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

October 7, 2014

AGENDA

COMMITTEE MEETINGS

A. **Loan Committee** **8:30 AM**
   1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
   2. INTERCAP Loan Increase Request - ***Decision***

Tab 1 CALL TO ORDER – Mark Noennig, Chairman **8:45 AM**

A. Roll Call
B. Public Comment – *Public Comment on issues with Board Jurisdiction*
C. Administrative Business
   1. Loan Committee Report
D. Comments from PERS and TRS Board Members
E. Comments from Board Legislative Liaisons

Tab 2 GLOBAL & NATIONAL ECONOMIC OUTLOOK – Chris Low, Chief Economist - FTN Financial **9:00 AM**

BREAK **9:45 AM**

Tab 3 PRIVATE EQUITY - A GENERAL PARTNER'S PERSPECTIVE – Glenn Scolnik, Chairman & Luke Phenicie, Partner – HKW (*handouts at meeting*) **10:00 AM**

A. Investment Strategy Review
B. Sourcing, Management, and Value Creation
C. Fund Economics and Alignment of Interests

Tab 4 OTHER INVESTMENT/PENSION BOARDS – RVK, INC., MBOI INVESTMENT CONSULTANT **11:00 AM**

A. Similarities, Dissimilarities of Other Investment/Retirement Systems
B. Governance Issues
C. Common Challenges
D. Seeking Returns/Mitigating Risks

LUNCH SERVED **11:45 PM**

The Board of Investments makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in public meetings. Persons needing an accommodation must notify the Board (call 444-0001 or write to P.O. Box 200126, Helena, Montana 59620) no later than three days prior to the meeting to allow adequate time to make needed arrangements.

Tab 5 MONTANA RETIREMENT SYSTEM – Shawn Graham, Executive Director, TRS and Dore Schwinden, Executive Director, PERS **12:30 PM**

Tab 6 BEST FIDUCIARY PRACTICES/GOVERNANCE – RVK, INC., MBOI INVESTMENT CONSULTANT **1:15 PM**

A. Accountability
B. Transparency
C. Independent and Numerous Agents
D. Reporting
E. Systematic Oversight and Review

RECAP OF STAFF TO DO LIST AND ADJOURNMENT – Mark Noennig, Chairman **2:00 PM**

Appendix

A. Annual Board Meeting Schedule
B. 24 Month Work Plan
C. Acronym Index
D. Terminology List
E. Public Market Manager Evaluation Policy
F. Educational Resources

ADJOURNMENT **2:30 PM**

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Chris Low
Chief Economist • FTN Financial

Chris has 25 years' experience tracking US and global economies, financial markets, central banks, and fiscal policy, as well as six years' experience as a money manager, giving him a unique ability to distill economic events into information useful to investors.

Chris writes daily economic and market updates, weekly economic commentaries, and regular economic forecasts. He is a frequent and popular speaker at national conferences and forums. He is a member of SIFMA's Economic Committee and the American Bankers Association's Economic Advisory Committee to the Federal Reserve Board of Governors, where he will serve as the 2014 Committee Chair.

Chris has been quoted in *Business Week*, *The Wall Street Journal*, *The New York Times*, and many other publications around the world. He is a regular on Bloomberg TV, CNBC, and Fox Business Channel and is often heard on the BBC World Service radio and American Public Media's *Marketplace*. Chris was recognized by Bloomberg as **"the most accurate forecaster of Treasury note yields"** in 2012.

Chris is a graduate of New York University.

Luke Phenicie, Partner

Luke joined Hammond Kennedy Whitney as an associate in 2004. Prior to joining the firm, Luke was a financial analyst at Prospect Partners, a Chicago based private equity firm that focuses on management-led leveraged acquisitions of lower middle market companies. Prior to Prospect Partners, Luke worked in the Mergers and Acquisitions Group at A.G. Edwards & Sons in St. Louis.

BS, Indiana University Kelley School of Business
MBA, The University of Chicago Graduate School of Business

Glenn Scolnik, Chairman

Glenn joined Hammond Kennedy Whitney in 1993 and grew with the firm to become its President and CEO. Prior to joining the firm, Glenn practiced business law at the Indianapolis law firm of Sommer Barnard PC from 1978 through 1992. He coordinated the firm's merger and acquisition activities of Hammond Kennedy Whitney. Prior to his law career, Glenn played professional football.

BS, Indiana University Kelley School of Business
JD, Indiana University School of Law

Structure, Governance, Challenges and Execution

Prepared for Montana Board of Investments

Jim Voytko
Becky Gratsinger, CFA
Mark Higgins, CFA

Structures

Models Commonly Used by Public Pension and Investment Entities

1. **The Integrated Model**
   - Management of the assets is combined with benefits administration
   - Examples: Pennsylvania, Ohio, Arizona, New Mexico, California, Wyoming

2. **The Board of Investment Model**
   - Management of the assets and benefits administration are separated under different fiduciaries.
   - The investment board typically manages the assets of multiple programs serving many purposes.
   - Examples: Montana, Oregon, Michigan, Florida, West Virginia, Washington, Wisconsin

3. **Either Structure with a Formal Investment Committee**
   - Examples: CalPERS, Washington State Investment Board, NYSCRF (Real Estate Only)

RVK

Pension Assets vs. Other Assets

The Management of Assets Beyond Pension Assets is Frequently Quite Disparate

Examples

- **Defined Contribution (primarily 457) plans**
  - Pennsylvania and New Mexico vs. Michigan and New York
- **College Savings (529) plans**
  - Oregon 529, Michigan 529
- **Workers Compensation Funds**
  - Ohio and New York vs. Kentucky and Montana
- **Permanent (Endowment) Funds**
  - Wyoming, New Mexico, Oklahoma vs. Michigan and Oregon
- **Economic Development Funds**
  - Michigan vs. Florida vs. Montana

RVK

Fiduciary Structure: Membership

- **Single Fiduciary**
  - New York, Michigan

- **Board**
  - **Appointed**
    - Oregon, Montana, New Mexico, Pennsylvania
  - **Elected**
    - Florida
  - **Mixed**
    - New Mexico

Seats whether appointed or elected can be reserved by statute for a representative of a specific group (retirees, employer or employee groups, etc.) or holding a specific office such as state treasurer.

RVK

Structures and Governance: Who Decides?

1. **The ultimate plan sponsor via constitutional, statutory and budget directions**
   - Board Size
   - Board Composition
   - Confirmation
   - Permissible Investments
   - Basket Clauses
   - Prudent Investor Rule
   - Mandatory A/L Studies
   - Mandatory Fiduciary Reviews
   - Open Meetings
   - FOIA
   - Permissible Countries

2. **The Federal Government via plan for qualification and generic plan legislative and regulatory requirements plus indirect influence via ERISA.**

3. **The Montana Board of Investments**
   - CalPERS, Washington State Investment Board, NYSCRF

All three directly or indirectly determine, constrain and influence the structure and governance through which the Board executes its mission.

RVK

Common Governance and Investment Challenges

Boards face a long list of challenges beyond the enormous challenge of achieving adequate investment returns at prudent levels of risk. Most of these challenges fall into three broad categories:

I	II	III
Board Operating Policy	***Board Investment Policy***	***Behavioral Factors***

RVK

Challenge #1: Board Operating Policy

Board Operating Policy

- ❑Board Leadership
- ❑Board Engagement
- ❑Workload/Allocating Time
- ❑Transparency
- ❑Consistency in Delegation
- ❑External Vendor Relationships
- ❑Engaging Key Constituents and Clients
- ❑Dual Roles – Fiduciary vs. Representation

RVK

Challenge #2: Board Investment Policy

II

Board Investment Policy

- ❑The AR/AAR Dilemma
- ❑Assessing Investment Performance
- ❑Assessing Investment Risk
- ❑Foreign Policy
- ❑Local Economic Development
- ❑ESG (Socially Responsible Investing)
- ❑Local Vendors
- ❑Preferred Vendors

RVK

Challenge #3: Behavioral Factors

III

Behavioral Factors

- ❑Chasing Past Performance
- ❑Unstable Risk Preferences
- ❑Herding Instinct
- ❑Cost vs. Net of Cost Outcomes
- ❑Presentation Skills vs. Investment Skills

RVK

Conclusions

The MTBOI is a high functioning Board and Organization

The MTBOI benefits from:

- ❑ Structure as a Board of Investments
- ❑ Separation of pension mandates from non-pension
- ❑ Clear focus on plan beneficiaries

The MTBOI has made good structural and operating policy decisions, such as:

- ❑ Delegation
- ❑ Understanding liabilities
- ❑ Arms length relationships with vendors
- ❑ Effective use of committees, agendas and work plans
- ❑ Focus on obligations to plan participants

The MTBOI has exhibited many good behavioral characteristics, such as:

- ❑ Open discussions of issues
- ❑ Seeking expert advice and applying judgment
- ❑ Pursuing additional knowledge
- ❑ Diligent and sustained efforts to monitor delegation of fund performance

RVK

Potential Improvements

1. Further deepen the Board's understanding and monitoring of risk, risks taken and returns delivered

2. Further deepen the Board's understanding of behavioral pressures bearing down on all institutional investors and their delegates

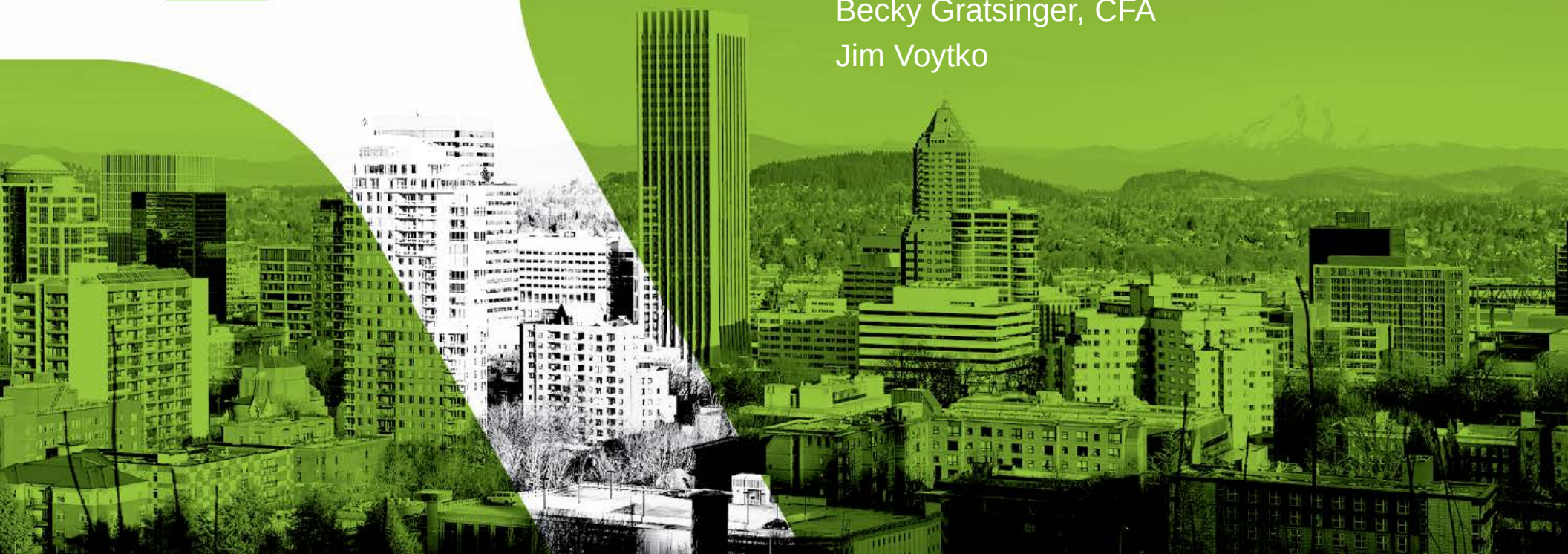
3. Maintain the disciplines of:
   - Detailed Agendas
   - Open Discussion
   - Published Meeting Minutes
   - Sustained Monitoring of the Portfolio and Ongoing Delegation
   - Schedule of Regular Rolling Reviews
   - Board Education

RVK

Investment Governance Best Practices

Prepared for Montana Board of Investments

Mark Higgins, CFA
Becky Gratsinger, CFA
Jim Voytko



Agenda

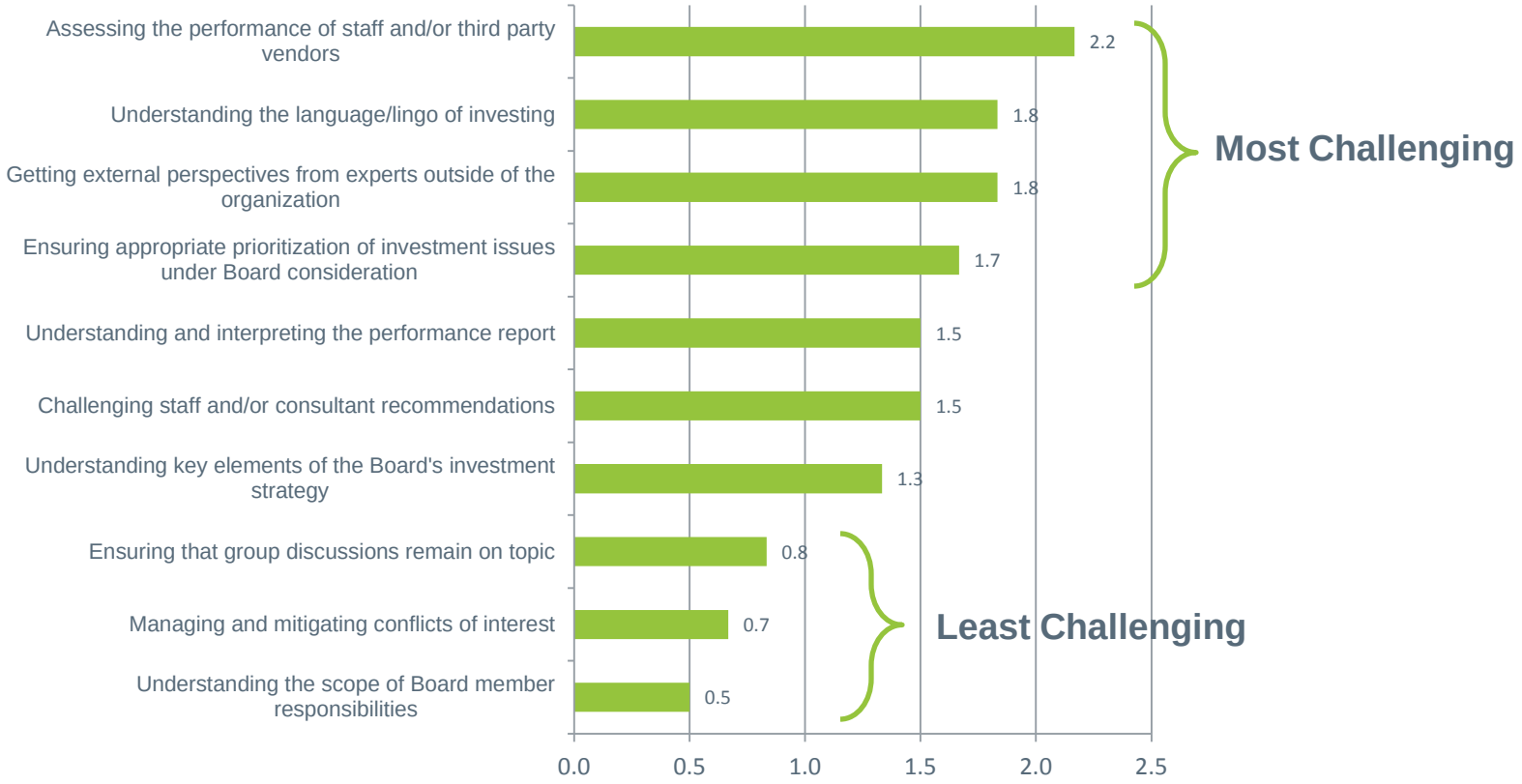
Results of Board Member Survey	2
RVK Best Practices Research	6
Evaluation of Current MBOI Practices	8
Upcoming RVK Research	13

RVK

Results of Board Member Survey: Question 1

Question #1: **Please indicate how challenging the following issues are to you as a member of the Montana Board of Investments. (0 = Not Challenging, 3 = Extremely Challenging)**

Figure 1: Average MBOI Board Member Response



* Based on 6 Total Respondents

RVK

Results of Board Member Survey: Question 2

Question #2: **Indicate what you perceive to be your level of knowledge on the following topics. (0 = Not Knowledgeable at All, 3 = Extremely Knowledgeable)**

Figure 1: Average MBOI Board Member Response

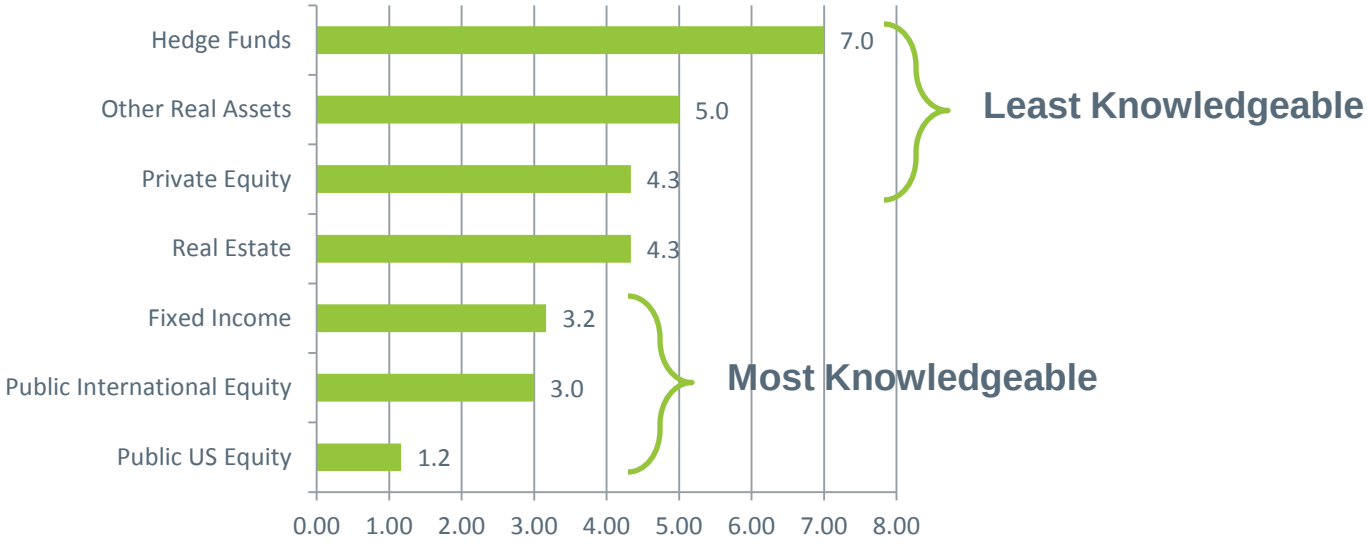
* Based on 6 Total Respondents

RVK

Results of Board Member Survey: Question 3

Question #3: **Rank the following asset classes by your relative depth of knowledge. (1 = Most Knowledgeable, 7 = Least Knowledgeable)**

Figure 1: Average MBOI Board Member Response



* Based on 6 Total Respondents

RVK

RVK Observations

Positives

- ☑ Members indicated that they generally understand their responsibilities and the Board's overarching investment strategy.
- ☑ Members do not view "mitigating conflicts of interest" to be a challenge. This can be a major impediment for other Boards.
- ☑ Board members are most knowledgeable in the asset classes with the greatest exposure (i.e., fixed income and public equities). This demonstrates appropriate prioritization of formal and self education.
- ☑ Board members generally feel knowledgeable with regard to concepts that we consider core competencies. Examples include: asset allocation/modeling, benchmarking/performance assessment, and active vs. passive management.

Potential Areas to Target for Improvement

1. **Staff and Third Party Performance Assessment**—Assessing staff and third party performance was listed as the biggest challenge. The Board may wish to explore methods to address this more thoroughly and frequently.
2. **Board Member Education**—Board members still view "understanding investment lingo" and "getting external perspectives" as significant challenges. Continued efforts to educate (possibly through the use of external speakers) may benefit the Board.
3. **Prioritization of Investment Issues**—Board members generally view prioritization to be a challenge. While we do not see concerning examples of poor prioritization, the committee may benefit from education on prioritization frameworks to ensure that board time is allocated optimally.

RVK

RVK Best Practices Research

Background

- Research commenced in January 2014 in response to high client demand
- Qualitative and quantitative research designed to:
  1. Pinpoint the most difficult challenges faced by Investment Boards and Committees
  2. Identify innovative solutions to resolve these challenges
- Final study will be available to RVK clients in December 2014

Methodology

- Comprehensive review of existing literature
- Interviews with approximately 30 investment committee members and staff
- Completion of two surveys
  1. Investment Committee Member Qualifications
  2. Investment Committee Task Prioritization

RVK

RVK Research: Concerns Expressed by Others

Common Challenges of Institutional Investment Committees

I

Scoping of Committee Responsibilities

- Determining the optimal scope of delegated committee authority
- Identifying responsibilities to delegate to staff or third parties

II

Committee Member Staffing

- Establishing an optimal committee size
- Identifying key member roles
- Isolating value-added member attributes
- Recruiting qualified committee members
- Evaluating committee member performance
- Enforcing accountability

III

Strategy Formulation and Continuity

- Matching objectives and strategy
- Orienting and re-orienting committee members
- Establishing comprehensive documentation
- Continuous and disciplined process of strategic review

IV

Decision Making and Execution

- Instituting effective prioritization frameworks
- Creating effective meeting materials
- Engaging investment committee members
- Ensuring adequate meeting preparation
- Establishing facilitation that balances efficiency and depth

RVK

Challenge #1: Scoping of Committee Member Responsibilities

MBOI Performance: EXCELLENT

RVK Comments	This issue does not appear to pose a significant challenge to MBOI. Since the Board lacks an investment committee, scoping is not necessary between these two parties. While there is always room for improvement, the Board also seems to be comfortable delegating authority on key tasks (e.g., manager selection/termination) that it lacks the time and expertise to handle.
Potential Improvements	*1. Discuss potential "gray areas" with staff and third parties, and document desired scope of responsibilities to resolve potential conflicts.*

RVK

Challenge #2: Committee Member Staffing

MBOI Performance: GOOD

RVK Comments

Public plans often have material constraints regarding committee membership. These constraints are often statutory. Whereas plans, such as endowments and foundations, can make meaningful improvements by refining their selection process, public plans typically must focus more attention on educating and training members given the limited flexibility on member selection. As such, we believe MBOI should continue to focus on its education and training programs.

Thus far, we feel that MBOI has done a good job with its education and training programs. Successful tactics include the Education Policy which encourages outside education and the regular time allotments at meetings for educational presentations.

Potential Improvements

1. ***Invite Outside Speakers to Board Meetings****—We believe this may help the committee by providing a fresh perspective. Presenters should be chosen carefully with an emphasis on topics that are both relevant to the Board and not well-understood by Board members.*

2. ***Prioritize Educational Sessions by Need and Relevance****—Future educational sessions should be selected based on relevance to decision-making and relative knowledgeability of the Board members.*

3. ***Committee Member Job Descriptions***—Leverage research and self-evaluation to identify personality attributes, experiences, and skills that characterize successful Board members. Share the descriptions with individuals who influence future appointments.

RVK

Challenge #3: Strategy Formulation and Continuity

MBOI Performance: EXCELLENT

RVK Comments	Many investment boards and committees struggle to create a strategy that appropriately reflects their long term investment objectives. In addition, the infrequency of Board meetings, coupled with regular Board member turnover, increases the risk that the strategy will evolve and stray from its core objectives. Given that MBOI is an established governance body, the primary risk is that the strategy will stray from its core objectives. Issues that influence this risk include Board member turnover, deterioration of institutional memory by existing board members, and failure to properly adapt the portfolio as Plan objectives evolve. Thus far, we believe that MBOI has handled this risk well. Some particularly effective practices include: *a. Annual Board Member orientation program* *b. Staggered and lengthy Board Member terms* *c. Extensive documentation of strategy and policies*
Potential Improvements	*1. **Board Member Re-Orientation Program**—We think it is worth encouraging (and perhaps even requiring) all Board members to attend the annual orientation program. Included in the program should be an overview of the core investment strategy and the key drivers behind it.*

RVK

Challenge #4: Decision Making and Execution

MBOI Performance: EXCELLENT

RVK Comments

The final challenge for investment boards and committees is effective decision making and execution. Since the scope of decision-making authority varies by institution, we find that the best way to assess this competency is to consider the following questions as they apply to your organization:

1. *Is the Board properly prioritizing the most impactful decisions?*
2. *Are the meeting materials thorough, comprehensible, and timely?*
3. *Do Board members prepare adequately for meetings?*
4. *Does the Board thoroughly deliberate before making a decision?*

We believe that MBOI performs well in this area. Specific practices that enable MBOI to answer "yes" to these questions include:

a. *Reliable, advanced delivery of meeting materials*
b. *Adoption of a rolling work plan*
c. *Structured agenda and disciplined adherence to the agenda*

Potential Improvements

1. ***Additional Education on Prioritization Frameworks****—While we do not believe that MBOI is prioritizing the wrong issues, it may be helpful to self-educate on different prioritization frameworks.*

2. ***Participate in Consultant/Staff "Office Hours"****—In order to enhance meeting preparedness, Board Members may wish to meet informally with consultants and/or staff prior to each meeting.*

RVK

Conclusions

RVK Comments

1. MBOI is a high functioning Investment Board, which compares favorably with Boards overseeing other large institutional funds.

2. RVK believes the committee is acting well in all four categories in which Boards commonly experience challenges. These include:
    1. Scoping of Committee Responsibilities
    2. Member Selection (and Education)
    3. Strategy Formulation & Continuity
    4. Decision Making and Execution

3. Despite the Board's impressive performance, there is always room for improvement. Based on member survey responses and RVK analysis, we believe the heaviest focus should be on continuing education.

Potential Improvements

1. Consider creating a more formal staff and third party performance review process.
    - Board members must balance the need for appropriate delegation of authority and accountability.

2. Consider inviting external speakers to present at Board meetings.
    - Speakers should be well-qualified to speak on topics that are highly relevant to upcoming decisions.

3. Continue the annual orientation process and consider extending it to existing members.

4. Enhance meeting preparation by attending pre-meeting sessions led by MBOI staff and/or RVK.

5. Schedule additional Board Member educational sessions based on relevance and perceived Board member knowledge deficit. Potential topics include:
    - Behavioral Finance
    - Private Equity
    - Prioritization Frameworks
    - Real Estate and Real Assets
    - Risk Management Frameworks & Concepts

RVK

Additional Insights: Future RVK Research

Common Challenges of Institutional Investment Committees

I

Scoping of Committee Responsibilities

- Determining the optimal scope of delegated committee authority
- Identifying responsibilities to delegate to staff or third parties

II

Committee Member Staffing

- Establishing an optimal committee size
- Identifying key member roles
- Isolating value-added member attributes
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III

Strategy Formulation and Continuity

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Decision Making and Execution

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- Creating effective meeting materials
- Engaging investment committee members
- Ensuring adequate meeting preparation
- Establishing facilitation that balances efficiency and depth

Research and Case Studies

1. **Case Study:** Investment Committee Charter
2. **RVK Research:** Committee Member Qualifications Survey
3. **RVK Research:** Committee Member Job Descriptions
4. **Case Study:** Volunteer Advisor Program
5. **Case Study:** Roles-Based Member Selection
6. **Case Study:** Annual Member Reviews
7. **Case Study:** Policy and Strategy Best Practice Composite
8. **Case Study:** Investment Committee Orientation Program
9. **RVK Research:** Investment Committee Prioritization Frameworks
10. **Case Study:** Investment Committee Speakers Program

RVK

2014 CALENDAR

Board Dates **Board Packet Mailing**

01 New Year's Day
20 M L King Day

JANUARY						
S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

17 President's Day

FEBRUARY						
S	M	T	W	Th	F	S
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2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

MARCH						
S	M	T	W	Th	F	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

18 Good Friday
20 Easter Sunday

APRIL						
S	M	T	W	Th	F	S
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6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

11 Mother's Day
26 Memorial Day

MAY						
S	M	T	W	Th	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

15 Father's Day

JUNE						
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22	23	24	25	26	27	28
29	30					

JULY						
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27	28	29	30	31		

04 Independence Day

AUGUST						
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24	25	26	27	28	29	30
31						

SEPTEMBER						
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21	22	23	24	25	26	27
28	29	30				

1 Labor Day

OCTOBER						
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19	20	21	22	23	24	25
26	27	28	29	30	31	

13 Columbus Day
31 Halloween

NOVEMBER						
S	M	T	W	Th	F	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

04 Election Day
11 Veterans Day
27 Thanksgiving Day

DECEMBER						
S	M	T	W	Th	F	S
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7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

25 Christmas Day

Revised April 2014

Systematic Work and Education Plan 2014

Feb. 25-26 **Quarterly Meeting**
Quarterly reports and subcommittee meetings
Annual Report and Financial Statements
Financial Audit
Performance Audit
Ethics
Domestic equities
Real estate - RVK

April 8 **Non-Quarterly Meeting**
All policy review
International equities
Emergency/Disaster preparedness
Intercap program
Custodial bank RFP
Web site
Look-back on terminated managers (RVK)
Board education and possible conferences (IFE usually in June)

May 20-21 **Quarterly Meeting**
Quarterly reports and subcommittee meetings
Private equity, real estate and timberland
Proxy voting public equities
Cash management
Staffing level review

August 19-20 **Quarterly Meeting**
Quarterly reports and subcommittee meetings
Costs (including reviewing CEM Benchmarking Inc. results)
MBOI Budget and legislative-related action-decision
Internal Controls
Fiscal Year performance through June 30th
Custodial bank recommendation

October 7 **Non-Quarterly Meeting**
TBD

Nov. 18-19 **Quarterly Meeting**
Quarterly reports and subcommittee meetings
Affirm or Revise Asset Allocation
Resolution 217
PERS/TRS annual update
Securities litigation status
Exempt staff annual review
Accounting Review

24 Month Work Plan Exposure				
			Proposed	
2012	**2013**	**2014**	**2015**	
		X	X	Accounting Review
X	X	X	X	Annual report and financial statements
X	X	X	X	Asset Allocation Range Approval (Board must review/approve annually as per policy)
X	X		X	Capital Market/Asset Allocation
X	X	X	X	Audit (Financial)
X	X	X	X	Benchmarks used by Board
	X		X	Board as a rated investment credit, a bond issuer and a credit enhancer
X	X	X	X	Board member education
X	X	X	X	Board's budget
	X		X	Board as landlord/tenant holdings
	X		X	Board's website
X		X		Cash Management of state monies
X	X	X	X	Cost reporting including CEM, Inc. analysis
		X		Custodial bank relationship, performance, continuity
	X		X	Customer relationships (State government)
	X	X		Disaster Recovery and other emergency preparedness
X	X	X	X	Exempt staff performance and raises (HR policy requires annual consideration)
X	X	X	X	Ethics policy – (Board policy requires annual affirmations)
X	X		X	Fixed Income
	X		X	In-state Loan program
X		X		INTERCAP program
X	X	X	X	Internal controls
X	X	X	X	Investment Policy Statements Review (Governance policy requires annual review)
X	X	X	X	Legislative session and interim matters
	X	X		Outreach efforts for Board - loan and municipal programs
X	X	X	X	PERS and TRS relationship
X		X		Private Equity
		X		Proxy voting public equities
X		X		Public Domestic Equities
X		X		Public International Equities
X		X		Real Estate and timberland
X	X	X	X	Resolution 217 update of current Investment Firms (Board policy requires annual update)
X	X	X	X	Resolution 218, role of deputy director to serve as acting executive if necessary
	X		X	Securities Lending
X	X	X	X	Securities Litigation
X	X	X	X	Staffing levels (required biannually in board policy)
	X		X	State Fund as major client

MONTANA BOARD OF INVESTMENTS
ACRONYM INDEX

ACH..... Automated Clearing House

ADR..... American Depository Receipts

AOF..... All Other Funds

ARC..... Actuarially Required Contribution

BOI..... Board of Investments

CFA..... Chartered Financial Analyst

EM..... Emerging Market

FOIA..... Freedom of Information Act

FWP..... Fish Wildlife and Parks

FX..... Foreign Exchange

IPS..... Investment Policy Statement

LDI..... Liability-Driven Investing

MBOH..... Montana Board of Housing

MBOI..... Montana Board of Investments

MDEP..... Montana Domestic Equity Pool

MFFA..... Montana Facility Finance Authority

MPEP..... Montana Private Equity Pool

MPT..... Modern Portfolio Theory

MSTA..... Montana Science and Technology Alliance

MTIP..... Montana International Pool

MTRP..... Montana Real Estate Pool

MTSBA..... Montana School Boards Association

MVO..... Mean-Variance Optimization

MONTANA BOARD OF INVESTMENTS
ACRONYM INDEX

NAV ..... Net Asset Value

PERS ..... Public Employees' Retirement System

PFL ..... Partnership Focus List

QZAB ..... Qualified Zone Academy Bonds

QSCB ..... Qualified School Construction Bonds

RFBP ..... Retirement Funds Bond Pool

RFP ..... Request for Proposal

SABHRS ..... Statewide Accounting Budgeting and Human Resource System

SLQT ..... Securities Lending Quality Trust

SSBCI ..... State Small Business Credit Initiative

STIP ..... Short Term Investment Pool

TFBP ..... Trust Funds Bond Pool

TFIP ..... Trust Funds Investment Pool

TIF ..... Tax Increment Financing

TIFD ..... Tax Increment Financing District

TRS ..... Teachers' Retirement System

TUCS ..... Trust Universe Comparison Service

VIX ..... Volatility Index

Terminology Commonly Used and Generally Understood at the Montana Board of Investments
(And most typical context used at BOI)

Active management (typically with respect to stocks)
Investment method which involves hiring a manager to research securities and actively make investment decisions to buy and sell securities in an effort to outperform an assigned index, rather than purchasing a portfolio of securities that would simply replicate the index holdings (*'passive'* investing).

Actuarial assumed rate (pension concept)
The investment return rate used by actuaries that enables them to project the investment growth of retirement system assets into the future (typically perpetual).

Actuarial funding status (pension concept)
A measurement made by actuaries to measure a pension system's financial soundness (ratio of actuarial liabilities to the actuarial value of the assets available to pay the liabilities).

Alpha (investment term)
Return on an investment portfolio in excess of the market return or benchmark return; generally used in the context of *'active'* management (as passive management, by definition, does not seek excess returns, or 'alpha').

Alternative Investments
A wide range of investments, other than traditional assets such as publically traded stocks and bonds. The most common nontraditional or alternative investments are private equity, real estate, commodities, and hedge funds.

Arbitrage (bond program)
A structural or systematic difference between investment types which may allow profiting from the 'difference,' i.e., arbitrage. The most common context for the use of 'arbitrage' at the BOI is the federal law that prevents 'arbitrage,' i.e., the profiting of investing tax-exempt securities (e.g. INTERCAP) into taxable yields investments (such as U.S. Treasuries).

Asset Allocation and Asset Allocation Range (general investment principle)
The Board's invested assets are divided or allocated into various asset classes such as stocks and bonds, each with its own characteristics, with the objective of attaining an optimal mix of risk and return. The total expected return of a portfolio is primarily determined by the mix or allocation to its underlying assets classes. Given the importance of 'asset allocation,' the BOI Board sets the asset allocation 'range' for each broad investment type or asset class.

Average life (fixed income, particularly bonds)
The average time period the debt is expected to be outstanding. This is typically the maturity date for a traditional bond structure, however it will be shorter for bonds having a sinking fund or amortizing payment structure.

Barclay's Aggregate Index (fixed income)
A composite of outstanding bond issues, including corporate, structured, and government bonds whose overall investment features such as return and investment type are tracked over many years. This is the most common benchmark used for comparing the performance of a portfolio that invests in U.S. investment grade fixed income securities. Formerly known as the Lehman Aggregate bond index.

Basis points (investment jargon)
A basis point is 1 100th of a percentage. Ten basis points is one tenth of a percent, typically written as 10 bps.

Benchmark (standard investment concept)
The concept of employing a particular independent or market investment return as a measurement to judge an investment portfolio's return; typically chosen investment benchmarks have the following attributes: they are investible, quantifiable, chosen in advance, easily understandable, and have a long history; common examples are the S & P 500 Index and the Barclay's Aggregate Index.

Beta (investment jargon)
A measure of the risk (or volatility) of a security or a portfolio in comparison to the market as a whole. If the stock or portfolio moves identically to that market, its beta value is 1; if its price volatility (or movement) is greater than that market's price volatility, it is said to have beta greater than 1.

Cap, as in large 'cap' (generally for stocks, i.e., public equities)
'Cap' is short for capitalization, as a reference to the market value of a publically-traded company. The current stock price times the total shares outstanding of the company equals its market capitalization or market 'cap'; often used contextually such as 'large-cap,' 'mid-cap,' and 'small-cap' for different sized public companies.

Clawback (private equity)
A clause in the agreement between the general partner and the limited partners of a private equity fund. The clawback gives limited partners the right to reclaim a portion of distributions to a general partner for profitable investments based on significant losses from later investments in a portfolio which ultimately resulted in the general partner receiving more distributions than it was legally entitled to.

Core (context varies for equity, fixed income, real estate)
In equity and fixed income, 'core' refers to investments that are generally always found in the portfolio and normally expect to hold for a very long time e.g. 'core' holdings of the largest U.S. companies, or U.S. treasuries; in real estate, 'core' generally refers to the best quality of real estate holdings such as prime commercial property in major metropolitan cities that have low leverage and low levels of vacancy.

Correlation (common statistical concept)
A measure of how two or more investment values or two asset classes move relative to each other during the same time period. A central concept in portfolio construction is to seek investments whose values do not move *together* at the same time, i.e., are uncorrelated. A correlation of 1 means that two or more investments 'move' precisely together.

Custom benchmark (or sometimes custom index)
A way to measure investment performance using a tailor-made measurement versus a generic industry-standard benchmark. At the BOI, total pension performance is measured against the Board's 'custom index' or 'custom benchmark' which is a weighted blend of all the underlying asset class benchmarks used to measure the asset class returns.

Derivatives (investment jargon)
Investment securities whose performance itself depends (or is 'derived') from another underlying investment return. Examples include stock options, puts/calls, and forward currency contracts whose returns are based on the underlying stock or currency.

Developed markets (equity)
Countries having a long period of stable industrialization; or are the most economically developed.

Discount (fixed income, generally)
Used most often with respect to bonds, the price paid that is less than face (or 'par') value. A $1 million face-value of a bond purchased for less than a million is bought at a 'discount.' Described as the difference between a bond's current market price and its face or redemption value.

Diversification (standard investment concept)
The concept of spreading risk by putting assets in several investment categories, each having different attributes with respect to type, expected return, risk, and correlation, to best protect against the risk of loss.

Duration (bonds)
Almost exclusively used when discussing fixed income bonds, a measurement of how sensitive a bonds' change in price is to a change in general market interest rates, expressed in years (specifically calculated as a weighted average term to maturity of the bond's cash flows). The greater the duration of a bond, the greater the volatility of price for changes in market interest rates.

Efficiency (usually when discussing various stock markets)
Used to describe markets where it is very difficult to achieve return in excess of that of the overall market from individual stock selection. When information is widely available on a company and its securities are traded regularly the market is considered 'efficient.'

Emerging Markets (most often for public equities)
Certain international securities markets that are typically small, new, have low turnover, and are located in countries where below-average income prevails and is developing in response to the spread of capitalism.

Enhanced (pertaining to stocks)
Generally linked with 'index' as in enhanced index, an indexed investment management style that has been modified to include the portfolio manager's idea of how to outperform the index by omitting some stocks in the index and overweighting others in a limited manner designed to enhance returns but at minimal risk.

Enhancement (bond program)
At BOI, the term generally refers to credit support or a bond or loan guarantee. For example the Board's INTERCAP bonds are 'enhanced' by the BOI's performance guarantee bringing down the yearly interest rate.

Excess returns (standard investment concept)
Returns are 'excess' if they are more than the market or more than the benchmark they are measured against.

Exempt staff vs. classified staff (specific to Montana state government)
"Exempt" refers to the Board's seven employees who, under state law, do not fall under the state's standard employment rules (the 'classified' staff).

Fiduciary (from the Latin verb, fidere, to trust)
The concept of trust and watchfulness; a fiduciary is charged with the responsibility of investing the money wisely for the beneficiary's benefit. Board members are the ultimate 'fiduciaries' for the Board's assets and are obligated to be a good agent.

FTE (state government jargon)
An acronym in state government: "full time equivalent" as in full time employee. The concept is a slot or position, not the actual individuals. The BOI is currently authorized for 32 FTE's.

Fund of funds (private equity)
A concept used in alternative investments referring to using an investment manager to invest in ***other*** managers or funds, as opposed to making direct investments in funds.

GAAP/GASB (accounting terminology)
GAAP…Generally Accepted Accounting Principles; Montana state law uses GAAP accounting principles unless specifically allowed otherwise. GASB…Government Accounting Standards Board, the board that sets GAAP

standards for U.S. governments (FASB…Financial Accounting Standards Board, the entity for commercial and business accounting standards).

General obligation (municipal finance term)
Used to describe the promise that a government makes to bond holders, backed by taxing and further borrowing power, it is generally considered the highest level of commitment to bondholders. At the local government level, general obligation bonds typically require a vote of the residents.

General partner vs. limited partner (private equity)
In private equity, the general partner is responsible for the operations of the partnership and makes the actual underlying investment decisions; the limited partner is the investor, and therefore has limited liability for investment decisions; the BOI is the 'limited' partner in its private equity fund investments (and real estate funds as well).

Growth (as to style public equities)
An investment style that more heavily invests in companies whose earnings are expected to grow at an above average rate to the market. A growth stock usually does not pay a dividend, as the company would prefer to reinvest retained earnings in capital projects to grow the company (vs. *'value,'* which considers buying established companies they feel are trading at bargain prices to the fundamental analysis of the company's financial statements and internal competitive factors).

Indenture (bond and loan programs)
The central document describing the contract between investors and the borrower or user of the proceeds. The Board's INTERCAP program is structured around a bond indenture.

Hedge fund (as defined by *Investopedia*)
An aggressively managed portfolio of investments that uses advanced investment strategies such as *leverage*, long, short and *derivative* positions in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market *benchmark*).

Hurdle Rate (private equity)
a minimum return per annum that must be generated for limited partners of a private equity fund before the general partner can begin receiving a percentage of profits from investments.

Index (investment concept)
Typically a single measure of a broadly-based group of investments that can be used to judge, or be compared to the return performance of an individual investment or manager.

Indexing (investment concept)
Typically refers to investing in a portfolio to match a broad range of investments that are set within a pre-determined grouping, such as the S&P 500, so as to match its performance; such investing is generally labeled 'passive' or indexed investing; or buying shares in an Index Fund.

In-state loan program (Montana-specific)
Programs that are funded by the state's coal severance tax monies.

Internal service vs. enterprise fund (state accounting concept)
Within Montana state government: a program whose funding is dependent on ***mandatory participation*** by another state government program is labeled an 'internal' service fund; a program whose funding is dependent on voluntary participation is labeled an enterprise fund. At BOI, the investment program is an internal service fund because participation is not voluntary; the Board's bond and loan programs, because their use is voluntary, are accounted for as an enterprise.

Investment grade (bonds)
Bond ratings from Moody's, Standard and Poor's, and Fitch high enough to be considered secure enough for most investors (bonds rated AAA – BBB). Below investment-grade bonds (below BBB) are generally considered to have a more speculative outlook and carry more risk of default.

IRR (private equity)
A measure of investment performance, short for 'internal rate of return,' expressed as a percentage (the 'internal rate of return' number, or discount rate) that mathematically will equalize the total future cash flows of an investment to the initial cash outflow of the investment; the concept accounts for the time value of money.

Leverage (investment concept)
As an investment concept, a way to increase a return on an investment through a combination of one's own money and also by borrowing additional money to enhance such an investment; high 'leverage' is also associated with high risk.

Mean Variance Optimization Model ('Modern Portfolio Theory')
A theory that it is possible to construct a portfolio to maximize the return for the least amount of risk or volatility. This theory is based on various asset types and their level of expected return, risk (volatility) and their correlation with each other or how the asset values move with each other. The central idea of the model is to blend investments so that in total, they provide both the best expected return and optimal amount of diversification to minimize deep performance swings (volatility); a central tenant is that long term historical returns are indicative of future returns.

Mezzanine finance (private equity)
Subordinated debt with an equity 'kicker' or ability to share in the equity value of the company. It is typically lower quality because it is generally subordinated to debt provided by senior lenders such as banks, thus is considered higher risk.

Multiple (as in "multiple" of invested capital, private equity)
The ratio of total cash returned over the life of the investment plus the investment's residual value over the total cash expended in making the investment. A multiple of 2 means, regardless of the total investment time period, that total cash returned was twice the cash invested.

130/30 Strategy (public equities)
Also called 'partial long short,' this strategy involves the establishment of a short position in select stocks while taking the proceeds of those shorts and buying additional long positions in stocks. The net effect is an overall market position that is 100% long, but the active decisions on individual stock selections are amplified by this ability to short. If the stock selections are successful, the strategy enables the portfolio to profit more than if a stock had simply not been owned, as with traditional long-only portfolios.

Opportunistic (real estate)
In real estate, a euphemism for the most risky real estate investments, typically distressed, raw land, newly developed buildings or other high risk investments in the real estate sector, (versus, *'core,'* which are the best quality fully leased commercial properties).

Overweight or underweight (investment concept)
Generally the level of holdings of a certain type of investment that is above or below either a benchmark's weight (portion of total investment), or the percentage held of a particular asset class compared to the Board's asset allocation policy weight. Also used to describe an external investment manager's decision to have more (or less) of a particular investment than the percentage or weighting found in the benchmark.

Passive management or passive investment (most often in public equities, but not exclusively)
An investment style where a fund's portfolio mirrors a market index, such as the S&P 500, with limited selection decisions by the manager, resulting in market returns. Passive management is the opposite of active management in which a fund's manager attempts to beat the market with various investment strategies and buy/sell decisions of a portfolio of securities to enhance returns.

P/E ratio (equity)
The price of a publically traded stock divided by its estimated or actual earnings is the price/earnings or P/E ratio. This can also be calculated for a stock index or portfolio of stocks. Over the last 100 years, the S&P 500 has had an overall P/E ratio of about 15, or a total index price of about 15 times the annual earnings of its underlying companies.

Pacing study (private equity)
An analysis of the likely timing and amount of the drawdown of committed but yet uninvested monies and the estimated distributions or returns from the funds held in an alternative investment portfolio, generally used to judge the future size of the portfolio and its potential liquidity needs, i.e., cash funding demands.

Par (fixed income)
The initial principal amount designated by the issuer of the bond, or face value of a bond.

Passive
For investments, generally not materially participating in an investment decision, meaning an investment portfolio whose returns follows that of a broad market index, such as an investable stock index, i.e. the S & P 500.

Passive weight (generally equities)
The percentage of a stock held in a particular index portfolio, or percentage of an overall asset class that is held in passive portfolios.

Policy Portfolio
A fixed-target asset allocation, as opposed to asset allocation ranges, which theoretically allows gauging whether deviations from the target portfolio had a positive or negative impact on overall performance.

Portable alpha (public equities)
An investment strategy which involves the active selection of securities while neutralizing overall beta or market risk. This often involves the use of derivative investments such as futures to replicate the market return, either taking a short or long position, while then selecting securities which are expected to add return in an absolute sense or in addition to the market return. As an example, this strategy can be found with certain hedge funds where a market exposure is shorted while individual securities such as specific stocks are purchased that are expected to outperform the general market. The concept of portable applies when the ability to generate positive alpha can be overlaid or ported onto a portfolio. This is not a strategy employed by any of MBOI's existing managers.

Premium (fixed income)
Most often the amount paid over the stated face amount (often called 'par') of a bond, but also used in other contexts, typically paying more (the premium) than a market price (as in a take-over bid for a company).

Proxy (publically traded companies)
An agent legally authorized to act on behalf of another party. Shareholders not attending a company's annual meeting may choose to vote their shares by proxy by allowing someone else to cast votes on their behalf, but the word 'proxy' is used more frequently colloquially as a 'close approximation.'

Prudent expert, prudent person (a central fiduciary concept)
These legal terms have long histories of court-determined standards of care, deriving originally under English common law. The BOI is empowered to operate under the 'prudent expert rule,' which states that the Board shall manage a portfolio:
a) with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;
b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and
(c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.
At an 'expert' level; there is more room for accepting risk under the prudent expert rule than the prudent person rule.

Rebalancing (general investment term)
The process of realigning the weightings of the portfolio of assets. Rebalancing involves periodically buying or selling assets in the portfolio to maintain the original desired level of asset allocation and/or to stay within predetermined asset category range; it is part of a disciplined investment approach within modern portfolio theory.

Resolution (government term)
Generally a formal and written action by a governmental (or corporate) body that has long term significance and requiring a vote of the governing body. BOI uses 'resolutions' generally only for its most significant and long term actions and/or policies.

Securities lending (general investment)
Investments that are temporally borrowed by other investors for a fee; the BOI allows most of its publically traded investments to be loaned for additional marginal income.

Standard deviation (common statistical concept)
A specific statistic that measures the dispersion of returns from the mean over a specific time period to determine the "historical volatility" of returns for a stock, or portfolio, or asset class; more specifically a single unit (i.e., one standard deviation) of dispersion that accounts for approximately 66% of all data around a mean using a 'normal' (or 'uniform' or 'bell-shaped' curve; as opposed to a skewed or asymmetrical) distribution. The standard deviation is used as a gauge for the amount of expected future volatility.

SABHRS (accounting jargon)
Montana state government's State Accounting, Budgeting and Human Resource System; the State's central information management system. BOI investment and other financial data must tie and be reported on this system, which is the official book of record and includes the state's financial statements.

Style drift (often in reference to public equity managers, but applicable to other managers, too)
As the name implies, a divergence from an investor's professed investment bias or style or objective.

Tracking error (statistical concept in investments)
A measurement of the standard deviation of a portfolio's return versus the return of the benchmark it was attempting to outperform. The concept is often used when discussing investment managers. For example some styles are expected to have high 'tracking errors,' (e.g., deep 'value' investors who buy companies that may be dogs for years), versus passive managers, whose stock volatility is expected to be very close to their benchmark. Tracking error can either be intentional or unintentional; it can also be regarded as an accepted deviation or contrary to the management agreement. High *unexpected* tracking error is generally a serious concern to be examined and understood.

Underwriter (bond program)
In investments, the agent who buys investments to be resold to the public; at BOI, the investment firms that buy the Board's bonds to be resold to the public.

Unified Investment Program (Montana Constitution)
The Program in the State's constitution requiring a central investment program which the legislature has assigned to the BOI.

Value (as to style when discussing public equities)
An investment style that focuses on buying established companies that investors believe are undervalued and trading at bargain prices to the fundamental analysis of the company's financial statements and internal competitive factors.

Venture capital (private equity)
A higher-risk/high-return type of investing in startup firms and small businesses with perceived long-term growth potential. Sometimes these are already existing business ventures with limited operating history that need additional management expertise and access to capital. (For start-ups, 'seed capital,' or 'angel investor' are terms differentiating this even higher risk type of investment.)

Volatility (investment jargon)
A statistical measure of the dispersion of returns for a given security or market index. Volatility is typically measured by using the standard deviation of returns from the security or market index. Commonly, the higher the volatility, the riskier the security.

Yield (general investment, but most often within fixed income)
The amount returned to the investor above the original investment generally expressed as a percentage. Yield can be thought of as the expected return from the combination of interest and price accrual or amortization to maturity (in the case of a bond trading at a discount or premium to par).

Yield curve (fixed income)
A line that plots the prevailing interest rates at a given time for bonds ranging in maturity from as short as three months out to 30 years. When plotted across these various maturities (typically 2, 5, 7, 10 and 30 years), the resultant line is shaped like a curve with generally low interest rates (the yield) for shorter maturities and gradually higher interest rates for longer maturities, because generally investors demand higher interest rates for longer term investments. The yield curve for U.S. Treasury debt is the most common when referring to the prevailing level of interest rates.

MONTANA BOARD OF INVESTMENTS
PUBLIC MARKETS MANAGER EVALUATION POLICY

INTRODUCTION

The purpose of this policy is to broadly define the monitoring and evaluation of external public markets managers. This policy also provides a basis for the retention and/or termination of managers employed within the Montana Domestic Equity Pool (MDEP), the Montana International Equity Pool (MTIP), the Retirement Funds Bond Pool (RFBP), and the Trust Funds Investment Pool (TFIP).

The costs involved in transitioning assets between managed portfolios can be significant and have the potential to detract from returns. Therefore it is important that the decision process be based on a thorough assessment of relevant evaluation criteria prior to implementing any manager changes. Staff will consider such costs when deciding to add or subtract to manager weights within the pools as well as in deciding to retain or terminate managers.

MONITORING PROCESS

Periodic Reviews: Staff will conduct periodic reviews of the external managers and will document such periodic reviews and subsequent conclusions. Periodic reviews may include quarterly conference calls on portfolio performance and organizational issues as well as reviews conducted in the offices of the Montana Board of Investments (MBOI) and on-site at the offices of the external managers. Reviews will cover the broad manager evaluation criteria indicated in this policy as well as further, more-detailed analysis related to the criteria as needed.

Continual Assessment: Staff will make a continual assessment of the external managers by establishing and maintaining manager profiles, monitoring company actions, and analyzing the performance of the portfolios managed with the use of in-house data bases and sophisticated analytical systems, including systems accessed through the Master Custodian and the Investment Consultant. This process culminates in a judgment which takes into account all aspects of the manager's working relationship with MBOI, including portfolio performance.

Staff will actively work with the Investment Consultant in the assessment of managers which will include use of database research, conference calls and discussions specific to each manager, and in any consideration of actions to be taken with respect to managers.

MANAGER EVALUATIONS

The evaluation of managers includes the assessment of the managers with respect to the following qualitative and quantitative criteria.

Qualitative Criteria:

- Firm ownership and/or structure
- Stability of personnel
- Client base and/or assets under management
- Adherence to investment philosophy and style (style drift)
- Unique macroeconomic and capital market events that affect manager performance

- Client service, reporting, and reconciliation issues
- Ethics and regulatory issues
- Compliance with respect to contract and investment guidelines
- Asset allocation strategy changes that affect manager funding levels

Quantitative Criteria:

- Performance versus benchmark – Performance of managers is evaluated on a three-year rolling period after fees.
- Performance versus peer group – Performance of managers is evaluated on a three-year rolling period before fees.
- Performance attribution versus benchmark – Performance of managers is evaluated on a quarterly and annual basis.
- Other measures of performance, including the following statistical measures:
    - Tracking error
    - Information ratio
    - Sharpe ratio
    - Alpha and Beta

PERFORMANCE MEASUREMENT

Performance calculations and relative performance measurement compared to the relevant benchmark(s) and peer groups are based on a daily time-weighted rate of return. The official book of record for performance measurement is the Master Custodian.

The performance periods relevant to the manager review process will depend in part on market conditions and whether any unique circumstances are apparent that may impact a manager's performance strength or weakness. Generally, however, a measurement period should be sufficiently long to enable observation across a variety of different market conditions. This would suggest a normal evaluation period of three to five years.

ACTIONS

Watch List Status: Staff will maintain a "Watch List" of external managers that have been noted to have deficiencies in one or more evaluation criteria. An external manager may be put on the "Watch List" for deficiencies in any of the above mentioned criteria or for any other reason deemed necessary by the Chief Investment Officer (CIO). A manager may be removed from the "Watch List" if the CIO is satisfied that the concerns which led to such status have been remedied and/or no longer apply.

Termination: The CIO may terminate a manager at any time for any reason deemed to be prudent and necessary and consistent with the terms of the appropriate contract.

MONTANA BOARD OF INVESTMENTS
PUBLIC MARKETS MANAGER EVALUATION POLICY

ROLES AND RESPONSIBILITIES

CIO: The CIO is responsible for the final decision regarding retention of managers, placement on and removal of "Watch List" status, and termination of managers.

Staff: Staff is responsible for monitoring external managers, portfolio allocations and recommending allocation changes to the CIO, and recommending retention or termination of external managers to the CIO.

Investment Consultant: The consultant is responsible for assisting staff in monitoring and evaluating managers and for reporting independently to the Board on a quarterly basis.

External Managers: The external managers are responsible for all aspects of portfolio management as set forth in their respective contracts and investment guidelines. Managers also must communicate with staff as needed regarding investment strategies and results in a consistent manner. Managers must cooperate fully with staff regarding administrative, accounting, and reconciliation issues as well as any requests from the Investment Consultant and the Custodian.

RECOMMENDED EDUCATIONAL RESOURCES FOR MEMBERS OF THE MONTANA BOARD OF INVESTMENTS

May 2014

RVK

RVK Resources			
Publication	**Cost**	**Link**	**Description**
RVK Quarterly Commentary *NEW*	Free	www.rvkuhns.com	Each quarter, RVK publishes a brief commentary that provides a high level overview of key macroeconomic events, as well as a performance summary for major asset classes. The commentary provides a quick reference for Board members, who wish to better understand the most important market events prior to each quarterly meeting.
RVK Investment Perspectives *NEW*	Free	www.rvkuhns.com	Each quarter, RVK publishes a white paper covering topics of common concern for our clients. The first two papers in the series are described below. 1. **Best Practices in Investment Governance—**This paper provides a framework for establishing key capabilities that are critical for the success of investment committees. It also serves as an introduction to a more comprehensive best practices research study that RVK will publish at the end of 2014. 2. **Framework for Evaluating Fixed Income Portfolio Structures—**This paper provides tools and insights to help investors think through the structure of their fixed income portfolios. The demand for this paper stems from the current, low interest rate environment, coupled with recent actions by the Fed to taper quantitative easing. If Board members wish to receive future issues proactively, RVK can add their email addresses to a distribution list. Alternatively, the white papers can be downloaded from the RVK site.

Periodicals			
Periodical	**Cost**	**Link**	**Description**
Pensions & Investments	$325/Year	**www.pionline.com**	Pensions and Investments is a bi-weekly publication that covers current events impacting defined benefit plans. The PI Online web site also provides a variety of research reports and databases to support the decision-making of defined benefit plan staff and board members.
The Economist	$134/Year	**www.economist.com**	The Economist is perhaps the most respected source of reporting and analysis on current events shaping the global economy. The Economist can help staff and board members stay familiar with the key factors and events that impact the performance of the portfolio.

Institutional Investor	$575/Year	**https://www.institutionalinvestor.com**	Institutional Investor provides a monthly magazine that serves as both a source of news and proprietary research. A subscription also provides varying degrees of access to proprietary data and research online. Subscriptions range from $575/year to $1,680/year depending on the desired level of access to online resources. We believe that the online research capabilities are most relevant to staff, and therefore would only recommend the $575 "silver" package for Board Members.
FundFire *NEW*	**N/A** – *MBOI already subscribed*	**http://www.fundfire.com/**	FundFire is a source of competitive intelligence for the separately managed account industry. A subscription provides access to original articles and summaries of industry news which helps investors, managers and consultants stay abreast of the changes in their industry. Investment managers read FundFire to find out what competitors and prospective clients are doing and thinking. Financial advisors, investment consultants, pension plans, endowments and foundations rely on FundFire to power their money management IQ.

Books

Book	Cost	Link	Description
Pioneering Portfolio Management	$24	**http://tinyurl.com/3sa4c4u**	This book was written by David Swensen, the Chief Investment Officer of the Yale Endowment. The book provides a blue print for Mr. Swensen's investing strategy, which has resulted in superior long term returns for decades. While the book is especially applicable to university endowments, many of the insights are relevant to public pension funds.
The Little Book of Behavioral Investing	$16	**http://tinyurl.com/3dya98f**	This book was written by a senior investment professional at GMO, a global asset management firm led by renowned investor Jeremy Grantham. The book provides a comprehensive overview of common behavioral biases that can negatively impact the investment decision-making process. The lessons are easily comprehensible to both expert and novice investors.
Cambridge Handbook of Institutional Investment and Fiduciary Duty *NEW*	$135	**http://tinyurl.com/nwegkvq**	This book provides commentary and guidance on the evolving standards governing institutional investment. It features a wide range of contributors who share their perspectives on the forces that drive the current emphasis on short-term investment returns. This book is not yet available, and appears to be more academic in focus. However, it covers fiduciary duty in great detail, and may be a great resource for new and existing board members.

Electronic Newsletters			
Newsletter	**Cost**	**Link**	**Description**
CFA Financial Briefs	Free	**https://www.smartbrief.com/cfa/index.jsp**	Each day, this newsletter compiles the most notable headlines relating to economics, investment management, and major geopolitical events. Each headline has a link to the underlying article. This email serves as the daily newspaper for many in the investing community.
Thoughts from the Frontline	Free	**https://www.mauldineconomics.com/subscribe**	John Mauldin releases a daily newsletter that includes, as an attachment, his own analysis on major economic events and/or the analysis of other investment experts. The newsletter typically has a bearish bias, but provides invaluable perspective on macroeconomic events and emerging research in the investment profession.
JPMorgan Eye on the Market	Free	**Send Email Request to Thomas.j.fisher@jpmorgan.com**	Eye on the Market is released 2-3 times per week and provides in depth analysis on events shaping the global economy. The content is typically more balanced than John Mauldin's letter, but should be viewed with some skepticism given the role of JPMorgan as an asset manager.