

November 15, 2022

Senator Howard Marklein, Co-Chair
Joint Committee on Finance
P.O. Box 7882
Madison WI 53707-7882

Representative Mark Born, Co-Chair
Joint Committee on Finance
P.O. Box 8952
Madison WI 53708-8952

Senator Robert Cowles, Co-Chair
Joint Legislative Audit Committee
P.O. Box 7882
Madison WI 53707-7882

Secretary Kathy Blumenfeld
Department of Administration
101 East Wilson Street
P.O. Box 7864
Madison, WI 53707-7864

Dear Senator Marklein, Senator Cowles, Representative Born, and Secretary Blumenfeld:

State statutes require the State of Wisconsin Investment Board (SWIB) to report all expenses charged to the trust funds under management and the number of full-time equivalent positions created or abolished during the quarter¹. The information contained in this report is for the quarter ended September 30, 2022.

Total Cost of Management Summary	4Q2021	1Q2022	2Q2022	3Q2022	Trailing 4 Qtr Total	% of Total
Internal Operating Expenses						
Operating Budget Expenses	\$ 14,225,300	\$ 14,062,637	\$ 42,801,859	\$ 13,275,388	\$ 84,365,184	61.4%
Custodial, Investment Operations & Banking	1,752,273	1,803,372	1,692,456	1,647,965	6,896,066	5.0%
Legal	821,846	625,000	625,000	625,000	2,696,846	2.0%
Investment Research & Consulting	10,521,546	10,007,468	9,150,155	9,112,954	38,792,123	28.3%
Total Internal Operating Expenses	\$ 27,320,965	\$ 26,498,477	\$ 54,269,470	\$ 24,661,307	\$ 132,750,219	96.6%
Securities Lending Agent Expenses	\$ 784,251	\$ 1,282,912	\$ 1,412,138	\$ 1,198,959	\$ 4,678,260	3.4%
Total SWIB Operating Costs	\$ 28,105,216	\$ 27,781,389	\$ 55,681,608	\$ 25,860,266	\$ 137,428,479	100.0%
External Investment Management Fees						
Externally Managed Separate Account Fees						
Beta One & Other - Separately Managed	\$ 9,818,853	\$ 12,730,351	\$ 6,621,385	\$ 15,970,497	\$ 45,141,086	6.8%
Supplemental Information - External Fund Fees						
Real Estate	\$ 17,693,091	\$ 19,209,516	\$ 19,257,344	\$ 20,775,122	\$ 76,935,074	11.5%
Private Equity & Venture Capital	61,375,539	56,999,361	72,498,709	67,722,428	258,596,036	38.7%
Hedge Funds	42,415,360	72,033,779	60,862,749	58,023,466	233,335,355	35.0%
Beta One & Other - External Funds	4,722,875	18,411,505	26,091,654	3,044,345	52,270,379	7.8%
Total External Investment Management Fees	\$ 136,025,718	\$ 179,384,512	\$ 185,331,841	\$ 165,535,858	\$ 666,277,930	100.0%
Total Cost of Management	\$ 164,130,934	\$ 207,165,901	\$ 241,013,449	\$ 191,396,124	\$ 803,706,409	

SWIB operating costs are charged to the trust funds under management. Externally managed fund fees for commingled assets are netted against investment returns generated by SWIB's external fund holdings. It is important to consider costs in the context of value-added investment returns. For example, during the five years ended December 31, 2021, after consideration of all expenses, costs, and fees, SWIB generated more than \$2.2 billion in additional profits beyond what would have been

¹Wisconsin Statutes Section 25.17 (13m): Investment-related costs and expenses charged to the WRS Trust Funds, State Investment Fund, State Life Insurance Fund, Historical Society Endowment Fund, Injured Patients and Families Compensation Fund and UW Trust Fund. Investment transaction expenses, such as trading commissions and interest expense, are included in investment returns, and therefore not included in this report.

generated by the benchmark portfolio SWIB is measured against. These profits all go directly into the Wisconsin Retirement System for the benefit of its beneficiaries.

Attachment A provides a breakdown of the amount and percentage of assets managed under each type of dedicated and commingled account or partnership, and the change in the amount and percentage from the prior calendar quarter. As of September 30, 2022, SWIB's total authorized positions are 290 as shown in the table below.

Assets Under Management & Positions		
	6/30/2022	9/30/2022
Internal Management	48.4%	46.4%
External Management	51.6%	53.6%
Total SWIB Positions	290	290

In addition, Attachment B provides details of the services provided to SWIB and their associated quarterly costs. For definitions of the expense categories presented in the Total Cost of Management Summary table, please refer to Attachment C.

As new investment strategies are implemented and markets continue to evolve, SWIB will continue evaluating the most efficient means to manage the trust fund assets. Please contact us if you have any questions or comments about this report.

Sincerely,



Edwin Denson
Executive Director/Chief Investment Officer

Attachments

cc: Members, Joint Committee on Finance
Members, Joint Committee on Audit
Robert Lang, Legislative Fiscal Bureau
Joe Chrisman, Legislative Audit Bureau

Total Assets Under Management

Wisconsin Retirement System (WRS)	12/31/2021		3/31/2022		6/30/2022		9/30/2022	
	Amount (in millions)	Percent	Amount (in millions)	Percent	Amount (in millions)	Percent	Amount (in millions)	Percent
Internally Managed	\$72,165	49.0%	\$64,161	45.5%	\$52,094	41.7%	\$45,843	39.1%
Externally Managed Dedicated Accounts	36,740	25.0%	36,289	25.8%	27,907	22.4%	26,743	22.8%
Externally Managed Commingled Accounts	38,311	26.0%	40,434	28.7%	44,852	35.9%	44,579	38.0%
1. Passive Index Funds	2,857	1.9%	2,283	1.6%	1,689	1.4%	1,711	1.5%
2. Limited Partnerships	26,574	18.1%	28,548	20.3%	30,212	24.2%	30,771	26.3%
3. Actively Managed Commingled Accounts	8,881	6.0%	9,603	6.8%	12,950	10.4%	12,097	10.3%
TOTAL WRS Assets	\$147,217	100.0%	\$140,884	100.0%	\$124,853	100.0%	\$117,165	100.0%
State Investment Fund - Internally Managed	\$16,051		\$16,930		\$18,401		\$17,876	
Separately Managed Funds - Internally Managed	\$123		\$111		\$101		\$93	
Separately Managed Funds - Externally Managed	\$2,276		\$2,095		\$2,409		\$2,438	
Total Assets Under Management	\$165,666		\$160,020		\$145,764		\$137,573	
Total Internal Management	\$88,338	53.3%	\$81,202	50.7%	\$70,596	48.4%	\$63,813	46.4%
Total External Management	\$77,328	46.7%	\$78,818	49.3%	\$75,168	51.6%	\$73,760	53.6%

STATE OF WISCONSIN INVESTMENT BOARD
Expenses for All Funds Under Management
Quarter Ending September 30, 2022

EXPENSE CATEGORY ¹	SERVICE PROVIDED	EXPENSES
<u>Internal Operating Expenses</u>		
Staff Compensation	Staff Compensation	\$ 9,780,360
Fringe Benefits	Fringe Benefits	2,058,268
Equipment, Supplies & Services	General Supplies & Services	1,436,760
Total Internal Operating Expenses		\$ 13,275,388
<u>Custodial, Investment Operations and Banking Fees</u>		
BNY Mellon Asset Servicing - Custody	Master Custody Services	\$ 256,191
BNY Mellon Asset Servicing - Investment Operations	Investment Operating Services	1,389,798
Markit NA	Investment Data Management Software	2,000
US Bank	Banking Fees	(23)
Total Custodial, Investment Operations and Banking Fees		\$ 1,647,966
<u>Legal Fees</u>		
Cox Castle & Nicholson LLP	Legal Work for Investment Strategies	\$ 40,942
DLA Piper LLP (US)	Legal Work for Investment Strategies	78,209
Godfrey & Kahn SC	Legal Work for Investment Strategies	35,040
Husch Blackwell	Legal Work for Investment Strategies	4,750
Latham & Watkins LLP	Legal Work for Investment Strategies	14,698
Legal Services Expense Accrual	Legal Work for Investment Strategies	350,002
Quarles & Brady	Legal Work for Investment Strategies	93,608
Vedder Price PC	Legal Work for Investment Strategies	7,750
Total Legal Fees		\$ 625,000
<u>Investment Counsel</u>		
Aksia LLC	Hedge Fund Investment Consulting	\$ 193,750
Alex Solutions	Research and Data Services	39,750
Apex Systems	Investment Consulting Services	49,503
Arb Journal	Regulatory Research & Analysis	22,000
Arthur Selender	Investment Consulting Services	20,000
Backstop Solutions Group	Investment Software	33,474
Baele Consulting	Investment Consulting Services	4,570
BCA Research Inc	Global & Domestic Fixed Income Strategy Research	34,125
BITA Risk Limited	Risk Oversight Services	47,250
Blackrock Financial Management Inc	Risk Services	75,000
Bloomberg Finance LP	Market, Company, Industry & Benchmark Information	796,992
BNY Mellon Asset Servicing - Eagle/Pace	Investment Consulting Services	219,780
Bridge Consulting Partners Ltd	Investment Consulting Services	71,280
Business Intelligence Advisors, Inc.	Advisory Services	37,878
Callan Associates Inc	Investment Consulting & Performance Benchmarking	18,750
Capital Economics LTD	Market Research	58,593
Carahsoft Technology Corp	Investment Consulting Services	8,922
CBJL Incorporated	Investment Consulting Services	97,580
CFRA Research	Investment Research Services	17,325
Charles River System Inc	Portfolio Management Trading Software & Services	238,055
CoStar Portfolio Strategy	Real Estate Consulting & Research Services	28,738
CUSIP Global Services	Research and Data Services	16,250
Dacheng Xiu	Investment Research	37,500
Datacamp Inc	Research and Data Services	185
Deutsche Bank	Tax registration fees	14,160
Dow Jones News Service	Company and Industry News Services	322
DTCC – EPN	Trade Settlement Service	3,000
DTCC ITP LLC	Trade Settlement Service	4,214
EFront Financial Solutions Inc	Private Markets Portfolio Management Services	162,453
Elevation LLC	Research and Data Services	15,000
Eric Siegel Consulting LLC	Investment Consulting Services	3,650
Euromonitor International	Research and Data Services	19,766
FactSet Research Systems Inc	Financial & Economic Database	978,106
FIS Data Systems Inc.	Research and Data Services	15,969
Fitch Solutions Inc	Credit Rating Services	17,500
Gallagher	Insurance and Risk Management Services	15,533
Gartner Inc	Technology Sector Research	19,523
Global Financial Data Inc	Research and Data Services	31,500

EXPENSE CATEGORY ¹	SERVICE PROVIDED	EXPENSES
Green Street Advisor	Real Estate Analytics	16,937
Haver Analytics	Global Macroeconomic Research	22,740
Healthy Markets Association	Research & Data Service	20,000
Ice Data LP	Fixed Income Indices	11,858
IHS Markit KY3P LLC	Risk Management Services	22,340
InsiderScore LLC	Investment Research & Analytics	20,000
Institutional Shareholder Services Inc	Proxy Voting Analysis	41,914
Intelligent Automation Consulting	Automation Consulting Services	22,500
Investment Research Expense Accrual	Investment Research	850,000
IPC Systems Inc	Trading Telecommunication System	8,906
IT-Venture LTD	Investment Consulting Services	6,425
Joyce C Knauff & Associates	Investment Consulting Services	32,500
Keystone Consulting Inc	Investment Information Technology Consulting Services	267,440
Kreischer Miller LLP	Investment Consulting Services	14,500
Law Debenture Corporate Services Limited	Investment Consulting Services	2,248
London Stock Exchange	London Stock Exchange Data	(78)
Mackey LLC	Research Management System	53,366
Manalo Advisors Limited	Research and Data Services	3,750
Markit Group Limited	Investment Consulting Services	63,090
Markit NA	Investment Data Management Software	19,250
Markit-EDM Limited	Investment Consulting Services	185,384
Matrix IDM, LLC	Investment Consulting Services	26,600
McLagan Partners Inc	Investment Compensation Data and Analysis	46,813
Meketa Investment Group	Public Markets External Manager Consultant	66,930
MNI Market News	Research and Data Services	2,835
Moodys Analytics	Economic, Currency & Bond Analysis	80,237
MSCI - Barra	Research and Data Services	32,500
MSCI Inc - Risk Metrics Solutions	Research and Data Services	330,300
MSCI, Inc	Research and Data Services	45,634
My Data Outlet International, LLC	Research and Data Services	30,500
NEPC LLC	Investment Consulting Services	50,000
Newsfile	Investment Research	995
Novus Partners Inc	Profit & Loss Analytics System	18,885
Nuware Technology Corp	Investment Information Technology Consulting Services	189,712
NYSE Market Inc	New York Stock Exchange Data	6,240
Odeon Capital Group, LLC	Research and Data Services	6,000
Oliver James	Investment Consulting Services	82,656
Options Price Reporting Authority	Quote System for Options Market	2,393
Pacific Pension & Investment Institute	Access to Investment Research	14,000
Pac-invest	Research and Data Services	8,510
PremiaLab	Investment Research	20,785
Preyer	Investment Consulting Services	33,333
Refinitiv	Research Pricing (Autex, Baseline, FirstCall)	202,112
Russell Investment Group	Index Data	8,932
Rystad Energy AS	Investment Research	7,500
S&P Global Market Intelligence	Industry & Corporate Research	134,867
SailPoint Technologies, Inc.	Information Security Software	18,750
Seaport Global Securities LLC	Research and Data Services	2,650
Sharp Decisions Inc	Investment Information Technology Consulting Services	76,864
Simcorp USA, Inc.	Investment System	1,489,766
Simmons & Simmons	Global Regulatory Services	6,527
Snowflake Inc	Research and Data Services	25,000
Solve Advisors Inc	Investment Research	9,000
Standards Board for Alternative Investments Limited	Investment Membership	2,390
StepStone Group	Private Equity Consulting Services	249,685
StepStone Group Real Estate	Real Estate Consulting Services	57,883
SWIFT SC	Research and Data Services	964
SystemsAccountants	Investment Information Technology Consulting Services	79,360
Taranis, Inc.	Investment Information Technology Consulting Services	79,200
Telsey Advisory Group	Consumer Sector Research	(4,808)
The Nasdaq Stock Market, LLC	Research & Data Services	4,500
Toronto Stock Exchange	Market Data	14,199
TradeWeb	On-Line Fixed Income Trading Services	10,188
Trivariate Research LP	Investment Research	10,000
Unit4 Business Software Inc	Financial & Administration Services System	69,827
Urban Land Institute	Investment Consulting Services	1,100
Vadim Moroz	Investment Consulting Services	67,500
Verus Advisory Inc	Benchmarking Consulting Services	42,000
Virtu ITG Analytics LLC	Trading Transaction Cost Analysis	20,500

EXPENSE CATEGORY ¹	SERVICE PROVIDED	EXPENSES
Visible Alpha LLC	Research and Data Services	25,633
V-Soft Consulting Group Inc	Investment Information Technology Consulting Services	3,600
WallachBeth Capital LLC	Investment Consulting Services	3,000
Wolverine Execution Services LLC	Options Trading Platform	1,395
WorldBridge Partners Inc	Recruitment Consulting	113,998
Yipit, LLC	Research and Data Services	30,000
Total Investment Counsel		\$ 9,112,954
 <u>Separate Account Public Market Management Fees</u>		
Acadian Asset Management	Public Market Management Fees	\$ 406,007
Alliance Bernstein	Public Market Management Fees	7,288,932
Blackrock	Public Market Management Fees	1,528,690
Dodge and Cox	Public Market Management Fees	690,994
eSecLending	Public Market Management Fees	2,528
Fidelity Investments	Public Market Management Fees	1,139,768
Parametric	Public Market Management Fees	1,404,655
Prudential Global Investment Management (PGIM)	Public Market Management Fees	1,161,053
Wellington Trust Company	Public Market Management Fees	2,347,870
Total Separate Account Public Market Management Fees		\$ 15,970,497
 <u>Securities Lending Agent Fees</u>		
BNY Mellon Asset Servicing	Securities Lending Agent Fees	\$ 1,198,959
Total Securities Lending Agent Fees		\$ 1,198,959
 Total Quarterly Charges to Funds		 \$ 41,830,764

¹All costs reported are on an accrual basis except for internal operating costs which are on a cash basis of accounting. Negative expense amounts are due to accrual adjustments and/or other miscellaneous adjustments.

Explanation of Expenses

Internal Operating Expenses

Internal operating expenses consist primarily of staff compensation and fringe benefits. SWIB employs a staff of professional investment and support staff to manage trust fund assets. Other internal operating expenses consist of office equipment, supplies, business travel, information technology equipment and services, and general services.

Custodial & Banking Fees

Wisconsin Certificate of Deposit Program: Under a contract with SWIB, Bankers' Bank administers the program under which the State Investment Fund (SIF) purchases certificates of deposit from Wisconsin-based banks and thrifts. Most administrative costs are paid by the participating banks. SWIB's expenses help underwrite other administrative costs, such as insurance that SWIB requires to be purchased.

BNY Mellon: Provides master custodial and administrative services (safekeeping of assets, income collection, valuations and accounting) for public and private domestic and foreign securities in the Wisconsin Retirement System (WRS), the SIF, and the other separately managed trust funds. In addition, SWIB receives performance measurement and analytical services through its contract with BNY Mellon, which serves as the official book of record for SWIB's accounting and performance measurement functions. BNY Mellon provides data and analytical tools used by SWIB for compliance and risk management. These include global collateral management, data management, and hosting services. Fees for these services are established by contract.

US Bank: The State of Wisconsin contracted with US Bank to be the state's working bank. The fees paid to US Bank by the SIF reflect bank service charges that are not directly applicable to the fund participants.

Legal Fees, Services, and Expenses

Under authority delegated by the Attorney General, pursuant to s. 25.18 (1) (a) Statutes, SWIB may employ legal counsel for any matters arising out of the scope of its investment authority. This includes legal services relating to bankruptcies, class actions, private markets transactions, fiduciary advice, securities law, investment litigation, and other similar matters.

Investment Counsel

Current law gives SWIB the authority to employ investment counsel in any matters arising out of the scope of its investment authority. Investment research and services provided include global market, industry, economic and company information, financial and performance analytics, news information, pricing and exchange data, credit ratings, financial modeling, economic forecasting, trading services, and a variety of Board consultations. These services enable SWIB to perform due diligence on current and future holdings and assist in monitoring investments.

Securities Lending Agent Fees

Securities lending programs generally earn income through the reinvestment of cash collateral posted by borrowers and through the collection of fees for loans where non-cash collateral is posted. SWIB's securities lending income is shared with the agent to pay the costs associated with the administration of the program. Securities lending agent fees are reported as expenses.

Externally Managed Separate Account Fees

External asset managers have been delegated authority within guidelines established by SWIB to determine investment strategy and purchase securities in SWIB's name within a SWIB account. Fees are typically assessed as a percentage of the market value of assets under management and in some cases, fees are based on investment performance.

External Funds Fees

SWIB invests in separate legal entities managed by external investment managers to gain exposure to select strategies including Public Markets, Private Equity, Venture Capital, Real Estate and Hedge Funds. In exchange for their investment management services, the external managers charge a fee within the entity they manage. Fees are typically assessed as a percentage of the market value of assets under management, commitments, and in some cases are based on investment performance. While the fees charged to these external vehicles do not meet the statutory definition of a cost or expense to SWIB, they are currently included in SWIB's total cost of management. Accordingly, these fees are reported as supplemental information.