

MINNESOTA
STATE
BOARD OF
INVESTMENT



Board Members:

Governor
Mark Dayton

State Auditor
Rebecca Otto

Secretary of State
Steve Simon

Attorney General
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DATE: January 30, 2018

TO: The Honorable Mark Dayton
Minnesota Legislative Reference Library

FROM: Mansco Perry III *MP3*
Executive Director and Chief Investment Officer

**SUBJECT: External Money Manager Report Pursuant to Minnesota
Statutes Section 11A.04, clause (12)**

Minnesota Statutes, Section 11A.04, clause (12) requires the State Board of Investment (SBI) to report annually to the Governor and Legislative Reference Library the cost and investment performance of external investment managers employed by the Board.

On June 30, 2017, the SBI utilized 17 domestic stock managers, 15 international stock managers and 7 fixed income managers for the defined benefit retirement assets under its control. The SBI also utilized a fixed income manager and an equity manager for the Assigned Risk Plan and a stable value manager for the conservative option in the defined contribution plan.

The investment performances of each manager, as well as the fees paid to each, are reported in the charts on the following pages. This information is also included in the Board's annual report for FY17.

It is important to note that all performance data reported by the SBI is net of fees and transactions costs associated with the various portfolios. The SBI's FY 2017 Annual Report contains additional detail on manager performance and may be accessed online at <http://mn.gov/sbi>.

Defined Benefit Plan

Domestic Public Stock Managers

The SBI evaluates domestic stock manager returns against the performance of Russell style indices which reflect the managers' specific investment approaches. The benchmark portfolios take into account the market forces that, at times, favorably or unfavorably impact certain investment styles. The aggregate domestic stock program is designed to outperform the Russell 3000 Index. Assets are allocated to managers within each Russell style index in the same proportion as in the Russell 3000 Index.

As a group, the managers outperformed the broad market by 0.8 percentage point for the fiscal year. For FY 2017, the active and semi-passive manager groups outperformed their respective benchmarks. Eight of the 15 active managers outperformed their respective benchmarks. (Four active, small-cap managers were hired in November of FY17 and do not have one year of performance data.) Both semi-passive managers outperformed the benchmark. One passive large-cap manager (Russell 1000) was hired in August of FY17 and does not have one year of performance data. The passive all-cap manager (Russell 3000) matched the benchmark for the fiscal year.

Fixed Income Public Managers

The SBI evaluates the performance of its fixed income managers against the Bloomberg Barclays U.S. Aggregate Bond Index. As a group, the fixed income managers outperformed the broad bond market by 1.2 percentage points for the year. For FY 2017, the active managers and two of the semi-passive managers outperformed the benchmark, and one of the semi-passive managers matched the benchmark return.

International Public Stock Managers

The SBI evaluates individual international stock managers against market indices published by Morgan Stanley Capital International (MSCI). Two indices are used: the World ex USA (net) and the Emerging Markets (net). As a group, the international stock managers underperformed the MSCI All Country World Index (ACWI) ex USA Index (net) by 0.3 percentage point for the fiscal year. Three of the six active developed markets managers outperformed their respective benchmarks for the year. (Six emerging market managers were hired in March of FY17 and do not have enough performance data available for the fiscal year.) The longstanding emerging markets manager underperformed the benchmark for the fiscal year. Two of the three semi-passive developed markets managers outperformed the benchmark for the year. The passive developed markets portfolio outperformed the MSCI World ex USA Index (net) and the passive emerging markets portfolio slightly underperformed the MSCI Emerging Markets Index (net).

Assigned Risk Portfolio

Domestic Stock Manager

The SBI evaluates the performance of the stock manager against the S&P 500 index. During the fiscal year 2017, the stock manager was transitioned from external management to internal management. The stock manager(s) outperformed the benchmark by 1.7 percentage points.

Fixed Income Manager

The SBI evaluates the performance of the bond manager against the Bloomberg Barclays Intermediate Government Index. During the fiscal year 2017, the bond manager outperformed its benchmark by 0.1 percentage point.

Conservative Option in Defined Contribution Plan

Stable Value Portfolio

The SBI evaluates the performance of the stable value manager against the 3-Year Constant Maturity Treasury + 45 basis points. During the fiscal year 2017, the stable value manager outperformed its benchmark by 0.3 percentage point.

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Retirement Program - Combined and Supplemental Investment Funds Investment Programs

Figure 21. Domestic Stock Program Manager Performance for Periods Ending June 30, 2017

	1 Year		3 Years		5 Years		Market Value (\$ in millions)
	Actual %	Bmk %	Actual %	Bmk %	Actual %	Bmk %	
Active Managers							
Large Cap Growth (Russell 1000 Growth)							
Sands Capital Mgmt.	25.7	20.4	7.8	11.1	14.2	15.3	444.3
Winslow Capital Mgmt.	21.6	20.4	10.1	11.1	14.7	15.3	187.4
Zevenbergen Capital	36.7	20.4	8.3	11.1	17.3	15.3	422.6
Large Cap Value (Russell 1000 Value)							
Barrow, Hanley	15.8	15.5	7.2	7.4	13.9	13.9	353.0
Earnest Partners	21.2	15.5	8.8	7.4	13.1	13.9	241.8
LSV Asset Mgmt.	20.6	15.5	7.9	7.4	16.6	13.9	374.4
Small Cap Growth (Russell 2000 Growth)							
ArrowMark							185.3
Hood River							217.7
McKinley Capital	22.3	24.4	6.5	7.6	16.0	14.0	261.1
Rice Hall James							191.8
Wellington							217.0
Small Cap Value (Russell 2000 Value)							
Goldman Sachs	20.9	24.9	6.9	7.0	14.5	13.4	330.8
Hotchkis & Wiley	28.1	24.9	4.5	7.0	14.9	13.4	287.8
Martingale Asset Mgmt.	23.2	24.9	8.7	7.0	16.6	13.4	274.7
Peregrine Capital Mgmt.	26.1	24.9	6.4	7.0	13.4	13.4	339.7
Semi-Passive Managers (Russell 1000)							
BlackRock Institutional	20.0	18.0	9.9	9.3	15.2	14.7	904.2
J.P. Morgan Investment Mgmt.	18.9	18.0	9.7	9.3	15.2	14.7	1,347.5
Passive Manager (Russell 1000)							
BlackRock Institutional							10,743.1
Passive Manager (Russell 3000)							
BlackRock Institutional	18.5	18.5	9.1	9.1	14.6	14.6	11,446.7
Aggregate Domestic Stock Program⁽¹⁾	19.3	18.5	8.7	9.1	14.5	14.6	28,771.5
Asset Class Target							
Russell 3000		18.5		9.1		14.6	

(1) Aggregate includes the performance of terminated managers.

Retirement Program - Combined and Supplemental Investment Funds Investment Funds

Figure 27. Fixed Income Program Manager Performance for Periods Ending June 30, 2017

	1 Year		3 Years		5 Years		Market Value (\$ in millions)
	Actual %	Bmk %	Actual %	Bmk %	Actual %	Bmk %	
Active Managers							
Columbia Mgmt.	2.0	-0.3	3.3	2.5	3.2	2.2	1,160.6
Dodge & Cox	2.7	-0.3	3.0	2.5	3.6	2.2	1,646.8
PIMCO	0.8	-0.3	3.0	2.5	3.1	2.2	1,575.5
Western Asset Mgmt.	2.4	-0.3	3.7	2.5	3.7	2.2	1,587.8
Semi-Passive Managers							
BlackRock Financial Mgmt.	-0.1	-0.3	2.6	2.5	2.4	2.2	2,066.8
Goldman Sachs Asset Mgmt.	0.2	-0.3	2.7	2.5	2.6	2.2	2,486.6
Neuberger Investment Mgmt.	-0.3	-0.3	2.6	2.5	2.4	2.2	2,231.3
Aggregate Fixed Income Program⁽¹⁾	0.9	-0.3	2.9	2.5	2.9	2.2	12,755.4
Asset Class Target							
Bloomberg Barclays U.S. Aggregate Bond Index		-0.3		2.5		2.2	

(1) Aggregate includes the performance of terminated managers.

Retirement Program - Combined and Supplemental Investment Funds Investment Programs

Figure 24. International Stock Program Manager Performance for Periods Ending June 30, 2017

	1 Year		3 Years		5 Years		Market Value
	Actual	Bmk	Actual	Bmk	Actual	Bmk	(\$ in millions)
	%	%	%	%	%	%	
Active Managers							
Developed Mkts (MSCI World ex USA net)							
Acadian Asset Mgmt.	29.6	19.5	6.7	0.7	13.7	8.1	486.1
Columbia Mgmt. Investment Advisers	19.0	19.5	3.2	0.7	9.0	8.1	394.4
Fidelity Institutional Asset Management	19.0	19.5	2.1	0.7	9.7	8.1	395.0
J.P. Morgan Investment Management	24.4	19.5	1.2	0.7	8.0	8.1	328.5
Marathon Asset Management	19.6	19.5	3.1	0.7	10.8	8.1	868.4
McKinley Capital Management	17.1	19.5	0.6	0.7	8.5	8.1	322.8
Semi-Passive Managers							
Developed Mkts (MSCI World ex USA net)							
AQR Capital Management	20.9	19.5	1.9	0.7	10.1	8.1	387.2
Fidelity Institutional Asset Management	17.1	19.5	0.4	0.7	8.3	8.1	552.1
State Street Global Advisors	22.7	19.5	0.9	0.7	9.4	8.1	343.2
Active Managers							
Emerging Mkts (MSCI Emerging Markets net)							
Earnest Partners							284.7
Macquarie Investment Management Advisers							291.0
Martin Currie							294.6
Morgan Stanley Investment Management	21.7	23.7	2.3	1.1	5.4	4.0	578.3
Neuberger Berman Investment Advisers							289.5
Pzena Investment Management							283.6
Rock Creek							283.1
Passive Managers							
Developed Mkts (MSCI World ex USA net)							
State Street Global Advisors	20.0	19.5	1.1	0.7	8.6	8.1	6,613.6
Passive Managers							
Emerging Mkts (MSCI Emerging Markets net)							
State Street Global Advisors	23.4	23.7	1.3	1.1	4.1	4.0	1,082.3
Aggregate International Stock Program⁽¹⁾	20.2	20.5	1.5	0.8	8.0	7.2	14,084.3
Asset Class Target							
MSCI ACWI ex USA (net)		20.5		0.8		7.2	

(1) Aggregate includes the performance of terminated managers.

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External Stock and Bond Managers' Fees

Total Payments for Fiscal Year 2017

Domestic Equity Active Managers	
ArrowMark Colorado Holdings, LLC	\$ 809,246
Barrow, Hanley, Mewhinney & Strauss, LLC	946,713
Earnest Partners, LLC	650,594
Goldman Sachs Asset Management, L.P.	2,095,585
Hood River Capital Management, LLC	1,009,162
Hotchkis and Wiley Capital Management, LLC	2,263,358
INTECH Investment Management LLC	408,455
Jacobs Levy Equity Management, Inc.	197,636
LSV Asset Management	1,784,356
Martingale Asset Management, L.P.	1,673,597
McKinley Capital Management, LLC	1,518,868
Next Century Growth Investors LLC	-207,111
Peregrine Capital Management	2,071,250
Rice Hall James & Associates, LLC	858,550
Sands Capital Management, LLC	838,374
Systematic Financial Management, L.P.	51,758
Wellington Management Company LLP	887,231
Winslow Capital Management, LLC	726,031
Zevenbergen Capital Investments LLC	1,569,883
Domestic Equity Semi-Passive Managers	
BlackRock Institutional Trust Company, N.A.	1,512,063
INTECH Investment Management LLC	1,289,743
J.P. Morgan Investment Management Inc.	2,084,776
Mellon Capital Management Corp.	1,537,902
Domestic Equity Passive Manager	
BlackRock Institutional Trust Company, N.A. (Passive R3000)	723,214
BlackRock Institutional Trust Company, N.A. (Passive R1000)	279,036
Fixed Income Active Managers	
Aberdeen Asset Management, Inc.	636,982
Columbia Threadneedle Investments	1,136,280
Dodge & Cox	1,721,135
Pacific Investment Management Company LLC (PIMCO)	3,288,140
Western Asset Management Company	1,487,370
Fixed Income Semi-Passive Managers	
BlackRock Financial Management, Inc.	1,121,075
Goldman Sachs Asset Management	1,709,761
Neuberger Berman Investment Advisers LLC	722,059

External Stock and Bond Managers' Fees

Total Payments for Fiscal Year 2017

International Active Developed Markets Managers		
Acadian Asset Management LLC	\$	1,654,692
Columbia Threadneedle Investments		1,175,877
Fidelity Institutional Asset Management LLC		1,713,765
J.P. Morgan Investment Management Inc.		1,210,980
Marathon Asset Management LLP		2,561,802
McKinley Capital Management, LLC		1,258,000
International Semi Passive Developed Markets Managers		
AQR Capital Management, LLC		1,659,754
Fidelity Institutional Asset Management LLC		1,010,745
State Street Global Advisors		634,463
International Passive Developed Markets Manager		
State Street Global Advisors		609,932
International Active Emerging Markets Managers		
Capital International, Inc.		1,384,675
Earnest Partners LLC		521,504
Macquarie Investment Management Advisers		460,873
Martin Currie Inc.		455,171
Morgan Stanley Investment Management Inc.		5,032,534
Neuberger Berman Investment Advisers LLC		629,577
Pzena Investment Management, LLC		620,318
The Rock Creek Group, LLC		745,506
International Passive Emerging Markets Manager		
State Street Global Advisors		404,943
Supplemental Fixed Interest Account		
Galliard Capital Management, Inc.		3,901,598
Assigned Risk Plan		
State Street Global Advisors		9,519
RBC Global Asset Management (U.S.) Inc.		251,664