

These minutes are Approved and Final. Full Board review and decision took place at the February 23, 2016 Regular Meeting of the Board.

**MONTANA BOARD OF INVESTMENTS  
DEPARTMENT OF COMMERCE  
2401 Colonial Drive, 3<sup>rd</sup> Floor  
Helena, Montana  
MINUTES OF THE MEETING – November 17-18, 2015**

**BOARD MEMBERS PRESENT:**

Mark Noennig, Chairman  
Karl Englund, Vice Chairman  
Kathy Bessette  
Terry Cohea  
Quinton Nyman  
Jack Prothero  
Marilyn Ryan  
Jon Satre  
Sheena Wilson

**LEGISLATIVE LIAISONS PRESENT:**

Representative Kelly McCarthy  
Senator Bob Keenan

**STAFF PRESENT:**

Polly Boutin, Associate Financial Manager	Ed Kelly, Alternative Investments Analyst
Jason Brent, CFA, Alternative Investments Analyst	Teri Kolnik, CFA, Alternative Investments Analyst
Geri Burton, Deputy Director	Eron Krpan, CIPM, Investment Data Analyst
Dana Chapman, Board Secretary	Tammy Lindgren, Investment Accountant
Richard Cooley, CFA, Portfolio Manager, Fixed Income/STIP	April Madden, Investment Accountant
Frank Cornwell, CPA, Associate Financial Manager	Savannah McCormack, Administrative Assistant
Craig Coulter, Alternative Investments Analyst	Rande Muffick, CFA, Portfolio Manager, Public Equities
Joseph M. Cullen, CFA, CAIA, FRM Chief Investment Officer	Mary Noack, Network Administrator
Roberta Diaz, Investment Accountant	Kelsey Poore, CPA, Investment Accountant
David Ewer, Executive Director	Jon Putnam, CFA, FRM, CAIA, Fixed Income Investment Analyst
Julie Feldman, CPA, Financial Manager	John Romasko, CFA, Fixed Income Investment Analyst
Julie Flynn, Bond Program Officer	Nathan Sax, CFA, Portfolio Manager, Fixed Income
Tim House, Equity Analyst/Investment Operations Chief	Steve Strong, Equity Investment Analyst
Ethan Hurley, CAIA, Portfolio Manager, Alternative Equities	Louise Welsh, Senior Bond Program Officer
	Maria Wise, Administrative Assistant
	Dan Zarlring, CFA, Director of Research

**GUESTS:**

Meg O'Leary, Executive Director, Department of Commerce  
Becky Gratsinger, CFA, RVK, Inc.  
Mark Higgins, CFA, RVK, Inc.  
Dore Schwinden, Executive Director, MPERA  
William Holahan, MPERA  
Shawn Graham, Executive Director, TRS  
Herb Kulow, CMB, Portfolio Manager, In-State Loan Program (Contracted)

**CALL TO ORDER**

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 12:45 PM. As noted above, a quorum of Board Members was present. Chairman Noennig advised video recording of the meeting was underway and called for public comment. There was none. Chairman Noennig called for comments or revisions to the August 18-19 Board Meeting Minutes.

Member Marilyn Ryan provided a correction on the TRS report on page 3 and Member Sheena Wilson provided a correction on the same page to the PERS report.

Member Ryan made a motion to accept the August 18-19, 2015 Board Meeting Minutes as revised. Member Jack Prothero seconded the motion. The motion carried.

Chairman Noennig called for comments or revisions to the October 6 Board Meeting Minutes. There were none.

Member Prothero made a motion to accept the October 6, 2015 Board Meeting Minutes as presented. Member Terry Cohea seconded the motion. The motion carried.

### Introduction

Executive Director David Ewer introduced and welcomed BOI's new Chief Investment Officer, Joseph Cullen. Mr. Cullen has been on board two weeks. Chairman Noennig also welcomed Mr. Cullen and noted he has already met all Board members.

## **ADMINISTRATIVE BUSINESS**

### Audit Committee Report

The Audit Committee met prior to the Board meeting. Committee Chairman Jon Satre advised the Committee had several decision items. The first item was an update on the FY 2015 Financial Audit. The legislative auditors were on site in mid-October. Staff has received draft opinions, which have been tentatively approved with no audit recommendations. An optional exit conference with the auditors is planned for the first week of December, if it is deemed necessary.

The Committee received a staff update on revisions to the Annual Report. Member Sheena Wilson assisted staff in developing the new format, which gives the Report a more modern feel. The Audit Committee is recommending the Board approve the draft Report and authorize staff to proceed with the changes, incorporating minor suggestions being coordinated with Member Wilson.

Audit Committee Chairman Satre made a motion to accept the Audit Committee's recommendation to approve the new draft Annual Report. Member Sheena Wilson seconded the motion. The motion carried.

Chairman Satre reported the Committee reviewed the Consolidated Unified Investment Program Financial Statement highlighting changes recently made to address STIP reporting requirements for participation (by the pools only) and clarifications in the footnotes. Previous statements in the footnotes reflected BOI did not have certain policies in place addressing cash risk. Several related policies have been revised to disclose cash risks and the related "no policy exists" footnotes were removed from the financials. The Enterprise Fund financials also incorporated changes due to GASB 68 and GASB 71 reporting requirements.

Chairman Satre made a motion recommending Board approval of the financial statements as presented. Member Sheena Wilson seconded the motion. The motion carried.

Chairman Satre reported the Committee approved a minor change in the Governance Manual Securities Litigation Policy Appendix F, as presented in Director Ewer's memo on securities litigation under Tab 3 in the Board packet. Staff is proposing the change to revise the frequency the executive director receive securities litigation reports from monthly to quarterly.

Chairman Satre made a motion to accept and implement the change in the Governance Manual, Appendix F. Member Sheena Wilson seconded the motion. The motion carried.

Chairman Satre stated the Audit Committee also considered and approved the proposed STIP Local Government Resolution and Participation requirements as detailed in Executive Director Ewer's memo.

Chairman Satre stated the Committee is recommending approval by the full Board and made a motion for approval. Member Sheena Wilson seconded the motion. The motion carried.

#### Human Resource Committee Report

The Human Resource Committee met prior to the Board meeting. Human Resource Committee Chairman Karl Englund stated the Committee reviewed and discussed evaluations of exempt staff; no actions were taken and no motions were required.

#### Loan Committee Report

The Loan Committee met prior to the Board meeting. Committee Chairman Jack Prothero reported the Committee considered two INTERCAP loans for approval. The Committee approved a loan for \$1.54 million to the City of Great Falls for waste management vehicles; the loan will be in the form of a revenue bond. The Committee also considered a loan request, received annually, from the Montana Department of Transportation (MDT) for \$3.3 million to finance vehicle purchases for the state motor pool. MDT is an ongoing relationship; the Committee approved the loan.

Chairman Prothero stated the Committee considered the INTERCAP Bond Anticipation Note and Additional Bonds Resolution No. 235 and asked Ms. Louise Welsh to provide details to the Board.

Ms. Welsh stated that Bond Program staff is requesting Board approval on a preliminary resolution for a new ~\$10 million bond to be issued in 2017 during the annual remarketing period. Staff is also asking for approval to issue an \$8.5 million Bond Anticipation Note (BAN) in the event funds need to be borrowed from the Board's Coal Tax STIP fund. Two bond issues, 1997 and 1998 are both approaching maturity making it difficult to make long-term loans with these funds; thus they are of limited use to INTERCAP. The 1997 bond matures in 2017 and will be fully redeemed in 2016. The 1998 bond matures in 2018 and staff intends to partially redeem that bond in 2017. The move will save money and balance out program needs. Staff is requesting approval.

Committee Chairman Jack Prothero made a motion to approve the BAN and the issue of the additional bonds. Member Cohea seconded the motion. The motion carried.

Chairman Prothero stated the Committee approved a two-part In-State loan package, which requires full Board approval.

The first part is a participation loan for \$10 million to Consumer Direct Holdings, Inc. (Consumer Direct) and Consumer Direct Grant Creek Campus, LLC, in participation with the Bank of Montana, Missoula. The loan term is 20 years. The as yet to be built building will serve as loan collateral and the loan terms fall well within policy guidelines.

The Committee recommends full Board approval of the Consumer Direct loan package as presented by staff and Committee Chairman Prothero so moved. Member Kathy Bessette seconded the motion. Member Karl Englund advised that both Consumer Direct and the Bank of Montana are clients, and therefore he will abstain from the vote. The motion carried.

Chairman Prothero stated the second part of the loan is an infrastructure loan, requested by the City of Missoula for \$2 million for a term of 20 years. The loan is part of the financial package for Consumer Direct for the purchase of the land for the building construction.

Chairman Prothero made a motion to approve the \$2 million infrastructure loan to the City of Missoula. Member Terry Cohea seconded the motion. Member Englund noted he would again recuse himself from the vote. The motion carried.

Chairman Prothero noted loan requests are picking up and staff has been busy; next year should be an active year for the loan program.

Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) Updates  
PERS Representative Sheena Wilson had no comments.

TRS Representative Marilyn Ryan noted Executive Director Shawn Graham would present the TRS Actuarial Report later in the agenda. Member Ryan reported she attended the TRS San Diego conference, which included some familiar faces. Representatives from TRS actuary Cavanaugh Macdonald Consulting, LLC were presenters at the conference.

Legislative Liaisons Comments

Senator Bob Keenan had no comments.

Representative Kelly McCarthy detailed comments he shared with the Loan Committee regarding a recent conversation he had at an infrastructure meeting of area mayors held in Miles City. Comments were made expressing the sentiment that the state was not doing enough to assist the region financially. Representative McCarthy explained to the group all that is being done, and added the requests for free money submitted during the last legislature session were not granted.

Representative McCarthy reported the state of state finances looks good. The legislative fiscal report is out and reveals that although there has been a downturn in oil and gas activity, the lack of revenue has not had an extreme impact. Additionally, the usual correlation shown between personal income tax wage reports and withholdings, which the Department of Revenue receives, shows withholdings are higher than originally anticipated. Revenue is \$7 million above previous estimates, due in part to drawing dollars from 401K taxes.

**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 (MPERA)

Mr. Graham stated TRS is required to present the actuarial evaluation to BOI annually. Last legislative session included three bills that impacted TRS, including Senator Brown's bill which required recording of board meetings, but none had an actuarial impact.

Mr. Graham reviewed the basic retirement funding equation: contributions, plus investment income, minus distributions. The results of valuations for FY15 were not as strong as FY14 with 4.57% market asset return vs. the 7.75% actuarial assumption. Valuations are calculated using an actuarial smoothing over four years. The smoothed rate is 9.95% or 1.84% above the actuarial rate of 7.75%. Based on 2013 legislative changes, the funded rate is expected to increase. The GABA (Guaranteed Annual Benefit Adjustment) is 1.5% for employees hired prior to July 2013; however, GABA varies from 0.5% to a maximum of 1.5% for those hired after July 2013, depending on the funded status of the plan.

Mr. Graham reviewed data for active vs. retired employees. The number of active employees has remained static since 2005 and the districts are not hiring more staff. Retirees have increased by 3.4% annually, averaged over 10 years, and the trend is holding. Last year the rate was 3.4%, or 0.8 retirees per active member. Ten years ago, there were 0.6 retirees per active member.

In 2015, the average salary for all active members was \$52,551. Retirees average income for 2015 was \$21,667 and salaries increased by 1.5% while retiree benefits increased by 2.4%.

Member Jon Satre asked what the average length of service is for employees.

Mr. Graham stated the average for current employees is 11.6 years of service and the average age for TRS employees is 45.6 years. The average years of service credit at retirement is 26, and 58 is the average retirement age.

Representative McCarthy asked if the reason full time salaries remain flat is due to higher earners being replaced by lower earning employees, and if so, is that planned.

Mr. Graham stated contributions are a percent of pay, so yes. Additionally, it is partly the result of the recession; from 2005 – 2010 salaries increased at a higher rate. The current trend of baby boomers retiring, with their many years of service, and the new entries into the job market have lower pay and consequently a lower rate going into retirement.

Representative McCarthy asked with the GABA change effective after July 1, 2013, under the new law did the payroll contribution percent remain the same for new employees.

Mr. Graham explained there is a two-tier system. For tier one employees the contribution rate is 8.15% and for tier two employees, the contribution is 7.15%, plus 1% depending on the funded status of the plan. The benefit status for both tiers remains the same.

Mr. Graham noted the combined payroll vs. benefits trend remains relatively steady and even though the market rate of return for FY15 was 4.57%, amortization still occurs sooner. The unfunded accrued liability decreased from \$1.793 billion to \$1.741 billion and the funding rate increased from 65.45% to 67% and amortization decreased from 28 to 26 years. If all valuations hold true, the fund will be fully funded in 2041.

Member Prothero asked how funding of Montana compares with other states.

Mr. Graham stated the funded ratio and amortization period are not mutually exclusive. Montana is on track with most systems, due in part to several revisions in the systems. The push is to be 80% or more funded, and triggers in statutes rely on being 80% funded. TRS wants to get to 100%, and even ideally to 110% funded status. Across the country, 70% is about average.

Member Cohea asked for an update on the request from the Colorado attorney for plan member names and benefit information.

Mr. Graham stated at the last TRS board meeting the request was denied and the Colorado attorney who made the request was notified of the board's decision. So far, the board has not received any further communication from the individual. The overwhelming response from members was that the privacy of members far outweighs the right to know and the board upheld the wishes of the members. If the request is revised and resubmitted, the board may consider providing the information. The board received a similar request in 2011 and the attorney general ruled the information as public, but the board voted the same way then, not to provide the information. That prior request for information did not ask for retiree names and TRS complied with the request.

Mr. Dore Schwinden presented the MPERA 2015 actuarial report, stating that while MPERA is not compelled by law to provide the report, they do so annually. MPERA manages eight defined benefit programs. Mr. Schwinden reviewed the funding status and highlights of the 2015 valuation report. The valuation determines the amount of contributions needed to fund benefits and determines the funded status. The report is generated annually and provides year-to-year comparisons. In 2015, much like TRS, the plan saw a 4.5% investment market return with a 9–9.6% smoothed return. The plans increased by a total of over \$7 billion. PERS, the largest fund, gained \$85 million. Most funds are adequately funded and six of the eight amortize within 30 years. Generally, funded status increased and amortization periods were reduced.

Game Wardens funded status remained the same as a year ago at 84% and the system does not amortize; the system includes correctional officers and game wardens. No plan has been devised yet to fix the funding of the system and to amortize the system in under 30 years.

MPERA has worked on the Sherriff's plan and the system is 81-83% funded, but still does not amortize; however, steps are being taken to devise a fix and there is a tentative agreement in place for prospective funding. There is hope for legislation that will assist the amortization of the system.

Member Englund asked if there is a solution.

Mr. Schwinden stated an increase of employee and employer contributions, whether as a onetime injection or an ongoing basis would help; the system has not amortized for a number of legislative sessions.

Member Englund asked is there anything the BOI Board could be doing more or less of working with MPERA, other than create returns.

Mr. Schwinden stated the relationship with BOI is very good; lower fees are always positive, but it is not within MPERA's control. BOI staff provides great service and wonderful expertise at the Board and legislative levels and it was a pleasure working with Mr. Cliff Sheets.

Mr. Graham added TRS is looking forward to working with new CIO Mr. Joe Cullen, and an excellent relationship exists with Executive Director Ewer.

### **EXECUTIVE DIRECTOR'S REPORT**

#### **Overall Comments**

Executive Director Ewer presented his Executive Director Reports, including the following items:

- Requests from the prior Board Meeting - memo from Department of Commerce Chief Legal Counsel Marty Tuttle detailing the procurement of outside legal services; authority for approval is designated solely to the Legal Services Review Committee by Executive Order 5-93.
- Quarterly cost report and the MBOI snapshot. There were no comments or questions.
- Resolutions – Certain Board resolutions are presented annually for Board review per the Governance Manual:
  - The Resolution 217 memo lists all changes of approved investment managers and lists new or removed managers in the past year. Resolution 217 also lists any changes made regarding BOI staff authorized to conduct financial transactions with the investment managers;
  - Resolution 218 is the delegation of authority in the absence of the Executive Director; and
  - Resolution 234 is the delegation of authority in the absence of the Chief Investment Officer.
- Financial Statements Update - the statements are provided and posted by December 31 of each year; FY15 statements are nearly complete, pending a few minor changes.
- Governor's Letter of Public Participation - a reminder we work for the public, democracy is open and transparent in Montana and is required by law and the constitution.
- 2016 Board Meeting Calendar - Dates are nearly identical to 2015 and do not vary much from year to year as meetings must be scheduled to allow reporting on quarterly work flow to the Board.
- 2016 Systematic Work and Education Plan - implemented over the last four years, the work plan draft for 2016 may be revised for items the CIO is responsible for now that new CIO Joe Cullen is on board. A review of all policies is conducted each April, and that will remain the same. Having a structured work plan in place provides collateral benefit to the public. The plan includes a schedule showing all items before the Board at least once every 24 months; many items are before the Board annually per policy. The draft Work Plan is used by the Executive Director, in consultation with the Board Chairman, to set Board meeting agendas.

## **BENCHMARKING**

### **Benchmarks as Currently Implemented by the Board – Mr. Eron Krpan, CIPM**

Mr. Eron Krpan presented an overview of benchmarking. Many managers claim to beat the market and benchmarks are used to measure manager performance. Benchmarks also dictate which assets are invested in, as well as identifying and evaluating risk exposure; for example, a large cap stock manager will not take risks similar to those of a small cap manager.

MBOI uses benchmarks to appraise the performance of managers and custom benchmarks are used for the pension plans, the weighted averages for the pools, specified for each pool and reflective of the underlying assets in the pool. A relevant underlying index does not exist for private equity; MBOI uses the S&P 1500 + 4% to approximate the expected returns.

The benchmark litmus test should reveal whether it provides an appropriate measure of performance against return and should be consistent with the style and expertise of a manager. It should also be reflective of current investment opinions, the underlying assets, and a benchmark cannot be retroactively applied. Using an invalid benchmark would be similar to measuring the skill of Tiger Woods as a bowler. To measure absolute return, or actuarial rate, one benchmark that meets criteria is an index; however, they are not available for all asset classes. A custom benchmark is appropriate when a manager's style is not represented by a publicly available benchmark.

Peer group benchmarks are not particularly valid due to differences in asset allocations and without knowledge of the underlying assets. Overall plan benchmarks are calculated on a monthly basis and the calculated weights match the weights in the pools. A manager can purposefully overweight or underweight an asset to try and time the market.

The public equity pools do not deviate much from zero/excess return, whereas the private equity and bond pools do. It is important to understand why a pool is exceeding or falling short of its benchmark.

The Montana Private Equity Pool (MPEP) benchmark has been discussed over time; however, the pool has provided excess return over 10 years, therefore as a rule, the benchmark is an accurate reflection of returns over time.

The benchmark used for the Montana Domestic Equity Pool (MDEP) is the S&P 1500. The benchmark is investable through passive or ETFs, it is measurable daily and the BOI portfolio is relatively similar to the composition of the S&P 1500. BOI specifies benchmarks in advance when hiring managers. The Montana International Investment Pool (MTIP) is similar to MDEP in criteria. MTIP uses the MSCI ACW ex US benchmark which is unambiguous, technically investable, and can be approximated; therefore, it is measurable and appropriate. The benchmark is an all cap world index, minus the U.S. and is a very broad, investible market.

The benchmark used for the Retirement Funds Bond Pool (RFBP) is the Barclays US Aggregate Bond Index. The index is technically investible, but due to size it is approximate. The index is measurable; however, it is important to note differences between the pool and the benchmark, including credit quality. The RFBP contains high yield assets, whereas the benchmark does not. The bond pool will behave slightly different, but is still accountable to the benchmark.

Member Terry Cohea asked if it would be appropriate to have a benchmark containing 10% of high yield bonds.

Mr. Krpan stated it would be possible to use a customized benchmark and it may eliminate some tracking error; there are investment analytic products, which could make it easier.

Mr. Nathan Sax added it would be possible to use a hybrid index which would be appropriate for a strategic allocation to High Yield.

Executive Director Ewer added the Barclays universe has changed dramatically over time; before the Great Financial crisis (GFC) it contained a lot less U.S. treasuries, vs. 11 years ago. Currently BOI is not overweight in treasuries. The notion that if year over year the portfolio has potentially more yield because you have more high yield, it does not necessarily mean the benchmark should be changed. Theoretically, you want the same benchmark through the decades. Mutual funds close out funds and open new ones rather than change the benchmark. If an asset class always performs over or above the benchmark, it is important to understand how the measurement is working.

Mr. Krpan stated within the RFBP, the benchmark meets the necessary criteria. Sector allocation, credit quality and yield curve placement all factor in over time.

Mr. Krpan reviewed the Montana Real Estate Pool (MTRP) benchmark criteria. The NCREIF ODCE Index is unambiguous and is technically investable, which differs from the RFBP where funds are closed. It is measurable and appropriate, but will behave differently dependent on market cycle. Core real estate may vary due to timber holdings; it is still accountable to the benchmark, although the benchmark will have differences, based on attributes.

The MPEP benchmark uses the S&P 1500 + 4% premium expected return. The 4% is not investible and the benchmark has a 90-day lag on return and it is influenced by the J curve effect and therefore will behave differently than equity. Over the short and midterm, the benchmark will not approximate return activity; however, over the long term it will be more reflective. It is a subjective benchmark.

Executive Director Ewer added the annual CEM report does not use the BOI private equity benchmark.

Member Prothero stated that over time, the Board has looked at the private equity benchmark and he would like to see the benchmark changed to the S&P 1500 plus 3.5% instead of 4%.

Chairman Mark Noennig noted the intent of the private equity benchmark is to apply a premium on private assets to ensure the risks are worth the premium expected returns above the S&P 1500. If the premium is lowered to 350 or 375 basis points vs. 400, is it worth changing the benchmark for.

Ms. Becky Gratsinger noted other funds do not look so much at returns vs. a benchmark, but rather at the internal rates of return. Most systems use equity returns plus a 300 to 500 return premium benchmark. The spread is under a lot of debate these days since the domestic equity market has done so well. In the last 10 years, the benchmark question has been raised regarding the target rate expected as compared with the requirement to tie up money over the long term.

Member Prothero asked Ms. Gratsinger what she would recommend, if the private equity pool was starting from scratch.

Ms. Gratsinger stated a good base would be the Russell 3000 index, but RVK would support using a benchmark with a slightly lower premium.

Member Karl Englund asked what the advantages of setting a lower return premium would produce.

Ms. Gratsinger stated it could decrease tracking error over the short term and may be worth looking into. She added there is no perfect solution, the return should be captured within the total fund, but the benchmark is hard to beat.

Member Prothero asked Mr. Hurley if he had an opinion to share with the Board on the private equity benchmark discussion.

Mr. Hurley stated he expects to have a full discussion with new CIO Joe Cullen.

Mr. Cullen stated benchmarks will be reviewed when asset allocation is reviewed in regards to managers and he recommends against taking a one-off look at one benchmark, but rather an overall look at all

benchmarks in general. It is important to understand why BOI uses the benchmarks it does and whether they are appropriate. Any changes should be made for the long term, not changed and then risk having to make subsequent changes. Next year, as part of the asset allocation process, staff will conduct a comprehensive review.

Executive Director Ewer commented it is sometimes acceptable to have provocative numbers; for 25 years, private equity has by far been the best performing asset for BOI. Director Ewer stated he supports a high bar, and it shows a commitment to private equity over the long term. The asset has different characteristics and private equity has been extremely beneficial to the portfolio.

Representative Kelly McCarthy asked how accurate the valuation of private equity is; since they are private assets and the true value is unknown until you capitalize them.

Director Ewer stated in the short term, asset value is the professional judgement of the general partner and there has been a lot of pressure recently on those general partners. Cash flows are demonstrable and the numbers look good.

Member Satre stated he appreciated all the comments. The topic should be part of an overall discussion at some point and he added at each Board meeting there is discussion as to why private equity does not match its benchmark.

Ms. Gratsinger added even if there was a change to the benchmark, the records will keep all prior periods, to accurately display past performance. A change would only affect performance going forward. Plan sponsors can go to world equity plus spread and it would make a bit of difference. However, you want to be sure there is accurate historical representation, and be aware of "moving the goal posts."

Mr. Krpan summarized it is important to keep in mind the differences between pools vs. their benchmarks. MDEP varies, private equities vs. public assets, STIP has slightly less risk than the benchmark. In context of the entire plan, BOI can afford to take risk that is mitigated on a plan wide basis due to correlations and diversification within pools. For plan vs. peer group, the numbers look phenomenal over time, but returns will go up and down. The CEM benchmarking study shows there are other ways of measuring plan performance and costs.

#### Benchmarks From an RVK Perspective – Mark Higgins, CFA, RVK, Inc.

Mr. Higgins presented the RVK perspective on benchmarks, stating it is a complimentary view to staff's presentation. As a Board, the evaluation of benchmarks should be approached to ensure the objectives and duties of the Board are met. The Board sets a framework to prioritize performance monitoring for meetings. The different metrics of performance for an investment portfolio from a Board perspective should include close monitoring of the things you can control and the impacts analyzed. Some things, such as liquidity, can only be controlled to a certain degree.

Strategic asset allocation is set each year and manager selection is mostly staff controlled. Investment fees are monitored effectively and asset class style biases, i.e. U.S. equity vs. small cap equity, are also reviewed; however, tactical allocation is not engaged in to any degree. Liquidity has an impact on performance and is monitored on a biennial basis. The frictional costs, those associated with market movement in different directions, are beyond your control.

High priority items monitored by staff and Board include strategic allocation of the total fund vs. peers, while keeping in mind the biggest driver in performance differences is due to asset allocation; comparing to peers is helpful. The risk-adjusted risk/return area is where you always want to perform better than your peers; better performance while taking on less risk.

The annual CEM Benchmarking Report, produced over the past several years, provides information such as the benefit of internal management of the bond pool and the avoidance of hedge funds. Pacing analysis is also performed, the monitoring of distributions and contributions.

Responding to a question from Member Prothero asking for areas needing improvement, Mr. Higgins noted a review of asset class style bias might be beneficial. Past benchmarks were more selective, but more general benchmarks are currently used. Performance reports are thorough, fees are monitored closely; these practices should continue. BOI does a solid job in general.

Ms. Gratsinger added one option is to create a benchmark that mirrors the asset mix, using a target allocation vs. a system of ranges and using a total target allocation composite benchmark.

Member Englund asked Ms. Gratsinger to explain the advantages.

Ms. Gratsinger stated a target allocation measures the frictional effect and provides additional information and insight.

Mr. Higgins added each asset class is assigned a target allocation, such as real estate, domestic equity, international equity, etc., and RVK is able to use the target to summarize fund performance for clients. It shows whether return is added or taken away vs. the target allocation.

Ms. Gratsinger noted BOI uses a range system for flexibility. RVK is able to run additional analytics on a fund when a target allocation is used.

Mr. Krpan added that CEM uses a target weight of the midpoint of ranges for calculations on its annual report analysis.

Mr. Cullen stated the industry standard is mid-range, but it does not have to be and can vary depending on the asset. A target allocation would allow for more attribution data and may provide information which could affect long-term decisions.

Mr. Higgins reviewed the benchmark matrix and important limits on allocations. For gross returns vs. other peer plans over \$3 Billion, at least 30 plans are preferable for comparison; however, the other participants need to reflect a similar asset allocation to the Montana plan. RVK uses BNY Mellon, which contains over 30 institutions. There are still limits on return data and participants may vary quarter to quarter. Additionally, the maturity status of plans varies from plan to plan.

For strategic asset allocation on a risk-adjusted basis, risk vs. return vs. peers, ideally you generate higher returns with less overall risk; doing well vs. peers on risk adjusted basis. The BOI portfolio underperformance vs. peers may be due to style bias; over time, the plan will have ebbs and flows of under and over performance vs. the benchmark. Overall, performance cannot be attributed only to managers. The portfolio's lower allocation to developed and emerging markets, which have performed well, is partly responsible for portfolio underperformance.

Mr. Higgins stated in terms of spending, BOI spends less than the median fund, and fees are very important to total return. BOI costs have been reduced due to higher allocations to passive assets and more efficient asset classes, the avoidance of fund of funds, and a low cost model for internally managed fixed income.

Mr. Higgins reviewed liquidity analysis, and stated liquidity will become more important in the future and will require close monitoring. An analysis should be conducted every two years, which includes asset allocation and the commitment to private equity and real estate, as well as a forecast of plan contribution needs.

In summary, Mr. Higgins stated RVK encourages the Board to focus on evaluating the things within its control and to make appropriate decisions. Private equity continues to contribute absolute return and diversification; and it is good practice to continue reviewing benchmarks regularly.

## **MONTANA LOAN PROGRAMS**

### **In-State Loan Program**

Mr. Herb Kulow presented the Montana Loan Program Report. The outstanding commercial loan portfolio balance as of September 30, 2015 was \$85,239,228 not including \$560,000 of other real estate. There was \$38,738,000 in outstanding reservations and \$28,632,000 in commitments.

Mr. Kulow reviewed the status of the Intermediary Relending Loan Program (IRP). The legislature allocated \$5 million to local economic development entities to utilize as matching fund vehicles; entities can apply to USDA for matching funds. Currently there is \$3.2 million available, however over \$1 million of that amount has outstanding commitments, bringing the total of outstanding and unused commitments to \$4.273 million, which means \$727,084 remains available to economic development organizations.

For the unused commitments, organizations can make loans to use with matching funds over three years, with a remaining term of 27 years; therefore, there is a low repayment rate to replenish the fund. There was an attempt to provide an additional allocation to the program during the last legislative session, which did not occur. Funding for the program is out of the Coal Tax Trust.

Mr. Kulow presented a summary of the residential loan program. As of September 30, 2015 the balance was \$8.7 million with three loans past due totaling \$201,716. The portfolio yield at September 30 was 6.29%. Many borrowers are opting not to refinance due to short remaining terms or low outstanding loan balances.

Mr. Kulow presented a summary of the Veterans Home Mortgage (VA) portfolio. The outstanding balance as of September 30, 2015 was \$27,801,382 with 14 outstanding reservations totaling \$2,486,360. One loan was 90 days past due; however, it was brought current in October. There is one loan under 90 days past due for \$104,000.

Member Cohea asked how the VA loan guarantee functions.

Mr. Kulow stated there is a VA guarantee on loans; however, it is not 100% like FHA guarantees and depends on the veteran's allocation. BOI policy requires that the allocation certificate is 100% and that the guarantee is not shared with any other parties.

Mr. Kulow reported the average one-year return on the VA portfolio is 1.82% as of September 30. The total VA program allocation is \$40 million as of July 1, 2015. Payoffs are generally received when a home is sold, although the VA does allow assumptions. However, so far there have been no requests to assume any of the loans.

## **BOND PROGRAM REPORTS**

### **Activity Report**

Ms. Welsh reviewed the quarterly Activity Summary Report as of September 30, 2015, and presented staff approved loans. Total loans outstanding were nearly \$80 million and most loans are going towards construction. Among staff approved loans, there were five borrowers new to the INTERCAP Program; all school districts. DA Davidson referred a couple of the borrowers and one came from a conference Ms. Julie Flynn presented at.

Being no further business for the day, the meeting adjourned at 3:54 p.m.

## **BOARD MEETING - DAY 2**

### **CALL TO ORDER**

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 8:30 AM. As noted above, a quorum of Board Members was present. Chairman Noennig advised video

recording of the meeting was underway. Chairman Noennig called for public comment. There was no public comment.

### **CONSULTANT REPORT**

#### **RVK, Inc. – Ms. Becky Gratsinger, CFA and Mr. Mark Higgins, CFA**

Ms. Gratsinger stated she would present the RVK quarterly performance report for the quarter ending September 30, 2015 and Mr. Higgins would present the executive summary.

Mr. Higgins stated there is both good and bad news. The bad news is it was a difficult quarter in absolute return terms, particularly for international and domestic equity. Fixed income and private equity did not provide enough positive return to compensate, and although BOI has done much better than peers, the quarter still had a loss for the quarter. The major economic drivers include concerns over the weakening economy and bad economic indicators coming out of China, which prompted market reactions. China tried reducing rates as a stimulus and because it is the second largest world economy, it has a big impact. Commodities were down 14.5%, U.S. equity markets and developed markets were down and both the Russell 2000 and the S&P 500 were down.

Another factor is market speculation on when the Federal Reserve (Fed) will increase rates. There were fears from investors approaching the last Fed meeting, but the Fed did right thing and did not raise rates. Speculation is running 50/50 as to if the Fed will raise rates in December, but even with positive numbers in the job market and moderate economic growth, things remain shaky.

Mr. Higgins stated the outlook going forward calls for continued volatility as uncertainties continue, and the question of how much the Fed will raise rates, likely 25 basis points, so the market may be over reacting. For international markets, China remains a big uncertainty and it is still unknown how severe the slowdown is or will continue to be. At any rate, it will affect all markets. The BOI portfolio is well diversified which helped a lot over the quarter. The portfolio needs to evolve constantly and RVK is looking forward to working with new CIO, Joe Cullen.

Ms. Gratsinger presented a summary of markets through September 30, and into October. Market conditions were difficult overall, although October was much more productive; year to date the S&P 500 was down but bounced back in October. The MSCI EAFE also bounced back, so results were more positive in October. Small caps are still down, as are emerging markets, and there is a lot of concern about commodities, which remain weak.

Ms. Gratsinger stated interest rates have risen over the last quarter, which fixed income managers were not expecting. Reviewing economic indicators, unemployment is now down to 5% but wage growth is still being monitored. There is some inflation out in the market; U.S. government GDP is still fairly high. Market volatility will continue and relative to history, consumer confidence is moderate.

Ms. Gratsinger reviewed asset class performance for the quarter. Portfolio diversifying classes such as real estate did well and returned 11.3% through September. Real estate returns are based on appraisals and income so are slower to react to market changes. BOI does not have direct commodity exposure where returns were down almost 15%.

Responding to questions from Members Cohea and Satre, Ms. Gratsinger stated small caps tend not to be as reactive to market movement and can benefit from a low interest rate environment, and REITs are public, and so are more affected by a market sell off.

Ms. Gratsinger reviewed the retirement plans in aggregate, which now total \$9.7 billion; PERS makes up \$4.8 billion and TRS \$3.5 billion. Asset allocation structure of the plans includes domestic and international equity at 54%; however, if you include private equity, total equity is 65%. Real estate is at 9% with the remaining balance in bonds and cash.

Ms. Gratsinger stated the PERS net of fee return for the quarter was -3.75% vs. the benchmark at -3.92%. Returns for calendar year-to-date are also negative, but returns remain positive over 1, 3 and 5 years. Relative to the benchmark, performance slippage is driven largely by the private equity benchmark. Gross of fees, compared to other public pension plans over \$3 billion, plan rankings have steadily improved year over year and in absolute returns, the plan ranks in the top decile over one year and in the top quartile for quarter and calendar year to date. Private equity has helped, as well as the overweight of domestic equity relative to other plans, and tremendous relative results overall.

Ms. Gratsinger reviewed other plan factors and noted it is important to look at risk; it is not just about returns but the path you take to generate those returns, on a gross of fee and a risk/return basis; BOI is in the optimal quadrant. Total plan risk/return is favorable; higher returns, but not with more risk, and the plan is tracking right on top of the benchmark, a very good result. Reviewing the Sharpe ratio, which measures both elements together, BOI is ranked in the third percentile compared to 36 other plans with a five-year history. BOI also performs very favorable on risk/return vs. the benchmark; less volatility with more return, and beta is a little lower than other plans over 10 years. Excess return and downside risk all look good.

Ms. Gratsinger reviewed the asset class performance for the investment pools, which totaled \$14.1 billion as of September 30, 2015. The \$3.7 billion Montana Domestic Equity Pool (MDEP) and the \$2.2 billion Retirement Funds Bond Pool (RFBP) had a slight underperformance for the quarter. The performance of the asset class pools used for trust funds and retirement plans had a slight underperformance over the quarter. As plan passive holdings have been increased, the plan has become more aligned with the benchmark, and correspondingly, fees have come down.

International equity looks good, although compared to peers is not as positive; however, relative to the benchmark since restructuring, performance is very good. The Trust Funds Investment Pool (TFIP) has done well and recent performance for the Montana Real Estate Pool (MTRP), for non-core, has beaten the benchmark. STIP continues with minimal yield in short duration securities.

For private equity, which lags by a quarter, absolute numbers were very strong; although relative to beating the benchmark, equity plus 4%, it was a bit behind. The 10-year absolute return for private equity is 10.5%, compared to the 10-year return for equity markets at 6.6%.

Reviewing peer rankings for asset classes, Ms. Gratsinger noted MDEP is just under the median, and ranking has improved as managers have changed and indexing has been added. For international equity, the ranking has not been as good. One reason is the peer group of funds over \$3 billion contains more emerging markets, which has an impact. Global strategies are lumped into international, which is also a factor. Other peers have used managers who invest in developed in emerging markets; it is worth noting however, that peer ranking has a lot of noise.

All asset classes have done well compared to the benchmarks, except private equity due to the benchmark, and compared to peers. Other classes really do provide diversification, the RFPB, MPEP and MTRP are not adding to equity beta. The reason private equity does not is due to private strategies, and they are only marked to market periodically. In theory, equity exposure includes private equity, but it does not add to equity volatility.

Member Prothero asked Ms. Gratsinger if there were concerns about any individual manager.

Ms. Gratsinger stated staff has made a lot of changes, including manager changes, and the watch list is a very short list these days compared to five years ago. A couple of managers remain on the watch list, but not all are due to performance concerns.

Member Englund stated although the international pool provides diversification, when considering factors like China, is it too uncertain.

Ms. Gratsinger stated there are several factors involved. Relative prices for international vs. domestic U.S. have been cheaper, and consideration as to where we are in the Fed cycle is a factor; international markets saw the central bank take action. For the U.S. market, the Fed is in a tightening environment, whereas international markets are more poised and have reacted upon concerns in the market. If you are counting on future actions by the European Central Bank (ECB), the first bail out is always more impactful.

Ms. Gratsinger added there is still validity in the global equity story and investments that are not U.S. based. Additionally, U.S. companies provide substantial global sales and the dollar has been strengthened as of late. The valuation of the U.S. dollar has an impact and instead of lowering international exposure, the question is should action be taken to hedge the dollar exposure. If so, RVK can provide the Board with education. Currency has a price, whether you guess right or wrong.

Mr. Higgins added BOI has an overweight to U.S. equity compared to other plans, and the overweight has helped performance vs. peers, but international equity does provide diversification. It is a valuable diversifier even though it has not paid off over the past 10 years.

Executive Director Ewer asked if the accepted conclusion is that foreign equities should outperform over time and grow faster than U.S. equities, and the theory is that stocks roughly track the economy, is the growth potential for international markets still expected to be higher.

Mr. Higgins replied the underlying fundamentals when comparing U.S. and international regarding dividend yield, expected inflation, historical valuations and building blocks, is that international has higher expectations at this point. Over the next 20 to 30 years, both look attractive, but international still looks more favorable.

Director Ewer noted while the theory is still valid, keeping a U.S. centric view has proven to be a shrewder strategy. Considering the ability to get work, lay off workers, patent laws and the engine for capital growth, no one protects capital better than the U.S. Peers with equal weights of domestic and international are underperforming.

Ms. Gratsinger noted RVK also looks at the historical relation of pricing for when you enter into a market. The evaluation of expected return, over the next 10 years, is factored into markets. International has higher volatility over time, and emerging market exposure comes with currency issues. Some plan sponsors have pursued defensive hedges, an issue that is often discussed.

Chairman Noennig asked Ms. Gratsinger what she thought interest rates will do and what the impact will be and if rates might be kept low until after the election regardless of market conditions.

Ms. Gratsinger stated within the industry, the large fixed income shops, the general theme is lower rates for longer and any moves the Fed makes will be incremental. The political issue is a factor, although the Fed may make the first move to get it over with, maybe raise rates to 1% next year.

Chairman Noennig asked if rates are raised, will the economy then be stimulated in other ways.

Ms. Gratsinger stated the stimulative action has been to leave rates low; people are borrowing, spending money, and oil prices are low. The Fed has looked at the numbers, and seen a mixed picture. Unemployment has made progress, it is now under 5%, which is terrific, but wage growth has lagged, and the average consumer may not be realizing the benefits. Additionally, productivity numbers have fluctuated. For investors, if rates go up too fast it will be detrimental. It is unlikely the Fed will move rates up drastically; however, this continued low interest rate is not normal.

Mr. Higgins added the Fed has two mandates: full employment and keeping inflation under control. Right now, under normal circumstances, you would assume with low unemployment that inflation would be increasing, but the unemployment rate may be deceiving. Normally, inflation would prompt the raising of

rates, however, inflation has not occurred and the economy is fragile, thus raising rates too quickly could be detrimental.

### **INVESTMENT ACTIVITIES/REPORTS**

#### **Retirement System Asset Allocation Report**

Mr. Joe Cullen reviewed asset allocation and performance for the pension plans for the quarter ending September 30, 2015. At quarter end, the pension plans totaled \$9.6 billion. Total change from the previous quarter is \$402 million, a significant decrease of a 4% decline. The plans benefited from the diversification of asset classes, but still realized a significant decline. A portion, \$25 million, was paid out for plan benefits, more than \$20 million was added to domestic equity, \$29 million to international; \$1 million was taken out of the private equity pool, \$5 million from real estate and \$6 million from the bond pool for a net total of \$37 million, which was funded out of STIP.

Mr. Cullen reviewed peer comparisons as provided by State Street Bank as of September 30, 2015. The State Street universe varies from the RVK universe. The TRS and PERS plans are slightly overweight in fixed income, real estate and U.S. equity and slightly under for cash, international and private equity.

#### **Montana Private Equity Pool (MPEP)**

Mr. Ethan Hurley presented the Montana Private Equity Pool report for the quarter ending June 30, 2015. There were three commitments for private equity since the last meeting. Board briefs are included in the packet.

<b>Fund Name</b>	<b>Vintage</b>	<b>Subclass</b>	<b>Sector</b>	<b>Amount</b>	<b>Date</b>
Angeles Equity Partners I, LP	2015	Buyout	Diversified	\$20M	5/1/15
Audax Private Equity V, LP	2015	Buyout	Diversified	\$20M	9/18/15
Gridiron Capital Fund III, LP	2015	Buyout	Diversified	\$20M	10/9/15

Member Prothero asked Mr. Hurley why he chose those three particular managers.

Mr. Hurley stated Angeles is a low middle market buyout manager, co-founders Tim Meyer and Jordan Katz focus on deep value, carve-outs and underperforming companies. Mr. Hurley added while a lot of folks shy away from "I" funds, the partnership framework has been in place for years, and he concluded they work together well and the team has a good track record. Mr. Hurley checked credibility and spoke with lenders and CEOs who all gave high marks. The team has the ability to raise capital and closed on \$120 million of a \$300 million cap. Mr. Hurley added staff identified the major risks and was comfortable with them. Also, as a first time fund, BOI had some leverage and will pay 17.5% carry vs. 20%.

Mr. Hurley noted Audax V was a re-up position with a very well established manager, which has performed well so far. They are a lower middle market buyout shop and have created what is referred to as a factory; they identify a platform company and train existing managers; they have good performance historically. They achieve multiple expansion on exit and have consistent performance overall. BOI has a 30% premium carry, and staff looked at multiples and the IRR level; the J curve is muted and the fee is lower at 1%.

Member Satre asked as staff decided on these three managers, how many others were considered during the process.

Mr. Hurley replied that for Audax and Gridiron III, staff was not comparing these managers against others. They were all known quantities; BOI has established relationships already and believe in conviction of relationships over time.

Member Cohea asked on the new manager, how were they selected and was staff looking for more than one manager.

Mr. Hurley responded in the case of Angeles, staff was looking at other managers. In any given year, commitments are roughly a mix of 50% new and 50% established relationships. Angeles fit within the private equity strategic plan; however, staff also ran a full recommendation on another manager, which was not chosen.

Member Englund asked Mr. Hurley if he had any concerns with the Audax co-CEO arrangement.

Mr. Hurley stated no, staff knows them both well. Audax has a debt side and an equity side of the house and the two CEO's founded the business together; and they have put a lot of their own money in.

Mr. Hurley stated Gridiron is also a re-up manager, and staff expects they will continue to perform.

Mr. Hurley presented the private equity report noting that cash flow ran negative for the quarter; the last time that occurred was the last quarter of 2014.

Executive Director Ewer asked if the negative cash flow is due to funding commitments, and Mr. Hurley replied yes, correct.

Mr. Hurley stated the portfolio by exposure is broadly diversified; buyouts are the largest exposure. The portfolio is highly diversified and geographic exposure remains highly North American centric, with no attempt to act globally; this should remain the case.

By investment vehicle exposure, most investments are direct primary commitments and those will increase as fund of funds decrease over time. Fund of funds are pursued only in certain cases, such as Asia and venture capital.

Representative Kelly McCarthy asked about determining market value for private equity and if there is any standard used, as evaluation of private equity seems a bit vague.

Mr. Hurley stated historically GPs would hold assets at cost until they sold. Today there are accounting principles which employ three different tier methodologies as to how investments are valued. Regardless of the valuation methodology applied, true value remains unknown until the final transaction.

Representative McCarthy observed it seems there are arbitrary valuations and an arbitrary benchmark.

Mr. Hurley stated it is how the industry works, however there is an attempt to determine value.

Executive Director Ewer stated the implied question is whether managers are misstating; however, there is no advantage for managers to misstate, rather, they are conservative in estimates. There are upcoming changes to GASB regulations regarding valuation of private equity.

Ms. Julie Feldman added GASB 72 goes into effect June 30, 2016 regarding the method of classifying fair market value, such as the market for an asset, similar/like assets, and classifying fair market value. Staff has been working with State Street Bank, discussing which of three buckets BOI private assets will fall into. The financial footnotes will include an explanation of how the assets are classified.

Member Englund asked Mr. Hurley if he agreed that general partners have no incentive to overstate value.

Mr. Hurley replied generally, yes. During the marketing period is only time managers might overinflate, although ideally that is not the case. At any rate, staff spends the necessary time to vet managers and any manager who misrepresents would soon be out of business.

Mr. Hurley reviewed return comparisons and noted most strategies performed in line with last quarter. The pool has an annual net IRR of 12.62% since inception, which is well above the actuarial rate of return of 7.75%.

#### Montana Real Estate Pool (MTRP)

Mr. Ethan Hurley presented the Montana Real Estate Pool report for the quarter ending June 30, 2015. There was one new commitment of \$15 million to PCCP Equity Fund VII, LP.

Fund Name	Vintage	Subclass	Sector	Amount	Date
PCCP Equity Fund VII, LP	2015	Opportunistic	Diversified	\$15M	8/21/15

Pool cash flow was positive for the quarter. The strategy remains diversified across various risk classes; core real estate includes the Montana buildings. Geographically, the pool is well diversified with no attempt to overweight or underweight the index. The key take away is that real estate continues to move in a positive direction.

Chairman Noennig asked about the strategy to not underweight or overweight strategies.

Mr. Hurley stated staff looks at the individual managers. Core real estate will moderate at some point; staff has maintained exposure but has not increased core. The strategy is to manage across property types and broadly by geography. Staff opted to move away from the core markets, such as Los Angeles and Boston, etc. for more tier two markets like Denver, Atlanta and Houston. There is less of a crush of capital chasing those markets and less competition. The development of the portfolio is dependent on the ability of managers to win deals. The portfolio is leveraged and within policy constraints.

Mr. Hurley reviewed the private equity and real estate partnership focus lists. Liquid Realty Partners IV, LP has been replaced by ARC, which has gained control of the books and records. ARC is working from the 9/30/15 financial statements and has distributed the \$30 million of previously undistributed cash to the partners; MBOI received \$1.6 million.

#### Fixed Income

Mr. Nathan Sax reviewed fixed income for the quarter ending September 30, 2015. The short end of the curve has risen over expectations the Fed will raise rates 25 basis points at the December meeting. Meanwhile, Europe is going in the other direction with record low interest rates for Germany. The original U.S. GDP estimate was 2.5%, but has been revised down to 2.1% for the year. The U.S. economy is not in a recession; inflation is at 1.3% according to the Fed, although it was expected to be closer to 2%. Japan, however, is in recession, with two consecutive negative quarters. The consensus on China is that their actual rate of growth is between 3-5%.

Mr. Sax reported high yield spreads widened out over the quarter, but have tightened since the end of the quarter. Commodities continue to decline dominated by oil. Commodities are depressed around the world, which has hurt U.S. mining companies, as well as Australia and Brazil, a symptom of weak growth and weak inflation.

The hawks argue that if the Fed does not raise rates now, they may have to raise rates more aggressively when inflation takes hold. The other side argues why tighten now with low inflation, low growth, and a strong dollar. There is a chance that no major rate hike will occur until after the 2016 election. The last recession was back in 2009 and the economy is growing, although only at a rate of 2%. The Fed's next meeting is December 15-16.

Mr. Sax reviewed the Retirement Funds Bond Pool (RFBP) and noted the internally managed portion has increased due to Aberdeen's termination as a manager. Currently, 82% of fixed income in the RFBP is managed in house; Neuberger Berman and Post Advisory are the two high yield outside managers. There is less liquidity in the markets and conventional wisdom says liquidity is not as good as it used to be; however, it does not affect BOI to a great extent. The pool is a little overweight on the front end and

middle of the curve, and underweight treasuries and agencies and is tracking the index relatively closely; relative performance is good.

Mr. Sax stated the Trust Funds Investment Pool (TFIP) performance has been similar to the RFBP. Neuberger Berman, a high yield manager, provided index-like performance; after fees performance has been mediocre. Post is ranked in the top decile for 1, 3 and 5 years; they are a bottom up manager and rely on internally generated information. Post has provided 427 basis points of alpha for the last five years and organizational stability has improved.

Core real estate, at 7.3% is near the top of the range and has been a real additive to performance over the last year. The Core Internal Bond Pool (CIBP) has averaged 129 basis points per year over the benchmark for 7 years and ranks at the 5<sup>th</sup> percentile for one year and at 21<sup>st</sup> for 5 years.

Mr. Sax stated there were two additions to the below investment grade holdings. Teck Resources Limited, a BB rated Canadian mining company specializing in tar sands development in Canada, has been affected by China making a lot less steel, and copper and zinc have been depressed. BOI has a \$3 million investment in Teck. The other addition is Edgewell Personal Care, a spin off from Energizer. Edgewell will grow at a low rate; BOI has \$10 million invested. Edgewell is trading at \$102.35 and has not lost much market value.

#### Fixed Income External Managers Watch List

Mr. Sax reported there are no managers currently on the watch list. Aberdeen was terminated and Reams was removed from the list after steadily improving performance. Reams, a core plus manager, has come back strong. They ranked at the 73<sup>rd</sup> percentile for three years, averaging 152 basis points above the benchmark per year over 7 years.

Member Satre asked if Reams is similar to the core internal fund.

Mr. Sax replied no, they have more turnover and active trading, and got into trouble when they anticipated interest rates would increase, which did not happen.

Member Englund asked about Talen Energy Supply, listed on the below investment grade report.

Mr. Sax stated the status has not changed much; the book value is \$17 million, market value is \$15 million and they have a low BB rating.

Member Englund asked if there was a change in price.

Mr. John Romasko explained Talen, a spin off from PPL, did make a significant purchase for gas-fired generation. The price had only modest recovery, but over the long term, there is a reasonable expectation BOI will be made whole on the deal. Mr. Romasko added he does not believe Talen will be downgraded or upgraded.

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

Mr. Rich Cooley gave an overview of the Treasurer's Fund for the quarter ending September 30, 2015. The fund total is \$833 million with \$140 million in securities, including 1-3 year in governments and agencies to pick up additional yield; a 92 basis point pickup over STIP.

Mr. Cooley reviewed STIP for the quarter and noted there was little movement in short term rates, as the Fed did not make a move on rates in September. The market expects an increase at the next Fed meeting in mid-December; however, November employment numbers may have an impact. The Fed could move 25 to 50 basis points, but there is still a chance they may not make a move until 2016. The yield curve is widening out a bit and LIBOR rates have moved up a bit in the last week or two.

STIP total was \$2.22 billion, so down a bit from last quarter. The portfolio is well diversified and operating within policy. Purchases over the quarter included \$25 million of floating rate agencies, \$75 million of floating rate Yankee CDs and corporate notes and \$25 million of fixed rate Yankee CDs. Average days to maturity is 48; policy maximum is 60 days. STIP net daily yield is 29 basis points, compared to the benchmark, the one-month LIBOR rate at 19 basis points.

Member Satre asked if given the nature of the portfolio, with the frequent turnover of assets, if the same names are purchased.

Mr. Cooley state, yes, generally for 30 – 60 day short term paper many of the same names are typically purchased. Trades are same day cash settlements with trades in the morning for commercial paper; Yankee CD settlements are longer, but the bulk of trading is cash trades.

The STIP reserve fund impact accounts for 12 basis points of yield and the daily reserve amount added is \$8,000. The residual SIV book value decreased by \$1.44 million for the quarter and has paid down from \$27.8 to \$26.3 million compared to last quarter end. The reserve fund balance increased by \$844,610 over the quarter, from \$28.7 to \$29.4 million.

Member Cohea asked about the decrease in book value for the SIV's.

Mr. Cooley explained principal payments received on the SIV's reduce the book value, and security gains from asset sales are also added into the reserve. Total impact to the STIP yield is 12 basis points. An example of a securities gain was on a GE holding. GE had a number of bond calls/options to switch into securities that offered attractive rates on a \$30 million GE floater, which on a six month security offered 94 basis points providing a gain of \$300,000. That gain was added into the reserve fund and will be reflected on next quarter's data.

Mr. Cooley reviewed the State Fund Insurance for the quarter ending September 30, 2015. The fixed income portion of the portfolio outperformed the benchmark by 12 basis points for the quarter and and 36 basis points for one year.

The portfolio equity portion is 10.5%; the client preferred range is between 8-12%. Core real estate totals \$86 million, or almost 6% of the portfolio.

The total State Fund portfolio performance for one year at quarter end was 3.06% compared to the custom composite benchmark at 2.07%. Equity total return for domestic and international index funds combined was -1.89; total fixed income return was 3.14% and real estate was the star of the show at 13.3%.

Over 10 years, the total fund return was 4.86%, compared to 4.17% for the Barclays Gov/Credit Intermediate benchmark, or 69 basis points of outperformance.

#### Montana Domestic Equity Pool (MDEP)

Mr. Rande Muffick reported on the Montana Domestic Equity Pool (MDEP) for the quarter ending September 30, 2015. Markets remained volatile over the quarter, although have mostly recovered in the current quarter. It is a nervous market; China is a concern, as are questions about pending Fed action. There was a correction in the third quarter, but a decent rally is underway this quarter. The market does correct when the Fed raises rates, usually about a 5% correction. Generally, the market realizes it is not a big deal, and markets come back and even out. At some point, the Fed will raise rates and markets will react. The Fed has been forecasting a raise in rates for so long there may not be the usual 5% correction. Equities can increase in value during a rising rate environment as long as inflation does not kick in. The Fed will take it slow and easy, some volatility is still expected.

There was not much activity for MDEP over the quarter; however, staff did act to take advantage of corrections in the market and rather than wait until month-end or quarter-end to rebalance, staff

purchased S&P 500 ETF SPDRs when the market was oversold, to put some money to work. Over the long-term, staff did this five or six times, taking money out of cash with the mid-month buy.

Chairman Noennig asked what indicates the market is oversold and is it just a matter of prices reacting to supply and demand.

Mr. Muffick stated there are certain indicators, as seen on Bloomberg, a lot of selling activity and contrary indicators. When investors are all selling, it is a good opportunity to buy. A buy-in on an oversold day, putting money into the market and using the intraday moves in the market, is a tactical move. ETFs are liquid, whereas index funds need a one-day notice to trade on and the market can move in the meantime. Responding to a question from Member Cohea, Mr. Muffick stated ETF transactions cost two pennies per share.

Mr. Muffick reported managers are doing well, although active management for the quarter for MDEP was disappointing. Large cap enhanced outperformed, but otherwise for active managers it was a tough quarter overall. Staff is still concerned with the mid cap style bucket, which has struggled for a while now and the portfolio is overweighted. Staff is a bit concerned with one manager in particular.

Mid-cap growth stocks have suffered in particular. Staff will take a closer look at why BOI managers in particular are struggling. The JP Morgan 130/30 has added a lot of value; however, they hold a large portion at 8.54% of the portfolio, and they have struggled this fiscal year so far. If a manager has 8-9% of the portfolio and they underperform, it affects total fund performance. Mr. Eron Krpan has run an analysis and determined JP Morgan is one of the biggest risks in the portfolio overall.

Mr. Muffick stated he is not concerned about JP Morgan over the long term. They have a bit higher beta than the benchmark, but the long-term numbers are good and they are sticking to their philosophy and style.

Member Cohea asked about Iridian Asset management, which seems to have a concentrated position.

Mr. Muffick answered Iridian is a mid-cap value manager, which compliments the other value manager Artisan. Iridian does run a concentrated portfolio, up to 5% in any given name/holding. They have done well, although have struggled a bit as of late, as with all mid-caps. MDEP continues overweight in small and mid-caps which is expected to remain the same; as is the active/passive mix.

Portfolio exposure is in small and mid-caps, and underweight mega and giant caps. By economic sectors, the portfolio is well diversified, no over/under weight greater than 1.5%. Discretionary is the biggest overweight, but is still close to the benchmark.

The portfolio is positioned slightly cyclical, but close to the benchmark for consumer discretionary. On a macro basis, China is slowing and retail will likely slow, causing concern. The oil price decline was supposed to be good for consumers; but there should be more consumer spending than we have seen.

#### Montana International Equity Pool (MTIP)

Mr. Muffick reported on the Montana International Equity Pool (MTIP) for the quarter ending September 30, 2015. International markets have mirrored domestic in some ways. International stocks experienced a sell off as well, and emerging markets suffered the most. MTIP activity for the quarter included the same type of purchases as for MDEP using iShares and MSCI EAFE ETFs for purchases of developed market stocks.

International active managers performed better than domestic for the quarter. The only negative for the quarter was large cap growth where the two new managers struggled a bit. MTIP managers have MSCI ACWI mandates, which include emerging markets. The peer group comparisons do not include emerging markets, so when emerging markets do poorly, it is noticeably worse than developed markets. Consequently, MTIP managers have a tough time vs. peer group comparisons.

Executive Director Ewer asked if there is bifurcation between emerging and developed markets.

Mr. Muffick stated with emerging markets, there is the growth factor potential; however, there is volatility and risk involved. Ideally, you want to pick up the growth in international markets, but there will be times of underperformance and it can vary widely.

Member Cohea added small cap international does outperform over the long term.

Mr. Muffick noted core growth and value have done well, and have added value to the portfolio.

Mr. Muffick stated there are no plans to change the current strategy. The active/passive weight levels and small and mid-cap overweights will continue as is. Exposure by economic sector is well diversified and slightly cyclical; managers are favoring consumer discretionary.

#### Public Equity External Manager Watch List

Mr. Muffick reviewed the Public Equity External Manager Watch List. There are no changes since last quarter. New managers were hired for the international pool and others were terminated. Artisan remains on the list. Staff still has confidence in them; they are currently out of favor and do not perform as well in up markets. The long up market, as well as a few areas of stock selection have contributed to sagging performance. Long-term, the numbers still look good and they are sticking to their style. The second manager on the watch list, Alliance Bernstein, is a small cap upside capture manager and should be performing better. Some stock picks have worked against them; staff continues to monitor them closely.

#### **PUBLIC EQUITIES MANAGER WATCH LIST November 2015**

<u>Manager</u>	<u>Style Bucket</u>	<u>Reason</u>	<u>Invested amount (\$mil)</u>	<u>Inclusion Date</u>
Artisan	Domestic – MC Value	Performance	\$119.8	November 2014
Alliance Bernstein	Domestic – SC Growth	Performance	\$32.9	February 2015

#### **RECAP OF STAFF TO DO LIST AND ADJOURNMENT**

Executive Director Ewer reviewed items on the “to do” list for the next Board meeting:

1. Mr. Hurley will include policy ranges in the quarterly reports.
2. Member Sheena Wilson will meet with staff to work on the Annual Report edits.

Being no further business before the Board, the meeting adjourned at 11:44 a.m.

#### Next Meeting

The next regular meeting of the Board will be February 23-24, 2016 in Helena, Montana.

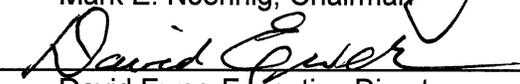
*Complete copies of all reports presented to the Board are on file with the Board of Investments.*

#### **BOARD OF INVESTMENTS**

APPROVE:

  
Mark E. Noennig, Chairman

ATTEST:

  
David Ewer, Executive Director

DATE:

February 23, 2016