These minutes are Approved and Final. Full Board review and decision took place at the November 13-14, 2018 Regular Meeting of the Board.

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

MINUTES OF THE MEETING – August 21-22, 2018

BOARD MEMBERS PRESENT:

Mark Noennig, Chairman
Karl Englund, Vice Chair
Terry Cohea
Jon Satre
Maggie Peterson
Jack Prothero
Jeff Greenfield
Diane Fladmo

LEGISLATIVE LIAISONS PRESENT:

Senator Scott Sales
Representative Jim Hamilton

STAFF PRESENT:

Polly Boutin, Associate Financial Manager
Jason Brent, CFA, CAIA, Investment Officer Public Markets
Geri Burton, Deputy Director
Dana Chapman, Board Secretary
Frank Cornwell, CPA, Associate Financial Manager
Joseph M. Cullen, CFA, CAIA, FRM Chief Investment Officer
Roberta Diaz, Investment Accountant
David Ewer, Executive Director
Julie Feldman, CPA, Financial Manager
Kelsey Gauthier, CPA, Investment Accountant
Kirsten Haswell, Investment Analyst
Tim House, Investment Analyst
Douglas Hill, Director of In-State Loan Programs
Ethan Hurley, CAIA Director of Private Investments
Teri Kolnik, CFA, Investment Analyst
Emily Kovarik, CPA, Investment Analyst
Eron Krpan, CFA, CIPM, Investment Analyst
Tammy Lindgren, Investment Accountant
April Madden, Investment Accountant
Rande Muffick, CFA, Director of Public Market Investments
Mary Noack, Network Administrator
Michael Nguyen, Investment Officer Private Investments
Mike Pettit, Director of Investment Operations
Jon Putnam, CFA, FRM, CAIA Director of Fixed Income
John Romasko, CFA, Investment Officer
Steve Strong, Investment Analyst
Louise Welsh, Senior Bond Program Officer
Thomas Winkler, CAIA, Investment Analyst
Dan Zarling, CFA, CIPM Director of Risk Management

GUESTS:

Becky Gratsinger, CFA, CEO, Senior Consultant, RVK, Inc.
Jim Voytko, President, Director of Research, Senior Consultant, Principal, RVK, Inc.
Mark Higgins, CFA, Principal, RVK, Inc.
Dan Villa, Budget Director, Office of Budget and Program Planning
Adam Gill, Executive Director, Montana Facility Finance Authority
Mike Heale, CEM
John Adams, Montana Free Press
Cliff Sheets
Herb Kulow
Katie Sutton, Director, Montana Organizing Project
Kim Wilson, Morrison Sherwood Wilson Deola PLLP

CALL TO ORDER

Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 11:32 a.m. As noted above a quorum of Board Members was present. Chairman Noennig advised video recording of the meeting was underway and called for public comment on issues with Board jurisdiction.

Public Comment

Ms. Katie Sutton, of Montana Organizing Project, introduced Mr. Kim Wilson, a local attorney with Morrison Sherwood Wilson Deola PLLP (MSWD). Ms. Sutton noted BOI invested $25 million in JLL Partners Fund V and then in 2006 JLL Partners (JLL) bought Ace Cash Express, which is involved with payday loans. Ms. Sutton stated JLL settled a court case with the Department of Education in 2015, along with a settlement of $10 million in 2014. Two months after this BOI invested in JLL Fund VII. Ms. Sutton stated Ace Cash Express charges 600% plus interest, while voters in Montana voted at 72% to ban payday loans in the state. Ace Cash Express no longer does business in Montana. Ms. Sutton distributed a handout of two letters from local reverends and rabbis detailing the harm of payday lending.

Ms. Sutton stated Montana is invested in JLL Partners Funds V and VII and asked why BOI invested another $25 million after the legal settlements, noting lawsuits hinder the profitability of funds. Ms. Sutton added JLL Fund VII is rated in the bottom quartile compared to peers.

Mr. Kim Wilson, an attorney in Helena with MSWD, stated he has practiced consumer rights law for over 30 years and supports Montana Organizing Project's goal to have Montana divest of all JLL Partners investments due to the predatory lending practices.

Both Ms. Sutton and Mr. Wilson urged the Board to divest of, or to stop doing business with, JLL Partners.

Chairman Noennig asked if there was any other public comment. There was none.

Chairman Noennig called for comments or revisions to the minutes from the May 22-23, 2018 Board Meeting and the August 6, 2018 Special Board Meeting.

> Member Jack Prothero made a motion to approve both sets of Board Meeting Minutes as presented. Member Maggie Peterson seconded the motion. The motion carried.

ADMINISTRATIVE BUSINESS

Audit Committee Report

The Audit Committee met prior to the Board meeting. Audit Committee Chairman Jon Satre reported that Executive Director Ewer shared that his appearance in June before the Legislative Audit Committee went well. Staff have been working with the GASB consultant from Eide Bailly, LLP, who is reviewing BOI processes and financial statements. Eide Bailly recommended staff compose a Management Discussion & Analysis letter (MD&A) for each financial statement, which staff will do. Wipfli, LLP (Wipfli) conducted an internal controls audit and presented the draft SOC 1, Type 2 Report. The report as presented by Wipfli contained a clean opinion. There was one exception noted, dealing with a State network password issue. The issue comes under the control of the Department of Administration, rather than BOI. The Audit Committee approved the draft SOC 1, Type 2 Report.

> Committee Chairman Jon Satre made a motion on behalf of the Audit Committee to accept the SOC 1, Type 2 Report. Member Terry Cohea seconded the motion and noted the final Report should include a Management Response from the Board. The motion carried.

Chairman Satre stated the Committee received an update on the Fiscal Year 2018 Financial Statements; drafts are expected to be completed in mid-September. This will enable completion of a peer review and to forward the statements to Eide Bailley, LLP. The statements are due to the Department of Administration on October 1st.

Financial Manager Julie Feldman provided an update on STIP local government compliance. Of the 183 participants, one is out of compliance. There are upcoming STIP web portal changes directed by the Board's custodial bank, State Street Bank. More information will be provided to the Board as the process continues.

Human Resource (HR) Committee Report
Committee Chairman Karl England reported that on August 6th the Board met and voted to accept the HR Committee's recommendation and make an offer to Mr. Dan Villa to become the new BOI Executive Director. That motion passed. A second motion delegated to the HR Committee the negotiation of the terms of that offer. The Committee has done that.

The terms of the offer are that Mr. Villa will begin work no later than October 1st of this year, the annual salary will be $195,000 and he will be employed under the terms of a one-year contract that is modeled after the contracts used by the University System.

> On behalf of the HR Committee, Chairman Englund made a motion that the Board accept the stated terms for the hire of Mr. Dan Villa. Member Jeff Greenfield seconded the motion. The motion carried.

Loan Committee Report
Committee Chairman Jack Prothero reported the Committee reviewed a Montana Facility Finance Authority (MFFA) loan and asked MFFA Executive Director Adam Gill to provide a summary.

Mr. Gill presented a request for the Master Loan Program to provide financing for Big Horn Memorial Health Care in Hardin, Montana. MFFA utilizes the BOI credit rating which helps to keep costs low. Hardin is expanding their Emergency Room and patient wing; the project is a significant expansion.

Committee Chairman Prothero stated the Committee reviewed the details of the loan and voted to approve the $11 million loan request.

> On behalf of the Loan Committee, Chairman Prothero made a motion to approve the loan request as presented. Member Maggie Peterson seconded the motion. Member Terry Cohea recused herself due to D. A. Davidson connections. The motion carried.

Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) Updates
Member Maggie Peterson stated the PERS Board met on August 9. Mr. Marty Tuttle is the new PERS president and Pepper Valdez is the new vice president. The PIMCO report shows PERS has slightly outperformed peers. Older inactive accounts hold the largest percentage of assets. Empower made a presentation to the PERS Board. The 457 programs have grown by 928 members since 2014. The PERS Board also had sexual harassment training. Member Peterson added MPERA now has a work plan for its Board after seeing the benefits of the BOI work plan.

Member Jeff Greenfield reported the TRS Board met and discussed a contested case where an individual received compensation they should not have. The case has been through multiple appeals over two years; the court upheld the TRS hearing findings and the next step is district court.

Legislative Liaisons Comments
Senator Scott Sales reported there is a lot going on; revenues continue to improve, and the general election is coming up; the makeup of the legislature is expected to remain about the same.

Chairman Mark Noennig introduced new legislative liaison Representative Jim Hamilton.

Representative Hamilton stated he was happy to be on the Board and has great respect for the Board. He is a financial advisor in the individual investor arena. The Legislative Fiscal Division has come out with a

2021 biennium outlook including revenue estimates. The full report is posted on the Legislative Fiscal Division web page.

EXECUTIVE DIRECTOR'S REPORT

Overall Comments

Executive Director David Ewer stated there were two Member requests from the prior meeting. Staff will keep the Work Plan current; there have been some changes in the scheduling of the asset class deep dives. The Work Plan is historically driven by staff through the Executive Director to present relevant topics to the Board on a systematic basis. The other item is the update of the glossary and acronym list which was completed by the BOI summer employee. Both are now current, and staff welcomes Board feedback on any revisions.

Director Ewer noted the monthly snapshot is included in each Board packet and provides a helpful resource. The quarterly expenses previously included in the packet have been discontinued.

Director Ewer explained the Governance Manual directs staff to bring the expenditure report before the Board. Much of the budget is funding the base items, along with a few new proposals.

Deputy Director Geri Burton stated the Board's budget reflects everyday bills that are paid; expenses are a combination of overhead, salaries, research services, travel and attorney expertise over the last year. Each August staff presents the past two actual fiscal years and the budget for the current fiscal year reflecting the difference from year to year. Member Maggie Peterson has asked for staff to include percentages in the report as well. Any large differences include footnotes on the cause of those differences. The largest line items include personal services and investment research services. For fiscal year 2019, the investment research services budget of $1.2 million has increased from $841,000 last year. Staff continually look at investment research services needed for certain asset classes; one of the larger expenses in this area is Bloomberg.

Member Jon Satre noted the investment research services budget is $350,000 higher than 2018, or 40% higher than last year.

Ms. Burton stated investment staff are reviewing new services and have talked to vendors but have not made any final decisions. Ms. Burton noted the fiscal year 2018 budget was about the same amount as staff anticipated purchasing new services, although none have been purchased yet.

Mr. Mike Pettit stated for analytics there is planning in the budget for a risk and investment monitoring system for the whole portfolio. Staff added Bloomberg terminals for 2017 and 2018 actuals; the budget for 2018 was similar at $1.223 million.

Member Cohea noted out of state travel costs were less than $100,000 although staff is asking for more than double that amount.

Mr. Cullen explained a few years back there was very little out of state travel; staff are doing significantly more travel currently and staff expect it to increase in the future, particularly for international travel. Some travel is planned due diligence, some is on the expectation staff may need to travel for situations that may arise, although that has not been needed so far. Staff expects to continue to see more travel in line with a longer vision of due diligence.

Vice Chairman Englund observed staff have underspent the budgeted travel.

Deputy Director Burton agreed the budgeted amount for travel was underspent.

Director Ewer stated the Limited Partner Advisory Committee (LPAC) expenses paid on BOI's behalf are included as a handout. The various LPAC meetings which staff attended as members of the LPAC's are listed.

Director Ewer asked the Board to vote on acceptance of the Fiscal Year 2019 Budget.

> Member Terry Cohea made a motion to approve the proposed Fiscal Year 2019 Budget as presented. Member Jon Satre seconded the motion. The motion carried.

Director Ewer noted every two years the legislature sets BOI's operational rate that can be charged, which covers a small part of expenses. Staff participates with the Department of Commerce as a starting point on the budget; the process is long, and it is hard to predict when it will be finalized. Staff is proposing three additional full-time employees (FTEs) which the Board has approved. The Commerce director gets to weigh in on the recommendation to the legislature. Staff is asking for two FTEs on the investment side and one on the accounting side. Staff is also requesting a new proposal which would consolidate data feeds to include in a single source for better utility. Staff collects data from many sources but there is no central data capacity. Cost is estimated between $400,000 to $500,000.

Mr. Cullen explained staff relies on State Street Bank for data warehousing. The current capability requires BOI staff to download and build spreadsheets to use as a database; however, it is not a good long-term solution. Staff is aiming towards a long term strategic change.

Director Ewer added the new FTEs are the most important; the data warehouse is secondary. It is a work in progress and a very fluid process. Commerce will have to approve it; then the Budget Office makes the final decision.

Representative Hamilton asked if FTEs are a reasonable metric to look at as it relates to the amount of money BOI manages vs. the FTEs.

Director Ewer stated staff are not aware of what other pensions do, or whether they use that metric. It is not uncommon for other boards to feel they are understaffed. BOI has three fixed income staff managing $9 billion; the state pays its bills through STIP, which is a $3 billion program; $1 billion is local governments which must be up and running at all times. A large portion of fixed income is managed internally by those three staff members.

Mr. Jim Voytko added it is an often used but not necessarily helpful statistic, assets vs. staff. However, internal management is a whole different game, as well as the complexity of the portfolio vs. funds that are very simple in structure. Another factor is what other resources you tap. A strong DIY atmosphere, proven through BOI's history of the CEM report, shows it is a cost-effective way to manage assets. Some organizations have special consultants for every asset class; the comparison of what BOI does is not very similar to other funds.

Deputy Burton noted there are two other areas staff are looking at for budget increases. One is legal services; the budget was $180,000 and is increasing to $325,000. The other area is background checks on private equity partners BOI is investing in.

<u>CEM Benchmarking – Mike Heale</u>
Mr. Mike Heale reviewed the CEM Benchmarking Results for the 5-year period ending December 31, 2017. The report is an independent and objective view of performance relative to costs. The most meaningful snapshot includes the performance database of U.S. public funds consisting of 52 mixed asset funds totaling $2 trillion in assets. For cost analysis the focus is on a smaller group of 18 U.S. public sponsors with a median fund size of $11.5 billion. The relative criteria for peer groups is size, as there are economies of scale, and secondly the commonality of asset classes relative to the BOI asset mix. This also helps to minimize turnover of the peer group.

Vice Chairman Englund asked if there is a way to evaluate economies of scale.

Mr. Heale stated yes; for a 10-fold increase in assets from $10 billion to $100 billion, will be a five basis point cost reduction, or larger, when you factor in internal management. Small funds have struggled with fixed costs due to the economies of scale.

For returns compared to the U.S. universe, asset mix is the biggest driver of returns, followed by implementation impact regarding active management. Comparing how BOI's costs compare to peers, BOI's net yield over the 5-year period was 9.7%, above both peers and the median, ranking in the top quartile in net total return, the most important number. The private equity default benchmark used is the small cap market and is the same for all, which eliminates noise. BOI had a higher weight of U.S. stocks at 36%; the average was 21% over five years. This had a positive effect compared to U.S. public bonds, one of the worst performing assets at an allocation of 12% for peers vs. 9% for BOI. Private equity, a strong performer, has also been a factor. Another positive factor for BOI is no hedge funds; the U.S. public average held 6%, and returns have been low.

For the period ending 12/31/17, BOI's total investment costs equaled 56.9 basis points, broken down by external management fees and oversight/custody for overseeing operations. Generally, expenses have increased for private equity and real estate, they are expensive asset classes. BOI has somewhat less expensive assets than peers. BOI costs are lower due to implementation style choices, which provides the biggest savings, also less external management and less fund of funds. Another factor is internal costs relative to peers, which are just slightly less than peers. BOI custody costs are somewhat higher as BOI has a more complex structure, and custodians provide different services for funds. Another area is consulting, where BOI is quite a bit below peers.

Overall, BOI has slightly lower costs. At a 9.7% net return, BOI is above peers, and is slightly lower for operation costs.

Mr. Jim Voytko added the net result of the CEM Report shows BOI is getting more while paying less. The subset of implementation cost reflects BOI's performance against the selected benchmark compared to peers vs. their benchmarks. The private equity benchmark is the biggest source of noise, and CEM uses a single private equity benchmark to reduce that effect.

INVESTMENT CONSULTANT REPORT

Becky Gratsinger, CFA, Jim Voytko and Mark Higgins, CFA

Ms. Becky Gratsinger started with performance of the capital markets. As of June 30, 2018, trailing returns are very good at 8.84% return; equity markets provided a nice backdrop. For quarter to date, calendar year, and over one year, equity investments did especially well. In the market environment, the S&P touched another high today, prices are very high. Starting in January with optimism on tax reform, hopes were high for GDP growth. But concerns about inflation crept in, and the market is concerned about trade wars and tariffs. The Federal Reserve (Fed) meets tomorrow and is expected to continue to raise rates. Volatility is a concern regarding tariffs, and for international markets as well. International markets over one-year contributed along with small cap and mid cap markets. The only negative returns for one year are bond markets. With rising interest rates, and the Fed expected to continue raising rates, we can expect bonds to respond.

With a flattening yield curve, the long end hasn't moved much with 2.85% for Treasuries, and unemployment numbers have been strong, which causes inflation concerns. The CPI was up 2.9% at the end of June. GDP picked up at the end of June and the dollar strengthened over the last quarter. There is a lot of strength in the U.S., although we will need to keep eyes on corporate earnings, the unemployment rate and inflation, as well as U.S. government debt which has stayed up. Consumer confidence is strong.

BOI's greater private equity allocation has helped over the long term; real estate has been additive as well. Overall in the economic environment, the biggest risk is exposure to equity which drives volatility.

Mr. Jim Voytko stated for the approach to asset allocation going forward there will be a temptation to squeeze the fixed income allocation lower, but that would be a risk/reward challenge.

Mr. Mark Higgins reviewed the portfolio performance report. The combined assets for the retirement plans PERS/TRS dominate, totaled $11.5 billion in retirement funds at the end of June. Each plan is divided up by CAPP at about 98%, and STIP cash holdings at about 2%. Annualized performance for each plan is shown net of fees and gross of fees. It was a very strong year and fiscal year returns were at 8.4%. Gross peer rankings remain very good, BOI is in the top decile over every trailing period except one year, and then just very slightly below. Avoiding hedge funds and having private equity and real estate have really paid off. Public equity was strong; private equity lags. The CEM results are very good, although things could reverse, as U.S. equity was outperformed by international equity.

BOI compared to other public plans over $3 billion was overweight U.S. equity and underweight international equity, but most important is hedge funds with BOI at zero which helps explain the long-term outperformance.

Mr. Voytko stated staff has made some big decisions over the last several years; going overweight on U.S. equities has been a winner and adding real estate has been more than repaid relative to the tough first few years. When you get the big things right, they make the difference.

Mr. Higgins reviewed volatility/standard deviation of the portfolio over 10 years annualized. BOI is getting a higher return annualized over 10 years compared to the median. The Sharpe Ratio risk adjusted return is .81 vs. .69, ranking at the 8th percentile. Positioned in the top the decile, unfortunately there is nowhere to go but down; expect to see short term fluctuations.

Director Ewer asked with the equity centric portfolio which will decline if equities decline, how can BOI have the protection of the downside risk with so much equity?

Ms. Gratsinger stated the mix of equity is part of the answer.

Mr. Voytko added BOI has had the right composition of equity; more U.S. equity helped. The total portfolio, because of real estate, private equity and fixed income, and the composition of equity, has not shown the sensitivity to the equity market we would expect so far. Custodial costs for BOI are higher than for peers although BOI has well diversified investments. Other plans don't have that, which may explain the higher custody costs.

Mr. Higgins noted international equity was not the same story, and is negative calendar year to date, but still relatively strong vs. the benchmark. Ranking vs. peers is right around the median. The fixed income sub asset classes were recently added, and while it is early yet, generally performance is right around the benchmark. High yield has underperformed; fixed income fiscal year to date is positive. The natural resources benchmark is similar to holdings over the long term but can trail dramatically in the short term. Real estate for the quarter saw a huge REITs rally; real estate has infrequent appraisals. It has been tough going, but positive over 10 years and 7 years. Diversifying strategies is made up of Treasuries and securities for now. Private equity is trailing the public equity index, and although a source of underperformance, is solid at 6.3%.

<u>Montana Real Estate Holdings</u>

Executive Director David Ewer reviewed his memo on the Montana real estate holdings. Staff was asked to confer with the Department of Administration and Director Ewer noted he spoke with Governor Bullock's chief of staff who reiterated the Administration's desire to keep options open, although they are not opposed to moving the real estate portfolio from pensions to the trust fund. Director Ewer added his recommendation is to make the transition between pensions and the trust fund, at the appraised value. Staff feels it is a better fit, as held in pensions the real estate is not managed for return. There are several reasons to keep the properties, including income, and the housing of state employees. The transition involves approximately $20 million; the Trust Funds Investment Pool will inherit cash income, whereas the pensions will receive the approximate $20 million to reinvest.

Responding to a question from Member Jack Prothero, Director Ewer noted building management would not change. The status quo is BOI has a separate property management company that pays the bills; it does take staff time, and that would not change. Deputy Director Burton and Ms. Louise Welsh have been very involved. Director Ewer added he is not an advocate of selling the Montana properties to a buyer.

Member Jon Satre asked why that was.

Director Ewer noted it is almost impossible to get a state building built, the last one was in 1983 and that was the Metcalf Building for state workers. These assets are under our control, and a point was made to put state agencies in them. The bias is opposed to putting the buildings in the private market. They are needed for state workers, although some issues are problematic; the governor put a restriction on contractual lease increases.

Member Satre noted BOI is not in the real estate business, and the properties use staff resources.

Member Jeff Greenfield stated he agreed with Director Ewer. As investors for the pensions, every dollar that increases costs cuts out of income; tenants costs would go up.

> Member Jack Prothero made a motion to move the Montana real estate from the pensions to the Trust Funds Investment Pool. Chairman Noennig seconded the motion.

Member Maggie Peterson clarified the transaction will be at the "as is" value, based on the appraised values.

> The motion carried.

<u>Treasurer's Fund Investment Policy Statement</u>
Mr. Jon Putnam reviewed proposed changes to the Treasurer's Fund Investment Policy. In a move to the new format, there are three minor changes to the Policy as outlined in the memo included in the packet.

> Member Jack Prothero made a motion to accept the Treasurer's Fund Investment Policy Statement as presented. Member Peterson seconded the motion. The motion carried.

Mr. Putnam stated the Board requested more historical information on the Board's separately managed accounts. BOI's summer staff person Ms. Robin Booher updated the Separately Managed Account Descriptions which is included in the packet and will be added to the BOI web site.

<u>High Yield Asset Class Review</u>
Mr. Jason Brent presented a review of High Yield. U.S. Dollar corporate issues are included in the asset class. A bond is high yield due to its higher credit risk, financial leverage, higher levels of debt relative to equity or cash flow and includes companies that are more volatile or smaller emerging companies.

A rating of BB or lower is considered high yield; the low credit rating for high yield bonds compensates for higher risk, spreads are risk premium, compared to yield on a treasury bond. Typical term is less than 10 years and bonds come with call provisions, meaning the issuer can repurchase and retire the bond.

The objectives of high yield include interest paid through coupons and return enhancement, higher yield, as well as some capital appreciation. High yield bonds are more correlated with stocks, but less volatile; investment grade bonds are not correlated with high yield. Managers BOI invests in are doing their own credit analysis regardless of credit rating. The ratings agencies are backward looking and slow to respond; managers form their own opinions.

Parameters are set on managers based on credit rating. Staff monitors and restricts purchases on low ratings. A lot has changed; in the 1970's they were fallen angels, downgraded corporate bonds; however, now they have their own issuers, and are a legitimate asset class with over one trillion in value. Companies use high yield bonds to finance capital needs.

High yield comes with business sector risk, meaning more sensitivity to economic conditions, and interest rate risk, although they tend to change less than investment grade bonds. They are traded over the counter. Smaller issues with lower trading volumes can prevent selling without effecting the bond price. The CAPP has 2.8% of high yield; Shenkman and Oaktree were funded 2017. There is a slight overweight of single B's and triple C's with more exposure to defensive companies. Some may have a split rating, and mis-rated bonds can mean a pick up in value.

The portfolio exposure by industry is overweight to consumer non-cyclical and to companies with stable cash flows, and underweight to cyclical; the portfolio is defensively positioned. In the current environment spreads could stay tight for a long period of time. High yield bonds have more sensitivity to the economy; when less healthy, there can be downgrades and defaults. The nature of higher coupons leads to shorter duration and creates less interest rate sensitivity. Credit quality on high yield has remained stable, default rates remain at relatively low levels at 2%.

Staff expects to maintain high yield within the approved range of 1-5% and will continue to provide downside protection with managers. Exposure will be maintained at 3% unless high yield spreads increase. The two new managers bring increased diversification, good performance in down markets with different views on credits, and they have long track records.

Bond Program Report

Ms. Louise Welch reviewed the INTERCAP Loan Activity Summary. The report includes more information reflecting the outstanding bonds, year over year comparisons, loans outstanding, the amount in the bond reserve and the balance in cash. Loans outstanding have held steady, running at about $80 million. Some large loans came in June from the University System for $5 million and Cascade County for $2 million. Loan commitments pending are $42.2 million; one has since funded. Fiscal Year 2018 had less activity, a lot of that due to delayed projects for interim financing and some those are starting to close. Three loans are closing this month, so it was mostly a timing issue.

There were ten staff approved loans, including the Plains School District which was a new borrower. INTERCAP has been used all over the state and although there are still 12 county governments that have not used the program, some cities within those counties have.

The Annual Loan Detail Report, which is provided to the Board annually, is included in the packet. The loan concentration and associated information is shown by county, comparing 2018 to 2017.

Montana Loan Program Report

Mr. Doug Hill reviewed the In-State Loan Program Report. As of August 6, the commercial loan portfolio balance was $180,479,161 with 103 individual loans. Since the last Board meeting, staff funded six Intermediary Relending Program (IRP) loans at $148,076; there are four loan reservations that total $5,863,000, and six loans committed at a total of $31,373,322.

The Springs at Bozeman, LLC, have renewed their rate for another year, now set to expire on August 17, 2019.

The portfolio return, excluding the Science and Technology loans and the VA loans, is 3.8%. The rate is affected by the job interest rate credit reduction; when a borrower creates jobs, it lowers the rate. By creating up to 50 jobs a borrower can receive a 2.5% interest rate reduction. The job creation must be confirmed; the banks monitor the jobs. If the created jobs go below 40, the interest rate can be adjusted accordingly. Businesses can continually create jobs and get reductions, or if jobs decrease they can lose the lower rate.

The past due loan for Shoot the Moon had a write down at the end of the fiscal year, based on the projected sales price. The pending offer to purchase fell through; there are no current offers.

The residential loan portfolio balance is $4,549,635 as of July 18, 2018 representing 108 loans. The portfolio has a yield of 6.65%. There are four loans over 90 days past due; all four have FHA guarantees. The Veterans Home Mortgage portfolio balance was $37,504,312 as of July 18, 2018, representing 221 loans. There were ten reservations totaling $2,317,480. Deducting the current reservations, the balance remaining in the program will be $178,208. The total allocation to the program of $40 million has been used up. Pay downs of current loans will be needed before funds will be available to loan.

The Meeting adjourned for the day.

CALL TO ORDER

Chairman Mark Noennig called the regular meeting of the Board of Investments (Board) to order at 8:32 a.m. As noted above a quorum of Board Members was present. Chairman Noennig advised video recording of the meeting was underway and called for public comment on issues with Board jurisdiction. There was none.

Vice Chairman Karl Englund acknowledged this was the last meeting with David Ewer as executive director. Mr. Ewer has had a long career in public service with both the Board, as budget director and serving in the Montana legislature. When he came on as executive director at BOI, we were in good shape, but he made the place better in a lot of ways. Director Ewer increased transparency of how the Board keeps with the requirement of open government, and he further empowered the talented staff to do their work and to make the Board more aware of staff members and their role at BOI, as well as how impressive the staff are. Vice Chairman Englund stated he hopes the change in culture is here to stay and on behalf of the Board, he stated it has been an honor and a pleasure to serve with Director Ewer.

Public Market Investments Manager Transition

Mr. Rande Muffick reported the public market group terminated Voya Investment Management in early July. Voya was with BOI for just over five years as a domestic small cap growth manager. Voya had a lot of staff changes; they changed their portfolio manager as well as turnover in analyst staff. Staff felt Voya are in a transition period with a new portfolio manager who looks to add to his staff; the team decided to terminate. For the time being, the funds have been moved into a small cap ETF, the IWM - iShares Russell 2000 ETF. Through due diligence, and Mr. Steve Strong in particular, staff have a potential small cap growth bench and a few managers of interest.

Member Jack Prothero asked how Voya was on performance.

Mr. Muffick stated they lagged the benchmark a bit, but staff turnover was the primary reason for the termination.

Mr. Mike Pettit explained following the decision to terminate, staff consulted with a couple of transition managers. The goal was to maintain market exposure to the target portfolio and SSB Global Markets (SSB) offered half the cost and maintaining of market exposure. SSB sold 85% of the portfolio on the first day on market close, then traded 15% the next day on market open. This helped to cut down on expenses. SSB provided an initial estimate at 8.13 basis points but came in at 7 basis points, or $78 million. The cost of commissions was $22,000 or 2.9 basis points, one penny per share, bid ask spread, market impact, taxes, fees, and opportunity costs. The transition began on a Friday and finished on Monday.

New Private Investment Commitments

Member Jack Prothero noted the private investment commitment briefs are always marked confidential and asked for clarification.

Director Ewer stated in general, Montana state government information is public; there are not many exceptions. One exception is the right to privacy, although there are a few others. Montana does have a trade secret statute and we sign non-disclosure agreements. Intellectual property is included, the details are proprietary and that is why staff marks the private equity briefs confidential. Managers do not want to share their competitive advantage. At times, staff may need to be able to put something in front of the Board, and as the client, the Board has to be able to see the details.

Mr. Michael Nguyen added that historically, it has not been an issue; staff would refrain from sharing information if it was not to be disclosed.

Ms. Teri Kolnik presented the brief for Fidelity Real Estate High Income Fund (Fidelity). This is BOI's first publicly traded private investment. Staff invested $20 million on July 16, 2018. High yield Commercial Mortgage Backed Securities (CMBS) are the main investment. Fidelity underwrites real estate by visiting on site and most team members have real estate backgrounds. It is a mutual fund, with low fees of 0.8%. Fidelity has a wider organization which provides all the back office accounting and IT; they handle investments. Staff visited onsite and were impressed with the level of compliance.

Ms. Emily Kovarik reviewed the brief for AG Realty Value Fund X (US), L.P. Staff committed $30 million on August 2, 2018. BOI has invested $135 million in Angelo Gordon since 2009. They have been a valued partner and are very adept at investing through all the cycles of real estate with top quartile performance. The focus is on non-core real estate. Although their primary fund can invest up to 20% in international, the private investments team discussed the options and although BOI had international exposure in prior funds, staff are very confident in the U.S. team and opted to invest in the U.S. only sleeve.

Mr. Michael Nguyen added staff may look at the international vehicles in the future.

Vice Chairman Englund asked if staff are in a good position to evaluate international managers.

Ms. Kovarik stated staff believes they are and there are plans to travel internationally and meet with managers and conduct onsite due diligence. Staff have the capability and will be looking at funds outside of the U.S.

Ms. Kovarik reviewed the brief for Axiom Asia Fund V. Axiom is a fund of funds manager with a lower middle market buyout focus, as well as growth capital and venture capital in the Asia space. Staff have deployed $90 million over three funds, which have top quartile performance. Additionally, if staff have questions on an international manager, Axiom staff provide valuable information to Montana. Staff committed $40 million in Fund V, which has a deep pipeline already.

Director Ewer noted this is an exception, as staff are not inclined to go with Fund of Funds, although do for certain investments. Director Ewer asked the private equity team to share the team's goals going forward.

Mr. Nguyen stated for the current time, Axiom has been a great manager. Although there is another layer of fees, net returns have been good. Staff will continue to focus on direct relationships with the long-term goal of phasing out of Fund of Funds.

Mr. Nguyen reviewed the brief for Crescent Asia Consumer and Deep Value Fund II. Crescent focuses on consumer growth, direct investments, and is in line with staff's effort to build the direct program. Crescent is a pan Asia manager. Staff have been speaking with Crescent over the past year and think highly of the team. Staff have met with the head of the team a couple of times in Helena and our opinion was strengthened after meeting on site with staff in Asia; they are a very impressive team.

BOI staff will serve on the LPAC (Limited Partner Advisory Committee).

Member Jon Satre asked if at a $50 million investment, BOI is a fairly significant investor.

Mr. Nguyen state yes; for the majority funds BOI invests in, we are a meaningful investor. Larger pension peers cannot do these types of investments; partners view BOI as a strategic LP (Limited Partner) and our size is large enough to be meaningful.

Staff relies on RVK for pacing studies for strategic allocation. The private equity pool is the largest, so generally the investments are larger in that pool. Over the last year, staff have been focusing on larger investments with fewer managers that staff believe in. With 175 plus fund commitments, there is no need for further diversification.

Mr. Nguyen reviewed the brief for Deerpath Capital Advantage IV. Deerpath follows a lower middle market strategy; staff committed an additional $30 million on June 11, 2018 as part of the function of staff wanting to lean into the best managers. An initial $30 million was committed previously on April 1, 2018. Staff were able to negotiate lower fees due to our size and value as a strategic partner.

Mr. Nguyen reviewed the brief for Blue Sage Capital III, L.P. a lower middle market buyout manager. Staff committed $40 million on June 1, 2018. Blue Sage offers access to part of the market not accessible on the public side. A high demand fund, staff visited them when in Austin when onsite with another Austin based GP in the BOI portfolio.

Blue Sage has a very focused strategy; a typical firm they might invest in would be quite small, such as a specialty parts manufacturer for high speed boats, or they may consolidate three small companies in a fragmented market and combine them, or even a gardening service company. They have a long-established track record including through the Great Financial Crisis (GFC). They are focused on low leverage.

INVESTMENT UPDATE

CIO Update

Mr. Joe Cullen provided an investment update as of June 30, 2018. Markets have done well, although the question is whether there is concern going forward; yes, however we are always concerned. As we look forward, the focus is always on fiduciary duties of the pension plans and the assets BOI manages. Staff's job is to manage risk. We are not making any predictions, but at some point, things will occur, and we continually try to improve the process. Staff will continue to diversify the pension plans across asset classes. Private equity staff will continue to increase diversification, but also invest in some new things in the public space, such as the Fidelity fund, and continuing to diversify risks. Staff feel well prepared to move forward.

Return for the fiscal year ending June 30, 2018 was 8.8% and is consistent with long term objectives. Pension plans are consistent with the same asset allocation, which is easier due to the CAPP structure. Returns may vary by a few basis points due to different cash levels, what percent of STIP vs. CAPP. One plan may have 2% cash, whereas another may have 2.3% cash.

Reviewing the 5, 10 and 20-year, as well as since inception returns, the 5-year reflects only good markets, the 10-year includes the 2008 market period, the last down market. Looking ahead to the next 10 years, we could see another downturn in the market. The most important number is since inception; the very long-term numbers do not change dramatically over time. The most important plan objective is to make benefit payments. The net cash need of $324 million in aggregate came out of the plans to pay benefits, and although meaningful, it is not concerning, it amounts to about 3% of plans. The net cash need is what is paid out plus the contributions coming in. The dollar value added was $958 million, almost a billion dollars.

Year over year the pension plans increased by $634 million after paying out benefits. Returns have been good, positive over the last 5 years; even during good performance, certain asset classes can go down. All asset classes are within approved ranges. Some asset allocation changes over the last year included a decrease in investment grade credit, staff decided to take some risk off the table and moved to agencies and treasuries.

Domestic equity has been the main source of capital, and staff will continue to pull money out. Fixed income has remained stable through the year, although duration is a little shorter than the overall markets. The change was due to moving from intermediate corporates to intermediate treasuries, which are comparable, taking assets from corporates to treasuries. Relative to peers, BOI has less interest rate risk; rates are rising, and staff is cautious of risk.

Executive Director Ewer noted BOI has 23% in fixed income with a floor of 15%, fairly low by historical standards. BOI was at 60% fixed income in the 1980's, when you could get an 8% coupon. Fixed income is an important component of strategy.

Mr. Cullen added if interest rates go up, staff will allocate more into fixed income, although will not try to time the market. The closer fixed income returns get to the actuarial rate, the more dollars staff will move to fixed income. Almost all asset classes are positive. Domestic equity was at 36.1%, the high end of the range. Staff continue to sell to keep below the top end of the range. The market has been going up, and we expect to continue at the midpoint of the high end. U.S. markets continue to perform.

<u>Risk Management</u>
Mr. Dan Zarling reviewed asset class contributions to returns in relation to total return. Equity asset classes contributed over 90% of return, which was the same as last year. There are risks associated with equities and staff consider risk and return. Equity is doing well and fixed income, while doing well, it is not as well as equities. Fixed income plays an important role adding stability and it has an element of liquidity, especially from cash and the STIP portfolio, which is important.

Staff monitors risk concentration by manager; BlackRock is by far the largest manager, including passive funds and they are the largest manager out there. JP Morgan has done well with the 130/30 portfolio, and they are BOI's largest active external manager. State Street manages the STIF cash vehicle, and there is a sweep vehicle in each of the asset classes. As of the end of fiscal year, staff have not been repositioning managers. Going forward, staff will reduce exposure to BlackRock and will move incrementally in private equity and real estate. When paying pension benefits, BlackRock is where staff takes from.

Geographically, there is inherent risk in international; the Global benchmark MSCI ACWI IMI is the global benchmark BOI subscribes to. A global benchmark will not hold cash or treasuries, and staff have a home bias, which is working well at this time. A look through at emerging markets, the overall portfolio is at 4%, while global markets have 11%, and international has 24% in emerging markets.

The portfolio has a large weighting in U.S. treasuries, which offers one day cash, a very liquid investment. Weights by sectors are high in tech financial and real estate. The real estate sector, which used to be included in financials, has just recently been added. At 4% real estate, it is not a big part of the benchmark. BOI real estate exposure, both public and private, is within policy range. Staff plans to increase the real estate exposure.

Looking at liquidity, staff provided two examples. The immediate priorities for net cash need for pension benefits is estimated at $360 million annually, which must be available in one day liquidity. A total of $175 million is expected in increases to private equity, real estate and natural resources; $175 million of net asset value is needed in the illiquid portfolio to bring weights up the goal staff is aiming for. There is available cash to make the move, and enough liquidity, so we are not forced so sell assets when it is unfavorable.

Member Terry Cohea asked about the one-day liquidity needs equal to an entire years' worth of pension payments.

Mr. Zarling state yes; as a margin of safety, it is preferable to have one day of liquidity to pay for an entire year, in cash and treasuries. Treasuries can be sold, but not other assets which may force sales. Treasuries are the deepest liquidity in the portfolio. One day liquidity of $1.8 billion if staff did nothing else but pay pension benefits, works out to five years to make pension benefits if required. It is a large margin of safety; however, there is value in having flexibility without forced sales.

Director Ewer added staff also needs liquidity for capital calls for private equity; there is just north of $600 million in commitments that could be called. In addition to meeting the states' bills, commitments need coverage as well.

Private Equity

Mr. Ethan Hurley reviewed the high points of private equity. Volumes remain high across private equity, mergers and acquisitions have come down but are still at high levels. IPO markets remain strong, secondary markets are strong, although prices remain elevated. Debt remains plentiful, terms remain easy, returns are strong, and dry powder remains high. A lot of investors are chasing their private equity allocation. While dry powder is high, prices and competition remain high, reminiscent of 2007-2008. As staff look at managers we look at those who have performed through market cycles.

Member Cohea asked due to the strength of private equity, is it a good time to sell some funds on the secondary market.

Mr. Hurley replied yes, and staff have sold some. Staff are actively looking at a transaction to reduce some of the legacy funds and Fund of Funds, and some funds that will not re-up. Staff are always cognizant of market dynamics and looking for ways to make the portfolio more efficient.

Member Cohea asked for some background on JLL.

Mr. Hurley stated BOI is invested in Fund V and VII, committed in 2005 and 2015, with $25 million in each fund. Fund V which is the Ace Cash Express holder is at 1.7 net multiple, Fund VII is at 1.13 net multiple, almost 11% net IRR as of the first quarter. Regarding the public comments, Ace Cash Express was invested in by Fund V in 2006 after BOI made the commitment. It is a blind pool, discretionary to the manager; staff do not dictate what companies they invest in. The CFPB (Consumer Financial Protection Bureau) has brought additional scrutiny. Staff have spoken to the manager about it; they are now in the market with Fund VIII, staff have not begun due diligence of a re-up. We skipped Fund VI, as staff had some liquidity concerns and wanted to manage commitments prudently at that time. Staff subject every fund to the same level of scrutiny and the same process each time. Given the increased scrutiny and public acuity that has come upon this Board, staff are very cognizant of Board reputation. BOI has a strong brand in the market place with all GP's, which is getting stronger every day. Staff have good communication and transparency and are aware of BOI's reputation. Staff monitor the reputation of GP's and how they could impact us with their investments. Staff want to be involved with managers who are cognizant of how what they do can reflect on us.

Mr. Hurley reviewed performance for private equity. Inception to date, the Internal Rate of Return (IRR) was 12.6% net as of 3/31/18 and a 15.6% time-weighted return for fiscal year 2018. The fund value was $1.2 billion as of 6/30/18 and has a buyout focus. There is increased focus on direct lending and Asia; cash flow was negative for the quarter, although positive for the year. There were ten new commitments for a total worth of $430 million.

Real Estate

Mr. Hurley reported real estate volumes remain high and stable; pricing continues to appreciate but is moderating and fundamentals remain strong. Capital continues to flow in country from outside, and there is interest in broadening the scope beyond primary city markets. Cap rates are very low, and competition is fierce. A lot of assets are long time holds and are not coming to market. Dry powder remains high. Looking forward, staff expect limited capital appreciation, continued income growth, although not a reason to pull back. Staff remains focused on managers who have stayed healthy and have a good track record over many market cycles.

Real estate performance net IRR since inception to date was 6.6% as of 3/31/18 and fiscal year 2018 time-weighted return was 7.6% as of 6/30/18.

Vice Chairman Karl Englund asked if it was right, real estate is 4% above the relative benchmark over one year.

Mr. Hurley stated that is correct. Total portfolio value was $808 million at fiscal yearend, balanced across all real estate types. Cash flow was positive for the quarter and the year. There were two new commitments during the quarter and $290 million in new commitments for the fiscal year. The portfolio is within all stated constraints.

Natural Resources
Mr. Hurley reviewed natural resources. The Pacific Northwest continues to be strong; there is a lot of demand; lumber prices are high, and consumption elevated. Although housing levels have slowed, they remain high.
In the energy/oil market, mergers and acquisitions have dropped off a bit. Oil has seen a 31% increase. There is always risk in oil markets; oil exists in areas of unrest and turmoil, although the U.S. continues to grow oil production and will likely will be world's largest producer at some point.

Mr. Hurley reviewed performance for natural resources. Since inception, net IRR ending 3/31/18 was 6.2% for energy and 4.5% for timber. Time weighted return for natural resources was 3.1% as of 6/30/18.

Many funds in the current portfolio are relatively new investments and still in the J curve which contributes to returns and are not a concern. Total market value for natural resources is $268 million. The portfolio includes all areas, upstream, downstream, timber, diversified by age, geography and species. Staff are looking at adding debt strategies for mining companies or energy and are adding a master limited partnership strategy. There were no new commitments for the recent quarter and a total of five for the fiscal year.

Internally Managed Fixed Income
Mr. Jon Putnam presented a review of internal fixed income. The Treasury curve been flattening through the year with raising interest rates. The Federal Reserve (Fed) is expected to raise rates in September and possibly again in December. Inflation is up a bit more than the Fed target; spreads across the board for the fiscal year are reasonably tight through the space. The Fed continues to reduce their balance sheet of both Treasuries and mortgages, which increases supplies for investors. Treasuries and agencies were a bit negative for the fiscal year. The internal fixed income portfolio outperformed slightly. The portfolio has $1 billion in treasuries, is underweight the long end of curve and duration; given the flat curve, there is no gain by going out the additional 7 to 10 years.

The TIPS portfolio had the best performance over the fiscal year in fixed income, which has been beneficial; allocation was increased by $50 million.

Mortgages eked out a positive return for the fiscal year; the allocation was increased by about $25 million during the fiscal year. The portfolio has been overweight in 20-year residential mortgages and given shifting interest rates that should help.

Investment grade credit had a slightly negative total return for the asset class, although managed to outperform the benchmark by 6 basis points. The asset class is a bit underweight duration and overweight the 5 to 7-year portion of the curve. The portfolio is overweight financials, although shorter on duration for financials and longer for industrials.

Broad Fixed Income
Mr. Rande Muffick reviewed broad fixed income. The portfolio outperformed the benchmark by 90 basis points for the fiscal year. The portfolio has been overweight treasuries, although they were reduced from 6% to 3% over the quarter. The portfolio is very defensively positioned.

High Yield
Mr. Muffick reviewed high yield. Spreads are tight historically and for managers generally relative returns were below the benchmark by 121 basis points for the fiscal year. The portfolio is positioned with four downside protection managers. Staff is not concerned. The four managers include the recently hired Oaktree and Shenkman. It is likely staff will even out the weighting over the four managers over time.

Domestic Equity
Mr. Muffick reported on domestic equity. The fundamentals are good and profits grew by over 20% this calendar year. Earnings reports are good and there are hopes the trade and tariff situation will get worked out before the November elections. The asset class had slight underperformance for the fiscal year, by 8 basis points. Small caps did really well, and the small cap allocation helped with returns. Active managers as a whole have improved, although the environment is still challenging for active managers.

Domestic equity returns were solid in the double digits; active managers have had a challenging environment. Being largely passive in large caps has been advantageous. Voya was terminated the second week of July; staff will provide a detailed report at the next Board meeting.

International Equity
Mr. Muffick reported international equity performed well too, although trade and tariff concerns are weighting on the market and has stocks down a bit. Relative to U.S., international stocks earned half of what domestic stocks did.

Relative performance for the fiscal year, international equity outperformed, also due in part to small caps. Emerging markets stocks last quarter were down 8% over concerns about tariffs and the stronger dollar. All in all, international had pretty good performance. Mr. Muffick provided a reminder that when looking at peer group comparisons, BOI uses the ACWI EX-US Benchmark, and a lot of peers do not have emerging markets as BOI does. Therefore, performance is influenced by how emerging markets do. There were no changes of money in or out or manager changes for international equity over the last quarter.

STIP (Short Term Investment Pool)
Mr. John Romasko reviewed STIP performance. The Fed continues to raise rates; investors expect one or two more rate increases this year and two next year. STIP portfolio performance for the fiscal year ending 6/30/18 was slightly under at minus 5 basis points vs. the benchmark. Characteristics were unchanged year over year; there was a $300 million increase of assets due in part to member participant deposits and to increases in state finances. The STIP Reserve was up $8 million over the year.

Montana State Fund
Mr. Jon Putnam reported State Fund had solid performance over all time frames and had a slight positive outperformance due in part to TIPS and spread product. The portfolio is a bit overweight overall duration.

Trust Funds Investment Pool
Mr. Putnam reviewed the Trust Funds Investment Pool and noted the portfolio saw good performance over all time frames. Positioning is similar to other portfolios; maintaining overweight to spread products. The portfolio is significantly underweight vs. the benchmark on the 30-year due to the flat curve.

Real Estate Asset Class Review
Ms. Emily Kovarik began the review of the Real Estate Asset Class. The role of real estate within the CAPP is to provide exposure to diversified real estate investments, including across vintage years, real estate types, and geography. The policy range for real estate is 4-12% of the CAPP and core real estate

can make up 30%-100% of the asset class. Non-core can be 0%-70% of the asset class. Leverage limits on core are between 0% to 50% and non-core leverage allowed is 0% to 75%. The portfolio is within all policy levels; the benchmark is the MSCI US REIT Index (starting April 2017).

The different types of real estate Montana considers in the Real Estate Asset Class include: public equity, such as a Vanguard ETF that is publicly traded. The second type is in private investments through LPs (Limited Partnerships). The third type is real estate public debt. BOI recently made a $20 million investment in Fidelity as a first investment in the space of publicly traded real estate debt securities. The fourth type is real estate private debt, of which Montana has not yet committed to a private debt fund.

The different styles of real estate investing include core, value add and opportunistic. Core has low volatility. Investors can own equity or debt and it is the most liquid style with the least leverage; rental income provides the bulk of returns. With value added, investors can own equity or debt. There is a mid-range of occupancy, with usually more leverage, and properties need operating improvements, renovations or management restructuring to cut costs.

Opportunistic can own equity or debt and needs major operating, renovation or use changes. Investment return is primarily obtained through property appreciation.
Ms. Teri Kolnik discussed the benefits of real estate investing, which include the resiliency to public market conditions. Returns have low correlation to stocks and bonds, real estate offers diversification to the overall portfolio, inflation is hedged through leases that include rental rates tied to regular increases, there is contractual income via the lease payments, and the manager can influence performance through improvements in interior and exterior that can attract higher quality tenants.

The risks of real estate include liquidity, inflation, the risk that property values may decrease and operational risk. Effective management is needed to maintain occupancy.

Ms. Emily Kovarik provided a summary on pacing. Pacing follows planned investments year over year, based on capital calls and distributions according to the time lines on those investments. RVK provides information on the real estate portfolio that looks at annualized growth, capital paid in and valuations. In 2017, staff focused on increasing the core exposure, and currently have a $120 million pacing goal for non-core real estate each year, or four funds per year for $30 million each. For the deal flow over the last five years, staff looked at over 1,400 options and just 55 made it through the due diligence process. Of those, there were 27 funds that staff committed to.

By strategy, core investments make up 44% and non-core is at 53%; non-core includes value added and opportunistic. Geographically, 98% are U.S. investments, with a small part in Canada, the United Kingdom and South Korea, and other small allocations. The portfolio is well diversified across all states, although California and Texas have the largest allocations.

Property types are diversified with the largest allocation to office at 41%. Older vintage funds of 2006 to 2012 have lower market values as they are winding down. Vintages from 2013 to 2015 are nearing full investment, whereas newer funds are not fully invested yet.

Ms. Teri Kolnik provided a market environment overview. Appreciation returns have been very strong, although have slowed to 1% over the last 12 months. Industrial is leading income returns. Net operating income is increasing in some markets due to increased employment. In retail, there are some winners and some losers. Malls are fading, and big box stores are vulnerable; E-Commerce is having an effect. Those who mix bricks and sticks with E-Commerce are doing well. High occupancy has made for a good real estate environment. Staff continue to favor North American real estate, with a continued interest in core real estate.

Responding to a question, Mr. Hurley stated other investors in real estate are building global portfolios; BOI has a North American bias. Given resource constraints and risks, staff are not looking to expand globally. Investing in those parts of the world have higher risk, although have not been shown to provide increased returns.

Mr. Cullen added staff continue to look at the broader space, such as airports, although do not expect to do ground up development.

RECAP OF STAFF TO DO LIST AND ADJOURNMENT

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

1. Staff received Board guidance on the STIP web portal transition and the Deputy Director position.
2. Chairman Mark Noennig requested an analysis of the Montana real estate showing a cost benefit analysis for sales vs. continuing to lease the buildings to state agencies.
3. Staff will provide a follow-up on the Management Discussion & Analysis (MD&A) letter.
4. Staff will provide an update on the Yellowstone County letter regarding the STIP issue.
5. The Board's attorney will review the one-year Executive Director contract.

Having no further business before the Board, the meeting adjourned at 12:27 p.m.

Next Meeting
The next regular meeting of the Board will be October 2, 2018 in Helena, Montana. Complete copies of 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: [signature]
Karl Englund, Vice Chairman

DATE: November 13, 2018

BOI/drc 10/30/18