stated staff will present the information which was provided to the SAVA Committee later in the agenda.

Representative McCarthy reported the Governor's budget was released yesterday. Representative McCarthy added this meeting will likely be his last meeting as legislative liaison with the 2015 Legislative Session starting January 5.

EXECUTIVE DIRECTOR'S REPORT

Overall Comments

Executive Director David Ewer presented his executive director's memo.

- Prior Meeting Member Requests - There were no follow up requests from members.
- Quarterly Cost Report - The report is included in the Board packet.
- BOI Snapshot - A new addition to the Board packet is a one-page snapshot staff prepares as a thumbnail showing the total Board portfolio. The snapshot answers all the basic questions such as active vs. passive investments, the breakdown by pension funds, investment pools and other holdings.

Member Karl Englund asked when the snapshot is prepared and if it is available to Board Members on a monthly basis.

Executive Director Ewer stated Mr. Tim House prepares the data for the prior month, usually 15-17 days after the prior month-end and it can be provided to Board members via email when available each month.

- Securities Litigation - An update of securities litigation was presented to the Audit Committee. The process has not changed and very little income has been received over the past few years. The Board has attorneys ready to advise on litigation. Currently there are no requests for MBOI to act as lead or co-lead on litigation.
- Resolution 217 – Authorization of approved investment managers.
- Resolution 218 – Delegation of Authority – Deputy Director.
- Resolution 234 – Continuity Resolution for Chief Investment Officer.

According to policy, staff presents resolutions to the Board annually. No action is required by the Board. MBOI is currently almost fully staffed and in significantly better shape for unplanned events, regarding succession and delegation. Significant progress on this front has been made over the last two years.

- Governor's Letter – Public Participation – Included in the Board packet.

Public participation is in Montana statute. It is included as Appendix A in the MBOI Governance Manual.

- Custodial Bank Contract Update – Staff is continuing to work on details of the State Street Bank contract. The current contract, which expired on October 31, has been extended three months to December 31, 2014 to allow time to work out contract details. The Procurement Bureau has to sign off on the final contract; MBOI has to sign off on the operational side.

Responding to a question from Chairman Noennig, Executive Director Ewer stated staff is several weeks into the extension period and expects to have the contract details completed by the extension deadline.

Member Sheena Wilson mentioned an article in Fundfire, which detailed an SEC investigation of a company employee, instrumental in contract negotiations with State Street Bank. The employee was then hired for a lucrative position at the bank. She added Montana's state procurement process, while is seems burdensome, provides huge benefits, including oversight and monitoring by the Department of Administration.

Executive Director David Ewer noted he is unfamiliar with the specific facts of the case, but added he doesn't have concerns about the integrity of State Street Bank. State Street personnel managing the Montana account are capable, committed and have integrity. State Street Bank is a huge shop with thousands of employees, and as such, is subject to occasional allegations.

- 2015 Board Meeting Dates – Board meetings are scheduled for the same days and times as the 2014 dates.
- 2015 Work Plan – The plan is the same for 2015 and provides a systematic effort through 24 months for the Board to hear staff report on every significant issue. Some items are biannual and some are annual. The Executive Director, with input from the Board Chairman, maps out the plan, which has built in flexibility, as changes are needed. For example, the October meeting focused on education topics with input from Board Members. Board Member feedback is welcome on the 2015 plan.

Executive Director Ewer reported he is aware of two legislative initiatives for the 2015 Legislative Session. Senator Jon Sesso has inquired about options for Butte Silver Bow County to invest the $16 million received from the Arco lawsuit settlement in BOI bond investment programs. Any change would require a change in statute as local governments are authorized to invest directly only in the Short Term Investment Pool (STIP), therefore, any change would be substantial. The feasibility and logistics of any proposed statute changes are yet to be determined.

The second item relating to the upcoming legislative session is for the Department of Agriculture, which has asked for MBOI's opinion on a loan to bolster hail insurance. The state of Montana is the only state that has hail insurance available through the state. There is a possibility, with legislation, that MBOI could lend money. MBOI could provide a cheaper loan in the event of a couple of bad hail years, which would deplete reserves. All Montana agriculture entities can sign up for the state sponsored hail insurance which is a huge benefit to farmers. MBOI has been asked to offer its input and staff expects the Department of Administration to weigh in as well.

Senator Dave Lewis offered an observation that hail insurance issues have come up previously; private insurers question the government subsidizing hail insurance when private market insurance is available.

Executive Director Ewer noted the insurance is not subsidized, as rates must be set at a fair rate.

Member Jon Satre asked for comments on the biennium budget.

Representative McCarthy stated student loan debt is on the legislative radar and may involve BOI. Solutions will not cost taxpayers anything and further discussions are expected.

Executive Director Ewer added the biennium budget has been submitted to the Governor's Office. MBOI's budget is constructed by Commerce in conjunction with the Budget Office. There are no requests for additional full time employees (FTEs), or any other items out of the ordinary. MBOI has filled all but one FTE; it is imperative to be fully staffed.

After further discussion, the Board agreed that any requests for information or guidance on upcoming or proposed bills, or legislation affecting MBOI, will be discussed by the full Board.

MONTANA LOAN PROGRAMS

In-State Loan Program

Mr. Herb Kulow presented an update of the commercial and residential loan program portfolios. As of October 31, 2014, the commercial loan portfolio totaled $103,848,069, not including $560,000 categorized as other real estate owned, MBOI's portion of the Vann's warehouse property, which is for sale. There has been some interest in the property, but no offers received yet.

Currently approximately $40 million is in the pipeline in reservations and commitments; there are no delinquencies.

Mr. Kulow gave a brief overview of the Intermediary Relending Program (IRP). The program began when the legislature took $5 million for matching USDA federal money. The federal rate cost is 1% and MBOI rate cost is 2%, so the interest rate is very attractive for business expansion. There are no delinquencies in the program. So far, $4.4 million has been used with $600,000 remaining.

The $5 million revolving loan balance has been allocated to 109 businesses throughout state, and currently consists of 23 outstanding loans; loan payments are made over a term of 27 years. The long-term repayment schedule inhibits the fund's growth to accrue sufficient funds to relend. Staff advised the Commerce budget office the fund is running low and will meet with Commerce to discuss.

The residential loan portfolio balance continues to decline; the balance as of October 31, 2014 is $11,020,799. Loans past due for 90 days or more, which are all guaranteed, make up just 1.6% of the total portfolio.

Staff received word that Streeter Brothers in Billings has sold its loan program to a company in Texas. The Board of Housing (BOH) will begin servicing the loans on December 1, 2014, many of which are owned by MBOI. Staff has received a few inquiries from loan holders about the changes.

The Veteran's Administration Loan Program (VA) is in a similar position to the IRP program; the outstanding balance is $24 million with just $5.7 million remaining for new loans. A few funding requests were processed this week, therefore quickly closing in on the $30 million maximum allotted. Principal and interest payments are received each month; however, it could take four months or more to rebuild the cash needed to allow lending for new incoming loan applications, unless a large payoff is received. BOH is aware. There are no delinquencies.

Staff has had a number of loan inquiries; some large loans including two grocery stores, one bank, and 16 and 18 unit apartment buildings. Some banks have internal lending limits, which they have reached, and some are refinance inquiries; however, MBOI does not do refinances. Staff plans to travel to meet with new bankers to provide updates and information on MBOI programs. First Interstate Banks in Billings, Bozeman and Missoula have all expressed an interest. Banks are prepping for a more vibrant economy. MBOI's current interest rates are very attractive at 5.8% for 20 years, plus additional discounts are allowed for job creation.

Member Jon Satre asked for a geographic breakdown of the loan program.

Mr. Kulow responded MBOI loans cover all areas of Montana except the eastern part of state, which is primarily agricultural. Staff received one inquiry from the Bakken area; however, the long-term amortization would have been risky.

Board Chairman Mark Noennig disclosed that regarding the sale of loan servicing from Streeter Brothers to the Board of Housing, he conducted some work for Streeter Brothers and now represents the Board of Housing on their foreclosures; there is no direct conflict of interest.

Mr. Kulow stated in 2003, BOI contracted with BOH to service our residential loan portfolio when the outstanding balance was approximately $325 million. BOI pays $36,000 per year to BOH to service the portfolio; as of October 31, 2014, the balance has decreased to $11,020,799. Mr. Bruce Posey, owner of Streeter Brothers, called Mr. Kulow prior to the sale of the company and inquired if BOI would approve of designating BOH as the servicer for the loans after sale of the company to the new owner. Mr. Kulow agreed it was a satisfactory arrangement, as they already service BOI loans.

BOND PROGRAM REPORTS

Activity Report

Ms. Louise Welsh reviewed the quarterly Activity Summary Report and presented the staff approved loans. August payments have been received and all loans are current; there are no delinquencies.

Ms. Welsh reviewed the commitments and fundings for August. Commitments totaled $6 million, including the MSU Bozeman Strand Union loan. Total loans funded this quarter totaled $3.8 million throughout the state, including interim funding for water and waste water projects, cities and towns and school projects, primarily for boilers; and fire halls. Counties account for the most activity with 53% for Missoula County.

Ms. Welsh presented the staff approved loans: 7 of 12 are brand new borrowers, including West Valley Rural Fire District, Hinsdale, Anderson, Elysian and Monforton Schools, Seeley Swan Hospital and the Town of Ryegate. Upcoming loans include a City of Boulder wastewater project for $3.5 million and the $3.2 million City of Libby Flower Creek Dam replacement loan, which should begin requesting funds soon. Draw down of the reservoir and demolition for that project will begin after installation of the chemical injection equipment in December is complete. An eagle's nest complication pushed out the City of Deer Lodge wastewater project to mid July 2015 and the Amsterdam Churchill project is suspended for the winter.

Ms. Julie Flynn has been conducting outreach across the state, attending various local government conferences, including the Montana Fire Alliance in Missoula, Montana Association of Counties in Kalispell, the Montana League of Cities and Towns, in West Yellowstone and the Montana Conference of Education Leadership in Billings. Next on the schedule is the Montana Rural Water Conference in Great Falls in February, where Ms. Flynn will be making a 15-minute presentation.

Staff approved loans:

Borrower:	West Valley Rural Fire District (Anaconda)
Purpose:	Construct a new fire station
Staff Approval Date:	July 7, 2014
Board Loan Amount:	$50,000
Other Funding Sources:	$ 8,000
Total Project Cost:	$58,000
Term:	15 years

Borrower:	Hinsdale School Districts
Purpose:	Replace school roof
Staff Approval Date:	July 8, 2014
Board Loan Amount:	$191,000
Other Funding Sources:	$ 0
Total Project Cost:	$191,000
Term:	4 years

Borrower:	Town of Ryegate
Purpose:	Preliminary Engineering Report for wastewater system
Staff Approval Date:	July 16, 2014
Board Loan Amount:	$20,000
Other Funding Sources:	$20,000
Total Project Cost:	$40,000
Term:	3 years

Borrower:	Seeley-Swan Hospital District
Purpose:	Expand Seeley-Swan Medical Center
Staff Approval Date:	July 17, 2014
Board Loan Amount:	$551,390
Other Funding Sources:	$273,392
Total Project Cost:	$824,782
Term:	15 years

Borrower:	Anderson Elementary School District (Gallatin Gateway)
Purpose:	Purchase 26 MacBook Pro computers
Staff Approval Date:	August 8, 2014
Board Loan Amount:	$31,044
Other Funding Sources:	$ 0
Total Project Cost:	$31,044
Term:	3 years

Borrower:	Park County Rural Fire District (Livingston)
Purpose:	Purchase land adjacent to existing fire station
Staff Approval Date:	August 8, 2014
Board Loan Amount:	$118,900
Other Funding Sources:	$ 1,000
Total Project Cost:	$119,900
Term:	15 years

Borrower:	Elysian School District (Billings)
Purpose:	Acquire land adjacent to existing campus and construct addition
Staff Approval Date:	August 8, 2014
Board Loan Amount:	$ 705,000
Other Funding Sources:	$ 9,465,000
Total Project Cost:	$10,170,000
Term:	4 years

Borrower:	City of Whitefish
Purpose:	Purchase a Water Tender Fire Apparatus
Staff Approval Date:	August 26, 2014
Board Loan Amount:	$ 211,000
Other Funding Sources:	$ 69,855
Total Project Cost:	$ 280,855
Term:	7 years

Borrower:	Lewis & Clark County
Purpose:	Road improvements for Lake Home Condo Rural Improvement District
Staff Approval Date:	August 27, 2014
Board Loan Amount:	$18,044
Other Funding Sources:	$ 0
Total Project Cost:	$18,044
Term:	15 years

Borrower:	Monforton School District (Bozeman)
Purpose:	Construct additional classrooms, kitchen and cafeteria
Staff Approval Date:	September 12, 2014
Board Loan Amount:	$ 300,000
Other Funding Sources:	$2,782,101
Total Project Cost:	$3,082,101
Term:	6 years

Borrower:	Wapiti Acres County Water District (Kalispell)
Purpose:	Construct a second well
Staff Approval Date:	September 12, 2014
Board Loan Amount:	$33,500
Other Funding Sources:	$ 0
Total Project Cost:	$35,000
Term:	15 years

Borrower:	City of Thompson Falls
Purpose:	Purchase two police vehicles
Staff Approval Date:	September 12, 2014
Board Loan Amount:	$58,530
Other Funding Sources:	$ 0
Total Project Cost:	$58,530
Term:	5 years

RETIREMENT SYSTEMS ANNUAL PRESENTATIONS

Mr. Shawn Graham, Executive Director, Montana Teachers' Retirement System (TRS) and Mr. Dore Schwinden, Executive Director, Montana Public Employee Retirement Administration (PERS)

Mr. Shawn Graham presented the TRS valuation results for July 1, 2014. Contributions plus income provided a surplus for the fiscal year due to generous investment returns. TRS market asset returns were 17.09% vs. the assumed actuarial assumption of 7.75%. The actuarial asset return was 13.21% vs. 7.75% – returns are smoothed over a five-year period, to alleviate volatility. The funded ratio on July 1, 2014 declined from 66.8 to 65.45 since the last evaluation, as House Bill 77 had not been filed yet. The evaluation uses a 1.5% rate for the Guaranteed Annual Benefit Adjustment (GABA), but will show 1.5% vs. 0.5% GABA, depending on the outcome of the two pension fund lawsuits.

Revised actuarial assumptions have been adopted, due to results from the Experience Study conducted for the five-year period ending July 1, 2013. Decreased price inflation and real wage growth assumptions were adjusted from 3.50% and 1.00%, to 3.25% and 0.75% respectively. Payroll growth assumption decreased from 4.5% to 4.00%. Investment return assumption is net of investment expenses only, and does not include administrative costs, as was previously the case. The GABA assumption was also revised from 0.5% to 1.5% since the previous assumption. Mr. Graham noted the changes have increased the pension's funded status by three years. People are living longer and drawing benefits over a longer period.

Mr. Graham advised the 7.75% actuarial assumption is net of investment expenses only; administration expenses have been removed per GASB 67, (Governmental Accounting Standards Board) which does not allow inclusion of administrative costs. Administration costs are added to normal costs.

Mr. Graham reviewed the composition of the TRS plan membership. The population of retirees is growing at a rate of 3.3% per year, while the number of active plan members has remained steady. The average annual salary is $51,697 and the average retiree benefit is $21,153; not even half of salary. Salaries have increased 2.5% annually since 2004 and benefits have increased 3.2% annually since 2004.

Comparing market value vs. actuarial value of assets, even 2009 and 2010 show the actuarial was considerably higher due to four year smoothing, using a lower valuation vs. market value.

As of July 1, 2013, the plan was 61.81% funded; as of July 1, 2014, funding status increased to 65.45% with a net decrease of one year off the amortization timeline (using the 1.5% GABA rate). Calculating the GABA rate at 0.5%, the funded ratio goes up to 70.99% and the amortization timeline decreases by three years. The system will be 100% funded in 17 years, based on actuarial assumption.

Valuation side-by-side comparisons considering the GABA, the status remains in limbo until the court case is decided. The GABA rate paid in fiscal year 2014 was 1.5%, therefore that rate is used as the official number.

Member Prothero asked for an update on the lawsuits.

Mr. Graham deferred to Member Karl Englund for an update.

Member Englund stated the timeline is still unknown. A bench trial is scheduled for March 2015, but the suit is expected to be settled before then. The PERS suit is several weeks behind the TRS case.

Chairman Noennig asked for an update of the pension plan's unfunded liability.

Mr. Graham stated the current forecast for the liability pay off is 2042. The TRS system does not require a specific time limit in statute similar to PERS (30 years); however, the plan must be deemed actuarially sound.

Mr. Dore Schwinden, Executive Director, Montana Public Employee Retirement Administration (PERS) presented an overview of the MPERA Summary of Actuarial Valuation Results as of June 30, 2014. Mr. Schwinden stated PERS will conduct an educational session with legislators in preparation for the upcoming session.

Plan benefits must equal contributions plus investment increase, minus benefits and administration costs. Mature plans rely more on investment earnings to keep balances up. For the valuation process, the actuary analyzes the financial consequences of risk, how many die or retire early, and combines demographic and economic factors, along with inflation and returns. The valuation is a financial checkup of the plan. The official opinion determines the amount of contributions needed and evaluates the funded status of the plan.

The valuation is very positive and reflects improvement in all plans; all systems realized actuarial gains, which differ from market gain. The $6.2 billion increase on market basis equals $4.59 billion in actuarial terms, so they will not match. The return for PERS for fiscal year 2014 was 17.12%; however, only a portion is recognized as gains; 13.21% was the real return.

The plan liability showed small gains and losses. PERS has 28,229 active members and 19,888 retirees. The plan is gaining 500 retirees per year, a 1.2 ratio, which is normal for mature plans. The annual average salary is $39,709 with annual benefits of $15,205, a monthly benefit of $1,267.

Representative Kelly McCarthy inquired as to the monthly benefit for plan members with disabilities.

Mr. Schwinden stated disability retirement is set in statute and depends on the individual's retirement option.

The fiscal year 2013 official valuation used the reduced GABA rate of 1.5%; the next comparison uses the GABA rate of 3%. Without the legal injunction and using the 1.5% GABA rate, the funded ratio is 74.4%; the funded ratio using the 3% GABA would be 70%.

The PERS plan amortizes at 29.3 years, therefore is under the 30-year requirement.

Member Jack Prothero asked how Montana compares to other plans in other states.

Mr. Schwinden noted Montana rates second best for funded status in the country per Moody's. Funded status is evaluated progressively over time; the trend over time is more important than the funded status at a point in time.

Mr. Schwinden noted of the total eight retirement plans, only Game Wardens' and Sheriffs' do not amortize, all other plans amortize, within parameters.

Responding to a question from Member Karl Englund, Mr. Schwinden stated work is ongoing to find funding solutions for the two plans. Discussions with stakeholders have raised possible options of increasing contributions or working with the budget office to find funds. Sheriffs' plan does not amortize; cash needed is about $6 million. Game Wardens' plan requires about $2 million initially to get the amortization schedule back on track.

Executive Director David Ewer added the systems vary; for example, the Firefighters' plan amortizes because the state of Montana contributes 58% of the money. Rarely acknowledged, the plan is subsidized by the state, the employer, rather than employees, unlike the Sheriffs' plan which does not receive the big state contribution.

Mr. Schwinden briefly reviewed the other retirement plans. Game Wardens' has 955 active employees and 201 retirees; average salary is $42,365 per year, average benefit is $20,817 per year, or $1735 per month. The actuarial gain was just under $5 million; the funded ratio has increased steadily. The plan could amortize, under given assumptions, within three years. Contribution rate is 10.56% for employees and 9% for employers.

Sheriffs' plan has 1,307 active employees and 498 retirees; average annual salary is $49,291, average benefit is $24,772 per year or $2,064 per month. The retirement actuarial gain was $12 million in 2014; the funded ratio has come up. The plan has a shortfall of $6 million and does not amortize.

The Highway Patrol plan has 229 active employees and 314 retirees. The average annual salary is $60,704: the annual benefit is $30,279 or $2,523 per month. The actuarial gain was $5 million.

Police Officers' plan has 743 active employees and 695 retirees; the average annual wage is $59,830 and an average annual benefit of $27,803 or $2,317 per month. The plan had $14 million of actuarial gain in 2014 and showed an improved funded status from 58% to 63%. The plan amortizes in 20 years.

Fire Fighters' plan has 616 active employees and 585 retirees; average annual salary is $64,115 and average annual benefit is $32,624 or $2,719 per month. The plan realized an actuarial gain and improved funding status from 66% to just under 72%. The plan amortizes in just over 11 years.

Judges' plan has 55 active employees and 67 retirees; the average annual salary is $118,093 and average annual benefit is $45,460 or $3,788 per month. The plan had an actuarial gain of $4,646,000 in 2014 and the plan is fully funded.

The Volunteer Fire Fighters' plan has 1,935 active employees and 1,332 retirees; the average annual salary is $1,737 or $145 per month, capped at $225 – for volunteers. The plan gained just under $2 million in 2014. The funded ratio improved by 8 years and amortizes in 5.1 years.

REVIEW ASSET ALLOCATION RANGES

Mr. Cliff Sheets presented the annual Asset Allocation range review for the pension plans. Each year the Board reviews any proposed changes to investment policy asset allocation ranges, or affirms the current ranges if no changes are proposed.

Mr. Sheets explained that last year staff conducted its first in-depth cash flow analysis, which will be updated and reviewed each subsequent year after fiscal year end. Mr. Sheets thanked Mr. Eron Krpan for his assistance in collecting and analyzing the relevant data. The analysis focused on the two largest pension funds, which account for 87% of the total pension assets. The reason for this analysis is to examine whether the cash needs of the plans might suggest a change in asset allocation is needed. The analysis considers benefit distributions and compares these to contributions from all sources, including employee and employer, general fund and coal tax revenue. A net cash need would occur when contribution inflow is below distribution outflow, and this difference must be satisfied via portfolio yield and implied asset sales.

Staff analyzed cash flows over the last four fiscal years and compiled projections looking ahead for the next five years. The projection of future cash flows was done in a conservative way, looking at historical income available from assets and then reducing it slightly from the actual 2014 numbers. Conservative assumptions of 2% yield and a 7% total return were used in making projections. The benefit outflow is gradually creeping up for both large pension plans and will continue, which is to be expected of maturing plans such as these.

The portfolio has natural investment income generation; real cash, not total return, such as dividend payments and bond interest. The projected net cash needed increases over the forecast period, but assets net of implied sales also grow as well, and are projected to increase at an average of about $390 million per year. During the past four years, thanks to strong returns, net asset growth was positive in all years with the exception of 2012.

If yield from the portfolio is not sufficient to pay benefits, assets are sold; although cash needs diminished in FY2014 due to the increase in contribution amounts after the last legislative session. The sale of $8 million in assets during FY2014 was not a substantial amount; however the net cash needed for fiscal year 2013 was much larger at about 1.2% of total assets.

Member Jon Satre asked for asset growth projections going forward.

Mr. Sheets stated staff assumes a 7% rate of return and an annual yield of 2%. After spending the yield and making asset sales, the net asset increase average is 4.2% over the forecast period.

Staff conducted a sensitivity analysis again this year in forecasting implied asset sales as a percent of average assets. The base forecast shows implied asset sales growing to 1.2% of average assets at the end of the five-year period, similar to fiscal year 2013. Mr. Sheets stated that, in reality, the pattern of market returns will be more volatile so it is helpful to show differing scenarios. The worst-case scenario shows returns similar to the five years that began in 2008; a particularly bad period that included the financial crisis and recession. Under those conditions, the implied asset sales grow to a more significant level, to 2.25% of assets. While not highly probable, the 2.25% amount represents a lot of implied dollars of sales. From a cash flow point, even in the worst case scenario, liquidity needs appear manageable. Sales would occur over time given the steady and predictable need for benefit payments. The fact that assets are 80% publicly traded would enable sales to meet the need, although even public assets can be challenging to sell during stressed market conditions. The projection for very favorable market conditions deviates little from the base case, but is slightly less negative.

Mr. Sheets then reviewed the current policy asset allocation ranges and compared the actual allocations to these ranges as of the quarter ending September 30, 2014. He noted the various considerations that go into setting the allocation ranges. These include long-term return expectations, the various risks associated with each asset class, and their liquidity. He acknowledged the heavy equity asset bias in the portfolio, which provides much of the needed return over time. The allocation mix includes other assets, such as alternative assets and fixed income assets, which act as a diversifier to the dominant public equity exposure. Furthermore, the asset allocation profile as constrained by the ranges is similar to that of the average public fund peer in terms of broad categories.

In summary, staff is not recommending any changes to the current policy asset allocation ranges. Staff recommends asset allocation ranges be kept at the current levels and is asking the Board to approve staff's recommendation.

Member Jack Prothero asked Ms. Becky Gratsinger if any big changes in asset class returns are forecast for the next year or two.

Ms. Gratsinger stated domestic equity has seen very good times; when looking at returns for the next ten years there is no drastic reduction expected in domestic equity. International equity has had a tougher time as Europe dipped into recession. The stronger U.S. dollar adds to the positive outlook over the long term as it recovers. Fixed income has been a big focus lately and while U.S. interest rates are expected to rise, to what level and how quickly is still unknown. Going into 2013, low returns were assumed for fixed income. Total assumed returns are not expected to drastically change over the long term and ongoing concerns remain relative to the interest rate environment.

Mr. Jim Voytko added the assumed rate of return is used for the long term when considering what return assets are expected to produce; Mr. Sheet's cash analysis is for a shorter horizon, so a more conservative outlook is used.

Member England asked Ms. Gratsinger if she concurred with staff's recommendation to retain the current asset allocation levels.

Ms. Gratsinger stated RVK, Inc. is comfortable with the current asset mix and sees no pressure at this time to move from illiquid to more liquid asset classes. Mr. Voytko added if a significant change was expected for any of the asset classes, the issue would have been raised. Additionally, if there was a significant change in liability; though pressure has been relieved due to the recent changes in contributions. Montana's Board decisions do not drastically differ from those of its peers. RVK supports Mr. Sheet's memo/recommendation.

Senator Dave Lewis commented the information provided is very valuable; legislators need a realistic view going forward.

Chairman Noennig asked for an example of a significant change in outlook for an asset class.

Mr. Voytko stated in the spring of 2009, equity and high yield return estimates were raised because they were in the tank. Recently the return outlook for fixed income and hedge funds has been regularly adjusted incrementally down. The equity return outlook has also been adjusted lower, as a reversion to the mean is expected after the extended period of high returns in the stock market since early 2009. Long term, the fund cannot be expected to maintain such high return numbers as those enjoyed over the past five years.

Member Jon Satre noted that during the recession, pension plans looked at taking a small part of their allocation to create a hedge against a collapse of assets, and asked given the heavy equity weighting, if that is an option.

Mr. Sheets stated while it would be ideal to avoid the same problem again, we should assume a prudent level of risk, not avoid it. It is possible to hedge, but it comes with a price tag in the form of an insurance premium. Another bear market and global crisis could happen and buying such things as equity put options may give comfort against a downside risk that may or may not happen. Due to their expense, however, the use of such a strategy on an ongoing basis would act as a detractor to plan returns.

Mr. Jim Voytko added that in 2009-2010, a number of endowments and pension plans were nervous and wanted to determine for participants that enough cash was available. A number of foundations pay a large distribution each year and needed much more liquidity. That talk has gone away and no major plans have implemented a structural hedge using derivatives. Absent that sort of liquidity pressure, appropriate risk should be taken to realize the expected associated long-term return benefit.

Ms. Gratsinger stated large plans decided instead of taking on more risk and then hedging, it was wiser to use a portion of that equity and spread it across other equity classes. Plan sponsors did the math and rather than pay the ongoing expense for insurance, managing the portfolio mix is a better option.

Executive Director Ewer noted staff has considered the insurance option and the question must be asked, if in a time of crisis, whether the insurer would be able to deliver.

Mr. Sheets stated current equity allocations could be dialed back; the question is if or when that would make sense. A year ago, the justification could reasonably have been made for scaling back, but a year later the market has continued to provide strong returns, which attests to the difficulty of making market-timing calls. The domestic equity pool had an 18% return over the last year, and if any significant portion of the allocation had been moved to fixed income or cash, it would have meaningfully reduced total return. The concept to protect the portfolio is appealing, but not very feasible given the costs and challenge of knowing when such strategies are worthwhile. Fundamentally, assuming equity risk is necessary to achieve the desired returns, which are not possible with a larger allocation to cash or another lower returning asset.

> Member Englund made a motion to affirm the recommendation by staff to retain the current asset allocation levels. Member Sheena Wilson seconded. The motion passed unanimously.

CONSULTANT REPORT

RVK, Inc. – Ms. Becky Gratsinger, CFA and Mr. Jim Voytko

Ms. Becky Gratsinger presented the market overview for the quarter ending September 30, 2014, and the Executive Summary. The market had a wall of worry to climb, although some positive drivers included the Federal Reserve giving modest signals of being accommodative and the U.S. economy continues to see 5.8% unemployment. The negative drivers included continued geopolitical instability; there is something new about ISIS each week in the news; the pro-democracy movement in China, worries over Russia and Ebola. There is certainly continued evidence for a more negative European outlook, which appears to be sliding back into recession. Japan has implemented a stimulus program bigger than the U.S.

On a year to date basis, risk oriented asset classes have sold off in the third quarter; small caps pulled back, and international and emerging markets suffered. The bond market provided a small positive return of 20 basis points.

Chairman Noennig asked if there was any interpretation of the China forecast.

Ms. Gratsinger stated we kept hearing about a China slowdown; the gross domestic product growth outlook for China is still larger than the U.S., but indications are it will be slower going forward.

Mr. Voytko added there is a lot of new construction in China; it is accumulating wealth and real GDP is growing, but China is using a lot of leverage with a large run up in debt. Critics argue much of the growth is state-directed, with a lack of diversified economic activity. That is gradually changing though, and the export market is becoming much more diversified.

Ms. Gratsinger reviewed total fund performance for the quarter ending September 30, 2014. Plan returns for PERS indicate the general trend for how all retirement plans performed in the quarter. For the quarter, the plan had a loss of 25 basis points, 35 basis points behind the benchmark. For calendar year-to-date, the plan returned 5.8% and double digit returns were experienced for 1, 3 and 5-year. The 7 and 10-year numbers are much softer. Relative to the benchmark, relative underperformance is due once again to the benchmark used for private equity, which is measured against the public equity market, plus 4%. This is reflected in the total fund returns, but there is positive improvement and peer rankings look good. Ranking is very strong quarter-to-date relative to peers, due at least in part by the heavier fund allocation to domestic equity, which outperformed international equity. The fund is in the top quartile for the quarter and top decile over 5-years; so terrific rankings. Ms. Gratsinger reviewed the asset class pools. Domestic equity had positive returns and ranked well, in the 16th percentile even though it trailed the benchmark by 35 basis points net of fees, while international equity trailed the benchmark by 15 basis points, ranking poorly vs. the universe in the 80th percentile.

Member Englund asked if it was time to look at making changes to the underperforming managers.

Ms. Gratsinger agreed it is time to look for a better fit for some managers; however, finding international growth managers who outperform is a challenge. As a value manager, Alliance Bernstein has struggled as well. When comparing to peers, some structural differences account for performance variations and switching out some managers is under discussion. Small cap allocation within international had more significant losses in the quarter than larger capitalization styles.

Member Englund asked with the difficulty finding well performing international growth managers, is it better to replace them, or abandon the position?

Ms. Gratsinger stated style variation is valuable and having both value and growth managers is beneficial over the long term.

Mr. Voytko added it is always better to employ a deliberate and thoughtful strategy as you move towards something, rather than run away from something; and manager transitions are costly.

Executive Director Ewer asked if passive investment strategies are more optimal for international equity.

Ms. Gratsinger stated when comparing active vs. passive managers over the last 10 years, developed, international equity managers, with a reasonable record, could add value. As markets have become more global and efficient, however, that evidence keeps shrinking. Passive strategies have become more attractive and active managers who will more consistently outperform have been more difficult to identify.

Mr. Voytko added it is best not to make active/passive decisions based on individual manager performance. The issue should be revisited each year, for each asset class, and consideration given to the latest evidence on active vs. passive managers.

Mr. Sheets added staff has considered style based strategy for international, and as long as there are better managers with a good consistent track record, they should continue for consideration. There are large cap international managers who can add value, as well as for emerging markets. Staff employs several decision-making tools to determine if there are noticeably better managers than the current incumbents, and the intent is to try to find improvements.

Mr. Voytko and Ms. Gratsinger agreed current strategies have worked quite well with the domestic pool, and there have been improvements in the international pool as well.

Member Englund asked if the problem is with current managers.

Ms. Gratsinger stated the international pool has 59% in the passive index with ACWI exposure, along with a small amount in emerging markets and small cap. It is likely a manager who will add value can be found.

Member Jack Prothero asked if a look back at the hiring of managers now under consideration for termination would reveal indicators that at the time of hire should have been detected.

Ms. Gratsinger noted Hansberger utilizes a boutique growth style; a more concentrated approach with 50 to 60 stocks. They did very well for a while; however, they have underperformed in down markets. In addition to poor performance, they underwent a manager change. Hansberger was first hired in 2006, but performance the last few years has not been compelling. Performance is not as low as the bottom quartile, but it is time to cut them loose.

Mr. Voytko added, Hansberger was a very good manager initially, but performance has degraded. It is difficult to tell why; however, the track record of decline is long enough to wonder if they have lost their way. In 2009 they were in the top 5th percentile.

Ms. Gratsinger added many factors are looked at when making an evaluation of a manager. RVK meets with hundreds of managers each year and keeps a database, recording the key findings and impressions of those meetings, which are utilized in the research of those companies.

Mr. Voytko noted management changes of any kind can have an effect. Succession plans and the way managers pay their professionals are just a couple of examples of information reviewed.

Mr. Cliff Sheets stated individual managers, in the context of the international pool, outperformed the benchmark over the last three years; however, compared to peers, the pool is lagging. This could partly be attributable to our ACWI ex-US orientation vs. some peers with an EAFE-only orientation, given the weaker performance of emerging markets over the past 3-5 years in particular. The recent pool structural changes included adding small cap managers last March, so it is a little early to judge; and the passive investment allocation has been increased. Style based managers are only about 27% of the pool.

Ms. Gratsinger continued reviewing the quarter end Executive Summary memo. The bond pool, and fixed income in general, has performed better than expected. Real estate did well over the quarter and is ahead of the benchmark for the quarter.

Mr. Voytko reviewed some points of note from the quarterly performance report. Comparing emerging markets and U.S. markets vs. developed foreign markets, particularly the one and five year S&P 500 compared to the MSCI EAFE, the difference is clear and has grown over time. The 5-year was 15% but has increased over the last year. U.S. stocks have crushed foreign stocks; true also of emerging markets.

Asset allocation is more powerful than anything else for determining returns and risk. An allocation of 38.8% to U.S. stocks vs. 16.8% for international is a heavy allocation to domestic equity, but within policy ranges. This mix of asset allocation has been very beneficial over this time frame. Asset allocation heavily outweighs the impact of individual manager performance. Asset allocation overall has been very good for this 5-year period. This trend is unlikely to continue, and therefore some modifications are expected.

The actuarial benchmark raises the question whether capital markets are providing enough return over this period to meet expected earnings assumptions, and the answer is yes, absolutely; there has

been a large actuarial gain. There will be times when you fall below actuarial rate. However, the track record of the fund has been quite good and the deficit from the great financial crisis has been erased; good news for both employers and the state.

Mr. Voytko explained the deficit of 100 basis points compared to the benchmark does not indicate a needed change, but rather is due to the single asset class of private equity. When the stock market rises sharply and on a sustained basis, the private equity market is chasing it due to its time lag in recording valuation increases. Less emphasis is put on comparisons of MBOI vs. peers. For the 1, 3 and 5-year periods, MBOI is in the top decile, or at the doorstep, for each of those periods; an exceptional result signaling no one is executing their strategy better than MBOI. If ranks were low over those periods, it would be a concern. Ranking moved from 61st over 10 years to 8th over five years.

More emphasis is given to comparative risk and return vs. peers and over a 5-year period; MBOI performance is positive overall. The comparison has more merit when return and risk are taken together, and compared to the median of retirement funds; MBOI takes less risk with more return. The benchmark is in the same position, which shows a close adherence to strategy. This is true over the 10-year period as well; much less risk, ranking just below the median fund in return.

Ms. Gratsinger noted looking back to the same comparisons from 2006, risk was less but returns were also lower. Recent changes in strategy have had a positive effect.

Mr. Voytko reviewed the portfolio beta and noted when using an equity centric exposure, there must be a willingness to take some risk. The equity beta measures how sensitive the fund is to stock market movement, as calculated using the S&P 500. Stock markets are volatile and since 2006-2008, the fund beta has smoothed out and is steady. This is due mainly to non-correlated assets such as the real estate pool, the bond pool and the private equity pool, all of which have much less sensitivity to the stock market than equities, which in turn reduces the stock market sensitivity of the total fund. The steady strategy of asset class exposure has performed well against the benchmark over the 3 and 5-year periods, but not over one year. International growth has outperformed over three years, but has been under for the 5 and 1-year terms. Overall, MBOI rankings are 44, 61 and 24 respectively, for international active equity peer comparisons for the 1, 3 and 5-year periods. Peer performance comparisons were much better for value than for growth over the three periods.

Alliance Bernstein has been substantially more volatile. They have returned less over the median and the benchmark, but have taken more risk; they outperform when the equity market is up, but lag when the market is down. Suitable replacement candidates can have attributes of outperforming the median manager while taking less risk. Hansberger has been the most volatile in the portfolio and earned the least return; worth taking a look at. They capture more than 100% of the upside, but also lose more on the downside. The numbers merit further investigation, considering the results.

INVESTMENT ACTIVITIES/REPORTS

Retirement Systems Asset Allocation Report

Mr. Sheets reviewed the asset allocation reports for the quarter ending September 30, 2014. Returns were flat this quarter; changes in asset allocation were minor, driven by relative performance differences and transactions. Equities fell, domestic had a slight positive performance; international stocks had very weak results, -5.6%. Private equity experienced a positive return of 4% and the allocation increased by 0.5%. Sales from the domestic equity and real estate pools went into fixed income, which ended the quarter at a 22.3% allocation weight

The cash allocation is up slightly to 2.2%. The policy range for cash is 1-5%; although this fluctuated at times during the quarter due to lumpy distributions affecting two plans. Firefighters and Police received an influx of cash during September, which was fully invested on Oct. 1st. Similarly, Volunteer Firefighters receives an annual influx of cash at the end of June, which is largely invested at the beginning of July.

Mr. Sheets reviewed the State Street Bank custom peer group comparison for the quarter end. The peer group is comprised of over 20 participants this quarter. Compared to peers, MBOI relative exposures for total public equity equals the median. Last quarter, the public equity median neared 59%, compared to 56% this quarter end. MBOI has a higher allocation to U.S. equities at 39% vs. 33% for the median, which was 38% last quarter; international equity was just under 17% at quarter end, compared to a median of 20%. The MBOI relative tilt has helped performance considerably in recent years. Fixed income is at the median, cash is below and real estate ended the quarter at 8.8%, which is above median.

Private equity has performed well. The median for private equity is 12% this quarter; MBOI is at 11%, slightly below the median but higher than the last quarter median, which was 10%. The median shifts from quarter to quarter partly because individual peer plans are not held constant in these types of public fund universes. However, the assets exposures by each anonymous plan are known, which enables netting out those plans with no exposure to certain asset classes, so the allocation comparisons are only to those plans that actually have an exposure to a given asset class.

The State Street Bank peer comparison of performance for funds at the $3–$20 billion range shows performance for additional periods than those reflected in the RVK peer comparisons, which utilizes a different peer group. Peer median performance for this State Street universe is consistent with the RVK data over the one and three year periods, and the median varies just slightly for the other periods, with the ten year median at 7.43% vs. RVK at 7.76%. The key take away is high absolute numbers, good relative rankings and an improving relative performance. The data is as good as it has ever been; performance over five years is impressive, aided by the public equity bias, but there is no expectation such high absolute performance will continue.

Executive Director David Ewer commended staff for the excellent performance.

Montana Private Equity Pool (MPEP)

Mr. Ethan Hurley presented the Montana Private Equity Pool report for the quarter ending June 30, 2014. The new commitments made since the last board meeting are shown in the table below:

Fund Name	Vintage	Subclass	Sector	Amount	Date
Centerbridge Capital Partners III, LP	2014	Buyout/Distressed	Diversified	$20M	8/29/2014
Spire Capital Partners III, LP	2013	Buyout	Diversified	$10M	9/12/2014
Tenaya Capital VII, LP	2015	Venture Capital	Diversified	$15M	9/12/2014

Member Karl Englund asked if venture capital investments can be invested in directly or if fund of funds must be utilized.

Mr. Hurley explained there are just a handful of funds in venture capital that attract the best entrepreneurs and account for most of the realized returns, and it is almost impossible to break into those; no direct access is available. Tenaya Capital can be viewed as the second derivative of these specific funds. Tenaya has established relationships with the top Venture Capital funds, which allows direct access to the premier early stage funds. Tenaya is raising additional funding, has a strong team and strategy and provided BOI an opportunity that would otherwise not be available.

Mr. Sheets added early stage venture capital has particular access issues, and the general pool strategy focuses on buyouts. Early stage venture capital has a huge "J" curve effect for the first five or six years of a fund and it is difficult to find consistent performers among those that are accessible. Staff has dialed back venture capital, reducing the need for fund of funds.

Mr. Hurley reported the private equity portfolio had the first negative cash flow quarter since the fourth quarter of 2011, specifically due to capital calls outpacing distributions; but is not indicative of a trend.

Total fund exposure is broadly diversified and buyout centric. The portfolio remains very broadly diversified by industry exposure and there is no attempt to over/under weight specific areas.

Portfolio geographic exposure is North America centric, and will continue as such. The U.S. market continues to be the deepest and most liquid in the world. The majority of the portfolio is direct primary fund investments. The total portfolio net asset value is down from last quarter, due to the secondary sale.

Mr. Hurley concluded the net IRR of 12.82% is significantly above the actuarial return and advised 10-year IRR return data will be available in the third quarter for private equity.

Montana Real Estate Pool (MTRP)
Mr. Hurley presented the Montana Real Estate Pool report for the quarter ending June 30, 2014. Real estate had little activity over the quarter with no new commitments. Real estate is slowly recovering, and although lumpy, staff is pleased with recent results. Portfolio exposure is broadly diversified and includes the Montana buildings. Core real estate is broadly diversified by region and type. Performance is driven by manager ability to source deals and carry them out, rather than a focus on a particular region or property type. Recent time weighted returns are favorable.

Mr. Sheets added timberland is encompassed in the portfolio and its returns have been a bit of a drag. Nevertheless, timberland is an important diversifier in the real estate pool. There is minimal manager exposure and staff will continue to maintain this flavor of diversification.

Chairman Noennig asked if other pension funds invest in timber.

Mr. Sheets stated some plans use timberland in addition to commodities or inflation-protected bonds in a broad "real assets" asset class, with the assumption they will all perform well during periods of high inflation. The MBOI real estate pool contains only real assets consisting of commercial real estate and timberland.

Mr. Jim Voytko added different funds use thematic inflation protected assets in a single bucket. MBOI's two private pools are used as all-purpose vehicles for private equity, distressed assets, timber and venture capital.

Partnership Focus List
There were no changes to the MPEP Focus list, and one addition to the MTRP Partnership Focus List this quarter. Carlyle European Real Estate Partners III, LP, has been added due to performance. They are divesting European assets and have cut staffing in half. As an area of ongoing concern, staff will continue to monitor closely.

Mr. Sheets stated unlike a number of real estate funds on this list, the private equity funds list is short considering our size. On the real estate side, many of the listed funds represent legacy funds that were part of the initial allocation to vintage years 2005/2006. Contracts cannot be terminated; and although the interests could be sold, it would be at a steep discount for the listed funds. Any buyers would be wary. There is a tradeoff between paying additional management fees, or allowing assets to wind down over time; a tailwind may help the residual assets held in these funds.

After a brief discussion regarding the manager watch lists, Mr. Hurley stated private equity is a relationship business, and the publishing of names on a watch list presents very little risk, although media inquiries are sometimes received when changes occur on the lists. It is incumbent upon staff when having internal discussions on manager performance to bring relevant items to the board.

Mr. Cliff Sheets, CFA, CIO, Mr. Nathan Sax, CFA, Portfolio Manager, Fixed Income and Mr. Rich Cooley, CFA, Portfolio Manager, Fixed Income/STIP
Mr. Nathan Sax presented a review of fixed income assets for the quarter ending September 30, 2014. Interest rates changed little over the quarter and globally the inflation rate remained low, which

helped the long end to perform very well despite fears of tighter monetary policy. Early in the third quarter investors moved into Treasuries and Agencies and away from risk assets. All fixed income pools are within policy ranges and comparable to the Barclays Capital Aggregate Bond Index benchmark, and within policy ranges for the plus sectors: high yield, non-dollar bonds and core real estate.

The High Yield spreads widened, although spreads are still tighter than they were at the beginning of the year. There is more demand for quality and liquidity. The recent rally in the U.S. dollar, resulting from policies in Asia and Europe flooding economies with money, has resulted in attractive interest rates relative to overseas markets after the U.S. ended quantitative easing. U.S. interest rates are attractive relative to Germany and Japan. This has attracted capital into the U.S. bond market.

Mr. Sax presented gross returns vs. the index and peer rankings for the Retirement Fund Bond Pool (RFBP). Including the external managers, the pool ranked 43rd over five years and 52nd over three years and 58th over the one year. The Trust Fund Investment Pool (TFIP) performed moderately better recently, due to a lower allocation in high yield and an allocation to core real estate.

Mr. Sax reported that the Core Internal Bond Pool (CIBP), which represents approximately 75% of the fixed income assets within the Retirement Funds Bond Pool (RFBP), outperformed the benchmark, the Barclays US Aggregate Bond Index, by 142 basis points over five years. Aberdeen has outperformed the benchmark, but peer ranking is in the 3rd quartile as some exposures to non-U.S. currency has caused problems over the short term. Neuberger Berman is ranked at the 32nd percentile over three years. Reams Asset Core Plus outperformed the benchmark by 109 basis points over five years, but is trailing for the most recent year, at the 97th percentile. In late 2013, Reams bet on interest rates rising, but they fell instead during 2014. They have performed slightly better in the most recent quarter; however still lag their benchmark, the Barclays Capital Universal bond index.

Fixed Income External Managers Watch List

Post Advisors has been removed from the watch list. Mr. Sax and Mr. Jon Putnam visited the manager in October. Post recently had a change in ownership and is now owned by Principal Insurance Company. After visiting, staff is convinced they have stabilized. They are conducting a search for a Chief Operating Officer and have made enhancements to staff. Reams remains on the watch list for performance, which has deteriorated in the last year. They manage about 11% of RFBP assets; staff will continue to monitor them closely.

There were no changes to the below investment grade list. Lehman Brothers is trading at 20 cents on the dollar, and going through bankruptcy; however, BOI did receive a cash distribution.

Short Term Investment Pool, State Fund Insurance & Treasurer's Fund Report

Mr. Rich Cooley gave an overview of the Short Term Investment Pool (STIP) for the quarter ending September 30, 2014. The quarter remained quiet in money markets. The TED spread over the last 12 months is 10 to 11 basis points, with very little movement in the short end. The markets are comparable to last year, with no movement in short-term rates. Long-term rates started the year at 3% and are down to 2.5%, awaiting movement by the Federal Reserve. The STIP portfolio is within all guidelines; with a weighted maturity at 52 days, the maximum allowed by policy is 60 days. Purchases over the quarter included floating rate CDs, fixed rate agencies and Yankee CDs.

STIP net daily yield as of October 31, 2014 was 0.10%, as compared to the current one-month Libor rate of 0.156%. The portfolio composition is well diversified and within all policy guidelines. Additions to the reserve fund continue to be deducted. Structured investment vehicles (SIVs), paid down $3,864,000 over the quarter and the reserve fund increased by $1 million. The balance of the reserve fund on 9/30/14 was $23 million and the SIV balance is $34 million, closing the gap to $7 million.

Mr. Cooley stated there was very little action in the Treasurers Fund. The purchase of 3-year agencies has provided a yield advantage over STIP.

The State Fund portfolio continues to have a slightly shorter duration and a yield to maturity slightly longer than the benchmark. The fixed income portion of the portfolio outperformed the benchmark by 16 basis points over the quarter and outperformed by 69 basis points over one year. Purchases for the quarter included $5 million in corporate bonds and agencies; and sales included $17 million in shorter floating rate securities. Proceeds were invested in similar securities to pick up yield. Three million in equity fund units were sold, as the equity allocation neared 12%. Over the last 12 months, $14 million in equity units have been sold. The fund account is within all policy parameters: 3.6% in STIP at quarter end and securities rated less than A totaled less than 25% exposure. The portfolio contains 11.5% in equities and real estate has performed well with just over 5% exposure. Mr. Cooley and Mr. Sheets met with State Fund recently to discuss fund performance and to review the real estate exposure, a relatively new asset addition to the fund.

Montana Domestic Equity Pool (MDEP)

Mr. Rande Muffick reported on the Montana Domestic Equity Pool (MDEP) for the quarter ending September 30, 2014. The positive effects of pool restructuring over the last couple of years are apparent. Pool performance is exceptional, ranking in the top decile for one year, and the top quartile over the 3 and 5-year periods. Along with restructuring, manager selection has been a factor and has worked well. MDEP is almost 40% of the plan total and is the most important pool within the allocation; attaining top performance for 40% of assets is substantial. Mr. Muffick noted he has never seen comparable numbers; the portfolio is hitting on all cylinders. Managers struggled a bit in the third quarter and did give up some ground in mid-caps, but in general fared better than peers. There was a market correction in October, but the market bounced right back. Cyclicals and energy were the most vulnerable to the correction; however, this could benefit the economy as a whole.

Montana International Equity Pool (MTIP)

Mr. Muffick reported on the Montana International Equity Pool (MTIP) for the quarter ending September 30, 2014. The pool has outperformed for three years, although the available peer group is not a great comparison; many in the peer group do not have emerging market exposure or small cap as MTIP does. Historically, going back to 5 and 7-year periods, many peer plans are absent as they did not report. The MTIP ranking would be higher if all funds reported over the long term, which must be considered when looking at the MTIP peer group comparisons.

Mr. Muffick noted that managers are not pulling their weight in the pool; however, the MTIP restructuring was not completed until last May, and results are expected to mirror the same positive changes that the domestic pool has shown. American Century and Templeton, hired in March, have just two quarters of data. Staff researched options for emerging market investments; however, after consideration decided against it at this time.

Public Equity External Manager Watch List

Mr. Muffick reviewed the Public Equity External Manager Watch List. There are three international managers on the list. Traditionally, a manager's performance is monitored over a full market cycle, and if performance is poor, options are explored. Any available options should offer an improvement over a current, underperforming manager. Hansberger and Alliance Bernstein both performed very well in just one year, before they were hired which skewed their performance numbers upwards. We have not seen that type of performance since we hired them.

Two domestic managers were added to the watch list this quarter. Artisan, a midcap value manager, has good long-term numbers, but the fund has fallen off a cliff in the last year and is down about 10% vs. the benchmark. Some bad stock picks and exposure to technology contributed to the underperformance; staff will continue to monitor closely. The other addition to the watch list is Voya Investment, a small cap growth manager. Recently transitioned from ING to Voya, the team leader has announced retirement in nine months. It is prudent to add the company to the watch list with the change in management.

Staff is looking for managers with more consistency over the long term. There is one potential value manager which staff has been communicating with and initial due diligence has been completed. There are a handful of growth manager candidates and staff hopes to hire two from the group. Consistent performance and complimentary pairing with existing managers are both important factors. Acadia manages for downside capture, so there is need for a manager with upside capture. Staff is searching for two growth managers with divergent styles as well.

PUBLIC EQUITIES MANAGER WATCH LIST
November 2014

Manager	Style Bucket	Reason	$ Invested (mil)	Inclusion Date
Alliance Bernstein	International – LC Value	Performance	$112.0	August 2012
Hansberger	International – LC Growth	Performance, Ownership Change	$113.2	May 2013
Martin Currie	International – LC Growth	Performance, Ownership Change	$113.6	August 2014
Voya Investment	Domestic – SC Growth	Portfolio Manager Change	$31.2	November 2014
Artisan	Domestic – MC Value	Performance	$132.5	November 2014

Investment Policies, PERS – Defined Contribution Disability Plan and Historical Society Trust Funds, Mr. Cliff Sheets, CFA, CIO

Mr. Cliff Sheets presented two investment policy statements for Board approval. The first policy is a new one for the PERS Defined Contribution Disability Plan. In 2002 the state introduced the defined contribution disability plan to provide a similar benefit enjoyed by those participating in the defined benefit plan. The plan is funded through a 30 basis point employer contribution. Over time, the plan has grown to the current balance of $2.5 million; however, an investment policy was never formulated. The fund is expected to continue to grow and receives an approximate $350,000 annual infusion. The fund is now invested in STIP with a near zero yield. The new policy is a fairly generic investment policy, which will utilize three types of BlackRock index funds. Management of these assets will be fairly straightforward via these index funds rather than via the DB plan pool approach, with periodic rebalancing. Under the new policy with an allocation exposure to a variety of longer term asset types, the fund is expected to receive the benefit of higher returns over the long term.

Responding to a question from Chairman Noennig, Mr. Sheets advised the plan may not meet the same criteria as other qualified investment plans; therefore, we do not want to use the asset pools to invest the fund.

Executive Director David Ewer stated the fund is not a retirement benefit, but rather is a disability benefit. No return is guaranteed and employees do not pay into the fund. Since it is not a true retirement plan, it must be segregated. It may take some time to get the index funds in place, but as a very young plan, the growth profile and lack of a need for cash enables utilizing longer-term investments.

> Board Member Jack Prothero made a Motion to approve the Montana Public Employees' Retirement Defined Contribution Disability Plan Investment Policy Statement. Member Marilyn Ryan seconded the Motion. The Motion carried.

Mr. Sheets presented the second policy for Board approval. The policy is a revision of the Historical Society Trust Funds Investment Policy Statement. The policy revisions use standard language to more closely reflect the long-term return requirements of the fund and the associated risk tolerance of investing in the Trust Funds Investment Pool to meet the long-term time horizon of the fund.

Board Member Marilyn Ryan made a Motion to approve the Historical Society Trust Funds Investment Policy Statement. Member Sheena Wilson seconded the Motion. The Motion carried.

Executive Director Ewer reviewed Board member requests for "to do" items for the next Board meeting.

1. The monthly portfolio snapshot will be sent out monthly to Board members.
2. Member Sheena Wilson requested that staff present to the Board a report on the Annual Report and the corresponding financial statements.
3. Staff will provide information on the STIP reserve fund, including the outstanding former SIV-related asset amounts, and present a draft plan to Board members.
4. The revised asset allocation spreadsheet reflecting the corrected asset class range numbers will be distributed to the Board.

Member Jack Prothero thanked staff for a great year of returns and expressed appreciation for all their hard work. Member Karl Englund stated Member Gary Buchanan recently resigned from the Board and expressed thanks for all the insight Member Buchanan brought to the Board during his tenure as a Board member.

Being no further business, the meeting was adjourned at 5:13 PM.

Next Meeting
The next regular meeting of the Board will be February 24-25, 2015 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 E. Noennig
Mark E. Noennig, Chairman

ATTEST: David Ewer
David Ewer, Executive Director

DATE: 2/25/15

MBOI:drc
1/29/15