These minutes are Approved and Final. Full Board review and decision took place at the August 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 - May 19 - 20, 2015**

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

**BOARD MEMBER ABSENT:**
Quinton Nyman

**LEGISLATIVE LIAISONS PRESENT:**
Senator Bob Keenan
Representative Kelly McCarthy

**STAFF PRESENT:**
Polly Boutin, Associate Financial Manager
Jason Brent, CFA, Alternative Investments Analyst
Geri Burton, Deputy Director
Dana Chapman, Board Secretary
Richard Cooley, CFA, Portfolio Manager, Fixed Income/STIP
Frank Cornwell, CPA, Associate Financial Manager
Craig Coulter, Alternative Investments Analyst
Roberta Diaz, Investment Accountant
David Ewer, Executive Director
Julie 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
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:**
Meg O'Leary, Director, Department of Commerce
Jim Voytko, RVK, Inc.
Kristin Reynolds, State Accounting Division
Neil Fryer, State Accounting Division
Mark Barry, State Fund
Lanny Hubbard, State Fund
Cheryl Grey, DOA
Ryan Evans, Office of the Governor
Shawn Graham, Teachers' Retirement System
Danette Gleason, Butte-Silver Bow
Matt Vincent, Butte-Silver Bow
Carleen Layne, MT Arts Council

## CALL TO ORDER

Board Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 11:24 AM. As noted above, a quorum of Board Members was present. Board Member Quinton Nyman was absent. Chairman Noennig called for public comment. There was no public comment.

Chairman Noennig called for any corrections or revisions to the Board minutes from the February 24-25, 2015 and April 7, 2015 Board meetings.

> Board Member Karl Englund made a Motion to approve the February 24-25, 2015, Board Meeting minutes. Member Jon Satre seconded the Motion. The Motion carried.

> Board Member Kathy Bessette made a Motion to approve the April 7, 2015, Board Meeting minutes. Member Terry Cohea seconded the Motion. The Motion carried.

Introduction

Executive Director David Ewer welcomed and introduced Ms. Julie Feldman, who recently joined BOI as the new Financial Manager. Ms. Feldman is a CPA and brings many years of service.

## ADMINISTRATIVE BUSINESS

Audit Committee Report

The Audit Committee met prior to the Board meeting. Committee Chairman Jon Satre noted the Committee had no issues requiring decisions by the Committee. Executive Director Ewer presented a status update on revisions under consideration for STIP protocol, including a draft resolution, which has been distributed to local governments for comments and suggestions. Staff will present recommendations to the Audit Committee at the November meeting; the new procedures will be implemented sometime in 2016.

Legislative Auditors were on site in March and conducted a planning session for the Audit. Auditors will return in June.

The Internal Controls Audit, conducted each year by Wipfli (formerly known as Galusha Higgins and Galusha), is underway. Wipfli staff was on site in March, and will return this week; the draft report is expected in August,

Fiscal year 2015 financial statements will be completed in September.

Revisions to the Annual Report are in process.

Human Resource Committee Report

The Human Resource Committee met prior to the Board meeting. Human Resource Committee Chairman Karl Englund advised there are three decisions from the Committee which require Board approval. The first is to adopt the new Exempt Staff Pay Plan Policy containing the updated table on the last page which includes the 2014 salary survey data.

> Committee Chairman Englund made a Motion to accept the Committee's recommendation to approve the new Exempt Staff Pay Plan Policy. Member Jon Satre seconded the Motion. There was no discussion. The Motion carried.

The second item provides a 3% pay raise for exempt staff effective January 1, 2016.

> Committee Chairman Englund made a Motion to accept the Committee's recommendation to approve the exempt staff pay increases. Member Jon Satre seconded the Motion. The Motion carried.

The third item requires Board approval to accept the staffing levels for the coming year of eight exempt and 24 classified positions, for a total of 32 full time positions.

> Committee Chairman Englund made a Motion to accept the Committee's recommendation to approve the current staffing levels as presented. Member Jon Satre seconded the Motion. The Motion carried.

Loan Committee Report

Committee Chairman Jack Prothero reported the Committee acted on two items that need full Board approval. The first item is a loan increase request from the City of Deer Lodge for an additional $3,455,000. The original loan for $5,024,000 was approved in April 2014. The new total loan amount is $8,479,000 for long-term interim financing for a wastewater treatment plant. The requested loan increase is due to delays and higher than expected costs for the project. The Loan Committee is recommending approval of the loan increase.

> Committee Chairman Prothero made a Motion to approve the loan increase to the City of Deer Lodge. Member Terry Cohea seconded the Motion. The Motion carried.

The Loan Committee is recommending Board approval for revisions to the Permanent Coal Trust Policy, adding Coal Severance Tax Bonds to the list of approved investments. The Policy change allows the Board to finance $1.5 million to the Department of Natural Resources & Conservation (DNRC) to purchase tax bonds to finance two projects. The Committee is recommending approval of the revised Policy.

> Committee Chairman Prothero made a Motion to approve the revised Permanent Coal Trust Policy. Member Kathy Bessette seconded the Motion. The Motion carried.

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

TRS Representative Marilyn Ryan reported the May 15 TRS Board meeting included a review of the Gabriel Roeder Smith (GRS) Actuarial Audit Report on the Cavanaugh MacDonald annual valuation of assets and liabilities of TRS. GRS reported the valuation is reasonable based on assumptions and methods and generally complies with Actuarial Standards of Practice.

Ten of the 11 GRS recommendations were acceptable or would be considered. However, there was an in depth discussion regarding No. 6: *"We recommend the retained actuary update the application of the actuarial cost method to align the calculation of the projected compensation and the total present value of plan benefits so that the normal cost rate reflects the most appropriate allocation of plan costs over future compensation."* Cavanaugh McDonald disagreed with the use of this method, and responded they believe the current actuarial methods and funding policy are appropriately applied. McDonald stated in their view, it would overcharge the normal rate, and the suggested method applies better to a corporate model, not education. The TRS Board voted to stay with the current method of projecting cost.

Member Ryan provided a legislative summary. HB 74 contained minor revisions to notice requirements to the Attorney General of data system security breaches. HB 85 is a housekeeping bill to comply with standards of defined benefit plans. SB 124 relates to video or audio recording of Board Meetings; TRS is going with audio for now. SB 141 eliminates the sunset date on MCA 19-20-732 regarding retiree return to work limitations in regards to TRS members.

The budget for 2016, with an increase of 6.58%, was approved. The increase is due to wage increases and the computer system update. State law provides 1.5% for administrative expenses; the current and 2016 TRS budgets expend 0.7092% for administrative expenses.

In other action, the TRS Board approved a contract renewal for legal services with Ice Miller; the interest for credit member accounts remains at 0.20%; and the computer system update continues.

PERS Representative Sheena Wilson thanked BOI staff for assistance implementing the new key card system. The Employee Investment Advisory Council met on May 14; the audio minutes are available on the PERS website. The advisory committee for the 457 plan will meet on June 11, 2015.

Legislative Liaisons Comments

Representative Kelly McCarthy reported there has been a lot of activity and noted he spends a good deal of time educating legislative colleagues on what happens at the Board. Each session a bill proposing the idea of a state bank reappears, and fails. Each session the appropriation committees discuss the BOI budget, and the subject of fees comes up. Another matter that came up this session, which can be difficult to understand, is the subject of bond holdings; yield vs. coupon vs. other factors.

Two issues in the House involving BOI included a bill by Representative Zach Brown from Bozeman tackling student loans. The bill died in the Senate. Representative McCarthy advised that he recommended implementation of the bill not be placed under BOI, and expressed appreciation for all the help BOI staff supplied to Representative Brown.

Representative McCarthy stated HB 347, changing the statutory composition of the BOI Board, failed in committee. He provided information to legislators and noted as one of the best reporting Boards in the country, changing the BOI Board composition to reflect the construction of the poorer performing boards seemed unwise.

Senator Bob Keenan had nothing to report at this time.

## EXECUTIVE DIRECTOR'S REPORT

Overall Comments

Executive Director Ewer presented an update on the Governance Policy. At the April Board Meeting, the Board discussed the need for additional revisions to staff's suggested language updating the communications delegation section of the Policy. Staff has revised the language to reflect the current procedures used by staff. Staff recommends the Board make a motion to accept the revised draft language. Executive Director Ewer affirmed the executive director serves as the primary spokesperson; however, not exclusively. There are a number of able staff who could serve as spokespersons, on a case-by-case basis, when appropriate. For example, the CIO should have more in person presence for the legislature.

> Member Marilyn Ryan made a Motion to approve the recommended Governance Policy communications delegation language. Member Terry Cohea seconded the Motion. The Motion carried.

Executive Director Ewer reviewed the implementation of SB 124, which is now law, directing various boards, including BOI, to record Board meetings and requires a "good faith" effort to record in video format, or audio format when video recording is not feasible. BOI will record the Board meetings in video, and staff has ordered the necessary equipment. The law states meeting recordings are to be submitted to the state broadcasting system or posted to the website within one business day. BOI will turn the video over to the state broadcasting system. Board Members briefly discussed whether Board committee meetings are included under the provisions of SB 124. Certain items, such as borrower's private financial information, discussions of personnel issues, and the Board's Internal Controls procedures, are considered confidential information.

Chairman Noennig advised the open meetings law contains an exception for privacy.

In light of confidentiality concerns in the Loan, Audit and Human Resource Committees, the Board agreed, by consensus, to initially record and submit video for full Board meetings only, subject to change. Executive Director Ewer added any true Board decision must come before the full Board and would therefore be public.

Executive Director Ewer asked if there were any questions or comments on the monthly Cost Report; there were none. He then reviewed the monthly snapshot, noting that the report is now sent monthly via email to each Board Member.

Executive Director Ewer provided a brief legislative update.

- BOI budget rates and charges were approved in HB 2. The rates and charges are set by the governor, the budget director and Department of Commerce fiscal officers. The operational budget covers the investment side only, and is not required for the Bond Program.
- The selection of BOI Board Members and legislative liaisons was approved.
- HB 610, the Montana student loan refinancing program bill failed.
- SB 113, which permits the long-term investment of local government funds passed.

Representative McCarthy thanked Member Englund, who provided wonderful testimony on HB 347, laying out the case against the bill. Executive Director Ewer added on behalf of staff, he agrees, although staff strives not to take a position. Chairman Mark Noennig agreed it was great testimony.

Executive Director Ewer stated the staffing budget snapshot will be presented to the Board at the August meeting, along with a recommendation for the operating budget, broken down in various categories.

The BOI website is listed on the 24 Month Work and Education Plan for review and asked Board members to take a look at the website and offer comments or suggestions.

Deputy Director Geri Burton advised the website survey results have been distributed to Board Members and she thanked the front office staff for their thorough review and update of the revamped web site.

Executive Director Ewer provided a summary of the annual Board meeting schedule. For the past couple of years, the Board has met six times during legislative years and five times during off years. Staff will look to Board Members for input and guidance on whether to have the one-day October meeting this year. Director Ewer will send a survey to Board members asking for possible meeting topics as well as the option to cancel the meeting.

## GENERAL SESSION WITH NON-PENSION LONG TERM INVESTMENT CLIENTS

Executive Director Ewer stated as part of the 24 Month Work and Education Plan, BOI invites clientele who are more focused on non-pension assets. He expressed appreciation to the guests in attendance and introduced them:

Ryan Evans, Assistant Budget Director, DOA
Shawn Graham, Executive Director, TRS
Danette Gleason, Finance & Budget Director, Butte Silver Bow
Matt Vincent, Executive Director, Butte Silver Bow
Neil Fryer, Accounting, State Accounting Division
Cheryl Grey, Administrator, State Financial Services Division, DOA
Kristin Reynolds, Accountant, State Accounting Division
Lanny Hubbard, President, Montana State Fund
Mark Barry, Vice President, Montana State Fund
Carleen Layne, Accountant, Montana Arts Council

Executive Director Ewer opened up the floor to those who wished to make comments to the Board or share informal thoughts and noted State Fund provided an informational handout, which is included with the Board materials. He encouraged guests to stay after the non-pension segment, for the general fixed income presentation. This is one of the regularly scheduled items included as part of the 24 Month Work and Education Plan and will be led by Chief Investment Officer, Cliff Sheets.

**State Fund as a Major Investment Client**

Director Ewer introduced Mr. Lanny Hubbard and Mr. Mark Barry representing Montana State Fund.

Mr. Hubbard expressed his appreciation for the opportunity to come before the Board and thanked BOI for its responsible management of State Fund assets.
Mr. Barry thanked BOI staff for all their help with the continued success of State Fund investments. An insurer of small business, 80% of Montana businesses pay less than $5,000 in annual premiums. State Fund places its focus on top customer service and is cost effective.

The State Fund Board recently declared an average 5% decrease in rates for policy holders. Compared to 1990 when State Fund was established, rates are only 11% higher today. The 2015 Legislature passed Senate Bill 123, which moves State Fund regulation to the State Auditors/Commissioner of Securities and Insurance. Mr. Barry stated the move is timely; although a lot will need to happen to accomplish the transition. Remaining as a state entity, BOI will continue to be the investment manager and State Fund staff will work with BOI staff to complete the necessary changes, which include converting to a calendar year basis, a big change. State Fund will continue working with, and is still required to, report to the state's accounting system. State Fund relies heavily on the investment portfolio; last year a $20 million dividend was declared, providing an average of 17% return of premium to customers. With the 5% rate reduction, State Fund is at target surplus range now and customers are very satisfied.

Member Karl Englund asked about communications with BOI staff.

Mr. Hubbard stated staff is very responsive to the Board of Directors; they hold quarterly standing meetings with BOI staff to review the portfolio. Customer service from the top down is great and communication is excellent. BOI staff understands State Fund's need for more conservative investments.

Executive Director Ewer added staff needs to find an effective way of closing of the books for December 31, due to the change to calendar year; however, it is a challenge we know about, and he thanked staff.

Director Ewer asked if any other guests wished to speak.

Ms. Carleen Layne of the Montana Arts Council stated the Council is a very small fund for BOI, and they are very grateful for the money that comes from Coal Tax into the Cultural Trust and that BOI staff is fabulous. The Council has been with the state for 37 years in this capacity. The Cultural Trust was started in the late 1970's and was first perceived as pork barrel. The initial amount totaled $815,000, and the funds go towards all things cultural. There is a 16-member citizen panel that judges what warrants funding. The corpus has risen over the life of the fund. Earnings are flat and declining; over the life of the trust 265 projects/organizations have received $19 million and there are only six Montana counties that have not received funds.

Four of the last five biennium's revenue has dropped and there is a $133,000 deficit because of the shortfall of revenue. The amount allocated this year is $385,000 almost half of the last allocation. Representative Mitch Tropila tried to secure another source. Grants were $18,000, but are now down to just $5,300. Any ideas for a solution would be appreciated. Ms. Layne added Mr. John Romasko helps greatly.

Executive Director Ewer added the legislature asked BOI to verify interest rates are in decline; rates really have had an effect on state government.

Member Jon Satre added he serves on the board of an arts organization in Helena where the public part of the grant was reduced this year. It has a huge impact, as arts have become dependent on arts council funding, which has been a supporter of arts in the community.

Ms. Layne added funding for the arts is like a patchwork quilt, it is a blessing that the state helps arts organizations get funding from outside sources; the money comes from a variety of sources.

Mr. Ryan Evans, Assistant Budget Director in the Governor's Office spoke next. Mr. Evans thanked BOI staff for the invitation and additionally thanked Board Chairman Noennig and Executive Director Ewer. The expertise of BOI staff helps sustain the stability of Montana and it is recognized; people do take notice. He thanked staff for all their hard work, and added there is a positive trajectory for financial stability.

**New STIP Web Portal Update**

Ms. Polly Boutin, Associate Financial Manager, provided an update on the launch of the recent STIP participant web portal. The new portal processes STIP transactions and provides participants account information and has streamlined the transaction process from 11 steps to four. The new system eliminates manual intervention, and is now automated. Account balance is displayed upon login and participants are prevented from withdrawing more than the available balance, preventing overdrafts, which occasionally occurred under the prior system. The new portal offers huge efficiencies for both time and process. Participants have easy access to balances and all transactions, and can future date transactions. The system allows the addition of notations to transactions, and transaction history can be downloaded into excel or pdf files; the audit trail is easily accessed.

The new system required a tremendous amount of staff work and assistance from State Street Bank and the web portal servicer. Many staff members were involved and the work required gathering relevant information from all participants. Ms. Boutin thanked all staff who were involved with completing the portal implementation: Deputy Director Geri Burton, Ms. Dana Chapman, Ms. Maria Wise, Ms. Savannah McCormack, and Ms. Mary Noack for all the technical aspects, as well as accounting staff: Financial Manager Gayle Moon, Ms. April Madden and Mr. Frank Cornwell. The new web portal, which was launched on February 17, provides ease of use for STIP participants and is working great.

Member Sheena Wilson inquired if staff has received any feedback from participants since the launch.

Ms. Boutin stated the feedback has only been good so far; participants have much better access to their account information.

**Fixed Income Presentation for Trust Funds, All Other Funds and State Fund**

Mr. Rich Cooley and Mr. John Romasko presented an overview of fixed income accounts. Separate accounts make up $5.3 billion at BOI, and there are currently 36 separate accounts sized from $1 million to almost $1.5 billion, State Fund. State Fund is the largest, the Perm Coal Trust appears as one, but actually contains four different accounts and totals over $1 billion. Other funds include the legal settlement tobacco trust, over $200 million; environmental funds include 13 different funds totaling close to $1.5 billion and are diversified over many asset classes.

The various asset classes used to invest the funds include individual bonds and 15 funds own individual securities outside of the pools, although dominated by State Fund. All clients except one are in STIP.

Trust Fund Investments Pool (TFIP) is the largest class, containing about 27 clients; 17 clients are only invested in TFIB and STIP, both large and small clients.

Responding to questions, Mr. Romasko stated each fund is managed according to what is best for the client's individual needs and preferences, and staff has an individual investment policy for each fund.

Mr. Romasko explained there are four types of accounts:

- Permanent funds where the corpus cannot be spent, usually constitutionally mandated, a legal settlement or a legislatively determined fund. Surplus funds fluctuate and earnings are used to support clients.
- Insurance funds.

- Expendable funds, which are almost entirely environment settlement related, both principal and interest are spent over a determined time frame.
- Operating funds, which are mostly invested in STIP, until the client expects to spend the funds.

Individual investment policies are written in accordance with the fund type: a permanent fund will have TFIB and a small amount in STIP, and in some cases, in-state investments via legislative investment guidelines.

Insurance funds have individual securities and STIP for liquidity.

Expendable funds allocate to the TFIP and individual securities, which are matched according to the maturity of an expected liability due time, and utilize STIP for liquidity.

Operating funds contain mostly STIP; however, may include intermediate funds to gain increased yield.

Member Satre asked if funds are categorized into just four types, why are more than four types of investment policies required.

Mr. Romasko stated BOI has an agreement with each client as to how the funds are invested. Staff relies on a mutual understanding with clients and it is important that if staff leaves, the policy is in place for guidance. All funds vary, they can be similar to each other, but the needs are not exact, so each is managed on a case-by-case, client basis.

Member Englund asked if staff relies on clients only, or does staff also go back to the documentation from when the fund was set up.

Mr. Romasko explained first a cash flow profile is developed to determine when the principal is needed, soon, later, or never, and staff relies on clients to provide that information. If it is an expendable fund, what are the expectations; and risk tolerance is determined; does the fund have any tolerance for market fluctuations; if no, the fund is exclusively invested in STIP. For a permanent fund, constitutionally set or legislatively mandated, those determine the guides for fund management; however, those can also change over time. All funds are invested in a way which best meets the client's needs.

Executive Director Ewer stated he was glad to have Mr. Matt Vincent, from Butte Silver Bow in attendance. Butte Silver Bow, through environmental damage legacy, has seen a lot of funding come to them and Senator Sesso recently carried a bill to change the laws mandating local governments investing in STIP only. The new law sets out certain parameters for other investments and Butte Silver Bow will need specific guidelines for management of the new fund. The client profile will guide how to invest the fund.

Mr. Romasko explained there are three options: STIP, which is similar to a money market fund, providing a modest return and which is the default fund used; individual securities, which provide cash flow and an increased yield, and the TFIP, which helps diversify investments and increases yield, thus enhancing total return.

Mr. Rich Cooley added for individual securities, if a client cannot withstand to have losses, the security is held to maturity; if put into the TFBP, they could suffer a loss.

Member Englund asked if the client advises staff of their rules.

Mr. Cooley used the example of the Treasurers Fund; they do not want any fluctuations in value, therefore funds are put into STIP and securities are held to maturity to avoid losses.

Mr. Romasko explained the investment process, starting with the client cash flow profile: when does the client expect to spend the money and how much. Staff provides the client an expected estimated yield, and the risk tolerance is determined. With a fluctuation in market yields, an expendable fund with

uncertain timing may require sales at a low point. For instance for State Fund, the policy was reviewed and revised, and with board approval, changes were implemented.

The largest account is the TFIP and it contains diverse investments. TFIP distributed income continues to decline, at a rate slower than market yields, as it still has long term bonds which were purchased at higher yields. Additionally, high yield and real estate have bumped up return. The market will continue to decline, staff estimates distributable income will decline by about 20 basis points per year, even if rates increase, and even if markets experience rising rates, income will continue to decline.
Member Satre asked how long the decline will last.

Mr. Romasko noted the portfolio turns over in about five years. Book yields, which were 6%, are now down to 4% and distributable income has gone down by a third or more.

**Fixed Income Investment Management Review**
Mr. Cliff Sheets, Mr. Rich Cooley and Mr. Nathan Sax provided a deeper dive into fixed income.

Mr. Sheets began with an asset class perspective. Mr. Jon Putnam and Mr. John Romasko are the two BOI fixed income analysts and are integral to the fixed income team. Both have separate account responsibilities. Fixed income is an obscure class; the basic concept is instruments that represent a contractual obligation of the borrower. Issuers are government entities, both within the U.S. and outside, structured securities, corporate debt, and bonds or money market are at the top of heap. Coupons provide dividends. The bond market generally has a longer than one year duration, and STIP acts as a money market fund. The asset class represents a set of future cash flows, more certainly to cash flow in relation to other assets. It is contractual income, and thus provides lower returns.

BOI manages over $8 billion in fixed income and most is internally managed. The externally managed assets include high yield and core plus, and institutional money market funds used for liquidity.

Mr. Sheets explained managing fixed income is a core competency for BOI. Staff has the internal expertise to buy/sell, but also the expertise to oversee and understand external money managers and the ability to manage the different types of assets. Nearly 90% is internally managed and the remainder is with specialized managers; high yield or international.

Member Satre observed BOI used to manage public equity assets internally, but was later moved to external managers, and whether there are circumstances which would cause a similar shift for fixed income.

Mr. Sheets replied not at this time, and only with a total absence of staff would there be a need to outsource. Nothing is inherently good or better with external management; staff added high yield to get the diversification and extra yield. Staff has the flexibility to move out of high yield if necessary. It requires expertise to oversee managers, and by adding outside managers, an additional 15 to 20 basis points in fees would be required. BOI has the expertise, and has picked our spots, spreading the resource base across the spectrum of responsibilities.

Representative Kelly McCarthy noted the infrastructure bill did not pass the legislature and asked if BOI ever invests in Montana paper.

Mr. Sheets replied no, and nor do we buy municipal debt, Montana originated or otherwise. The issue was recently debated at it was decided it is not worth the distraction at this point.

Mr. Jim Voytko added, in context of other public plans, indexed passive equity and core fixed income are generally managed internally. Most funds have the majority of assets managed externally and any internal management tends to be similar to BOI, internal core bond management.

Mr. Nathan Sax presented the objectives of fixed income: to generate income and provide diversification and liquidity. Total return is income plus change in price. The latter is driven by the movement of interest

rates. More yield entails more risk. Fixed income is not highly correlated with equities. It provides diversification and liquidity, in order to raise cash when markets are stressed and for pension distributions.

Responding to a question regarding credit quality, Mr. Sax stated that structured securities may incorporate a structure premium. With "structured," we have no credit risk, but rather structure risk, depending on the collateral. We are presently invested 27% in corporate bonds and 22% in Mortgage Backed Securities (MBS), which tamps down volatility. The former is driven by the issuer's ability to pay principal and interest, the other by how much collateral is in a trust and failure rates or defaults. A lower rated borrower may have to pledge a surplus of collateral.

Mr. Sheets added rating does take into account the cash flow uncertainty, but is not related to volatility of payments; you may see low quality receivables. The degree of subordination matters; for senior position you may get AAA, a junior position may get BBB. The structure of trust is hard wired to apply cash flow to the senior, higher rated bonds first, losses hit the juniors first.

Mr. Sax explained the volatility of returns, and noted fixed income is less volatile than other asset classes; additionally, the correlation to stocks is low. From 1995 to the end of the first quarter of 2015, as well as from the financial crisis to 2015, the correlation to stocks was zero. At zero, the bond portfolio is not correlated to stocks. The Retirement Funds Bond Pool (RFBP) is more correlated, as it contains high yield assets, which behave almost as a hybrid security, i.e., somewhere between a stock and a bond

Mr. Sax explained the Barclays U.S. Aggregate Index benchmark created in 1986 (known as the Lehman Aggregate Index prior to 2009) shows a cross section of the bond market. From the beginning of the market crisis until now, the benchmark has undergone significant changes. Securitized assets, mostly mortgage backed securities (MBS), declined from 43.7% to 30.8% due to the reduction of the supply in housing related bonds, supported by mortgage payments. Fannie Mae and Freddie Mac issued debentures to purchase whole loans to use as collateral to securitize. Corporates increased from 17.7% to 23.6% over the same period as companies took advantage of lower interest rates to lower their cost of capital.

Director Ewer added staff will present the annual benchmark review in November. The components of benchmarks can change over time, but should be a proxy for several things, and be measurable.

Mr. Sax stated the non-core strategies are managed by external managers, which BOI started hiring in 2009. There are four current managers and prior to 2009, fixed income was totally managed internally. The external managers supplement the return of the portfolio, which has paid off over time by investing in High Yield and non-core bonds.

The fixed income strategy is structured to limit volatility and risk. Staff has been able to add alpha while limiting risk; the deviations from the index are controlled by explicit policies and risk parameters. Since 2008, tracking error has been decreased, signifying lower risk and volatility, while still adding alpha, i.e., outperforming the index. The portfolio risk has been greatly reduced, which is important overall for the pension portfolio.

Mr. Sax reviewed the sectors of fixed income, which are defined by Treasuries, Agencies, MBS, ABS, commercial mortgage backed securities and corporate bonds. When comparing the composition of the Core Investment Bond Pool (CIBP) and Trust Fund Investment Pool (TFIP) to the Barclays Aggregate bond index, we are overweight corporate bonds and other spread product. Our duration also varies from the index.

Liquidity is important and has been an issue since the financial crisis in 2008. If redemptions occur in ETFs or mutual funds, can you get out of the market quickly? If our portfolios were it would cause concern. BOI has taken steps to increase liquidity significantly, especially as compared to our portfolios of 2007 and earlier. This will enable our ability to raise cash when necessary.

Member Satre asked what makes a bond liquid.

Mr. Sax responded the size of the market, e.g., Treasuries are the largest, most liquid market. The size of an individual issue is another factor. A relatively small agency or corporate bond can be more difficult to sell at an attractive price. The bid-ask spread reflects liquidity. Wider spreads represent less liquid bonds.

Mr. Sax stated BOI fixed income staff has a weekly fixed income meeting to discuss market events, and staff also conducts monthly strategy meetings. Analysts have played a larger role since 2008: Mr. Putnam and Mr. Romasko have been increasingly involved with sections of the market and have been very helpful in forming the overall portfolio structure. The use of internal resources is helpful. Fixed income resources include portfolio analytics systems; for instance, Wilshire Analytics analyzes the bond index and compares BOI to the index, showing duration, partial duration and individual holdings vs. the index. This helps control the risk style.

Responding to a question from Member Englund, Mr. Sax noted staff can analyze current holdings, as well as run analysis on changes staff may be considering. There is a process in place when deciding on assets, a strategy of ideas, and staff receives assistance from external managers for advice as well. The analytic system provides staff a prediction of characteristics for any portfolio changes under consideration.

Mr. Sheets added there is no process for predicting, no formula; it depends on the portfolio and on market events for the day.

Mr. Sax noted for external credit research, BOI subscribes to two outside independents, Credit Sights and Gimme Credit. The subscription is annual, and staff receives daily updates. Staff also has access to Bloomberg Credit Research and S&P, Moody's and brokerage contacts are also available to assist and they have credit researchers.

Mr. Sax stated fixed income management costs are generally low and the internally managed Core Investment Bond Pool (CIBP) costs just 2.4 basis points for staff to manage.

Mr. Voytko added the internal cost of fixed income is very low at BOI due to a very efficient management structure.

Mr. Rich Cooley presented the management review for the Short Term Investment Pool (STIP). Management of STIP has three objectives:

- Preservation of principal
- Liquidity
- Return

The investment objectives by policy include cash liquidity requirements by day and by week, taking into account scheduled maturities and all known cash needs. STIP uses an approved credit list for securities or issuers allowed under the policy and the policy has risk constraints for quality, company exposure and ratings. The STIP reserve account serves as a cushion account in case of losses. The reserve was initiated the 4th quarter of 2007. The current reserve balance is $27.5 million and daily deposits to the fund come from daily yield and realized gains.

There are currently 490 STIP participant accounts and the total fund value as of April 20, 2015 is $2.5 billion; local governments account for 18% of the asset total. STIP return is consistently competitive with institutional money market funds; the LIBOR 1 Month Index is used as the benchmark.

Gross of fees, the 1-year and 3-year returns reflect the drag the reserve is starting to have on returns; the 5-year and 10-year numbers are still above the benchmark.

Mr. Cooley reviewed the STIP management process. Most securities can be viewed according to a set of parameters and trades are mostly done electronically. The fund is efficient; $20 to $50 million in securities mature daily, which must be reinvested. Trades are reviewed for reasonableness; treasuries and agencies settle the same day and corporate bonds have a three-day settlement. Staff works from an approved list of 76 names.

Mr. Sheets summarized the role of fixed income and the three key elements:

- Fixed income has certain objectives, providing diversification and liquidity
- Fixed income is a core competency for BOI
- Fixed income is managed very efficiently

## MONTANA LOAN PROGRAMS

In-State Loan Program

Mr. Herb Kulow presented the Montana Loan Program Report. The outstanding commercial loan portfolio balance is $97,331,749 as of April 30 with $72,636,000 in outstanding reservations and five committed loans for $8,363,000. There are two loans past due 90 days or more, both are guaranteed by SBA, so BOI has no exposure. Since February there has been a total of $3.5 million in pay offs. Whenever there is a payoff requested by the bank, staff requires an email explaining the financial advantage to the borrower. Banks are not allowed to repurchase simply for the liquidity advantage, and staff approves only in cases where there is a reasonable advantage to the borrower.

Mr. Kulow advised the Board that BOI would not be participating in the Sidney area Pheasant Run Apartments loan.

As of April 30, there were 235 residential loans totaling $9,669,721. Ratios of past due loans are very favorable as compared to national statistics, and all past due loans are FHA insured. There is one VA loan past due for $195,862. The Board of Housing (BOH) has sent a demand letter. There are seven VA loan reservations totaling $1,343,445 million. Staff has processed the STIP request for funding of the $1.3 million. This reduces the available cash for VA loans to just $1,429,372 million in available funds until July 1 when the new legislative allocation of $10 million will be added. Loan activity for the VA program has slowed down significantly.

Calls about BOI programs are still coming in. BOI participates in lender loans; however, if they do not submit applications, we cannot participate. IRP and infrastructure loans are the only ones where BOI is allowed to be the direct lender. Staff expects a $2 million Missoula loan arriving next week. There is no pressure to get it done right away, staff will talk to the lender. There will be a $15 million loan as well, which will require full Board approval, and there may be a construction loan first.

Member Jon Satre asked Mr. Kulow how often staff rejects a participation loan that has been submitted.

Generally, loans received by staff are not turned down, as verbal reviews with the lender are conducted first. However, if staff receives a loan which has a surprise, such as financials, or a terms and conditions change, it may be turned down at that time. Mr. Kulow, at that time, would converse with the lender and refund the reservation fee, if the loan does not fit within BOI criteria. Any received loans not meeting policy are turned down. In a case where Mr. Kulow is not in agreement with the lender, who is requesting to have the loan presented, Mr. Kulow would present to the Board, but he would recommend denial; this has only happened once.

Executive Director Ewer reminded Board members that starting in August, Board meetings will be video recorded. He stated Board and staff will need to be mindful of items which may include disclosure of potentially confidential information being discussed in the open forum. Disclosures of personal or confidential information may prompt the decision to close the meeting during such discussions. He added if Board members ask questions of staff, staff will answer.

## BOND PROGRAM REPORTS

### Activity Report

Ms. Welsh reviewed the quarterly Activity Summary Report as of March 31, 2015, and presented staff approved loans. All INTERCAP loans are current; the next payments are due in August. Since 3rd quarter end, nearly $8 million in new commitments have been approved and close to the same amount has funded or is scheduled to fund before fiscal year end. Three of the 14 applicants this quarter are new to the program. Fundings included cities, towns and states, and one for the Montana Department of Transportation (MDT). For the staff approved loans, all are drawn down or drawing down funds.

## ADJOURNMENT

Being no further business, the meeting adjourned at 3:15 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 8:30 AM. As noted above, a quorum of Board Members was present. Chairman Noennig called for public comment. There was no public comment.

## CONSULTANT REPORT

### RVK, Inc. – Mr. Jim Voytko

Mr. Jim Voytko presented the market overview for the quarter ending March 31, 2015, and reported this quarter was a repeat of a number of quarters; a victory lap. He added a wise investor once said to build wealth and benefit when markets are moving up and then protect your capital when it is moving down. Markets have been moving up and the fund has done quite well. The 1, 3, 5, and 7-year numbers show a trend, the program put in place is working; the numbers are very good. The current quarter has seen changes in investment markets, which should be watched over the next year. The S&P 500 for 5 years is 14.47% per year, which is amazing; that alone is well in excess of the actuarial benchmark for funding pensions.

The current quarter running at an annualized rate of 4% shows a market deceleration; not at same pace as the last five years. When Mr. Sheets says to prepare for lower expectations, RVK echoes that sentiment. Looking at 1 and 5-year returns, compared to S&P 500 and MSCI EAFE, a reasonable proxy for Ex-US markets, the EAFE was down almost 1% per year while U.S. markets were up 13% per year, a huge gap. U.S. and global markets were more closely aligned prior to the market crash. Last year this was a detriment to international markets, as they are not moving in tandem. MSCI EAFE is up 5% for the current quarter, significantly outpacing U.S. markets. The benefits of diversification are reemerging in the current markets.

(Legislative Liaison Kelly McCarthy arrived at 8:35 AM)

Mr. Voytko explained some diversifying asset classes, like Real Estate, REITs and Hedge funds, have suddenly started performing better, which will be a consideration when conducting the next examination of asset allocation. One area of relative disaster is commodities which have suffered. Chinese demand has slowed down and dropped significantly from prior rates; growth remains at 7% or 7.5%, but not the double digits seen when the economy was booming. The granularity of capital markets is undergoing some change.

Chairman Noennig asked for an explanation of the gap between domestic and international markets.

Mr. Voytko explained when you see a difference of 13% annually that is a large gap. Europe and Japan do not go away, they are still major parts of the world economy. For 2015, capital market assumptions

the slight edge goes to international exposure; not because it is doing better than U.S., but rather due to the current valuation. No one knows what the appropriate value is, once you see a gap opening up, you regress to the mean. Europe and Japanese stocks are not doing well, and investor confidence plays a short-term role, expectations reflect that a Euro economy would benefit.

Valuation is driven by price to earnings dividends and dividend growth rates; those have long-term effects. Most people have subdued expectations over next 10+ years because markets have done so well, no one expects an acceleration of values, but a modest regression to the mean.

Mr. Voytko reviewed the 1, 3 and 5-year returns for the retirement plans, re: how have markets and funds, asset allocation in particular, and execution of asset allocation, combined to help fund benefits. Regardless of whether or not funding is part of the picture, pension funds are performing well. Absolute returns, net of cost/fees, the 1 year is 8.12%, the 3-year return is 10.77% and the 10-year return is 10.32%; an absolute dream. The combination of what capital markets are doing and how investment strategy is working beyond expectations, a terrific 5 years, and to the point of funding benefits, it has been a great period.

Mr. Voytko stated how the program doing in engaging in capital markets vs. your own return expectations, as set forth against the PERS benchmark performance, a mixture of best practices and arbitrary decision, the numbers are modestly red; however, expectations are very high, and even these returns have not met expectations. This is all attributable to a single asset, private equity.

Executing against expectations, the pension funds came up a bit short; however, it is concentrated in single area, private equity and the return picture does not capture the longest-term investment. Comparing plan returns for the 1, 3, and 5-year, with respect to peer comparisons, the least weight should be placed on this. All funds tailor their portfolios to match a particular set of liabilities and funding situation, which varies from BOI. The fund and strategy have done well.

Reviewing the quarter to date returns, absolute returns net of all fees is 2.10%, beating the benchmark but by a closer margin. Performance vs. the peer benchmark is -0.32%, the shortfall is due to private equity on a time-weighted basis vs. the rising public market. Compared to peers, BOI is ranked at the 65$^{th}$ percentile, not terrible, and the fund requires a 7.75% expected return, therefore the fund has exposure to equity and private equity, expected to deliver higher returns over the long term. Funds like BOI must have exposure to equity. As markets lag, funds loaded with diversifiers like larger real estate, or hedge fund exposure may tend to do better when the market wanes; the fund must be protected through strategic asset allocation; a 65% percentile is a regression to the mean.

The quarter does reveal some changes going on in markets. Based on 5 years and addressing the critical question, are you taking excess risk to gain returns, this must be analyzed over a reasonable length of time, a minimum of 5 years. The portfolio is positioned ideally: less risk, with greater return than the median. Over the last 5 years, return is above peers with moderately less risk, i.e. the golden quadrant.

BOI has divided equity exposure between public and private assets, but has used fixed income very effectively, and used real estate instead of hedge funds as a diversifier. Portfolio timing going into real estate was not ideal; however, it is slowly improving and having a positive effect on the total fund.

Fund performance prior to the 5 and 7-year periods was not great, the last 5 years have pushed the fund up into the golden quadrant.

Member Karl Englund asked why the Public Employees' benchmark is not in the golden quadrant.

Mr. Voytko explained, the benchmark reflects the basic expectations for the fund. If expectations had played out using the benchmark only, and not utilizing BOI's execution, the fund would have ended up below the line of the preferred quadrant. A lot happens between asset allocation, benchmark and

managers, such as active vs. passive allocations and any movement of funds in and out when paying benefits. Those decisions play into execution as well as manager selection.

Member Terry Cohea commented the management of the BOI program shows staff has made good decisions.

Mr. Voytko agreed, and stated the Board has as well. The composite structures of the changes to domestic equity and international by staff have had positive results.

Mr. Voytko reviewed the pool performance. Over the asset class composites for the 1, 3, and 5 year periods, there is steady improvement, four of the major asset classes have outperformed, which is expected, as the fund performance has been so good. Good total fund performance does not require a home run; but rather treat each pool in its relative role to the total.

Over the quarter, performance is even better, as five of the six classes outperformed. Asset allocation is not perfectly matched to the quarter performance; however, the structure put into place for the TFIB, MTRP, MTIP and MDEP are all beating the benchmark for the quarter. The active/asset mix and manager selections are working very nicely. Again, returns are net of all fees.

Comparative performance for MTIP shows underperformance of 1% annually vs. peers and the portfolio has struggled over the long term; although the 1, 3 and 5-year periods show some improvement.

Real estate has suffered from bad timing and the entrance into the asset class turned out to be the period approaching a peak. The pool started out not so great and suffered from early J curve expenses, but at the present time, the portfolio is starting to mature and perform better has been steady improvement and right now is outperforming the benchmark.

For private equity, the key is the internal rate of return, IRR, and in order to put in the effect for the total fund, you must look at the time-weighted rate of return. Private equity investments lag at least a full quarter behind domestic equity markets. It will never catch up when domestic equity is rising, and when the market turns, goes down or is flat, you see results like in 2010, which produced a huge excess return of 16.97%. Some reasons why private equity may lag have to do with exposure rather than structure. There are heated discussions on expenses for private equity and it is worth noting over a 10-year period, the highest return class of private equity has also been highest for fees. The next highest, domestic equity, has the next highest expense. Fixed income has the lowest expense of a major asset class. You need good risk adjusted returns net of the fees you pay for them. In the case of earning expected rates of return, you must pursue investments that have higher cost. Ideally, you receive high returns with lower costs; more passive investments have helped.

Ranking for the most part is good; the irony is that domestic equity vs. the benchmark is just so so, but against other funds investing in domestic equity, the portfolio looks good. It is hard to beat a passive benchmark, but BOI is doing better than most plans.

Mr. Voytko noted the TFBP and TFIB returns have been consistently good and the specialty external managers have helped performance.

There is no good peer group for private equity, which has the greatest disparity of what funds are doing.

Generally, consistency pays off for a perpetual fund and an equity centric portfolio; however, the most risk is the most volatile asset; and returns suffer due to volatility. From 2009 to today, the portfolio has steadied equity beta and if beta is bumped up, you have too much sensitivity for the market.

Mr. Voytko stated the key message for the quarter is we like what we see.

Member Jack Prothero asked if any managers need discussion.

Mr. Voytko stated that Alliance Bernstein have not performed well in recent periods; for fiscal year to date they rank at the 95th percentile. For 2011, they were positive at 5.2% over the benchmark. Over the long-term track record they are in the next best quadrant and have long term excess returns compared to the benchmark, but at the expense of taking more risk. Considering the up/down capture ratio, in up markets, they are way up, but when the market is down, they are way down.

Artisan is performing slightly better than the median over the long term with a lot less risk, with lower volatility seeking out positive returns. The challenge with Artisan is the contrast to Alliance Bernstein; Artisan lags in a rising market, and historically have done better when markets are falling. Any changes in process or people makes historical performance moot.

## INVESTMENT ACTIVITIES/REPORTS

Retirement System Asset Allocation Report

Mr. Cliff Sheets reviewed asset allocation and performance for the quarter ending March 31, 2015. Assets for the quarter increased by $140 million, and there were positive returns for all pools. There was a big reversal in relative performance for international vs. domestic stocks. Asset allocation weights saw minor changes, driven by performance and small transactions over the quarter. Total equity allocation was up slightly to 67.1% due to international and domestic performance offset by net sales. Domestic equity was flat, reflective of positive performance of 3.9% and net sales. International equity increased to 16.5%, up by 0.4%, reflecting good performance and was up to 17.2% as of yesterday due to market conditions; slightly less than the range midpoint of 18% for international equity.

Private equity was at 10.4% reflecting $21 million of sales, and fixed income was at 22.6%, due to a combination of purchases and good performance.

The real estate allocation was up slightly to 8.7% and included a net buy needed to fund capital calls and reflected a return of 3.1% for the quarter. Total transaction activity for the pools netted to a sale of $6 million for the quarter. Cash declined slightly, by 0.3%, ending the quarter at 1.6%. The cash decline was due to the net cash needed to pay benefits.

Mr. Sheets reviewed the asset allocation comparisons vs. the State Street Bank peer universe. The medians for total public equity and fixed income included only 26 observations this quarter. For fixed income the median allocation is 19.8%; MBOI is at 22%; however aligns closer to the median than the numbers would suggest based on past surveys.

Domestic equity is again above the median and private equity is close to the median, although slightly below at 10.4%. The median for private equity has been near 12% for the past couple of quarters.

Mr. Sheets reviewed performance vs. peers and noted the State Street peer set is different than the BNY Mellon data reflected by the RVK report, with only 25 observations this quarter. The take away is that the 5, 7 and 10-year numbers are shifting upwards. The relative rankings compared to RVK are similar and rank in the first decile or quartile for 3, 5, and 7 year periods. The medians are a bit different, but for the 7 and 10-year periods the rankings are almost identical to the RVK data with MBOI ranked in the first quartile for 7 years, and second quartile for 10 years.

Member Englund noted that Mr. Voytko focused on the previous quarter, and stated it is an important sign of what is to come. He asked Mr. Sheets if he agreed this indicates a forecast for the future.

Mr. Sheets stated yes, there were noteworthy changes in the first quarter. The stronger international stock return stands out, but whether the trend will continue or not is the question. A regression to the mean may be going on after a prolonged period of weaker non-US stock returns, however, quarter to quarter it is hard to tell. Stock valuations abroad are cheaper than domestic stocks so it is likely we will see more of an even race going forward relative to domestic stocks. For fixed income, there is a lot of

debate as to whether returns will suffer, should the Fed tighten policy later this year. Given the absolute level of interest rates, fixed income will likely not perform well unless there is a bear market in stocks in which case it would benefit as a relative safe haven.

Mr. Sheets added another important point in the return outlook is real estate, which is firing on all cylinders with strong double-digit returns since the first quarter of 2010. Our portfolio reflects a conglomeration of commercial real estate, Montana office properties and timberland, which acts as a diversifier vs. the commercial real estate within the pool. Additionally, closed end value-added funds have been doing well and are expected to continue to see positive returns given the momentum in core real estate values. Real estate is a good diversifier versus other asset exposures, the portfolio has a reasonable weight and the absolute numbers are good.

Executive Director Ewer also noted from a fiduciary standpoint, we have both RVK and State Street performance data, two independent periscopes, which is important. There were none previously, and we now have independent data from our consultant and State Street.

Montana Domestic Equity Pool (MDEP)

Mr. Rande Muffick reported on the Montana Domestic Equity Pool (MDEP) for the quarter ending March 31, 2015. Markets were volatile in January over concerns in Europe and while still not as volatile as other times, more than we saw 2014. U.S. markets are trying to find their way, some challenges are coming from corporate America and all are wondering what the Fed will do with interest rates. No one is making any big bets and trading ranges are at near record levels. The dynamic of a stronger dollar and weaker oil was evident in U.S. stocks; mid and small caps did better than large caps, due more to products and the associated expense when selling products.

Mr. Muffick reported growth stocks fared better than value for the quarter, due to energy companies, which are largely value, having problems with profit. Active management industry-wide did pick up and earn its keep – due to more favorable correlations; when stocks are less correlated to each other, active management can perform better.

The MDEP large cap active managers in the pool all outperformed; a bit of an aberration, it speaks well of our managers. Midcap active management is struggling and had mixed performance over the quarter, but did pick up. Midcaps have more trouble beating the benchmark than they used to, and they have started to be top heavy due to higher valuations. While too risky for managers to invest well, when those stocks do well, managers suffer.

Member Englund asked why managers are choosing to stay away.

Mr. Muffick responded they are too expensive, for example Tesla, which has a cult following; managers are staying away from those names; however they are a large part of the benchmark so it hurts them.

Mr. Muffick reported on two moves during the quarter, $20 million was taken out of the asset index fund and put into Iridian and Nicholas. Both have done really well on initial performance and they are still outperforming. For positing within MDEP, staff is keeping passive/active the same; it is working well. Additionally, midcaps vs. large caps will stay at current levels as well.

Member Englund asked Mr. Muffick if he anticipates any changes in the active/passive allocation for the international pool.

Mr. Muffick stated if managers continue to outperform the benchmark and increase over the 12% ceiling of the range for active management, they will likely be trimmed.

Montana International Equity Pool (MTIP)

Mr. Muffick reported on the Montana International Equity Pool (MTIP) for the quarter ending March 31, 2015. The pool has some interesting aspects and markets for international were strong, broadly due to central bank action on quantitative easement in Europe and the stimulus in China. When investors see

central banks are providing stimulus, they invest in those markets. Germany was up 20%, similar to other international markets and the dollar has been rising in relation to the Euro. Overall, it was a solid quarter. There is no difference between growth and value when money moves; when new money comes into stocks, investors buy everything when there is a broad rally, as we saw in the first quarter.

Active management did very well in international markets as well, the same as U.S. markets where correlations were higher between stocks, which provided fertile ground for stock pickers.

Mr. Muffick added the managers BOI is terminating did come back and add value over the quarter. Manager terminations are not done simply for performance and it is never wise to fire managers at the bottom. There was some realized performance and the timing is right to improve on the manager mix.

Mr. Muffick summarized transactions for the quarter and reported that emerging markets were reduced by half a percent. The exposure weight for emerging markets vs. the benchmark was less than 1%, but is now closer to 0.3% overweight. China markets have taken off, and the government has allowed investors to own more Chinese stocks. This was previously available only to citizens, so has taken off recently. Staff analyzed and decided it could be a bubble and so chose to trim back. Additionally, some risk was taken out of the portfolio. Greece, an emerging market portion of the benchmark constituents, is now considered an emerging market rather than a developed market. The move was overdue by MSCI.

Mr. Muffick stated the active/passive strategy will be adjusted a bit. When the new managers are hired those managers will start with less money than the take out from the legacy managers, and therefore will increase the passive allocation for the pool. Additionally, $10 million will be moved to Templeton small cap (they had hoped for $50 million). Templeton has done really well after the initial $35 million funding. The fund appreciated and the additional $10 million allocated will come out of the large cap portion of the legacy managers and will bump them to $54 million.

Moving out of AllianceBernstein, Hansberger and Martin Currie, staff expects a more consistent relative performance on an annual basis, which the new managers should provide. Ideally, we want returns close to the benchmark on an annual basis and staff believes the new managers will perform better than the three terminated managers did.

The new managers hired include Lazard, a large cap value manager; Baillie Gifford, a large cap growth manager and Invesco, which picks stocks and does not use a quantitative model. Lazard is more of a downside capture manager and has been consistent over time. Staff allocated $100 million to Lazard; Baillie and Invesco complement Lazard. Baillie is an upside capture growth manager, staff allocated $95 million to them; and Invesco is more of a growth manager which performs better in downside or stable markets. They also received $95 million. The new managers are receiving less than the terminated legacy managers meaning there will be leftover money. Besides the $10 million to Templeton small cap, the residual amount of $72 million will go into the BlackRock index fund at that time. The new allocation drops the active portion of value/growth from the prior level of 13.7% to below 10%.

Member Englund asked Mr. Muffick to explain the mechanics of reallocating the $372 million occurring with the transition.

Mr. Muffick stated State Street Global Market is the transition manager. All involved parties work with the transition manager who takes the lead, once the transition contract is signed detailing that they will handle the transition. Staff directs State Street Bank to open three new MU accounts for the new managers and a transition account as well. The assets of the three terminated legacy managers go into the transition account. Starting tomorrow, the State Street Global will begin trading within the transition account to set up the new portfolios, which will go into the new manager MU accounts. Most assets will be transacted tomorrow, with the remaining on Friday. On May 31, the assets will go into the three new manager's MU accounts. The new managers advise State Street Global of the assets they want to retain and which assets should be dispensed.

Member Terry Cohea asked if staff receives a transition cost estimate beforehand.

Mr. Muffick stated because there is so little overlap between the outgoing and incoming assets, (approximately 20% stocks in common with the legacy portfolios), the cost will be expensive, approximately 40-45 basis points, of the total $372 million transition.

Mr. Jim Voytko added within the management of the portfolio, this is a cost that is not very visible to the Board, it gets buried into the "since inception" long term numbers of the terminating managers. It can get expensive if you do a lot of changing of managers, and the performance of the fund would show it. The transition is planned out very carefully and reviewed before execution.

Mr. Muffick stated the managers were hired in the fall of 2006, so we have been with them a long time.

Mr. Sheets added that Mr. Muffick will go through the transition pre and post trade at the August Board meeting and provide commissions, bid ask spread, opportunity costs. There are lots of moving pieces and the transition manager makes the best guess before the fact, but the exact cost is unknown until the transition is completed. Staff will provide the data to the Board in August.

Chairman Mark Noennig asked if the transition manager has an incentive to minimize losses.

Mr. Muffick answered the manager does not make more money, and they try to minimize market impact.

Mr. Voytko added the manager does not know what the market will do, or what the optimal sequence of trading will be. A comparison of pre bid and post-performance gives them a track record.

Mr. Muffick added the transition manager must provide a post trade report, which is due June 19; the total time working for us is about one and a half months.

Mr. Sheets added that another variable is the lack of overlap on individual stocks, plus the international factor, and the currency markets have an impact as well.

Executive Director Ewer noted the terminated managers were held through a business cycle of three years. The logistics of the transition are very significant. All the new managers visited staff in Helena. Then once selected, there are lengthy contract negotiations back and forth. In the internet age, the press knew about it before the Board did. Newsmakers want to inject drama; however, staff does not provide details, just states performance as the reason for the terminations. Big deals take a lot of work, and a lot of due diligence through the legal offices.

Mr. Voytko offered that RVK, as consultant, receives the same calls from the Wall Street Journal and Pensions & Investments, and they refer callers to ask the client only.

Public Equity External Manager Watch List

Mr. Muffick reviewed the Public Equity External Manager Watch List. The list is half of what it was because of the three terminated managers. The three remaining include Voya; nothing new to report, their lead portfolio manager is retiring at the end of June. Staff has had a couple of calls with his replacement on quarterly reviews; they will remain on list until staff observes how the new manager does. Artisan remains on the list for performance issues. They have stumbled, although staff still has confidence in the numbers since inception; they have still outperformed for BOI. Looking at returns through the year, when they stumble, they usually bounce back well, and in the recent quarter, performance has picked up.

For Alliance Bernstein it is a similar situation, they have stumbled in the up market. Bad stock picks are part of the issue; staff was concerned when they were hired at the number one position, and they have stumbled since the initial good performance. Staff still has confidence they are a good small cap growth manager. There were no additions to watch list this time.

**PUBLIC EQUITIES MANAGER WATCH LIST**
**May 2015**

| Manager | Style Bucket | Reason | Invested amount ($mil), 3/31 | Inclusion Date |
|---|---|---|---|---|
| Voya Investment | Domestic – SC Growth | Portfolio Manager Change | $35.5 | November 2014 |
| Artisan | Domestic – MC Value | Performance | $136.5 | November 2014 |
| Alliance Bernstein | Domestic – SC Growth | Performance | $37.0 | February 2015 |

Montana Private Equity Pool (MPEP)
Mr. Ethan Hurley presented the Montana Private Equity Pool report for the quarter ending December 31, 2014. One new commitment was made since the last Board meeting as shown in the table below:

| Fund Name | Vintage | Subclass | Sector | Amount | Date |
|---|---|---|---|---|---|
| ArcLight Energy Partners Fund VI, LP | 2015 | Buyout | Energy | $20M | 2/20/2015 |

Member Satre noted the new commitment is in the energy sector.

Mr. Hurley stated ArcLight focuses on midstream energy, pipes, product storage, as well as some upstream energy exploration. They have been a great manager for BOI since 2001, commodity prices have taken a hit with prices down, so it is a good time to be investing in the long term, taking advantage of good long term buying opportunities.

MPEP had another positive cash flow quarter, just south of $8 million. Strategy remains heavily diversified; the bulk is buyout at 70%, and most co-investment funds are standard buy out. The industry diversification is highly diversified with no attempt to overweight/underweight exposures. Most managers invest across broad sectors. Geographically, the pool remains heavily North American centric – global has outstanding risk – while North America is deeper and provides the most liquidity.

Portfolio total exposure by investment vehicle remains heavily overweight to direct limited partnership interests; fund of funds will continue to decrease over time and will help avoid the extra fee drag. Primary partnership interests tend to outperform.

Member Englund noted with $661 million in remaining commitments, and with a market value of $1.05 billion, is there an ideal target ratio.

Mr. Hurley stated it is common to overcommit between 1.2 to 1.7 times in order to reach your target investment and this reflects a normal rate.

Mr. Voytko added staff periodically asks RVK to work on pacing. You have no control over how fast new commitment capital is called, or when return capital comes in, which has to do with pacing. If you are far below the preferred allocation you would want to load up, but if over-invested, you would want to budget down.

Mr. Hurley stated 9/30/13 was the last pacing study and it is required every two years at a minimum.

Mr. Sheets added the pacing exercise is a required necessity, but it is only a tool. Staff must estimate how quickly existing money will be returned. There has been a mergers and acquisitions environment lately and pacing takes certain assumptions into account, but it is a function of the market. Recently markets have been very beneficial for sellers of assets; however, that may not continue. Staff is hesitant

to increase the commitment budget, knowing there could be denominator shrinkages. Current allocation feels about right, at about 10.5%. Pace is a fuzzy number, which depends on market conditions. You should never commit unless you know the funds/managers are good.

Chairman Noennig asked if all current commitments were fulfilled would the total equal the $1.05 billion plus the $661 million.

Mr. Hurley stated yes, assuming no capital appreciation/depreciation or distributions.

Mr. Hurley reviewed the standard periodic return comparisons for various classes within the portfolio and noted the 10-year numbers are now reported. The net investment multiple is 1.5 and IRR is 12.58%.

Member Prothero asked if Mr. Hurley had concerns about any manager in particular.

Mr. Hurley stated no; 11 managers have a negative return. Terra Firma and J.C. Flowers remain two of our underperformers while EIF just went through a major change of control transaction; they went from a negative return well into the positive realm; however, it may be how valuations are reported. Responding to a question from Member Englund, Mr. Hurley noted there is one company within the Eureka fund, West Academic, which has done extremely well. They refinanced, took out a dividend, and returned 3 times the invested capital and they continue to perform.

Mr. Sheets added it is unusual because it happened early in the investment cycle, with only $3 million called, and they are out of the J curve already, with a multiple of 1.8 – the IRR will get diluted, but it is particularly nice to see in the early stages of a fund.

Mr. Hurley reviewed the State Street comparative fund returns and stated it is nearly impossible to appropriately benchmark the fund. The Paid in Capital (PIC) shows the fund has paid in less capital but received more distributions. The Total Value to Paid Capital (TVPC) shows the IRR has dipped relative to the benchmark, due to the makeup of the benchmark and the fund weights. All in all, not a bad performance.

Executive Director Ewer added looking at vintage year, you cannot predict when it will be a great or poor year.

Mr. Hurley stated there is a lot of liquidity in the market, as an asset class we may not commit as much as we have to avoid investing in something that is potentially overpriced.

Mr. Sheets added the nature of the asset class, when the stock market has been doing well and asset valuations are at their height, is not generally a good time to buy. There has been a strong recovery, with record levels in this bull market, so caution should be exercised in our commitment appetite.

Montana Real Estate Pool (MTRP)

Mr. Hurley presented the Montana Real Estate Pool report for the quarter ending December 31, 2014. Two new commitments were made since the last Board meeting as shown in the table below.

| Fund Name | Vintage | Subclass | Property Type | Amount | Date |
|---|---|---|---|---|---|
| AG Realty Fund IX, LP | 2015 | Opportunistic | Diversified | $20M | 2/25/2015 |
| AG Core Plus Realty Fund IV, LP | 2015 | Value Add | Diversified | $20M | 02/25/2015 |

Mr. Hurley noted capital calls outpaced distributions for the quarter, resulting in negative cash flow for quarter. The portfolio is balanced and diversified, and geographically diversified relative to the index;

there is no effort to map to the index or over/underweight due to geography and the same is true for property types.

Time weighted returns across core funds, timberland and opportunistic have been gaining upward momentum. The internal rate of return for each manager continues its upward trajectory. Real estate is a cyclical asset class, and so will not always be up; however, continued upside is expected in the near term.

The portfolio remains conservatively leveraged and within policy constraints. The two core real estate funds introduced into the Trust Fund Investment Pool have increased over time.

Mr. Sheets added one motivation for adding real estate to the TFIP was to diversify the income of the pool, providing an increase vs. very low bond market yields. It has been a struggle to maintain book yield in the TFIP over time and the real estate is helping bolster the yield.

Mr. Hurley advised there were no changes in the private equity and real estate partnership focus lists this quarter.

Fixed Income

Mr. Sheets noted the format for the fixed income report has been changed.

Mr. Nathan Sax presented the fixed income report for the quarter ending March 31, 2015. The yield curve for the quarter had a shift to lower interest rates, but has since gone right back up and 30 year yields are over 3%. Some economists are optimistic. During the first quarter, the European Central Bank started quantitative easing. For U.S. rates, the Fed is expected to go in the opposite direction. During the quarter, the 10-year German sovereign came down and oil bottomed at $48 a barrel. There were no major changes in economic fundamentals over the quarter.

Mr. Sax reviewed spreads for the high yield market and reported spreads were a bit tighter in the high yield sector this year. Real GDP for the U.S. has been at a 2.2% pace average, positive, but low economic growth. Europe expects economic growth at 1.5%.

Mr. Sax reviewed the revised format on the fixed income report, which should be more intuitive. The new report breaks down the details of the RFBP, CIBP and TFIP. The report shows assets managed internally vs. those by managers, the asset allocation details, portfolio metrics, credit quality breakdown, sector weights and duration.

Member Prothero thanked staff and noted the new format shows the details he was looking for.

Mr. Sax noted Mr. Jon Putnam worked on the new format and thanked him.

Mr. Sax reported the CIPB is in the 25th percentile over 5 years and is ranked 9$^{th}$ for FYTD. The portfolio continues to do well; it is not a high-risk portfolio. The TFBP rank vs. peers is 26$^{th}$ over 5 years. Both internal pools continue to outperform the benchmark.

Neuberger Berman is at the 33$^{rd}$ percentile over 3 years, and 26$^{th}$ over 5 years; they are a beta manager and perform in alignment with high yield. Post is a high yield manager, they do a lot of internal credit analysis and pick lesser known names and get involved in the legal asset area. They are doing very, very well. They were on the watch list, due to organizational issues, but are doing well.

Fixed Income External Managers Watch List

Mr. Sax reviewed the external managers watch list and noted Aberdeen was added to the watch list due to performance; over 5 years they are at the 65$^{th}$ percentile. Generating 26 basis points per year after fees, they ran into trouble, down 119 basis points at FYTD. Reams remains on the watch list; ranked at the 54$^{th}$ percentile for 5 years. Reams stumbled when they got into short duration. Both core plus managers on the watch list have a combined $350 million between them. Both remain stable

organizations with competent staff, but have been fooled by difficult markets. If performance does not improve, staff may need to consider termination; however, no immediate action is planned.

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

Member Terry Cohea asked if a manager on the watch list is terminated whether the process is similar to that used for domestic equity managers.

Mr. Sax explained transition costs can be managed and transaction costs minimized as money moves, as well as ensure that the custodial bank receives all owned assets. It can be a clean process.

Member Englund asked it that includes freezing assets.

Mr. Sax responded that some investors would instruct the manager to liquidate; however, BOI would freeze assets.

Mr. Sheets added staff has never done a fixed income transition; external managers were not hired until 2008. Staff has investigated the process, and as a rule of thumb, if the goal is downsizing, the manager handles it as economically as possible. If a manager is terminated, a transition manager would be hired, not just to minimize transaction costs, but to maintain market exposure pending a transfer of assets into another account, which may include the CIBP. The process is different from a public equity transition given the bond market is an over the counter market.

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

Mr. Rich Cooley gave an overview of the Short Term Investment Pool (STIP) for the quarter ending March 31, 2015. Money markets have been quiet the last three months in anticipation as to when the Fed will start raising rates. Some investors think the Fed will take action in September, others predict not until next year. The speculation has not changed how we invest STIP. Libor rates have drifted up slightly and short-term spreads remain stable. The portfolio remains well diversified, within policy which requires $150 million daily and $250 million weekly of liquidity. The portfolio duration has gone up slightly; staff purchased a couple of 1-year maturities, fund duration is now closer to 60 days. There were no changes in the breakdown of assets.

Spreads for the first quarter were a bit wider, so staff was able to pick up some additional yield. There were some maturities in the quarter; $225 million went to purchase Yankee CDs in the quarter. The portfolio totaled $2.5 billion at quarter end, so has come down a bit due to seasonal lows.

Mr. Cooley reviewed the STIP reserve account and noted the impact of the daily deposit amount has not changed: $10,000 per day equates to 15 basis points, down slightly. A little more than half of the yield is going into the reserve fund. The institutional money market funds return is 8 to 14 basis points, so return remains competitive. The SIV book value decreased due to cash flow received from assets, declining from $31.9 to $29.4 million and the reserve balance increased from $26.5 to $27.5 million, an increase of $1 million over the quarter. The reserve is increasing $10,000 per day plus any coupon payments received from the former SIV-related assets. Any principal payments are used to reduce the book value. Gains on asset sales are also added to the reserve fund.

Member Cohea asked about the option of writing off the SIVs.

Mr. Sheets stated staff is not contemplating a write off at this time, but will continue to monitor. Staff does have a reserve target amount in mind; allowing for extra reserve for any future events which may result in realized losses. By calendar year end, the SIV balance and the reserve fund balance should be at a point of equilibrium.

Mr. Cooley added by July 1, the reserve balance will be slightly larger than the remaining SIV balance.

Mr. Sheets noted the daily reserve amount may be dialed down a smidge.

Mr. Cooley reported there were no purchases of securities, sales or activity for the Treasurer's Fund for the quarter.

Mr. Cooley reviewed the State Fund Insurance quarter end report and noted the Fund is still slightly short on duration. Corporate spreads tightened slightly over the quarter. Fund performance is up by 8 basis points for the quarter and 40 basis points for the year. Purchases of $28 million in corporate bonds over the quarter was higher than normal, and $20 million in agencies were purchased. Cash is at 2.3%, within policy range. The total fund return for one year is 5.18%; equities returned over 11% and fixed income return was just over 4%. Equities and real estate combined added 100 basis points of added return, although they make up around 17% of the portfolio. Both provide added yield and diversification to the portfolio.

Mr. Sheets added staff keeps in regular contact with State Fund and they have expressed their appreciation for the work BOI staff provides.

Investment Policy Changes – CIBP and TFIB

Mr. Nathan Sax presented staff' recommendations for minor policy changes to CIBP and TFIB investment policy statements. For both policies, staff is asking to change the allowable range sectors for government agency bonds and corporate bonds due to changes over time in the Barclay's Aggregate Bond Index.

Mr. Sheets noted the corporate weighting has gone up in a noteworthy fashion over the last 7 years. Staff does not anticipate adjusting the asset weights of the two pools, but rather revising ranges in the two policies to align more closely with current benchmark weights.

> Board Member Karl Englund made a Motion to approve staff recommended changes to the Core Investment Bond Pool (CIBP) and Trust Fund Investment Pool (TFIB) Investment Policy Statements. Member Jack Prothero seconded the Motion. The Motion carried.

## RECAP OF STAFF TO DO LIST AND ADJOURNMENT

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

1. The Audit Committee directed staff to check with the three agencies, which received the STIP Corporate Resolution Draft, to attend the next Committee meeting.
2. Staff will send out a poll to Board members asking for suggestions for items for the October meeting, including a "no meeting" option.

Member Prothero expressed concern about policies and procedures when Board Meetings begin the required videotaping and he requested staff put together educational guidelines to follow once meetings are video recorded.

Following a brief discussion, Executive Director Ewer advised staff will compose a short script to be read at the start of Board Meetings, starting at the August meeting, (the law goes into effect on July 1), advising all in attendance that the proceedings are being videotaped.

There being no further business before the Board, the meeting adjourned at 12:17 p.m.

Next Meeting

The next regular meeting of the Board will be August 18-19, 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: August 18, 2015

MBOI:drc
8/3/15