ND STATE INVESTMENT BOARD MEETING

Friday, October 28, 2016, 8:30 a.m.
Peace Garden Room, State Capitol
Bismarck, ND

I. APPROVAL OF AGENDA

II. APPROVAL OF MINUTES (September 23, 2016)

III. GOVERNANCE

A. SIB Client Satisfaction Survey - Mr. Hunter (enclosed) (10 min) **(Board Acceptance)**
   1. ND Board of Medicine (Insurance Trust) - Mr. Schulz (enclosed) (15 min) (Informational)
B. SIB Audit Committee Report - Ms. Miller Bowley (enclosed) (10 min) **(Board Acceptance)**
C. Follow-Up to SIB Annual Governance Manual Review - Mr. Hunter (enclosed) (10 min) *First Reading*
D. Annual Evaluation of RIO vs. Policy Ends - Mr. Hunter (enclosed) (20 min) **(Board Acceptance)**

IV. QUARTERLY MONITORING - 9/30/16 (enclosed). (Board Acceptance) (10 min)

A. Executive Limitations/Staff Relations - Mr. Hunter
B. Budget/Financial Conditions - Ms. Flanagan
C. Investment Program - Mr. Schulz
D. Retirement Program - Ms. Kopp
E. Watch List - Mr. Schulz

V. INVESTMENTS *Informational Only*

A. Legacy and Budget Stabilization Fund Update - Mr. Hunter (enclosed) (15 min)

========== Break from 9:45 to 10:00 am ==========

B. Western Asset Management Fixed Income Update - Mr. Carl Eichstaedt (enclosed) (45 min)
C. Fixed Income Update (Pension Trust) - Mr. Schulz (enclosed) (15 min)
D. Private Equity Update (Pension Trust) - Mr. Hunter (enclosed) (15 min)

VI. OTHER

SIB Audit Committee meeting - November 17, 2016, 3:00 p.m. - Workforce Safety & Insurance
SIB meeting - November 18, 2016, 8:30 a.m. - Workforce Safety & Insurance

VII. ADJOURNMENT.

Any individual requiring an auxiliary aid or service, please contact the Retirement and Investment Office
(701) 328-9885 at least three (3) days prior to the scheduled meeting.

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
SEPTEMBER 23, 2016, BOARD MEETING

MEMBERS PRESENT:
Drew Wrigley, Lt. Governor, Chair
Mike Sandal, Vice Chair
Lance Gaebe, Commissioner of Trust Lands
Mike Gessner, TFFR Board
Adam Hamm, Insurance Commissioner (TLCF)
Rob Lech, TFFR Board
Mel Olson, TFFR Board
Kelly Schmidt, State Treasurer
Yvonne Smith, PERS Board
Cindy Ternes, WSI designee
Tom Trenbeath, PERS Board

STAFF PRESENT:
Eric Chin, Investment Analyst
Connie Flanagan, Fiscal & Invt Ops Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Dep ED/CRA
Terra Miller Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Dep CIO
Susan Walcker, Invt Acct

GUESTS PRESENT:
Melissa Anezinis, JP Morgan
Luigi Cerreta, JP Morgan
Levi Erdmann, Dept. of Trust Lands
Jan Murtha, Attorney General's Office
James Sakelaris, JP Morgan

CALL TO ORDER:

Lt. Governor Wrigley, Chairman, called the State Investment Board (SIB) meeting to order at 8:33 a.m. on Friday, September 23, 2016, at the State Capitol, Peace Garden Room, Bismarck, ND.

AGENDA:

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. GESSNER AND CARRIED ON A VOICE VOTE TO ACCEPT THE AGENDA FOR THE SEPTEMBER 23, 2016, MEETING AS DISTRIBUTED.

AYES: MS. TERNES, MR. OLSON, TREASURER SCHMIDT, COMMISSIONER GAEBE, MR. TRENBEATH, MR. LECH, MR. SANDAL, MS. SMITH, MR. GESSNER, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER HAMM

MINUTES:

IT WAS MOVED BY COMMISSIONER GAEBE AND SECONDED BY MS. SMITH AND CARRIED ON A VOICE VOTE TO ACCEPT THE AUGUST 26, 2016, MINUTES AS DISTRIBUTED.

AYES: MS. TERNES, MR. OLSON, MR. SANDAL, TREASURER SCHMIDT, MR. GESSNER, MS. SMITH, COMMISSIONER GAEBE, MR. LECH, MR. TRENBEATH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: COMMISSIONER HAMM

INVESTMENTS:

Investment Fee and Private Equity – Mr. Hunter provided a preliminary overview of investment fees and expenses for the Pension Trust, Legacy Fund, and Insurance Trust for the period ending June 30, 2016. Investment management fees and expenses, as a percent of average assets under management, declined 20 plus basis points or 0.65% in fiscal year 2013, to 0.51% in fiscal year 2014, to 0.48% in fiscal year 2015, and to less than 0.45% in fiscal year 2016. As a result, approximately $20 million of annual incremental savings was realized based on $10 billion of average assets under management.

Mr. Hunter also informed the board the private equity co-investment with ND Investors LLC has issued an initial public offering of its common stock. The SIB's portion as of June 30, 2016, has a market value of $11,921,782, which will result in approximately $15 million of cash proceeds when the transaction closes on September 27, 2016. Mr. Hunter noted that RIO will continue to take advantage of opportunities to reposition the private equity portfolio within the pension trust particularly if the disposition generates a significant gain on sale.

Commissioner Hamm participated by teleconference at 8:58 a.m.

JP Morgan – Representatives reviewed trends in domestic real estate and also reviewed the SIB mandates.

The Board recessed at 9:55 a.m. and reconvened at 10:10 a.m.

GOVERNANCE:

Governance Manual Review - Mr. Hunter reviewed with the board Governance Manual policies in Section B-Governance Process and Section C-Board/Staff Relationship. There were no modifications of significance.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MS. TERNES AND CARRIED BY A VOICE VOTE TO ACCEPT THE GOVERNANCE POLICY REVIEW OF SECTION B-GOVERNANCE PROCESS AND SECTION C-BOARD/STAFF RELATIONSHIP.

AYES: MR. LECH, TREASURER SCHMIDT, MR. OLSON, COMMISSIONER GAEBE, MR. TRENBEATH, MR. SANDAL, COMMISSIONER HAMM, MR. GESSNER, MS. SMITH, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

Compliance Review – Mr. Schmidt reviewed compliance certifications that the SIB managers are required to confirm their adherence to each fiscal year end: Certification of Compliance with Investment Guidelines, Financial Audit and Internal Control (SSAE 16), ADV Part 1, 2A, and 2B, and submission of a due diligence questionnaire.

Mr. Schmidt stated all of the SIB managers have responded to the compliance review and are for the most part in compliance. There were a few exceptions and staff will be following up with those managers.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MS. SMITH AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL COMPLIANCE REVIEW OF THE SIB MANAGERS FOR THE 2016 FISCAL YEAR END.

AYES: COMMISSIONER HAMM, MS. TERNES, COMMISSIONER GAEBE, MR. GESSNER, MS. SMITH, MR. TRENBEATH, MR. SANDAL, MR. LECH, MR. OLSON, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

Budget Review - Ms. Flanagan reviewed the status of RIO's budget as of June 30, 2016. Ms. Flanagan also reviewed RIO's budget request for the 2017-19 biennium. RIO is a

special fund agency and does not receive general fund monies. The office generally attempts to comply with budget guidelines from the Governor and was able to cut operations by 9 percent.

IT WAS MOVED BY COMMISSIONER GAEBE AND SECONDED BY MR. GESSNER AND CARRIED BY A VOICE VOTE TO ACCEPT THE BUDGET REPORT FOR RIO.

AYES: MR. GESSNER, COMMISSIONER GAEBE, MS. SMITH, TREASURER SCHMIDT, MR. LECH, COMMISSIONER HAMM, MR. OLSON, MR. TRENBEATH, MR. SANDAL, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

ADMINISTRATION:

Employee Benefits Programs Committee (EBPC) - Mr. Hunter provided testimony before the EBPC on September 1, 2016, regarding investment allocations and strategies and recent investment returns for the Public Employees Retirement System (PERS) and the Teachers' Fund for Retirement (TFFR).

OTHER:

The next meeting of the SIB Audit Committee is scheduled for September 23, 2016, at 1:00 p.m. in the Peace Garden Room at the State Capitol.

The next meeting of the SIB is scheduled for October 28, 2016, at 8:30 a.m. in the Peace Garden Room at the State Capitol.

ADJOURNMENT:

With no further business to come before the SIB, Lt. Governor Wrigley adjourned the meeting at 10:55 a.m.

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Lt. Governor Wrigley, Chair
State Investment Board

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Bonnie Heit
Assistant to the Board

Agenda Item III. A.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 20, 2016

SUBJECT: SIB Client Satisfaction Survey – Cover Memo

The Audit Services team conducted the 2016 Customer Satisfaction Survey over the past few months. Survey responses were received from all but one customer board. Several methods were used this year to collect the survey data including customer created paper forms, Survey Monkey, and PDF.

SIB clients assigned a 3.6 overall rating in 2016 which is the comparable to prior years (of 3.7). This numerical score was based on 4.0 rating scale as follows:

Excellent	4.0
Above Average	3.0
Average	2.0
Poor	1.0
Not Applicable	-

Terra Miller Bowley, Supervisor of Audit Services, has provided a summary which follows on the next two pages. Terra can address any questions on the overall survey or individual board responses. I am also able to answer any questions relating to the survey comments noting that the vast majority of board responses were positive and encouraging.

Similar to last year, we received two comments requesting "faster turnaround on monthly reports". As noted last year, RIO has not historically closed our fiscal year-end financial reporting until the external audit is substantially complete which generally does not take place until mid-to-late September.

I am pleased to note that we obtained more responses this year than in prior years and "N/A" was only provided as a response to one question this year (versus 18 in 2015).

SIB Client Boards:

1. **PERS**
2. **TFFR**
3. **City of Bismarck**
4. **City of Grand Forks Employees**
5. **City of Grand Forks Park District**
6. **WSI**
7. **Insurance Commissioner**
8. **State Risk Mgmt.**
9. **ND Association of Counties**
10. **Council on the Arts**
11. **State Board of Medical Examiners**
12. **Center for Tobacco Prevention & Control**
13. **City of Fargo**
14. **Legacy & Budget Stabilization Fund Advisory Board**

CUSTOMER SATISFACTION SURVEY
NORTH DAKOTA STATE INVESTMENT BOARD
2016

Evaluation Forms Sent 14
Evaluation Forms Returned 13

1. Telephone calls and/or e-mail handled promptly and professionally.

Excellent	Above Average	Average	Poor	N/A
8	4	0	0	1

2. Clarity and effectiveness of letters, reports, and presentations.

Excellent	Above Average	Average	Poor	N/A
7	5	1	0	0

3. Detail provided on reports.

Excellent	Above Average	Average	Poor	N/A
7	4	2	0	0

4. Delivery of high-quality service.

Excellent	Above Average	Average	Poor	N/A
9	3	1	0	0

5. Accessibility.

Excellent	Above Average	Average	Poor	N/A
9	4	0	0	0

6. Responsiveness.

Excellent	Above Average	Average	Poor	N/A
9	4	0	0	0

7. Efficiency.

Excellent	Above Average	Average	Poor	N/A
10	2	1	0	0

8. Knowledge of investments.

Excellent	Above Average	Average	Poor	N/A
8	4	1	0	0

2016 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	67	30	6	0	1
Grade	4	3	2	1	0
Percent	64%	29%	6%	0%	1%
Average	**3.6**				

2015 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	53	25	0	0	18
Grade	4	3	2	1	0
Percent	55%	26%	0%	0%	19%
Average	**3.7**				

2014 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	63	25	0	0	8
Grade	4	3	2	1	0
Percent	66%	26%	0%	0%	8%
Average	**3.7**				

Overall Customer Satisfaction Survey Comments and Impressions:

- Faster turnaround on monthly reports.
- My only request would be to receive the monthly reports a bit earlier. I do understand this is probably impossible but this is the only item I can say I wish were better.
- The City of Bismarck appreciates the assistance that we get from the SIB. We have a great deal of trust in what they do.
- The RIO staff have been excellent on the request from the committee. It takes a lot of effort to keep up with the changing times. SIB needs to have multiple sources of Information and the Legacy Committee requires that it is not todays information but what the future is. Thank You. Keith Kempenich District 39.
- Somewhat difficult to improve on excellence but I would like to remind you of the vital task you have and urge you to continue with the great service you are rendering.
- Keep up the good work.
- I have greatly appreciated the manner in which NDRIO operates. There is a willingness to consider constructive and actionable feedback, which is likely why the organization operates so well. I would suggest that NDRIO keep working towards the areas that have already been targeted, specifically in the creation of online member services, archived webinars on specific areas of need that can service constituencies, and any embraced methods of communication that can be utilized.
- I am very satisfied with the level of service and knowledge provided to me by staff members. I am particularly impressed with David's leadership style. He creates a positive environment and is quick to give his staff credit for success.
- The quality of customer service is excellent. The staff is obviously committed to their work and it is evident with their friendly and efficient work products.

AGENDA ITEM III.A.1.

TO: State Investment Board

FROM: Dave Hunter and Darren Schulz

DATE: October 26, 2016

SUBJECT: State Board of Medical Examiners Annual Review – Cover Memo

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RIO routinely conducts annual reviews with our clients which includes a review of recent returns and the impact of any proposed organizational developments (such as changes in personnel, liquidity and/or risk/return expectations) on the existing investment policy statement. These reviews serve as the basis for Staff recommendations to modify asset allocation guidelines.

On October 25, 2016, RIO reviewed recent investment performance including the current investment policy statement of the North Dakota State Board of Medical Examiners with its' Executive Secretary, Duane Houdek. At this time, Mr. Houdek stated he was pleased with the service provided by the SIB and RIO ("givng all 4's in the recent survey"). Mr. Houdek stated he intends to share the attached presentation with the State Board of Medical Examiners next month.

North Dakota State Board of Medical Examiners Fund ("Fund") – Annual Investment Review

For the Periods Ended June 30, 2016

October 25, 2016

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Executive Summary - June 30, 2016

Investment Performance –

- **For the fiscal year ended June 30, 2016, the Fund generated a net investment return of 1.63% versus a policy benchmark of 1.32%. Short-Term Fixed Income (with a 65% allocation) was the primary driver of performance and generated a net return of 1.68%.** Disappointing results in International Equity (down 10.7%) and U.S. Small Cap (down 5.3%) were largely offset by modest returns in U.S. Large Cap (up 2.7%) and strong returns in U.S. Fixed Income which posted an impressive 6.3% return and Real Estate which was up 9.7% in the last fiscal year.

- **Asset allocation is the primary driver of returns.** The Fund's asset allocation policy is 65% Short-Term Fixed Income, 21% Equity, 12% U.S. Fixed Income and 2% Real Estate. Over a full market cycle, we believe this asset allocation policy should deliver returns in the 3% to 4% range although this goal has not been achieved the last two years (e.g. 2.7% in fiscal 2015 and 1.6% in fiscal 2016). The weaker than expected absolute results are largely a function of global equity returns being weak the past two years due to slowing global growth rates which resulted in China devaluing its currency in August of 2015. Given cautionary growth expectations and growing political uncertainty (in both the developed and emerging markets), risky assets underperformed long-term expectations last year, while high quality investments performed well. As example, long-term U.S. Treasuries returned over 19% last year given that longer term interest rates remained low and noting the **10-year U.S. Treasury rate declined from 2.35% at June 30, 2015, to less than 1.5% at June 30, 2016. Despite this challenging environment, investment earnings have likely kept pace, if not beat, inflation which has remained below 2% in recent years.**

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Board of Medical Examiners – Investment Managers
Equity – June 30, 2016

	June-16			Current FYTD		Prior Year FY15	
		Allocation		Returns		Returns	
	Market Value	Actual	Policy	Gross[1]	Net	Gross[1]	Net
TOTAL BOARD OF MEDICINE FUND	**2,208,667**	**100.0%**	**100.0%**	**1.84%**	**1.63%**	**2.86%**	**2.70%**
POLICY TARGET BENCHMARK				*1.32%*	*1.32%*	*1.84%*	*1.84%*
LARGE CAP DOMESTIC EQUITY							
Los Angeles Capital	73,947	3.3%	3.3%	5.44%	5.24%	12.53%	12.32%
Russell 1000 Growth				***3.02%***	***3.02%***	***10.56%***	***10.56%***
LSV	71,089	3.2%	3.3%	-3.01%	-3.30%	7.16%	6.87%
Russell 1000 Value				***2.86%***	***2.86%***	***4.13%***	***4.13%***
Los Angeles Capital	49,540	2.2%	2.2%	5.96%	5.82%	8.45%	8.31%
Russell 1000				***2.94%***	***2.94%***	***7.37%***	***7.37%***
Clifton Group	48,959	2.2%	2.2%	5.29%	5.22%	7.17%	7.10%
S&P 500				***3.99%***	***3.99%***	***7.42%***	***7.42%***
TOTAL LARGE CAP DOMESTIC EQUITY	***243,536***	***11.0%***	***11.0%***	***2.91%***	***2.72%***	***9.02%***	***8.83%***
Russell 1000				***2.94%***	***2.94%***	***7.37%***	***7.37%***
SMALL CAP DOMESTIC EQUITY							
PIMCO RAE (formerly Research Affiliates)	27,376	1.2%	1.2%	-3.87%	-4.14%	5.51%	5.18%
Clifton	38,226	1.7%	1.7%	-5.52%	-5.98%	8.24%	8.03%
TOTAL SMALL CAP DOMESTIC EQUITY	***65,603***	***3.0%***	***3.0%***	***-4.85%***	***-5.27%***	***7.46%***	***7.23%***
Russell 2000				***-6.73%***	***-6.73%***	***6.49%***	***6.49%***
INTERNATIONAL EQUITY							
Capital Group (2)	101	0.0%	0.0%	N/A	N/A	-1.35%	-1.73%
LSV	64,492	2.9%	2.9%	-11.21%	-11.55%	-3.33%	-3.73%
MSCI EAFE				***-10.16%***	***-10.16%***	***-4.22%***	***-4.22%***
William Blair	55,025	2.5%	2.8%	N/A	N/A	N/A	N/A
MSCI ACWI ex-US IMI (Net)							
DFA	15,691	0.7%	0.7%	-9.28%	-9.28%	-3.27%	-3.27%
Vanguard (1)	16,151	0.7%	0.7%	-7.27%	-7.27%	0.57%	0.57%
S&P/Citigroup BMI EPAC < $2BN				***-3.37%***	***-3.37%***	***1.14%***	***1.14%***
TOTAL INTERNATIONAL EQUITY	***151,460***	***6.9%***	***7.0%***	***-10.44%***	***-10.74%***	***-2.11%***	***-2.43%***
MSCI EAFE				***-10.16%***	***-10.16%***	***-4.22%***	***-4.22%***

U.S. Equity returns were mixed last year with Large Cap stocks increasing by 3% to 5%, while Small Cap Equities declined by over 5%.

International Equities severely disappointed (down over 10%) due to slowing global growth rates particularly in China and escalating uncertainty in the European Union.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Board of Medical Examiner – Investment Managers Fixed Income and Real Estate – June 30, 2016

	June-16			Current FYTD		Prior Year FY15	
		Allocation		Returns		Returns	
	Market Value	Actual	Policy	Gross[1]	Net	Gross[1]	Net
FIXED INCOME							
Western Asset	80,493	3.6%	3.8%	6.79%	6.64%	2.76%	2.62%
Prudential	28,768	1.3%	1.0%	7.12%	6.83%	2.32%	2.05%
PIMCO (DiSCO II) (1)	10,542	0.5%	0.5%	4.39%	4.39%	4.32%	4.32%
PIMCO (BRAVO II) (1)	6,020	0.3%	0.3%	7.02%	7.02%	10.36%	10.36%
BC Aggregate				***6.00%***	***6.00%***	***1.85%***	***1.85%***
Declaration (Total Return) (1)	20,847	0.9%	0.9%	2.59%	2.59%	3.55%	3.55%
3m LIBOR				*0.49%*	*0.49%*	*0.26%*	*0.26%*
State Street	37,339	1.7%	1.7%	6.71%	6.68%	1.70%	1.66%
BC Gov/Credit				***6.70%***	***6.70%***	***1.68%***	***1.68%***
Wells Capital	81,374	3.7%	3.8%	7.19%	6.99%	0.96%	0.78%
BC Credit Baa				***6.93%***	***6.93%***	***-1.37%***	***-1.37%***
TOTAL FIXED INCOME	***265,383***	***12.0%***	***12.0%***	***6.42%***	***6.29%***	***2.40%***	***2.27%***
BC Aggregate				***6.00%***	***6.00%***	***1.85%***	***1.85%***
REAL ESTATE							
JP Morgan	24,780	1.1%	1.0%	10.11%	9.03%	16.68%	15.44%
Invesco	22,106	1.0%	1.0%	10.96%	10.58%	16.38%	15.97%
TOTAL REAL ESTATE	***46,886***	***2.1%***	***2.0%***	***10.51%***	***9.75%***	***16.36%***	***15.50%***
NCREIF Total Index				***10.64%***	***10.64%***	***12.98%***	***12.98%***
TOTAL CASH EQUIVALENTS	***2,149***	***0.1%***	***0.0%***	***0.12%***	***0.12%***	***0.01%***	***0.01%***
90 Day T-Bill				***0.19%***	***0.19%***	***0.02%***	***0.02%***
SHORT TERM FIXED INCOME							
Babson Capital	776,963	35.2%	32.5%	1.95%	1.73%	2.55%	2.43%
BC 1-3 Year US Gov't Index				**1.31%**	**1.31%**	**0.91%**	**0.91%**
JP Morgan	656,688	29.7%	32.5%	1.82%	1.67%	1.11%	1.01%
BC 1-3 Year Gov/Credit Index				***1.59%***	***1.59%***	***1.62%***	***1.62%***
TOTAL SHORT TERM FIXED INCOME	***1,433,651***	***64.9%***	***65.0%***	***1.87%***	***1.68%***	***1.76%***	***1.61%***
BC 1-3 Year US Gov't Index				***1.31%***	***1.31%***	***0.91%***	***0.91%***

U.S. Fixed Income performed well as investors were cautious about investing in riskier assets. As such, fixed income investors were rewarded with returns of 6% or higher in most sectors.

Real Estate remains a top performing sector with returns ranging from 10% to 15% the last two years.

S/T Fixed Income exceeded benchmarks although absolute returns were sub-2%.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Investment Fees and Expenses – Preliminary Overview

Note: Investment management fees and expenses for the North Dakota Board of Medical Examiners are estimated at less than 0.40% p.a.

During the last three-years, investment management fees and expenses as a % of average assets under management declined from **0.65%** in fiscal 2013 to **0.51%** in fiscal 2014 to **0.48%** in fiscal 2015 and to less than **0.45%** in fiscal 2016.

All State Investment Board Clients	Investment Fees and Expenses a	Average "Assets Under Management" b	% of "AUM" a / b
Fiscal Year Ended June 30, 2013	$45 million	$6.9 billion	0.65%
Fiscal Year Ended June 30, 2014	$44 million	$8.6 billion	0.51%
Fiscal Year Ended June 30, 2015	$48 million	$10.1 billion	0.48%
Fiscal Year Ended June 30, 2016	$46 million	$10.9 billion	0.42%

- Based on $10 billion of average assets under management, this **20+ bps** decline between fiscal 2013 and fiscal 2016 translates into approximately $20 million of annual incremental savings.

- RIO will diligently work to prudently manage all SIB client investment fees and expenses, but acknowledges it will be challenging to reduce fees and expenses below 45 bps (0.45%) per annum in future years. Current fiscal years results were materially impacted by low incentive performance fees.

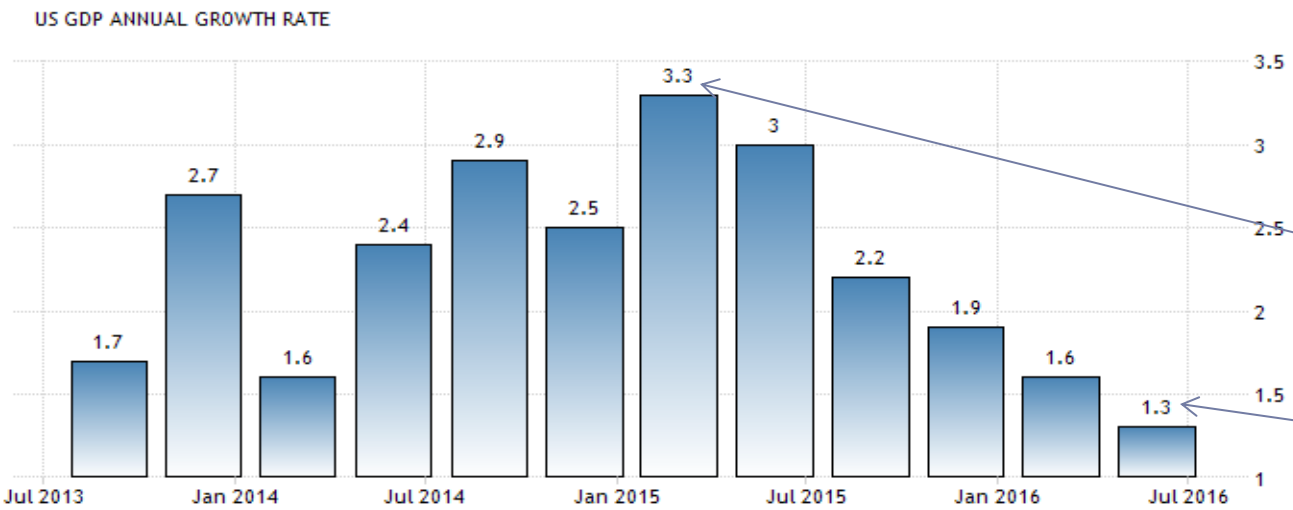
A basis point (or "bp") is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points ("bps") is equivalent to 1%.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Economic and Capital Markets Update

As of June 30, 2016

U.S Economy – GDP Growth Rates



SOURCE: WWW.TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

- Quarterly GDP Growth Rates (top chart) have not exceeded 3% since the 4Q of 2014 and not exceeded 2% in the last year.
- Annual GDP Growth Rates (bottom chart) have trended down since peaking at 3.3% during the 1st quarter of 2015 and approximate 1.3% as of the 2nd quarter of 2016.

U.S Labor Market – Unemployment Rate and Productivity Index

U.S. labor markets appear to be improving as the "Unemployment Rate" is now below 5% since peaking at 10% in October of 2009.

The "Labor Productivity Index" has trended upward since 2006, but has declined four consecutive quarters (to 106) since hitting an all-time high of 107 in 3Q of 2015.

Source: U.S. Dept. of Labor: Bureau of Labor Statistics

In the United States, the productivity of nonfarm workers is measured as the output of goods and services per hour worked. Labor productivity is calculated by dividing an index of real output by an index of hours worked of all persons, including employees, proprietors, and unpaid family workers.

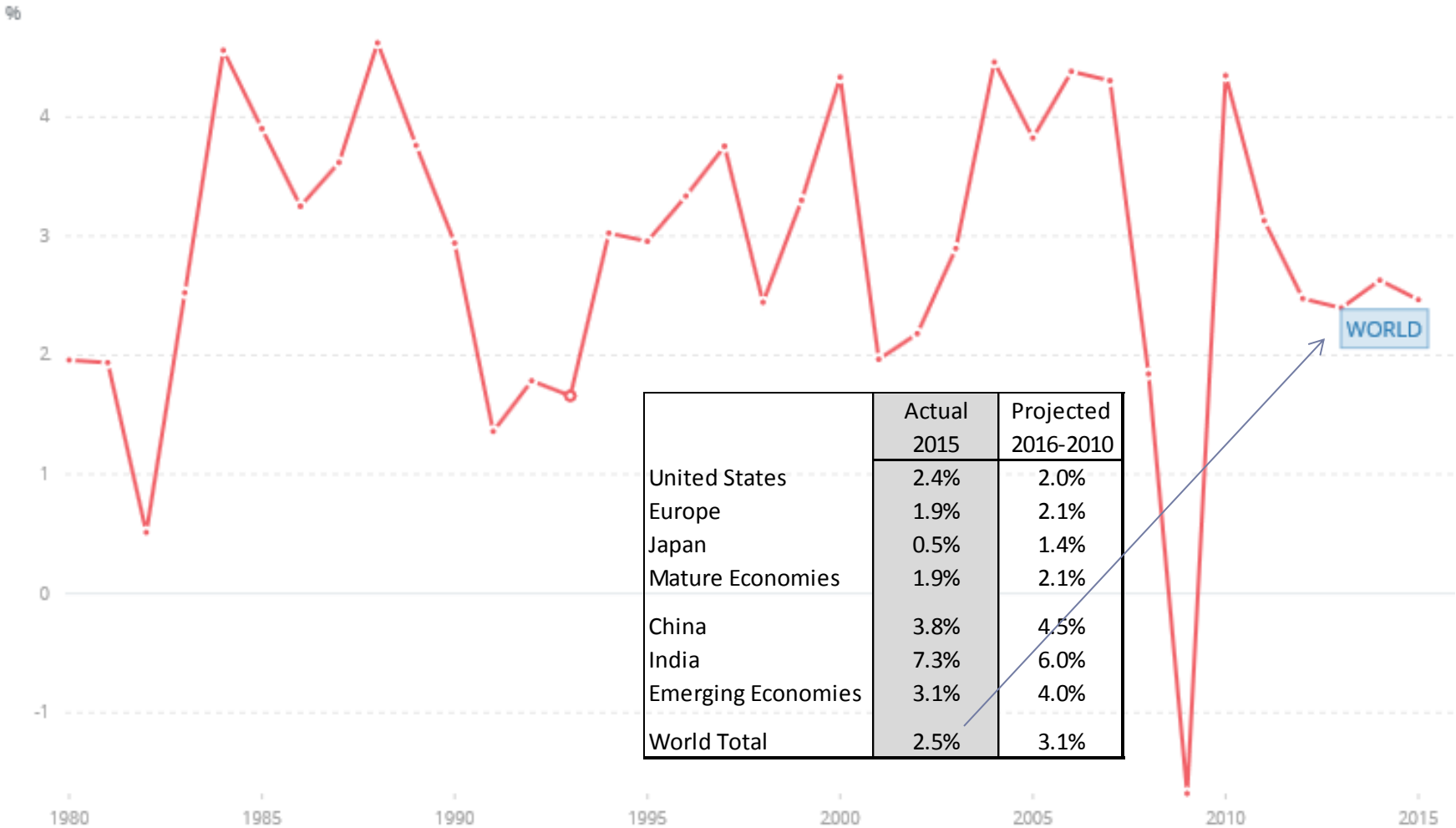
U.S Labor Market – Wage Growth and Participation Rates

U.S. labor markets appear to be improving as "Wage Growth" has been averaging 4% or higher during the two years.

The "Labor Participation Rate" remains below long-term historical averages, but appears to have leveled out at slightly above 62.5% over the last year.

Source: U.S. Department of Labor: Bureau of Labor Statistics

"World GDP Growth Rates" have declined to 2.5% from 2012 to 2015, with some "Experts" projecting slightly higher future growth rates.



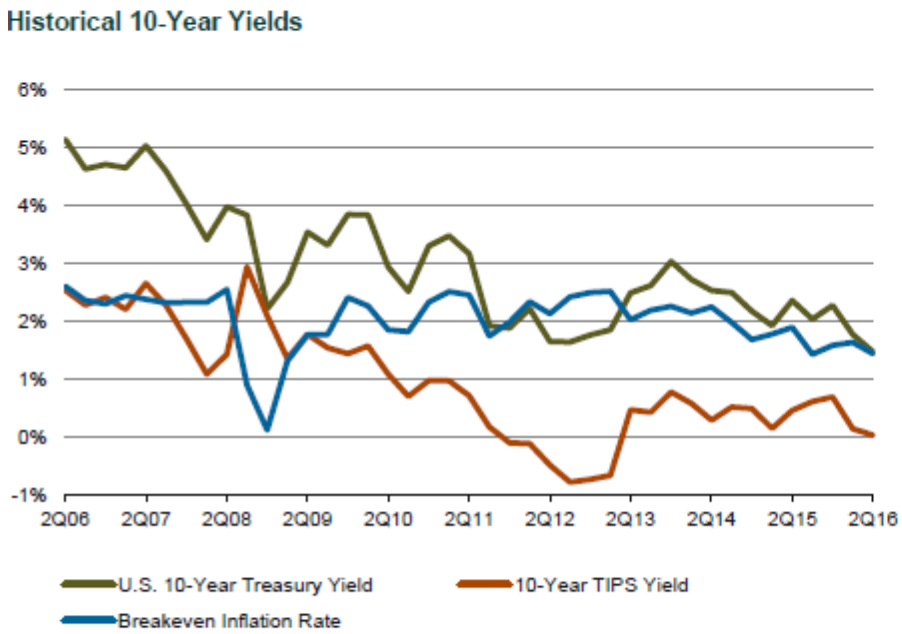
	Actual 2015	Projected 2016-2010
United States	2.4%	2.0%
Europe	1.9%	2.1%
Japan	0.5%	1.4%
Mature Economies	1.9%	2.1%
China	3.8%	4.5%
India	7.3%	6.0%
Emerging Economies	3.1%	4.0%
World Total	2.5%	3.1%

Source: Historical Global GDP Growth Rates from *The World Bank Group* ,with Projected Growth Rates by *The Conference Board*.

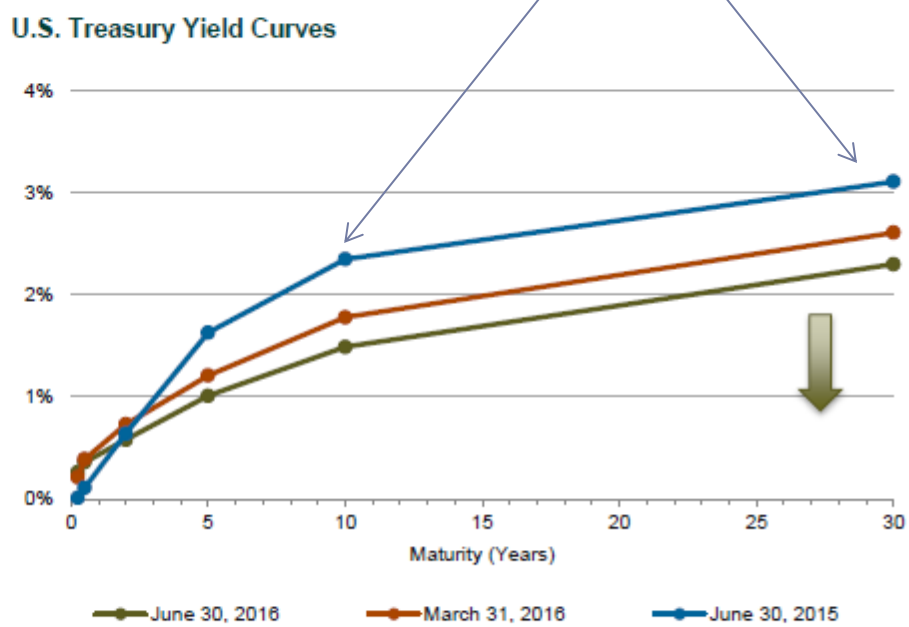
Yield Curve Changes

Key: Long-Term Treasury Rates Fell 0.85% Last Year

Periods Ending June 30, 2016



Source: Bloomberg



Source: U.S. Department of the Treasury

- Low rates abroad kept demand for U.S. assets strong. The German 10-year sovereign bond traded at a negative yield for the first time ever.
- The decline in Treasury yields boosted returns across all segments, with longer maturities posting the biggest gains. The 10-year dropped 29 basis points to a low not seen since 2012, finishing June at 1.49%.
- Breakeven inflation ended lower despite a climb in oil prices and healthy core inflation numbers.

Asset Class Performance

Periodic Table of Investment Returns for Periods Ended June 30, 2016

Best

Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
BLMBRG:Commdty Idx 12.7%	Barclays:Aggregate Index 6.0%	S&P:500 11.7%	S&P:500 12.1%	S&P:500 7.4%
Russell:2000 Index 3.8%	S&P:500 4.0%	Russell:2000 Index 7.1%	Russell:2000 Index 8.4%	Russell:2000 Index 6.2%
S&P:500 2.5%	3 Month T-Bill 0.2%	Barclays:Aggregate Index 4.1%	Barclays:Aggregate Index 3.8%	Barclays:Aggregate Index 5.1%
Barclays:Aggregate Index 2.2%	Russell:2000 Index (6.7%)	MSCI:EAFE 2.1%	MSCI:EAFE 1.7%	MSCI:EM Gross 3.9%
MSCI:EM Gross 0.8%	MSCI:EAFE (10.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	MSCI:EAFE 1.6%
3 Month T-Bill 0.1%	MSCI:EM Gross (11.7%)	MSCI:EM Gross (1.2%)	MSCI:EM Gross (3.4%)	3 Month T-Bill 1.0%
MSCI:EAFE (1.5%)	BLMBRG:Commdty Idx (13.5%)	BLMBRG:Commdty Idx (10.6%)	BLMBRG:Commdty Idx (10.9%)	BLMBRG:Commdty Idx (6.5%)

Worst

Last Year: U.S. Fixed Income (Barclays Aggregate) returned 6% and the S&P 500 returned 4% last year. In contrast, U.S. Small Cap Equity (Russel 2000) declined 6.7% and International Equity (MSCI EAFE) declined 10.2%. The Bloomberg Commodity Index declined 13.5% during the last fiscal year.

Historical Asset Class Market Returns – June 30, 2016

		Period Ended June 30, 2016			
Asset Class	**Benchmark**	**1-Year**	**3-Years**	**5-Years**	**10-Years**
Large Cap US Stocks	Russell 1000	2.93%	11.48%	**11.88%**	7.51%
Small Cap US Stocks	Russell 2000	-6.73%	7.09%	**8.35%**	6.20%
Non-US Stocks (Developed)	MSCI EAFE	-10.16%	2.06%	**1.68%**	1.58%
Non-US Stocks (Emerging)	MSCI Emerging Markets	-12.05%	-1.56%	**-3.78%**	3.54%
US Bonds	Barclays Aggregate	6.00%	4.06%	**3.76%**	5.13%
High Yield Bonds	Barclays Corporate High Yield	1.62%	4.18%	**5.84%**	7.56%
International Debt	Barclays Global Aggregate Ex-US	**11.24%**	1.85%	**0.34%**	4.00%
Inflation Protected	Barclays Global Inflation Linked	2.55%	2.74%	**2.27%**	4.42%
Real Estate	NCREIF	10.64%	11.61%	**11.51%**	7.40%

Last 5-Years:

- **U.S. Large Cap Equity (up 11.88%) has been one of the top performing asset classes in the last 5-years, followed by Real Estate (up 11.51%) and U.S. Small Cap Equity (up 8.35%).**
- **During the last 5-years, U.S. Bonds (up 3.76%) and High Yield (up 5.84%) performed generally in line with long-term expectations (along with Inflation Protected Debt, up 2.27%).**
- **Emerging Market Equity (down 3.78%) and International Equity (up 1.68%) and International Debt (up 0.34%) performed poorly the last 5-years, although International Debt surpassed most other major indices last year (up 11.24%).**

Preliminary Investment Update - August 31, 2016

Preliminary Fund Update – August 31, 2016

	August-16			Current FYTD		Prior Year FY16	
		Allocation		Returns		Returns	
	Market Value	Actual	Policy	Gross[1]	Net	Gross[1]	Net
TOTAL FUND	**2,240,409**	**100.0%**	**100.0%**	**1.50%**	**1.45%**	**1.84%**	**1.63%**
POLICY TARGET BENCHMARK				*0.97%*	*0.97%*	*1.32%*	*1.32%*
Los Angeles Capital	72,773	3.2%	3.3%	3.28%	3.23%	5.44%	5.24%
Russell 1000 Growth				***4.20%***	***4.20%***	***3.02%***	***3.02%***
LSV	75,307	3.4%	3.3%	5.31%	5.23%	-3.01%	-3.30%
Russell 1000 Value				***3.70%***	***3.70%***	***2.86%***	***2.86%***
Los Angeles Capital	48,947	2.2%	2.2%	3.32%	3.28%	5.96%	5.82%
Russell 1000				***3.95%***	***3.95%***	***2.94%***	***2.94%***
Clifton Group	49,085	2.2%	2.2%	3.95%	3.75%	5.29%	5.22%
S&P 500				***3.83%***	***3.83%***	***3.99%***	***3.99%***
TOTAL LARGE CAP DOMESTIC EQUITY	***246,112***	***11.0%***	***11.0%***	***4.02%***	***3.94%***	***2.91%***	***2.72%***
Russell 1000				***3.95%***	***3.95%***	***2.94%***	***2.94%***
PIMCO RAE (formerly Research Affiliates)	29,009	1.3%	1.3%	7.58%	7.51%	-3.87%	-4.14%
Clifton	38,485	1.7%	1.7%	8.12%	7.56%	-5.52%	-5.98%
TOTAL SMALL CAP DOMESTIC EQUITY	***67,494***	***3.0%***	***3.0%***	***7.88%***	***7.52%***	***-4.85%***	***-5.27%***
Russell 2000				***7.84%***	***7.84%***	***-6.73%***	***-6.73%***
LSV	67,398	3.0%	3.0%	6.61%	6.51%	-11.21%	-11.55%
MSCI EAFE				***5.14%***	***5.14%***	***-10.16%***	***-10.16%***
William Blair	57,592	2.6%	2.8%	6.68%	6.64%	N/A	N/A
MSCI ACWI ex-US IMI (Net)							
DFA	16,566	0.7%	0.7%	7.60%	7.60%	-9.28%	-9.28%
Vanguard (1)	16,708	0.7%	0.7%	5.43%	5.43%	-7.27%	-7.27%
S&P/Citigroup BMI EPAC < $2BN				***5.92%***	***5.92%***	***-3.37%***	***-3.37%***
TOTAL INTERNATIONAL EQUITY	***158,264***	***7.1%***	***7.0%***	***6.61%***	***6.55%***	***-10.44%***	***-10.74%***
MSCI EAFE				***5.14%***	***5.14%***	***-10.16%***	***-10.16%***

NOTE: All data is deemed to be materially accurate, but unaudited and subject to change.

Preliminary Fund Update – August 31, 2016

	August-16			Current FYTD		Prior Year FY16	
		Allocation		Returns		Returns	
	Market Value	Actual	Policy	Gross[1]	Net	Gross[1]	Net
Western Asset	82,030	3.7%	3.8%	1.52%	1.49%	6.79%	6.64%
Prudential	29,325	1.3%	1.0%	1.58%	1.52%	7.12%	6.83%
PIMCO (DiSCO II) (1)	10,822	0.5%	0.5%	2.65%	2.65%	4.39%	4.39%
PIMCO (BRAVO II) (1)	6,020	0.3%	0.3%	0.00%	0.00%	7.02%	7.02%
BC Aggregate				***0.52%***	***0.52%***	***6.00%***	***6.00%***
Declaration (Total Return) (1)	21,260	0.9%	0.9%	1.60%	1.60%	2.59%	2.59%
3m LIBOR				*0.12%*	*0.12%*	*0.49%*	*0.49%*
State Street	37,712	1.7%	1.7%	0.59%	0.58%	6.71%	6.68%
BC Gov/Credit				***0.59%***	***0.59%***	***6.70%***	***6.70%***
Wells Capital	82,814	3.7%	3.8%	2.68%	2.63%	7.19%	6.99%
BC Credit Baa				***2.14%***	***2.14%***	***6.93%***	***6.93%***
TOTAL FIXED INCOME	***269,983***	***12.1%***	***12.0%***	***1.76%***	***1.73%***	***6.42%***	***6.29%***
BC Aggregate				***0.52%***	***0.52%***	***6.00%***	***6.00%***
JP Morgan	24,780	1.1%	1.0%	0.00%	0.00%	10.11%	9.03%
Invesco	22,106	1.0%	1.0%	0.00%	0.00%	10.96%	10.58%
TOTAL REAL ESTATE	***46,886***	***2.1%***	***2.0%***	***0.00%***	***0.00%***	***10.51%***	***9.75%***
NCREIF Total Index				***1.35%***	***1.35%***	***10.64%***	***10.64%***
TOTAL CASH EQUIVALENTS	***2,913***	***0.1%***	***0.0%***	***0.03%***	***0.03%***	***0.12%***	***0.12%***
90 Day T-Bill				***0.05%***	***0.05%***	***0.19%***	***0.19%***
Babson Capital	792,530	35.4%	32.5%	0.50%	0.46%	1.95%	1.73%
BC 1-3 Year US Gov't Index				**-0.22%**	**-0.22%**	**1.31%**	**1.31%**
JP Morgan	656,226	29.3%	32.5%	-0.04%	-0.07%	1.82%	1.67%
BC 1-3 Year Gov/Credit Index				***-0.09%***	***-0.09%***	***1.59%***	***1.59%***
TOTAL SHORT TERM FIXED INCOME	***1,448,756***	***64.7%***	***65.0%***	***0.22%***	***0.22%***	***1.87%***	***1.68%***
BC 1-3 Year US Gov't Index				***-0.22%***	***-0.22%***	***1.31%***	***1.31%***

Initial funding: April 30, 2014

NOTE: All data is deemed to be materially accurate, but unaudited and subject to change.

North Dakota State Board of Medical Examiners Fund – Account Balances as of June 30, 2015

	June-15			Current FYTD		Prior Year FY14	
		Allocation		Returns		Returns	
	Market Value	Actual	Policy	Gross[1]	Net	Gross[1]	Net
TOTAL FUND	**2,174,702**	**100.0%**	**100.0%**	**2.86%**	**2.70%**	**N/A**	**N/A**
POLICY TARGET BENCHMARK				*1.84%*	*1.84%*		
LARGE CAP DOMESTIC EQUITY							
Los Angeles Capital	72,259	3.3%	3.3%	12.53%	12.32%	N/A	N/A
Russell 1000 Growth				***10.56%***	***10.56%***		
LSV	71,529	3.3%	3.3%	7.16%	6.87%	N/A	N/A
Russell 1000 Value				***4.13%***	***4.13%***		
Los Angeles Capital	47,327	2.2%	2.2%	8.45%	8.31%	N/A	N/A
Russell 1000				***7.37%***	***7.37%***		
Clifton Group	46,848	2.2%	2.2%	7.17%	7.10%	N/A	N/A
S&P 500				***7.42%***	***7.42%***		
TOTAL LARGE CAP DOMESTIC EQUITY	***237,963***	***10.9%***	***11.0%***	***9.02%***	***8.83%***	***N/A***	***N/A***
Russell 1000				***7.37%***	***7.37%***		
SMALL CAP DOMESTIC EQUITY							
Research Affiliates	18,869	0.9%	0.9%	5.51%	5.18%	N/A	N/A
Clifton	46,832	2.2%	2.2%	8.24%	8.03%	N/A	N/A
TOTAL SMALL CAP DOMESTIC EQUITY	***65,701***	***3.0%***	***3.0%***	***7.46%***	***7.23%***	***N/A***	***N/A***
Russell 2000				***6.49%***	***6.49%***		
INTERNATIONAL EQUITY							
Capital Group	59,640	2.7%	2.7%	-1.35%	-1.73%	N/A	N/A
LSV	59,008	2.7%	2.7%	-3.33%	-3.73%	N/A	N/A
MSCI EAFE				***-4.22%***	***-4.22%***		
DFA	15,242	0.7%	0.7%	-3.27%	-3.27%	N/A	N/A
Vanguard (1)	15,376	0.7%	0.7%	0.57%	0.57%	N/A	N/A
S&P/Citigroup BMI EPAC < $2BN				***1.14%***	***1.14%***		
TOTAL INTERNATIONAL EQUITY	***149,267***	***6.9%***	***7.0%***	***-2.11%***	***-2.43%***	***N/A***	***N/A***
MSCI EAFE				***-4.22%***	***-4.22%***		
FIXED INCOME							
Western Asset	81,195	3.7%	3.9%	2.76%	2.62%	N/A	N/A
Prudential	23,317	1.1%	1.0%	2.32%	2.05%	N/A	N/A
PIMCO (DiSCO) (1)	10,099	0.5%	0.5%	4.32%	4.32%	N/A	N/A
PIMCO (BRAVO II) (1)	4,524	0.2%	0.2%	10.36%	10.36%	N/A	N/A
BC Aggregate				***1.8%***	***1.8%***		
Declaration (Total Return) (1)	20,542	0.9%	0.9%	3.55%	3.55%	N/A	N/A
3m LIBOR				*0.26%*	*0.26%*		
State Street	35,477	1.6%	1.7%	1.70%	1.66%	N/A	N/A
BC Gov/Credit				***1.68%***	***1.68%***		
Wells Capital	79,953	3.7%	3.9%	0.96%	0.78%	N/A	N/A
BC Credit Baa				***-1.37%***	***-1.37%***		
TOTAL FIXED INCOME	***255,107***	***11.7%***	***12.0%***	***2.40%***	***2.27%***	***N/A***	***N/A***
BC Aggregate				***1.85%***	***1.85%***		
REAL ESTATE							
JP Morgan	25,139	1.2%	1.0%	16.68%	15.44%	N/A	N/A
Invesco	22,019	1.0%	1.0%	16.38%	15.97%	N/A	N/A
TOTAL REAL ESTATE	***47,157***	***2.2%***	***2.0%***	***16.36%***	***15.50%***	***N/A***	***N/A***
NCREIF Total Index				***12.98%***	***12.98%***		
CASH EQUIVALENTS							
Northern Trust (1)	1,820			0.01%	0.01%	N/A	N/A
TOTAL CASH EQUIVALENTS	***1,820***	***0.1%***	***0.0%***	***0.01%***	***0.01%***	***N/A***	***N/A***
90 Day T-Bill				***0.02%***	***0.02%***		
SHORT TERM FIXED INCOME							
Babson Capital	714,038	32.8%	32.5%	2.55%	2.43%	N/A	N/A
BC 1-3 Year US Gov't Index				**0.91%**	**0.91%**		
JP Morgan	703,649	32.4%	32.5%	1.11%	1.01%	N/A	N/A
BC 1-3 Year Gov/Credit Index				***1.62%***	***1.62%***		
TOTAL SHORT TERM FIXED INCOME	***1,417,687***	***65.2%***	***65.0%***	***1.76%***	***1.61%***	***N/A***	***N/A***
BC 1-3 Year US Gov't Index				***0.91%***	***0.91%***		

Initial funding: April 30, 2014

Appendix of Supporting Materials

SIB Background, Client Returns, Service Providers, Transparency Update, Callan's Capital Market Expectations and Survey Results

State Investment Board Members – August 31, 2016

The SIB includes 11 members with Lieutenant Governor Drew Wrigley serving as Chairman and includes **State Treasurer Kelly Schmidt**, the **Commissioner of University and School Lands Lance Gaebe**, the **Director of Workforce Safety and Insurance designee Cindy Ternes**, the **Insurance Commissioner Adam Hamm**, plus three TFFR board members and three PERS board members.

The TFFR representatives include **Michael Gessner, Rob Lech** and **Mel Olson** noting that Mr. Lech also serves as the board parliamentarian.

The PERS representatives include **Mike Sandal, Tom Trenbeath** and **Yvonne Smith** noting that Mr. Sandal also serves as *Vice Chairman* of the SIB.

North Dakota Retirement & Investment Office – Background

RIO is an agency of the State of North Dakota. The agency was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important long-standing state programs – the retirement program of the Teachers' Fund for Retirement (TFFR) and the investment program of the State Investment Board (SIB).

The SIB is responsible for setting policies and procedures guiding the investment of over $11 billion in assets for seven pension funds and 16 other insurance-type funds. Their investments are divided into two investment trust funds and two individual investment accounts. Individual investment guidelines for each fund can be found in the Investment Section. These guidelines include goals and objectives, risk tolerance, liquidity constraints, asset allocation and portfolio restrictions specific to each fund's unique circumstances. When creating investment pools to implement the asset allocations for each client fund, the SIB takes all of these guidelines into consideration in order to best meet the objectives of each fund and safeguard fund assets.

The pension investment pool is made up of only qualified pension funds whose monies must be invested exclusively for the benefit of their participants. The insurance investment pool is made up of mainly insurance-type funds, but also includes other funds that do not qualify as pension funds and would like to benefit from the cost savings of being pooled with other funds' assets. All of these funds are invested in accordance with the "Prudent Investor Rule."

An important aspect of the prudent investor rule is that individual investments are considered not in isolation but in the context of the trust portfolio as a whole. Some new opportunities may appear risky when viewed alone. However, when part of a diversified mix of investments in stocks, bonds and other assets, they can increase returns often without increasing the overall portfolio risk and, in some cases, may help decrease the overall portfolio's risk.

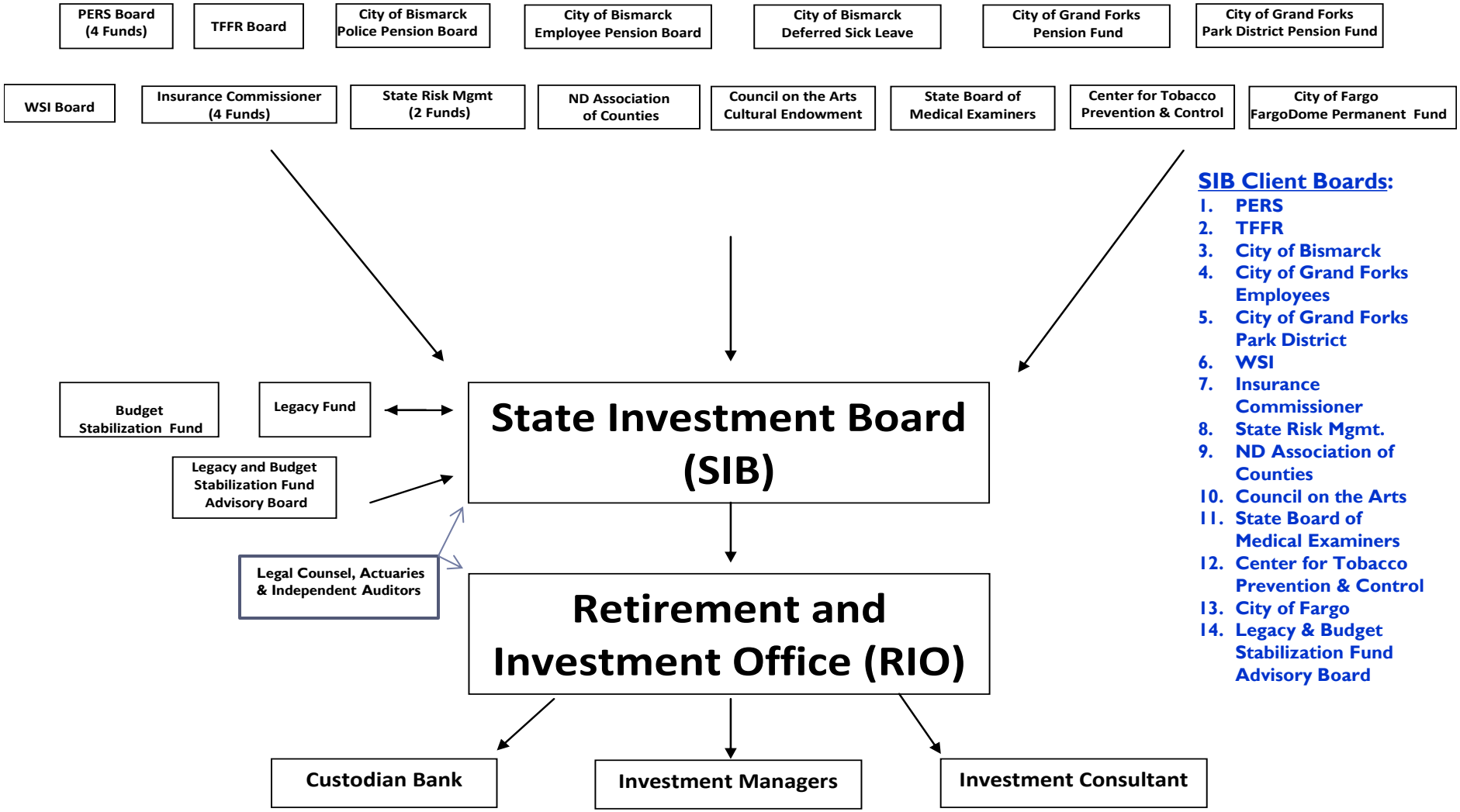
North Dakota Retirement & Investment Office – Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for its comprehensive annual financial report for the fiscal year ended June 30, 2015. This was the eighteenth consecutive year that RIO has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

TFFR also received the 2015 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council. To receive the award, the retirement system must certify that it meets specific professional standards for a comprehensive benefit program, actuarial valuations, financial reporting, investments, communications to members, and funding adequacy.

State Investment Board Process



SIB Client Boards:

1. PERS
2. TFFR
3. City of Bismarck
4. City of Grand Forks Employees
5. City of Grand Forks Park District
6. WSI
7. Insurance Commissioner
8. State Risk Mgmt.
9. ND Association of Counties
10. Council on the Arts
11. State Board of Medical Examiners
12. Center for Tobacco Prevention & Control
13. City of Fargo
14. Legacy & Budget Stabilization Fund Advisory Board

State Investment Board Process

Client Responsibilities: (Per NDCC 21-10-02.1) The governing body of each fund (client) shall establish policies on investment goals and objectives and asset allocation that must include:

- Acceptable rates of return, liquidity and levels of risk
- Long-range asset allocation goals

State Investment Board Responsibilities: (Per NDCC 21-10):

- Accept and implement client asset allocations
- Apply Prudent Investor Rule when investing for fund under its supervision
- Approve general types of securities for investment
- Set policies and procedures regulating securities transactions on behalf of the clients
- Select custodian servicer
- Select investment director and/or investment consulting service
- Create investment pools

State Investment Board Process

Retirement and Investment Office Staff Responsibilities (on behalf of SIB):

- Administer overall investment strategy
- Advise SIB on ways to maximize risk/return opportunities within each asset class
- Act as liaison between SIB and managers, consultant and custodian
- Monitor individual clients' investment guidelines and asset allocations
- Maintain separate accounting for client accounts

Investment Manager Responsibilities:

- Accept and implement specific mandates or "investment missions"
- Make buy/sell decisions based on investment guidelines
- Report to RIO Staff on regular basis
- Provide education to SIB

State Investment Board Process

Custodian Bank Responsibilities:

- Safe-keep assets
- Settle trades
- Record-keeper

Investment Consultant Responsibilities:

- Performance measurement of investment managers
- Manager search assistance
- Provide education to SIB

Special projects

Others Experts:

- Legal Counsel
- Independent Actuaries and Auditors
- Specialists in custody and fee reviews and/or transaction cost analyses

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 6/30/16 [1]	Market Values as of 6/30/15 [2]
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,459,388,086	2,422,579,595
Teachers' Fund for Retirement (TFFR)	2,082,183,640	2,103,807,355
Job Service of North Dakota Pension		96,392,560
City of Bismarck Employees Pension	82,441,003	81,745,817
City of Grand Forks Employees Pension	57,975,758	59,232,375
City of Bismarck Police Pension	33,983,598	35,889,940
Grand Forks Park District	5,720,245	6,035,136
City of Fargo Employees Pension		1,461
Subtotal Pension Trust Fund	**4,721,692,330**	**4,805,684,242**
Insurance Trust Fund		
Workforce Safety & Insurance (WSI)	1,832,104,203	1,762,659,138
Budget Stabilization Fund	575,918,381	574,011,151
ND Tobacco Control and Prevention	54,366,538	
PERS Group Insurance Account	37,715,356	39,653,686
City of Fargo FargoDome Permanent Fund	38,782,721	41,007,046
State Fire and Tornado Fund	24,091,203	23,416,232
Petroleum Tank Release Compensation Fund	7,149,512	7,162,837
State Risk Management Fund	6,534,801	6,849,214
State Risk Management Workers Comp Fund	5,516,177	6,224,542
ND Association of Counties (NDACo) Fund	4,048,863	3,833,500
State Bonding Fund	3,296,372	3,180,023
ND Board of Medical Examiners	2,208,667	2,174,703
Insurance Regulatory Trust Fund	1,085,836	2,636,662
Bismarck Deferred Sick Leave Account	642,265	872,177
Cultural Endowment Fund	386,452	383,049
Subtotal Insurance Trust Fund	**2,593,847,347**	**2,474,063,959**
Legacy Trust Fund		
Legacy Fund	3,809,485,177	3,328,631,303
PERS Retiree Insurance Credit Fund	101,623,224	97,671,060
Job Service of North Dakota Pension	96,588,333	
Total Assets Under SIB Management	**11,323,236,411**	**10,706,050,563**

[1] *6/30/16 market values are unaudited and subject to change.*

[2] *6/30/15 market values as stated in the Comprehensive Annual Financial Report.*

- SIB client assets grew by approximately 6% (or $617 million) in the last year with the Legacy Fund creating the largest asset growth of $481 million primarily due to tax collections.
- The Legacy Fund generated a net investment gain of 1.06% for the year ended June 30, 2016, slightly exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 2.78% (over the last 4.75 years) exceeding the performance benchmark of 2.05%.
- The Pension Trust posted a net return of 0.31% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 6.35%, exceeding the performance benchmark of 5.99%.
- The Insurance Trust generated a net return of 3.12% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 4.83%, exceeding the performance benchmark of 3.81%.
- SIB client assets exceeded $11.3 billion as of June 30, 2016, based on unaudited valuations.

ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2016

		Investment Performance (net of fees)																
		Quarter Ended					Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)						
Fund Name	Market Values as of 6/30/16	9/30/15	12/31/15	3/31/16	6/30/16	FYTD 2016	2015	2014	2013	2012	2011	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Pension Trust Fund																		
Teachers' Fund for Retirement (TFFR)	2,082,183,640	-4.98%	2.72%	1.31%	1.41%	0.28%	3.52%	16.53%	13.57%	-1.12%	24.05%	6.55%	6.32%	4.45%	5.51%	6.48%	7.48%	7.73%
Public Employees Retirement System (PERS)	2,459,388,086	-5.04%	2.71%	1.33%	1.47%	0.28%	3.53%	16.38%	13.44%	-0.12%	21.27%	6.51%	6.48%	4.81%	5.84%	6.88%	7.86%	7.89%
City of Bismarck Employees Pension	82,441,003	-4.25%	2.17%	1.34%	1.70%	0.82%	3.69%	14.56%	12.41%	1.57%	20.32%	6.20%	6.46%	5.16%	5.84%	6.86%	7.79%	*
City of Bismarck Police Pension	33,983,598	-4.76%	2.34%	1.25%	1.66%	0.32%	3.56%	15.27%	13.03%	1.31%	21.10%	6.19%	6.52%	5.02%	5.73%	6.71%	7.68%	*
Job Service of North Dakota Pension	96,588,333	-3.12%	3.38%	2.95%	2.27%	5.45%	3.30%	13.54%	11.71%	3.09%	16.39%	7.34%	7.33%	6.00%	6.11%	7.57%	*	*
City of Grand Forks Employees Pension	57,975,758	-5.32%	2.80%	1.26%	1.58%	0.11%	3.53%	16.33%	14.01%	1.09%	21.64%	6.43%	6.80%	*	*	*	*	*
Park District of the City of Grand Forks Pension	5,720,245	-4.89%	3.32%	0.88%	1.24%	0.36%	4.22%	16.44%	14.43%	0.86%	20.98%	6.80%	7.05%	*	*	*	*	*
Subtotal Pension Trust Fund	4,818,280,663																	
Insurance Trust Fund																		
Workforce Safety & Insurance (WSI)	1,832,104,203	-1.92%	1.18%	2.04%	2.29%	3.58%	3.26%	11.71%	8.31%	6.17%	13.23%	6.11%	6.56%	5.66%	5.58%	6.78%	7.39%	*
State Fire and Tornado Fund	24,091,203	-2.89%	1.76%	1.79%	2.07%	2.67%	3.16%	12.78%	10.59%	4.93%	14.52%	6.10%	6.75%	5.87%	5.65%	6.43%	6.58%	*
State Bonding Fund	3,296,372	0.21%	-0.11%	1.57%	1.78%	3.48%	1.25%	4.06%	2.96%	5.31%	5.01%	2.92%	3.40%	2.07%	3.24%	4.60%	5.17%	*
Petroleum Tank Release Compensation Fund	7,149,512	0.20%	-0.10%	1.43%	1.62%	3.17%	1.13%	3.68%	2.47%	4.84%	4.97%	2.65%	3.05%	1.82%	2.97%	4.47%	*	*
Insurance Regulatory Trust Fund	1,085,836	-2.58%	1.53%	1.22%	1.33%	1.46%	2.04%	9.88%	8.49%	2.82%	11.61%	4.39%	4.88%	4.63%	4.75%	5.67%	5.68%	*
State Risk Management Fund	6,534,801	-2.08%	1.50%	2.26%	2.78%	4.46%	4.08%	12.29%	10.19%	7.63%	14.36%	6.88%	7.68%	6.59%	5.86%	*	*	*
State Risk Management Workers Comp Fund	5,516,177	-2.65%	1.90%	2.20%	2.78%	4.21%	4.57%	13.68%	11.61%	7.40%	16.23%	7.40%	8.23%	6.74%	*	*	*	*
Cultural Endowment Fund	386,452	-4.39%	3.00%	1.59%	2.14%	2.18%	5.22%	16.94%	15.58%	4.65%	21.33%	7.93%	8.75%	6.33%	*	*	*	*
Budget Stabilization Fund	575,918,381	0.27%	-0.34%	1.06%	0.82%	1.82%	1.86%	1.94%	1.87%	2.03%	3.73%	1.88%	1.91%	2.11%	*	*	*	*
ND Association of Counties (NDACo) Fund	4,048,863	-2.50%	1.49%	1.79%	2.02%	2.76%	2.77%	11.61%	9.46%	1.69%	17.73%	5.63%	5.58%	4.73%	4.97%	*	*	*
Bismarck Deferred Sick Leave Account	642,265	-2.48%	1.47%	2.04%	2.27%	3.26%	2.95%	12.32%	9.83%	5.69%	13.80%	6.09%	6.75%	6.08%	5.86%	*	*	*
City of Fargo FargoDome Permanent Fund	38,782,721	-4.50%	2.40%	1.60%	1.84%	1.19%	3.38%	16.34%	13.46%	3.14%	19.16%	6.76%	7.33%	5.97%	*	*	*	*
State Board of Medicine Fund	2,208,667	-1.66%	0.88%	1.26%	1.16%	1.63%	2.70%	*	*	*	*	*	*	*	*	*	*	*
PERS Group Insurance Account	37,715,356	0.00%	-0.08%	0.94%	0.62%	[illegible]	[illegible]	0.06%	0.27%	0.24%	0.31%	0.52%	0.41%	1.25%	1.64%	*	*	*
Subtotal Insurance Trust Fund	2,539,480,809																	
Legacy Fund	3,809,485,177	-4.42%	2.46%	1.55%	1.62%	1.06%	3.31%	6.64%	1.15%	*	*	3.65%	*	*	*	*	*	*
Tobacco Control and Prevention Fund	54,366,538	*	*	*	0.65%	*	*	*	*	*	*	*	*	*	*	*	*	*
PERS Retiree Insurance Credit Fund	101,623,224	-5.59%	2.82%	1.56%	2.17%	0.72%	3.06%	16.53%	12.71%	2.62%	21.65%	6.55%	6.95%	5.13%	5.23%	6.40%	7.17%	*
Total Assets Under SIB Management	11,323,236,410																	

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. **All figures are preliminary and subject to revision.**

NDRIO – Consulting and Professional Services (June 30, 2016)

Actuary

The Segal Company
Chicago, Illinois

Auditor

CliftonLarsonAllen LLP
Baltimore, Maryland

Legal Counsel

Attorney General's Office
Bismarck, North Dakota

Ice Miller
Chicago, Illinois

K&L Gates
Boston, Massachusetts

Information Technology

Advent Software, Inc.
San Francisco, CA

CPAS Systems Inc.
Toronto, Ontario

Master Custodian

The Northern Trust Company
Chicago, Illinois

Investment Consultant and Performance Measurement

Callan Associates Inc.
San Francisco, California

Mercer LLC
Chicago, Illinois

Novarca North America LLC
Palo Alto, California

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers

Adams Street Partners, LLC
Chicago, Illinois

Investment Managers (cont.)

Axiom International Investors
Greenwich, Connecticut

Babson Capital Management LLC Boston, Massachusetts

Brandywine Asset Management
Wilmington, Delaware

Callan Associates
San Francisco, California

Capital Group
Los Angeles, California

Corsair Capital
New York, New York

Declaration Mgmt & Research, LLC
McLean, Virginia

Dimensional Fund Advisors
Chicago, Illinois

EIG Energy Partners
Los Angeles, California

Epoch Investment Partners, Inc.
New York, New York

Goldman Sachs Asset Mgmt
New York, New York

Grosvenor Capital Management
New York, NY

Hearthstone Homebuilding Investors, LLC
Encino, California

INVESCO Realty Advisors
Dallas, Texas

InvestAmerica L&C, LLC
Cedar Rapids, Iowa

J.P. Morgan Invest. Mgmt, Inc.
New York, New York

Loomis Sayles & Company
Boston, Massachusetts

Los Angeles Capital Management
Los Angeles, California

LSV Asset Management
Chicago, Illinois

Matlin Patterson Global Advisers LLC
New York, New York

Investment Managers (cont.)

Northern Trust Asset Management
Chicago, Illinois

Parametric Portfolio Associates
DBA The Clifton Group
Minneapolis, Minnesota

PIMCO
Newport Beach, California

Prudential Investment Management
Newark, New Jersey

Quantum Energy Partners
Houston, Texas

Quantum Resources Mgmt, LLC
Denver, Colorado

Research Affiliates, LLC
Newport Beach, California

SEI Investments Management Co.
Oaks, Pennsylvania

State Street Global Advisors
Boston, Massachusetts

Timberland Investment
Resources, LLC
Atlanta, Georgia

UBS Global Asset Management
Chicago, Illinois

The Vanguard Group
Valley Forge, Pennsylvania

Wellington Trust Company, NA
Boston, Massachusetts

Wells Capital Management, Inc.
Menomonee Falls, Wisconsin

Western Asset Management Co.
Pasadena, California

Transparency Enhancement Update – 2016

Strategic Investment Belief / Goal:

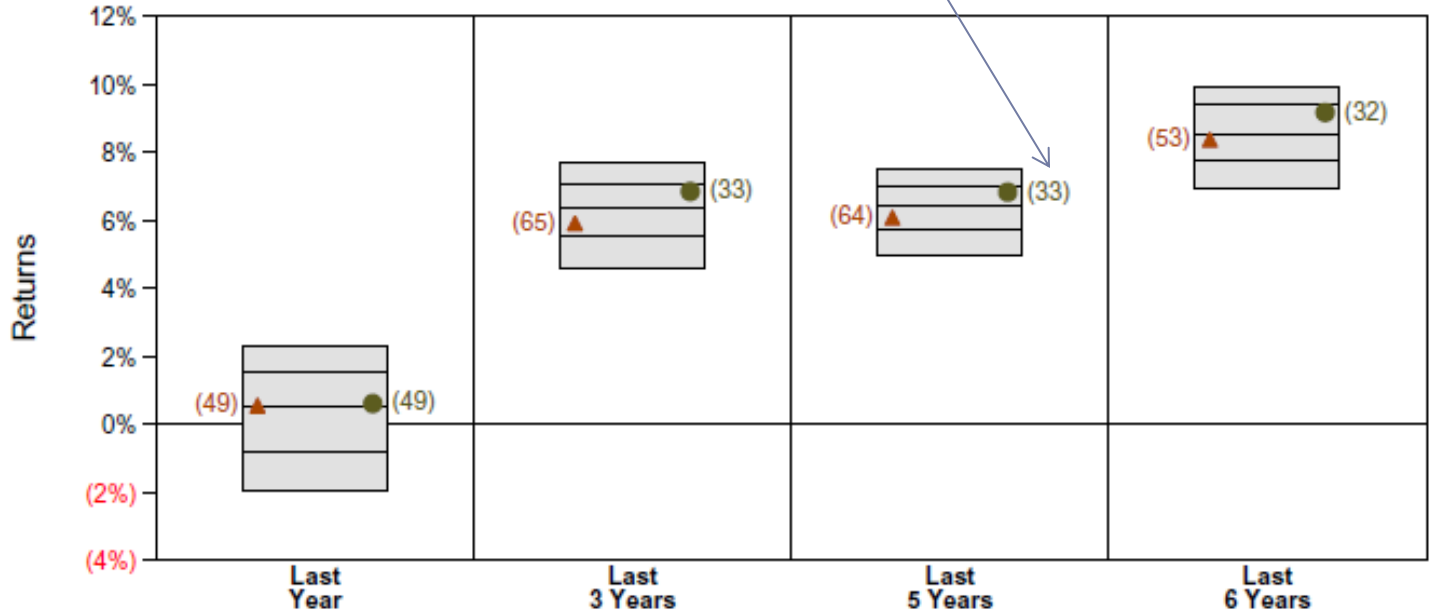
Although SIB meetings are open to the public and RIO is committed to adhering to all applicable open records laws, a transparency enhancement initiative was commenced in mid-2015 in order to make it easier for interested parties to gain access to information on RIO's website. RIO believes these actions support our desire to foster trust, understanding and support within our community.

RIO's Stated Action Plan (as stated in our SIB Meeting Materials in 2015 and 2016):

1) Enhance public access to our SIB Governance Manual by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "SIB Governance Manual" under the "SIB / Board" section); http://www.nd.gov/rio/SIB/Board/GovernanceManual/default.htm
2) Enhance public access to our SIB Meeting Materials by adding a new hyperlink on our RIO website (hyperlink accessed by clicking on "Meeting Materials" under the "SIB / Board" section); http://www.nd.gov/rio/SIB/Board/SIB%20Meeting%20Materials/default.htm
3) Enhance public access to our SIB's Audit Committee Charter and Meeting Materials by adding a new hyperlink on our RIO website (hyperlinks accessed by clicking on "SIB Audit Charter" or "Meeting Materials" under the "SIB Audit" section). http://www.nd.gov/rio/SIB%20Audit/Board/default.htm

PERS "gross" returns were ranked in the 33rd percentile for the 5-years ended June 30, 2016, based on Callan's "Public Fund Sponsor Database".

CAI Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
10th Percentile	2.31	7.70	7.53	9.95
25th Percentile	1.56	7.06	7.02	9.39
Median	0.54	6.39	6.42	8.53
75th Percentile	(0.81)	5.51	5.70	7.77
90th Percentile	(1.97)	4.57	4.94	6.96
Total Fund ●	0.61	6.84	6.82	9.17
Policy Target ▲	0.56	5.91	6.08	8.37

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays US HY Corp 2% Cp, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

2016 Capital Market Expectations

Return and Risk

- Public market expectations represent passive exposure (beta only).
- Return expectations for private market investments such as real estate and private equity reflect active management premiums.
- Return expectations are net of fees.

Summary of Callan's Long-Term Capital Market Projections (2016 - 2025)

Asset Class	Index	Projected Return*	Projected Risk
Equities			
Broad Domestic Equity	Russell 3000	7.35%	18.70%
Large Cap	S&P 500	7.25%	17.95%
Small/Mid Cap	Russell 2500	7.55%	22.75%
Global ex-US Equity	MSCI ACWI ex USA	7.55%	21.30%
International Equity	MSCI World ex USA	7.25%	20.05%
Emerging Markets Equity	MSCI Emerging Markets	7.60%	27.85%
Fixed Income			
Domestic Fixed	Barclays Aggregate	3.00%	3.75%
TIPS	Barclays TIPS	3.00%	5.30%
High Yield	Barclays High Yield	5.00%	10.50%
Non-US Fixed	Barclays Global Aggregate ex-USD	1.40%	9.20%
Emerging Market Debt	EMBI Global Diversified	4.60%	9.90%
Other			
Real Estate	Callan Real Estate Database	6.00%	16.45%
Timberland	NCREIF Timberland	6.20%	17.50%
Infrastructure	S&P Global Infr / JPM Infr	6.60%	19.00%
Private Equity	TR Post Venture Capital	8.15%	32.80%
Hedge Funds	Callan Hedge FoF Database	5.25%	9.30%
Commodities	Bloomberg Commodity	2.75%	18.50%
Cash Equivalents	90-Day T-Bill	2.25%	0.90%
Inflation	CPI-U	2.25%	1.50%

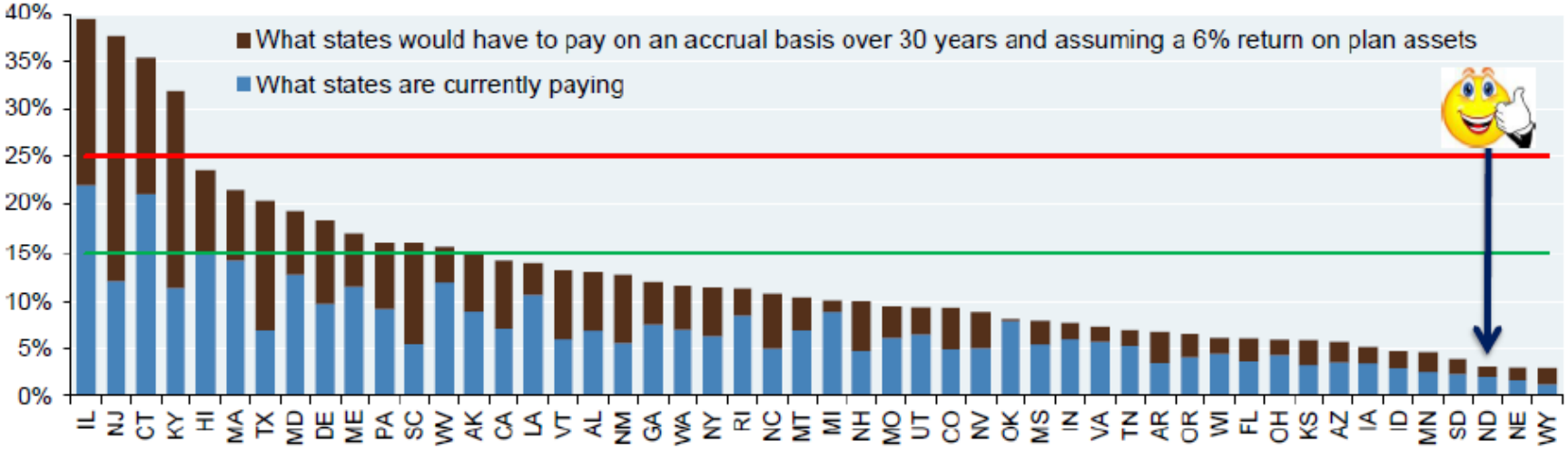
** Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).*

How big is the post-retirement bill?

A relative comparison of the 50 states' payment obligations

The state of the states: how much states spend on debt, pensions and retiree healthcare

% of state revenue collections required to pay the sum of interest on bonds, the state's share of unfunded pension and retiree healthcare liabilities, and defined contribution plan payments



Source: J.P. Morgan Asset Management, state/pension plan Comprehensive Annual Financial Reports, Census, Loop Capital Markets. FY 2015.

- Bars that appear above the **red line** indicate a level at which states face critical challenges in meeting an ability to service their debt and post-retirement benefit obligations.
- Bars that appear below the **green line** identify states that one might view not requiring "a disproportionate share of revenues to service their debts."
- Note that North Dakota's overall funding obligations are comparatively low (third from the right).

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 20, 2016

SUBJECT: SIB Client Satisfaction Survey – Cover Memo

The Audit Services team conducted the 2016 Customer Satisfaction Survey over the past few months. Survey responses were received from all but one customer board. Several methods were used this year to collect the survey data including customer created paper forms, Survey Monkey, and PDF.

SIB clients assigned a 3.6 overall rating in 2016 which is the comparable to prior years (of 3.7). This numerical score was based on 4.0 rating scale as follows:

Excellent	4.0
Above Average	3.0
Average	2.0
Poor	1.0
Not Applicable	-

CUSTOMER SATISFACTION SURVEY
NORTH DAKOTA STATE INVESTMENT BOARD
2016

Evaluation Forms Sent	14
Evaluation Forms Returned	13

1. Telephone calls and/or e-mail handled promptly and professionally.

Excellent	Above Average	Average	Poor	N/A
8	4	0	0	1

2. Clarity and effectiveness of letters, reports, and presentations.

Excellent	Above Average	Average	Poor	N/A
7	5	1	0	0

3. Detail provided on reports.

Excellent	Above Average	Average	Poor	N/A
7	4	2	0	0

4. Delivery of high-quality service.

Excellent	Above Average	Average	Poor	N/A
9	3	1	0	0

5. Accessibility.

Excellent	Above Average	Average	Poor	N/A
9	4	0	0	0

6. Responsiveness.

Excellent	Above Average	Average	Poor	N/A
9	4	0	0	0

7. Efficiency.

Excellent	Above Average	Average	Poor	N/A
10	2	1	0	0

8. Knowledge of investments.

Excellent	Above Average	Average	Poor	N/A
8	4	1	0	0

SIB Customer Survey Results:

SIB Customer Satisfaction Survey scores remain above average with an overall score of 3.6 out of 4.0 in which 3.0 is "Above Average" and 4.0 is "Excellent". This score is comparable with the prior years in which the overall score was 3.7.

2016 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	67	30	6	0	1
Grade	4	3	2	1	0
Percent	64%	29%	6%	0%	1%
Average	3.6				

2015 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	53	25	0	0	18
Grade	4	3	2	1	0
Percent	55%	26%	0%	0%	19%
Average	3.7				

2014 Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	63	25	0	0	8
Grade	4	3	2	1	0
Percent	66%	26%	0%	0%	8%
Average	3.7				

MEMORANDUM

TO: **State Investment Board (SIB)**

FROM: **Rebecca Dorwart, SIB Audit Committee Chair**

DATE: **October 28, 2016**

SUBJECT: **Fiscal Year End Audit Committee Activities Update**
July 1, 2015 to June 30, 2016

The Audit Committee is a standing committee of the State Investment Board (SIB) authorized under the SIB Governance Policy B-6, Standing Committees. Its primary function is to assist the SIB in fulfilling its oversight responsibilities of the Retirement and Investment Office (RIO) internal and external audit programs, including the financial reporting process, internal controls, and compliance with laws, regulations, policies, and procedures.

Members of the Audit Committee for the 2015-2016 fiscal year were: Rebecca Dorwart, Chair; Mike Gessner, Vice Chair/SIB Liaison representing the Teachers' Fund For Retirement (TFFR) Board; Karol Riedman, Health Dept.; Mike Sandal, representing the Public Employees Retirement System (PERS) Board; and Cindy Ternes, designee from Workforce Safety & Insurance representing elected and appointed officials. The Audit Committee held four regular meetings during the fiscal year ended June 30, 2016.

Activities of the Audit Committee during the past year included:

- The Committee approved a July 1, 2015 through June 30, 2016 Audit Services work plan. Progress was monitored on a quarterly basis. Audit activities included:
    - Twenty-two employer audits including twenty-one <u>TFFR Compliance Audits</u> and one <u>Not In Compliance (NIC) Review</u>.
        - <u>TFFR Compliance Audits</u> are designed to test the accuracy of retirement salaries and contributions reported by employers to determine compliance with the definition of salary as it appears in NDCC 15-39.1-04(9). Service hours and eligibility are also reviewed during the audit process. Audit Services found nineteen employers to be in compliance or generally in compliance and two employers not in compliance with NDCC 15-39.1-04(9). Employers found not in compliance with NDCC 15-39.1-04(9) will undergo a Not In Compliance Review (NIC) once one year of unaudited salary is available.
        - Audit Services conducted one Not In Compliance (NIC) Review. NIC Reviews are designed to verify that the employer implemented recommendations and corrected previous audit finding(s). Audit Services found the employer to be not in compliance with NDCC 15-39.1-04(9). A TFFR Compliance Audit will be completed on the employer in fiscal year 2017.

- Four TFFR File Maintenance Audits were completed. Changes made to TFFR member account data by RIO employees were reviewed and found accurate.
- Annual Benefit Payment Audit was completed. Deaths, purchases of service, refunds, long outstanding checks, and long term annuitants were reviewed to ensure established policies and procedures were adhered to.
- Annual Salary Verification Project was completed. Salaries and contributions reported to TFFR for the prior fiscal year for fifty randomly selected member accounts were verified.
- Executive Limitations Audit was completed. Determined Executive Director/CIO level of compliance with SIB Governance Manual Executive Limitation policies (A-1 through A-11) for the calendar year ending December 31, 2015

- The Committee received the results of the RIO financial audit for the fiscal year ended June 30, 2015 from independent auditors, CliftonLarsonAllen, LLP. They issued an unqualified opinion.

- The Committee reviewed the RIO financial audit plan for fiscal year ended June 30, 2016 with independent auditors, CliftonLarsonAllen, LLP. Discussion included scope and approach for the audit to ensure complete coverage of financial information and review and approval of the Final GASB 68 Schedule Audit Report.

- The Committee adopted a detailed audit work plan, budgeted hours, and TFFR employer risk assessment for fiscal year July 1, 2016 to June 30, 2017.

- The Committee adopted a revised Audit Charter which was subsequently approved by the State Investment Board in May 2016.

The above activities support the Committee's fulfillment of its oversight responsibilities. Please inform the Committee if there are special audits or activities the Board would like to have reviewed.

ND STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING

Friday September 23, 2016 – 1:00 PM
State Capitol – Peace Garden Room
600 East Blvd Ave, Bismarck, ND 58505-0130

AGENDA

1. Call to Order and Approval of Agenda – Chair (committee action)(5 minutes)

2. Approval of May 19, 2016 Minutes – Chair (committee action)(5 minutes)

3. Election of Chair, Vice Chair, and Liaison – Chair (committee action)(10 minutes)

4. Affirmation of Code of Conduct Policy – Cody Schmidt, ND RIO Compliance Officer (information)(5 minutes)

5. 2015 – 2016 Year End Audit Activities Report – Terra Miller Bowley (committee action)(20 minutes)

6. 2015 – 2016 Audit Committee Report to SIB – Terra Miller Bowley (committee action)(10 minutes)

7. 2016 – 2017 First Quarter Audit Activities Update – Terra Miller Bowley (information)(10 minutes)

8. Other – Next SIB Audit Committee Meeting

   Workforce Safety and Insurance (WSI)
   Thursday, November 17, 2016 @ 3:00 PM
   1600 E Century Ave, Bismarck, ND 58503

9. Adjournment

Any individual requiring an auxiliary aid or service should contact the Retirement and Investment Office at (701) 328-9885 at least (3) days prior to the scheduled meeting.

STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING
MINUTES OF THE
MAY 19,2016, MEETING

COMMITTEE MEMBERS PRESENT: Rebecca Dorwart, Chair
Mike Gessner, TFFR Board (TLCF)
Karol Riedman, ND University System
Mike Sandal, PERS Board
Cindy Ternes, Workforce Safety & Insurance

STAFF PRESENT: Connie Flanagan, Fiscal & Invt Ops Mgr
Bonnie Heit, Assist to the Audit Committee
David Hunter, ED/CIO
Bradley Kasper, Intern
Fay Kopp, Dep ED/CRO
Terra Miller Bowley, Suprv Audit Services
Shelly Schumacher, Retirement Program Mgr
Dottie Thorsen, Internal Auditor

GUESTS: Thomas Rey, CliftonLarsonAllen

CALL TO ORDER:

Ms. Dorwart called the State Investment Board (SIB) Audit Committee meeting to order at 3:04 p.m., on Thursday, May 19, 2016, at the State Capitol, Peace Garden Room, Bismarck, ND.

A quorum was present for the purpose of conducting business.

AGENDA:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MR. SANDAL AND CARRIED ON A VOICE VOTE TO APPROVE THE REVISED AGENDA FOR THE MAY 19, 2016, MEETING AS DISTRIBUTED.

AYES: MR. SANDAL, MS. TERNES, MS. RIEDMAN, MR. GESSNER, AND MS. DORWART
NAYS: NONE
MOTION CARRIED

MINUTES:

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. RIEDMAN AND CARRIED ON A VOICE VOTE TO APPROVE THE FEBRUARY 25, 2016, MINUTES AS DISTRIBUTED.

AYES: MR. GESSNER, MR. SANDAL, MS. TERNES, MS. RIEDMAN, AND MS. DORWART
NAYS: NONE
MOTION CARRIED

CLIFTONLARSONALLEN:

Mr. Thomas Rey, CliftonLarsonAllen, reviewed the engagement and work plan for the audit of the financial statements of the Retirement and Investment Office (RIO) for the period of July 1, 2015 to June 30, 2016.

Mr. Rey also reviewed the audit results for GASB 68 schedules (schedules of employer allocations and pension amounts by employer) for the period ending June 30, 2015. An unmodified clean opinion was issued on the schedules.

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. RIEDMAN AND CARRIED BY A VOICE VOTE TO ACCEPT THE GASB 68 SCHEDULES AUDIT REPORT.

AYES: MS. TERNES, MS. RIEDMAN, MR. SANDAL, MR. GESSNER, AND MS. DORWART
NAYS: NONE
MOTION CARRIED

Ms. Miller Bowley introduced Mr. Bradley Kasper. Mr. Kasper is interning with the Retirement and Investment Office for the period of May 16 - August 19, 2016. Mr. Kasper will be primarily working with the Audit Division and will also be assisting the Retirement Services Division approximately one to two days a week.

AUDIT SERVICES ACTIVITIES REPORT:

Ms. Miller Bowley reviewed Audit Service activities for the period of January 1, 2016 - March 31, 2016.

Two compliance audits were re-opened after additional information was received from the employers. The additional information was evaluated and amended reports were issued. Ms. Miller Bowley stated no additional employer audits were completed during the third quarter. Eight audits are currently in progress, which once completed will conclude the end of the third audit cycle. Six audit notifications were sent to employers for the fourth audit cycle. Those audits will began once the third audit cycle is completed.

Ms. Miller Bowley also stated the TFFR File Maintenance audit for the second quarter of fiscal year 2016 is currently in progress and will be concluded prior to the close of the fiscal year.

In February 2016, Audit Services verified the accuracy of retirement salaries, contributions, and service hours reported to TFFR for the prior fiscal year for 50 randomly selected member accounts representing 39 employers. Audit results required corrections to eight member accounts.

The audit on Executive Limitations for calendar year 2015 was issued in February 2016. Audit results indicated the Executive Director/CIO was in compliance with the SIB Governance Manual Executive Limitation policies A-1 through A-11.

Audit Services also administered an employee opinion survey in January 2016, which provides employees the opportunity to share their opinions regarding the physical office environment and resources, job satisfaction, employee morale, compensation, and immediate supervisors.

Audit Services also assisted the SIB Executive Review Committee in the evaluation of the Executive Director/CIO for the period of January 1, 2015 - December 31, 2015 by administering a survey to the SIB, which evaluated the Executive Director/CIO's level of compliance with the Ends and Executive Limitation policies. Survey results were compiled in April 2016.

Ms. Miller Bowley also stated the Audit Services Division continues to pursue professional development opportunities via the Institute of Internal Auditor's local chapter, Central Nodak.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. RIEDMAN AND CARRIED ON A VOICE VOTE TO ACCEPT THE AUDIT ACTIVITIES REPORT FOR THE PERIOD OF JANUARY 1, 2016 - MARCH 31, 2016.

AYES: MR. GESSNER, MS. RIEDMAN, MR. SANDAL, MS. TERNES, AND MS. DORWART
NAYS: NONE
MOTION CARRIED

AUDIT PLAN:

Ms. Miller Bowley reviewed the Audit Services workplan, budgeted hours, TFFR participating employer risk assessment, and employer audit plans for the period of July 1, 2016 - June 30, 2017, as well as future years. Significant changes were made to the workplan in an effort to direct activities that are of greatest concern to the SIB Audit Committee, RIO Management, and the external audit partners. After discussion,

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. RIEDMAN AND CARRIED ON A VOICE VOTE TO ACCEPT THE 2016-17 AUDIT SERVICES WORKPLAN.

AYES: MR. SANDAL, MS. TERNES, MS. RIEDMAN, MR. GESSNER, AND MS. DORWART
NAYS: NONE
MOTION CARRIED

AUDIT CHARTER:

Ms. Miller Bowley stated at the February 25, 2016, Audit Committee meeting the Audit Committee reviewed proposed revisions to the current audit charter and requested that staff submit the charter to legal counsel for review. Legal counsel, Ms. Jan Murtha, completed the review and indicated the charter is acceptable in its current format but also provided suggestions for the Audit Committee's consideration. After discussion,

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. RIEDMAN AND CARRIED ON A VOICE VOTE TO APPROVE THE ADOPTION OF THE CHARTER BASED UPON THE CURRENT DISCUSSION AND AUTHORIZE STAFF TO DO THE WORDSMITHING TO REFLECT THE REVISIONS DISCUSSED PRIOR TO SUBMITTING THE CHARTER TO THE SIB FOR APPROVAL.

AYES: MS. TERNES, MS. RIEDMAN, MR. SANDAL, AND MS. DORWART
NAYS: NONE
MOTION CARRIED
ABSENT: MR. GESSNER

Ms. Miller Bowley also informed the Audit Committee RIO personnel would be formalizing a Fraud Reporting policy, which will be included in the office administrative policy manual. Ms. Miller Bowley inquired of the Audit Committee if language could be included that would site the Audit Committee as a body where a confidential report of fraudulent activity could be made. The Audit Committee concurred that the appropriate language should be included.

AUDIT COMMITTEE MEMBERSHIP:

Ms. Miller Bowley stated the Audit Committee's membership has a one-year term and will expire on June 30, 2016. Ms. Miller Bowley requested the Audit Committee inform her if they would or would not like to continue to serve on the committee by June 1, 2016.

GOVERNMENT FINANCE OFFICERS ASSOCIATION (GFOA):

Ms. Miller Bowley notified the Audit Committee the Retirement and Investment Office has received a Certificate of Achievement for Excellence in Financial Reporting from GFOA. This marks the 18th consecutive year that RIO will have been awarded this honor. Mr. Hunter will publish the news in the office publications that he feels would be appropriate.

OTHER:

The next Audit Committee meeting is scheduled for Friday, September 23, 2016 at 1:00 pm at the State Capitol, Peace Garden Room, Bismarck, ND.

ADJOURNMENT:

With no further business to come before the Audit Committee, Ms. Dorwart adjourned the meeting at 5:04 p.m.

Respectfully Submitted:

Ms. Rebecca Dorwart, Chair
SIB Audit Committee

Bonnie Heit
Assistant to the Audit Committee

Agenda Item III. C.

Section B-10 – FIRST READING

Section D. Ends - INFORMATIONAL

TO: **State Investment Board**

FROM: **Dave Hunter**

DATE: **October 20, 2016**

SUBJECT: **Follow-Up to SIB Annual Governance Manual Review**

In accordance with Section B-7 of the SIB Governance Manual, the Board Planning Cycle should include an "Annual Review of the Governance Manual" each September. The SIB conducted this review last month. A subsequent review of **Section B-10 "Policy Introduction / Amendment Passage",** however, identified some ambiguity which could be eliminated by adopting clarifying language. As such, RIO requests the SIB to complete a "First Reading" of the proposed revision to Section B-10 as highlighted on the following page.

The SIB Governance Manual (section B-7) also states the SIB should conduct an annual review and evaluation of RIO's performance versus the Ends policies each October. In anticipation of completing this "Annual Evaluation of RIO vs. Policy Ends, we have included **Section D. "Ends"** of the SIB Governance Manual for review and consideration by the board.

Policy Type: Governance Process

Policy Type: Policy Introduction / Amendment Passage

New policies or policy amendments may be proposed by the Executive Director or a Board member. All new policies or amendments may be submitted to the Board's Legal Counsel for drafting in the approved style.

Upon request of the Executive Director or a Board member a new policy or amendment shall be placed on the Board's agenda for action as follows:

1. Introduction and first reading. A brief explanation or summary of the new policy or amendment shall be presented to the Board. Upon approval of introduction and first reading, the measure shall be placed on the agenda of the next scheduled meeting of the Board for second reading and adoption. When appropriate, the measure shall be distributed to interested parties.

2. *Second reading and adoption. Interested parties and the public shall be allowed an opportunity to comment on the policy or amendment before final action by the Board. The measure shall take effect immediately following second reading and adoption by the Board, unless a different effective date is stated.*

3. Amendments. Amendments may be proposed at any time before final adoption of the measure. Upon determination by the Board that adoption of an amendment constitutes a substantive change that significantly changes the meaning or effect of the measure, the Board shall continue consideration of second reading and adoption to the next meeting to permit further review and comment.

Emergency measures. The Board may, upon determination that an emergency or other circumstances calling for expeditious action exists, waive the requirement of a second ~~meeting~~ reading and immediately approve ~~second reading and adoption~~ the new policy or amendment following introduction and first reading.

Policy Implemented: February 27, 2009
(Revision proposed on October 28, 2016)

D. *ENDS*

PAGE

Mission D-1

Organizational Beneficiaries D-2

Investment Services D-3

Information on Available Services D-4

Retirement Services D-5

Information on Retirement Services D-6

Customer Satisfaction D-7

EXHIBITS

Organizational Beneficiaries ..... *D-I*
Monitoring Summary ..... *D-II*

POLICY TYPE: ENDS

POLICY TITLE: ***MISSION***

The Retirement and Investment Office exists in order that:

- SIB clients receive investment returns, consistent with their written investment policies and market variables, in a cost effective manner and under the Prudent Investor Rule.
- Potential SIB clients have access to information regarding the investment services provided by the SIB .
- TFFR benefit recipients receive their retirement benefits in a cost effective and timely manner.
- TFFR members have access to information which will allow them to become knowledgeable about the issues and process of retirement.
- SIB clients and TFFR benefit recipients receive satisfactory services from the boards and staff of the office.

Policy Implemented: October 27, 1995.
Amended: January 27, 2012.

POLICY TYPE: ENDS

POLICY TITLE: *ORGANIZATIONAL BENEFICIARIES*

RIO beneficiaries (clients) are those which are statutorily defined and those which have contracted for services under statutory authority. Exhibit D-I lists the organizational beneficiaries.

Policy Implemented: October 27, 1995.

POLICY TYPE: ENDS

POLICY TITLE: *INVESTMENT SERVICES*

The Retirement and Investment Office exists in order that:

1. SIB clients receive investment returns, consistent with their written investment policies and market variables, in a cost-effective manner and under the Prudent Investor Rule.

    A. This "End" will be evaluated based on the following:

        1. Comparison of client fund's rate of return NET of fees and expenses, to that of the client's policy benchmark over a minimum evaluation period of 5 years.

        2. Comparison of the client fund's risk, measured by standard deviation of NET returns, to that of the client's policy benchmark over a minimum evaluation period of 5 years.

        3. Comparison of the risk adjusted performance of the client fund, NET of fees and expenses, to that of the client's policy benchmark over a minimum evaluation period of 5 years.

Policy Implemented: October 27, 1995.
Amended: November 22, 1996, January 27, 2012.

POLICY TYPE: ENDS

POLICY TITLE: *INFORMATION ON AVAILABLE SERVICES*

The Retirement and Investment Office exists in order that:

1. Potential SIB clients have access to information regarding the investment services provided by the SIB.

Policy Implemented: October 27, 1995.

POLICY TYPE: ENDS

POLICY TITLE: ***RETIREMENT SERVICES***

The Retirement and Investment Office exists in order that:

1. TFFR benefit recipients receive their retirement benefits in a cost-effective and timely manner.

    A. Retirement program performance quality will be measured against the *Ends* and retirement policies and administrative rules adopted by the Teachers' Fund for Retirement Board.

Policy Implemented: October 27, 1995.

POLICY TYPE: ENDS

POLICY TITLE: *INFORMATION ON RETIREMENT SERVICES*

The Retirement and Investment Office exists in order that:

1. TFFR members have access to information which will allow them to become knowledgeable about the issues and process of retirement.

Policy Implemented: October 27, 1995.

POLICY TYPE: ENDS

POLICY TITLE: *CUSTOMER SATISFACTION*

The Retirement and Investment Office exists in order that:

1. SIB clients and TFFR benefit recipients receive satisfactory services from the boards and staff of the office.

    A. The quality of services will be assured by direct board contact and by surveying clients and beneficiaries at least annually and promptly addressing identified client/beneficiary concerns.

Policy Implemented: December 1, 1995.

ORGANIZATIONAL BENEFICIARIES

INVESTMENT CLIENTS:

Statutory:

1. Budget Stabilization Fund
2. Cultural Endowment Fund
3. Insurance Regulatory Trust Fund
4. Petroleum Tank Release Compensation Fund
5. Public Employees Retirement System Fund
6. Risk Management Fund
7. State Bonding Fund
8. State Fire and Tornado Fund
9. Teachers' Fund for Retirement
10. The Legacy Fund
11. Workforce Safety & Insurance Fund

Contractual:

1. City of Bismarck Deferred Sick Leave Fund
2. City of Bismarck Employees Retirement Fund
3. City of Bismarck Police Retirement Fund
4. City of Fargo Dome Permanent Fund
5. City of Grand Forks Park District Pension Fund
6. City of Grand Forks Pension Fund
7. ND Association of Counties Fund
8. ND Job Service Retirement Fund
9. Public Employees Retirement System Group Health Insurance Fund
10. Public Employees Retirement System Retiree Health Insurance Fund
11. Board of Medicine
12. Center for Tobacco Prevention & Control

ADMINISTRATIVE CLIENTS:

Statutory:

1. Teachers' Fund for Retirement Beneficiaries

Amended: July 24, 2015

GOVERNANCE POLICY MONITORING SUMMARY				
POLICY	METHOD	RESPONSIBILITY	FREQUENCY	BOARD ACTION
ENDS				
Investment Services	External	Investment Consultant	Annual - FYE	N/A
	Internal	Investment Officer	Quarterly	Accept or Follow-Up
Retirement Services	External	Actuary	Annual - FYE	N/A
	Internal	Retirement Officer	Quarterly	Accept or Follow-Up
EXECUTIVE DIRECTOR LIMITATIONS				
Executive Constraint	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Quarterly	Accept or Follow-Up
Staff Relations	Internal	Executive Director	Quarterly	Accept or Follow-Up
	Internal (External)	Audit Supervisor (SIB)	Annual - CYE	Accept or Follow-Up
Public Relations	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Budgeting	Direct	Board Review	Biennial	Accept or Follow-Up
	External	Governor (State Auditor)	Annual - FYE	N/A
	Internal	Executive Director	Quarterly	Accept or Follow-Up
Financial Condition	External	External Auditor	Annual - FYE	Accept or Follow-Up
	Internal	Executive Director	Quarterly	Accept or Follow-Up
Board Communication	Direct Board Participation	State Investment Board	Annual - CYE	Accept or Follow-Up
Asset Protection	External	External Auditor	Annual - FYE	N/A
	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
Compensation and Benefits	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Conflict of Interest	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Code of Conduct	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up
Unrelated Business Interests	Internal	Executive Director	Annual - CYE	Accept or Follow-Up
	Internal	Audit Supervisor	Annual - CYE	Accept or Follow-Up

Audit Supervisor = Report to State Investment Board Audit Committee with a Summary Report to the SIB

FYE = Fiscal Year End CYE = Calendar Year End N/A = Not Applicable *Amended September 26, 2014*

AGENDA ITEM III. D.

State Investment Board

Annual Evaluation of RIO versus Policy Ends

October 20, 2016

Dave Hunter, Executive Director / CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

SIB Governance Process B.7: Annual Board Planning Cycle

October: Annual Meeting for Evaluation of RIO vs. Policy "Ends"

Background: RIO's "Mission" is defined in SIB Governance Policy D-1 on "Ends".

"The Retirement and Investment Office serves the SIB and exists in order that:

1) SIB clients receive investment returns, consistent with their written investment policies and market variables, in a cost effective investment manner and under the Prudent Investor Rule. (**D-3** See pages 3 to 11 of this presentation for supporting documentation.)
2) Potential SIB clients have access to information regarding the investment services provided by the SIB. (See bullet point 2 on page 3 noting that RIO's website is public.)
3) TFFR benefit recipients receive their retirement benefits in a cost effective and timely manner. (See SIB Audit Committee Report for support and documentation including a TFFR Benefit Payment Cost Efficiency Review performed by Audit Services in fiscal 2015 and 2016.)
4) TFFR members have access to information which will allow them to become knowledgeable about the issues and process of retirement. (TFFR member surveys support this statement.)
5) SIB clients and TFFR benefit recipients receive satisfactory services from the boards and staff of the office." (SIB and TFFR client satisfaction surveys support this statement.)

Summary Statement: The SIB and RIO are achieving its' stated goals and mission based on SIB and TFFR client survey results and noting that 21 out of 22 SIB clients with a 5-year track generated positive excess return for the 5-years ended June 30, 2016, while adhering to prescribed risk metrics. Based on the dollar amount of SIB client assets under management, the success ratio exceeds 99%.

RIO's performance is prudently monitored by the SIB

Mission Accomplished

1) Every SIB client generated positive excess returns for the 5-years ended June 30, 2016, with one exception (for the PERS Retiree Health Insurance Credit Fund) while adhering to approved investment guidelines and noting that management fees declined from 0.65% in fiscal 2013 to less than 0.45% in fiscal 2016.

2) RIO implemented a transparency enhancement initiative in late-2015 which enhanced public access to our website by adding new hyperlinks for our governance manual, audit charter and meeting materials (including our quarterly investment performance reviews by RIO and Callan).

3) RIO's internal audit team has conducted reviews which provide reasonable assurance that TFFR benefit recipients receive their retirement benefits in a cost effective and timely manner.

4) TFFR member surveys support management's belief that members have access to information which will allow them to become knowledgeable about retirement issues and processes.

5) SIB and TFFR client surveys confirm that the boards and staff provide satisfactory services.

SIB Gov. Policy D-2 RIO clients are those which are statutorily defined and those which have been contracted for services under statutory authority.

Investment Performance Evaluation – June 30, 2016

Investment Performance Criteria :

SIB clients should receive investment returns consistent with their investment policies and market variables (pursuant to Section D.3 of the SIB Governance Manual). **The "Ends" for investment performance is evaluated based on comparison of each client's actual rate of return (net of fees), risk levels and risk adjusted returns, versus the client's policy benchmark over 5 years.**

Pension Trust:

Every Pension Trust client posted positive Excess Returns over the last 5-years. Excess Return approximated 0.41% and 0.59% for PERS and TFFR, respectively, for the 5-years ended June 30, 2016.

For the 5-years ended June 30, 2016, PERS generated a net return of approximately 6.49%, while TFFR generated a net return of approximately 6.32%. U.S. Public Equity and Real Estate were the top two performers with net annualized returns of 11% and 13%, respectively, for the last 5-years. U.S. Fixed Income and Infrastructure also performed well with annual returns over 5% (since 6/30/2011). International Equity returns outperformed their benchmark, but underperformed long term expectations with (annualized) returns only approximating 2% (for the last 5 years). International Fixed Income, Timber and Private Equity were disappointing generating a net annual return of only 1%, 2% and 0.4%, respectively, for the last 5-years.

During the last year, PERS and TFFR generated a net investment return of approximately 0.28%. This underperformed PERS and TFFR benchmarks by 0.28% and 0.34%, respectively, largely due to our fixed income portfolio being positioned for a gradual rise in interest rates. In contrast, interest rates actually declined sharply during the past year with 10-year U.S. Treasury rates falling from 2.35% at June 30, 2015, to less than 1.5% at June 30, 2016. Two global equity managers (LSV with $428 million and Epoch with $338 million of assets under management as of June 30, 2016) also materially underperformed in the last year.

Non-Pension Trust:

Every Non-Pension Trust client generated positive Excess Return and positive Risk Adjusted Excess Returns for the 5-years ended June 30, 2016, if applicable, with one exception for the PERS Retiree Health Insurance Credit Fund. WSI generated net returns of 6.5% over the last 5-years and 3.5% over the last year, both of which exceeded the performance benchmark. The Budget Stabilization Fund also performed well and generated above benchmark returns of 1.8% over the last year and 1.9% over the last 5-years. **Risk, as measured by standard deviation, was within approved levels for all SIB clients for the five-years ended June 30, 2016, if applicable.**

Actual asset allocations are within Target ranges and guidelines as confirmed by Callan Associates as of June 30, 2016.

Note: Current year returns are unaudited and subject to change.

Pension Trust Return & Risk Summary – **June 30, 2016**

Returns and Risk: Every Pension Trust client portfolio generated positive "Excess Return" for the 3- and 5-year periods ended June 30, 2016, while adhering to prescribed risk levels (e.g. within 115% of the Policy Benchmark for the 5-years ended 6/30/2016).

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
PERS (Main Plan)					
$ 2,459,388,086					
Total Fund Return - Net	**0.28%**	**6.51%**	**6.49%**	7.7%	**0.09%**
Policy Benchmark Return	0.56%	5.92%	6.08%	7.4%	
Excess Return	**-0.28%**	**0.59%**	**0.41%**	**105%**	
TFFR					
$ 2,082,183,640					
Total Fund Return - Net	**0.27%**	**6.55%**	**6.32%**	8.2%	**0.31%**
Policy Benchmark Return	0.62%	5.95%	5.73%	7.9%	
Excess Return	**-0.34%**	**0.60%**	**0.59%**	**105%**	
BISMARCK EMPLOYEES					
$ 82,441,003					
Total Fund Return - Net	**0.82%**	**6.20%**	**6.46%**	6.7%	**0.21%**
Policy Benchmark Return	1.38%	5.66%	5.95%	6.4%	
Excess Return	**-0.56%**	**0.54%**	**0.52%**	**105%**	

Note: Current year returns are unaudited and subject to change.

Pension Trust Return & Risk Summary – **June 30, 2016**

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
BISMARCK POLICE					
$ 33,983,598					
Total Fund Return - Net	**0.32%**	**6.20%**	**6.52%**	7.3%	**0.24%**
Policy Benchmark Return	0.77%	5.64%	6.02%	7.0%	
Excess Return	**-0.45%**	**0.55%**	**0.50%**	**104%**	
JOB SERVICE PENSION PLAN					
$ 96,588,333					
Total Fund Return - Net	**5.45%**	**7.35%**	**7.33%**	6.0%	**1.01%**
Policy Benchmark Return	2.20%	5.48%	5.70%	5.5%	
Excess Return	**3.24%**	**1.87%**	**1.63%**	**109%**	
CITY OF GRAND FORKS PENSION PLAN					
$ 57,975,758					
Total Fund Return - Net	**0.11%**	**6.44%**	**6.80%**	7.9%	**0.14%**
Policy Benchmark Return	0.56%	6.03%	6.42%	7.7%	
Excess Return	**-0.45%**	**0.41%**	**0.38%**	**104%**	
GRAND FORKS PARK DISTRICT PENSION PLAN					
$ 5,720,245					
Total Fund Return - Net	**0.36%**	**6.80%**	**7.05%**	8.1%	**-0.09%**
Policy Benchmark Return	0.51%	6.33%	6.75%	7.6%	
Excess Return	**-0.15%**	**0.47%**	**0.29%**	**106%**	

Risk Adjusted Excess Returns for the 5-years ended June 30, 2016, were positive for all Pension Trust clients with one exception (of -0.09%) for the Grand Forks Park District Plan (which still generated 0.29% of Excess Return over the past five-years).

Risk Adjusted Excess Return measures actual portfolio results versus a benchmark adjusted by its risk relative to a benchmark portfolio. This metric is positive if excess returns are due to "smart" investment decisions or negative if driven by excess risk.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **June 30, 2016**

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016 (within 1%)	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
WSI					
$ 1,832,104,203					
Total Fund Return - Net	**3.58%**	**6.12%**	**6.56%**	**3.9%**	**0.62%**
Policy Benchmark Return	3.42%	5.29%	4.99%	**3.3%**	
Excess Return	**0.16%**	**0.83%**	**1.57%**		
LEGACY FUND			*4.75 Yrs Ended 6/30/2016*		
$ 3,809,485,177					
Total Fund Return - Net	**1.06%**	**3.65%**	*2.78%*		
Policy Benchmark Return	1.01%	3.06%	*2.05%*		
Excess Return	**0.04%**	**0.59%**	*0.73%*		
BUDGET STABILIZATION					
$ 575,918,381					
Total Fund Return - Net	**1.82%**	**1.88%**	**1.91%**	**0.7%**	**0.56%**
Policy Benchmark Return	1.50%	0.96%	0.69%	**0.5%**	
Excess Return	**0.33%**	**0.92%**	**1.21%**		
FIRE & TORNADO FUND					
$ 24,091,203					
Total Fund Return - Net	**2.67%**	**6.10%**	**6.75%**	**5.3%**	**0.35%**
Policy Benchmark Return	2.58%	5.20%	5.24%	**4.4%**	
Excess Return	**0.09%**	**0.90%**	**1.51%**		

Returns and Risk: All but one Non-Pension Trust client generated positive Excess Return and Risk Adjusted Excess Return for the 5-year period ended June 30, 2016 (if applicable). These returns were achieved while adhering to reasonable risk levels which were generally within 1% of policy levels.

Risk Adjusted Excess Return measures a portfolio's excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to "smart" investment decisions or negative if driven by excess risk.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **June 30, 2016**

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
STATE BONDING FUND					
$ 3,296,372					
Total Fund Return - Net	**3.48%**	**2.92%**	**3.40%**	**1.9%**	**0.95%**
Policy Benchmark Return	3.35%	2.26%	2.10%	**1.7%**	
Excess Return	**0.13%**	**0.66%**	**1.30%**		
INSURANCE REGULATORY TRUST FUND (IRTF)					
$ 1,085,836					
Total Fund Return - Net	**1.46%**	**4.38%**	**4.87%**	**4.5%**	**0.27%**
Policy Benchmark Return	1.40%	3.86%	3.91%	**3.8%**	
Excess Return	**0.06%**	**0.52%**	**0.96%**		
PETROLEUM TANK RELEASE COMPENSATION FUND					
$ 7,149,512					
Total Fund Return - Net	**3.17%**	**2.66%**	**3.06%**	**1.6%**	**0.88%**
Policy Benchmark Return	3.06%	2.06%	1.92%	**1.5%**	
Excess Return	**0.11%**	**0.60%**	**1.14%**		
STATE RISK MANAGEMENT FUND					
$ 6,534,801					
Total Fund Return - Net	**4.46%**	**6.88%**	**7.68%**	**4.8%**	**0.24%**
Policy Benchmark Return	4.26%	5.89%	5.97%	**3.9%**	
Excess Return	**0.20%**	**0.98%**	**1.72%**		

SIB Client Commentary:

The State Bonding Fund, Insurance Regulatory Trust Fund, Petroleum Tank Release Compensation Fund, and State Risk Management Fund have all posted positive Risk Adjusted Excess Returns for the 5-years ended June 30, 2016, including Excess Returns of 0.96% or more.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **June 30, 2016**

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
STATE RISK MANAGEMENT WORKERS COMP FUND					
$ 5,516,177					
Total Fund Return - Net	**4.21%**	**7.40%**	**8.23%**	**5.7%**	**0.34%**
Policy Benchmark Return	4.01%	6.44%	6.58%	**4.7%**	
Excess Return	**0.20%**	**0.96%**	**1.65%**		
ND ASSOCIATION OF COUNTIES FUND (NDACo)					
$ 4,048,863					
Total Fund Return - Net	**2.76%**	**5.63%**	**5.58%**	**5.5%**	**0.51%**
Policy Benchmark Return	2.67%	4.75%	4.13%	**4.6%**	
Excess Return	**0.09%**	**0.88%**	**1.45%**		
CITY OF BISMARCK DEFERRED SICK LEAVE ACCOUNT					
$ 642,265					
Total Fund Return - Net	**3.26%**	**6.10%**	**6.75%**	**4.8%**	**0.27%**
Policy Benchmark Return	3.13%	5.08%	5.05%	**3.8%**	
Excess Return	**0.13%**	**1.02%**	**1.71%**		
FARGODOME PERMANENT FUND					
$ 38,782,721					
Total Fund Return - Net	**1.19%**	**6.76%**	**7.32%**	**7.6%**	**0.59%**
Policy Benchmark Return	1.03%	5.95%	6.03%	**6.8%**	
Excess Return	**0.15%**	**0.82%**	**1.29%**		

SIB Client Commentary:

The State Risk Management Workers Compensation Fund, North Dakota Association of Counties, City of Bismarck Deferred Sick Leave Account and FargoDome Permanent Fund have all posted positive Risk Adjusted Excess Returns for the 5-years ended June 30, 2016, including Excess Returns of 1.29% or more.

Note: Current year returns are unaudited and subject to change.

Non-Pension Trust Return & Risk Summary – **June 30, 2016**

	1 Yr Ended 6/30/2016	3 Yrs Ended 6/30/2016	5 Yrs Ended 6/30/2016	Risk 5 Yrs Ended 6/30/2016	Risk Adj Excess Return 5 Yrs Ended 6/30/2016
CULTURAL ENDOWMENT FUND					
$ 386,452					
Total Fund Return - Net	**2.18%**	**7.94%**	**8.74%**	**8.0%**	**0.46%**
Policy Benchmark Return	2.13%	7.14%	7.38%	**7.2%**	
Excess Return	**0.05%**	**0.80%**	**1.36%**		
BOARD OF MEDICAL EXAMINERS					
$ 2,208,667					
Total Fund Return - Net	**1.63%**				
Policy Benchmark Return	1.32%				
Excess Return	**0.31%**				
PERS RETIREE HEALTH					
$ 101,623,224					
Total Fund Return - Net	**0.72%**	**6.55%**	**6.94%**	**8.6%**	**-0.80%**
Policy Benchmark Return	1.60%	6.97%	7.11%	**7.8%**	
Excess Return	**-0.88%**	**-0.42%**	**-0.17%**		
PERS GROUP INSURANCE					
$ 37,715,356					
Total Fund Return - Net	**1.49%**	**0.51%**	**0.41%**	**0.5%**	**0.04%**
Policy Benchmark Return	1.56%	0.54%	0.36%	**0.5%**	
Excess Return	**-0.07%**	**-0.03%**	**0.05%**		

SIB Client Specific Commentary:

The Cultural Endowment Fund has generated the highest absolute level of net investment returns (of 8.7%) over the last 5-years.

The Board of Medical Examiners became an SIB client two years ago noting they were previously investing in Certificates of Deposit.

PERS Retiree Health absolute returns have been reasonable the last 5-years (6.94%) but disappointing on a risk adjusted basis.(-0.80%). We are re-examining SEI's benchmarks and risk and return profile.

RIO implemented a new asset allocation policy for PERS Group Insurance in late-2105 to enhance returns and lower fees.

Note: Current year returns are unaudited and subject to change.

Investment Fees and Expenses – Preliminary Overview

During the last three-years, investment management fees and expenses as a % of average assets under management declined from **0.65%** in fiscal 2013 to **0.51%** in fiscal 2014 to **0.48%** in fiscal 2015 and to less than **0.45%** in fiscal 2016.

All State Investment Board Clients	Investment Fees and Expenses a	Average "Assets Under Management" b	% of "AUM" a / b
Fiscal Year Ended June 30, 2013	**$45 million**	**$6.9 billion**	**0.65%**
Fiscal Year Ended June 30, 2014	**$44 million**	**$8.6 billion**	**0.51%**
Fiscal Year Ended June 30, 2015	**$48 million**	**$10.1 billion**	**0.48%**
Fiscal Year Ended June 30, 2016	**$46 million**	**$10.9 billion**	**0.42%**

- Based on $10 billion of average assets under management, this **20+ bps** decline between fiscal 2013 and fiscal 2016 translates into approximately $20 million of annual incremental savings.

- RIO will diligently work to prudently manage all SIB client investment fees and expenses, but acknowledges it will be challenging to reduce fees and expenses below 45 bps (0.45%) per annum in future years. Current fiscal years results were materially impacted by low incentive performance fees.

A basis point (or "bp") is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points ("bps") is equivalent to 1%.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Fundamental Investment Beliefs

Strategic Investment Plan

RIO's Mission Statement and Strategic Investment Plan are based on the Fundamental Investment Belief that asset allocation decisions are the main drivers of long-term investment returns, but the prudent use of active management is an important contributor to ensuring our clients attain their stated investment objectives.

Dave Hunter, Executive Director / CIO

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

NDRIO 2015-17 Strategic Investment Plan

Fundamental Investment Beliefs

Asset allocation decisions are the primary driver of investment returns, but the prudent use of active investment management is an important contributor towards ensuring our clients attain their stated investment objectives. SIB clients generated over $220 million of incremental income via the prudent use of active investment management over the past five years including over $120 million during the last three years (net of fees).

Strategic Investment Plan

1. Reaffirm the organizational commitment to our current governance structure including a persistent awareness to the importance of continuing board education.

2. Enhance transparency and understanding of our core goals and beliefs.
    a. Remain steadfast in our commitment to the prudent use of active investment management.
    b. Expand awareness to downside risk management which is essential to achieving our long term investment goals.
    c. Given actual and projected growth of SIB client assets and the heightened public awareness of the Legacy Fund, align our investment platforms to promote greater clarity and efficiency in reporting and implementing client investment policies.

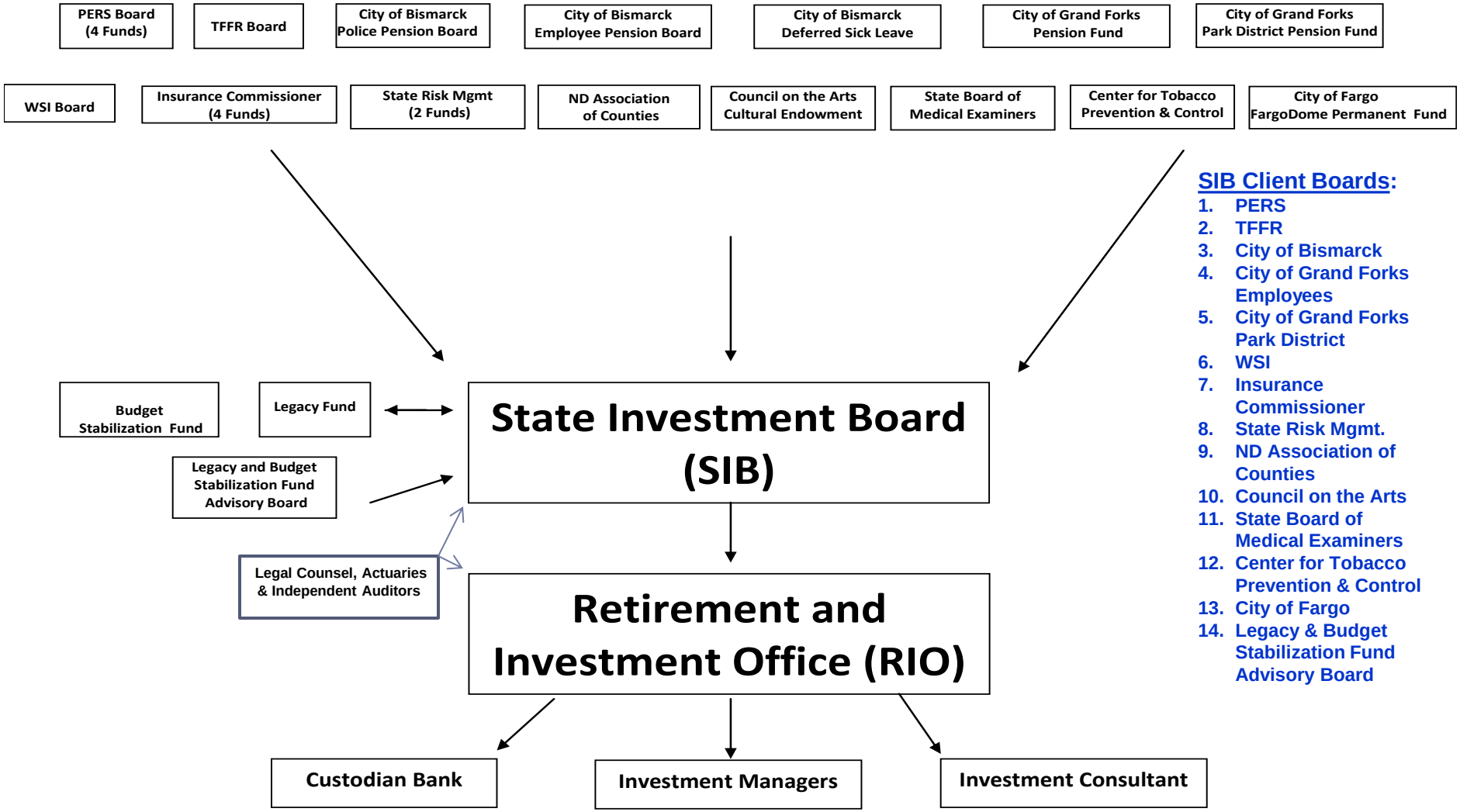
3. Expand RIO's influence and ability to create positive and sustainable change by developing relationships with existing clients, organizations and legislative leaders.
    a. Enhance community outreach to build upon public awareness and confidence.
    b. Develop concise presentations which highlight our overall risk, return and cost control framework including our progress towards attaining our long-term goals.

4. Heighten employee engagement by promoting an open and collaborative work environment while encouraging employee participation in staff meetings, offer more opportunities to impact RIO's change initiatives and improve overall compensation levels.
    a. RIO's ability to continue to deliver strong results is dependent on the combined efforts of our highly valuable team members.

5. Enhance our existing risk management tools and processes by developing a more robust risk management framework utilizing proven risk management solutions with a focus on portfolio construction and downside risk management (or "stress test" scenarios).
    a. A robust risk management framework provides a foundation to understand downside risks and our ability to withstand market corrections in varying stress test scenarios.

6. Evaluate and expand the efficient use of technology in our investment program activities including risk management, compliance monitoring, client satisfaction surveys, website design and communications in order to increase overall efficiency and effectiveness.

State Investment Board Process



SIB Client Boards:

1. PERS
2. TFFR
3. City of Bismarck
4. City of Grand Forks Employees
5. City of Grand Forks Park District
6. WSI
7. Insurance Commissioner
8. State Risk Mgmt.
9. ND Association of Counties
10. Council on the Arts
11. State Board of Medical Examiners
12. Center for Tobacco Prevention & Control
13. City of Fargo
14. Legacy & Budget Stabilization Fund Advisory Board

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 6/30/16 [1]	Market Values as of 6/30/15 [2]
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,459,388,086	2,422,579,595
Teachers' Fund for Retirement (TFFR)	2,082,183,640	2,103,807,355
Job Service of North Dakota Pension		96,392,560
City of Bismarck Employees Pension	82,441,003	81,745,817
City of Grand Forks Employees Pension	57,975,758	59,232,375
City of Bismarck Police Pension	33,983,598	35,889,940
Grand Forks Park District	5,720,245	6,035,136
City of Fargo Employees Pension		1,461
Subtotal Pension Trust Fund	**4,721,692,330**	**4,805,684,242**
Insurance Trust Fund		
Workforce Safety & Insurance (WSI)	1,832,104,203	1,762,659,138
Budget Stabilization Fund	575,918,381	574,011,151
ND Tobacco Control and Prevention	54,366,538	
PERS Group Insurance Account	37,715,356	39,653,686
City of Fargo FargoDome Permanent Fund	38,782,721	41,007,046
State Fire and Tornado Fund	24,091,203	23,416,232
Petroleum Tank Release Compensation Fund	7,149,512	7,162,837
State Risk Management Fund	6,534,801	6,849,214
State Risk Management Workers Comp Fund	5,516,177	6,224,542
ND Association of Counties (NDACo) Fund	4,048,863	3,833,500
State Bonding Fund	3,296,372	3,180,023
ND Board of Medical Examiners	2,208,667	2,174,703
Insurance Regulatory Trust Fund	1,085,836	2,636,662
Bismarck Deferred Sick Leave Account	642,265	872,177
Cultural Endowment Fund	386,452	383,049
Subtotal Insurance Trust Fund	**2,593,847,347**	**2,474,063,959**
Legacy Trust Fund		
Legacy Fund	3,809,485,177	3,328,631,303
Individual Investment Accounts		
PERS Retiree Insurance Credit Fund	101,623,224	97,671,060
Job Service of North Dakota Pension	96,588,333	
Total Assets Under SIB Management	**11,323,236,411**	**10,706,050,563**

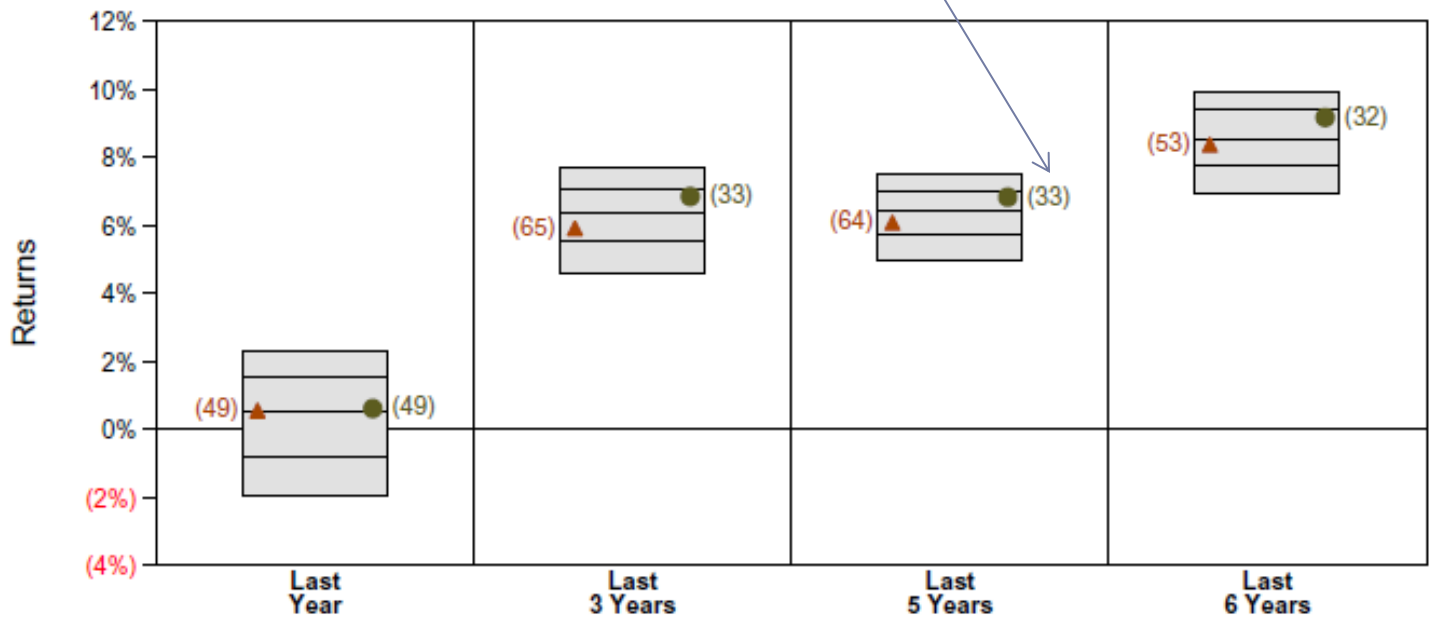
[1] 6/30/16 market values are unaudited and subject to change.

[2] 6/30/15 market values as stated in the Comprehensive Annual Financial Report.

- SIB client assets grew by approximately 5.8% (or $617 million) in the last year with the Legacy Fund creating the largest asset growth of $481 million primarily due to tax collections.
- The Legacy Fund generated a net investment gain of 1.06% for the year ended June 30, 2016, slightly exceeding its performance benchmark. Since inception, the Legacy Fund has generated a net annualized return of 2.78% (over the last 4.75 years) exceeding the performance benchmark of 2.05%.
- The Pension Trust posted a net return of 0.31% in the last year. During the last 5-years, the Pension Trust generated a net annualized return of 6.35%, exceeding the performance benchmark of 5.99%.
- The Insurance Trust generated a net return of 3.12% in the last year. During the last 5-years, the Insurance Trust posted a net annualized return of 4.83%, exceeding the performance benchmark of 3.81%.
- SIB client assets exceeded $11.3 billion as of June 30, 2016, based on unaudited valuations.

PERS "gross" returns were ranked in the 33rd percentile for the 5-years ended June 30, 2016, based on Callan's "Public Fund Sponsor Database".

CAI Public Fund Sponsor Database

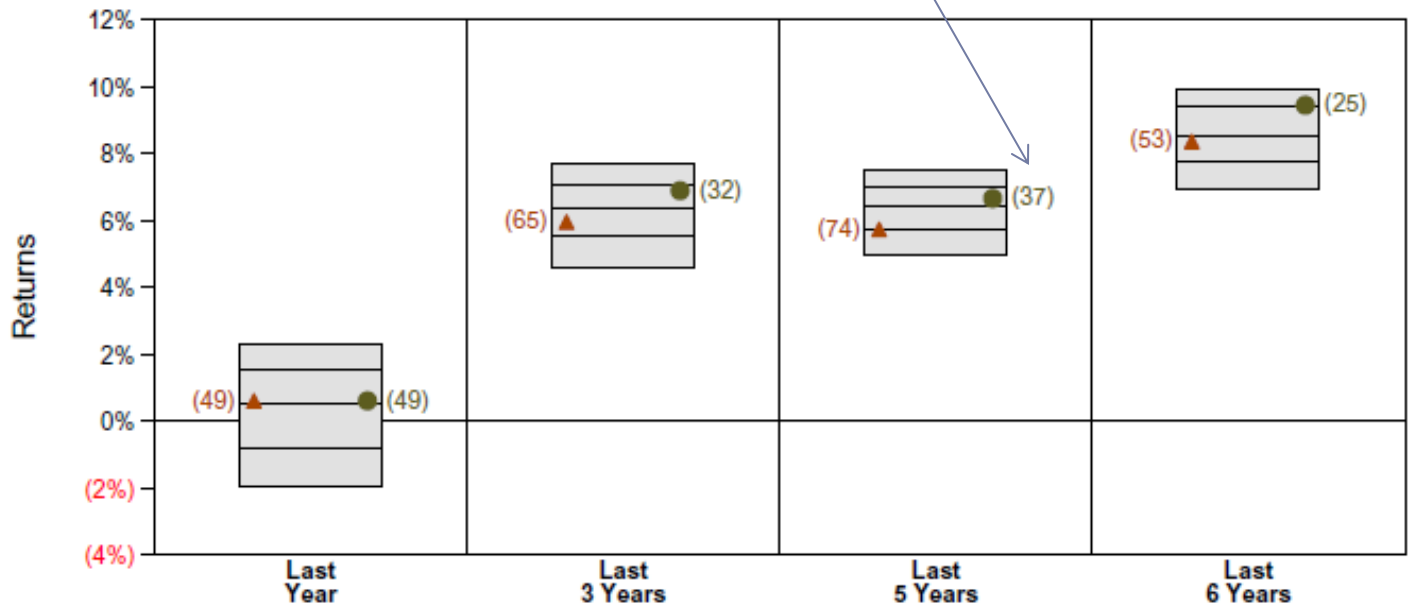


	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
10th Percentile	2.31	7.70	7.53	9.95
25th Percentile	1.56	7.06	7.02	9.39
Median	0.54	6.39	6.42	8.53
75th Percentile	(0.81)	5.51	5.70	7.77
90th Percentile	(1.97)	4.57	4.94	6.96
Total Fund ●	0.61	6.84	6.82	9.17
Policy Target ▲	0.56	5.91	6.08	8.37

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays US HY Corp 2% Cp, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

TFFR's "gross" returns were ranked in the 37th percentile for the 5-years ended June 30, 2016, based on Callan's "Public Fund Sponsor Database".

CAI Public Fund Sponsor Database



	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
10th Percentile	2.31	7.70	7.53	9.95
25th Percentile	1.56	7.06	7.02	9.39
Median	0.54	6.39	6.42	8.53
75th Percentile	(0.81)	5.51	5.70	7.77
90th Percentile	(1.97)	4.57	4.94	6.96
Total Fund ●	0.61	6.89	6.66	9.44
Policy Target ▲	0.61	5.95	5.73	8.36

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Barclays Global Agg ex-US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Barclays US HY Corp 2% Cp, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

Biennial Calendar - Annual Board Planning Cycle

Approved by the SIB on April 24, 2016

Annual Board Planning Cycle
Biennial Agenda

Fiscal 2015-16	July 2015	August	September	October	November	December	January 2016	February	March	April	May	June
	Gov. Offsite - Election of Officers, - Appoint Audit Comm. - Plan Annual Agenda - Plan Board Education	**Annual Investment Performance Review** - Establish Investment Work Plan - Add Invest. Education	**Annual Review of Gov. Manual** *(Done)* - New Board Member Orientation Complete	**Annual Evaluation of RIO vs. *Ends* policies** - Annual Board Evaluation	**Investment Director Report on Investment Work Plan**	No Meeting Scheduled		**Investment Director Report on Investment Work Plan** - Executive Limitations Review	**Review Budget Guidelines for next Biennium**	**Review "Ends" Policies, Biennial Agenda, Strategic Plan and Budget Guidelines**	**Investment Director Report on Investment Work Plan** **ED/CIO Review** - Investment Guidelines	No Meeting Scheduled

Fiscal 2016-17	July 2016	August	September	October	November	December	January 2017	February	March	April	May	June
The SIB Meeting Agenda has not been establised for Fiscal 2016-17	**Gov. Offsite** - Election of Officers, - Appoint Audit Comm. - Plan Annual Agenda - Plan Board Education	**Annual Investment Performance Review** - Establish Investment Work Plan - Add Invest. Education	**Annual Review of Gov. Manual** - New Board Member Orientation Complete	**Annual Evaluation of RIO vs. *Ends* policies** - Annual Board Evaluation	**Investment Director Report on Investment Work Plan**	No Meeting Planned	- Legislative Update	**Investment Director Report on Investment Work Plan** - Executive Limitations Review	**Confirm Budget Guidelines** - Legislative Update	**Review Biennial Agenda, End Policies, Strategic Investment Plan and Budget Guidelines**	**Investment Director Report on Investment Work Plan** **ED/CIO Review** - Investment Guidelines	No Meeting Planned

1.) **SIB Governance Policy B-7 on Governance Process states that "the Board will follow a biennial agenda which (a) completes a re-exploration of Ends policies annually (April) (which is also referred to as "RIO's Mission Statement") and (b) continually improves its performance through attention to board education and to enriched input and deliberation."**
2.) **"In the first three months of the new cycle, the Board will develop its agenda for the ensuing year. Scheduled monitoring will be used to evaluate and adjust the annual agenda as needed."**
3.) **"The Board will identify areas of education and input needed to increase the level of wisdom forethought it can give to subsequent choices. A board education plan will be developed during July and August of each year."**
4.) **Budget Guidelines: RIO will prepare and submit a biennial budget pursuant to OMB guidelines as established by the Governor which will not reduce the level of service provided by RIO. Expenditures for budget items will not exceed the appropriation without approval of the State Investment Board.**

Date: April 14, 2016

SIB Investment Manager Reference Sheet – June 30, 2016

LEGACY FUND	- LEGACY FUND - $ millions	%	
EQUITY	**$ 1,840**	**48.3%**	
U.S. Equity	**$ 1,137**	**29.8%**	
Large Cap:	$ 828	**21.7%**	
L.A.Cap.Enhanc.Grwth	$ 168	**4.4%**	R1000
L.A.Cap.Lrg.Cap Grwth	$ 251	**6.6%**	R1000-G
Parametric Clifton LC	$ 166	**4.4%**	S&P 500
LSV Large Cap Value	$ 243	**6.4%**	R1000-V
Small Cap:	$ 309	**8.1%**	
Parametric Clifton SC	$ 168	**4.4%**	R2000
PIMCO RAE (RAFI)	$ 141	**3.7%**	R2000
International Equity	**$ 703**	**18.5%**	
Wm.Blair ACWI x-US	$ 259	**6.8%**	ACWI-xUS
DFA Int'l. SC Value	$ 71	**1.9%**	World SC xUS
LSV Int'l. Value	$ 303	**8.0%**	EAFE
Vanguard Int'l.	$ 70	**1.8%**	Int'l. S/C
FIXED INCOME	**$ 1,342**	**35.2%**	
BND Declaration Total Ret.	$ 103	**2.7%**	3M LIBOR
Prudential	$ 146	**3.8%**	BC Agg.
SSGA US Gov/Cr. Index	$ 188	**4.9%**	BC Gov/Cr
Wells Cap (BBB/Baa)	$ 420	**11.0%**	Baa Cr.3%
Western Asset	$ 421	**11.0%**	BC Agg.
PIMCO-Disco (Bravo)	$ 64	**1.7%**	BC Agg. (HY)
REAL ASSETS	**$ 619**	**16.2%**	
US TIPS Western TIPS	$ 285	**7.5%**	BC Glob.TIPS
JPMorgan Infrastruct.	$ 80	**2.1%**	CPI-W
Grosvenor Infrastruct.	$ 10	**0.3%**	CPI-W
Invesco Real Estate	$ 117	**3.1%**	NCREIF
JPMorgan Real Estate	$ 127	**3.3%**	NCREIF
CASH	**$ 9**	**0.2%**	
TOTAL	**$ 3,810**	**100%**	

INSURANCE TRUST	INSURANCE TRUST $ millions	%	
EQUITY	**$ 482**	**19.0%**	
U.S. Equity	**$ 319**	**12.6%**	
Large Cap:	$ 240	**9.4%**	
L.A.Cap.Enhanc.Grwth	$ 49	**1.9%**	R1000
L.A.Cap.Lrg.Cap Grwth	$ 73	**2.9%**	R1000-G
Parametric Clifton LC	$ 48	**1.9%**	S&P 500
LSV Large Cap Value	$ 70	**2.8%**	R1000-V
Small Cap:	$ 79	**3.1%**	
Parametric Clifton SC	$ 46	**1.8%**	R2000
PIMCO RAE (RAFI)	$ 33	**1.3%**	R2000
International Equity	**$ 163**	**6.4%**	
Wm.Blair ACWI x-US	$ 60	**2.4%**	ACWI ex-US
DFA Int'l. SC Value	$ 17	**0.7%**	World SC xUS
LSV Int'l. Value	$ 69	**2.7%**	EAFE
Vanguard Int'l.	$ 17	**0.7%**	Int'l. S/C
FIXED INCOME (w/o BSF)	**$ 1,021**	**40.2%**	
Declaration Total Ret.	$ 80	**3.1%**	3M LIBOR
Prudential	$ 111	**4.4%**	BC Agg.
SSGA US Gov/Cr. Index	$ 143	**5.6%**	BC Gov/Cr
Wells Cap (BBB/Baa)	$ 312	**12.3%**	Baa Cr.3%
Western Asset	$ 309	**12.2%**	BC Agg.
PIMCO-Disco (Bravo)	$ 66	**2.6%**	BC Agg. (HY)
Budget Stabilization Fund:	**$ 602**	**23.7%**	
JPMorgan S/T Bonds	$ 277	10.9%	BC G/C 1-3
Babson S/T Bonds	$ 243	9.6%	BC G/C 1-4
BND CD's	$ 82	3.2%	
REAL ASSETS	**$ 400**	**15.7%**	
Western TIPS	$ 113	**4.4%**	BC Glob.TIPS
JPMorgan Infrastruct.	$ 75	**3.0%**	CPI-W
Grosvenor Infrastruct.	$ 21	**0.8%**	CPI-W
Invesco Real Estate	$ 62	**2.4%**	NCREIF
JPMorgan Real Estate	$ 69	**2.7%**	NCREIF
TIR ETO Timber	$ 60	**2.4%**	NCREIF-T
CASH	**$ 35**	**1.4%**	
TOTAL	**$ 2,540**	**100%**	

PENSION TRUST	PENSION TRUST $ millions	%	
EQUITY	**$ 2,699**	**57.2%**	
U.S. Equity	**$ 1,063**	**22.5%**	
Large Cap:	$ 816	**17.3%**	
L.A.Cap.Enhanc.Grwth	$ 191	**4.0%**	R1000
L.A.Cap.Lrg.Cap Grwth	$ 309	**6.5%**	R1000-G
Parametric Clifton LC	$ 172	**3.6%**	S&P 500
North.Trust Enhanced	$ 144	**3.0%**	S&P 500
Small Cap:	$ 247	**5.2%**	
Parametric Clifton SC	$ 134	**2.8%**	R2000
Atlanta Capital	$ 113	**2.4%**	R2000
International or World Equity	**$ 1,476**	**31.3%**	
Wm.Blair ACWI x-US	$ 122	**2.6%**	ACWI ex-US
DFA Int'l. SC Value	$ 72	**1.5%**	World SC xUS
Wellington Int'l SC	$ 81	**1.7%**	Int'l. SC
NT World ex-US Index	$ 255	**5.4%**	World x-US
LSV World Value	$ 429	**9.1%**	MSCI ACWI
EPOCH World	$ 339	**7.2%**	MSCI World
DFA Emerging Mkts.	$ 46	**1.0%**	MSCI EM
Axiom Emerging Mkts.	$ 132	**2.8%**	MSCI EM
Private Equity:	**$ 160**	**3.4%**	
Adams Street Partners	$ 40	0.8%	
Non-ASP	$ 120	2.5%	
FIXED INCOME (w/o BSF)	**$ 1,099**	**23.3%**	
Declaration Total Ret.	$ 86	**1.8%**	3M LIBOR
PIMCO Unconstrained	$ 62	**1.3%**	3M LIBOR
SSGA Long-Treas Index	$ 67	**1.4%**	BC Long Trsy
JPM Agency MBS	$ 114	**2.4%**	BC Mortgage
PIMCO Agency MBS	$ 183	**3.9%**	BC Mortgage
PIMCO-Disco (BravoGS)	$ 143	**3.0%**	BC Agg. (HY)
Loomis Sayles (HY)	$ 186	**3.9%**	BC HY 2%
Brandywine - World	$ 147	**3.1%**	Global Agg.
UBS - International	$ 111	**2.4%**	GlobAggxUS
REAL ASSETS	**$ 866**	**18.3%**	
JPMorgan Infrastruct.	$ 170	**3.6%**	CPI-W
Grosvenor Infrastruct.	$ 45	**1.0%**	CPI-W
Invesco Real Estate	$ 289	**6.1%**	NCREIF
JPMorgan Real Estate	$ 209	**4.4%**	NCREIF
TIR Springbank Teredo	$ 153	**3.2%**	NCREIF-T
CASH	**$ 58**	**1.2%**	
TOTAL	**$ 4,722**	**103%**	

SIB "Total"	$ millions	%
EQUITY	**$ 5,021**	**45%**
- U.S.	**$ 2,519**	**22%**
- US LC	$ 1,884	17%
- US SC	$ 635	6%
- Int'l.	**$ 1,574**	**14%**
- World	**$ 768**	**7%**
Public Equity 44%		
Public Debt 37%		
Private 18%		
Cash 1%		
RE 8%; Debt 4%; Infra 3%; Timber 2%; PE 1.5% (to 3%)		
- P/E	**$ 160**	**1%**
BONDS	**$ 4,064**	**37%**
REAL	**$ 1,885**	**17%**
SEI - Separate Funds		
RHIC	**$ 102**	**60 / 40**
Job Serv	**$ 97**	**40 / 60**
SSGA - Separate Fund		
Tobacco	**$ 54**	**10 / 90**
CASH	**$ 100**	**1%**
TOTAL	**$ 11,323**	**100%**

Investment Manager Rankings by Assets Under Management

		-------- As of June 30, 2016 ---------			Total	
		Equity	Debt	Real Assets	(millions)	
1	Western Asset Mgmt.		$730	$398	$1,128	Western Asset Mgmt.
2	JPMorgan		$391	$730	$1,121	JPMorgan
3	LSV	$ 1,114			$1,114	LSV
4	LA Capital	$ 1,041			$1,041	LA Capital
5	Parametric	$ 734			$734	Parametric
6	Wellls Capital		$732		$732	Wellls Capital
7	PIMCO (RAFI)	$ 174	$452		$626	PIMCO (RAFI)
8	Northern Trust	$ 399	$117		$516	Northern Trust
9	Invesco			$468	$468	Invesco
10	SSGA		$452		$452	SSGA
11	William Blair	$ 441			$441	William Blair
12	Epoch	$ 339			$339	Epoch
13	Declaration (Manulife)		$269		$269	Declaration (Manulife)
14	Prudential		$257		$257	Prudential
15	Babson (MassMutual)		$243		$243	Babson (MassMutual)
16	TIR			$213	$213	TIR
17	DFA	$ 206			$206	DFA
18	SEI	$ 199			$199	SEI
19	Loomis Sayles		$186		$186	Loomis Sayles
20	Brandywine		$147		$147	Brandywine
21	Axiom	$ 132			$132	Axiom
22	Atlanta Capital	$ 113			$113	Atlanta Capital
23	UBS		$111		$111	UBS
24	Vanguard	$ 87			$87	Vanguard
25	Bank of North Dakota		$82		$82	Bank of North Dakota
26	Wellington	$ 81			$81	Wellington
27	Grosvenor			$76	$76	Grosvenor
28	Adams Street	$ 40			$40	Adams Street
29+	Other Private Equity	$ 120			$120	Other Private Equity
		$5,220	$4,169	$1,885	$11.3	billion

NORTH DAKOTA RETIREMENT AND INVESTMENT OFFICE

QUARTERLY MONITORING REPORT

Quarter Ended September 30, 2016

EXECUTIVE LIMITATIONS / STAFF RELATIONS

The Executive Limitation "Staff Relations" deals with the treatment of staff at RIO. The executive director "shall not cause or allow any condition or any communication which is unfair, undignified, or disrespectful." This Executive Limitation lists six specific limitations that range from personnel policies to exit interviews. All the limitations are intended to protect staff from unfair, undignified, or disrespectful treatment by management.

During the past quarter, there were no exceptions to this Executive Limitation.

The Executive Director/CIO also conducted individual meetings with every RIO team member during the second or third calendar quarter of 2016 in connection with annual performance reviews and salary increases. Three full office meetings and three manager meetings were also held during the third calendar quarter of 2016 in order to promote an open and collaborative work environment while enhancing team member communication, awareness and engagement.

RIO is fully staffed as of September 30, 2016.

BUDGETING / FINANCIAL CONDITION

AS OF SEPTEMBER 30, 2016

	2015-2017 BUDGET	ADJUSTED APPROPRIATION	EXPENDITURES BIENNIUM TO DATE ACTUAL	BUDGET AVAILABLE	% BUDGET AVAILABLE	% OF BIENNIUM REMAINING
SALARIES AND BENEFITS	$ 4,340,551.00	$ 4,342,556.31	$ 2,603,975.93	$ 1,738,580.38	40.04%	37.50%
OPERATING EXPENDITURES	990,874.00	990,874.00	423,999.83	566,874.17	57.21%	37.50%
CONTINGENCY	82,000.00	82,000.00	0.00	82,000.00	100.00%	37.50%
TOTAL	$ 5,413,425.00	$ 5,415,430.31	$ 3,027,975.76	2,387,454.55	44.09%	37.50%

EXPENDITURE REPORT

QUARTER ENDED SEPTEMBER 30, 2016

	INVESTMENT	RETIREMENT	QUARTERLY TOTALS	FISCAL YEAR TO - DATE	BIENNIUM TO - DATE
CONTINUING APPROPRIATIONS					
INVESTMENT EXPENDITURES (SEE ATTACHED DETAIL)	$ 8,303,858.24	$ 0.00	$ 8,303,858.24	$ 8,303,858.24	$ 40,565,617.86
MEMBER CLAIMS					
1. ANNUITY PAYMENTS	0.00	47,259,376.96	47,259,376.96	47,259,376.96	226,963,153.16
2. REFUND PAYMENTS	0.00	1,476,301.41	1,476,301.41	1,476,301.41	7,728,870.91
TOTAL MEMBER CLAIMS	0.00	48,735,678.37	48,735,678.37	48,735,678.37	234,692,024.07
OTHER CONTINUING APPROPRIATIONS	43,760.08	69,481.08	113,241.16	113,241.16	590,605.55
TOTAL CONTINUING APPROPRIATIONS	8,347,618.32	48,805,159.45	57,152,777.77	57,152,777.77	275,848,247.48
BUDGETED EXPENDITURES					
1. SALARIES & BENEFITS					
SALARIES	198,883.64	203,705.19	402,588.83	402,588.83	1,925,120.16
OVERTIME/TEMPORARY	0.00	4,185.00	4,185.00	4,185.00	8,021.25
TERMINATION SALARY & BENEFITS	0.00	0.00	0.00	0.00	0.00
FRINGE BENEFITS	58,744.19	78,715.08	137,459.27	137,459.27	670,834.52
TOTAL SALARY & BENEFITS	257,627.83	286,605.27	544,233.10	544,233.10	2,603,975.93
2. OPERATING EXPENDITURES					
DATA PROCESSING	2,124.92	11,327.05	13,451.97	13,451.97	91,854.72
TELECOMMUNICATIONS - ISD	521.27	1,007.14	1,528.41	1,528.41	10,803.59
TRAVEL	1,966.94	7,473.04	9,439.98	9,439.98	49,716.54
IT - SOFTWARE/SUPPLIES	51.54	77.31	128.85	128.85	503.90
POSTAGE SERVICES	698.75	9,083.18	9,781.93	9,781.93	53,920.04
IT - CONTRACTUAL SERVICES	205.57	445.18	650.75	650.75	6,266.95
BUILDING/LAND RENT & LEASES	10,603.32	17,842.08	28,445.40	28,445.40	110,331.60
DUES & PROF. DEVELOPMENT	2,659.35	6,314.65	8,974.00	8,974.00	31,253.50
OPERATING FEES & SERVICES	606.27	516.70	1,122.97	1,122.97	24,497.58
REPAIR SERVICE	28.47	49.53	78.00	78.00	90.50
PROFESSIONAL SERVICES	1,000.71	2,104.29	3,105.00	3,105.00	13,886.00
INSURANCE	48.23	83.92	132.15	132.15	762.92
OFFICE SUPPLIES	(2.94)	47.12	44.18	44.18	2,069.08
PRINTING	719.93	6,036.69	6,756.62	6,756.62	22,265.23
PROFESSIONAL SUPPLIES & MATERIALS	0.00	0.00	0.00	0.00	647.34
MISCELLANEOUS SUPPLIES	56.64	81.13	137.77	137.77	917.96
IT EQUIPMENT UNDER $5000	0.00	0.00	0.00	0.00	2,182.38
OTHER EQUIPMENT UNDER $5000	0.00	0.00	0.00	0.00	472.00
OFFICE EQUIPMENT & FURNITURE UNDER $5000	0.00	0.00	0.00	0.00	1,558.00
TOTAL OPERATING EXPENDITURES	21,288.97	62,489.01	83,777.98	83,777.98	423,999.83
3. CONTINGENCY	0.00	0.00	0.00	0.00	0.00
TOTAL BUDGETED EXPENDITURES	278,916.80	349,094.28	628,011.08	628,011.08	3,027,975.76
TOTAL EXPENDITURES	$ 8,582,775.04	$ 49,084,772.65	$ 57,780,788.85	$ 57,780,788.85	$ 278,876,223.24

INVESTMENT EXPENDITURE DETAIL

FEES PAID DURING THE QUARTER ENDED SEPTEMBER 30, 2016

FOR QUARTER ENDED 6/30/16

PENSION DEVELOPED INTERNATIONAL EQUITY POOL		
Capital Guardian	67,856.19	
Northern Trust	21,115.62	
Wellington	188,138.34	
William Blair	39,429.68	
TOTAL PENSION INTERNATIONAL EQUITY		316,539.83
PENSION GLOBAL EQUITY POOL		
Epoch	543,641.85	
LSV	103,802.00	
LSV - Performance Fee	318,959.00	
TOTAL PENSION GLOBAL EQUITY		966,402.85
PENSION BELOW INVESTMENT GRADE FIXED		
Loomis Sayles		232,299.93
PENSION INVESTMENT GRADE FIXED INCOME POOL		
JP Morgan	58,533.82	
PIMCO	146,028.90	
State Street	6,641.75	
TOTAL PENSION INVESTMENT GRADE FIXED INCOME		211,204.47
PENSION LARGE CAP EQUITY POOL		
Clifton S&P 500 (Performance)	372,195.00	
LA Capital	208,071.45	
TOTAL PENSION LARGE CAP EQUITY		580,266.45
PENSION SMALL CAP EQUITY POOL		
Atlanta Capital	207,293.00	
Clifton (Performance Fee)	612,566.00	
TOTAL PENSION SMALL CAP EQUITY		819,859.00
PENSION REAL ESTATE		
JP Morgan (Special & Strategic)		443,339.29
PENSION INTERNATIONAL FIXED INCOME		
Brandywine	140,725.75	
UBS	85,058.94	
TOTAL PENSION INTERNATIONAL FIXED INCOME		225,784.69
INSURANCE FIXED INCOME POOL		
Prudential	74,635.29	
State Street	12,125.17	
Wells	140,328.44	
Western Asset	104,664.08	
TOTAL INSURANCE FIXED INCOME		331,752.98
INSURANCE LARGE CAP EQUITY POOL		
Clifton (Performance Fee)	92,954.00	
LA Capital	54,351.24	
LSV	52,663.00	
TOTAL INSURANCE LARGE CAP		199,968.24
INSURANCE SMALL CAP EQUITY POOL		
Clifton (Performance Fee)	256,569.00	
PIMCO RAE	21,880.00	
TOTAL INSURANCE SMALL CAP		278,449.00
INSURANCE INT'L EQUITY		
Capital Guardian	38,967.59	
LSV	69,833.00	
William Blair	20,870.15	
TOTAL INSURANCE INT'L EQUITY		129,670.74

INVESTMENT EXPENDITURE DETAIL

FEES PAID DURING THE QUARTER ENDED SEPTEMBER 30, 2016

INSURANCE DIVERSIFIED REAL ASSETS		
Western Asset		38,306.89
INSURANCE SHORT TERM FIXED		
Babson	103,781.01	
JP Morgan	77,912.65	
TOTAL INSURANCE SHORT TERM FIXED		181,693.66
LEGACY FIXED INCOME		
Prudential	98,378.12	
State Street	15,866.43	
Wells	188,494.64	
Western Asset	140,854.94	
TOTAL INSURANCE FIXED INCOME		443,594.13
LEGACY LARGE CAP EQUITY		
Clifton (Performance Fee)	412,028.00	
LA Capital	187,285.35	
LSV	181,362.00	
TOTAL INSURANCE LARGE CAP		780,675.35
LEGACY SMALL CAP EQUITY		
Clifton (Performance Fee)	887,562.00	
PIMCO RAE	93,080.74	
TOTAL INSURANCE SMALL CAP		980,642.74
LEGACY INT'L EQUITY		
Capital Guardian	133,188.27	
LSV	296,145.00	
William Blair	91,469.74	
TOTAL INSURANCE INT'L EQUITY		520,803.01
LEGACY DIVERSIFIED REAL ASSETS		
Western Asset		93,673.84
PERS RETIREE HEALTH INSURANCE CREDIT FUND		
SEI		71,525.40
JOB SERVICE FUND		
SEI		54,355.75
TOBACCO PREVENTION & CONTROL TRUST FUND		
STATE STREET		4,629.98
CUSTODIAN		
Northern Trust		247,996.37
CONSULTANT		
Adams Street	16,816.00	
Callan	100,350.88	
Novarca	17,945.00	
TOTAL CONSULTANT		135,111.88
TOTAL FOR QUARTER ENDED 6/30/16		**8,288,546.47**
FOR QUARTER ENDED 9/30/16		
PENSION CASH		
Northern Trust		15,311.77
TOTAL FOR QUARTER ENDED 9/30/16		**15,311.77**
TOTAL FEES PAID DURING QUARTER ENDED 9/30/2016		**8,303,858.24**

Quarterly Report on Ends
Q1:FY17

Investment Program

Continuing due diligence conducted on the following organizations:

Adams Street (private equity)	Invesco (real estate)
Atlanta Capital (US small cap)	JP Morgan (fixed income)
BlackRock (private equity)	JP Morgan (infrastructure)

Initial due diligence conducted on the following organizations:

Antares (direct lending)	Goldman Sachs (direct lending)
Apollo (opportunistic credit)	Golub (direct lending)
Ares (direct lending, private credit)	HPS (direct lending)
Babson (direct lending)	KKR (direct lending, opportunistic credit)
Bain (direct lending, private credit)	Oaktree (opportunistic credit, direct lending)
Carlyle (direct lending)	PIMCO (private credit)
Crescent (direct lending)	TPG (direct lending)

Following the Board's selection at the March SIB meeting of BlackRock Private Equity Partners to manage a fund-of-one private equity program within the Pension Trust, Staff continued to make progress towards completing a legal contract review, which is expected to be finalized in October.

At the July SIB meeting, the Board approved revised investment policies for three clients: PERS & Highway Patrol, Budget Stabilization Fund, and the Legacy Fund.

Staff is continuing its review of the current fixed income manager structure within the pension trust and recommended changes will be submitted to the Board at an upcoming Board meeting. Staff is currently conducting due diligence on a number of private credit managers and will be advancing finalist candidates to present to the Board.

Staff completed its review of third-party total plan risk management providers with the selection of BlackRock Solutions Aladdin system. Staff began the implementation process in September.

Staff attended meetings with the following entities: TFFR Board, NDPERS Investment Subcommittee, NDPERS Board and the Employee Benefits Programs Committee.

Staff continues to conduct preliminary due diligence on possible managers/products for future consideration.

Staff continues to monitor each client’s asset allocation monthly and makes rebalancing decisions based on rebalancing policy and cash flow requirements.

Quarterly Monitoring Report on TFFR Ends Quarter Ended September 30, 2016

Retirement Program

This report highlights exceptions to normal operating conditions.

- Cavanaugh Macdonald Consulting completed an actuarial audit of TFFR's current actuary, Segal Company. The audit found that the current actuarial valuation results were reasonable and accurate based on the assumptions and methods used. The valuation was also done in accordance with the principles and practices prescribed by the Actuarial Standards Board. While CMC noted a few issues where they believe there are opportunities for improvement, the audit stated they found Segal's work to be an appropriate assessment of the health and funding requirements of TFFR.

- TFFR Board and RIO staff studied retiree in-staff subbing issue, and developed policy to clarify current practice.

- TFFR Board received ITD report regarding state cybersecurity efforts and initiatives.

Agenda Item IV. E.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 24, 2016

SUBJECT: Watch List – Cover Memo

RIO routinely reviews manager performance, organizational structure, investing philosophy/style and fund flows of specific strategies and the firms overall operations. These reviews serve as the basis for Staff recommendations to add, maintain or remove managers from our Watch List.

There are three firms currently on our Watch List including PIMCO (2 strategies), JPMorgan and UBS, all within the Pension Trust's fixed income allocation.

PIMCO	MBS	$184 million	**JPMorgan**	MBS	$123 million
PIMCO	Unconstrained	64 million	**UBS**	International	116 million

PIMCO has been on Watch since October of 2014 largely due to significant organizational changes including the departure of PIMCO's founder, Bill Gross, in late-September of 2014, and the prior departure of Mohamed El-Arian, PIMCO's former CEO. Since then, there have been additional turnover including the latest announcement that Douglas Hodge, who served as PIMCO's CEO since Mohamed El-Arian left in early-2015, will now step aside so as to allow Emmanuel Roman to become its next CEO on November 1, 2016. Mr. Roman was previously CEO of Man Group Plc, the world's largest publicly traded hedge fund manager, since February 2013.

Despite of the above senior management turnover, PIMCO has generally performed in a satisfactory manner with strong results in less liquid strategies (e.g. DiSCO and Bravo) and moderately weak results in the public sector mandates. As a result, RIO has advised the SIB to keep PIMCO's public mandates on Watch the last two years. During this time, the MBS strategy ($184 million) has generally provided benchmark returns (after fees), while the Unconstrained Bond mandate has underperformed expectations (generated net returns of approximately 1.9% per annum) although recent performance has been encouraging with a 5.6% net return for the 1-year ended 9/30/2016. Given this mixed performance, **Staff recommends that both PIMCO strategies remain on Watch until RIO completes its fixed income manager review in the Pension Trust in the next few months.**

The JPMorgan Mortgage Backed Securities (MBS) mandate was placed on Watch at the April 22, 2016, board meeting following the departure Henry Song as Co-Portfolio Manager. This event followed the earlier departure of Doug Swanson as Portfolio Manager in September 2015. Although JPMorgan generally maintains strong bench strength across the board, the departure of two highly tenured portfolio managers within eight months is highly unusual. Since April, RIO has met with the new JPMorgan MBS portfolio management team in addition to Henry Song at his successor firm. Staff continues to believe there is no immediate risk to the overall management of this strategy given JPM's bench strength and relatively conservative risk profile of this specific mandate. As such, **RIO recommends that JPMorgan MBS strategy remain on Watch until Staff completes its fixed income manager review in the next few months.** The JPMorgan MBS strategy has generally provided benchmark performance since inception although recent returns trailed the MBS index by approximately 10 bps over the last year.

UBS International Debt strategy was placed on Watch in early-2015 when trailing 1-, 3-, and 5-year returns were over 30 bps below benchmark. During the last year, UBS performance has significantly improved such that inception to date results are now flat to the index (after fees) and 1-year returns (of 12%) beat the benchmark by 25 bps (after fees). **RIO continues to recommend that UBS remain on Watch until Staff completes it fixed income manger review in the next few months.**

Bloomberg: PIMCO Names Man Group's Chief Emmanuel Roman as Its New CEO

Pacific Investment Management Co. named Emmanuel "Manny" Roman as its next chief executive officer, replacing Douglas Hodge, who presided over a tumultuous time that included the departure of Bill Gross and a plunge in assets at the firm.

Roman, 52, has been CEO of Man Group Plc, the world's largest publicly-traded hedge fund manager, since February 2013. He will assume his new position at PIMCO, owned by German insurer Allianz SE, on Nov. 1, the Newport Beach, California-based firm said in a statement on Wednesday. Hodge will become a managing director and senior adviser.

"This could be a signal that Allianz isn't totally happy with PIMCO despite the progress seen on containing redemptions; they still have lower inflows than peers," said Thomas Seidl, an analyst at Sanford C. Bernstein. "This is going to be more complex than managing a firm with a leaner structure, so it's probably not going to be an easy job."

Roman took over leadership of Man Group at a time of volatility and client withdrawals amid losses posted by one of its main funds. That experience may serve PIMCO, which has suffered management upheaval and lost about 25 percent of its assets since 2013, when it oversaw $2 trillion.

Man Group, which said it had $78.6 billion in funds under management as of March 31, on Wednesday named Luke Ellis to succeed Roman. The shares fell 3.5 percent to 118 pence at 8:18 a.m. in London, bringing their decline this year to 33 percent. Allianz rose less than 0.1 percent in Frankfurt.

PIMCO didn't say how much it will pay Roman. Man Group said in a statement in May that Roman's salary will rise 10 percent to $1.1 million this year, the first increase since 2010, and he was also awarded a $2.5 million cash bonus for last year.

Roman took the helm of Man Group following a 20 percent drop in assets since mid-2011 amid muted demand for investment products. Assets rebounded under his tenure, thanks in part to acquisitions including Newsmith's equities management business and Pine Grove Asset Management.

PIMCO Turmoil

Hodge, 58, was appointed CEO following the abrupt departure in January 2014 of Mohamed El-Erian. In September 2014, Gross, who co-founded the firm in 1971 and built PIMCO Total Return Fund into the world's largest mutual fund, jumped to Janus Capital Group Inc. following a dispute with other managers.

Gross, 72, sued PIMCO last year, alleging he was pushed out so rivals at the firm could divide his bonus. He also said they wanted to diversify beyond PIMCO's debt-trading roots, a strategy Gross's lawsuit compared to the "varied menu at a Cheesecake Factory restaurant" instead of the traditional "bonds and burgers" niche.

PIMCO, under pressure to improve operations and reverse outflows, began recruiting senior executives this year for positions that would bolster its leadership. The firm cut 68 jobs or about 3 percent of its workforce in June, after reducing staff about 5 percent to 2,300 during the year through March. It has also hired 140 employees globally, in positions from portfolio management to business development.

Allianz earlier this year hired Jacqueline Hunt, who previously headed Prudential Plc's U.K. and European division, to lead its asset-management and U.S. life-insurance divisions. She is overseeing a turnaround plan at PIMCO that includes cost cuts and the closing of some funds.

NDSIB Watch List

Data as of 09/30/2016

PIMCO MBS (Pen.)		*$184,437,522*	
	Returns	Index[1]	Excess
1 Year	3.82	3.61	0.21
3 Year	3.59	3.61	(0.02)
Inception*	2.66	2.62	0.04

*Funded 3/31/2012

PIMCO Unconstrained (Pen.)		*$63,625,363*	
	Returns	Index[2]	Excess
1 Year	5.93	0.61	5.32
3 Year	1.90	0.37	1.53
Inception*	2.53	0.36	2.17

*Funded 3/12/2012

JP Morgan MBS (Pen.)		*$123,474,049*	
	Returns	Index[1]	Excess
1 Year	3.65	3.61	0.03
Inception*	3.68	3.52	0.16

*Funded 09/30/2014

UBS International Fixed (Pen.)		*$111,580,334*	
	Returns	Index[3]	Excess
1 Year	12.22	11.67	0.55
3 Year	0.66	0.75	(0.09)
Inception*	6.30	5.99	0.30

*Funded 07/01/1989

[1] Barclays Mortgage Index
[2] Libor 3-Month
[3] Barclays Global Aggregate ex-US

Note: Return data is gross of fee due to data availability

Agenda Item V. A.

INFORMATIONAL ONLY

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 21, 2016

SUBJECT: **Legacy and Budget Stabilization Fund Update**

Budget Stabilization Fund ("BSF"):

RIO transferred $125 million from the Budget Stabilization to the General Fund (via the Treasurer's Office) at the direction of the Governor on October 7, 2016. RIO will transfer an additional $250 million from the BSF to the General Fund on (Friday) October 28, 2016. The balance in the Budget Stabilization Fund will approximate $200 million at October 31, 2016, after reflecting these two transfers of $375 million. Funds for these transfers were raised equally from BSF short-term fixed income accounts with Babson Capital and JPMorgan.

In anticipation of future transfers from the BSF, RIO intends to transfer the BND CD Program to the Legacy Fund over the next few months. There was approximately $79 million outstanding under the BND CD Program as of August 31, 2016. This investment policy decision was previously approved by the SIB and acknowledged by the Legacy and Budget Stabilization Advisory Board earlier this year.

BUDGET STABILIZATION FUND
INVESTMENT PERFORMANCE REPORT AS OF AUGUST 31, 2016

	August-16		
		Allocation	
	Market Value	Actual	Policy
TOTAL BUDGET STABILIZATION FUND	**577,187,441**	**100.0%**	**100.0%**
Bank of ND CD'S	**79,035,296**	**13.7%**	**13.7%**
Northern Trust (1)	13,906,908		
TOTAL CASH EQUIVALENTS	***13,906,908***	***2.4%***	***2.4%***
SHORT TERM FIXED INCOME			
Babson Capital	243,736,813	42.2%	41.9%
JP Morgan	240,508,423	41.7%	41.9%
TOTAL SHORT TERM FIXED INCOME	***484,245,237***	***83.9%***	***83.9%***

NOTE: Monthly returns and market values are preliminary and subject to change.

Legacy Fund:

The Legacy Fund surpassed $4 billion in assets as of August 31, 2016.

LEGACY FUND
INVESTMENT PERFORMANCE REPORT AS OF AUGUST 31, 2016

	August-16			Current FYTD		Prior Year FY16		3 Years Ended 6/30/2016	
		Allocation		Returns		Returns			
	Market Value	Actual	Policy	Gross[1]	Net	Gross[1]	Net	Gross[1]	Net
TOTAL LEGACY FUND	**4,012,627,172**	**100.0%**	**100.0%**	**3.62%**	**3.55%**	**1.31%**	**1.06%**	**3.87%**	**3.65%**
POLICY TARGET BENCHMARK				*3.00%*	*3.00%*	*1.01%*	*1.01%*	*3.06%*	*3.06%*
TOTAL LARGE CAP DOMESTIC EQUITY	***860,336,123***	***21.4%***	***22.0%***	***3.96%***	***3.87%***	***2.72%***	***2.52%***	***N/A***	***N/A***
Russell 1000				***3.95%***	***3.95%***	***2.94%***	***2.94%***		
TOTAL SMALL CAP DOMESTIC EQUITY	***331,836,619***	***8.3%***	***8.0%***	***7.79%***	***7.47%***	***-4.58%***	***-4.99%***	***N/A***	***N/A***
Russell 2000				***7.84%***	***7.84%***	***-6.73%***	***-6.73%***		
TOTAL INTERNATIONAL EQUITY	***786,963,846***	***19.6%***	***20.0%***	***6.73%***	***6.68%***	***-10.46%***	***-10.73%***	***N/A***	***N/A***
MSCI EAFE				***5.14%***	***5.14%***	***-10.16%***	***-10.16%***		
TOTAL FIXED INCOME	***1,396,399,044***	***34.8%***	***35.0%***	***1.79%***	***1.75%***	***6.54%***	***6.40%***	***N/A***	***N/A***
BC Aggregate				***0.52%***	***0.52%***	***6.00%***	***6.00%***		
TOTAL DIVERSIFIED REAL ASSETS	***383,213,235***	***9.6%***	***10.0%***	***2.44%***	***2.41%***	***3.51%***	***3.14%***	***N/A***	***N/A***
Benchmark				***2.33%***	***2.33%***	***2.00%***	***2.00%***		
TOTAL REAL ESTATE	***244,647,044***	***6.1%***	***5.0%***	***0.00%***	***0.00%***	***10.51%***	***9.79%***	***N/A***	***N/A***
NCREIF Total Index				***1.35%***	***1.35%***	***10.64%***	***10.64%***		
TOTAL CASH EQUIVALENTS	***9,231,261***	***0.2%***	***0.0%***	***0.03%***	***0.03%***	***0.13%***	***0.13%***	***0.05%***	***0.05%***
90 Day T-Bill				***0.05%***	***0.05%***	***0.19%***	***0.19%***	***0.09%***	***0.09%***

Initial funding September 7, 2011.
NOTE: Monthly returns and market values are preliminary and subject to change.

RIO is currently working with OMB, Legislative Council and the Office of the Treasurer to develop procedures for the potential transfer of funds from the Legacy Fund to the General Fund. RIO is also working with OMB to revise Legacy Fund earnings estimates for the upcoming biennium. The results of this revised budgeting exercise will be shared with the SIB on October 28, 2016, after additional discussion with OMB budget analysts in the interim.

Legacy Fund "Earnings" as of August 31, 2016:

	"Earnings"	Total Net Income
FY 2012	$ 2,571,475	$ 2,300,225
FY 2013	15,949,089	4,216,026
FY 2014	50,033,655	113, 153,662
FY 2015	95,143,905	99,895,650
FY 2016	65,326,673	45,851,680
FY 2017	40,809,207	135,331,712
Since Inception	**$269,834,004**	**$400,748,955**

"Earnings" as defined for the purposes of section 26 of article X of the Constitution of North Dakota (NDCC 21-10-12).

As of August 31, 2016, the Legacy Fund had received over $3.6 billion in deposits and generated over $400 million of investment income since initial funding on September 7, 2011.

Legacy Fund Returns
Preliminary Investment Update
As of September 30, 2016

Overview:

Weak global equity returns during the last fiscal year were largely responsible for generating disappointing investment results for the Legacy Fund. This resulted in net returns of slightly over 1% for the fiscal year ended June 30, 2016. The 3rd calendar quarter of 2015 was particularly disappointing noting that the plan posted a **- 4.42%** net return (for the quarter ended 9/30/2015).

On a positive note, current fiscal year to date returns through 9/30/2016 are exceeding long-term expectations (of 6.4% per annum). **Based on preliminary unaudited data, Legacy Funds' estimated net return for the 1-year period ended September 30, 2016, is projected to approximate 8% as detailed below:**

Legacy Net Returns	**– Quarter Ended 9/30/15**	**- 4.42%**	
	– Quarter Ended 12/31/15	**+2.46%**	
	– Quarter Ended 3/31/16	**+1.55%**	
	– Quarter Ended 6/30/16	**+1.62%**	
	– Fiscal Year Ended 6/30/16		**+1.06%** actual
	– Quarter Ended 12/31/15	**+2.46%** actual	
	– Quarter Ended 3/31/16	**+1.55%** actual	
	– Quarter Ended 6/30/16	**+1.62%** actual	
	– Quarter Ended 9/30/16	**+2.25%** estimate	
	– One-Year Period Ended 9/30/16		**+8%** estimate

Legacy Fund Performance as of August 31, 2016:

	August 31, 2016 Market Value	Current FYTD Returns Net
TOTAL LEGACY FUND	**$ 4,012,627,172**	***3.5%***

In an attempt to be conservative, Legacy Funds' quarter ended 9/30/16 net return was estimated at **+2.25%** noting actual returns exceeded **3%** through 8/31/16 (see table above) and September's monthly return was estimated to be positive (at less than ½ percent). Please note the 9/30/16 estimates are based on preliminary data which is unaudited and subject to change.

Data estimates refreshed as of October 17, 2016.

Appendix

Legacy Fund
Preliminary Investment Returns
As of August 31, 2016

	August 31, 2016			Current FYTD
		Allocation		Returns
	Market Value	Actual	Policy	Net
TOTAL LEGACY FUND	**$ 4,012,627,172**	*100%*	*100%*	***3.5%***
TOTAL LARGE CAP DOMESTIC EQUITY	*860,336,123*	*21.4%*	*22.0%*	***3.9%***
Russell 1000				***3.9%***
TOTAL SMALL CAP DOMESTIC EQUITY	*331,836,619*	*8.3%*	*8.0%*	***7.5%***
Russell 2000				***7.8%***
TOTAL INTERNATIONAL EQUITY	*786,963,846*	*19.6%*	*20.0%*	***6.7%***
MSCI EAFE				***5.1%***
TOTAL FIXED INCOME	*1,396,399,044*	*34.8%*	*35.0%*	***1.8%***
BC Aggregate				***0.5%***
TOTAL DIVERSIFIED REAL ASSETS	*383,213,235*	*9.6%*	*10.0%*	***2.4%***
Benchmark				***2.3%***
TOTAL REAL ESTATE	*244,647,044*	*6.1%*	*5.0%*	***0.0%***
NCREIF Total Index				***1.4%***
TOTAL CASH EQUIVALENTS	*9,231,261*	*0.2%*	*0.0%*	***0.0%***
90 Day T-Bill				***0.0%***

Notes: Please note the above August 31, 2016 data is preliminary, unaudited and subject to change.
Real Estate investments are only valued at quarter end assumed to be zero in the interim.

Data estimates refreshed as of October 17, 2016.

Agenda Item V. B.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 21, 2016

SUBJECT: Western Asset Management Fixed Income Update – Cover Memo

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Mr. Carl Eichstaedt, Portfolio Manager, and Ms.Susan Signori, Relationship Manager, from Western Asset Management Company (or "WAMCO") will provide a portfolio review and fixed income sector update. WAMCO has managed money for the SIB for over 25 years and currently invests over $1.1 billion on behalf of our clients.

In the Insurance Trust, WAMCO invests $309 million in core fixed income which is benchmarked against the Barclays Aggregate and $113 million in global inflation linked securities benchmarked against the Barclays Global Inflation Linked index.

In the Legacy Fund, WAMCO manages $421 million in core fixed income and $285 million in global inflation linked securities. The Legacy Fund and Insurance Trust mandates use common benchmarks for the related strategies and use identical investment guidelines.

Callan's one page summary of the investment performance of each strategy is provided on the following pages as of June 30, 2016. Carl and Susan will provide updated September 30, 2016, performance data for all strategies in their presentation.

Western Asset Management Company
Period Ended June 30, 2016

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

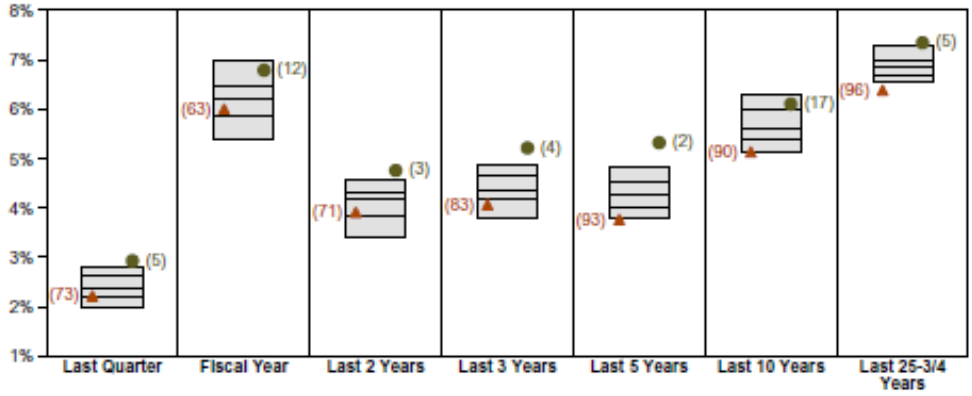
Quarterly Summary and Highlights

- Western Asset's portfolio posted a 2.93% return for the quarter placing it in the 5 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 12 percentile for the last year.
- Western Asset's portfolio outperformed the Barclays Aggregate Index by 0.71% for the quarter and outperformed the Barclays Aggregate Index for the year by 0.79%.

Quarterly Asset Growth

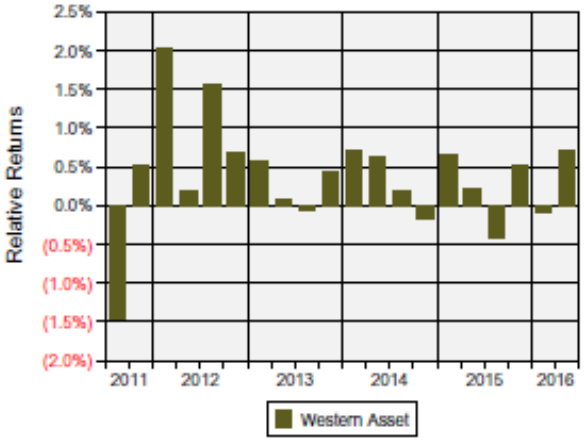
Beginning Market Value	$292,896,294
Net New Investment	$7,397,927
Investment Gains/(Losses)	$8,733,034
Ending Market Value	$309,027,255

Performance vs CAI Core Bond Fixed Income (Gross)

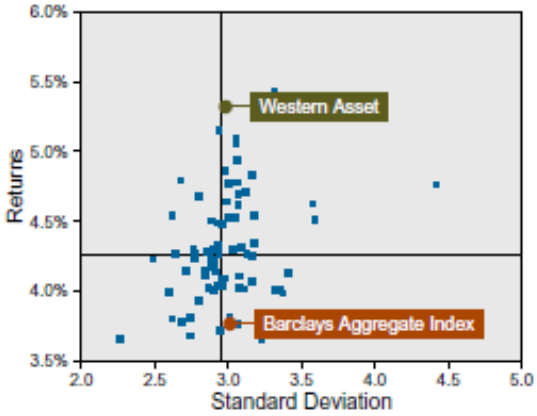


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 25-3/4 Years
10th Percentile	2.80	6.98	4.55	4.86	4.82	6.28	7.27
25th Percentile	2.62	6.46	4.33	4.65	4.54	6.00	7.01
Median	2.36	6.20	4.17	4.37	4.25	5.62	6.86
75th Percentile	2.20	5.85	3.84	4.17	4.02	5.41	6.68
90th Percentile	2.00	5.39	3.42	3.80	3.80	5.11	6.57
Western Asset ●	2.93	6.79	4.76	5.21	5.32	6.10	7.35
Barclays Aggregate Index ▲	2.21	6.00	3.91	4.06	3.76	5.13	6.38

Relative Return vs Barclays Aggregate Index



CAI Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



Western Asset Management Company
Period Ended June 30, 2016

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

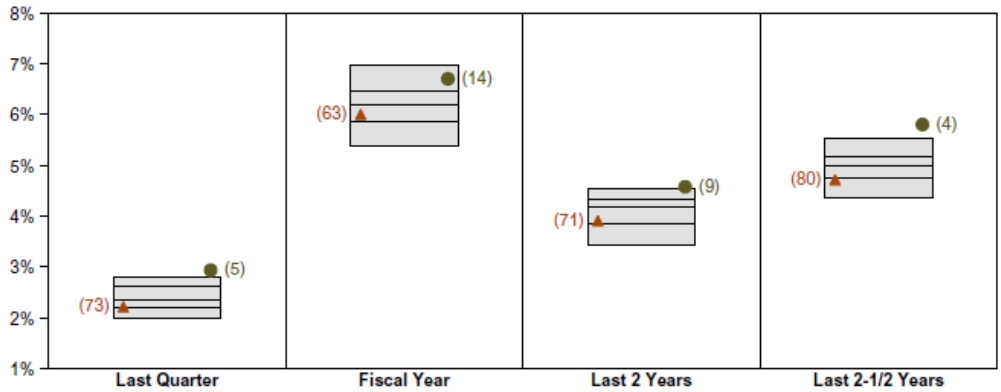
Quarterly Summary and Highlights

- Western Asset's portfolio posted a 2.94% return for the quarter placing it in the 5 percentile of the CAI Core Bond Fixed Income group for the quarter and in the 14 percentile for the last year.
- Western Asset's portfolio outperformed the Barclays Aggregate Index by 0.72% for the quarter and outperformed the Barclays Aggregate Index for the year by 0.70%.

Quarterly Asset Growth

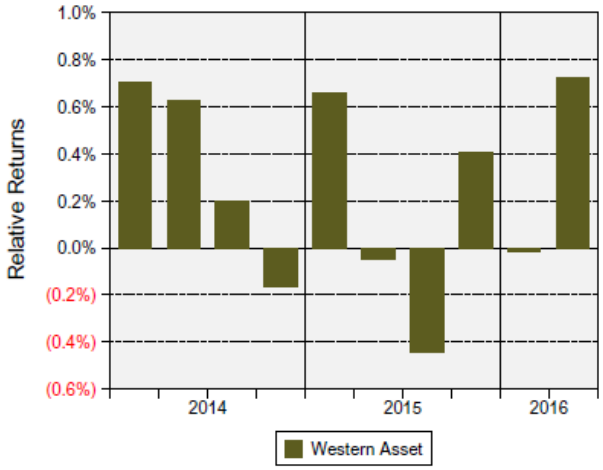
Beginning Market Value	$393,153,177
Net New Investment	$15,864,599
Investment Gains/(Losses)	$11,861,856
Ending Market Value	$420,879,632

Performance vs CAI Core Bond Fixed Income (Gross)

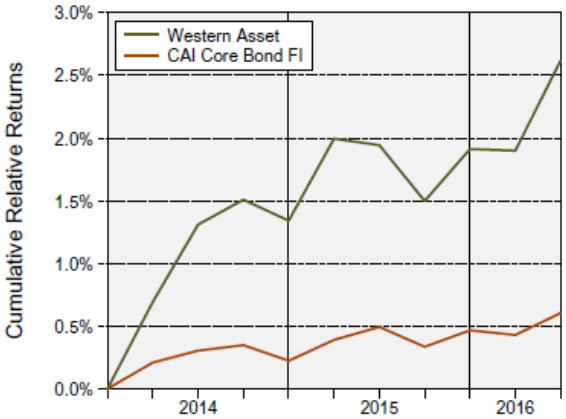


	Last Quarter	Fiscal Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	2.80	6.98	4.55	5.53
25th Percentile	2.62	6.46	4.33	5.19
Median	2.36	6.20	4.17	4.98
75th Percentile	2.20	5.85	3.84	4.76
90th Percentile	2.00	5.39	3.42	4.36
Western Asset ●	2.94	6.70	4.58	5.80
Barclays Aggregate Index ▲	2.21	6.00	3.91	4.72

Relative Return vs Barclays Aggregate Index



Cumulative Returns vs Barclays Aggregate Index



Western TIPS
Period Ended June 30, 2016

Investment Philosophy

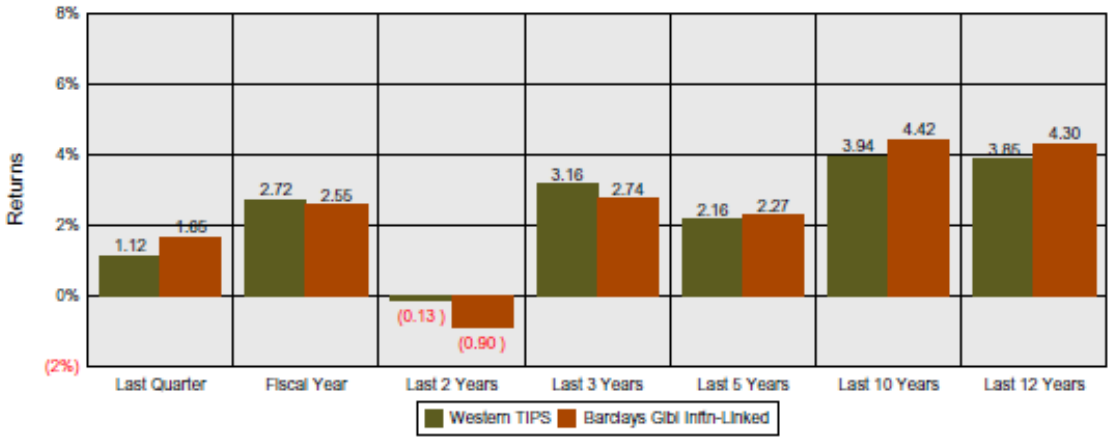
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management. **Barclays US TIPS through 12/31/2009 and Barclays Glolbal Inflation-Linked thereafter.**

Quarterly Summary and Highlights

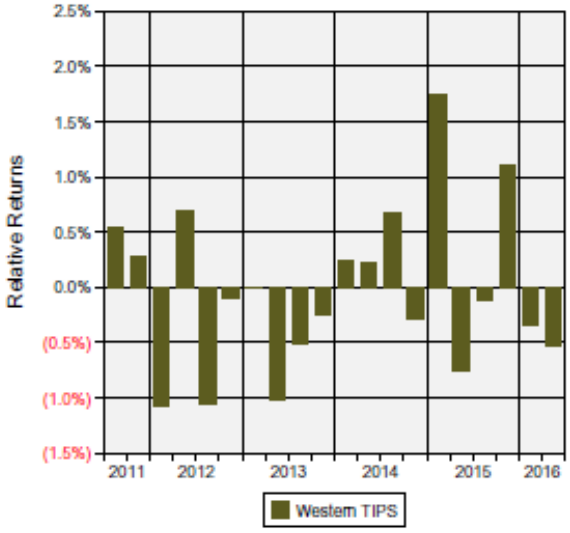
- Western TIPS's portfolio underperformed the Barclays Glbl Inftn-Linked by 0.53% for the quarter and outperformed the Barclays Glbl Inftn-Linked for the year by 0.17%.

Quarterly Asset Growth

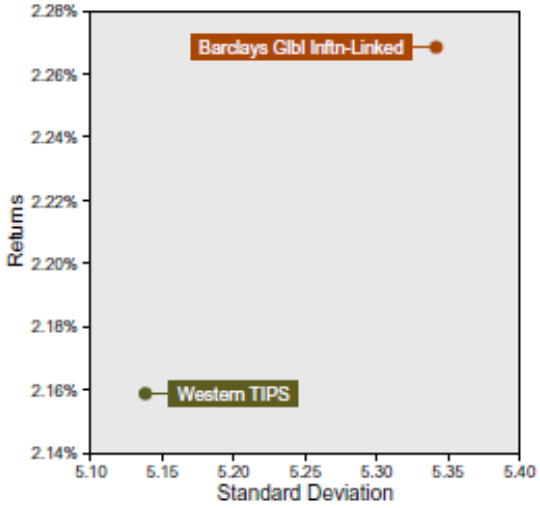
Beginning Market Value	$111,893,066
Net New Investment	$-38,536
Investment Gains/(Losses)	$1,248,944
Ending Market Value	$113,103,474



Relative Return vs Barclays Glbl Inftn-Linked



Annualized Five Year Risk vs Return



Western Asset TIPS
Period Ended June 30, 2016

Investment Philosophy

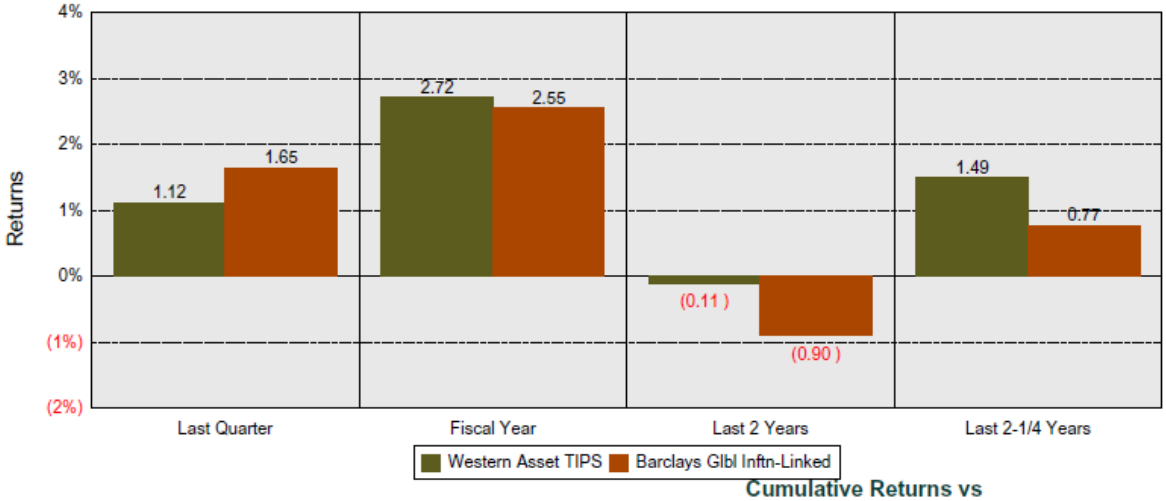
Western Asset's Global Inflation-Linked composite includes portfolios that employ an active, team-managed investment approach around a long-term, value-oriented investment philosophy. Constructed primarily of inflation-indexed securities, these portfolios use diversified strategies in seeking to add value while minimizing risk. Value can be added through country selection, term structure, issue selection, duration management and currency management.

Quarterly Summary and Highlights

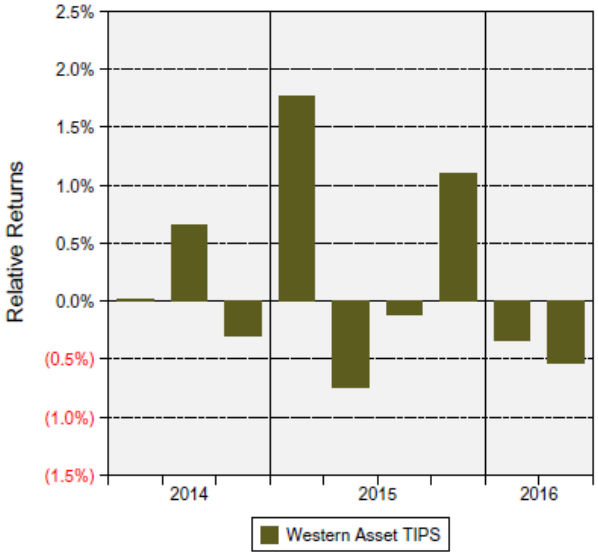
- Western Asset TIPS's portfolio underperformed the Barclays Glbl Inftn-Linked by 0.53% for the quarter and outperformed the Barclays Glbl Inftn-Linked for the year by 0.17%.

Quarterly Asset Growth

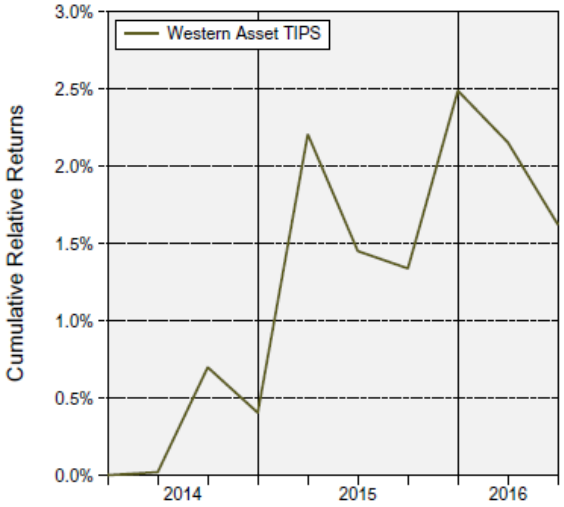
Beginning Market Value	$261,414,825
Net New Investment	$19,909,323
Investment Gains/(Losses)	$3,202,916
Ending Market Value	$284,527,063



Relative Return vs Barclays Glbl Inftn-Linked



Cumulative Returns vs Barclays Glbl Inftn-Linked



North Dakota State Investment Board

October 28, 2016

Carl L. Eichstaedt, CFA

Susan R. Signori

WESTERN ASSET

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I. About Western Asset

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IV. Investment Outlook

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WESTERN ASSET

About Western Asset

About Western Asset

Western Asset is a globally integrated fixed-income manager, sourcing ideas and investment solutions worldwide

Western Asset At a Glance

- Founded in 1971. Independent affiliate of Legg Mason since 1986
- Fixed-income value investors
- $444.5 billion (USD) AUM
  - $365.4 billion (USD) long-term assets
  - $79.1 billion (USD) cash and cash equivalent assets
- 842 employees

Organizational Pillars

- Clients first
- Globally integrated
- Team-based
- Active fixed-income
- Integrated risk management

AUM by Sector – Total $444.5 billion (USD)

Western Asset's Deep Global Integration Allows Us to Source Investment Ideas and Investment Solutions Across Regions

Investment Management
- 125 investment professionals on five continents and in seven offices
- 21 years of average experience
- 38 portfolio and quantitative analysts in portfolio operations

Client Service & Marketing
- 172 staff dedicated to client service
- Specialized teams to meet individual client needs

Risk Management & Operations
- Independent risk management function with 40 professionals including 10 PhDs
- 368 staff dedicated to globally integrated operations

Global Footprint (AUM in USD billions)

Source: Western Asset. As of 30 Sep 16
**Splits time between Hong Kong and Singapore offices*

WESTERN ASSET

Investment Solutions

Western Asset offers a full range of fixed-income products that can be tailored to meet the needs of our clients

Identifying Investment Solutions to Align With Client Objectives and Risk Tolerances

- Protect from rising rates
- Protect from inflation
- Preserve capital
- Diversify globally
- Hedge liabilities
- Enhance income
- Generate tax-free income
- Generate total return

Selected Investment Strategies

Broad Market
- Global Core/Core Full Discretion
- Regional Core/Core Full Discretion
- Regional Intermediate
- Global Sovereign

Credit
- Global Credit
- Investment-Grade Credit
- Global High-Yield
- US Bank Loans
- US High-Yield
- Short-Duration High Income

Unconstrained / Alternatives
- Macro Opportunities
- Total Return Unconstrained
- Global Total Return
- Multi-Asset Credit
- Global Multi-Sector
- Tail Risk Protection

Long Duration / LDI
- Long Duration
- Long Credit
- Liability-Driven Investing

Mortgage / Asset-Backed
- Agency Mortgage-Backed Securities
- Structured Products
- Diversified Loan Opportunities
- MBS Opportunities

Emerging Markets Debt
- EMD Diversified
- EMD Local Currency Sovereign Debt
- EMD USD Corporate Credit
- EMD USD Sovereign
- EMD Opportunities

Inflation-Linked
- US TIPS
- Global Inflation-Linked

US Municipals
- Short Duration Muni
- Intermediate Muni
- Managed Muni

Liquidity / Short Duration
- Money Market
- Enhanced Cash
- Limited Duration

About Western Asset – Clients

Committed to excellence in client service

Representative Client List

Corporate

AGL Resources, Inc.
Alcoa Inc.
Allergan, Inc.
Allied Domecq Pension Fund
American Cast Iron Pipe Company
ArcelorMittal USA Inc.
AT&T Investment Management Corporation
Atmos Energy Corporation
Bayer Corporation
Campbell Soup Company
Chrysler LLC
Clark Enterprises, Inc.
Consolidated Edison Company Of New York, Inc.
Consolidated Rail Corporation
Energy Transfer Partners LP
FairPoint Communications, Inc.
Graphic Packaging International Incorporated
Hawaiian Telcom
Highbury Pacific Capital Corp.
International Paper Company
John Lewis Partnership Pensions Trust
Lennox International, Inc.
LyonRoss Capital Management LLC
Macy's, Inc.
National Grid USA
Nestle USA, Inc.
Nisource, Inc.
Orbital ATK
PCS Administration (USA), Inc
Pensioenfonds Horeca & Catering
PPG Industries
Southern California Edison
Stichting Pensioenfonds DSM-Nederland
The Dun & Bradstreet Corporation
ThyssenKrupp North America, Inc
Unilever United States, Inc.
Unisys Corporation
Vidanova Pension Management

Public / Gov. / Sovereign Wealth

Arkansas Local Police and Fire Retirement System
California State Teachers' Retirement System
City of Grand Rapids
City of Orlando
compenswiss
East Bay Municipal Utility District
Employees' Retirement System of the City of Baton Rouge and Parish of East Baton Rouge
Employees' Retirement System of the State of Rhode Island
Fife Council Pension Fund
Fresno County Employees' Retirement Association
Gloucestershire County Council
Government of Bermuda Public Funds
Hampshire County Council
Indiana State Treasurer's Office
Iowa Public Employees' Retirement System
Kansas Public Employees Retirement System
Los Angeles County Employees Retirement Association
Marin County Employees' Retirement Association
Minnesota State Board of Investment
New Jersey Transit
North Dakota State Investment Board
Ohio Police & Fire Pension Fund
Orange County Transportation Authority
Oregon Investment Council
Phoenix City Employees' Retirement System
Public Employee Retirement System of Idaho
Public School Teachers' Pension and Retirement Fund of Chicago
Salt River Project Agricultural Improvement and Power District
School Employees Retirement System of Ohio
Seattle City Employees Retirement System
State of Ohio Bureau of Workers Compensation
Surrey County Council
Tennessee Valley Authority
Ventura County Employees' Retirement Association
Virginia Retirement System
Washington Metro Area Transit Authority
Wichita (KS) Retirement Systems
Wyoming Retirement System

Multi-Employer / Unions

1199 SEIU Health Care Employees Pension Fund
Alaska Electrical Trust Funds
Automotive Machinists Pension Trust
Bert Bell / Pete Rozelle NFL Player Retirement Plan
Boilermaker Blacksmith National Pension Trust
Carpenters District Council of Kansas City
Directors Guild of America-Producer Pension and Health Plans (DGA - PPHP)
Heating, Piping and Refrigeration Local 602 Pension Fund
Heavy & General Laborers' Locals 472/172
IBEW Local 25
IBEW Local No. 9
International Union of Operating Engineers-Employers Construction Industry Retirement Plan, Locals 302 and 612
Iron Workers Local #11 Benefit Funds
Line Construction Benefit Fund
Major League Baseball Players Benefit Plan
National Asbestos Workers
National Education Association of the United States
New England Healthcare Employees Union, District 1199, AFL-CIO
Operating Engineers Local #428 Trust Funds
Retail Wholesale & Department Store Union
Southern Nevada Culinary & Bartenders Pension Trust Fund
United Association Union Local No. 290 Plumber, Steamfitter & Shipfitter Industry Pension Trust
United Food and Commercial Workers Union Local 919
Western Washington Laborers Employers Pension Trust

Healthcare

Abington Memorial Hospital
Ascension Investment Management
Baptist Healthcare System, Inc.
Baylor Scott & White Holdings
Catholic Health Initiatives
CHRISTUS Health
Kaiser Permanente
LCMC Health
Lehigh Valley Hospital
NorthShore University HealthSystem
Pinnacle Health System
Sisters of Charity of St. Augustine Health System, Inc.
St. George Corporation

Eleemosynary

Abilene Christian University
Baha'i' World Centre
Bill & Melinda Gates Foundation Trust
Commonfund
Creighton University
Domestic & Foreign Missionary Society ECUSA
Indiana University
Saint Louis University
Salk Institute for Biological Studies
United Negro College Fund
University of Southern California
University of Wisconsin Foundation
Voelcker Foundation
Washington College
Washington State University

Insurance

AAA of Northern California, Nevada, & Utah
American Contractors Insurance Group
Anthem, Inc.
Blue Cross Blue Shield of Massachusetts
Catalina Holdings (Bermuda) Ltd
Great-West Life & Annuity Insurance Company
Health Care Service Corporation
Maryland Automobile Insurance Fund
Oil Investment Corporation Ltd.
United Services Automobile Association

Sub-Advisory

Asset Management One Co., Ltd.
AXA
Cathay Securities Investment Trust Co Ltd.
Contassur
Delphi Capital Management Company
GuideStone Capital Management, LLC
Legg Mason, Inc.
Morgan Stanley
Russell Investment Group
SEI Investments Management Corporation
Sumitomo Mitsui Asset Management Company, Limited

As of 30 Sep 16. Please see the Representative Client List Disclosure in the Appendix for more information. All have authorized the use of their names by Western Asset for marketing purposes. Such authorization does not imply approval, recommendation or otherwise of Western Asset or the advisory services provided.

WESTERN ASSET

Philosophy, Process and People

Investment Philosophy

These are the core beliefs that drive our investment decision-making

Long-term fundamental value

- **Markets often misprice securities.** Prices can deviate from fundamental fair value, but over time, they typically adjust to reflect inflation, credit quality fundamentals and liquidity conditions. Consistently investing in undervalued securities may deliver attractive investment returns.
- **We can systematically identify mispricings.** We believe we can identify and capitalize on markets and securities that are priced below fundamental fair value. We do this through disciplined and rigorous analysis, comparing prices to the fundamental fair values estimated by our macroeconomic and credit research teams around the globe.
- **Our portfolios emphasize our highest convictions.** The greater the difference between our view of fair value and markets' pricing, the bigger the potential value opportunity. The greater the degree of confidence in our view of fundamentals, the greater the emphasis of the strategies in our portfolios.

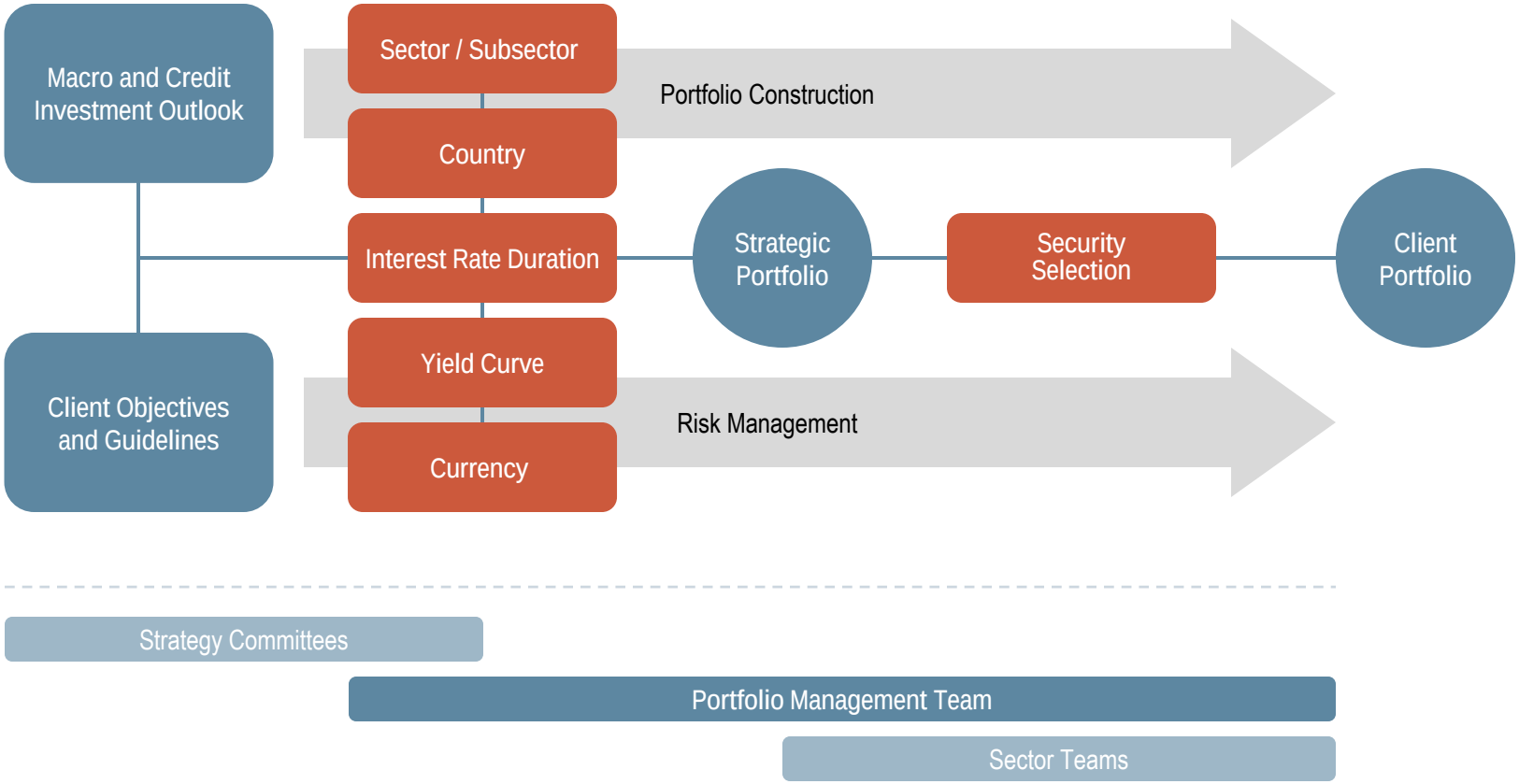
Multiple diversified strategies

- **We seek diversified sources of returns.** Our objective is to meet or exceed our investors' performance objectives within their tolerances for risk. We seek to diversify investments and add value across interest rate duration, yield curve, sector allocation, security selection, country and currency strategies. We deploy multiple diversified strategies that benefit in different environments so no one strategy dominates performance, helping to dampen volatility.

Investment Process

Our time-tested investment process is designed around our value philosophy and our team-based approach.

Western Asset Investment Process and Team Interaction

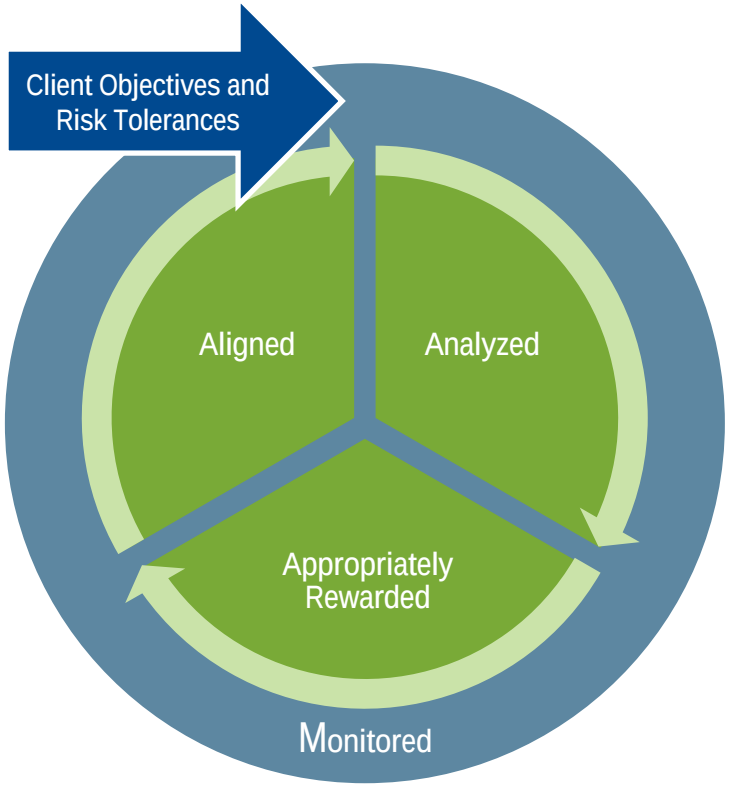


WESTERN ASSET

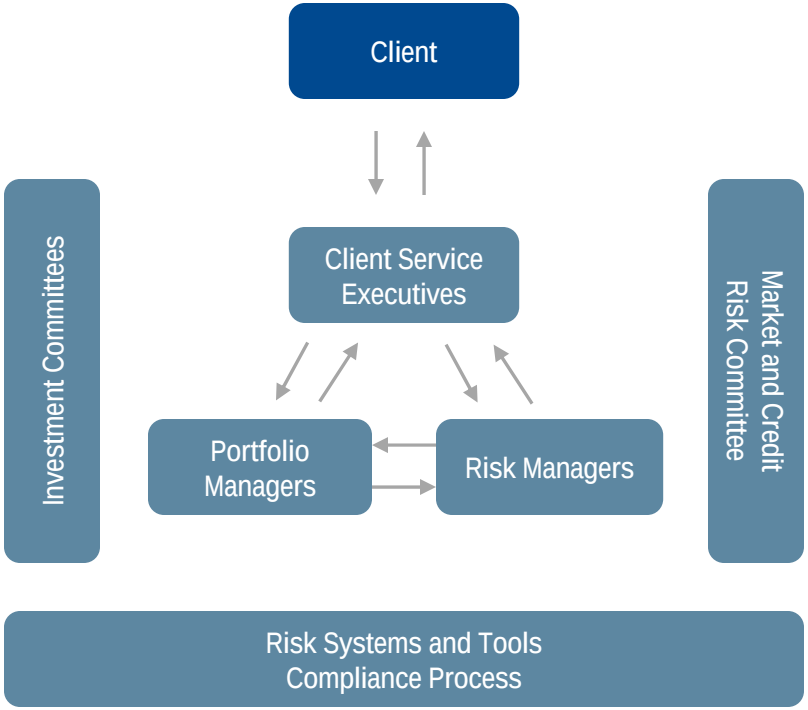
Risk Management

In our culture, effective risk management is critical to successful portfolio management

Integrating risk management into portfolio construction and in the independent review of portfolio risks strengthens its effectiveness.



Risk management is a team effort. Robust communication and escalation procedures underpin the independence and transparency of risk management.



Source: Western Asset

WESTERN ASSET

People

The Core/Core Full Discretion investment team leverages Western Asset's global investment capabilities

Core / Core Full Discretion Investment Team

S. Kenneth Leech
Portfolio Manager / CIO

John L. Bellows, PhD, CFA
Portfolio Manager / Research Analyst

Carl L. Eichstaedt, CFA
Portfolio Manager

Mark S. Lindbloom
Portfolio Manager

Frederick R. Marki, CFA
Portfolio Manager

Julien A. Scholnick, CFA
Portfolio Manager

Portfolio Analysts

Nicholas Mastroianni, CFA
Portfolio Analyst

Ian J. Smith
Portfolio Analyst

Rafael Zielonka, CFA
Portfolio Analyst

Risk Management

Porntawee Nantamanasikarn, PhD
Risk Analyst

Timothy G. Raney, CFA
Risk Analyst

Product Specialists

Travis M. Carr, CFA
Product Specialist

Western Asset Investment Team

Investment Management Professionals
- Chief Investment Officer: S. Kenneth Leech
- Deputy CIO: Michael C. Buchanan
- 125 Investment Professionals on five continents and seven offices, as of September 30, 2016
- 21 years of average experience

Major Investment Committees
- Global Investment Strategy Committee
- Global Credit Committee
- US Broad Strategy Committee
- Global Emerging Markets Strategy Committee
- Unconstrained Asset Allocation Committee

Sector and Regional Teams
- Global credit
- Investment-grade
- High-yield
- Emerging markets
- MBS/ABS
- Long duration
- US municipal
- Liquidity
- Insurance
- US
- Europe
- UK
- Japan
- Asia
- Brazil
- Australia / New Zealand

Independent Risk Management Function
- Chief Risk Officer: Kenneth J. Winston, PhD
- Independent evaluation of strategies and risks in portfolios
- Market and Credit Risk Committee
- 40 investment risk professionals of which 10 are PhDs, across four offices, as of September 30, 2016

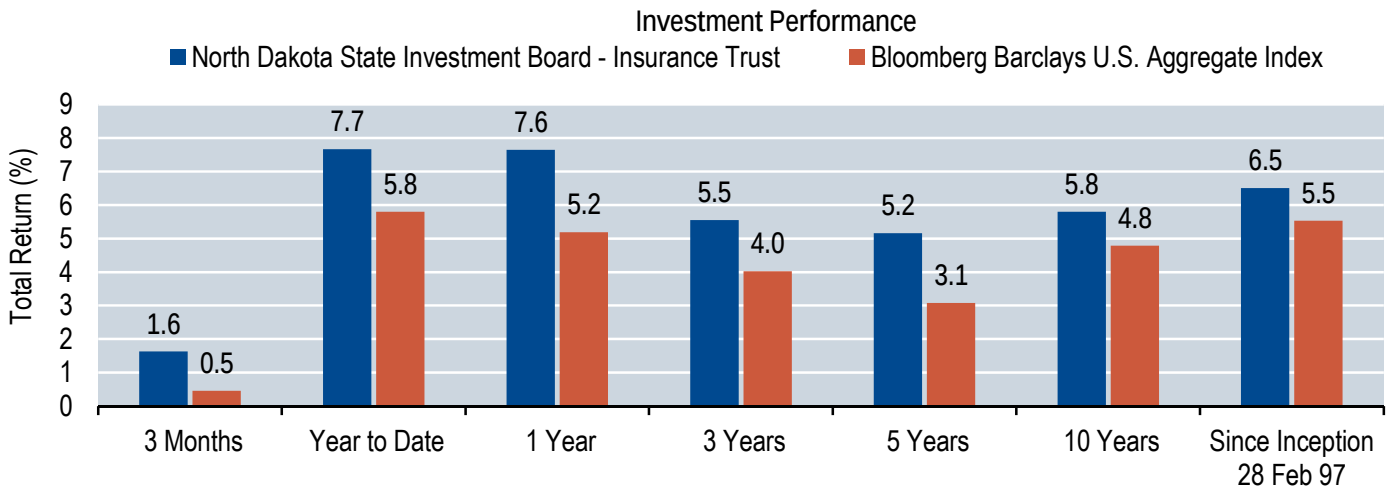
As of 30 Sep 16

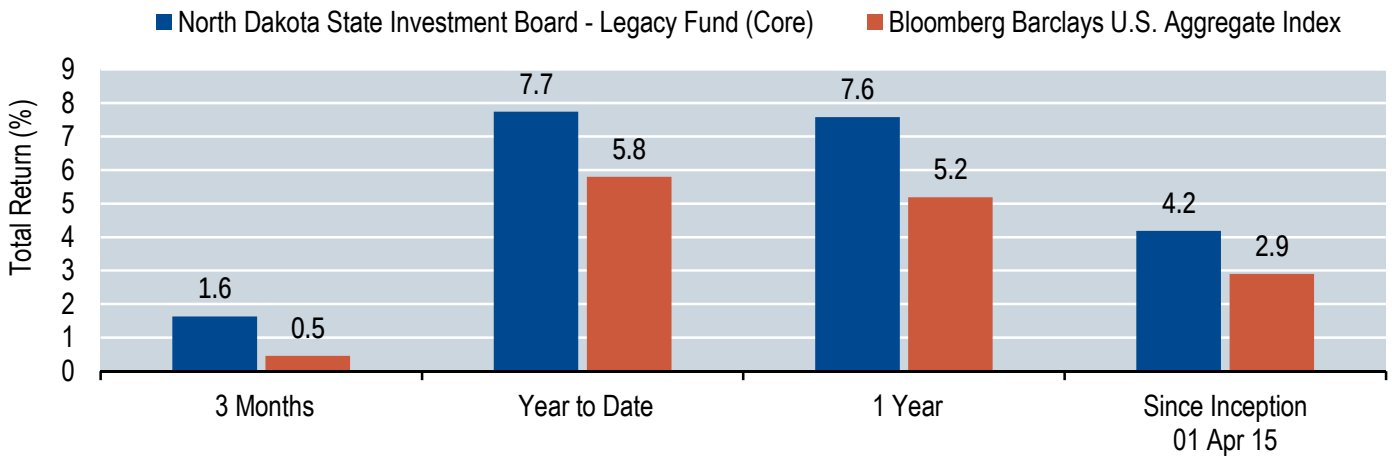
Core Portfolio Review

Investment Results

North Dakota State Investment vs. Bloomberg Barclays U.S. Aggregate Index

September 30, 2016





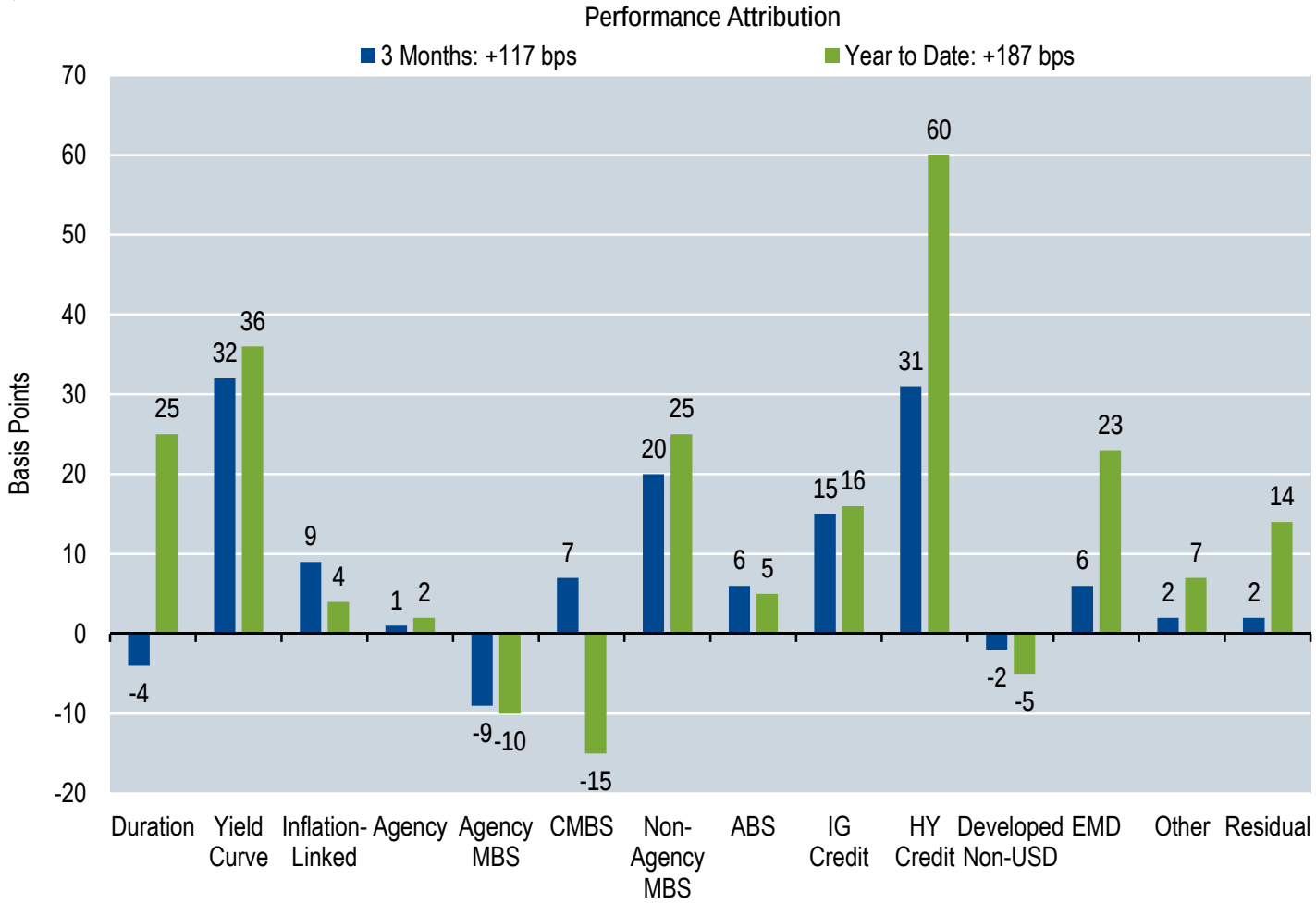
Performance shown is gross of fees. The account's actual return will be reduced by those fees and any other expenses chargeable to the account. The fee schedule for this strategy may be found in Part 2 of Western Asset's Form ADV. As fees are deducted quarterly, the compounding effect will be to increase the impact of the fees by an amount directly related to the gross account performance. For example, on an account with a 1% annual fee, if the gross performance were 10%, the compounding effect of the fees would result in a net performance of approximately 8.93%. Returns for periods greater than one year are annualized. Returns since inception are as of the indicated close of business day.

WESTERN ASSET

Attribution Analysis

North Dakota State Investment Board – Insurance Trust vs. Bloomberg Barclays U.S. Aggregate Index

September 30, 2016



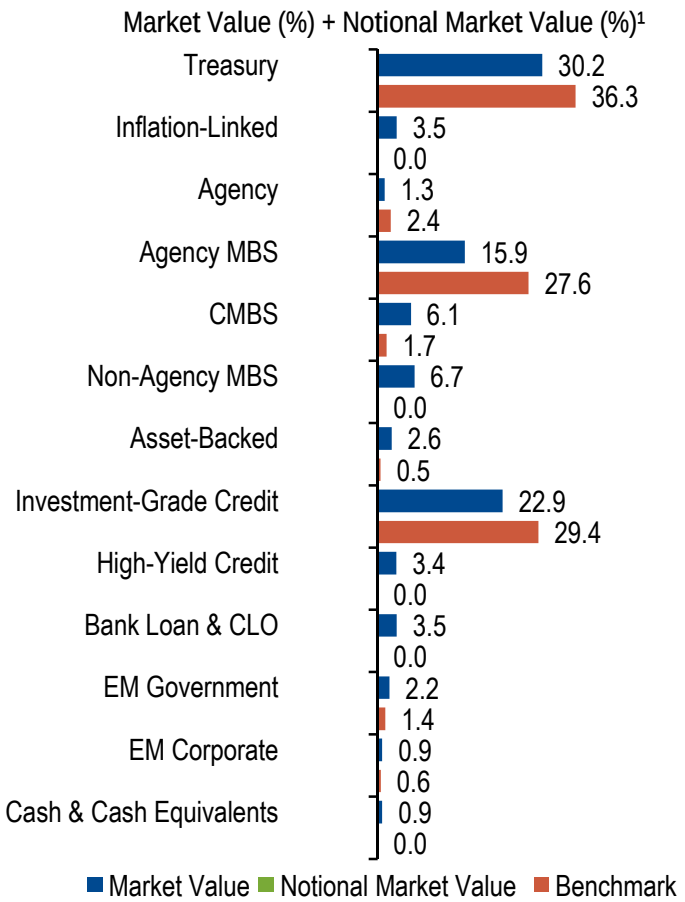
Western Asset believes that attribution is not a hard science, but rather a means of evaluating strategies to determine their relative impact on overall portfolio performance. The intent of the manager, therefore, is critical in the evaluation of different strategies, and the return attribution for any sector or strategy could be over or understated due to its inclusion in another component. Data may not sum to total due to rounding.

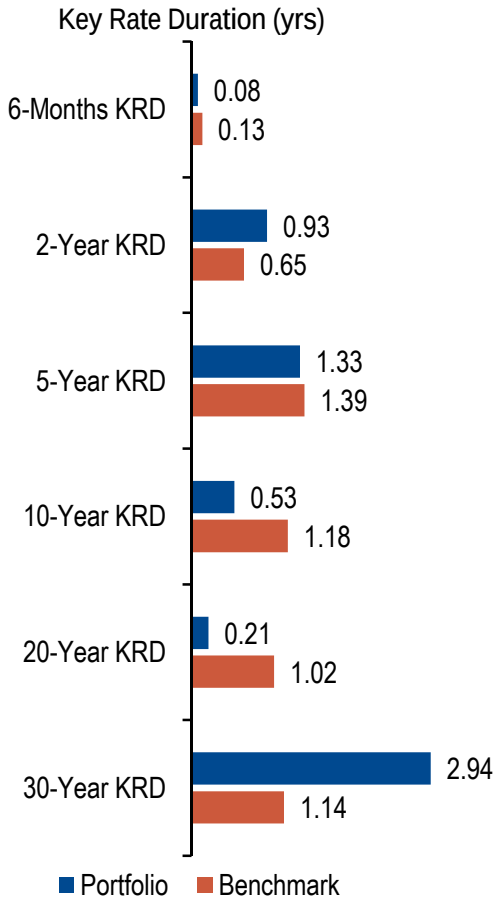
WESTERN ASSET

Sector Exposure

North Dakota State Investment Board – Insurance Trust vs. Bloomberg Barclays U.S. Aggregate Index

September 30, 2016





Yield	
Portfolio:	2.86
Benchmark:	1.96

Total Duration	
Portfolio:	6.01
Benchmark:	5.50

¹Notional market value represents derivatives notional market value excluding interbank derivatives.

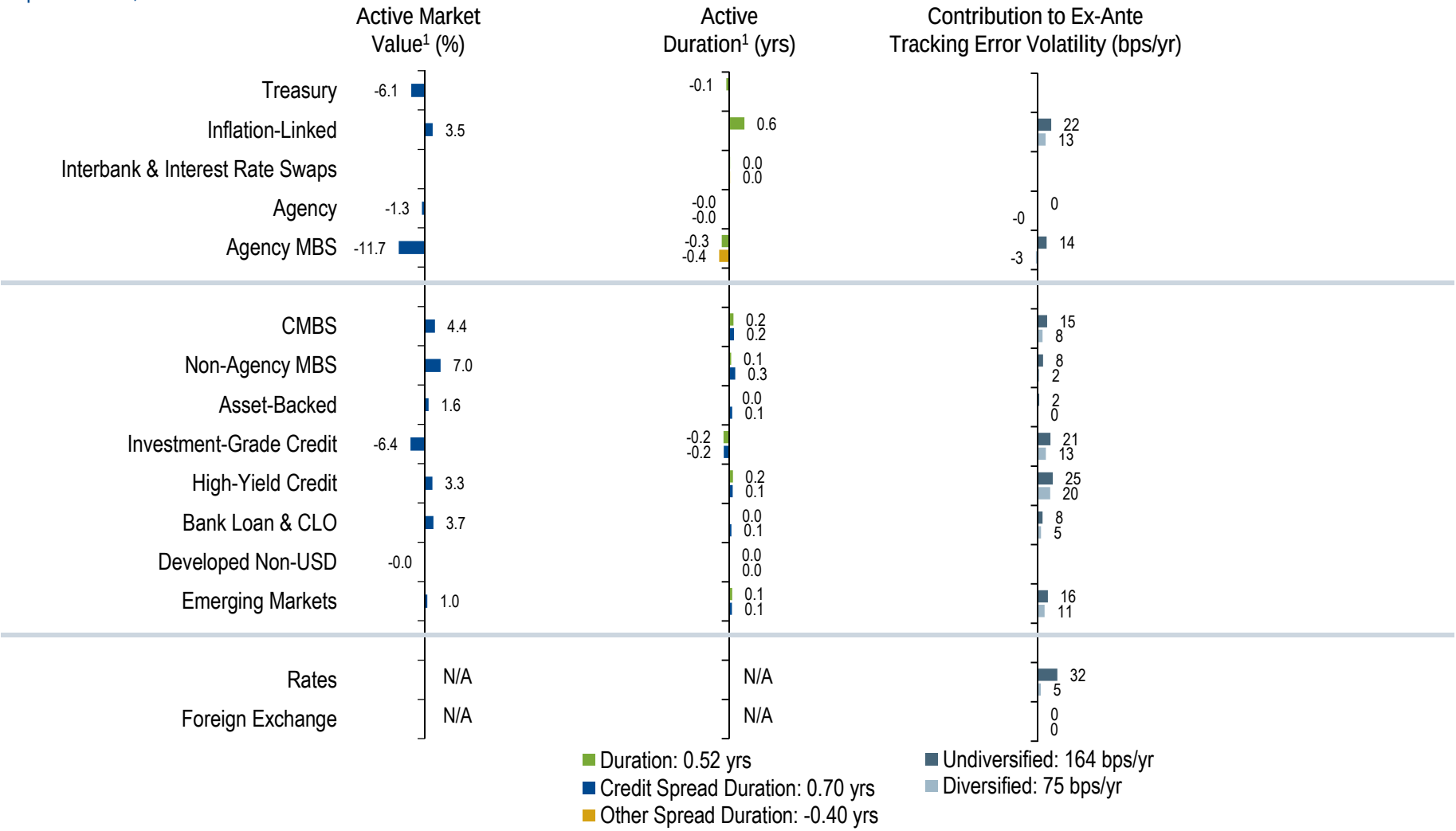
Note: Sector exposure includes look-through to any underlying commingled vehicles if held. All weightings are a percentage of total market value. A negative cash position may be reported, which is primarily due to the portfolio's unsettled trade activity. Data may not sum to 100% due to rounding. The benchmark does not provide an allocation to the "Emerging Markets" sector. The emerging market sector allocation shown for the benchmark above is based on Western Asset's emerging market countries definition for comparison purposes..

WESTERN ASSET

Portfolio Positioning

North Dakota State Investment Board – Insurance Trust vs. Bloomberg Barclays U.S. Aggregate Index

September 30, 2016



Note: Sector exposure includes look-through to any underlying commingled vehicles if held. Market values are on a cash basis and a percentage of total market value. Market values may not sum to 100% (or 0% if reported relative to benchmark) due to rounding and cash not being included. Tracking error contribution from each security partition is the residual risk after taking out rates and FX risks at the portfolio level. Reported duration is option adjusted. "Other" Spread Duration is spread duration resulting from spread risk other than credit/default such as break-even inflation, swap spread, and prepayment. "Diversified" tracking error takes into account expected benefits of diversification, while "undiversified" tracking error assumes that all segments of a portfolio are perfectly correlated so that the portfolio is denied the expected benefits of diversification.

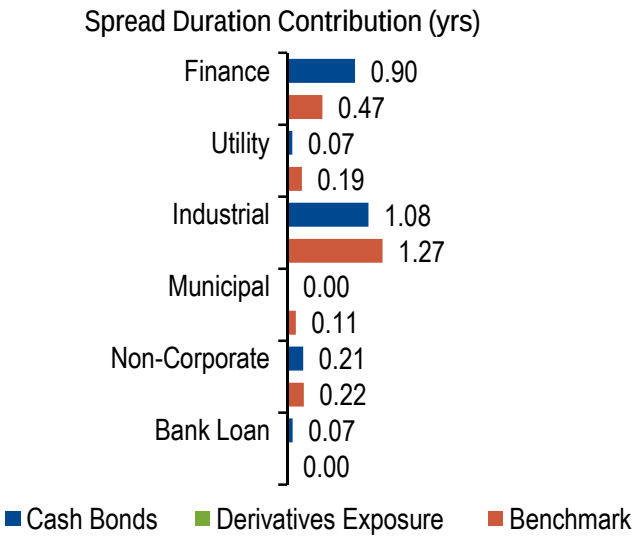
[1]Values relative to the index.

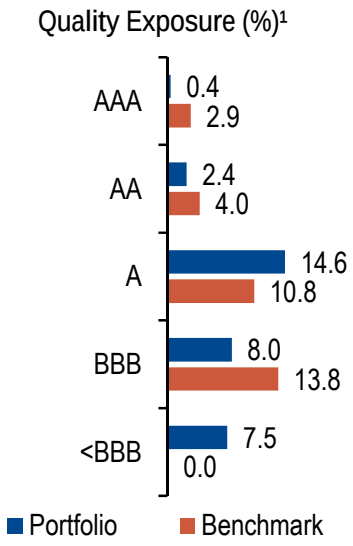
WESTERN ASSET

Credit Sector Exposure

North Dakota State Investment Board – Insurance Trust vs. Bloomberg Barclays U.S. Aggregate Index

September 30, 2016





32.8% of Portfolio

Credit Spread Duration

Portfolio:	2.33
Benchmark:	2.26

Bloomberg Barclays U.S. Credit Index Excess Returns

	2015	2016*
Finance	0.48%	1.08%
Utility	-2.03%	2.61%
Industrial	-2.67%	4.11%
Non-Corporate	-2.02%	1.92%

*As of 30 Sep 16

	2015	2016*
AAA	-0.07%	0.21%
AA	-0.04%	1.39%
A	-0.34%	1.89%
BBB	-3.65%	4.64%
<BBB**	-5.77%	11.31%

*As of 30 Sep 16;**Bloomberg Barclays U.S. High-Yield Index

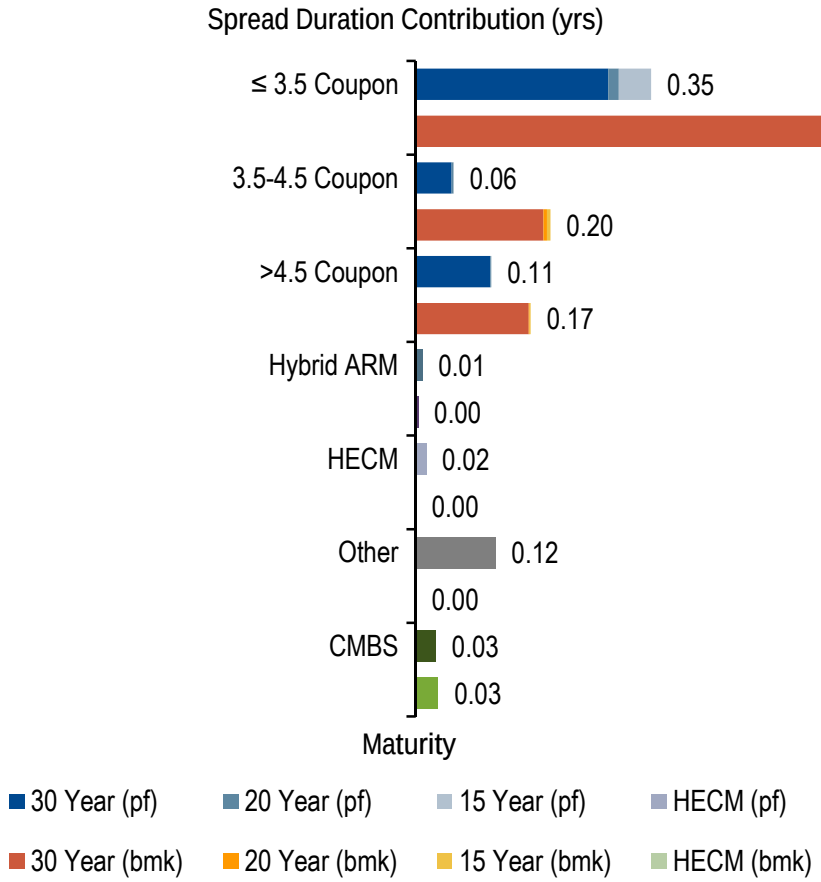
Note: Sector exposure includes look-through to any underlying commingled vehicles if held.
Data may not sum to total due to rounding. Includes investment-grade, high-yield, bank loans, emerging market governments and emerging market corporates.
¹All weightings are a percentage of total market value.

WESTERN ASSET

Agency Mortgage-Backed Sector Exposure

North Dakota State Investment Board – Insurance Trust vs. Bloomberg Barclays U.S. Aggregate Index

September 30, 2016



Agency MBS Spread Duration

Portfolio:	0.69
Benchmark:	1.19

Note: Sector exposure includes look-through to any underlying commingled vehicles if held. Data may not sum to total due to rounding. The CMBS allocation only includes agency CMBS. Non-agency CMBS is not reflected in this calculation.

Western Asset

WISER Risk Report, North Dakota State Investment Board – Insurance Trust

Benchmark: Bloomberg Barclays US Aggregate Index
Portfolio MV (millions, USD): 311

As of September 30, 2016

Risk Factor Partition CTESD	CREDIT SPREAD	INFLATION LINKED	EM SPREAD	US CMBS	RATES	IDIOSYNCRATIC	NON AGENCY RMBS	AGENCY MBS
Annual CTESD (bps)	36	13	11	7	5	4	2	-3
Annual CTESD (%)	47.5%	17.2%	14.6%	8.7%	6.3%	5.7%	2.8%	-4.1%

Annual Tracking Error Standard Deviation (bps)	
Ex Post	134
Ex Ante	75
Risk Target	250

Volatility Ratio	
Ex Post	1.07
Ex Ante	1.04

Annual Unison TESD (bps)	Divers. Benefits
173	57%

Security Partition	TOTAL													
	High-Yield Credit	Inflation-Linked	Investment-Grade	Emerging Markets	CMBS	Bank Loan & CLO	Agency MBS	Non-Agency MBS	Asset-Backed	Agency	Treasury	Developed Non-USD	Interbank & Interest	Cash & Others
Weight (%)	3.3%	3.5%	-6.4%	1.0%	4.4%	3.7%	-11.7%	7.0%	1.6%	-1.3%	-6.1%	0.0%	0.0%	0.9%
Residual UTESD (bps)	24.6	21.9	20.8	16.3	15.4	7.8	14.5	8.4	2.3	0.2	0.0	0.0	0.0	0.0
Residual CTESD (bps)	20.5	12.9	12.9	11.1	7.8	5.3	-3.1	2.4	0.4	0.0	0.0	0.0	0.0	0.0
Residual CTESD (%)	27.4%	17.2%	17.2%	14.8%	10.4%	7.1%	-4.1%	3.2%	0.5%	-0.1%	0.0%	0.0%	0.0%	0.0%

Top 5 Risk Factors CTESD	Net Exposure	CTESD (bps)	CTESD (%)
USD CRED CORP IG OAS	.73 BETA*OASD	17.7	23.6%
USD 30Y OTR KEY RATE	1.8 KRD_YR	-11.5	-15.4%
EMBIG STRIP SPRD	.13 BETA*OASD	10.1	13.4%
USD 10Y OTR KEY RATE	-.66 KRD_YR	8.2	10.9%
USA BREAKEVEN 30Y SPRD	.39 OAD	7.5	10.1%
Total		31.9	42.7%

Top 10 Issuers by CTESD	Notional Weight (%)	OASD Contrib.	Residual CTESD (bps)	Residual CTESD (%)
C - CITIBANK	1.4%	0.1	6.7	8.9%
WFC - WELLS FARGO & CO	0.8%	0.1	4.0	5.3%
BAC - BANK OF AMERICA CORP	1.2%	0.1	3.6	4.9%
GS - GOLDMAN SACHS GROUP IN	0.6%	0.1	3.2	4.3%
PETBRA - PETROLEO BRASILEIRO S	0.4%	0.0	2.2	2.9%
FE - FIRSTENERGY CORP	0.4%	0.0	2.1	2.8%
DVN - DEVON ENERGY CORPORAT	0.3%	0.0	2.1	2.7%
PEMEX - PETROLEOS MEXICANOS	0.1%	0.0	2.0	2.7%
STANLN - STANDARD CHARTERED	0.3%	0.0	1.8	2.4%
MEX - UNITED MEXICAN STATES	0.1%	0.0	1.7	2.2%
Total	5.5%	0.5	29.3	39.1%

Scenario Analysis	Scenarios	Rates	FX	Credit	Total
Historical	Return to pre-Lehman	-20	0	-280	-301
	Return to November 2008	-46	0	-676	-722
	Replay Jun '07 to Nov '08 with Carry	-44	0	-806	-716
	Return to June 2007	-41	0	171	130
	Replay Russia Crisis 1998	41	0	-32	9
	Return to LT Median	-10	0	-56	-66
	Replay May and June 2013	-17	0	-11	-28
Forward Looking	Market Unchanged, 1y horizon	0	0	0	89
	Eurozone Continued Uncertainty	16	0	-113	-97
	Eurozone Controlled Breakup	79	0	-283	-203
	China Slowdown	106	0	-326	-220

Top 5 Risk Factors Undiversified TESD	Undiversified TESD (bps)	Undiversified TESD (%)
CREDIT SPREAD	43.4	25.1%
RATES	32.1	18.6%
INFLATION LINKED	21.9	12.7%
IDIOSYNCRATIC	17.6	10.2%
EM SPREAD	15.5	9.0%
Total	130.6	75.6%

Key Rate	USD	EUR	TOTAL
6m	-0.05	0.00	-0.05
2y	0.28	0.00	0.28
5y	-0.05	0.00	-0.05
10y	-0.66	0.00	-0.66
20y	-0.80	0.00	-0.80
30y	1.80	0.00	1.80
Total	0.52	0.00	0.52

Top 10 Countries by Active Weight	Weight (%)
Supra-National	-1.6%
Canada	-0.9%
Germany	-0.7%
Belgium	0.7%
Brazil	0.6%
United Kingdom	0.6%
Netherlands	0.5%
Australia	0.5%
United States	-0.4%
Indonesia	0.3%
Total	-0.5%

Top 5 Non-Benchmark Issuers	Notional Weight (%)
MSRR 2015-R2	0.8%
JMAC 2009-A	0.8%
SMB 2014-A	0.6%
NMRR 2015-6R	0.5%
WCMT 2015-SBC5	0.4%
Total	3.1%

Top 5 Diversified CTESD by Currency	Weight (%)	CTESD (bps)	CTESD (%)
AUD CURRENCY	0.0%	0.0	0.0%
EUR CURRENCY	0.0%	0.0	0.0%
Total	0.0%	0.0	0.0%

Diversified CTESD by Cap Structure	Weight (%)	CTESD (bps)	CTESD (%)
Senior+LT2	2.1%	19.4	25.9%
T1+UT2	1.0%	5.0	6.7%
Total	3.1%	24.4	32.5%

Total Active OAD	0.52

Security Partition buckets exclude Currency and Curve risk and thus the TE Contribution % values may not sum to 100%. Any Currency and/or Curve Contribution to TE can be seen in the "Contribution to Tracking Error" section at the top of page. Note: This risk dashboard above is for illustrative purposes only and reflects Western Asset's best efforts to identify and measure the major sources of risk in the sample portfolio. Results depicted are dependent on an underlying statistical model and/or varying market conditions and are therefore subject to change without notice. There is no guarantee that ex-ante risk measures will be in line with their ex-post realizations.

WESTERN ASSET

Investment Outlook

Summary

Global recovery remains intact, albeit fragile, despite a tumultuous first quarter and Brexit.

Slow but sustainable US and global growth

US and global inflation remain subdued

Central bank accommodation is aggressive and necessary

Treasuries and sovereign bonds underpinned by low policy rates

Spread sectors, having rebounded from depressed levels, should offer attractive returns

Economic Outlook – Fed

The Fed has executed a "Dovish Pivot" and has moved from a desire to move rates up to a more opportunistic posture. The Fed will be on hold until three conditions are met – only financial conditions have improved so far.

Fed on hold until three conditions are met

1. Economic growth is in line with Fed forecast
2. Financial conditions improve significantly
3. Inflation expectations rise

Fed's adapted language reflects lower inflation expectations

"Unfortunately, the stability of longer-run inflation expectations cannot be taken for granted."

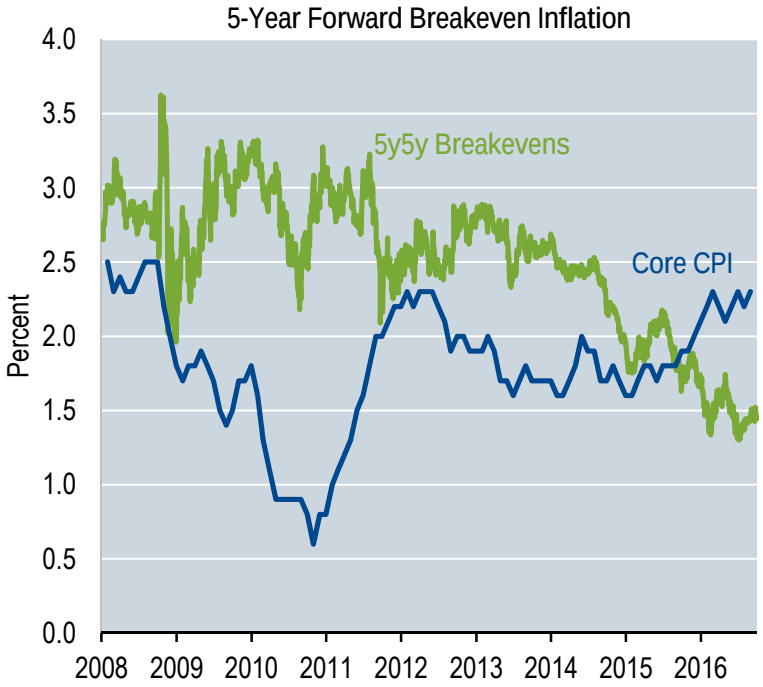
– *Janet Yellen, March 29, 2016*

"But the indicators have moved enough to get my close attention. If inflation expectations really are moving lower, that could call into question whether inflation will move back to 2 percent as quickly as I expect."

– *Janet Yellen, June 6, 2016*

"Nevertheless, one cannot rule out a decline in inflation expectations among market participants since last summer."

– *Federal Reserve Monetary Policy Report to Congress, released June 21, 2016*

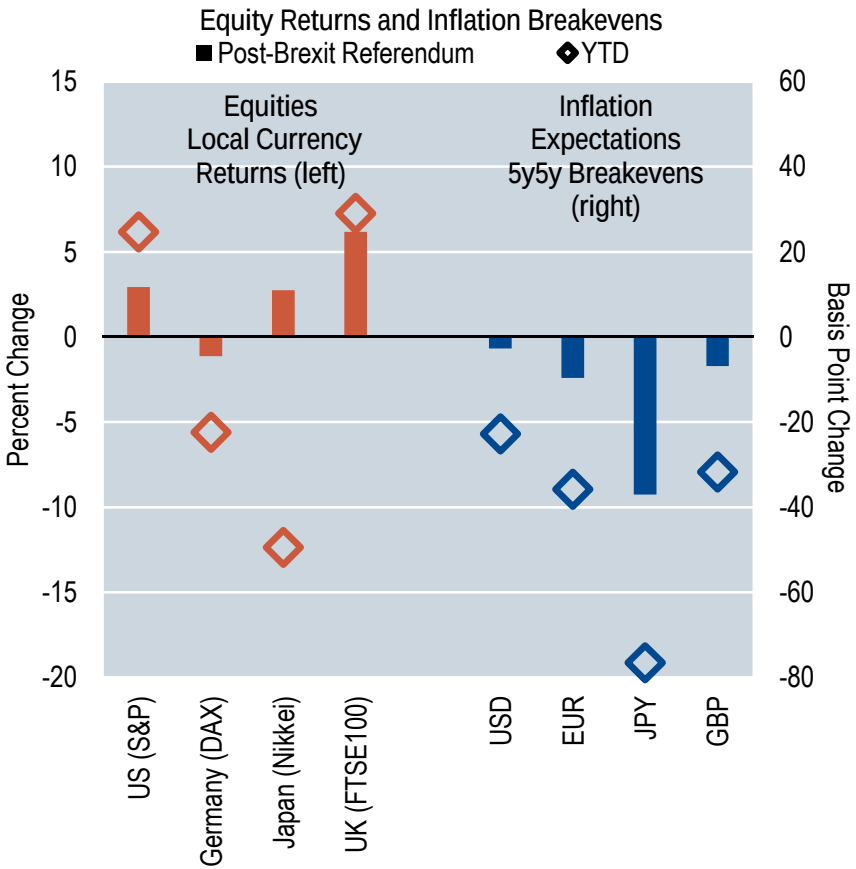


Source: Federal Reserve, Bureau of Labor Statistics. As of 30 Sep 16

WESTERN ASSET

Economic Outlook – Growth and Inflation

Over time, the story of interest rates is the story of inflation. Despite strong risk asset performance, global inflation expectations are declining.



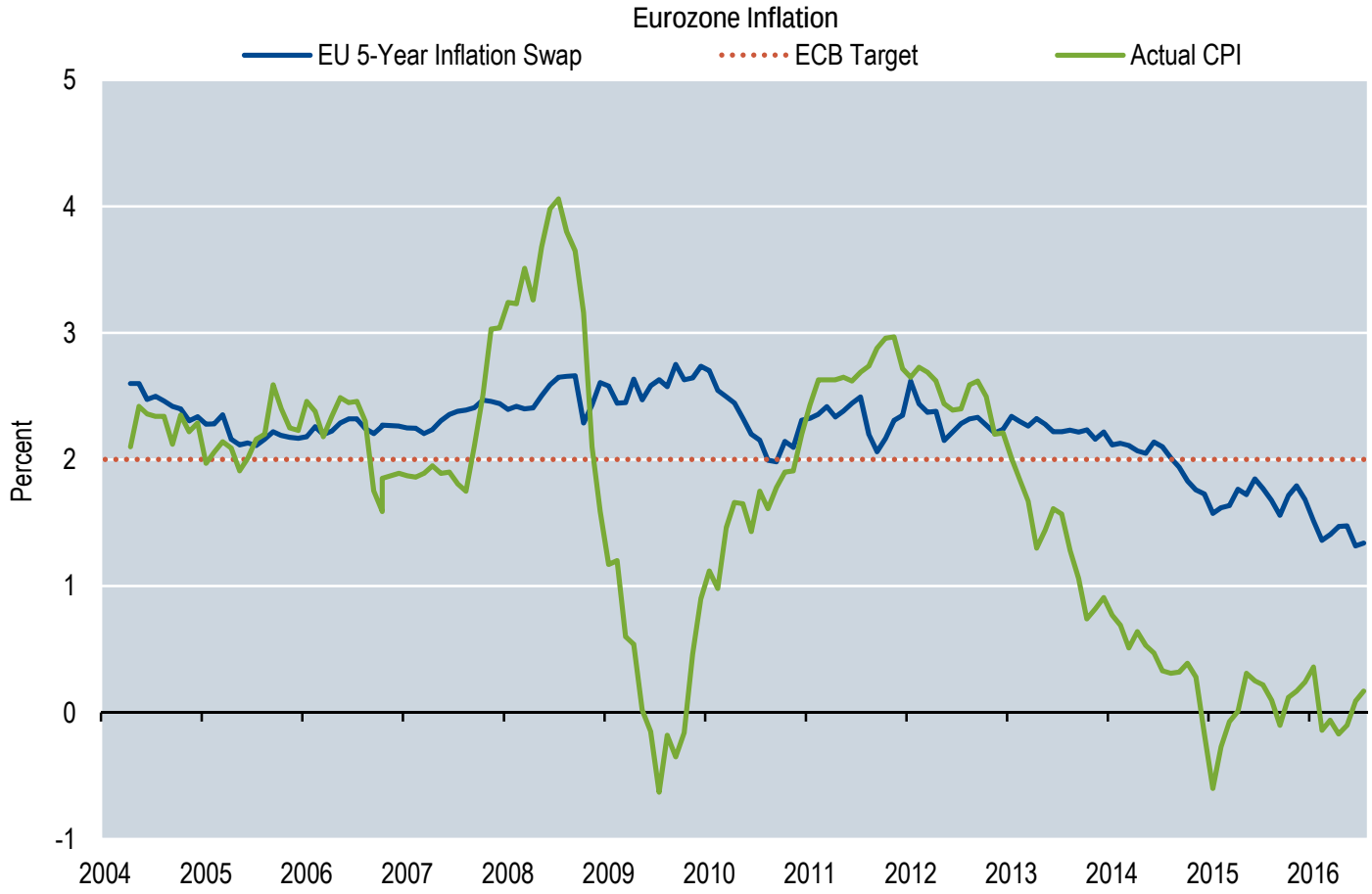
Source: Bloomberg. As of 20 Jul 16
Note: Brexit Referendum occurred on June 23, 2016

Source: Bloomberg. As of 31 Aug 16

WESTERN ASSET

Economic Outlook – Europe

In Europe, weak inflation expectations will likely force ECB to act again.

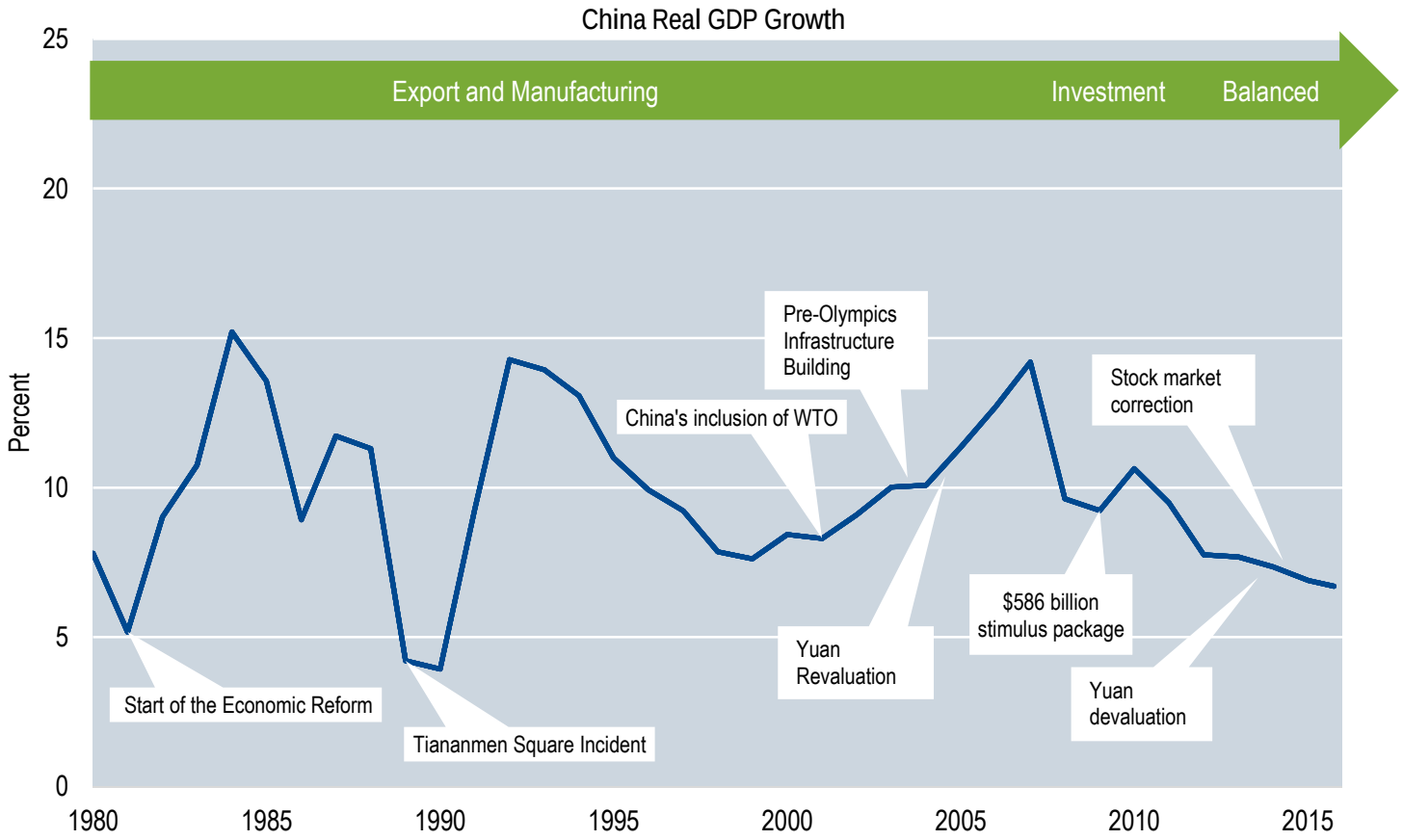


Source: Bloomberg. As of 31 Jul 16

WESTERN ASSET

Economic Outlook – China

Worries about the Chinese economy have abated, but we will still see a declining growth rate driven by the move from an export-led economy to one more consumption-led and balanced.

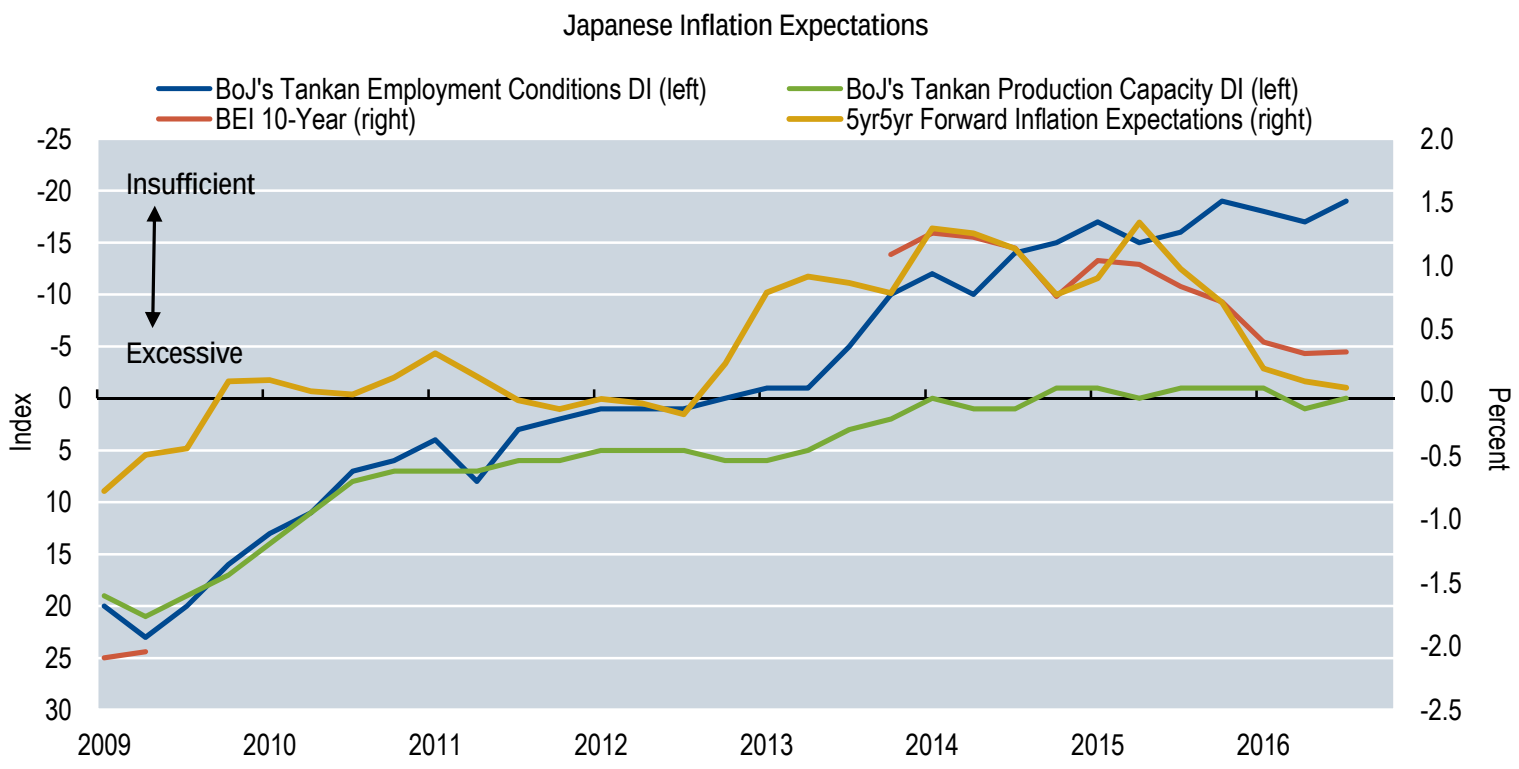


Source: The World Bank. As of 30 Sep 16

WESTERN ASSET

Economic Outlook – Japan

In Japan, inflation expectations are declining with tighter labor markets.



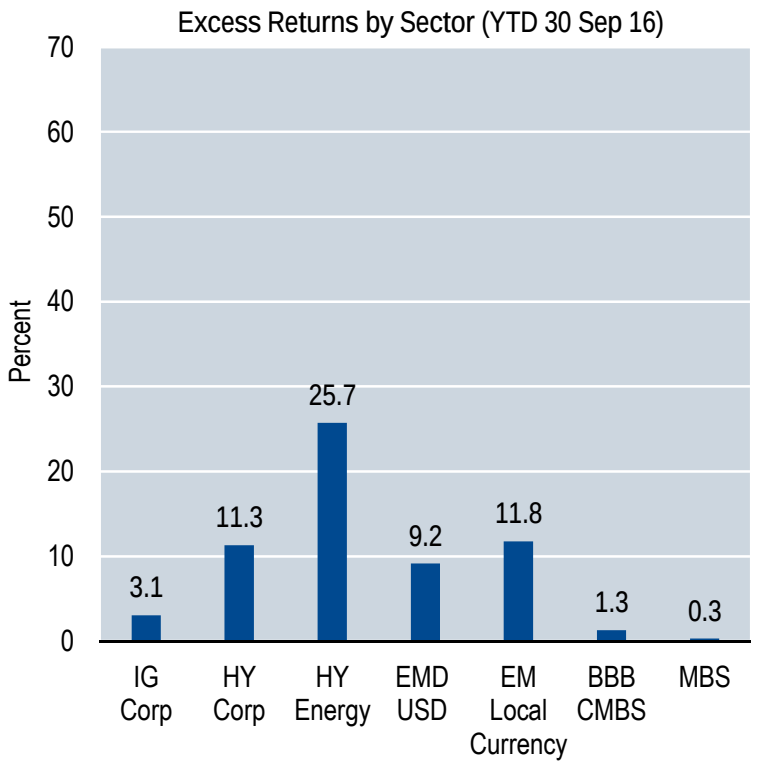
- Employment Conditions DI: Excessive employment minus Insufficient employment, negative number indicates tighter employment conditions
- Production Capacity DI: Excessive capacity minus insufficient capacity, negative number indicates tighter production capacity
- BEI 10-Year: Breakeven inflation spread with JGBi (CPI-linked JGB). The issuance of JGBi with no deflation floor was suspended in 2008 because of concerns over deflation. JGBi was re-designed with deflation floor and started to be issued in 2013

Source: Bank of Japan, Cabinet office, Western Asset. As of 30 Sep 16

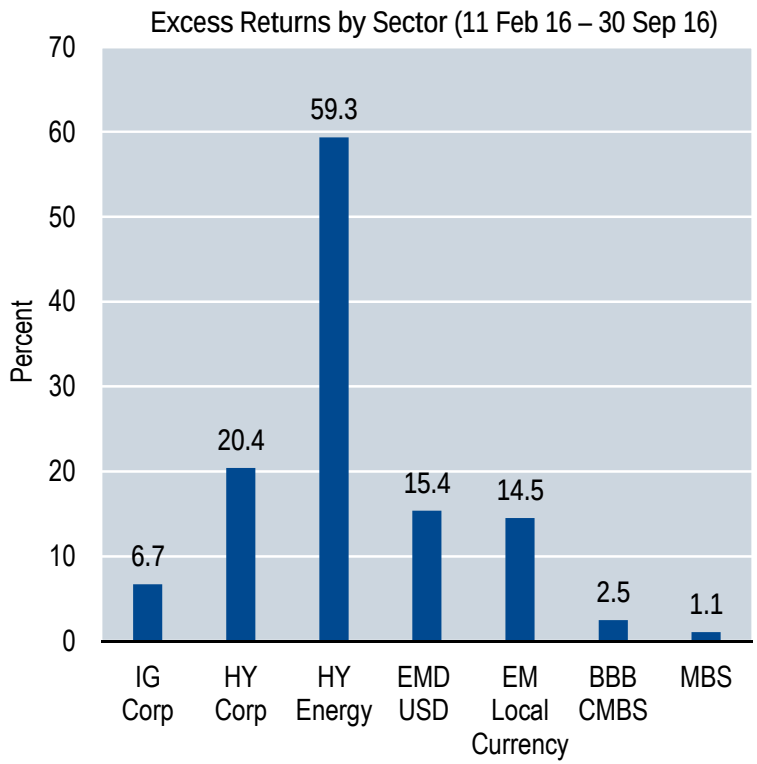
WESTERN ASSET

Investment Themes – Excess Returns

Recent excess returns for spread sectors have been remarkable, particularly following the low mark in February.



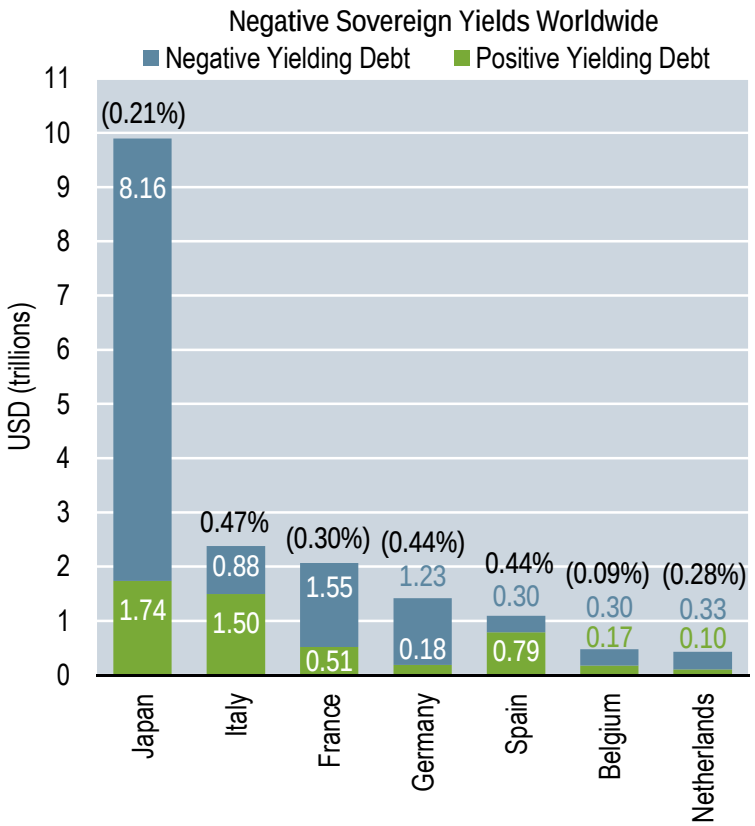
Source: Bloomberg Barclays, J.P. Morgan. As of 30 Sep 16



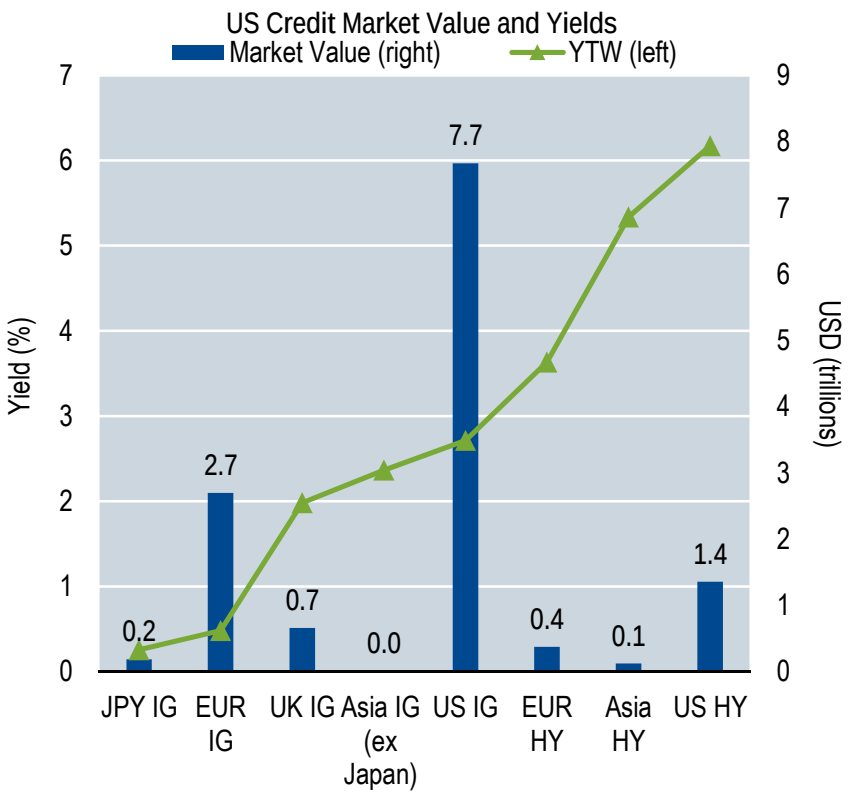
Source: Bloomberg Barclays, J.P. Morgan. As of 30 Sep 16

Investment Themes – US Credit

US credit markets offer both yield and size for global investors, driving a technical tailwind.



Source: Bloomberg. As of 19 Jul 16



Source: Bloomberg Barclays. As of 30 Sep 16

WESTERN ASSET

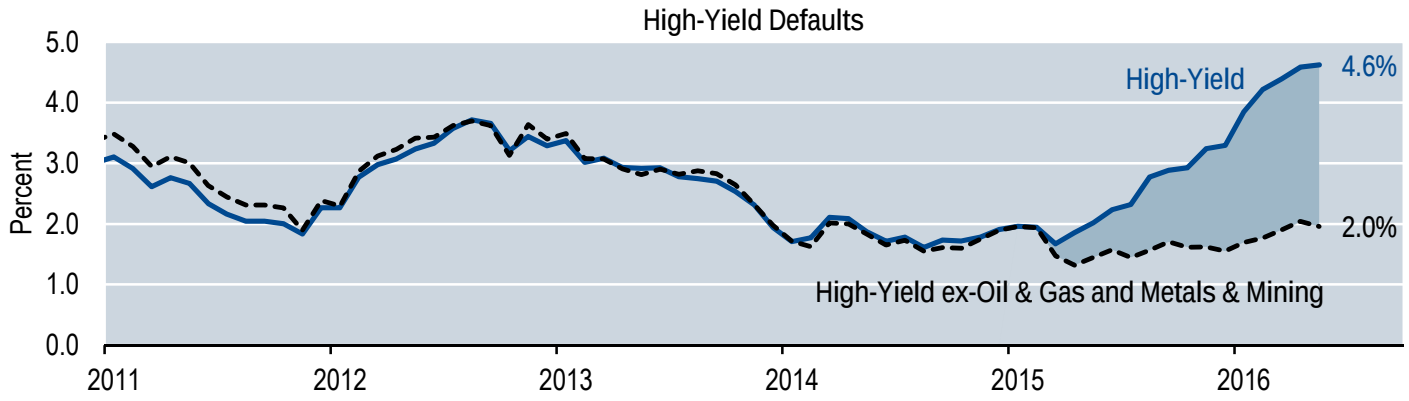
Investment Themes – US High-Yield

Ex-energy and metals and mining, high-yield defaults are near post-crisis lows and valuations are still attractive.

Implied Default Rates

	29 Feb 16	30 Sep 16	
Bloomberg Barclays U.S. High Yield Index OAS:	726 bps	480 bps	Actual Modern Era Peak
Assumed Recovery Rate: 30%	Year 5	Year 5	1999-2003
Implied Annual Default Rate	9.9%	6.6%	
Implied Cumulative Default Rate	40.5%	29.0%	37.2%
Bloomberg Barclays U.S. High Yield Ex-Energy Index OAS:	639 bps	459 bps	
Assumed Recovery Rate: 30%	Year 5	Year 5	1983-1987
Implied Annual Default Rate	8.7%	6.4%	
Implied Cumulative Default Rate	36.7%	28.0%	22.1%

Source: Bloomberg Barclays, Bloomberg

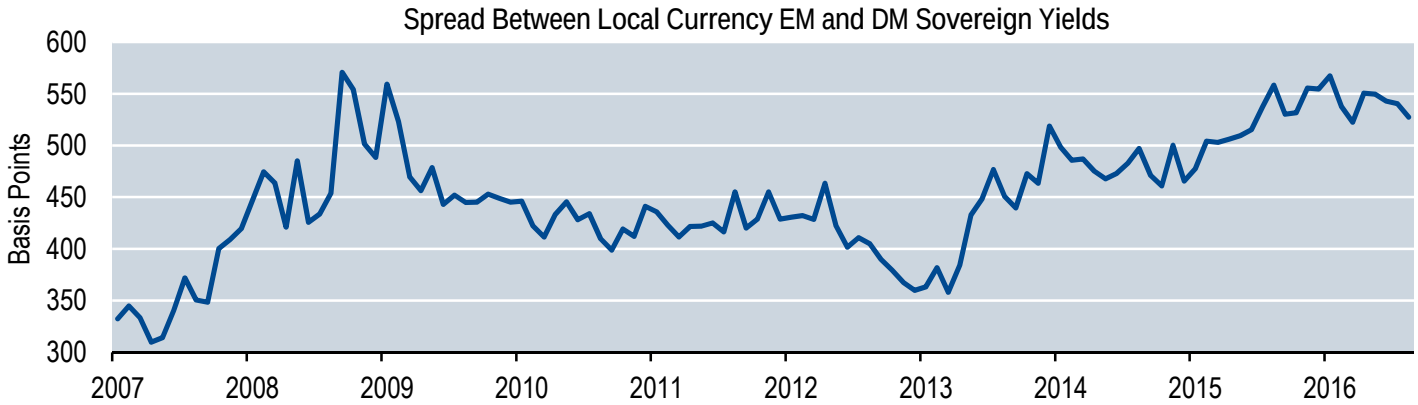


Source: Goldman Sachs Global Investment Research. As of 30 Jun 16

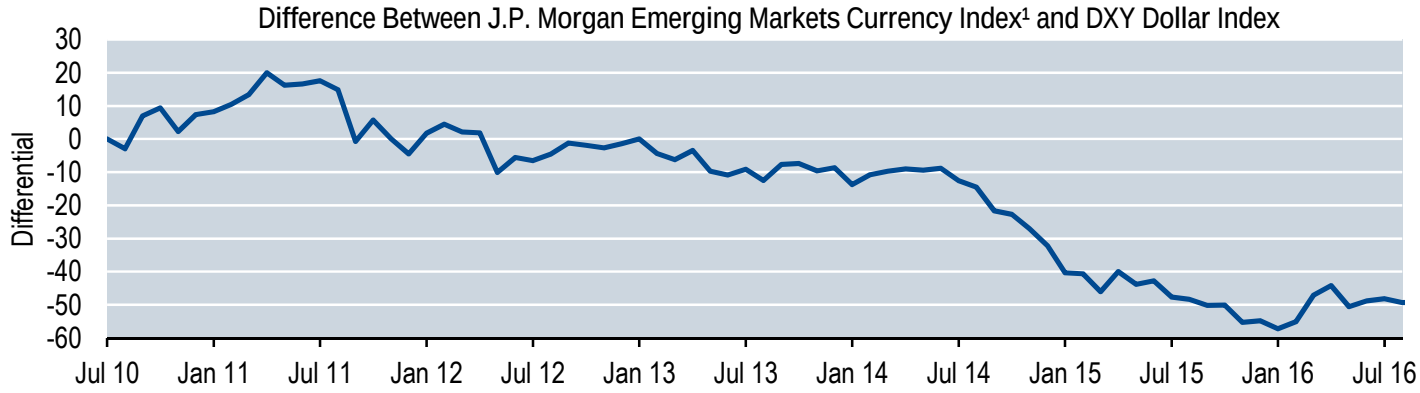
WESTERN ASSET

Investment Themes – Emerging Markets

We believe we have seen the bottom for emerging markets, coming back from a deep bear market. The Fed on hold and central banks pulling back from rhetoric designed to devalue their currency will be positive for EMD overall.



Source: J.P. Morgan. As of 30 Sep 16



Source: J.P. Morgan and Bloomberg. As of 30 Sep 16

[1]The J.P. Morgan EM Currency Index is a tradable benchmark for emerging markets currencies vs. USD. The index is comprised of a basket of ten emerging market currencies: BRL, CLP, CNH, HUF, INR, MXN, RUB, SGD, TRY, ZAR.

WESTERN ASSET

Summary

Global recovery remains intact, albeit fragile, despite a tumultuous first quarter and Brexit.

Slow but sustainable US and global growth

US and global inflation remain subdued

Central bank accommodation is aggressive and necessary

Treasuries and sovereign bonds underpinned by low policy rates

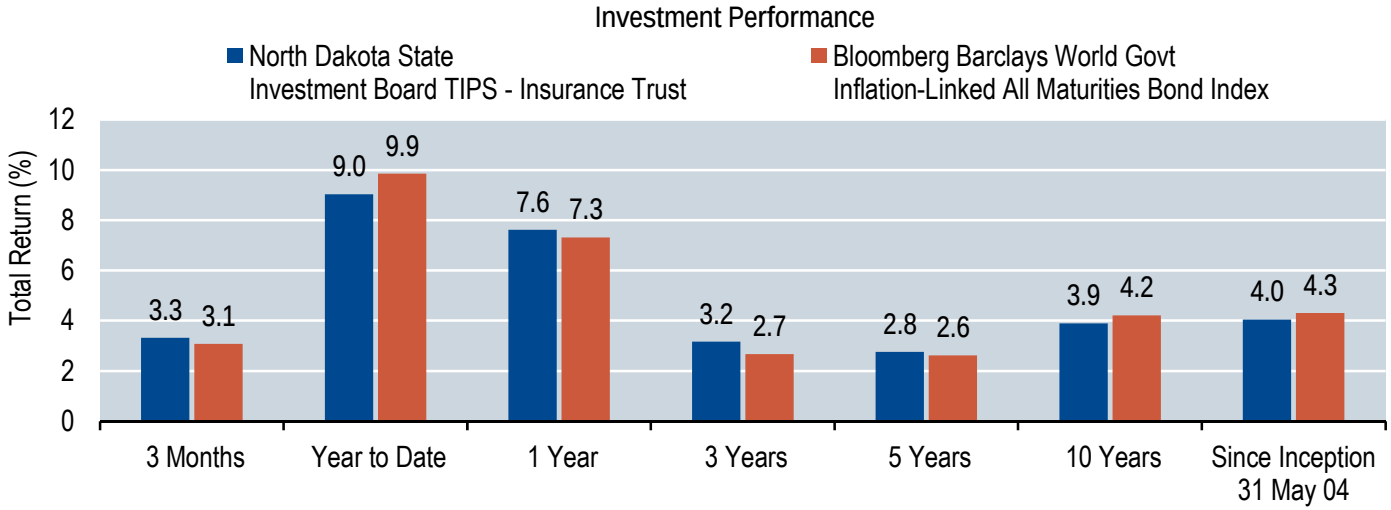
Spread sectors, having rebounded from depressed levels, should offer attractive returns

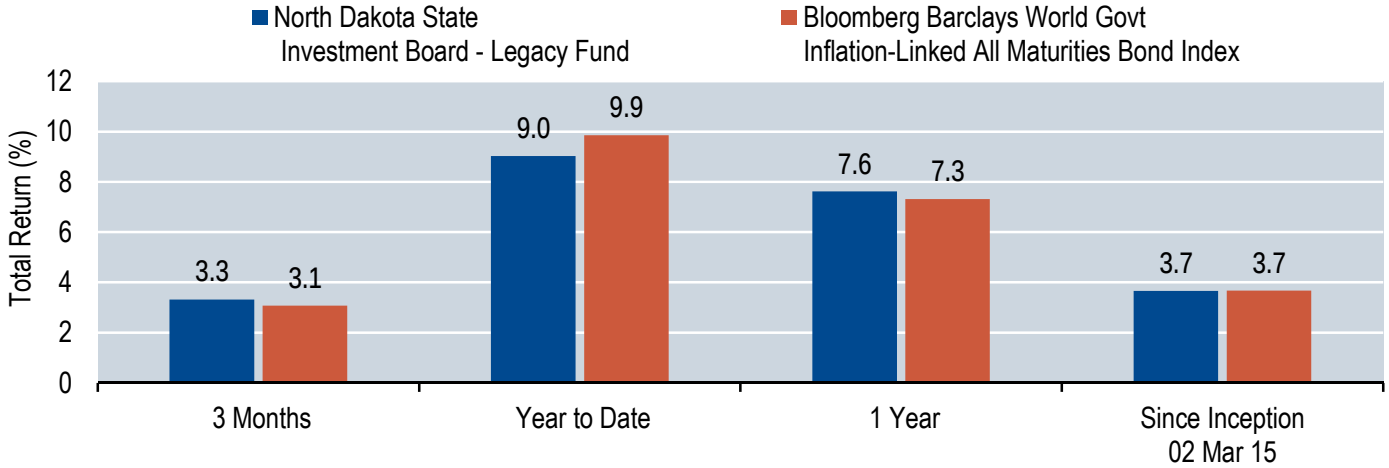
Appendix

Global Inflation-Linked Portfolio Review

Investment Results

September 30, 2016





Returns for periods greater than one year are annualized. Returns since inception are as of the indicated close of business day. The performance calculation reflects the deduction of administrative and custodian fees only. The impact of advisory fees on performance is not reflected in this calculation.

WESTERN ASSET

Performance Attribution

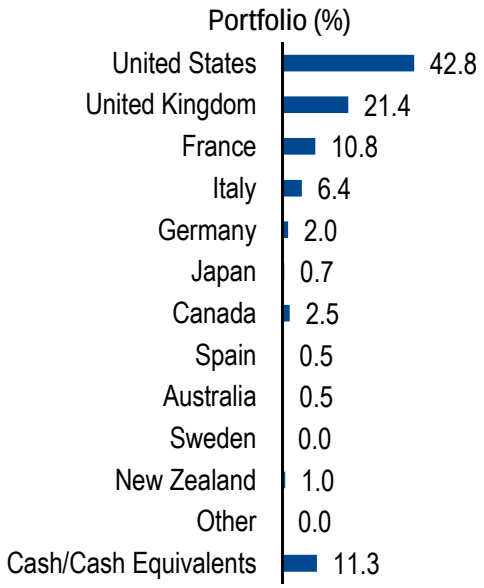
Western Asset Global Inflation-Linked Plus L.L.C.

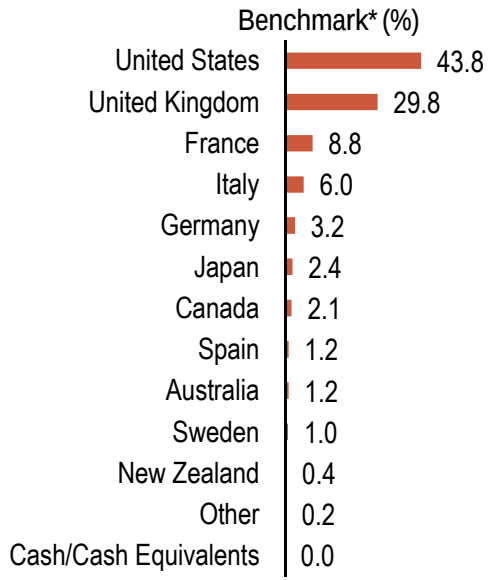
Basis Points	Q3 2016	YTD 2016
Portfolio	333	907
Benchmark	308	985
Duration	16	-7
Yield Curve	1	-5
Country	5	9
Currency	-7	-28
Sector Allocation	12	-26
Selection/Residual	-2	-22
Total	25	-79

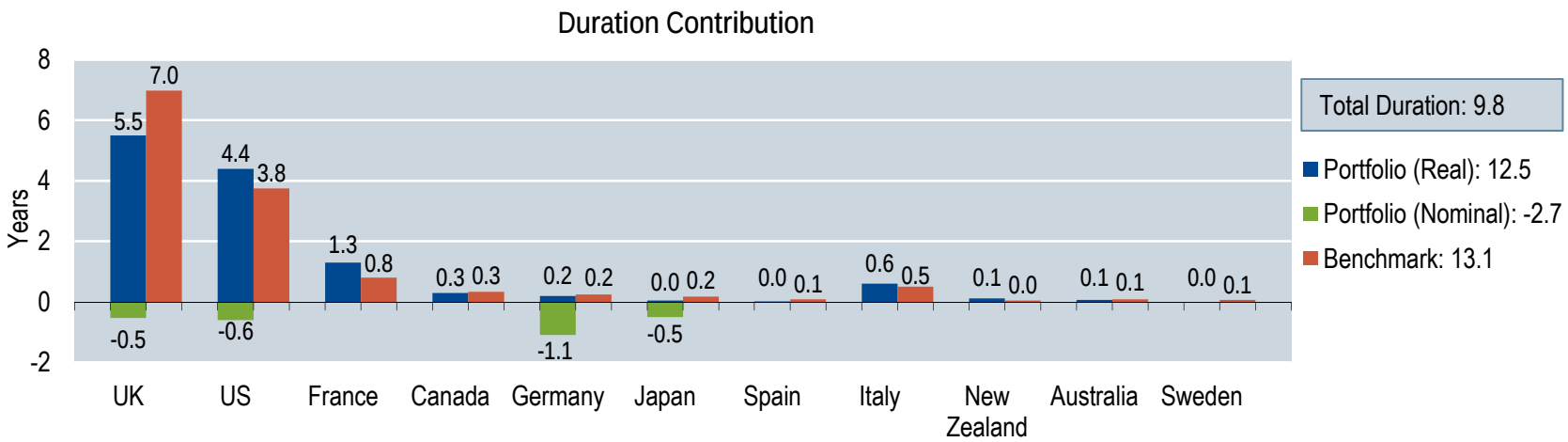
As of 30 Sep 16
Note: 1 basis point = 0.01%
Performance attribution results depend on the calculation methodology and models used: different calculation methodologies and models will deliver different results. Different calculation methodologies and models may be employed in order to better reflect both the natures of the sectors invested in and the investor's decision-making process, style or approach. Western Asset uses a top-down decomposition approach in which security selection is not separated from sector beta effects, benchmark pricing differences and unaccounted systematic factors. Sector and strategy contributions to performance will vary.
Data may not sum due to rounding.

Western Asset Global Inflation-Linked Plus L.L.C.

As of September 30th 2016







[1]Barclays World Inflation-Linked All Maturities Index

WESTERN ASSET

Biographies

CARL L. EICHSTAEDT

30 Years Experience

– Western Asset Management Company – Portfolio Manager, 1994–
– Harris Investment Management – Portfolio Manager, 1993–1994
– Pacific Investment Management Company – Portfolio Manager, 1992–1993
– Security Pacific Investment Managers – Director, Fixed Income, 1990–1992
– Chemical Securities Inc. – Vice President, Fixed Income, 1986–1990
– *Kellogg Graduate School of Management, Northwestern University, M.B.A.*
– *University of Illinois, B.S.*
– *Chartered Financial Analyst*

SUSAN R. SIGNORI

21 Years Experience

– Western Asset Management Company – Client Service Executive, 2005–
– Lord & Taylor Department Store – Manager of Internal Communications, 1995-2005
– *Fordham University, Graduate School of Business, M.B.A.*
– *Bucknell University, Lewisburg, B.A.*

Note: Western Asset experience reflects current position title and hire date.

Representative Client List Disclosure

The clients listed are invested in a wide range of mandates, and are located in a variety of countries or regions of the United States.
The clients listed in the Corporate company type have portfolios with an AUM of $3(M) or greater.
The clients listed in the Public company type have portfolios with an AUM of $77(M) or greater.
The clients listed in the Multi-Employer / Union company type have portfolios with an AUM of $21(M) or greater.
The clients listed in the Healthcare company type have portfolios with an AUM of $14(M) or greater.
The clients listed in the Eleemosynary company type have portfolios with an AUM of $4(M) or greater.
The clients listed in the Insurance company type have portfolios with an AUM of $5(M) or greater.
The clients listed in the Sub-Advisory company type have portfolios with an AUM of $15(M) or greater.

Clients that have advised Western Asset of account terminations have been excluded from the lists.

Risk Disclosure

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Past results are no guarantee of future performance. An investment in the Portfolio may be worth more or less than you originally paid for based on factors such as interest rate, credit, strategy and limited liquidity risks. Additional risks and information regarding fees, expenses and tax considerations are more fully described in the Confidential Offering Memorandum, which must precede or accompany this material. Please read the Offering Memorandum carefully before investing.

The Western Asset Global Inflation-Linked Plus LLC is a private fund offered by means of a Confidential Offering Memorandum and is not available to all investors.

Agenda Item V.C.

INFORMATIONAL MEMO

TO: State Investment Board

FROM: Dave Hunter, Darren Schulz and Eric Chin

DATE: October 21, 2016

SUBJECT: Fixed Income Manager Restructuring - Background

Summary:

Amidst a historically low interest rate environment across global developed markets and a regulatory regime that has materially changed following the Global Financial Crisis, the fixed income market climate and breadth of investment options has evolved dramatically over the past several years. In light of these challenges and the opportunities it has created, Staff will be proposing a new fixed income manager framework for the Pension Trust at an upcoming SIB meeting. Additionally, as part of a search for alternative credit managers to diversify and enhance returns within the fixed income allocation, Staff will be bringing forward finalist candidates for consideration as part of the implementation of the new framework.

The Evolution of Fixed Income For Institutional Investors:

Historically, investment in fixed income served to achieve multiple objectives, such as capital preservation, income generation, and diversification. In a bygone age, implementation typically consisted of investing in a basket of publicly traded government and plain vanilla corporate bonds. In the 1980s, with the advent of securitization and the high yield market, not to mention a burgeoning derivatives markets, implementation evolved. Today, however, while the core objectives of fixed income remain unchanged, due to a number of long-term secular forces and recent regulatory changes the implementation of fixed income within institutional portfolios has grown increasingly more complex and segmented:

1. A 35-year decline in U.S. interest rates fueled by a dampening of long-term inflation and, more recently, a low rate environment driven by unprecedented monetary stimulus undertaken by central banks across the globe has prompted many institutions to review and restructure their fixed income portfolios in response to the low rate environment.

2. In reaction to the worst recession and financial crisis since the Great Recession, regulators have attempted to address areas considered to have caused the last crisis by heavily regulating financial institutions, mortgage lending, structured products, and derivatives. A stricter regulatory environment in the U.S. (Federal Reserve, Volcker Rule, Dodd-Frank, Leveraged Lending Guidelines of OCC/Fed/FCIC) and abroad for banks (Basel III, ECB) and problematic balance sheets among European banks has created a financing void as U.K and European banks deleverage and as U.S. banks significantly curtail or eliminate lending activities in areas that require high capital charges. Non-bank investors that are positioned to accept varying degrees of illiquidity have taken note of this sea change, seeing it as a way to harvest diversifying sources of return not available across traditional credit strategies.

3. After the financial crisis, dealers began to move away from a principal model of market making in public fixed income securities, whereby they would facilitate trades using their own inventories and assume some risk, toward an agency model. Pro-crisis regulation has been widely cited as a key factor in this change, the effect of which is upward pressure on bid-ask spreads and trading costs, and a concentration of activity in the most liquid instruments and a move away from less liquid ones. This problem is particularly acute in segments of the U.S. high yield market.

Considerations for Reshaping a Fixed income Allocation in Response

The following are key questions to consider across four categories in reshaping a fixed income structure going forward:

- **Liquidity**: How much liquidity is actually needed to fund liabilities? Is there additional potential to harvest illiquidity premiums in less liquid strategies?

- **Diversification**: Are there complementary strategies to diversify a fixed income portfolio that consists of a more traditional allocation to Barclays Aggregate sectors such as Treasuries, government-related, investment grade corporate, and securitized bonds (Agency MBS, CMBS, ABS)?

- **Interest Rate Risk**: Given that rising rates erode the purchasing power of a fixed coupon bond, what strategies can be employed through floating rate structures to deliver returns that are not highly correlated with rates?

- **Opportunity**: Can opportunistic strategies be employed to tactically capitalize upon market dislocations or niche opportunities in a timely and efficient manner, two examples being distressed debt and the regulatory-driven disposition of non-performing loans by European banks?

Alternatives to Traditional Fixed Income

The breadth of fixed income options has expanded considerably since the Great Recession, giving investors greater flexibility to construct fixed income structures tailored to meet expected return targets and risk tolerances. Today, the menu of options has evolved beyond the traditional “plus” sectors of a “core-plus” approach, such as high yield, into a broader group called “alternative credit”, which can be simply defined as all credit which is not traditional investment grade government or corporate debt.

Some examples of alternative credit strategies include the following:

- **Bank loans** – Private debt obligations senior in the capital structure (above high yield) issued by companies as part of a leverage buyout, also known as leveraged loans. Loans are typically secured on assets and are floating rate, thus having a higher default recovery rate and lower interest rate risk as compared to high yield bonds. Bank loans are less liquid than high yield and thus command an added illiquidity premium.

- **Structured credit** – Debt securities whose value is determined by an underlying pool of loans producing regular cash flows. By grouping often small illiquid loans into one structure, structured securities can be offered to investors with different risk/return profiles. Examples include CLOs (collateralized loan obligations, whose underlying securities are pools of bank loans) or ABS

(asset-backed securities, whose underlying securities are pools of other assets, including auto, credit card or student loans).

- **Direct lending** – Includes loans to private companies, privately placed debt of public companies, or loans backed by real assets (real estate, infrastructure). Direct lending is an opportunity for non-bank investors to capitalize on the financing void created by post-crisis regulation. Company-specific terms provide idiosyncratic return drivers and better diversity.

- **Distressed debt** – Debt of public companies at or near bankruptcy, defined as bonds rated CCC or below or those with spreads exceeding 10% over Treasuries. They can also include distressed real asset loans where collateral value falls below loan value and non-performing consumer, corporate or real asset loan pools (NPLs). Distressed debt is a less liquid strategy, allowing a manager to actively unlock value through a bankruptcy/restructuring process.

In a research article titled "Illiquid Credit – Playing the role of a (good) bank", Willis Towers Watson summarized the characteristics of various alternative credit strategies in the following table:

Opportunities exist across the risk and return spectrum	**Investment grade alternatives**	**Loan/High-yield alternatives**	**Higher-risk performing credit**	**Equity-like credit**
	Trade finance	Niche-focused direct lending	Real asset leasing	Distressed for control
	New issue mortgages	Mezzanine	Royalties	Distressed debt
	Infrastructure senior debt	Unitranche	Specialty finance	Rescue finance
	CRE senior debt	Real estate whole loans	US RPLs	CLO equity/risk-retention
	AAA CLO debt	Middle-market direct lending	Regulatory capital	NPLs
Characteristics				
Net return range (over reference rate)	1.5%–5%	5–8%	8–12%	12%+
Income generating	Yes	Yes	Yes	Mix
Risk profile	Low	Medium	Medium-high	High
Reasons to consider	Diversification	Illiquidity premium	High carry	Alternative source of equity-like returns
	Low-risk source of yield	Skill	Illiquidity premium	Illiquidity premium
		Diversity of alternative credit risk	Skill	Skill

Historically, some of these lending strategies fell under the domain of financial institutions, but with regulatory-driven disintermediation they have become increasingly mainstream, more familiar and appealing to non-bank investors, particularly institutions with long investment horizons in a funding position to be adequately compensated for judiciously surrendering liquidity.

An important point to make concerning alternative credit strategies is that they are not intended to replace but rather complement a traditional allocation to fixed income. Whereas the more liquid and efficient traditional side of fixed income provides less opportunity for alpha and is more vulnerable to rising rates and inflation, alternative credit strategies tend to focus on less efficient corners of the bond

market, are generally floating rate in nature, are structured based on company-specific credit events, and allow for return enhancement through both manager skill and through the intrinsic illiquidity premium these strategies command.

RIO Staff Fixed Income Manager Structure Review and Restructuring Process

Over several months, in addition to the ongoing due diligence of existing fixed income manager mandates across all three investment pools, Staff has engaged numerous fixed income solutions teams among our existing roster of fixed income managers to analyze risk and return of current NDSIB fixed income structures. These discussions have yielded frameworks for budgeting liquidity and structuring fixed income with a focus on options to consider for enhancing risk-adjusted returns and diversification.

Additionally, in recognition of the merits of alternative credit strategies as a complement to traditional fixed income, Staff has engaged a number of specialist alternative credit managers with the following attributes:

- Differentiation in credit origination and sourcing
- Time-tested track record
- Strong credit underwriting culture across the organization with an understanding of the loans underwritten and the associated risks
- Investment process and focus on risk management
- Meaningful portfolio management experience
- Use of leverage
- Technology infrastructure to perform loan administration services

Among the firms identified, Staff has conducted due diligence calls and meetings with the following alternative credit firms: Apollo, Ares, Bain/Sankaty, Blackrock, Carlyle, Cerberus, Crescent, Goldman Sachs, Golub, Highbridge, PIMCO, Oaktree, KKR and TPG. Additional due diligence is being currently conducted on nine of the aforementioned firms from which finalist candidates will be advanced to present to the Board at an upcoming SIB meeting.

Conclusion

Staff will be proposing a fixed income manager framework that seeks to achieve material improvements in return potential and diversification without increasing plan-level risk. The proposed structure will be a "bar belled" approach, explicitly segmenting the fixed income manager structure based on liquidity, quality and expected return potential: 1) An anchor of low risk, high quality, highly liquid traditional fixed income beta exposures on one end of the credit risk spectrum to fulfill the role of capital preservation and high quality income generation; 2) Complemented by moderate risk, less liquid, higher return potential alternative credit strategies for greater diversification and differentiated sources of return enhancement. Finalist alternative credit managers will be brought forward to the Board for consideration as part of the implementation of the less liquid portion of the manager structure.

TO: State Investment Board ("SIB")

FROM: Dave Hunter, Darren Schulz, and Eric Chin

DATE: October 21, 2016

SUBJECT: **Private Equity Update – Informational Only**

Adam Street Partners ("Adams Street" or "ASP")

Update: As a result of increasing concerns over the transparency provided by Adams Street, Staff is temporarily pausing future investments in order to reconsider our last two private equity finalists.

Background: Over the past several months, Staff has spent considerable time and resources working to optimize SIB's projected private equity portfolio. As a consequence of these efforts, Staff became aware that Adams Street provides different levels of transparency to different types of clients. Clients "subject to FOIA or similar laws" are provided a redacted reporting package. ASP withholds key metrics on the underlying GPs - these metrics include internal rate of return, % drawn, % distributed, money multiples, and Adams Street's internal manager ratings.

Adams Street's rationale is twofold:

1. ASP has signed confidentiality agreements with their underlying general partners such that Adams Street is mandated to limit information to investors "subject to FOIA or similar laws".
2. ASP is concerned that North Dakota's confidentiality provisions may be inadequate, and unable to protect confidential information if contested by a third party (despite numerous conversations between North Dakota and Adams Street's counsel).

Conclusion: While the reduced transparency does not directly affect Adams Street's investment capabilities, it does place the SIB in a disadvantageous position compared to other non-FOIA/open records investors invested in the same commingled products. Staff is concerned that there exists a class of investors that has privileged information—investors that can make better informed investment decisions. Consequently, Staff believes it prudent to revisit the top private equity candidates evaluated during the SIB's 2015-2016 Private Equity Search to determine if there exists a suitable replacement.

BlackRock Private Equity Partners ("BlackRock" or "PEP")

Since the SIB approved BlackRock as one of its strategic partners for private equity, Staff has been diligently working to launch the SIB's fund of one private equity program with PEP. In the interim, BlackRock has demonstrated the strength of its client service model, which was one of the key factors that drove RIO's recommendation for PEP. The BlackRock team has produced a number of portfolio analyses and models to assist Staff with the evaluation and optimization of the entire SIB private equity portfolio. In addition, BlackRock has led several training and knowledge transfer sessions to develop Staff's in-house expertise on private equity. Lastly, to prepare Staff for the launch of the SIB's fund of one program, the PEP team has led regularly scheduled pipeline discussions—providing in-depth color on potential co-investment and GP opportunities. To date, RIO has been quite pleased with BlackRock's preparatory efforts and knowledge sharing endeavors.

Strategic Plan: RIO will continue to promote the development of strategic partnerships in all asset classes including the private markets which are inherently longer-term (i.e. 7-10+ years).

Private Equity Performance Summary

Pension Trust Private Equity
As of June 30, 2016
($ in millions)

	Vintage		Unfunded	Net Asset	% Total	Internal Rates of Return (IRR)				
						Net Returns				
Adams Street Partnerships (ASP)	Year	Commitment	Commitment	Value	Pension	1-year	3-years	5-years	10-years	Inception
1998 BPF Trust Subscription	1998	$ 23.7	$ 0.9	$ 1.6	0.0%	(3.5%)	2.5%	1.2%	6.8%	5.0%
1999 BPF Non-U.S. Trust Subscription	1999	$ 24.5	$ 0.6	$ 3.3	0.1%	4.3%	6.6%	1.4%	9.8%	12.0%
1999 BPF Trust Subscription	1999	$ 24.5	$ 1.1	$ 2.4	0.1%	(2.4%)	3.7%	2.6%	6.8%	6.0%
ASP 2008 Non-US Fund	2008	$ 10.0	$ 1.7	$ 7.6	0.2%	4.7%	13.5%	9.5%	-	8.9%
ASP 2010 Direct Fund	2010	$ 1.5	$ 0.1	$ 1.4	0.0%	4.8%	16.5%	14.1%	-	12.6%
ASP 2010 Emerging Markets Fund	2010	$ 1.5	$ 0.4	$ 1.3	0.0%	4.6%	14.5%	10.2%	-	9.6%
ASP 2010 Non-US Developed Fund	2010	$ 4.5	$ 1.4	$ 2.8	0.1%	7.9%	8.6%	7.9%	-	7.3%
ASP 2010 US Fund	2010	$ 7.5	$ 2.3	$ 5.8	0.1%	8.1%	16.3%	14.2%	-	14.6%
ASP 2015 Global Fund	2015	$ 30.0	$ 28.6	$ 1.7	0.0%	-	-	-	-	26.0%
ASP 2016 Global Fund	2016	$ 30.0	$ 30.0	$ (0.0)	0.0%	-	-	-	-	-
Brinson Venture Partnership Fund III	1993	$ 3.0	$ -	$ -	0.0%	-	-	6.1%	17.2%	29.6%
BVCF III	1993	$ 3.0	$ -	$ -	0.0%	-	-	(4.1%)	(28.5%)	40.4%
BVCF IV	1999	$ 25.0	$ -	$ 3.8	0.1%	(1.6%)	20.7%	28.9%	25.7%	7.7%
Direct Co-Investment	2006	$ 20.0	$ 0.9	$ 5.8	0.1%	10.6%	18.8%	12.6%	-	5.8%
Institutional Venture Capital Fund II	1989	$ 5.0	$ -	$ -	0.0%	-	-	(18.6%)	29.7%	21.3%
Total ASP Private Equity		$ 213.7	$ 67.9	$ 37.5	0.8%	5.8%	13.6%	9.4%	10.4%	10.9%
Non-ASP Primary Fund Partnerships										
Capital International Private Equity Fund V	2007	$ 35.0	$ 5.3	$ 7.8	0.2%	(28.1%)	(9.5%)	(8.4%)	-	0.8%
Capital International Private Equity Fund VI	2011	$ 35.0	$ 11.4	$ 17.9	0.4%	1.4%	(8.0%)	-	-	(9.8%)
Coral Momentum Fund	2002	$ 25.0	$ -	$ -	0.0%	-	(59.0%)	(23.0%)	(20.3%)	(18.5%)
Coral Partners V	1998	$ 40.0	$ -	$ -	0.0%	-	-	(11.6%)	20.8%	(5.6%)
Coral Partners V - Supplemental	2001	$ 2.0	$ -	$ -	0.0%	-	-	(73.4%)	(20.0%)	(10.2%)
Corsair III	2007	$ 25.0	$ 2.5	$ 13.4	0.3%	(8.7%)	(4.9%)	(5.7%)	-	(4.5%)
Corsair III - ND Investors LLC	2008	$ 11.2	$ 0.2	$ 11.9	0.3%	6.4%	(0.2%)	2.4%	-	1.0%
Corsair IV	2010	$ 25.0	$ 4.7	$ 17.1	0.4%	(3.0%)	12.2%	7.1%	-	5.7%
EIG Energy Fund XIV	2007	$ 45.0	$ 2.0	$ 4.7	0.1%	(67.0%)	(36.4%)	(18.7%)	-	(3.5%)
Hearthstone MSII	1999	$ 3.5	$ 3.5	$ 0.0	0.0%	-	-	-	48.3%	27.5%
Hearthstone MSIII	2003	$ 35.0	$ 30.9	$ 4.4	0.1%	(1.5%)	-	31.0%	293.3%	25.2%
InvestAmerica (Lewis and Clark Fund)	2002	$ 7.5	$ 0.8	$ 1.3	0.0%	(51.1%)	(33.7%)	(12.6%)	(0.4%)	0.1%
L&C II	2009	$ 15.0	$ 1.4	$ 9.6	0.2%	1.9%	(6.7%)	(5.9%)	-	(6.7%)
Matlin Patterson Global Opportunities	2002	$ 25.3	$ -	$ -	0.0%	14.8%	4.7%	118.5%	24.3%	16.7%
Matlin Patterson Global Opportunities II	2004	$ 40.6	$ 0.0	$ 1.7	0.0%	10.8%	4.3%	(26.9%)	(23.3%)	(22.2%)
Matlin Patterson Global Opportunities III	2007	$ 40.0	$ 3.4	$ 27.0	0.6%	(5.5%)	(1.3%)	16.7%	-	4.5%
Quantum Energy Partners IV	2007	$ 15.0	$ 1.4	$ 6.6	0.1%	(17.1%)	(2.1%)	10.0%	-	5.8%
Quantum Resources	2006	$ 15.0	$ 1.4	$ 0.1	0.0%	(45.8%)	(22.2%)	2.5%	-	3.2%
Total - Non-ASP Private Equity		$ 440.2	$ 69.0	$ 123.4	2.6%	(14.1%)	(8.1%)	(3.2%)	(1.2%)	(0.9%)
Total - Private Equity		$ 653.9	$ 136.9	$ 160.9	3.4%	(9.8%)	(3.1%)	0.1%	2.5%	3.5%

Source: Adams Street ASPIRE

Returns are reviewed, but not audited.

Summary: The private equity portfolio within the Pension Trust can largely be divided into two groups:

1) the Adams Street Partnerships which have generally performed in line with expectations with a net IRR of 9.4% in the last 5-years and 10.9% since inception; and

2) the Non-ASP Partnerships which have generally performed below expectations with a net IRR of -3.2% in the last 5-years and -0.9% since inception (with a few positive exceptions).

Key Takeaway: Promote the development of ***strategic partnerships*** to leverage a "best ideas" approach while increasing pricing leverage.

FUNDfire
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Transparency Standoff Threatens Mandate at $11B Pension

By Tom Stabile October 26, 2016

Adams Street Partners is facing sharp questions – and a potential lost mandate – this week from a longtime pension client for providing it with far less information about its private equity fund of funds strategy than it gives other clients.

The North Dakota State Investment Board is set to discuss its "increasing concerns over the transparency provided by Adams Street" at its meeting scheduled for this Friday, according to a memorandum from pension officers, including **Dave Hunter**, executive director and CIO for the $11.3 billion system. The investment board runs the state **Teachers' Fund for Retirement** and **Public Employees' Retirement System**, as well as other state funds.

The staff is "temporarily pausing future investments in order to reconsider our last two private equity finalists" and even weigh seeking a "suitable replacement," according to the memo. The investment board's staff "became aware that Adams Street provides different levels of transparency to different types of clients" during a months-long review of its private equity portfolio.

While the memo's language is stark, North Dakota still has strong ties to Adams Street, and hopes to work out the issues, Hunter says. The pension committed $60 million to Adams Street strategies with 2015 and 2016 vintages, and has given the firm more than $200 million to manage since 1989.

"Adams Street Partners has been a wonderful private equity partner for us for a long time," he says. "We actually have a 25-26 year relationship with them. We're always going to try to work with them and see what we can do to maintain our relationships going forward."

Adams Street aims to provide "the highest possible level of reporting transparency" to its clients, says **Bon French**, executive chairman at the manager, in an e-mailed statement.

"At the same time, in order to deliver strong investment performance and provide investors with access to top-tier managers, we sometimes must honor confidentiality agreements with certain general partners," French says. "We believe that striking a balance between transparency and access to high-performing managers is the right way to serve our clients."

The issue appears to turn on concerns that North Dakota's freedom of information laws could result in the release of data about underlying strategies in the Adams Street fund of funds.

Private equity managers and their investors may see more snags along these lines as various states look at requiring greater disclosure of data on fund investments, fees, and expenses. California has gone the furthest with a law enacted last month that calls for public institutions to provide data on their share of fees and expenses related to private equity investments.

In most cases, the hand-wringing over data can be resolved through negotiations about what investors really want and what managers are willing to share, says **Michael Rosen**, CIO at Angeles Investment Advisors, an investment consulting firm. "This is easily solved with some common sense," he says.

North Dakota is not alone getting a "redacted reporting package" from Adams Street, according to the memo, which states that other clients "subject to FOIA or similar laws" also get the lighter data set. These

investors don't get to see data on the underlying funds' internal rate of return, percentage of capital withdrawn, percentage of capital distributed back to investors, money multiples on deals, and the internal ratings that Adams Street assigns to each manager in its strategies.

Adams Street apparently made its case to North Dakota, according to the memo, citing a need to protect "confidential information if contested by a third party," even though the investment board's counsel had apparently already discussed the matter at length with the fund manager. The investment board's staff memo concludes that although these data practices don't impact how Adams Street invests, "it does place [North Dakota] in a disadvantageous position compared to other non-FOIA/open records investors invested in the same commingled products. Staff is concerned that there exists a class of investors that has privileged information – investors that can make better-informed investment decisions."

The memo recommends that the investment board "revisit the top private equity candidates evaluated during the [board's] 2015-2016 private equity search to determine if there exists a suitable replacement."

The data gap appears to have been in place already, and North Dakota only recently learned of it, Hunter says.

"I don't think it's something that's really changed all that much on the Adams Street side, [but rather] us becoming just more informed of a different level of true data that's available out there for us from a [private equity] standpoint," he says. "And given that, we're just asking more questions. At this point everything is kind of just being reviewed, and under consideration."

North Dakota has been pleased with the manager to date, Hunter says. "Adams Street does a wonderful job for us," he adds. "They're not on watch. They're actually our top-performing private equity manager."

Another page in the board's agenda package for this week's meeting states that Adams Street's strategies have had net internal rates of return of 9.4% in the past five years and 10.9% since inception. Other current private equity holdings for the state – which total $123.4 million, most in fund vintages prior to 2010 – have had a net internal rate of return of negative 3.2% in the last five years.

Managers that decide to provide varying levels of data to their clients must ensure they are fully disclosing those differences, and most do, says **Luke Wilson**, partner and private equity practice co-head at ACA Compliance Group. Managers only face regulatory risk if they don't disclose such differences, and even then, the damage might not equal the penalty for similar failures involving fee and expense data, he says.

"The [Securities and Exchange Commission] is ultra-sensitive around economic terms," he says. "I don't know if informational data would rise to that level."

Investors certainly should be told upfront whether or not they're getting data sets equal to others in the same fund, however, Rosen says. Some investors might decide they're OK getting less information, and others might buy into the argument that a fund of funds manager may be subject to nondisclosure agreements from underlying managers, he says.

"The expectations should be set and clear at the start," he says.

A bigger issue is that private equity fund managers treat far more data as confidential than is reasonable or necessary, Rosen adds. While fund managers might have a case for withholding data on proprietary analyses or nonpublic information, such as details on pending transactions, the returns and capital transactions data in the North Dakota faceoff shouldn't be restricted, he says.

"It's like the government marking every single document top secret," Rosen says. "I'm not sure there's any reason to keep that information confidential."

BOARD LEADERSHIP
INNOVATIVE APPROACHES TO GOVERNANCE

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The Evolution of Governance Education

by Rose Mercier

Rose Mercier, chair of the International Policy Governance Association (IPGA), provides a brief overview of the evolution of the need for governance education and the programs to fulfill it and introduces a new program from IPGA.

Governance: An Old Idea

A COLLEAGUE, Dr. Richard Biery, whose extensive knowledge in many fields I greatly admire, often starts his work with a board by talking about the roots of the word *governance*. It serves to emphasize that the concept of governance has a long history—some 2,500 years—although its modern story is much shorter. The word governance is derived from the Greek words *kubernesis* and *kubernao*, which mean to pilot or steer. The job of the *kubernetes* was to deliver the orders about the destination of the voyage; the *kubernetes* stood next to the helmsman, whose job was to navigate the ship toward its destination. The *kubernetes* did not take over the wheel and navigate. He stood on the deck and monitored the helmsman so he would know if the ship was traveling toward its intended destination. Implicit in the charge to the helmsman was arriving safely, without damaging the ship or losing sailors at sea. (I am perhaps only imagining that the Greeks would find the latter unacceptable.)

The Romans Latinized the word (*gubernao*) to described the same function, and through the centuries it was Anglicized. However, it is only in the past twenty-five years that governance has become widely used in the modern lexicon, its relevance and importance for today's world being rediscovered. Unfortunately, it has taken scandal and malfeasant conduct for corporations, nonprofit organizations, public agencies, and educational institutions to look more closely at the meaning and exercise of governance.

In the foreword of her 2003 book, *Corporate Governance*, Carol Hansell, a highly respected Canadian corporate lawyer, described how the value of directors and corporate governance was of little importance from the 1950s through to the 1990s. She relates the story of how Irving Olds, then chair of U.S. Steel, estimated the value of directors as that of "parsley on fish—decorative but useless." In

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NEWS

Duty Before Virtue: The Real Ethical Dilemma Facing Corporate Governance

Board Leadership is very interested in the raging debate on ownership taking place in the corporate sector. Here is some "fuel for the fire" from Australian lawyer, writer, and theorist, Peter Tunic. http://ondirectorship.com/ondirectorship/2016-1

The Future of Governance

Dr. Colin Coulson-Thomas, a lecturer in Human Resources & Organisational Behaviour at the University of Greenwich, United Kingdom, has set out a brief overview of the issues and questions that he believes today's board members should be considering. https://www.academia.edu/19609082/The_Future_of_Governance

The New Face of Facebook

The social network Facebook has turned itself into one of the world's most influential technology giants and wants to become ever more powerful. How could this affect your world? You can get a pretty good idea from this *Economist* article published in April of this

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Evolution

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that same period, Ms. Hansell writes, there was little written about directors or boards because there was little interest or understanding of their role. It was the role of the chief executive that seemed central to organizational leadership.

Managing and Leading Are Different—Managing and Governing Are Different

Scientific management, from Frederick Taylor's time-motion studies and later focus on organizational structure, job design, and organizational efficiency, was in the ascendancy in the late 1970s when Abraham Zaleznik published an article in *Harvard Business Review* that questioned whether managers and leaders were different. Zaleznik's answer, which argued that leadership was the missing and complementary system of organizational action to management, disrupted business schools' thinking about the study and education of organizational managers.

I point out this bifurcation in thinking—leadership is distinct yet complementary to management—because it foreshadowed a similar bifurcation in thinking that occurred approximately twenty years later when Sir Adrian Cadbury and John Carver authored publications that disrupted current thinking about governance. "The financial aspects of corporate governance" (usually known as the Cadbury Report), published in December 1992, made recommendations directed toward raising standards in corporate governance, which continue to influence codes of corporate governance, not just in Britain, but also those published by the Organization for Economic Cooperation and Development (OECD), International Monetary Fund (IMF), and World Bank. Just prior to and just after the Cadbury report, John Carver's first book, *Boards That Make a Difference* (1990) and second book, *Boards That Create Value* (2002, co-authored with Caroline Oliver) introduced the world, in the words of Sir Adrian Cadbury, to an analysis of the role of boards from first principles that offered "a fully integrated and coherent system of governance, a significant advance in management thinking, as near a universal theory of governance that we at present have."

If there is indeed a unique job for a board of directors, it must be possible to identify the knowledge that board members, individually and collectively, need to acquire and put into practice.

Governance Comes of Age—Again

The vision articulated in *Boards That Make a Difference* was for "higher quality in the boardroom than has been common" by urging a "transformation in the practice of governance and, more important, how people think about governance." Carver's vision was for a world in which boards would truly be leaders by controlling the long-term, big-picture future toward which today's helmsmen and women would navigate their organizations without the interference of their *keremetes*, the board. A future where management skill, creativity, expertise—and even science—could be applied in their fullest expression, without the board abandoning its ultimate accountability to the organization's ownership for safe passage to the ultimate destination. John Carver introduced a principles-based system of governance that has influenced, often uncredited, those who write, speak, and think today. His Policy Governance® model introduced in a way that was conceptually new for noncorporate sectors, the fundamental tenet that a board's authority to govern comes from its legal or moral ownership, and it is to this ownership that a board is accountable.

Carol Hansell also points out that ever since ownership was separated from management in firms, the need for "some group, other than management, to represent the interests of the owners in the corporation has been recognized." While the value of boards was certainly seen as no more than "parsley on fish" for many years, the perception of the need for them has increased more recently, at least in the corporate sector. Exponential growth in business complexity and competitiveness, the increase in institutional investors flexing the power of their voting blocs to demand accountability, and the anger of shareholders in the wake of large-scale corporate failures have combined to highlight the need for boards to provide long-term direction and control.

Learning to Govern

If there is indeed a unique job for a board of directors, it must be possible to identify the knowledge that board members, individually and collectively, need to acquire and put into practice—an idea that business schools have embraced since the 1990s. Educational institutions include the study of governance in their undergraduate and graduate programs but more prominently offer courses of study for executives who are, or are hoping to be, corporate directors.

A sampling of the programs offered in France, the United States, Canada, the United Kingdom, and Australia illustrates how various programs are organized to help in

developing knowledge. Programs are offered over periods of time that range from two to twelve days for not inconsequential tuition costs.

The topics listed behind each of the following bullet points illustrate how board director education is organized in different programs:

- Board effectiveness and dynamics, board decision making and oversight, director effectiveness and development
- Strategy formation; board risks, duties, and responsibilities; board and director effectiveness; board-management relations; strategic innovation; discretionary accounting; financial strategy; audit committees; avoiding decision failure; shaping board culture; evaluating the CEO; succession planning; executive compensation; governance committees; board evaluation and director assessment; enterprise risk management; mergers and acquisitions
- Understanding directors' role and compliance issues; leading beyond compliance toward better understanding of governance and ethical considerations for business; building a better board and streamlining/improving board processes; focused strategic discussions; monitoring organizational financial performance and risk management; personal director performance
- Accountability and change; leadership and strategy; oversight and finance; communication and social responsibility
- Understanding the role of the board (different models of governance, board and committee responsibilities, board's role in a crisis); understanding the role of committees; current issues (legal, activist investors, cyber security)
- Composition, role, and dynamics of the board; board diversity; role and contribution of chairman; contribution of committees and nonexecutive directors; board engagement from stakeholder perspective; importance of corporate, social, and community responsibility; investor perspectives

There are also programs that aim to meet the needs of directors of nonprofit organizations. One such program is the two-day Governance Foundations for Not-for-Profit Directors offered by the Australian Institute of Company Directors, which covers:

> Policy Governance is an organizing system specifically designed to help boards to fulfill their accountability for the direction and control of whole organizations.

- Duties and responsibilities of not-for-profit directors (role in governing organization and how this differs from for-profit sector, potential liability, balance between performance and compliance roles)
- Strategy and risk for not-for-profit (director's role in setting and overseeing strategy while monitoring risk, link between strategy and risk management, risk culture, and effective leadership; enhancing organizational performance through effective contribution to strategy formulation; personal risk appetite and its impact on board decisions)
- Finance for the non-for-profit director

BoardSource in the United States offers a Certificate of Nonprofit Board Education, a two-day program in which directors learn about board roles and responsibilities; legal and financial issues of boards; identifying, recruiting, and orientation of board members; board-staff relations; board meetings and use of committees; board's fundraising role; board member motivation, responsibilities, and accountability; competing governance models; and governance trends.

A New Program

Policy Governance is an organizing system specifically designed to help boards to fulfill their accountability for the direction and control of whole organizations. In October of this year, the International Policy Governance Association (IPGA) will launch its Policy Governance Professional (PGP) Certification Program.[1] This program is designed to provide participants with the knowledge and expertise needed to play a leadership role in the application of Policy Governance principles and practice.

The program is divided into seven units that will be offered over eight months. Each unit will be guided by a tutor who will lead the unit's webinars. Participants will also be expected to complete unit assignments, all in preparation for the unit assessment. Individuals who successfully complete the assessments and final evaluation will be acknowledged as Certified Policy Governance Professionals and be able to use the PGP designation.

While the focus is on the understanding and application of the principles of Policy Governance, the program starts with a big-picture understanding of the legal framework and societal context for governance within which all boards must function.

The program's seven units will address:

- Foundations of Governance
- Policy Governance Principles and Architecture
- Policy Governance: Roles, Documentation, Processes and Competencies

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What's It Worth?

by Ted Hull and Caroline Oliver

You've recently purchased a new car that your colleague eyes with obvious appreciation and scarcely disguised envy. "So what's something like that worth?" he asks. Depending on the degree of modesty you want to express, you either mumble or gloatingly say how much you paid for your car. Both of you implicitly assume that what the car cost is the same as what it's worth. What you have really told your friend is that what you paid for the car is an amount equal to or less than what it is worth to you. Otherwise, you wouldn't have bought the car.

What something costs and what it's worth are two different questions.

Your three-year-old daughter has been diagnosed with a degenerative heart condition. There's a surgical procedure that has a high likelihood of being successful, but without the operation both the quality and quantity of your daughter's life are doubtful.

FOOD FOR THOUGHT

"True freedom is not the absence of structure … but rather a clear structure that enables people to work within established boundaries in an autonomous and creative way."

Erich Fromm (1900–1980), German-born American psychoanalyst and social philosopher in *Escape from Freedom* (New York: Farrar & Rinehart, 1941).

Your first question isn't going to be, "So what's the surgery going to cost." And even if it is, it won't be a consideration as you address the *worth* question. You won't posit that your kid might be worth $175,000, but there's no way you're going to pay $250,000 to keep her alive. You will spend, mortgage, beg, borrow, and plead for whatever funds are necessary to ensure her return to health. When picking up the coin that represents the value of your daughter, you will look first at the *worth* side.

> As long as the funds come in to feed the dinosaur, the board has met its goal.

However, cost is a consideration. The anticipated cost for the surgery is significant, and as such you aren't going to shell out $250,000 without investigating the options. Suppose, for example, $250,000 was the cost for having the treatment done in your home state, but it could be done in another state for $175,000. You will likely decide that the surgery isn't worth $250,000 because materially the same result can be produced for $175,000.

The Ends component of the Policy Governance® system for board work is composed of identifying the intended results (using our analogy, that would be a healthy heart) for the intended recipients (your daughter) and the worth to the owners (you as parents) of producing those results.

The idea of results and recipients is relatively easy for many boards to address. However, when it comes to the value piece, they are often stalled. And it does take some careful consideration. A for-profit company may state that it is concerned only about shareholder return. And while there may be a good return to those shareholders on the sale of widgets, would there be a better return if the company sold doodads? In any case, the bottom line is determining the worth of the return as it relates to the cost of the investment, the risk, and whatever other investment opportunities are being passed up as this venture is pursued.

Not-for-profit organizations face an additionally complex challenge. The matter of value can't be easily reduced to a dividend, and there is no monetary return to the investor. The return is the more nebulous and subjective satisfaction that certain other people are better off.

An example is those who have a passion to see that people in need of a healthy meal receive it. The people with this philanthropic ambition will not be directly rewarded (fed or paid) for their investment. So how are they able to determine if the cost of providing the meals for people who would otherwise be hungry is worth it?

Let's suppose that we sit on the board of such an organization. How do we ensure that the work of our organization is worth what it should be? We know we will not be able to ensure that every hungry person in the world is well fed. Thus, we may limit the recipients of our program to a certain city or even a certain part of that city, and we may also limit how often or how well the recipients are fed. So in deciding specifically who will receive these benefits and how much or how frequently they will be fed, we have *ipso facto* determined who will *not* receive those benefits and what benefits will not be realized. In other words, we, as owner-representatives, have decided that some benefits for some people are worth more to us than other benefits to other people.

However, we still don't know how we are going to establish what the worth of the work of our organization should be.

We know that there is a point at which we would say that the value of the results we are producing are not worth all the resources that our organization is consuming to produce them. That cost might be, for example, an amount greater than the cost of producing similar results (a similar number of meals providing similar nutritional benefit) incurred by a local restaurant. Otherwise, as people with the passion to see that people in need are fed, we should simply pay a local restaurant to do the job. So we have determined that we can establish whether the worth of our work is appropriate by ensuring that the "costs" (resources of time and money) incurred by our organization are no greater than the costs a local restaurant is incurring to produce similar results.

This sounds simple.

But is a local restaurant really a fair comparison if many of the people our organization serves are homeless and/or have mental health issues. Can we leave our Ends silent on the benefits of the social environment we provide and the advice our staff offer to those in trouble? And, if we expand our Ends to include friendship and information, what is the worth of those results relative to the worth of the meals, and how do we factor this into our measurement of the overall worth of our work? A tricky question indeed, but an important one.

We have met with boards that seem to be stuck when it comes to addressing the Ends component of value. They would be just as happy to have Ends that define the results and the recipients but leave out the *value* part. They say that they have no idea about the value of producing the results.

But they do.

"If your soup kitchen provided a total of seventy-seven meals a month," we ask, "would that be a reasonable value produced by your organization?" (That's not a typo—seventy-seven meals a *month*.) They quickly discover that despite thinking they had no idea if the cost was worth the results, they actually do—and no, it's not worth it. Then asking if they provided seventy-seven hundred meals a month, their understanding of the worth of the organization becomes clearer on the other end of that worth/cost continuum.

Sadly, one of the reasons that boards don't want to investigate the value component of their Ends is that certain organizations exist because they always have. As long as the funds come in to feed the dinosaur, the board has met its goal. So another way of framing the Ends question is to ask what would happen if the organization were shut down. How much value would be lost? Which intended recipients would be negatively impacted, what benefits would they no longer receive, and how much time and money would be saved? The results of this inquiry can be revelatory. A legacy would be lost and staff would be unemployed; however, in terms of meaningful results for people in need of those results, many boards would be hard pressed to identify many of either.

At the very least, say that boards need to think about the appropriate value of their organization's results quite separately from worrying about issues such as how much clients are having to pay for those results or whether suppliers or staff are being overpaid. Board concerns about individual elements of cost can be wholly dealt with in Executive Limitations by proscribing conditions or activities that the board would find unacceptable even if the Ends could still be achieved. The Ends question of "at what worth" addresses a much more profound question: are the results produced by our organization sufficient to justify the resources we consume to produce them? It is not at all easy for the board to create

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WHEN WE SAY ...

BOARD LEADERSHIP's mission is "to discover, explain, and discuss innovative approaches to board governance with the goal of helping organizations achieve effective, meaningful, and successful leadership to fulfill their missions."

Board Leadership aims to fulfill this mission by engaging its readers in a lively and illuminating inquiry into how board governance can be made more effective. This inquiry is based on three key assumptions:

- Boards exist to lead organizations; not merely monitor them.
- Effective board governance is not about either systems, structures, processes, theories, practices, culture, or behaviors—it is about all of them.
- Significant improvements are likely to come only through challenging the status quo and trying out new ideas in theory and in practice.

Uniquely among regular publications on board governance, *Board Leadership* primarily focuses on the job of board leadership as a whole, rather than on individual elements of practice within the overall job.

Over time, *Board Leadership* will provide a repository of different approaches to governance created through its regular "One Way to Govern" feature.

Here's what a few of the key terms we use mean to us:

- **Innovative:** Creating significant positive change.
- **Approaches to:** principles, theories, ideas, methodologies, and practices.
- **Board governance:** The job of governing whole organizations. ❑

For Your Bookshelf ...

Reviewed by Dr. John P. Bohley

John P. Bohley, LISW-S, DPA, principal consultant for Boards On Course, a Monroe, Ohio-based board development consulting firm specializing in Policy Governance®, reviews a guidebook for school boards developed by the National School Boards Association.

The Key Work of School Boards Guidebook

by The National School Boards Association, Alexandria, VA: National School Boards Association, 2015

The Key Work of School Boards Guidebook has been developed by the National School Boards Association to assist school boards in achieving governance excellence. This 2015 edition is preceded by the original version in 2000 and an update in 2010. The *Guidebook* provides helpful insights and practical suggestions and recommendations in five key governance areas: Vision, Accountability, Policy, Community Leadership, and Board/Superintendent Relationships.

Vision. Each school board is encouraged to develop a vision grounded in its key values, with its top priority being student achievement and a mission statement that includes a focus on desired results for students. Student education should meet the future needs of students and not be trapped by educational concepts of the past. This section of the *Guidebook* includes sample vision and mission statements, a board self-assessment tool, sample goals and strategies, and a summary of the roles and responsibilities of the school board and the superintendent related to the vision and strategic planning process.

> Student education should meet the future needs of students and not be trapped by educational concepts of the past.

Accountability. School boards are seen as accountable for student achievement, which is to be measured in relation to established performance standards. Such standards include those mandated by the state as well as district-level standards adopted by each school board. Such local standards need to continually change with our evolving world. Student performance data should be used to guide continuous performance improvement of the student body as a whole as well as identified student demographic subgroups. Though not much attention in the *Guidebook* is given to the accountability relationship between school board and community, the *Guidebook* recognizes that ultimately the school board is accountable to the "vote of the community." This section of the *Guidebook* ends with a board self-assessment tool related to accountability and a summary of related school board and superintendent roles and responsibilities.

Policy. School boards are to develop policies that enable them to focus on the bigger issues while refraining from micromanaging. Such policies are to be differentiated from the "administrative procedures" developed by the superintendent. Compliance with policies can be monitored by "internal reports" from the superintendent, "external review" by unbiased third parties, or by "board inspection." (Persons familiar with Policy Governance will recognize these three types of monitoring.) This section of the *Guidebook* concludes with questions to guide policy development, a listing of core policies, and a board self-assessment tool related to policy development.

Community Leadership. The focus of community leadership is advocacy with legislators and building community support through engagement of the general public, parents, and community leaders. Excellent school boards are seen as being proactive in developing public opinion rather than just responding to it. I would add that, consistent with the Policy Governance model, community relations are not just about garnering public support, but also fundamentally about genuinely listening to and learning from the people the school board represents and on whose behalf it governs. The *Guidebook* states that school boards should have a policy about the participation of the public at school board meetings and recognize that how well its school board meetings are conducted is a reflection on the competency

WRITING FOR *BOARD LEADERSHIP*

Board Leadership **welcomes articles from governance practitioners, researchers, and consultants on topics related to the discovery, explanation, and discussion of innovative approaches to board governance. If you have something new to say or want to provide a new perspective on something already said, please get in touch to discuss your idea further and to get a copy of our publishing criteria. Email: coliver@goodtogovern.com** ❑

of the school board and the overall district school system. This section of the *Guidebook* ends with suggested guidelines for collaborative relationships and a summary of related school board and superintendent roles and responsibilities.

Board/Superintendent Relationships. While it can be said that the school board governs and the superintendent administers, the distinction between the roles in each school district needs to be clarified by the board and superintendent. A process is suggested by which the board and superintendent can jointly clarify what matters are delegated to the superintendent, what matters require the superintendent to inform the board either before or after each superintendent decision, and what matters are reserved to the board. The board and superintendent need to function as an effective team characterized by frequent two-way open and honest communication. Clearly defined measurable board expectations for the superintendent become the basis for effective evaluation of the superintendent's performance. This section of the *Guidebook* ends with guidelines for planning and conducting the superintendent's evaluation.

The *Guidebook* concludes with "Eight Characteristics of Effective School Boards" drawn from a 2011 report written for the Center for Public Education of the National School Boards Association:

1. "Effective school boards commit to a vision of high expectations for student achievement and quality instruction and define clear goals toward that vision. ...
2. Effective school boards have strong shared beliefs and values about what is possible for students and their ability to learn, and of the system and its ability to teach all children at high levels. ...
3. Effective school boards are accountability driven, spending less time on operational issues and more time focused on policies to improve student achievement. ...
4. Effective school boards have a collaborative relationship with staff and the community and establish a strong communications structure to inform and engage both internal and external stakeholders in setting and achieving district goals. ...
5. Effective school boards are data savvy: they embrace and monitor data, even when the information is negative, and use it to drive continuous improvement. ...
6. Effective school boards align and sustain resources, such as professional development, to meet district goals. ...
7. Effective school boards lead as a united team with the superintendent, each from their respective roles, with strong collaboration and mutual trust. ...
8. Effective school boards take part in team development and training, sometimes with their superintendents, to build shared knowledge, values and commitments for their improvement efforts. ... (pp. 56–57)

In the course of the *Guidebook*, several imperatives for excellent school board governance are identified, including the following:

- An unwavering focus on results related to student achievement
- Data-driven governance
- Using board-level policy for organizational governance
- Avoidance of overinvolvement in operational matters
- Effective engagement with the community
- Clarity regarding board and superintendent roles and the scope of authority delegated to the superintendent
- Effective monitoring and evaluation of superintendent performance

I would recommend this *Guidebook* as a very useful addition to the literature for school boards. However, as so much governance guidance does, it leaves many practical "how" questions unanswered. Crucially, the methodologies for distinguishing roles in relation to any given issue and for tracking policy compliance could be clearer and more helpful. Hence, I would suggest that school boards committed to governance excellence might want to consider the Policy Governance model of board operations as a comprehensive, effective, and efficient framework for addressing the seven imperatives listed above. ❑

John Bohley can be reached at www.BoardsOnCourse.com or John@BoardsOnCourse.com.

BOARD LEADERSHIP IS NOW MORE ACCESSIBLE THAN EVER!

Do you vaguely remember a fascinating *Board Leadership* article that you can no longer find? Do you or your colleagues want to be able to see what past *Board Leadership* articles have to say on a particular subject? Look no further. All issues of *Board Leadership* from 1992 onwards are now searchable. And, Issues 135 and prior are available for purchase—as are individual articles from Issue 136 to date. Just go to http://onlinelibrary.wiley.com and search for *Board Leadership* and then use the "In this Journal" option on that page (top right) to search on any term you choose.

And you can find more about *Board Leadership* and some free "taster" articles at www.boardleadershipnewsletter.com. ❑

Evolution

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- Policy Governance in Action
- Building the Ownership Connection
- Varieties of Policy Governance Application
- Representing Policy Governance

Where to Next?

Ruben Nelson, a futurist who wrote about the importance of boards developing strategic foresight in Volume 139 of *Board Leadership*, uses the analogy of an onion to illustrate how that in which organizational leadership has needed to achieve mastery has evolved over time. In the 1950s, leaders focused on administration of activity; in the 1970s they focused on efficiency (remember time-motion studies?); in the 1990s there was focus on organizational effectiveness as the impact of understanding the complementarity of management and leadership were better understood. At the outer skin of the onion, the focus must be on organizational relevance.

Ensuring that any organization can sustain relevance in a changing world will require boards and individual directors that not only understand their roles and responsibilities but have the ability to add value. Today's *kubernates* will need to do more than just stand on the deck; they will need a profound understanding of the source of their authority and the means through which they can and should direct and safeguard an organization's voyage and the need to understand the interconnected world in which organizations exist. One suspects that board education will continue to figure prominently. ❑

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Note

1. The Policy Governance® Professional (PGP) Certification Program is a thirty-two-week accredited program starting this October run by the International Policy Governance Association (IPGA) and leading to the certified PGP designation. More information is available at https://www.policygovernanceassociation.org/events-and-conferences/172-policy-governance-professional-program.html.

News

(continued from front page)

year. http://www.economist.com/news/briefing/21696507-social-network-has-turned-itself-one-worlds-most-influential-technology-giants?fsrc=scn/tw/te/pe/ed/howtowinfriendsandinfluencepeople

Will Your Next AGM Allow for Online Participation?

If you are considering online participation at your next AGM, you may be glad to know that Ralph Ward of *Boardroom Insider* newsletter has alerted us to this publication from an investor communications firm called Broadridge. http://www.broadridge.com/broadridge-insights/Guidelines-for-Protecting-and-Enhancing-Online-Shareholder-Participation-in-Annual-Meetings.html

Know Your Biases

Everything we do can be impacted by our biases—consciously or unconsciously. Within Our Lifetime is an American network created for the purpose of advancing a new sense of what is possible with regards to racial healing and equity. They have created an interesting video and a test under the title *Beyond Bias*, which could help you consider the issue of bias in any domain.

Video: https://www.youtube.com/watch?v=ySpgiOxgKQE

Test: http://bit.ly/1nsczDd ❑

What's It Worth?

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good policy to address this question, let alone for the CEO to come up with reasonable measurable interpretations for it, but if you want your organization to be adding real value to the world, it has to be asked. ❑

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Thinking of publishing in* Board Leadership*? Contact managing editor Caroline Oliver for criteria at coliver@goodtogovern.com

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The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

September 2016

CAN THE ACTUARIAL PROFESSION INNOVATE? ..... SHOULD IT?

"Neither the Society of Actuaries nor the American Academy of Actuaries will be publishing the paper or endorsing it……we do not think it would be appropriate …… to take the existing paper and publish it somewhere else…..".

Tom Wildsmith, President, AAA
Craig Reynolds, President, SOA

"The Paper"

There is no better way to create interest in a paper than to ban its publication. This is effectively what the American Academy of Actuaries (AAA) and the Society of Actuaries (SOA) did with a paper innocuously titled "Financial Economics Principles Applied to Public Pension Plans". The ban has already been the subject of articles in *Pensions & Investments* titled "Actuary groups disband taskforce on finance", in *The Economist* "No love, actuary: a report on American pension funds is controversially shelved", in *MarketWatch* "The $6 trillion public pension hole that we're all going to have to pay for", and in the *Wall Street Journal* "Covering up the Pension Crisis". [i]

Given that the AAA and the SOA identify themselves as organizations interested in respectively promoting good public policy and good education/research in pensions, banning a research paper by a taskforce they themselves created is surely a highly unusual step. Presumably, the organizations felt strongly that the paper did not meet requisite education/research quality standards, nor would it foster good public policy in pension design, disclosure, and regulation. This *Letter* summarizes the key messages of "the paper", offers opinions on why it was banned, what the ban says about innovation in the actuarial community, and on what good research, education, and public policy advocacy in pensions could and should produce.

Newsflash!!

SOA President Craig Reynolds announces the SOA has changed its mind, and will soon publish a version of "the paper" that is "acceptable to all parties". However, now it appears that a copyright battle has broken out between the warring parties.

Pensions, Actuarial Practices, and Financial Economics

Actuarial valuations are keystones in the annual reports of Defined Benefit (DB) pension plans. They usually end with a recitation like: "*We believe that the methods employed in the valuation are appropriate for the purposes of the valuation and that the assumptions used in the valuation are in accordance with accepted actuarial practices".* This statement gets us to the heart of the controversy sparked by "the paper" very quickly. It asserts that accepted actuarial practices in the USA regarding pension costing and liability estimation are inconsistent with the principles of financial economics.

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Those principles require that DB pension costs and solvency liabilities depend not only on the benefits promised, but also on the likelihood that they will actually be paid. The greater the likelihood, the closer cost/liability valuation discount rates should be to the market-determined term-structure of risk-free interest rates. "The paper" points out that accepted actuarial practices in the USA permit cost/liability valuation discount rates well above the rates dictated by financial economic principles. This leads to a number of problems in U.S. public sector DB plans:

- The economic value of deferred compensation and hence total compensations costs for public sector employees are understated.
- Current employment costs are shifted to future generations.
- Accrued pension liabilities are understated.
- There is a false perception that pension benefit costs and liabilities can be reduced by taking on more investment risk. [ii]

How serious are these consequences for US public sector DB plans? In the cited *MarketWatch* article titled "The $6 trillion public pension hole that we're all going to have to pay for", authors Bartholomew and Gold estimate that relative to the $4 trillion in assets and $5.5 trillion in reported liabilities, using the principles of financial economics, those liabilities would amount to more like $10 trillion….leading to a gaping $6 trillion pension hole.

All this raises profound questions. Did the two actuarial societies really believe "the paper" lacked rigour, educational value, and public policy-making potential? Or did they want to distance themselves from a study with their names on it that (effectively/indirectly) concludes that "accepted actuarial practices" have, and continue to seriously damage the financial condition of many U.S. state and local governments?

Can Actuaries Innovate?

If the latter answer is closer to the truth, it is worth asking how this awkward situation could have arisen. Reasonable people will have different answers. My own sense is that the actuarial profession has long had a 'to a person with a hammer, everything looks like a nail' problem. As a result, with a few notable exceptions, the DB construct was unquestionably accepted by the profession as the preferred design for workplace pension plans.

Long-time readers of this publication will recall that I began to question this apparently unassailable dogma many years ago. For well over a decade now, deductive logic and empirical findings have been leading me to the view that neither the traditional DB nor DC constructs lead to ideal workplace pension designs. Here is a brief recitation of that journey:

- The powerful <u>life-cycle theory of personal finance</u> makes it clear that the ideal pension arrangement allows people to maintain their standard of living after they retire from the work-force. Modern forms of the theory have been around since 1969.[iii] It helps frame the pension design issues that need to be addressed.
- The <u>requisite savings rate</u> can be calculated with projections about work-phase length, post-work life-expectancy, real investment returns, and the Pillar 1 old-age pension amount.
- The <u>Gordon Return Model</u> (1959) provides the simplest reasonable 'best estimate' of future long-term investment returns.[iv] This model currently projects a long-term real return for a 60-40 stock-bond asset mix of 2.4%/yr., far below the 5%/yr. historical realization still being used in many U.S. public sector DB plans. [v]

- Two key life-cycle risks to be addressed relate to investment return and life expectancy.
- Life expectancy risk has micro and macro dimensions. It is micro-poolable within cohorts, but not macro-poolable across cohorts (i.e., the whole group living longer than expected).
- Investment risk also has micro and macro dimensions. Again, it is micro-poolable within a specific time-horizon (i.e., through asset diversification), but not macro-poolable across multiple time-horizons (i.e., intergenerational risk-sharing in DB plans is more myth than reality).[vi]
- There is yet another investment risk dimension. The dominant risk for retirees is pension payment uncertainty, which can be hedged by matching assets to liabilities (call it 'solvency risk'). The dominant risk for workers is not solvency risk, but that the affordable pension contributions made during their working lives don't earn a high-enough return to generate the desired pension payments in retirement (call it 'compounding risk').[vii]
- Achieving two goals requires two instruments. The first Nobel Prize in Economics (1969) was awarded to Jan Tinbergen for enunciating this principle. In pension design it means designing and managing separate return compounding and payment safety instruments. The focus of the former is to assemble and manage a diversified portfolio of sustainable cash-flows (e.g., interest payments, dividends, rents, tolls, etc.) through multiple decades. The focus of the latter is to deliver a lifetime series of well-defined pension payments to retirees.
- Earning above-market returns is a credible expectation, but only for the small number of funds with the requisite culture and expertise.[viii]
- Achieving the right amount of participant involvement is another important design goal. Daniel Kahneman and Amos Tversky launched the modern version of behavioral economics in the 1970s. That is when thinking about how to introduce the real behavior of real people into pension design began (e.g., thinking through how to introduce choice into workplace pension plans in a constructive manner). This in turn has led to automatic default designs, but with participant 'opt-out' options. Default/'opt-out' features could relate to the contribution rate structure, the choice of retirement date, or how to transition participant asset exposure from the return compounding instrument to the payment safety instrument on an age-related basis.

The point of this 10-item recitation is to demonstrate that there have been a series of important theoretical developments and empirical findings impacting the design of workplace pension plans over the course of the last 40 years. Workplace pension scenes around the world would look a great deal brighter today if those developments and findings had found their way into the redesign of workplace pension plans in a timely manner. That is especially so with U.S. public sector DB plans.

Brighter Workplace Pension Scenes around the World

What would these brighter workplace pension scenes look like? Consider the following features:

- Logical, explainable pension goals and designs to achieve them
- Clear participant property rights
- No intergenerational wealth/cost shifting through the systematic accumulation of unfunded pension liabilities
- Clearer definitions, and more efficient allocation and management of embedded investment and longevity risks
- Reasonable payment safety for retirees without the very high costs of payment guarantees
- Limited, but informed participant choice options
- More effective transformation of retirement savings into wealth-producing capital
- Functional 'value-for-money' pension organizations

There is of course the question of getting from here to there. At one end of the spectrum, without embedded employer guarantees, the Australians are well-placed to continue to move their workplace-based 'superannuation' system in an ever-brighter direction by integrating longevity risk-pooling protocols into the payment safety components of their super schemes.[ix] They only need to bolt value-adding features on to the designs they already have.

In contrast, most U.S. public sector DB plans today lie at the dark end of the design spectrum. In many cases, accumulated pension promises are far greater than the assets accumulated to secure those promises. Further, without clear property rights, it is often not clear who the balance sheet underwriters are. All this constitutes an adversarial game theory situation: no group (e.g., current and future retirees, active workers, taxpayers) wants to end up without a chair when the money music stops. Without functional conflict-resolution mechanisms, courts of law will end up being the decision-makers of last resort.

Where is the Actuarial Profession in all this?

This *Letter* opened by asking what role the actuarial profession could/should play in fostering innovation in pension plan design and management. Stating the obvious, suppressing views and research findings that raise serious questions about "accepted actuarial practices" in the valuation of DB plans shines a defensive, reactive light on the profession. Surely the profession is better than that. Much work remains to be done to bring financial security to aging populations around the world. Actuaries must be part of the solution, not part of the problem.

Keith Ambachtsheer

Endnotes:

i. *The publication dates of the four articles are August 8, 13, 20, and 25 respectively.*
ii. *There is empirical evidence that mature U.S. public sector DB plans and those with more political board appointees in fact take on more investment risk. See Andonov, Bauer, Cremers (2016), "Pension Fund Asset Allocation and Liability Discount Rates", SSRN Working Paper.*
iii. *See various papers by Merton, Bodie, Samuelson, et al.*
iv. *Gordon (1959), "Dividends, Earnings, and Stock Prices", The Review of Economics and Statistics.*
v. *See my recent July Letter for the basis of these real return projections. Note that the 2.4%/yr. is the expected real return of the 60-40 mix, and not the long-term risk-free rate, which is currently about 0.5%/yr.*
vi. *The February 2016 Letter titled "Solving the Annuity Puzzle: It's All in how You Ask the Question" cites a Dutch research study by Bonenkamp, Broer, and Westerhout which shows that intergenerational risk sharing has been over-rated as a risk-reduction device. The bigger problem is that DB plans expose all plan participants (whether young or old) to the same amount of balance sheet mismatch risk despite the fact that the kind of risks they face, and their tolerances to them, are very different. A number of earlier Letters made the point that game theory predicts (and empirical evidence confirms) that DB plan surpluses will be spent in the form of reduced contribution rates and increased benefits, while deficits will be pushed forward to future generations not present at the bargaining table.*
vii. *Early versions of the life-cycle theory do not distinguish between solvency risk and compounding risk. Today there is increasing recognition that their nature and management are fundamentally different. For example, an expertly-managed, high-yield, high-sustainability equity portfolio is a poor hedge against a pension payment due next month, but can at the same time offer the highest probability of achieving a 20-year target real return of 4%. See my November 2015, July 2016, and August 2016 Letters for more on this.*
viii. *See my recent August Letter for the bases for this belief.*
ix. *Mercer actuary David Knox is a thought-leader in this effort. See the June Letter titled "Attaching Income-For-Life 'Back-Ends' To DC Pension Plans: Why The Time Has Come".*

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The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

October 2016

GOVERNOR CARNEY ON CLIMATE CHANGE:

WHY PENSION PEOPLE SHOULD PAY ATTENTION

"A classic problem in environment economics is 'the tragedy of the commons'. The solution to it lies in property rights and supply management…. Climate change is 'the tragedy of the horizon'…. its impacts will be felt beyond the traditional horizon of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix…..".

From a speech by Mark Carney, Governor of the Bank of England
Given at Lloyd's of London, 29 September, 2015

"The Paris Agreement provides detailed climate policies and creates the prospect of a future ratcheting up of efforts to control carbon emissions. In doing so, it greatly increases transition risks as well as opportunities. By bringing forward the horizon, it puts a premium on the ability of private markets to adjust….. This is crucial because these transition risks could turn success into failure…..".

From a speech by Mark Carney, Governor of the Bank of England
The Arthur Burns Memorial Lecture, Berlin, 22 September 2016

A Different Kind of Central Banker

In a recent visit home to Canada, Mark Carney jokingly observed that the job of central bankers is to repeat the same few messages over and over again, but to do so a profound and very serious manner. He went on from there to offer thoughts on what he called the "climate paradox" in a way that belied his earlier "repeat the same few messages" comment. His remarks ranged well beyond the usual central banker boiler plate about fostering stable economic environments and prosperity. His dissertation on the realities of climate change and its profound implications for financial markets and investors effectively combined deep integrative thinking with an ability to 'keep things as simple as possible, but no simpler'.[i]

As the Governor of the Bank of Canada during the Global Financial Crisis (GFC), Mr. Carney gained international prominence as he and his colleagues played important leadership roles in stabilizing the global financial system. Arguably, this led to two outcomes for him. First, he was the first foreigner to be offered the Governor position at the Bank of England. And second, he was appointed Chair of the newly created Financial Stability Board (FSB) at the 2009 G20 London Summit. The mandate of FSB is to play a pro-active role in fostering international financial stability and thus prevent the kind of GFC that almost brought the global financial system to its knees in 2008/9.

In Mr. Carney's view, the FSB's mandate includes assessing how climate change, and measures to mitigate its current and future impacts, could lead to financial instability in the years/decades ahead. This assessment should in turn inform the FSB on what measures it, and other financial markets participants, should be taking now to mitigate climate change-related risks.[ii] This *Letter* sets out his views on these matters, and my interpretation of their implications for pension people.

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Is Climate Change Real?

In his Lloyd's of London speech last year, Mr. Carney took on the climate change deniers:

- In the Northern Hemisphere the last 30 years have been the warmest since Anglo-Saxon times. Indeed, eight of the ten warmest years on record in the UK have occurred since 2002.
- Atmospheric concentrations of greenhouse gases are at levels not seen in 800,000 years.
- The rate of sea level rise is quicker now than at any time over the last two millennia.
- Since the 1980s, the number of registered weather-related insurance loss events has tripled. Losses from these events have increased from an annual average of around $10B in the 1980s to $50B over the past decade.
- Without mitigation, these impacts will continue to increase in size and scope in the years/ decades ahead.

With mounting evidence that human drivers have, are, and will continue to play a major role in these outcomes, why has so little been done to date? The answer lies in 'the tragedy of the horizon'. Solutions to the climate change problem require unconventional thinking beyond the typical lengths of the business cycle, the political cycle, and the time horizons of technocratic authorities like central banks.

In his Berlin speech last month, Mr. Carney characterized last December's COP-21 Paris Agreement on climate change as a serious international attempt to address the 'tragedy of the horizon' challenge. The goal is to curb carbon emissions consistent with limiting the rise in global average temperatures relative to those in the pre-industrial world to 2◦C, and to pursue efforts to limit the temperature increase to 1.5◦C. Countries have agreed to submit their Nationally Determined Contributions (NDCs) to these goals, to be updated regularly with each update a progression on the last. Of course saying is one thing, doing another….

Climate Change and Financial Stability

How does climate change impact the stability of the globe's financial system? Through three channels:

- Physical risks: arising from the increased frequency and severity of climate- and weather-related events that damage property and disrupt trade. The insurance industry is the front line of these risks, but there are limits to its ability to cover them.
- Liability risks: stemming from parties with climate change-related losses seeking compensation from those they hold responsible. Some actions of this nature are already occurring, but they could accelerate as the science and evidence of climate change hardens.
- Transition risks: resulting from adjustments towards a lower-carbon economy. The triggers could be changes in policy, technology, or reassessments of physical risks. The result could be a reassessment of the value of a large range of assets as costs and opportunities become apparent. The speed of these price adjustments is uncertain, possibly taking place rapidly enough to destabilize financial markets (e.g., the U.S. coal sector is a 'canary in the coal mine' micro example).

These realities lead Mr. Carney to encourage us to think through how building new markets in climate-change transition and green finance can help mitigate these risks. This thinking leads to clear policy frameworks that encourage the mobilization of private capital to finance the transition to low-carbon economies. Green finance offers major opportunities here by allocating capital to green technologies and increasing the prospects for an environmentally sustainable recovery in global growth.[iii]

The Information Imperative

Mitigation strategies to effectively deal with these three climate change-related risks cannot be executed without a requisite information base. To that end, Mr. Carney proudly points to the FSB's Taskforce on Climate-Related Financial Disclosures (TCFD) chaired by Michael Bloomberg. The TCFD's mandate is to develop recommendations for voluntary, consistent, comparable, reliable, and clear disclosures around climate-related financial risks for companies to lenders, insurers, investors, and other stakeholders.

In a Phase I Report in April, the TCFD confirmed that existing disclosure frameworks vary in their legal status, and are generally incomplete and fragmented. Mr. Carney lists three imperatives for the TCFD's Final Report, due by the end of this year:

- Disclosures must be strategic rather than static: they must be forward-looking, and sufficiently granular to offer real insight into how climate-related risks and opportunities may impact a firm's existing and future businesses.
- Scenario analysis may be needed for investors to price financial risks and opportunities correctly against plausible public policy developments, technological advances, and evolving physical risks.
- Materiality judgements will help scale the granularity necessary for effective disclosure. This will help investors sort out the information they need to understand the prospective risks and rewards across such varied sectors as agriculture, automobiles, consumer goods, and electric power utilities.

There is in fact a fourth imperative. The TCFD is not the globe's first initiative to attempt to set out a standard protocol for corporate disclosure of climate change–related risks and opportunities at a micro level, or of broader disclosure of what a corporation is doing to be a sustainable wealth-producing entity in the long term. It is going to be important to align the TCFD's recommendations with already-developed broad approaches such as those of the IIRC, SASB, FASB, IASB, and SEC, and more climate-specific efforts such as CDP, CERES, and CDSB.

In the end, lenders, insurers, investors, and other stakeholders want a stream of material corporate information that is consistent, comparable, reliable, and clear. The TCFD is well-placed to play an integrative role of bringing this about.

Climate Change and Security Analysis

How could/should this framing of the risks and opportunities attached to climate change impact assessing the long-term investment prospects of publicly-traded corporations? A recent study titled *German Utilities: Scoping the 'Tragedy of the Horizon'* shows the way.[iv] The study focuses on the strategic restructuring of German electric utilities E.ON and RWE. Both companies are splitting themselves into separate 'new' (i.e., renewables and networks) and 'old' (i.e., fossil fuels [FF]) entities.

The study's risks/opportunities assessments are based on following through the implications of (likely) tighter Paris Agreement-driven carbon emission targets than the current EU targets for 2030. Tighter targets mean a higher CO2 price, higher power prices, and a radical shift in FF merit order towards gas and away from coal and lignite. Such shifts would have materially different valuation implications for the 'old' E.ON and RWE businesses. In contrast, the 'new' renewables/networks businesses offer "appealing defensive growth" prospects. All this supports the view that over the next decade and beyond "we will see a further acceleration away from the more carbon-intensive forms of fossil fuel generation".

And what does all this have to do with Governor Carney's quest for greater understanding of, and more decisive actions to address the consequences of climate change? Here is how the Barclays researchers put it in the context of their study:

> *"This is precisely why Governor Carney set out the need for greater disclosure from companies around their climate-related financial risks….. It is also why we think power utilities should be disclosing more information about how they are thinking about the risks of tighter climate policy in the future, and what they are doing to prepare for and/or pre-empt these risks. In this way, as Governor Carney puts it,* ***a 'market' in the transition to a 2-degree world can be built****."*

Implications for Pension People

This *Letter* is a sequel to our July 2015 *Letter* titled "From an 'Unknown' to a 'Known': Managing Climate Change Risk'.[v] It placed managing climate-related risks in the broader context of the roles of boards and managements of pension organizations in understanding the financial risks they need to oversee and manage on behalf of plan participants, and how to actually do that. Using the Mercer study "Investing in a Time of Climate Change" as a guide, that *Letter* also pointed to the value of scenario analysis in assessing exposures to the three types of climate change risks set out by Mr. Carney: 1. physical, 2. litigation-related, and 3. transition-related.

Importantly, Mr. Carney pointed to the likely dominance of transition-related risks and opportunities over the next few years, flowing out of the myriad national policy decisions triggered by the Paris Agreement. The cited Barclays study confirms the view that these decisions will have major impacts on how markets will assess the present value of future corporate cash-flows, depending on whether their sensitivity to these policy decisions is negative or positive.

The July 2015 *Letter* used the fractured Donald Rumsfeld 'known unknown' taxonomy as a metaphor for the state of knowledge of the global pension community about climate change and its financial implications. This *Letter* signals that pension people can no longer use the 'unknown' excuse for inaction on the climate change file. We must all play constructive roles in successfully managing the needed market transition to a 2-degree world.

Keith Ambachtsheer

Endnotes:

i. *A dictum attributed to Albert Einstein.*
ii. *As well as identify and exploit climate change-related opportunities.*
iii. *See the cited Berlin speech for more detail about these ideas. All speeches are available at www.bankofengland.co.uk .*
iv. *The September 2016 study was produced by the European Utilities team of Barclays, led by Mark Lewis. He is a member of the FSB's Taskforce on Climate-Related Financial Disclosures.*
v. *It was reprinted as Chapter 27 in my new book THE FUTURE OF PENSION MANAGEMENT.*

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