These minutes are Approved and Final. Full Board review and decision took place at the November 17-18, 2015 Regular Meeting of the Board.

MONTANA BOARD OF INVESTMENTS
DEPARTMENT OF COMMERCE
2401 Colonial Drive, 3rd Floor
Helena, Montana
MINUTES OF THE MEETING – August 18 - 19, 2015

BOARD MEMBERS PRESENT:
Mark Noennig, Chairman
Karl Englund, Vice Chairman
Terry Cohea
Jack Prothero
Marilyn Ryan
Jon Satre
Sheena Wilson

BOARD MEMBERS ABSENT:
Quinton Nyman
Kathy Bessette

LEGISLATIVE LIAISON PRESENT:
Senator Bob Keenan (Aug 18 only)
LEGISLATIVE LIAISON ABSENT:
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
David Ewer, Executive Director
Julie Feldman, CPA, Financial Manager
Julie Flynn, Bond Program Officer
Tim House, Equity Analyst/Investment Operations Chief
Ethan Hurley, CAIA, Portfolio Manager, Alternative Equities
Ed Kelly, Alternative Investments Analyst
Teri Kolnik, CFA, Alternative Investments Analyst
Eron Krpan, CIPM, Investment Data Analyst
Herb Kulow, CMB, Portfolio Manager, In-State Loan Program
Tammy Lindgren, Investment Accountant
April Madden, Investment Accountant
Mary Noack, Network Administrator
Savannah McCormack, Administrative Assistant
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:
Jim Voytko, RVK, Inc.
Becky Gratsinger, CFA, RVK, Inc.
Mark Higgins, CFA, RVK, Inc.
Mike Heale, CEM Benchmarking
Daniel Day, Vice President, Bank of Montana
Tom Swenson, President, Bank of Montana
Rod Liebeck, GMA Garnet Group
Steve Gobby, GMA Garnet Group

CALL TO ORDER

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 10:39 AM. As noted above, a quorum of Board Members was present. Chairman Noennig advised video recordings of Board Meetings is now in effect, starting with this meeting. Chairman Noennig called for public comment.

Mr. Stephen Gobby, CEO of GMA Group presented a brief background of the company. GMA Group has been in the global garnet market for about 20 years and brings both capital and experience to the Montana mine. The mine, located in Alder, will assist a good, stable environment for Montana and the inclusion of the Australian expertise means the Montana location will have very experienced employees. Mr. Gobby expressed hope that the loan will be approved as the company embarks on its journey and adds a lot of value to the state of Montana, enabling a partnership for many years to come.

Chairman Noennig called for any corrections or revisions to the minutes from the May 19-20, 2015 Board Meeting or the June 22, 2015 Conference Call Board meeting.

> Board Member Jack Prothero made a motion to approve the May 19-20, 2015, Board Meeting minutes. Member Sheena Wilson seconded the motion. The motion carried.
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> Board Member Karl Englund made a motion to approve the June 22, 2015, Conference Call Board Meeting minutes. Member Marilyn Ryan seconded the motion. The motion carried.

Chairman Noennig read Herb Kulow's resignation letter. Mr. Kulow is retiring, effective November 2, 2015. The letter was accepted.

Audit Committee Report

The Audit Committee met prior to the Board Meeting. Committee Chairman Jon Satre reported that staff has undertaken updating the annual report. He noted staff is making great progress, and added the Committee appreciates the effort. The Committee discussed the STIP draft revisions to protocol, which will include distribution to local governments requesting authorizing resolutions. Accounting staff will be attending several conventions and meetings to gather participant feedback. There is a pending GASB (Governmental Accounting Standards Board) change coming affecting how STIP is handled. Staff will be gathering input on identifying what those impacts will be.

The Committee reviewed Internal Controls. Wipfli, LLP (formerly Galusha, Higgins & Galusha) has completed the FY 2015 Internal Controls Report. The report did not contain any recommendations and Wipfli complimented BOI on the procedures used to complete the process. The Committee also reviewed revisions to the Internal Controls Policy, adding a section on SSAE 16 review.

Staff is currently working on the Fiscal Year 2015 financial statements and will have a number of deadlines between now and October 1. The Committee made decisions; however, no Board action is required.

Deputy Director Geri Burton stated the Internal Control Policy does require full Board approval and requested the Board delay the motion to allow the full Board an opportunity to review a copy of the redline Policy showing the changes. The motion was delayed until later in the agenda.

Human Resource Committee Report

The Human Resource Committee met prior to the Board Meeting. Human Resource Committee Chairman Karl Englund reported staff received 125 applications for the CIO position. From the 125, the Committee is in the process of conducting telephone interviews with 17 applicants. The Committee will determine which of those 17 to invite to Helena for interviews. The telephone interviews of the 17 will be completed tomorrow at the conclusion of the Board Meeting.

Chairman Englund expressed the Committee's deep appreciation to Deputy Director Geri Burton, Executive Director Ewer, Chief Investment Officer Cliff Sheets and Board Secretary Dana Chapman for their assistance to the Committee to do this work.

Chairman Mark Noennig asked if there were questions or comments. There were none.

Loan Committee Report

The Loan Committee met prior to the Board Meeting. Committee Chairman Jack Prothero reported the Committee approved two INTERCAP loans. The first loan is to the City of Fort Benton for $2.5 million as interim financing in anticipation of USDA Rural Development long term financing for wastewater system improvements. The loan term is for up to two years and is in the form of a bond anticipation note (BAN).

The second loan is for the Department of Natural Resources and Conservation (DNRC) for $3.1 million as interim financing for its Renewable Resource Grant & Loan Program (RRGL). This loan is in anticipation of issuing coal severance tax bonds to refinance existing local government debt or new projects associated with rehabilitating water and sewer facilities. The loan will be in the form of a BAN with a term of three years; however, DNRC typically pays funds back ahead of schedule.

Chairman Prothero reported Mr. Herb Kulow presented a Bank of Montana loan request for BOI to participate at 80% in the amount of $24 million for funding of a hard rock garnet mine located in Alder, MT. The borrower is Garnet USA, LLC, and the loan is a unique one for BOI. The parent company, GMA Group, is an Australian company, based in Perth, which sells alluvial garnet used for sand blasting and water filtration for a myriad of uses including military, oil and aviation. The loan to value is 40% and the capacity to pay of the parent company is very strong. The Committee is recommending approval of the loan as presented.

> Committee Chairman Prothero made a motion to approve the $24 million loan to Garnet USA, LLC. Member Terry Cohea seconded the motion. Member Karl Englund stated for the record he has done legal work for the Bank of Montana and recused himself from the vote. The motion carried.

Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) Updates

PERS Representative Sheena Wilson reported the MPERA Board recently elected her as chairperson and three new members have joined the board: Pepper Valdez, a firefighter in Billings, who recently received his accounting degree at MSU Billings; Marty Tuttle, Chief Legal Counsel for the Department of Commerce, representing members of the defined contribution plan and Julie McKenna, a current state employee at the Department of Revenue who is very active in MEA-MFT. Member Wilson added the lawsuit has been settled and the computer system upgrade continues to move forward.

TRS Representative Marilyn Ryan reported that the TRS Board is considering tuition reimbursement for staff as provided for in other departments of state government. Questions have arisen over legislative language directed to TRS relating to a 10% cap on earned income during the three years prior to retirement when determining retirement benefits. The board received a FOIA request from an unknown source requesting information on TRS retirees and the amounts they earn in benefits. The Board is investigating how to handle the request. There is a concern, as beneficiaries have previously made threats of lawsuits regarding disclosure of the information. The Board is conducting strategic planning on how to address GASB 68. The Board currently has one vacancy.

Chairman Noennig asked for further information on the FOIA request.

Member Ryan stated the request is from an attorney in Colorado, and when directly asked, she refused to tell the reasoning for needing the information. The request includes information about all retirees and all benefits. The Board maintains their responsibility is to the members.

Legislative Liaisons Comments
Representative Kelly McCarthy was absent. Senator Sen Keenan had nothing to report.

EXECUTIVE DIRECTOR'S REPORT

Overall Comments
Executive Director Ewer noted the quarterly cost and monthly snapshot were included in the Board packet and asked if there were any questions on either. There were no questions.

Director Ewer presented the FY 2015 Expenditure Report and the FY 2016 Budget Report and accompanying memo showing details of the budget recommendation from staff for FY 2016 and the status of FY 2015. Director Ewer asked if there were any questions on the structure of the budget or the appropriations for BOI. He explained the legislature approves the yearly maximum dollar amount that can be charged, which covers daily operating costs. Law specifically allows BOI to collect costs in MCA 17-6-201, and allows collection of fees before distributions. Statute dictates by law the payment structure to cover the custodial bank, as well as the Enterprise Fund to run the INTERCAP program.

There are two program areas BOI reports costs for: the general investment side and the bond program. INTERCAP (the bond program) is an enterprise fund and the unified investment program is an internal service fund. The layout is the same for both reflecting actual and budgeted expenses; although there is a large research budget for the internal service fund (unified investments).

The Board materials include the FY 2016 budget, showing staff recommendations going forward. This requires a Board motion to adopt staff's recommendations on the budget. Staff can explain research expenses or relay the differences of the INTERCAP program if desired.

> Member Sheena Wilson made a motion to approve the FY 2016 budget, and thanked staff for the thorough notes. Member Terry Cohea seconded the motion.
>
> Executive Director Ewer asked Senator Keenan if he wanted to comment and added it is helpful that some legislators fully understand the budget process. Senator Keenan stated he had no questions, having served on the audit committee for several years he understands the process. The motion carried.

Chairman Noennig advised the Bank of Montana and Garnet USA representatives they were welcome to stay for the remainder of the Board meeting, but let them know they were free to leave should they choose to.

Executive Director Ewer provided an update on the Annual Report revisions underway by staff. The Annual Report is undergoing revisions to make it more digestible to the public. It has not been revised in many years; it is a work in progress and staff expects to present a draft at the November Board Meeting. The legal deadline for the report to be publicly available is December 31. Throughout the revision process, staff will continue to ask for Board guidance and approval.

Director Ewer reported staff has received the GASB exposure draft, which has implications for STIP. STIP functions similar to a money market fund, although not absolutely. It is similar to a "2a-7-like" fund. Staff will have a recommendation to maintain STIP at the current structure. New 2A-7 money market rules substantially reduce the ability to have longer maturities. Staff believes it is prudent to recommend leaving STIP as is from an operational standpoint to prevent the loss of additional yield. Changes will be made regarding the financial reporting of STIP. The cash flow situation of the state is known and is stable, not subject to volatility. The new GASB rule goes into effect after December 2015. Slight changes may be required to sharpen recommendations on the reserve account, to keep STIP current and allow the continued opportunity to provide the yields historically enjoyed.

Director Ewer provided an update on the executive search firm RFP for the CIO search. Two RFP responses were received, Korn/Ferry International and EFL Associates. Both firms are very qualified and the differences in the RFP responses are minor. The Board has empowered staff to score the RFP responses; however, scoring has not taken place. Director Ewer added the HR Committee is well on track with the current CIO search and he recommended letting the Committee proceed as is with the process.

BOND PROGRAM REPORTS

Activity Report
Ms. Louise Welsh reviewed the quarterly Activity Summary Report as of June 30, 2015. During the quarter there were 20 staff approved commitments, covering a variety of purposes; the biggest include construction, schools, fire halls and county buildings. Funding over the quarter included draws totaling $10.8 million. The Board requested bond program staff provide an annual snapshot of activity, which has been included in the Board packet. It shows the concentration between the two fiscal years and loan details for the remaining commitments. In other news, staff attended a couple of conferences. Ms. Flynn presented at the MT Association of School Officials (MASBO). Each presenter had 20 minutes at a table of eight, which provided effective one on one discussion and question and answer opportunities. It was a very good way to disseminate information. Ms. Welsh attended the MT Joint Fire and Emergency Services Conference in Ennis, which was a very interesting conference. It utilized small groups and Ms. Welsh shared one of the presenter's illustrations that aptly showed the value of delegation.

MONTANA LOAN PROGRAMS

In-State Loan Program
Mr. Herb Kulow again thanked the Board for approving the Garnet USA, LLC loan. Mr. Kulow presented the Montana Loan Program Report. The commercial loan portfolio has an outstanding balance of $93,316,253 and $73,396,000 in reserved loans, as well as four committed loans totaling $8,175,700. Of the $8 million, roughly $7 million is for the Loenbro infrastructure loan that is expected to close late September or early October. The Garnet USA, LLC loan is expected to close at the end of August. There are two past due loans, only one is over 30 days, totaling $141,155. The property in Lolo, GMP, LLC, has a one-year lease that is providing income of $6,000 per month. At the end of the lease period, the bank will submit BOI's 70% participation and associated costs of carrying the property. On January 31, 2016, it is hoped the leaseholder will execute the option to buy, at which time BOI will be able to recoup the initial $62,000 charge off.

The residential loan portfolio has 223 loans, totaling $9,237,849 as of June 30, 2015. There are six past due loans totaling $367,188; three are past due over 90 days, but all are guaranteed. The largest loan servicer was Streeter Brothers; however, they recently sold the servicing rights to the Board of Housing (BOH) and sold all loans to a firm in Texas. First Interstate Bank is the second largest lender of the top five, and there are 28 other lenders. Some borrowers continue to pay off their loans at the historical higher interest rates, some at over 7%.

Member Satre asked why a borrower would keep a loan with rates much higher than those currently available.

Mr. Kulow proposed many opt not to pay the costs of a refinance when their remaining balance is quite low.

Mr. Kulow reported the Veterans residential loan portfolio (VA) has 164 current loans with a balance of $27,912,503 as of June 30, 2015. There is one loan past due over 60 days. The individual left the area to attend school. There is a one-year time limit; he wanted an extension, but staff declined as that exposes the loan guarantee. The process of foreclosure is handled by BOH as the loan servicer.

The top banks with VA loans are First Interstate Bank, followed by Mountain West Bank, now owned by First Interstate Bank, then Opportunity Bank of Montana and Stockman Bank. Most VA loans are in the Helena area at $8,843,810, followed by Great Falls, Missoula, East Helena, Kalispell and Billings.

Mr. Kulow presented a summary of the In-State Loan Program over the past 15 years. BOI has funded 530 different loans totaling almost half a billion dollars, all within Montana. The outstanding balance is currently ~$93 million. Over the program history, approximately 5,000 jobs have been created in Montana. The current committed and reserved loans will provide almost another 680 jobs when funded. At the request of lenders, BOI developed other loan programs within policy guidelines. When interest rates were higher, BOI received a request to streamline the process and the small loan program was developed, allowing banks to package a number of small loans. Those loans required a higher equity and a higher capacity to pay or debt coverage, with a 30/360 basis and required auto deduct from their account. The program worked well.

Another request indicated a need for subsidized or low-income housing loans, which BOI did not offer at the time. When bankers asked why and there was no sufficient reason preventing such a program, BOI developed a low-income housing tax credit program where BOH applies for U.S. government tax credits, for either seniors or low income. In most cases, 80% of the loan is for tax credits. Loan amortization is 30 years; however, maturity is 16 years and the low-income participants have to remain in the project for 15 years; the interest rate is an average of the 15 and 20-year rates. If the borrower leaves the program early, they lose the credit. The program worked very well and was well received, although there were only half a dozen loans.

The legislature provided the Value Added Loan Program for BOI which was very successful when interest rates were high. It also initiated the Intermediary Relending Program (IRP), which allocated $5 million for economic development for more matching federal dollars. Borrowers can apply for matching funds. BOI has only one seasoned loan, for the purpose of economic development. Seasoned loans must meet all commercial loan criteria. The most recent program established by the legislature was the VA program, created two legislative sessions ago. The program has been very successful.

Butte Silver Bow City County Investment Policy

Mr. Cliff Sheets and Mr. John Romasko presented a new policy, the Butte Silver Bow City County Investment Policy Statement, and provided a brief history. The authority for the entity, The Butte Redevelopment Trust Authority Fund (BRTA) came into existence in 2006 with the legal settlement between the City and County of Butte-Silver Bow and the Atlantic Richfield Company (Arco) stemming from Montana's long mining history and corresponding cleanup. The policy statement allows for investment in the Trust Funds Investment Pool (TFIP) as opposed to only cash, which has had a diminishing rate of return.

Executive Director Ewer provided some background information. Senator Jon Sesso, who is the chief planning officer of Butte Silver Bow, approached BOI about the possibility of enabling local governments, under certain circumstances, to utilize BOI for more than STIP investments. Up to this point, local governments have been authorized to invest exclusively in STIP. Senator Sesso requested, and then crafted the bill, and he was receptive to BOI offering input on drafting the bill. Senator Sesso included the items suggested by BOI into the bill draft.

The bill parameters stipulate if a government has a onetime phenomenon, such as an insurance settlement or environmental settlement, excluding operating costs, of a minimum of $10 million, it may be eligible. Additionally, the local government applicant must represent, in good faith, that any principal is not needed for at least five years. The law states local governments are not required to use BOI and BOI is not obligated to accept the money. The Trust Funds Investment Pool (TFIP) is intended as a long-term investment. Mr. John Romasko compiled the investment guidelines, which were written very similar to other environmental funds.

Chairman Noennig asked if any other entities are expected to utilize the law.

Director Ewer stated there are no expectations at this time and the law has a high hurdle with specific, unique circumstances. Livingston has a significant site with Burlington Northern, but staff has not been contacted by them.

Responding to a question from Chairman Noennig, Director Ewer stated the TFIP investments are not unique. Certain clientele such as DNRC or DEQ use the pool when they require a long-term horizon. The TFIP provides liquidity and yield, but neither is guaranteed; it is used for long-term investments.

Responding to a question from Chairman Noennig, Mr. Romasko stated the only other investment option is STIP; unless there is a liability with a specific time frame, then an individual investment, such as a five-year agency bond, would be an option. TFIP provides diversity and additional pick up in yield.

Member Terry Cohea noted the Montana constitution does not allow for non-pension equity investments.

Mr. Sheets added the prohibition for investing in equities is precluded by constitutional requirements. An individual bond would have more direct exposure to default, but the TFIP is highly diversified and includes high yield investments through a high yield fund. It allows a highly diversified mix, with fixed income like instruments, and provides additional yield.

> Member Jack Prothero made a motion to approve the Butte Silver Bow City County Investment Policy Statement. Member Cohea seconded the motion. The motion carried.

CEM BENCHMARKING ANALYSIS

Mr. Mike Heale, CEM Benchmarking

Mr. Heale presented the CEM Benchmarking Results. The report provides an independent, objective review of costs and performance over the five years ending 12/31/14. There are 53 U.S. public funds included in the universe. The review database was not fully populated, but did include about 75% participation. For the cost analysis, the focus is on the custom peer group of $4.2 billion to $17.8 billion; BOI is near the median at $9.6 billion. The peer group contains mostly the same participants as prior years, with four new or different funds. The ones replaced were those that had not submitted data or the data was not of sufficient quality. The report focus is on the 18 U.S. public funds most similar to BOI for peer comparison and returns are broken into two key pieces. Asset mix is by far the main return driver, along with implementation impact. The report looks at costs and cost effectiveness in detail.

BOI has a total net total return of 10.6% over the five-year period compared to the U.S. public median of 9.7% and a peer median of 9.8% compared to the median of the 53 U.S. participating public funds universe.

Mr. Heale reviewed the policy return and noted the BOI policy return was 10.6% compared to the U.S. public median of 9.6% and peer median of 9.7%, a ranking in the top 10%. There is a special adjustment applied to private equity when comparing to benchmark, as funds have self-selective benchmarks that are very diverse. In order to show funds on a more consistent basis, a common benchmark is applied to the private equity component of all funds with private equity. Because this benchmark is a function of lagged public small cap equity returns, this lowers the policy return compared to applying the BOI benchmark of the S&P 1500 + 4%. Responding to a question from Member Satre, Mr. Heale stated the policy return is based on the benchmark, generally using passive indices.

Mr. Heale reviewed market returns of the different asset classes. The strongest class was publicly listed REITs; however, it was a very good five-year period for equities in general. Private equity lagged a bit, followed by bonds and the foreign equity market, and lastly by hedge funds at 4.2%, of which BOI has no holdings.

BOI policy return is high relative to most U.S. funds since it contains more U.S. stock at 36% on average, compared to 25%; and BOI has more private equity, 12% vs. 8%, and no hedge funds, while the public average is 4%.

Implementation impact is the difference between total return and policy return, and impacts are usually quite modest.

Mr. Heale added if totally invested in passively managed assets, the result would be minus some number of basis points compared to the benchmark, as there are costs to invest passively. Additionally, generally active management provides a modest return, adding 19 basis points of positive value; the recovered cost plus the added net value.

It helps to look at net returns by major asset classes compared to peers. BOI had higher net returns than peers for U.S. average public returns, all stock, all fixed income and real estate and just slightly behind peers for private equity. Costs for managing assets in house, including direct management transaction costs, are not included. External managers make up a bigger chunk of costs.

BOI total costs for 2014 by asset class, including both active and passive, equaled $54.6 million or 56 basis points. In reviewing the cost trend over five years, costs decreased from $68.9 million to $56.6 million, a significant decrease over five years. Passive holdings increased from 36% to 53% and the allocation to higher cost private equity has declined to 12.7%. The 56.6 basis points of pure cost compared to the peer median and U.S. median of 67.2 basis points is due to the difference in asset mix, which has a big effect on cost. Holdings of high cost assets for BOI is 19% vs. the peer average of 21%.

Mr. Heale stated the benchmark cost calculation for BOI is 56.6 basis points, 3.4 basis points below the benchmark cost of 60 basis points, slightly below peers. The main reason BOI is lower is the difference in implementation style; less external active management and less fund of funds. BOI is paying slightly more for external investment management costs, and slightly less for custody costs.

For BOI implementation style differences, 47% external active asset management vs. peers at 69% provides a structural cost advantage of significantly less external active management. For U.S. large cap stock, BOI has almost 30% external active vs. peers at 38%, a 30 basis points advantage that saved $717,000. BOI's private equity portfolio is more diversified than peers, containing 26.6% fund of funds vs. 34% for peers, which saved almost $1 million.

In summary, including all costs, BOI saved $3.2 million due to implementation style compared to what you would expect on a benchmark basis. The key factors include less external active management, minimal fund of funds, paying a bit more for external management and a bit less for internal management. The key results show good returns over five years, a 10.6% net total return, placing BOI in the top decile.

Executive Director Ewer asked what advantage active vs. passive management has on average year over a year by comparison.

Mr. Heale stated U.S. pension fund performance of the CEM database over the last 24 years averaged 19 basis points of positive net value added. Mr. Heale explained the factors associated with generating the 19 basis points include the use of active management, those using 100% active management outperformed by 38 basis points on average over passive funds net of fees.

Internal management outperformed external by 22 basis points and very few funds the size of Montana's use internal management. Typically, funds over $50 billion manage internally and reap the benefits due to pure economies of scale. If 100% passive management were used, there would be a negative result.

Mr. Heale added cost trends have increased over the last 10 years from 42.2 to 61 basis points, due largely to private equity and hedge fund costs and more external active managers. For 2014, costs averaged 64.1 basis points for the U.S. universe; however, that excludes transaction costs and private equity incentive payments, therefore the actual true cost for U.S. pension funds is closer to about 90 basis points, if all costs were truly reported. Mr. Healy stated managing cost is important, as it consumes about three quarters of gross value added.

Mr. Heale reviewed performance differences between defined benefit vs. defined contribution. Reviewing the database, results over an 18-year history show a total return advantage of 1.11 basis points for defined benefit plans. The underperformance for defined contribution plans is due in part to asset class differences. Private equity has been a good returning class, but while defined benefit plans have 4%, defined contribution plans have none; real estate makes up 5% of defined benefit plans while defined contributions have none. Defined contribution plans do not reap the benefit from those asset classes.

Mr. Jim Voytko added if all structure was fixed between defined benefit and defined contribution it would still be problematic; there will always be a gap, due in part to behavioral factors.

Mr. Sheets asked about the general measure of implementation of the value added over the long term, the 19 basis points, in context of active vs passive. In terms of index funds creating the difference, there is broad implementation impact, the differential between policy weights and actual weights.

Mr. Heale stated, yes, there are mixed impacts with actual weights vs. policy weights, where you make tactical decisions and the asset class levels. U.S. large cap has been the exception and has been negative.

Mr. Heale added he commends BOI staff and noted the quality of the report is a reflection of the great job they do.

ASSET RANGE RECOMENDATION

Mr. Cliff Sheets, CFA, CIO

Executive Director Ewer stated the Board is required by policy, in accordance with the Governance Manual, to annually review pension asset allocation and it is one of the most important presentations staff makes. The annual review has been moved up from the November to the August Board Meeting, due to the retirement of Mr. Sheets in October.

Mr. Sheets started with a discussion of a cash flow analysis of the pensions, and noted it includes the two biggest plans, TRS and PERS, which represent about 87% of the total assets of the nine plans. Cash flow is important in relation to asset allocation given its impact on the ability to raise cash. The cash flow status of these plans is negative, meaning cash outflow for benefits is larger than incoming contributions and portfolio income or yield. Staff conducts an analysis each year, and projects over a five-year interval. Mr. Sheets acknowledged Mr. Eron Krpan as data analyst and noted he has been very helpful in enhancing the credibility of the data.

The contribution inflow to the portfolio, plus income and asset sales are combined to meet cash needs, primarily benefit outflows. The dependence on asset sales is the crux of the challenge given the net cash need. The implied asset sales are forecast to continue to grow in dollar amounts and as a percent of assets. The growth rate of benefit distributions is greater than contribution growth rates by 2-3% per year. The implied sales as a percent of assets is projected to increase to 1.7% of average assets in five years.

Mr. Sheets stated it is important to consider that growth of implied asset sales will increase irrespective of returns, as the size of the gap continues at approximately the same level regardless of investment returns. Even a good return year does not increase the portfolio enough to generate sufficiently more income to provide a meaningful change to the net cash needed. Assets must still be sold, although poor returns can make things much worse over a short period; however, even absolute strong returns will not close the expected gap. The current outlook suggests a marginal deterioration in cash flow. The change in cash flow status does not warrant a change in the management of assets at this time.

Member Terry Cohea asked for a brief review of the sensitivity analysis graph presented, showing the best, base and worst-case scenarios.

Mr. Sheets explained the graph projects the total return assumption for the next five years. The base line assumes a 7% total return, a bit more conservative than the actuarial rate of return; the best case reflects a more volatile picture, but is generally positive. The worst case is similar to the period of fiscal years 2008-2012. In the worst case, even when you get a snap back in terms of positive returns, you do not realize significant improvement on implied sales as a percent of assets. The difference in implied sales from best/worst case is a differential of 1.6%. On a cumulative basis, that adds up to 10-13% of assets.

Mr. Jim Voytko added it has been some time since RVK last conducted an asset liability study; the five-year analysis of cash flow is very reminiscent of the asset liability study. The study showed liquidity was an issue, and if payouts exceed the contribution policy, the trend of cash needed will continue to trend up. Consequently, the allocation to illiquid assets will need to be curbed back over time. This is something the Board has no control over, but increasingly will influence investment choices if the trend continues. It would take persistent, extraordinarily high returns to overcome contributions at levels less than benefit outflows.

Member Karl Englund inquired if there would be a lag between when higher contributions rates are implemented and when the payout is affected.

Mr. Voytko stated yes; and the lag can last longer if higher than expected retirement rates occur.

Mr. Sheets stated FY14 data reflected employee and employer contribution additions and general fund and coal tax reserve input. The issue is not just a contribution policy function. There was a meaningful impact from the changes in contributions set by the legislature, and any benefit adjustments were implemented on new employees only, so any benefit adjustments are slow to impact the cash need status. If changes in benefits only affect new employees, the impact will not be meaningful for a generation.

Chairman Noennig noted if there is a continued net increase in projected assets, though the concern is not immediate, there will come a time when that is no longer true and the required payouts may jeopardize the ability to invest.

Mr. Sheets stated the perception of the issue is affected by nominal asset growth. In 2009, there was a drawdown of assets, but that did not change the net cash needed. In 30 years, there may be an actual shrinkage of assets. Even as assets grow, there could be challenges, and over time more retirees will be added as well.

Chairman Noennig asked what strategy can be used to convince policy makers to understand the issue.

Mr. Sheets responded any need to sell assets requires a plan. The question is do you want a greater dependence on highly volatile assets if you have to depend on sales to provide the net cash need. It is much less painful to sell stocks when they are up 10% in value, but much more difficult if they are down 10-20%. Regarding the current asset allocation recommendation, staff is not recommending any change. The fundamentals are very similar to last year: determine what the plan needs are and what is required in terms of return. There is a need to invest in risky assets and stretching to include assets that provide return over time, while at the same time considering a balance of risk and return and viewing risk in the context of volatility. The fundamental concept is the importance of diversification, which helps smooth the return pattern. There will be times of a perfect storm for correlations, but over time, there is a benefit from diversification. The liquidity concern goes beyond just ease of trading, but the dependence on the need to possibly sell a depressed asset. Additionally, liquidity is not simply black and white. Staff conducted the secondary private equity asset sale last year and generated $120 million, but you cannot rely on those opportunities. In addition, ranges need to be wide enough to accommodate inherent market volatility. The denominator effect can have a big impact. Staff uses the discipline of ranges to help keep within a similar risk profile.

Mr. Sheets summarized that while implied asset sales will continue to be more noticeable, they are manageable at this time. Staff is requesting Board approval of the pension asset allocation recommendation.

Executive Director Ewer asked if there is a reasonable argument for continuing the total maximum total equity level at 72%, given the permanent phenomenon of net cash needed, or if there is a counter argument for changing it.

Mr. Sheets replied we do not know what equity will do, including private equity, and we cannot predict what the market will do. Returns do not necessarily help the cash flow issue; even with great bull markets, that will not make up the difference required. Income and returns only help so much, they cannot overcome net cash needed which will continue to provide challenges in the future.

Director Ewer asked what the window is, going forward, before a change in asset allocation is required.

Mr. Sheets stated it is important to review asset allocation annually. Benefit or contribution policies are dependent on the legislature. These are important variables not set by pension boards or actuaries. Considering the status quo, if the baseline proves out, in seven or eight years the question will likely need to be addressed more seriously.

Mr. Sheets added the challenge will evolve over time in terms of asset class preferences. Monthly payouts are very predictable; it is a slow motion challenge. Cash flow is slow motion and on the asset front, it is more a case of adjusting the flavor of assets. Fixed income and real estate, for example, can provide more income generating strategies. Even public equities can allow more focus on income generation. The situation will be more stressful at some times than others; a bear market in stocks would create a more difficult scenario to sell assets.

Member Marilyn Ryan asked if, in the short run, simply increasing contributions can make a difference.

Mr. Sheets replied in the short run, yes. The effort to trim costs of the system by dialing down the Guaranteed Annual Benefit Adjustment (GABA) was on the right track, but it did not succeed legally and added staff must look at the investment end. It is natural as a defined benefit system matures that net cash needs play out; some plans are a lot further down that road than Montana.

Member Englund noted if you consider an increase in contributions over the long term, and the decrease in benefits to new employees, once the new employees start collecting less in benefits and those now collecting die, it should aid the system in the long run. Continuing the year-to-year analysis is a good approach as a Board.

Mr. Sheets added some adjustments will help over the long term. The ability to manage it depends on investment assets and the ability to raise cash; it is important to manage around the issue and to look at markets on a monthly and yearly basis.

Member Cohea asked what the best strategy is to let people know there is an issue; as even though assets are growing, net cash needs continue to grow because of the age of plan, although the progression is slow.

Mr. Voytko stated while the process is slow, the gap between contributions and payouts will continue to grow even as assets continue to grow. Looking beyond the current generation, the payout ratio could get worse before it gets better, and changes in asset allocation may be required to accommodate.

Member Jon Satre asked if there is a window of 5 – 7 years where the issue is not yet critical, should the opportunity be taken to enhance allocations, even if it does not make a huge difference. The private equity allocation decreased after the recent secondary sale.

Mr. Sheets explained private equity did decrease from 12.6% to 10.7%, but that was due in part to the denominator effect resulting from the long-term positive stock market, which boosted the denominator. Equities do provide better returns over time, but the balance of returns/risk must be maintained over time; selling assets in a down market is not ideal. Markets have had low volatility and been generally positive since 2011 and since March 2009, it is easy to be lulled by the return pattern of stocks. The trend line of the S&P 500 has been calm with low volatility for 3-4 years and it is easy to forget the third quarter of 2011 when stocks went down significantly. Asset allocation ranges are built to be flexible. There are ways to seek returns in a broad sense of asset allocation by maintaining the current biases. The current and expected net cash need is more a function of benefits and contributions. The cash issue is not a dire situation and is manageable in the foreseeable future; it is wise to keep a long term perspective, don't panic, and keep using a deliberative process.

> Member Karl Englund made a motion to approve the asset allocation ranges as presented. Member Sheena Wilson seconded the motion. The motion carried.

RISK MANAGEMENT MINDSET – RVK INC.

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

Ms. Gratsinger began the risk management presentation by recounting some of the key challenges facing public pension plans. She emphasized that while many investors focus heavily on volatility risk, there are many other risks that must be considered. Examples include investment or headline risk, liquidity risk, solvency risk and governance risk.

Mr. Higgins then reviewed each of these risks:

1. Governance risk occurs when the structure of an institution is not suited to manage assets effectively, and therefore are not managed efficiently or in the best interests of the benefit stakeholders.

2. Investment risk occurs when the investment strategy is not executed effectively.

3. Operational risk occurs when, although an organization is governed well, operationally, something lacks, such as an insufficient disaster recovery plan.

4. Solvency risk is the risk an institution cannot meet its obligations. Mr. Higgins noted that this risk a bit different, as this is outside of the control of this Board

Member Jack Prothero noted personnel changes, and the associated risk of hiring the right people, is a situation BOI is facing currently with the challenge of hiring a new CIO with the pending retirement of Mr. Sheets. It is a big risk, and if the individual filling the CIO position is a bad fit, it could be detrimental.

Mr. Higgins concurred that this is the biggest risk that the Board faces currently, but credited the Board for treating the issue with the appropriate level of concern and action.

Mr. Higgins reviewed the different aspects of the various risk categories. Governance risk includes problem areas such as an inadequate legal framework or delegation. Mr. Higgins noted that MBOI has done very well in this area. The Governance Manual includes established outlines, detailing what the Board, staff and other stakeholders are responsible for; it also ensures investments are well managed. The establishment of a citizen board and the ability to ask questions and monitor staff is important, but delegation is critical. Typically, boards do not delegate enough. The MBOI Board understands the oversight role and delegates appropriately.

Additionally, the decision making process itself, which may include discipline in sticking to an agenda and meeting preparation is a big risk. Mr. Higgins crediting the MBOI for the use of the 24-month work plan and preparing well. RVK noted that they use the work plan with other clients because it works so well.

The turnover of board members is one challenge many boards have; it is critical to maintain strategic continuity during turnover. The BOI board member orientation is very helpful for continuity. The BOI Board is also proactive in terms of reaching out to RVK and others for education of new and existing Board Members. That BOI is a well-governed board is not an accident; it is very deliberate.

Member Jon Satre asked Mr. Higgins if he had any concerns regarding the Board.

Mr. Higgins replied that poor performing boards rarely ask that question, but nonetheless, he believes that MBOI is a very well-functioning board.

Ms. Gratsinger added it is important to have the Governance Manual and to revisit it regularly. Having the plan in place helps to implement discipline; it codifies what is working and is a living breathing document.

Executive Director Ewer added is it a reality of what we are doing. The Governance Manual is the backbone of the status quo as of now and has been very important; staff takes it seriously. For instance, last year the succession plan was updated. It is the reference for process/discipline and is a profoundly important document.

Mr. Higgins stated on the operational front, the important factors include administrative structure, the right people, systems and policies in place, along with robust checks and balances, and regular internal/external audits. Additionally, it is important that budgetary controls are regularly reviewed and costs are reviewed, as they are an important driver of ultimate returns of a plan. Other factors include IT and security, which are very important; the technology invested in requires continuing investment and the necessity to have a continuity plan in place.

Mr. Higgins continued, regarding HR management, when senior staff leaves, the investment profession can attract talent and managers and one way to compete is to have exempt employee status, and be competitive in terms of pay. Characteristics include the ability of the personality and the leadership of staff. Additionally, Montana is not necessarily a destination, so recruiting can be difficult.

Ms. Gratsinger reviewed investment risk. Although revisited often, some institutions do not look at asset allocation enough or react to market factors. It is important to adhere to the prudent expert principle and diversification principles and to reaffirm the asset allocation ranges each year. Some plans still operate under the prudent man rule, rather than prudent expert. Even long-term investors can be tempted to make tactical moves, but it is best to have a clear long-term horizon. Monitoring the absolute levels of risk is also very important to prepare for market scenarios.

Ms. Gratsinger noted when it comes to active manager performance, when an investment manager goes through changes or performance suffers, decisions can be difficult. Nearly all managers go through lower quartile times and some funds cut and run when a manager is bottoming out. It is important to establish limitations on managers. It is painful to sell an asset at the low point. Another question is when you have illiquid asset classes, how much do you allocate to them. It is important to rebalance the portfolio to help keep on track from a risk and illiquidity standpoint.

Ms. Gratsinger reviewed solvency risk, stating if the contribution policy inadequately provides for sufficient contributions, it represents a long-term risk to the portfolio. Although the Board does not have control over contribution or distribution policies, both are closely monitored. Many plans struggle, with the market performing so well, with the assumed return and many plans are trimming forecasts back. You must regularly check in to what portfolio contribution expectations are, over time, to the plan.

Mr. Higgins added this is a very good point now, looking at the performance report, to guard against becoming complacent, as you never know when danger looms. Sticking to your strategy, philosophy and discipline are all important. It increases the odds you would act prudently and exercise due diligence when/if something happens.
Executive Director Ewer thanked Mr. Higgins and Ms. Gratsinger for the presentation and added it is a good resource to have an independent periscope from an outside source.

Being no further business, the meeting adjourned for the day at 3:48 PM.

BOARD MEETING - DAY 2

CALL TO ORDER

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 8:00 AM and called for public comment. There was no public comment.

> Audit Committee Chairman Jon Satre requested the Board formally approve revisions to the Internal Control Policy as presented and made a motion for approval. Member Sheena Wilson seconded the motion. The motion carried.

CONSULTANT REPORT

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

Mr. Higgins reviewed the capital markets for the past quarter and presented the executive summary, which was added as a regular item for Board distribution. Mr. Higgins stated the recent market trend has been challenging, but more positive for the BOI portfolio than others, due to domestic equity exposure. In the end, markets for the quarter ended up relatively flat, although international equity markets were up a bit more than domestic equity markets. The big news in the second quarter was the continued challenge in Europe related to the Greek economy and need for additional support from the Eurozone. While there was speculation that Greece may leave the Euro zone, in the end a deal was brokered.

Of bigger concern over the second and third quarters was uncertainty in China, which saw continued weakening of their economy. Evidence of weakening was apparent in export volumes and real GDP growth. One side effect of the slowing Chinese economy was a collapse in commodity prices, such as oil, copper and iron. There are also concerns that economic weakness in China may continue to negatively impact U.S. and world markets.

On the domestic front, U.S. equities and fixed income returns were not as strong as over the last five years. Head winds included fears of what many believed to be a potentially premature Fed rate increase, as well as concerns over a slowing global economy. The U.S. dollar strengthened over the last year, putting further downward pressure on energy prices. On the positive side, there is still moderately positive GDP growth. Job growth also continued to show solid growth, with the U.S. continuing to add roughly 200,000 jobs per month. This continues to steadily decrease the unemployment rate and bring discouraged workers back into the market.

After Mr. Higgins concluded the discussion on capital markets, Ms. Gratsinger reviewed the retirement plans. The total market value of the retirement portfolio is over $10 billion: for the two largest plans, PERS now has more than $5 billion and TRS has roughly $3.7 billion as of June 30. The relative allocation is about 57% equities, 11% private equity, and 22% fixed income (or 24% if you add in cash).

Ms. Gratsinger reviewed the relative performance of the largest retirement plans. There were muted returns of 0.5% for the quarter, although the plans did outperform the benchmark and ranked of 27th among peers. Calendar year to date rate of return was 2.62% gross of fees and 4.6% for the fiscal year end with a 2nd percentile ranking. Over five years, MBOI ranked in the 1st percentile.

Over a three and five-year period, the return of the retirement plans substantially exceeds the actuarial hurdle rate of 7.75%. However, the 10-year net return lags of 6.6% still lags as the effects of the global financial crisis continue to exert a strong impact.

Ms. Gratsinger proceeded to review PERS performance vs. the plan sponsor peer group and stated relative to other plans, the portfolio had a nice progression and ranks at the top compared to other plans. The slight lag behind the PERS benchmark is due to the same private equity benchmark issue the Board has discussed on several occasions.

It is important to look at portfolio risk relative to other plans and to the benchmark. The portfolio position relative to the index is right on top of the median for return perspective, but when risk is added, things appear more attractive. Another measure of risk in a portfolio is equity beta, which indicates the portfolio's sensitivity to the S&P 500 index. Relative to other comparable public plans the portfolio is right at the median. In other words, despite a large overall allocation to equities, the plans have a similar sensitivity to equity as other plans with lower equity allocations.

Ms. Gratsinger noted that despite the past success, it will be very hard to replicate returns achieved over the past 3 and 5-year periods. U.S. equity has performed quite well, but is not expected to continue as such going forward.

The RFBP and TFIP had negative returns as interest rates went up in the quarter. Over the longer period return history, both have beaten the benchmark on every trailing period.

Real estate has been outperforming over shorter periods, but the long-term returns reflect the timing issue of entering into the market.

STIP has had very small returns on a net of fee basis and has a small underperformance vs. the benchmark for the quarter.

In the absolute sense, the private equity pool has helped total return going back to 2012 and performance is very positive; there are no concerns regarding the underperformance vs. the benchmark.

Ms. Gratsinger noted on a gross of fee basis, the asset pool performance compared to other plans shows a relatively good ranking for domestic equity for the quarter and FYTD; the international ranking comparisons must take into consideration that other plans contain less emerging markets.

In summary, overall, relative ranking has improved and compared to other plans, Montana has extracted a considerable amount of value from capital markets. RVK continues to support the asset allocation decisions made by staff.

INVESTMENT ACTIVITIES/REPORTS

Retirement System Asset Allocation Report

Mr. Cliff Sheets reviewed asset allocation and performance for the quarter and fiscal year ending June 30, 2015 and highlighted the fact the quarter was relatively mediocre. Total plan assets were essentially flat, declining by $10 million. Clearly, returns were more muted for equity assets this quarter, and slightly negative for fixed income because of a rise in interest rates. International equities did pick up relative to domestic, although that has changed since quarter end. Overseas events and emerging markets in particular are creating a return drag for international equity right now. Changes in asset allocation weights were small; domestic stocks saw a decline as performance was flat and sales were made from the domestic equity pool. A portion of the net sales across the three different equity categories were added to fixed income to retain the minimum policy weight to this asset class.

Mr. Sheets stated, looking back at the fiscal year, allocation changes were influenced by returns mostly, and transactions to a lesser extent; the actual dollar increase of total plan assets was approximately $230 million. The positive net return of 4.6% was weaker than the actuarial hurdle. Missing by 3% is not a significant shortfall; FY12 was down about 2%. This does not indicate a real problem in the context of longer-term returns, and returns are not expected to continue at the recent pace. Allocations overall changed little, but of particular note is the domestic vs. international equity weights which grew apart due to relative performance. Overall, equity declined slightly, by half a percent, reflective of negative returns for international stocks offset by a 7% plus return from domestic stocks and a little over 8% for private equity.

The sales of $125 million in domestic stocks reflects the continuation of exercising limited degrees of change in asset allocation, consistent with selling stronger performing assets and buying weaker performing assets. Staff pulled out excess liquidity from the private asset pools and added $135 million to the fixed income pool to remain above the allocation floor of 22%. Mr. Sheets emphasized that for overall diversification, the alternatives are providing benefits. The private equity pool continues to perform very well, and the real estate pool is doing well; the asset class is serving its function. The objective of the allocation to real estate was to provide added diversification and it is providing that function and hitting the absolute return target. There is no way to know if the trend will continue, but the pool has done well over the last year.

Mr. Sheets reviewed asset allocation peer comparisons and noted there were no meaningful changes relative to peers. Total public equity weight is right at the median of 56% for the custom universe, yet last quarter the median was 59%, so it varies from quarter to quarter. BOI does have an ongoing tilt to domestic equity vs. international. Fixed income is slightly above the median, although fixed income has been very close to the median in the recent past; policy minimum is 22%. For real estate, BOI is in the top quartile at 8%, although the median of 4.6% can be misleading. The true median is higher, closer to 7% or 8%, in reality. Real estate has provided a very favorable exposure, both with positive returns and diversification. BOI is now slightly below the median for private equity; no significant change there.

Member Englund asked if the relative allocation levels are cause for concern.

Mr. Sheets responded there will be times when domestic equity may hurt us, but that is not the case currently. As of now, the positive tilt still makes sense; international stocks are cheaper than U.S., but they are cheap for a reason. The portfolio does have a 17% exposure to international equity, and we do get concerned at times when international outperforms, but not over the long term. The current equity mix is functioning well.

Chairman Noennig asked what factors would lead to reducing domestic equity in favor of international.

Mr. Sheets stated the fundamental economic difference between the U.S. and the rest of world would have to equalize. There is a lot going for the U.S. economy versus the challenges in Europe, and emerging markets in particular. There would have to be a change from stagnation to more fundamentally positive economic growth, which will drive earnings, and more confidence is required to justify an increase on the international side. Also, global equities are more closely correlated than 20 years ago.

Mr. Sheets reviewed the measure of beta, or correlation with the S&P 500, of the different asset classes for the retirement plans as prepared by RVK. BOI's beta relative to the S&P 500 is stable at about 0.6; however, international stocks have been all over board, although for a while they were trending with domestic stocks. More recently, they have had a dip in beta. Whether beta is at 0.8 or 1.2, generally international equity moves in the same direction as domestic equity, though recently beta relative to the S&P is shifting to a lower correlation for international equity.

Mr. Sheets reviewed relative performance vs. the State Street peer universe, and stated looking at one through five years the portfolio is in top the quartile and sometimes the top decile. Comparing the median returns vs. the BNY Mellon data used in RVK's book, in some cases the State Street Bank data is higher or lower depending on the time period, but over 10 years the median returns are the same. Gross return for PERS for 10 years at 6.93% is spot on with the survey data provided by RVK, ranked around the 30th percentile.

Fixed Income

Mr. Nathan Sax presented the Fixed Income overview and strategy for the quarter ending June 30, 2015. Mr. Sax stated the U.S. Treasury 10-year note rose over the quarter, ending at 2.354%; today it is at 2.22%, so interest rates are still low. The Fed has been in the news a lot; the Fed's target of inflation is 2% and there is a lot of anticipation the Fed will raise rates. In Europe, there was a flight to quality; the German yield decreased to seven basis points, and there is a lot of concern with emerging markets due to China's markets. Commodities prices have fallen and manufacturing activity is on the wane. Oil is a big part of commodities and oil has fallen substantially. Over the last quarter, Aberdeen Asset Management was terminated. BlackRock was the transition manager and a total of $106 million was liquidated, which will be kept and managed internally. Reams Asset Management has started to improve; they have been on a 17 basis points fee vs. Aberdeen, which was 25 basis points. After prolonged volatility and performance issues, including global bonds and exposure to currencies, Aberdeen (formerly known as Julius Baer then Artio) was terminated.

Mr. Sax stated there were no changes to below investment grade holdings.

Fixed Income External Managers Watch List

Mr. Sax reviewed the external managers watch list and noted Aberdeen, now terminated, will come off the list. They ranked at the 94th percentile for the quarter, 98th for the year and 99th 2013. Staff believes they have a good team; however, several strategies have not worked out. Reams will likely be removed from the list next quarter. Reams was ranked at the 86th percentile for three years, but moved up to 33rd last quarter. The Core Internal Bond Pool (CIBP) continues to perform well, ranking at the 10th percentile for one year and 32nd for three years. Neuberger has experienced mediocre returns for the 1, 3 and 5-year periods; high yield managers have not been comparable to liquid aggregate managers. Post has performed very well and returns over 1, 3 and 5-year have been fantastic; we pay a 60 basis points fee, but they have done remarkably well. They were on the watch list for a while but have improved.

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

Mr. Rich Cooley presented the Treasurer's Fund report for the quarter ending June 30, 2015. Staff bought $20 million of securities to bring the total up to $140 million, attempting to pick up additional yield; a 98 basis points yield for $140 million is a good pick up over the STIP yield.

Mr. Cooley presented the STIP report for the quarter ending June 30, 2015 and noted there was not much change in money markets. Investors are still waiting for the Fed to take action on interest rates and the market seems to think it will happen in September. The 3-month Libor moved up five basis points; not much, but more movement than we have seen recently. There was a little widening of spreads with 2-year bank paper; staff sold a bit of short bank paper that had rolled down, most of which had a gain. Staff was able to increase book yield by rolling out to 2-year securities. The portfolio yield was 23 basis points at the end of the quarter; currently it is 24 basis points. STIP return is 12 basis points for the year, below both the benchmark and the peer group. This is mostly a function of the reserve account fund; the 3 and 5-year numbers have not changed much. The STIP reserve impact was reduced due to a decrease in the daily addition to STIP reserve fund from $10,000 to $8,000 per day on June 22. This reduced the STIP yield impact from 15 basis points to 12 basis points increasing yield to participants by three basis points. At quarter end, the total reserve fund balance was greater than the outstanding book value of the SIVs. Over the quarter, the reserve account increased by about $1 million and the SIV pay down was about $1.6 million.

Responding to questions from Member Englund and Member Cohea, Mr. Cooley explained paybacks on the SIVs are rolling right along and BOI may receive the total due over the next three to five years. The change in the reserve fund is a result of the change in book value due to pay downs on those assets; maturities over time will determine if and when something should be sold.

Additions to the STIP reserve account include the amount held back from yield, income that flows off the SIVs and proceeds of security sales made out of the portfolio. There were some gains on securities sold over the quarter.

Mr. Cooley presented the State Fund report for the quarter ending June 30, 2015. The most significant thing over the quarter was the widening of corporate spreads by 16 basis points and increasing treasury rates during the fiscal year. Fixed income, including STIP, had 40 basis points of out performance. Purchases included corporate and government, mostly 5-year, but some 10-year securities, with a good pick up in yield. Sales of equity units totaled $3 million for the quarter as equity approached the fund maximum ceiling of 12%.

The current State Fund breakdown of fund holdings is 11.4% domestic equity and nearly 6% real estate. The total portfolio had a one-year return of 3.05%. Total equity return was 5.94%, although domestic equity was 7.49%. The best return was 12.38% for real estate.

Mr. Sheets added it is important to remember the objective for State Fund is income, although total return does affect income.

Mr. Cooley added the strategy is mostly buy and hold to keep the book yield up.

Montana Domestic Equity Pool (MDEP)

Mr. Rande Muffick presented the Domestic Equity Pool (MDEP) report for the quarter ending June 30, 2015. Greece and China were the main characters in play this quarter, in particular China's economic state; a market correction is due. The U.S. markets were affected by the influence of Greece and China; although trading ranges are consistent with those seen over the past several months. Investors are waiting to see what the Fed does and are biding their time. In the U.S. market environment, growth stocks fared a lot better than value over the past year, due mainly to commodities; as prices fall, stocks follow the commodities. Those stocks are typically value stocks so it has an effect. The markets were favorable for growth stocks such as health care and biotech stocks.

Market capitalization performances were mixed for the quarter with not much going on. Mid-cap performance was down from 1-2%, while small caps eked out positive returns. Over the last 12 months and fiscal year, large, mid and small caps came in close to each other in the upper single digits for the fiscal year. In the active management industry, domestic active did pretty well for the year. The median manager outperformed for all large, small and mid-caps for the fiscal year and the same for the end of the second quarter. For the BOI managers, domestic equity outperformed the benchmark for the fiscal year, so active managers are pulling their weight. All four large cap managers added value for the fiscal year. Mid-cap managers within the domestic equity pool struggled a bit, but still outperformed for the second quarter. In summary, the strategy for both pools is performing fairly well; the favoring of mid and small caps will continue for the portfolio and we expect allocations to stay the same going forward.

Montana International Equity Pool (MTIP)

Mr. Muffick presented the Montana International Pool (MTIP) report for the quarter ending June 30, 2015. There was a lot of volatility in the international markets in the second quarter due to China and Greece. International markets for U.S. investors like BOI were impacted due to dollar denominated negative numbers. Local markets did well, however U.S. investors are penalized when foreign dollars are transferred back into U.S. dollars. Small caps did well vs. large caps in non-U.S. developed markets and emerging markets. With all the concerns over the quarter, it is surprising small caps did as well as they did. Large caps are easier to sell generally.

The fiscal year had negative numbers due to currency, returns were mixed; large cap value did worse at -9.5% due to commodities. The top performer was small cap growth which still had a negative return at -1.4%. There was dramatic movement in the dollar over the year. The U.S. dollar was very strong over the last 12 months, which weighed on international returns for U.S. investors.

It has been a pretty good year for active management both domestic and international. MTIP outperformed vs. the benchmark and added value in large cap, even though we transitioned managers. There was an increase in the small cap allocation, which now has a slight overweight vs. the benchmark, due to the transition at the end of May.

For international exposure, specifically emerging market exposure, the portfolio is underweight as of the end of June; when China looked like a bubble, we pulled some money out of emerging markets. Consequently, there has been a big sell off. After the transition from the three legacy managers, the emerging market weighting was also affected and moved the portfolio to a slight underweight.

Public Equity External Manager Watch List

Mr. Muffick reviewed the Public Equity External Manager Watch List. There are two managers currently on the list. The first is a domestic manager, Artisan, which has been on the list for a long time. They have fallen in relative performance over the last year and a half; however, staff is not overly concerned and remains comfortable with the manager, and they are still following their style. Eventually performance is expected to come back. Mr. Muffick added, as Mr. Voytko mentioned, even the best managers can go through periods in the bottom quartile; Artisan's style is currently out of favor. The second manager on the list is Alliance Bernstein, a domestic small cap manager. Alliance Bernstein was hired at the top of their performance cycle; therefore, BOI's timing was not favorable. Performance has improved some, but they have stumbled a bit. A good manager, they have impeccable long-term numbers and are sticking to their strategy; a momentum stock manager, they are still picking stocks and managing the portfolio according to style.

Voya was removed from watch list this quarter. There was a change in the lead portfolio manager, but after three consecutive quarterly reviews with the new lead man, style implementation and philosophy have remained the same and things are going well, prompting staff to remove them from the list.

PUBLIC EQUITIES
MANAGER WATCH LIST
August 2015

Manager	Style Bucket	Reason	$ Invested (mil)	Inclusion Date
Artisan	**Domestic – MC Value**	**Performance**	**$133.8**	**November 2014**
Alliance Bernstein	**Domestic – SC Growth**	**Performance**	**$38.6**	**February 2015**

Mr. Muffick reviewed the recent MTIP large cap manager transition. The main objective was to improve the combination of large cap managers within the international portfolio, and to enable more consistent performance relative to the benchmark and to improve the style complement with Acadian. Three large cap managers were terminated and three new managers were hired. The total transition amounted to $360 million. When a new manager is hired, they do not receive 100% of the expected long-term funding goal, therefore the new managers received less than the amount removed from the terminated managers. The remaining balance went into a large cap index fund managed by BlackRock and $10 million was allocated to Templeton. Templeton has performed well, therefore staff decided to allocate another $10 million to the $50 million currently under management.

Any transition is complex and affects several different accounts. State Street Bank Global Market was hired to manage the transition, at a total transition cost of 51.4 basis points. The cost turned out to be higher than anticipated; the actual cost on the $360 million equaled $1.9 million and the 11–12 basis points affected returns for the international pool as a whole. Transitions can be costly and when conducting any transition, it is important to understand when to hold on to a manager and when to let go. Ideally, it is best not to fire a manager at the bottom of a performance cycle.

Member Englund asked if all transition costs will be reflected in the most recent quarter returns.

Mr. Muffick stated yes, the negative 12 basis point impact will be reflected in the latest quarter. The newly hired managers had good performance in June, which helped. Mr. Muffick added the summary provided by State Street of the post trade report has detailed information of the transition. Some special trades were required as well as an initial position in emerging markets ETF's to take out an imbedded fund of a legacy manager. Transition managers attempt to mitigate any negative impact.

Mr. Muffick stated the largest part of the transition cost involved the portfolio holdings of the three legacy managers as State Street moved out of legacy stocks and into the new stocks. Those new stocks were outperforming the ones sold off and so the market moved against us. The cost to the actual portfolio return, as of the move on June 1, the $1.9 million market impact, totaled 24 basis points which raised the total cost to 51 basis points. Taxes and commissions also had an impact.

The target portfolios were more expensive than expected and the internal/external cross costs were larger than estimated. Additionally, another fund was expected to do a transition at the same time as BOI, on the opposite side of the trade of many of the transition stocks, but pulled out at the last minute, which meant less external/internal crossing occurred. Internal crossing was estimated at 7.4%.

Mr. Muffick added there is an element of luck involved and there is no way to predict how the market will function on the day of transition.

Montana Private Equity Pool (MPEP)

Mr. Ethan Hurley presented the Montana Private Equity Pool report for the quarter ending March 31, 2015. There was one commitment for the quarter, a re-up with current manager Neuberger Strategic Co-Investment Partners, III, LP for $20 million. MBOI committed $20 million to Fund II in 2012 and $35 million to Fund I in 2006.

Fund Name	Vintage	Subclass	Sector	Amount	Date
Neuberger Strategic Co-Investment Partners III, LP	2015	Buyout	Diversified	$20M	7/10/2015

It was another positive cash flow quarter, which marks 13 out of the last 14 quarters. The pool is well diversified by strategy and industry and remains geographically North American centric. There were no material changes over the quarter; investments are primarily limited partnerships and fund of funds are used only when necessary. Responding to a question from Member Englund, Mr. Hurley stated fund of funds will continue to wind down, however the pace will be slow.

At quarter end since inception, the private equity pool net investment multiple was 1.5x and the net IRR multiple was 12.53%.

Montana Real Estate Pool (MTRP)

Mr. Hurley presented the Montana Real Estate Pool for the quarter ending March 31, 2015. Staff made one commitment since the last Board meeting to Equus Investment Partnership X, LP for $20 million. This is also a re-up with an existing value add manager. The U.S. team is strong and tenured with a good record. Staff committed early with a first close and they gave us a reduced management fee.

Fund Name	Vintage	Subclass	Sector	Amount	Date
Equus Investment Partnership X, LP	2015	Value Add	Diversified	$20M	4/1/2015

Reviewing pool cash flow for non-core funds only for the quarter, there was a net positive cash flow and real estate markets continue to rebound and are favorable. The portfolio exposure by strategy is relatively well diversified with no significant changes to report. Exposure by property type is very diversified, and there is no specific effort to under/overweight relative to the index. Time weighted returns remain positive for core managers.

Mr. Hurley reported the portfolio is conservatively leveraged and well within policy constraints.

Mr. Hurley advised there were no changes to the private equity and real estate partnership focus lists this quarter; however, Liquid Realty Partners, IV has been on list since August 2010 and has been a concern. BOI joined other LPs as of June 26, 2015 and formally removed the GP and replaced with a new GP. The process proceeded in accordance with the governance outlined in the LP agreement, and the process worked.

Board Chairman Mark Noennig asked who initiated the action.

Mr. Hurley stated Duke Endowment, Harvard and Liberty Insurance initiated the process and it is a legal battle, not to the extent that the GP has been removed, but the GP has been reticent to relinquish the bank accounts. BOI is north of 6% of the fund; there is $38 million in cash the GP has been holding back and has not given up. As of August 6, the current GP filed to show cause and there is a New York court date set for September 30 to disclose all books and records and accounts. The LP agreement letter was followed to the letter for the removal and replacement of the general partner; the process was done by the book.

Member Satre asked what the current BOI investment is.

Mr. Hurley stated BOI has over $18 million in commitments, which is about 6% of the fund total and added he will keep board apprised of the situation.

Executive Director Ewer called for any to-do items for the next Board Meeting. There were no items noted.

The next scheduled Board Meeting is October 6. At this time, the Meeting is scheduled for one day, but may be extended to a day and a half if needed.

Being no further business before the Board, the meeting was adjourned at 9:55 a.m.

Next Meeting
The next regular meeting of the Board will be October 6, 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: November 18, 2015

MBOI:drc
11/2/15