

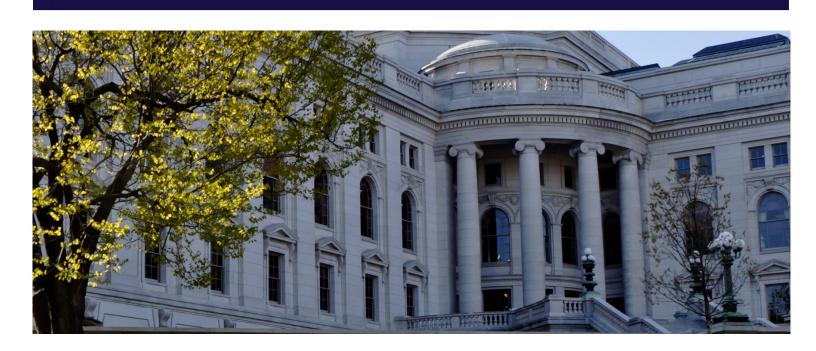
STATE OF WISCONSIN-

Legislative Audit Bureau

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Report 24-18 November 2024

State of Wisconsin Investment Board



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State of Wisconsin Investment Board



Legislative Audit Bureau

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Reports are submitted to the Joint Legislative Audit Committee and made available to other committees of the Legislature and to the public. The Audit Committee may arrange public hearings on the issues identified in a report and may introduce legislation in response to the audit recommendations. However, the findings, conclusions, and recommendations in the report are those of the Legislative Audit Bureau.

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From SWIB's Executive Director/Chief Investment Officer



STATE OF WISCONSIN

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November 12, 2024

Senator Eric Wimberger and Representative Robert Wittke, Co-chairpersons Joint Legislative Audit Committee State Capitol Madison, Wisconsin 53702

Dear Senator Wimberger and Representative Wittke:

We have completed an evaluation of the State of Wisconsin Investment Board (SWIB), as required by ss. 13.94 (1) (df) and 25.17 (51m), Wis. Stats. In December 2023, SWIB managed \$155.1 billion in assets, including investments of the Wisconsin Retirement System (WRS) and six other funds.

As of December 2023, the 20-year average annual investment return of the Core Fund was 7.1 percent, which was higher than the 6.8 percent long-term expected rate-of-return assumption, but it had declined from 8.4 percent as of December 2014. As of December 2023, the Core Fund exceeded its five-year benchmark and had an average annual investment return of 9.3 percent, which ranked fourth among a peer group of nine other large public pension plans.

SWIB is authorized to establish its own budget and create staff positions. SWIB's expenses increased from \$480.3 million in 2019 to \$852.0 million in 2023 (77.4 percent), primarily because of an increase in management fees paid to external investment managers. In December 2023, SWIB had 298.0 full-time equivalent (FTE) positions, which was an increase of 63.0 FTE positions since December 2019. The consultant that compares SWIB to a peer group of 14 other large public pension plans found that the Core Fund's expenses were greater than the peer group's expenses by approximately \$0.05 per \$100 of assets managed in 2022.

For 2023 performance, SWIB paid its staff \$59.2 million for salaries and fringe benefits, signing bonuses, retention bonuses, and severance payments. In addition, SWIB paid 262 staff a total of \$30.6 million for annual bonuses. The annual bonuses increased 19.1 percent from the prior year, while the five-year excess return for the Core Fund increased by an annualized 0.1 percent (from 0.47 percent to 0.57 percent). In October 2022, the Board approved new policies for awarding long-term bonuses to staff in senior positions, and SWIB paid 65 staff a total of \$4.2 million in long-term bonuses that were based on the Core Fund's performance during the 5- and 10-year periods that ended in December 2023.

SWIB expects the proportion of assets it manages internally will decrease. We recommend SWIB develop a multiyear strategic plan that includes the estimated costs and anticipated benefits of specific investment strategies it plans to manage internally and externally. Doing so will allow the Board to more thoroughly assess SWIB's proposed budgets, requests for additional staff positions and staff compensation, and requests for other significant expenses.

We appreciate the courtesy and cooperation extended to us by SWIB's staff. A response from SWIB's executive director/chief investment officer follows the appendices.

Respectfully submitted,

Joe Chrisman State Auditor

JC/DS/ag

Introduction

The State of Wisconsin Investment Board (SWIB) invested assets for the Wisconsin Retirement System (WRS) and six other funds in December 2023. Statutes require SWIB to provide prudent and cost-effective management of the assets it holds in trust by investing these assets in a manner consistent with their intended purposes. Although SWIB is a state agency, its Board of Trustees establishes SWIB's investment, budgeting, and staffing policies. SWIB hires external investment managers to supplement its staff, including when it requires additional investment expertise or is cost effective to do so.

On December 31, 2023, SWIB managed \$155.1 billion in assets. As shown in Figure 1, SWIB managed \$155.1 billion in assets on December 31, 2023, including \$132.4 billion (85.4 percent) in WRS assets. The WRS funds retirement benefits for more than 691,000 participants, who include current and former employees of state and local governments. Although SWIB invests WRS assets, the Department of Employee Trust Funds (ETF) manages WRS operations that interact with employers and participants, including collecting contributions and paying benefits. Appendix 1 includes information about the funds SWIB manages.

Figure 1

Assets Managed by SWIB

December 31, 2023 (in billions)



¹ Excludes \$2.7 billion in WRS assets held in the State Investment Fund (SIF).

Section 25.14 (1), Wis. Stats., requires SWIB to invest the assets of the SIF, which include the excess operating cash balances of the WRS, state agencies, and more than 1,300 local governments participating in the Local Government Investment Pool. The Department of Administration (DOA) manages the individual accounts of these local governments. In December 2023, 63 funds administered by state agencies were invested in the SIF, as listed in Appendix 2. Statutes require DOA to distribute SIF earnings to each participating fund.

In December 2023, SWIB invested assets for five other funds:

- Injured Patients and Families Compensation Fund, which is overseen by the Office of the Commissioner of Insurance (OCI) and had \$1.4 billion in assets;
- UW System Cash Management Fund, which is overseen by the Board of Regents for short-term investments and had \$681.0 million in assets;
- UW System Long Term Fund, which is overseen by the Board of Regents for long-term investments and had \$556.0 million in assets;
- State Life Insurance Fund, which is overseen by OCI and had \$99.0 million in assets; and

² Includes the Injured Patients and Families Compensation Fund, University of Wisconsin (UW) System Cash Management Fund, UW System Long Term Fund, State Life Insurance Fund, and Historical Society Trust Fund.

Historical Society Trust Fund, which is overseen by the Wisconsin Historical Society and had \$25.0 million in assets.

In September 2021, SWIB sold its downtown Madison office building for \$12.6 million. In September 2021, SWIB executed an agreement under which it sold the building it occupied at 121 East Wilson Street in downtown Madison to a developer for \$12.6 million and leased its office space at that building until it moved to a new location. In November 2021, SWIB executed a 15-year lease for office space at 4703 Madison Yards Way in Madison, beginning in March 2023. In May 2023, SWIB completed its relocation to this current office space, which is its headquarters building. Under the lease, SWIB agreed to pay \$2.5 million in rent for the first year. In December 2023, our Telework, Space Management, and Risk Management audit (report 23-22) found that:

- SWIB staff used their key cards at the headquarters building an average of 1.87 days per week from May 1, 2023, through June 2, 2023, according to the State Capitol Police's key card data. SWIB began moving into this building in April 2023 and indicated not all employees began working there until June 2023.
- Policies allowed staff to telework up to 5.0 days per week and indicated the frequency employees were expected to work in the office was based, in part, on the distance they resided from the headquarters building. For example, staff who resided in Dane County or less than 30 miles from this building were expected to work in the office at least 3.0 days per week, staff who resided from 30 to 59 miles from this building were expected to work in the office at least 2.0 days per week, and staff who resided 60 miles or more from this building were expected to work in the office at least 1.0 day per week.

Sections 13.94 (1) (df) and 27.17 (51m), Wis. Stats., require the Legislative Audit Bureau to biennially conduct a performance evaluation audit of SWIB's policies and management practices. To evaluate SWIB's operations in 2022 and 2023, we:

- analyzed investment returns by comparing them to performance benchmarks established by SWIB, the long-term expected rate-of-return assumption that is recommended by the WRS actuary and approved by the ETF Board, and the investment returns of other large public pension plans;
- assessed expenses, including management fees SWIB paid to external investment managers and internal operating expenses;

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- examined staffing levels and trends in staffing;
- analyzed staff compensation, including salaries and bonuses; and
- assessed SWIB's strategic planning efforts.

Board Meetings SWIB's Operations

Board of Trustees

SWIB is governed by a nine-member Board of Trustees. SWIB is governed by a nine-member Board of Trustees that has a fiduciary responsibility to administer at a reasonable cost the assets of each fund solely for the purpose of the fund and to manage investments with care, skill, prudence, and diligence. Board members include the Secretary of DOA, six members appointed by the Governor and confirmed by the Senate to serve six-year terms, and two WRS participants. Four members appointed by the Governor must have at least 10 years of experience making investments, and one must have at least 10 years of financial experience, including in local government. The two WRS participants, who serve six-year terms, include one teacher appointed by the Teacher Retirement Board and one individual who is not a teacher and is appointed by the Wisconsin Retirement Board. Appendix 3 shows the members as of September 2024. We recommend SWIB work with the Board of Trustees to allow members of the public to watch or listen online to meetings of Board committees.

Board Meetings

The Board of Trustees met seven times in 2022, five times in 2023, and is scheduled to meet five times in 2024. A variety of subjects are discussed at meetings, including asset allocations, budget proposals, comparisons to other investment managers, investment performance, staff compensation, and staffing. Each Board member serves on at least one of four committees that report to the Board. Relevant committees review and discuss proposals, and they then make recommendations to the full Board for its consideration.

The Board of Trustees appoints the executive director/chief investment officer and the internal audit director. Although the Board established an overall investment plan for SWIB-managed funds, it delegated day-to-day investment management decisions to the executive director/chief investment officer and investment staff. In addition, the Board delegated certain investment decisions to a SWIB staff investment committee chaired by the executive director/chief investment officer that met regularly to make investment decisions, including to make changes to investment guidelines and strategies. SWIB's senior managers worked with the executive director/chief investment officer to make organizational decisions that were intended to help ensure staff operated according to the Board's established policies, objectives, and guidelines.

In report 22-8, we recommended that SWIB allow members of the public to watch Board of Trustees meetings online and provide brief comments at Board meetings. In our current audit, we found that SWIB allowed the public to watch most meetings of the full Board and established a page on its website for the public to submit comments, which staff shared with the Board. However, we found that SWIB did not allow the public to watch online meetings of Board committees.

We assessed the extent to which 18 other public pension funds allowed the public to watch or listen online to meetings of committees that report and make recommendations to governing boards. We found that 11 other public pension funds allowed the public to watch or listen online to committee meetings.

SWIB should work with the Board of Trustees to allow members of the public to watch or listen online to meetings of the Board's committees. SWIB should work with the Board of Trustees to allow members of the public to watch or listen online to the meetings of the Board's committees. Doing so will increase transparency by allowing individuals, including WRS participants, to better understand the Board's decisions, such as those pertaining to investment strategies, budget proposals, and policy changes.

☑ Recommendation

We recommend the State of Wisconsin Investment Board:

- work with the Board of Trustees to allow members of the public to watch or listen online to meetings of the Board's committees; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement this recommendation.

SWIB's Operations

SWIB has more flexibility than most state agencies to manage its operations. For example, 2011 Wisconsin Act 32, the 2011-2013 Biennial Budget Act, authorized SWIB to establish its operating budget and create staff positions outside of the biennial budget process. The Board is authorized to establish staff compensation outside of the State Compensation Plan. 2021 Wisconsin Act 177, which was enacted in March 2022, authorized SWIB to employ special legal counsel without first obtaining the Attorney General's advice and consent and to manage procurements for its operating expenditures independently from DOA.

2021 Wisconsin Act 177 permits one individual to serve in both the executive director and the chief investment officer positions. The Board of Trustees oversees the performance of the executive director/chief investment officer. Statutes also establish an internal audit department that is led by an internal audit director and assists the Board in its oversight responsibilities by performing periodic internal audits of SWIB's activities.

The Board of Trustees established the Management Council to support the executive director/chief investment officer.

The Board of Trustees established the Management Council to support the executive director/chief investment officer. Management Council members include the deputy executive director/chief operating officer and senior leaders from investment management staff. The membership is set by the executive director/chief investment officer, who must inform the Board any time the membership changes. The Management Council assists the executive director/chief investment officer in implementing SWIB's investment strategy and identifying, developing, and leading initiatives to support SWIB's investment strategy. Appendix 4 lists the Management Council's members in September 2024.

WRS Structure and Asset Allocation
Management of Assets
Statutory Investment Requirements
Assessing SWIB's Investment Performance
Non-WRS Fund Investment and Performance

Investment Performance

SWIB seeks investment returns to meet the long-term expected rate-of-return assumption for the WRS. SWIB seeks investment returns to meet the long-term expected rate-of-return assumption for the WRS. As of December 2023, the 20-year average annual investment return of the Core Fund was 7.1 percent, which was higher than the 6.8 percent long-term expected rate-of-return assumption, but had declined from 8.4 percent as of December 2014. As of December 2023, the Core Fund exceeded its five-year benchmark and had an average annual investment return of 9.3 percent, which ranked fourth among a peer group of nine other large public pension plans. As a result of a statutory modification in April 2008 and opinions from two Attorneys General, SWIB indicated it is not required to comply with at least 17 statutory provisions pertaining to its management of WRS assets, as long as it provides prudent and cost-effective management of the assets. The Legislature could consider modifying statutes to clarify SWIB's obligations regarding its management of WRS assets.

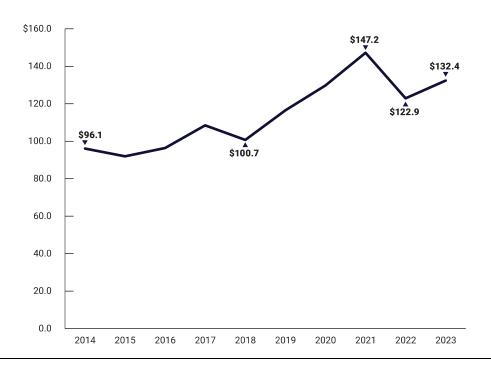
WRS Structure and Asset Allocation

The WRS is a defined-benefit plan that provides lifelong monthly retirement benefits determined by using a formula that considers a participant's number of years of service and highest three years of salary, or a separate money purchase option. A fundamental objective of the WRS is to have sufficient assets to pay projected future benefits to retired participants, who are known as annuitants. SWIB manages WRS assets in two funds:

 The Core Retirement Investment Trust Fund (Core Fund) is a diversified fund that typically is invested for the long term and had \$122.6 billion in assets on December 31, 2023. The Variable Retirement Investment Trust Fund (Variable Fund) is statutorily required to be invested primarily in public equities. WRS participants can invest 50.0 percent of their retirement contributions in the Variable Fund, which provides returns that are typically more volatile than Core Fund returns. Variable Fund assets totaled \$9.8 billion on December 31, 2023.

WRS assets totaled \$132.4 billion on December 31, 2023. As shown in Figure 2, WRS assets increased from \$96.1 billion on December 31, 2014, to \$132.4 billion on December 31, 2023 (37.8 percent). The amount of assets is affected by pension contributions, benefit payments to annuitants, and investment returns.





SWIB works with a consultant to develop an annual asset allocation plan that the Board of Trustees approves. To manage risk and costs, SWIB works with a consultant to develop an annual asset allocation plan that the Board of Trustees approves. For each asset class, the plan designates an allocation target, which represents the intended proportion of investments allocated to the asset class, and a corresponding range that limits the extent to which the asset class can exceed or fall short of the target. Asset classes include:

- Public equities, such as stocks and other publicly traded equities, including domestic, international, and emerging market investments. Public equities are susceptible to market trends, and investment returns may fluctuate significantly from year to year.
- Fixed income investments, such as bonds, emerging market debt, government debt, and treasuries. The risk for fixed income investments is typically lower than the risk for other asset classes, but investment returns may also be lower.
- Inflation protection investments, such as U.S. Department of Treasury inflation-protected investments.
- Private equity and debt investments, which are made in conjunction with other investors through partnerships in which SWIB is a limited partner. SWIB largely invests in private equity as a limited partner in partnerships that buy out or invest in struggling firms or provide capital to emerging private companies. Because these investments often have investment cycles of longer than five years and typically cannot be sold sooner than that without a loss in value, they are considered to be risky but may outperform public equities in the long term.
- Real estate investments, such as commercial, industrial, and multifamily properties. SWIB's real estate investments are largely in partnerships that acquire and manage properties.
- Multi-asset investments, which span multiple asset classes within a collection of investment strategies that are intended to perform independently of the overall market. In 2022, SWIB eliminated the multi-asset class.

SWIB's data indicate the use of leverage increased the five-year average annual investment return for the Core Fund as of December 2023.

Investment strategies that involve leverage can amplify investment gains and losses, depending on market performance. The Board of Trustees approves a target and corresponding range for leverage, which allows SWIB to borrow against Core Fund assets in order to increase investments in certain other assets. Such other assets can include those that have higher risks and the potential to earn higher returns, or those that have lower risks and the potential to earn lower returns. SWIB uses leverage to increase its investments in fixed-income assets, which have lower risks, in order to help it meet the long-term expected rate-of-return assumption. In December 2023, SWIB used 13.9 percent leverage, which means it borrowed \$17.1 billion against Core Fund assets in order to increase investments in certain other assets. SWIB's data indicate the use of leverage increased the five-year average annual

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investment return for the Core Fund from 8.9 percent to 9.3 percent as of December 2023.

As shown in Table 1, the proportions of Core Fund assets invested in public equities and fixed income investments decreased from 2019 through 2023. In contrast, the proportions invested in inflation protection, private equity and debt, and real estate investments increased.

Table 1

Investment of Core Fund Assets, by Asset Class
As of December 31

Total ³	109.9%	106.8%	112.2%	114.9%	113.9%
Cash	0.6	0.5	$(0.1)^2$	0.3	0.5
Multi-Asset	3.4	3.4	3.4	_1	_1
Real Estate	7.0	6.7	7.0	10.5	9.8
Private Equity and Debt	9.3	10.0	13.5	18.2	19.3
Inflation Protection	15.4	15.4	15.5	18.9	18.8
Fixed Income	25.1	22.1	23.5	23.7	24.1
Public Equity	49.1%	48.7%	49.4%	43.3%	41.4%
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Asset Class	2019	2020	2021	2022	2023

¹ SWIB eliminated the multi-asset class in 2022.

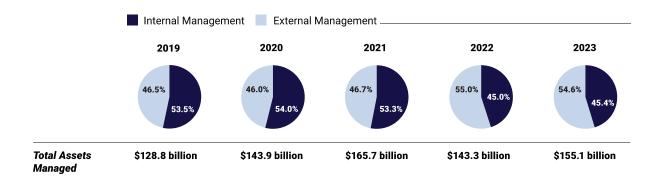
Management of Assets

From December 2019 to December 2023, the proportion of assets managed internally decreased from 53.5 percent to 45.4 percent. The Board of Trustees delegates to the executive director/chief investment officer the authority to determine whether assets will be managed internally by SWIB's staff or by external managers. As shown in Figure 3, the proportion of assets managed internally decreased from 53.5 percent in December 2019 to 45.4 percent in December 2023.

² Reflects liabilities incurred because of SWIB's use of leverage in hedge fund investments.

³ Exceeds 100.0 percent because of SWIB's use of leverage.

Figure 3 **Proportion of Assets Managed Internally and Externally** As of December 31



SWIB indicated the increase in externally managed assets resulted, in part, from its decision to increase investments in private market assets, such as private equity and debt assets and real estate assets, which are managed externally. SWIB indicated its decision, which it plans to continue over the coming decade, is intended to help it to meet the 6.8 percent long-term expected rate-of-return assumption for the WRS. In December 2023, SWIB's asset allocation consultant reported that it expects the 10-year future return for private equity and debt to be 8.4 percent, compared to 5.6 percent for public equities and 5.9 percent for fixed income assets.

In February 2021, SWIB reported that external management was between 1.5 and 4.0 times more expensive than internal management for numerous public market portfolios. In order to manage more assets internally, SWIB indicated to us that it needed to:

- employ a sufficient number of investment management and administrative support staff with the requisite skills;
- offer competitive compensation to attract talented staff: and
- have sufficient information technology (IT) infrastructure, information, and technical capacity to execute effective investment management decisions.

SWIB's executive director/chief investment officer determines whether to adopt a passive or an active strategy when selecting investments. A passive strategy attempts to earn returns consistent with market-based benchmarks, while an active strategy attempts to earn returns greater than such benchmarks. The proportion of WRS assets that are actively managed increased from 60.7 percent in December 2019 to 70.3 percent in December 2023. SWIB uses active strategies to help meet the long-term expected rate-of-return assumption for the WRS. Based on expected market conditions and the most-recent asset allocation plan the Board of Trustees approved in December 2023, SWIB expects annual investment returns over the next 10 years for the Core Fund to be 6.5 percent without active strategies and between 6.8 percent and 7.3 percent with active strategies.

Statutory Investment Requirements

2007 Wisconsin Act 212 modified SWIB's authority to manage WRS assets. 2007 Wisconsin Act 212, which was enacted in April 2008, modified SWIB's authority to manage WRS assets. Act 212 created s. 25.182, Wis. Stats., which indicates that notwithstanding any limitation on SWIB's management authority provided under any other provision of law, SWIB may manage the money and property of the WRS in any manner that does not violate s. 25.15 (2), Wis. Stats., which requires SWIB to provide prudent and cost-effective management of the assets it holds in trust. Section 25.182, Wis. Stats., requires SWIB to continue to invest Variable Fund assets primarily in public equities.

In December 2008 and at SWIB's request, the then Attorney General indicated in Opinion 11-08 that s. 25.182, Wis. Stats., authorizes SWIB to manage WRS assets in ways other than those articulated in other statutory provisions, as long as SWIB provides prudent and cost-effective management of these assets and invests Variable Fund assets primarily in public equities. In August 2022, the Attorney General in Opinion 02-22 reaffirmed the December 2008 opinion.

SWIB indicated it is not required to comply with at least 17 statutory provisions pertaining to its management of WRS assets. As a result of s. 25.182, Wis. Stats., and the opinions from the two Attorneys General, SWIB indicated it is not required to comply with at least 17 statutory provisions pertaining to its management of WRS assets, as long as it provides prudent and cost-effective management of the assets and invests Variable Fund assets primarily in public equities. The 17 statutory provisions are listed in Appendix 5 and came into effect no later than 1999, which was before the creation of s. 25.182, Wis. Stats. For example:

- Section 25.18 (2) (e), Wis. Stats., requires SWIB to ensure no more than 20.0 percent of Core Fund assets are managed externally. In December 2023, 64.3 percent of such assets were managed externally.
- Section 25.18 (2) (e), Wis. Stats., requires SWIB to ensure no more than 20.0 percent of the Variable Fund assets are managed externally. In December 2023, 32.7 percent of such assets were managed externally.
- Section 25.17 (5), Wis. Stats., requires SWIB to invest no more than 2.0 percent of Variable Fund assets in the securities of corporations in the venture capital stage of their development. In December 2023, no Variable Fund assets were invested in such securities.

- Section 25.185 (2), Wis. Stats., requires SWIB to attempt to ensure that 5.0 percent of the annual amount it spends for financial and investment analysis, as well as brokerage fees, is paid to minority-owned firms, as well as attempt to ensure that 1.0 percent is spent for the services of disabled veteran-owned firms. SWIB reported to DOA that it paid 4.9 percent of its discretionary brokerage fees to three minority-owned firms in fiscal year (FY) 2021-22 and 6.1 percent to two such firms in FY 2022-23. SWIB reported it did not pay any fees to disabled veteran-owned firms in either fiscal year because DOA had certified no such firms.
- Section 25.186 (2), Wis. Stats., requires SWIB to pay at least 5.0 percent of the annual amounts of brokerage fees to brokerages headquartered in Wisconsin and with principal business operations in Wisconsin. SWIB reported to DOA that it paid one Wisconsin firm 6.3 percent of such fees in FY 2021-22 and 4.8 percent in FY 2022-23.

SWIB indicated it does not monitor its compliance with the 17 statutory provisions as they relate to its management of WRS assets.

Issue for Legislative Consideration

The Legislature could consider modifying some or all of 17 statutory provisions to indicate whether SWIB must comply with them.

The Legislature could consider modifying statutes to clarify SWIB's obligations regarding its management of WRS assets. If the Legislature agrees that s. 25.182, Wis. Stats., supersedes SWIB's requirement to comply with certain other statutory provisions, including some or all of the 17 statutory provisions with which SWIB indicated it is no longer required to comply, it could modify these provisions to clarify that they do not apply to SWIB's management of WRS assets. However, if the Legislature does not agree, it could modify some or all of these statutory provisions to indicate that SWIB must comply with them.

Assessing SWIB's Investment Performance

SWIB's performance at investing WRS assets can be assessed by considering its performance relative to:

- the long-term expected rate-of-return assumption;
- market-based benchmarks; and
- the investment performance of other public pension plans.

Long-Term Expected Rate-of-Return Assumption

The long-term expected rate-of-return assumption for the WRS has been 6.8 percent since 2022.

Based on actuarial recommendations, the ETF Board approves a long-term expected rate-of-return for the annual performance of WRS investments. This rate was 7.2 percent from 2011 through 2018, 7.0 percent from 2019 through 2021, and 6.8 percent since 2022. Because of the long-term nature of a pension plan and annual fluctuations in market performance, investment returns may not meet this assumption every year. To reduce volatility in contributions and annuity payments because of fluctuations in investment returns, Core Fund returns are smoothed over a five-year period.

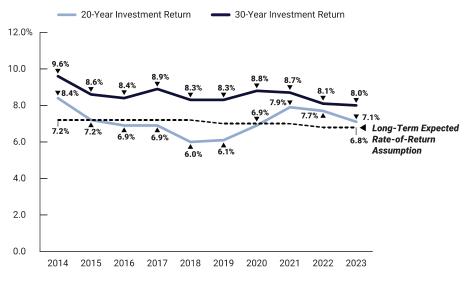
As of December 2023, the 20-year average annual investment return of the Core Fund was 7.1 percent. As shown in Figure 4, the 20-year average annual investment return of the Core Fund as of December 2023 was 7.1 percent, which was higher than the long-term expected rate-of-return assumption. The 20-year average annual investment return declined from 2014 through 2023, and was lower than the long-term expected rate-of-return assumption from 2016 through 2020. The 30-year average annual investment return declined from 2014 through 2023 but remained above the assumption and was 8.0 percent as of December 2023.

Figure 4

Core Fund 20- and 30-Year Investment Returns,

Compared to the Long-Term Expected Rate-of-Return Assumption

As of December 31



¹ The 20-year returns include management fees but exclude internal operating and other expenses. The 30-year returns exclude all fees and expenses.

Investment returns affect the annuity payments to retired participants. Appendix 6 shows the annual annuity adjustments for the Core Fund and the Variable Fund for the past 15 years. In the past five years, annuity adjustments ranged from:

- 1.6 percent to 7.4 percent for the Core Fund; and
- negative 21.0 percent to positive 21.0 percent for the Variable Fund.

Investment returns affect contribution rates paid by employers and employees. ETF calculates these rates by considering various factors, including investment performance smoothed over five years for the Core Fund. As shown in Table 2, the total contribution rate for general employees participating in the WRS was 13.8 percent of wages in 2024. This rate increased from 2022 to 2024.

Table 2 **Total Contribution Rates for General Employees Participating in the WRS** Rates as a Proportion of Wages

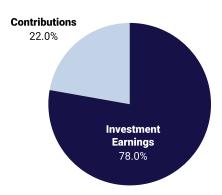
Calendar Year	Total Contribution Rate
2015	13.6%
2016	13.2
2017	13.6
2018	13.4
2019	13.1
2020	13.5
2021	13.5
2022	13.0
2023	13.6
2024	13.8

Market-Based Benchmarks

WRS pension benefits are funded primarily by employer contributions, employee contributions, and investment earnings. As shown in Figure 5, investment earnings represented 78.0 percent of total WRS funding from 2014 through 2023. As a result, investment returns are important to the financial stability of the WRS.

Figure 5

WRS Funding Sources
2014 through 2023



SWIB used market-based benchmarks to measure the performance of WRS investments. The Board of Trustees selected benchmarks based on the guidance of a consultant, which recommended specific benchmarks based on industry-recognized standards, such as the Morgan Stanley Capital International and Bloomberg indices. Each underlying asset class benchmark was used to determine overall market-based benchmarks for the Core Fund and the Variable Fund. Because benchmarks are intended to track underlying market-based investment returns, they differ over time and may be calculated monthly, annually, and over longer time periods. To measure its performance, SWIB focused primarily on five-year investment returns.

For the five-year period ending in December 2023, average annual investment returns were 9.3 percent for the Core Fund and 12.7 percent for the Variable Fund.

As shown in Table 3, average annual investment returns for the five-year period ending in December 2023 were 9.3 percent for the Core Fund and 12.7 percent for the Variable Fund. As of December 2022 and December 2023, the Core Fund exceeded its 1-, 3-, 5-, and 10-year benchmarks, but the Variable Fund did not consistently exceed its benchmarks. Appendix 7 shows the one-year investment returns for the Core Fund and the Variable Fund since 1982.

Table 3 Investment Performance Relative to Market-Based Benchmarks¹ As of December 31

	Core	Fund	Variab	ole Fund
	Investment	Average Annual	Investment	Average Annual
Period	Benchmark	Investment Return ²	Benchmark	Investment Return ²
One-Year				
2022	(13.3)%	(12.9)%	(18.1)%	(17.8)%
2023	11.0	11.4	23.1	22.2
Three-Year				
2022	4.8	5.5	5.1	5.0
2023	3.8	4.3	6.7	6.4
Five-Year				
2022	5.7	6.2	6.6	6.5
2023	8.7	9.3	12.9	12.7
Ten-Year				
2022	6.8	7.3	9.8	9.8
2023	6.7	7.1	9.3	9.3

¹ Returns that did not meet benchmarks are in shaded cells.

The investment returns of most WRS asset classes exceeded their five-year benchmarks as of December 2023. Appendix 8 shows the investment returns of each asset class compared to its benchmark for 1-, 3-, 5-, and 10-year periods as of December 2022 and December 2023.

Other Public Pension Plans

We compared the investment performance of the Core Fund to the performance of nine other large public pension plans. We compared the investment performance of the Core Fund to the performance of nine other large public pension plans. Such comparisons are affected by differences in plan structure, such as asset allocation, cash flow needs, investment styles, funding levels, return assumptions, risk tolerance levels, and statutory or other restrictions on allowable investments. In addition, SWIB's investment strategies and asset allocation are affected by the financial position of the WRS, which is generally stronger than that of the nine other large public pension plans. However, all nine plans face the same market conditions.

Among the peer group, the long-term expected rate-of-return assumptions ranged from 6.7 percent to 7.0 percent in 2023. The Core

² The 1-, 3-, and 5-year returns are net of all costs, while the 10-year returns include management fees but exclude internal operating and other expenses.

Fund was tied with the California Public Employee Retirement System for the third-lowest return assumption at 6.8 percent. In 2023, the funded ratio of the WRS was 98.9 percent, which was calculated in accordance with pension accounting standards. A higher ratio indicates the amount of assets are closer to the estimated amount needed to meet future pension obligations. Other peer group plans had ratios ranging from 47.1 percent to 95.7 percent. Appendix 9 contains information about the peer group.

The five-year investment return for the Core Fund ranked fourth among the peer group as of December 2023.

We compared the performance of the Core Fund with the performance of the peer group for the 1-, 3-, 5-, and 10-year periods as of December 2023. SWIB considers five-year investment returns to be its primary performance measure. As shown in Table 4, the five-year investment return for the Core Fund ranked fourth among the peer group as of December 2023.

Table 4

Comparison of Average Annual Investment Returns among Selected Public Pension Plans
As of December 31, 2023

	One-	Year	Three	-Year	Five-	Year	Ten-	Year
Public Pension Plan	Return	Rank	Return	Rank	Return	Rank	Return	Rank
Washington State Investment								
Board ¹	9.2%	9	8.9%	1	10.9%	1	9.2%	1
Minnesota State Board of								
Investment Combined Funds ²	14.6	1	6.0	4	10.4	2	8.2	2
Virginia Retirement System ¹	10.2	7	7.4	2	9.5	3	7.7	3
Wisconsin Retirement System								
Core Trust Fund ²	11.4	3	4.3	8	9.3	4	7.1	7
Florida State Board of								
Administration ²	11.4	3	5.4	6	9.2	5	7.4	4
New Jersey Division of Investment ¹	12.9	2	5.5	5	8.7	6	7.0	9
Pennsylvania Public School								
Employees Retirement System ²	8.6	10	6.8	3	8.4	7	7.2	6
Teachers Retirement System of								
Texas ¹	9.7	8	5.2	7	8.3	8	7.3	5
Ohio Public Employees Retirement								
System ²	11.4	3	4.2	9	8.3	8	7.1	7
California Public Employee								
Retirement System ¹	10.3	6	3.5	10	7.9	10	6.5	10

¹ Returns are net-of-fees.

² Returns are net-of-all-costs.

Because of the funding status of the WRS, SWIB does not experience the same pressure to achieve high returns as other plans in the peer group. Six peer group plans, including the Minnesota State Board and the Washington State Investment Board, attempted to achieve higher returns. Investment returns also reflect differences in asset allocation decisions. In 2023, the Minnesota State Board allocated more assets to public equities than did the Core Fund, and the Washington State Investment Board allocated more assets to private equity and real estate investments than did the Core Fund.

Non-WRS Fund Investment and Performance

In December 2023, the assets for the SIF, Historical Society Trust Fund, Injured Patients and Families Compensation Fund, State Life Insurance Fund, UW Cash Management Fund, and UW System Long Term Fund totaled \$22.7 billion, which was 14.6 percent of all assets that SWIB managed.

One-year investment returns as of December 2023 for the Historical Society Trust Fund, Injured Patients and Families Compensation Fund, State Life Insurance Fund, UW Cash Management Fund, and UW System Long Term Fund ranged from 6.7 percent to 21.3 percent, and all met or exceeded their benchmarks. The SIF had a one-year return of 5.2 percent, which exceeded its benchmark of 4.9 percent. Appendix 1 provides additional information about these six funds.

Expenses
Information Technology Projects
Staffing
Travel Reimbursements and
Procurement of Goods and Services
Budget Oversight by the Board of Trustees
Expenses Relative to Other Public Pension Plans
Data Management

Investment and Operating Expenses

The Board of Trustees is responsible for investing assets in a prudent and cost-effective manner. As part of its fiduciary role, the Board of Trustees is responsible for investing assets in a prudent and cost-effective manner. SWIB is authorized to establish its own budget and create staff positions. SWIB's expenses increased from \$480.3 million in 2019 to \$852.0 million in 2023 (77.4 percent), primarily because of an increase in management fees paid to external investment managers. In December 2023, SWIB had 298.0 full-time equivalent (FTE) positions, which was an increase of 63.0 FTE positions since December 2019. The consultant that compares SWIB to a peer group of 14 other large public pension plans found that the Core Fund's expenses were greater than the peer group's expenses by approximately \$0.05 per \$100 of assets managed in 2022. We recommend SWIB annually provide the Board with information that compares the Core Fund's expenses to a comparison group for a period of at least five years and assess its data management capabilities relative to an industry standard model and then report to the Board at least annually on its assessment results.

Expenses

As authorized by s. 25.187 (2), Wis. Stats., SWIB bills an allocated amount for its internal operating costs, including staff salaries and bonuses, to the agencies that administer the funds for which SWIB invests assets. SWIB is statutorily authorized to spend the amounts these agencies pay it and has been authorized since 2011 to establish its own budget, which SWIB prepares and presents to the Board of Trustees for consideration and approval. Certain expenses for SWIB's investment activities, such as fees for external investment managers, are charged directly to investment earnings. Whether SWIB receives payments from agencies

or charges expenses directly to investment earnings, all of SWIB's expenses are incurred by the funds for which SWIB invests assets. SWIB receives no general purpose revenue.

SWIB's expenses increased from \$480.3 million in 2019 to \$852.0 million in 2023 (77.4 percent). As shown in Table 5, SWIB's expenses increased from \$480.3 million in 2019 to \$852.0 million in 2023 (77.4 percent). Management fees, which SWIB pays to external investment managers who invest in assets such as private equity investments, real estate investments, and hedge funds, increased by \$321.5 million over this five-year period and accounted for 83.1 percent of total expenses in 2023. Management fees typically include contractually determined base fees that are calculated as a proportion of assets invested and conditional performance fees that vary based on circumstances and are typically calculated based on investment returns. Appendix 10 shows the external investment managers paid the highest amounts of management fees in 2023.

Table 5 **SWIB's Expenses**(in millions)

	2019	2020	2021	2022	2023
Management Fees					
Public Markets and Hedge Funds ¹	\$178.8	\$247.3	\$286.0	\$363.3	\$379.2
Private Equity ²	157.2	130.8	218.6	269.6	245.0
Real Estate ²	50.8	55.6	67.9	80.1	84.1
Subtotal	386.8	433.7	572.6	713.1	708.3
External Support Services ³	43.2	43.3	51.0	50.2	49.3
Internal Operating Expenses					
Salaries and Fringe Benefits	34.3	43.8	51.0	55.0	59.2
Bonuses ⁴	9.8	13.9	21.5	24.0	25.7
Supplies, Travel, and Facilities ⁵	6.2	5.7	6.0	7.1	9.6
Subtotal	50.3	63.4	78.5	86.2	94.4
Total	\$480.3	\$540.4	\$702.1	\$849.5	\$852.0

¹ Includes fees for external management of publicly traded investments.

² Excludes management fees known as "carried interest," which is charged to investment returns and not reported with other SWIB expenses.

³ Includes fees for asset custody, consulting, external investment research, external IT services, legal services, and securities lending. Appendix 11 lists the 10 highest-paid vendors in 2023.

⁴ Bonuses are for prior-year performance.

⁵ Includes office space, research, supplies, travel, and IT equipment.

In 2023, carried interest costs totaled \$120.2 million.

Carried interest, which is a management fee related to private equity and real estate investments, is charged to investment returns and not reported with other SWIB expenses. SWIB pays carried interest when a fund manager liquidates an investment and the rate-of-return exceeds an agreed-upon minimum rate. As shown in Table 6, carried interest costs totaled \$120.2 million in 2023.

Table 6 Carried Interest Costs, by Asset Class¹ (in millions)

Total	\$217.4	\$380.4	\$1,260.0	\$395.9	\$120.2
Real Estate	19.9	$(5.5)^3$	133.0	155.7	$(65.6)^3$
Private Equity ²	\$197.5	\$385.9	\$1,127.0	\$240.2	\$185.8
Asset Class	2019	2020	2021	2022	2023

¹ Carried interest is a management fee related to private equity and real estate investments.

We analyzed the total investment expenses per \$100 of assets that SWIB managed. In December 2023, SWIB managed 20.4 percent more assets than it did in December 2019. If investment expenses increase only because of an increase in the amount of assets managed, expenses per \$100 of assets managed remains consistent.

SWIB's total investment expenses for each \$100 of assets managed increased from \$0.57 in 2019 to \$0.65 in 2023.

As shown in Table 7, SWIB's total investment expenses, including carried interest costs, for each \$100 of assets managed increased from \$0.57 in 2019 to \$0.65 in 2023. This increase occurred primarily because of the amount of fees SWIB paid to external investment managers.

² Includes venture capital investments.

³ Carried interest was negative because investment performance declined.

Table 7

Investment Expenses Per \$100 of Assets Managed, by Calendar Year

Calendar Year	Investment Expenses	Total Investment Expenses ¹	Change in Total Investment Expenses ¹
0010	40.00	40.57	,
2019	\$0.39	\$0.57	n/a
2020	0.42	0.71	\$0.14
2021	0.45	1.25	0.54
2022	0.58	0.85	(0.40)
2023	0.57	0.65	(0.20)

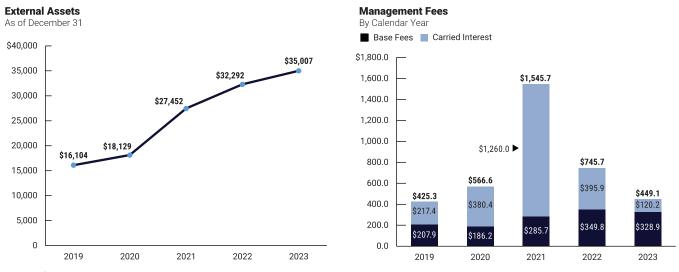
¹ Includes carried interest costs.

Management Fees

In recent years, SWIB allocated an increased proportion of Core Fund assets to more-complex investment strategies that involve external investment managers. These strategies included private equity, real estate, and hedge fund investments.

SWIB's private equity and real estate investments increased, as did the fees it paid to external investment managers. As shown in Figure 6, SWIB's private equity and real estate investments increased from \$16.1 billion in December 2019 to \$35.0 billion in December 2023 (117.4 percent). The amount of fees SWIB paid to external investment managers increased from \$425.3 million in 2019 to \$449.1 million in 2023 (5.6 percent).

Figure 6 External Management of Private Equity and Real Estate Investments^{1,2} (in millions)



¹ Excludes private debt.

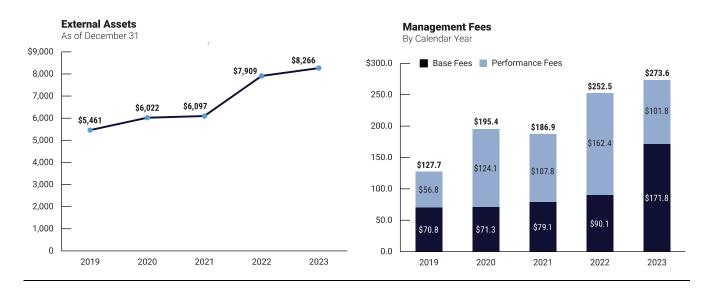
SWIB's hedge fund investments increased, as did the fees it paid to external investment managers.

As shown in Figure 7, SWIB's hedge fund investments increased from \$5.5 billion in 2019 to \$8.3 billion in 2023 (50.9 percent). The amount of fees SWIB paid to external investment managers increased from \$127.7 million in 2019 to \$273.6 million in 2023 (114.3 percent).

² Fees for private equity and real estate are comingled, so we report these two asset categories together.

Figure 7

External Management of Hedge Fund Investments
(in millions)



In report 22-8, we recommended SWIB work with the Board of Trustees to modify its policies to report the total amount of external management fees paid each calendar year and comply with the modified policies by providing the Board in the final quarterly update for a given calendar year all available information about the total amount of external management fees paid during that calendar year. In our current audit, we found SWIB complied with these recommendations.

Information Technology Projects

In recent years, SWIB initiated IT projects to update and expand its data management, investment management, and operational capabilities, in part, to be able to manage a greater proportion of investments internally and support increasingly complex investment strategies. SWIB spent \$12.7 million of the \$26.3 million it had budgeted for IT projects in 2022 and 2023.

In 2019, SWIB began Project Centum, which was intended, in part, to allow it to increase the proportion of assets it manages internally. In 2019, SWIB began Project Centum, which was intended, in part, to allow it to increase the proportion of assets it manages internally, as we noted in report 22-8. SWIB anticipates the project will make internal management of assets more successful by improving data quality and permitting it to process investment trades and transactions internally. For example, SWIB anticipates the project will provide real-time data on its holdings, improve support for internal reporting, and improve fund-level performance calculations. In June 2024, SWIB reported to the Board of Trustees that it had spent \$19.2 million on the project from 2019 through 2023, and that it will spend an estimated \$6.6 million in 2024.

In report 22-8, we noted that SWIB in September 2020 had executed a contract with a vendor to construct the software platform for Project Centum and had reported to the Board of Trustees that it planned to migrate its first investment strategy to this new platform in the second quarter of 2021. However, SWIB reported to the Board in June 2021 that the project's progress was delayed and would require additional expenditures because of unanticipated software customizations that were needed. As a result, we recommended SWIB assess in writing the planning and vendor evaluation processes it used for the project and identify improvements that could help avoid delays and unexpected expenditures on future IT projects.

In our current audit, we found that SWIB complied with our recommendation by conducting a review of its planning and vendor evaluation processes for Project Centum in June 2023. This review included recommendations for SWIB to provide additional attention to vendor demonstrations of capabilities for critical or high-complexity project components, establish more-realistic timelines for its own staff's deliverables in working with the vendor, and more consistently define and ensure adherence to project deadlines agreed upon with the vendor.

In June 2022, SWIB reported to the Board of Trustees that it planned to continue to work with its existing vendor to complete most components of Project Centum, but that it planned to execute an agreement with a new vendor to complete the component pertaining to upgrading SWIB's system for executing investment trades. SWIB reported that it planned to issue a request for proposal to identify a new vendor early in 2025, at an estimated cost of \$4.5 million. In contracting with a new vendor, it will be important for SWIB to consider the recommendations in its June 2023 review, which will help to avoid additional delays and unexpected expenditures.

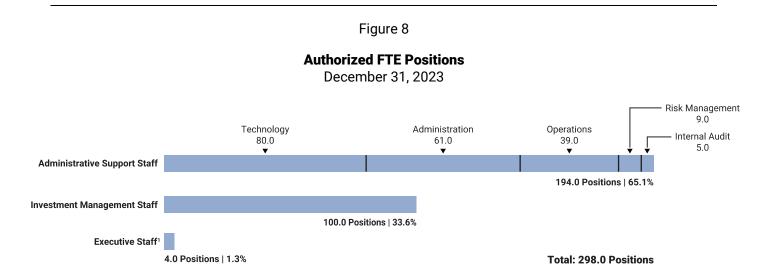
Staffing

SWIB's staff are in the unclassified civil service and include:

- administrative support staff who provide accounting and operations, IT, finance, legal, and other services;
- investment management staff who research, select, and trade investments; and
- executive staff.

In December 2023, SWIB had 298.0 FTE positions.

As shown in Figure 8, SWIB had 298.0 FTE positions in December 2023, including 194.0 FTE administrative support positions, 100.0 FTE investment management positions, and 4.0 FTE executive positions. From 2022 through 2023, the Board of Trustees approved the creation of 8.0 FTE positions, all of which it approved in December 2023. SWIB had 45 new-hires and 43 staff departures in 2022, and 46 new-hires and 21 departures in 2023. In April 2024, 13.0 FTE positions were vacant.



¹ Includes the executive director/chief investment officer, deputy executive director/chief operating officer, chief of staff and strategy, and head of risk management.

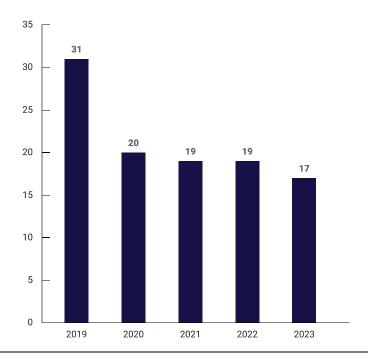
Contract Staff

SWIB uses contract staff to perform typical business operations and help to complete specific projects. SWIB's policies do not require Board of Trustees approval to hire contract staff, who are generally more expensive than other types of staff. SWIB updates the Board quarterly on the number and cost of its contract staff.

The number of SWIB's contract staff declined from 31 in December 2019 to 17 in December 2023.

As shown in Figure 9, the number of SWIB's contract staff declined from 31 in December 2019 to 17 in December 2023. In December 2023, 10 of the 17 contract staff performed typical operational tasks, and 7 contract staff helped to complete specific projects. SWIB expects the 10 contract staff to perform their functions until replaced by new FTE positions or hired into vacant FTE positions. In 2023, SWIB spent \$4.9 million on contract staff.

Figure 9 **Number of SWIB's Contract Staff** As of December 31



In December 2023, SWIB reported to the Board of Trustees that the number of its contract staff will increase in 2024 in order to support Project Centum and to perform typical business operations while SWIB works to fill vacant FTE positions. In June 2024, SWIB reported to the Board it had 20 contract staff, including 14 who support specific projects such as Project Centum.

In report 22-8, we recommended SWIB continue to assess its need for contract staff and convert the positions filled by contract staff who perform typical operational tasks into FTE positions. In our current audit, we found SWIB complied with our recommendation by decreasing its reliance on contract staff to perform typical business operations.

Issue for Legislative Consideration

Section 19.42 (10) (1), Wis. Stats., requires specified SWIB employees to file with the Wisconsin Ethics Commission annual statements of economic interests, which identify an employee's investments, real estate, creditors, and other financial information. Statutorily specified employees include SWIB's executive director, executive assistant to the executive director, internal auditor, chief investment officer, chief financial officer, chief legal counsel, chief risk officer, and investment directors of the investment board.

In December 2023, SWIB used its statutory authorization to create a new position, the chief of staff and strategy, which is intended to support the executive director/chief investment officer in the efficient and effective management of SWIB and the development and execution of SWIB's overall strategy. The individual in this new position is not statutorily required to file an annual statement of economic interests.

The Legislature could consider modifying statutes to require any staff member in the chief of staff and strategy position to file an annual statement of economic interests.

The Legislature could consider modifying statutes to require any staff member in the chief of staff and strategy position to file an annual statement of economic interests. Because the potential exists that SWIB could in the future create additional new senior positions, the Legislature could also consider modifying statutes to require staff in any such positions to file annual statements of economic interests. For example, the Legislature could modify statutes to require any staff member in any position reporting directly to the executive director/chief investment officer or to the deputy executive director/chief operating officer to file annual statements of economic interests.

Travel Reimbursements and Procurement of Goods and Services

2021 Wisconsin Act 177, which was enacted in March 2022, established new requirements pertaining to how SWIB reimburses its staff for travel expenses, as well as how SWIB procures goods and services from vendors.

We found that SWIB established travel reimbursement policies for its staff and job applicants, as well as a reimbursement schedule for travel expenses, as required by s. 25.187 (4), Wis. Stats. The December 2023 policies:

- required travel expenses to be individually listed and supported by receipts showing vendor names, dates, and amounts for all expenses greater than \$25;
- established maximum rates for in-state lodging expenses that were the same as the State's uniform travel schedule, which was \$98 per night for most counties, and maximum rates for out-of-state lodging of \$250 per night in most cities and \$400 in 25 high-cost cities;
- prohibited premium seating on domestic flights shorter than three hours, but permitted certain premium seating for longer domestic or international flights; and

allowed reimbursement for meal costs of up to \$80 per day for domestic travel, up to \$100 per day in high-cost cities, and up to \$150 per day for international travel. The cost of meals in the greater Madison area were generally not reimbursable.

We found that the 21 highest-cost travel expense reports submitted in 2023 complied with SWIB's travel reimbursement policies.

We reviewed the 21 highest-cost travel expense reports that staff submitted in 2023 and found the reports, which totaled \$122,000, complied with SWIB's travel reimbursement policies. One expense report was submitted more than nine months after a staff member's travel concluded. The policies in effect at the time indicated an expense report submitted more than 60 days after the last travel day was generally not reimbursable unless approved by SWIB's chief financial officer, who approved this particular report. In December 2023, SWIB modified its policies to require all expense reports be submitted within 60 days after the last travel day.

Section 25.187 (1), Wis. Stats., permits SWIB to manage its operating expenditure procurements independently from DOA and requires SWIB to adopt policies and procedures that specify when it is required to publicly solicit proposals from multiple vendors, how it is to evaluate the proposals, and how it is to assess any vendor conflicts of interest. We found that SWIB had established procurement policies before this statutory requirement began and updated them in January 2024. Under its policies:

- procurements with an estimated cost of \$150,000 or more required SWIB to issue a request for proposal and evaluate proposals from multiple vendors;
- procurements with an estimated cost more than \$10,000 but less than \$150,000 permitted SWIB to use a simplified bidding process, under which bids are typically received from three potential vendors, and the lowest-cost bidder that is best able to supply the good or service is selected; and
- procurements with an estimated cost of less than \$10,000 permitted SWIB to select a vendor based on staff research of the vendor best able to supply the good or service.

We found SWIB justified in writing only one of the sole-source bids we reviewed.

We reviewed five SWIB procurements involving contracts that totaled \$2.5 million and were executed from January 2024 through May 2024. Three of these procurements involved sole-source bids, for which SWIB considered only one vendor for each procurement. Written policies require SWIB to obtain written approval from legal staff before conducting a sole-source bid and to justify in writing its reasons for conducting a sole-source bid. Our review found that legal staff provided written approval for all three sole-source bids, but that SWIB justified in writing only one of the three procurements.

SWIB should consistently follow its written policies by justifying in writing each sole-source bid. Doing so will help to ensure that SWIB conducts sole-source bids only when necessary.

☑ Recommendation

We recommend the State of Wisconsin Investment Board:

- consistently follow its written policies by justifying in writing each sole-source bid; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement this recommendation.

Budget Oversight by the Board of Trustees

At its December meeting each year, the Board of Trustees typically reviews and approves SWIB's annual budget for the next calendar year. Policies require the Board each June to approve an internal operating budget that includes SWIB's expenses for staff compensation and bonuses for the fiscal year, based on approved calendar-year budgets, in order to meet state accounting and reporting requirements.

In September 2021, the Board of Trustees approved a change to SWIB's policies to remove external management fees from the annual budget, beginning in 2022. SWIB indicated this change was made in order to focus the budget on the most-controllable costs, such as internal operating expenses and expenses for services provided by other vendors. External management fees vary from year to year, based on changes in the amount of assets managed and investment returns. As noted, SWIB in 2023 paid \$708.3 million for external management fees, which was 83.1 percent of its total expenses.

SWIB's expenses, excluding external management fees, were \$17.8 million less than budgeted in 2023. As shown in Table 8, SWIB's expenses, excluding external management fees, were \$17.8 million less than budgeted for 2023. This decrease occurred primarily because expenses for contractors, IT projects, and investment research and consulting were less than SWIB had initially anticipated.

Table 8

SWIB's Budgeted and Actual Expenses, by Calendar Year

Excludes External Management Fees (in millions)

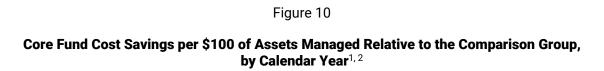
Calendar Year	Budgeted Expenses ¹	Actual Expenses	Under Budget
2021	\$140.0	\$126.2	\$13.8
2022	150.2	131.3	18.9
2023	157.0	139.2	17.8

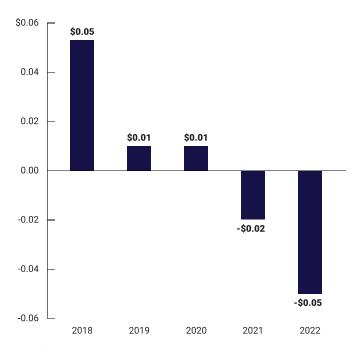
¹ Includes adjustments to reflect annual bonus amounts the Board of Trustees approved each March.

Expenses Relative to Other Public Pension Plans

To assess the general cost effectiveness of investment management, SWIB hires a consultant to annually compare the Core Fund's expenses to the expenses of a peer group of 14 other large public pension plans. This comparison accounts for differences in the sizes and asset allocations of the plans. In its written response to report 22-8, SWIB noted the consultant found that SWIB had saved approximately \$1.1 billion in costs relative to its peers from 2011 through 2020.

In 2022, the Core Fund's expenses were greater than those of the comparison group by approximately \$0.05 per \$100 of assets managed. As shown in Figure 10, the Core Fund's expenses were greater than those of the comparison group by approximately \$0.05 per \$100 of assets managed in 2022, which was the most-recent year such information was available at the time of our audit. SWIB had annual cost savings compared to the comparison group from 2018 through 2020, but Core Fund expenses per \$100 of assets exceeded those of the comparison group in the following two years. The consultant attributed the decline in SWIB's cost savings primarily to the increased proportion of assets under external and active management. The consultant reported that 46.5 percent of Core Fund assets were managed externally in 2018, compared to 57.2 percent in 2022, and that 57.7 percent of Core Funds were under active management in 2018, compared to 77.9 percent in 2022.





Negative amounts indicate the Core Fund's expenses per \$100 of assets managed exceeded the expenses of the comparison group.

SWIB annually provides the Board of Trustees with information from the consultant's most-recent report. In presentations to the Board from December 2019 through December 2022, SWIB provided information on the Core Fund's expenses compared to the comparison group for each year over a 10-year period of time. In contrast, SWIB in December 2023 presented the Board with comparative information for 2022 only.

SWIB should annually provide the Board of Trustees with information that compares the Core Fund's expenses to the expenses of the comparison group for a period of at least five years. Doing so will help the Board to assess SWIB's expenses over time and consider SWIB's annual budget requests in consideration of these expenses.

² Information for 2023 was not yet available at the time of our audit.

☑ Recommendation

We recommend the State of Wisconsin Investment Board:

- annually provide the Board of Trustees with information that compares the Core Fund's expenses to the expenses of the comparison group for a period of at least five years; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement this recommendation.

Data Management

Data management involves collecting, maintaining, and using data securely, efficiently, and cost-effectively. SWIB needs comprehensive and accurate data in order to move swiftly to take advantage of investment opportunities.

In report 20-23, we found that SWIB received an internal audit report and a consultant report that identified data management deficiencies, and we recommended SWIB develop a plan and timeline for improvement. In report 22-8, we found that SWIB had updated the Board of Trustees in March 2021 with a list of priorities and a timeline for improvement that was based on an industry standard model for data management. In April 2022, SWIB indicated to us it had improved its data management capabilities but not as much as expected, in part, because of delays in implementing Project Centum. As a result, we recommended SWIB continue to assess and report to the Board at least annually on its progress toward improving data management.

In our current audit, we found that SWIB reported to the Board of Trustees on its data management in September 2022 and March 2023. Although SWIB discussed its data management improvements, it did not assess its data management capabilities relative to the industry standard model. SWIB indicated to us it believes it improved its data management capabilities and will continue to do so, including after it has made additional progress toward completing Project Centum.

SWIB should consistently assess its data management capabilities relative to the industry standard model it had previously presented to the Board of Trustees. In addition, SWIB should report to the Board at least annually the results of its assessments, areas of needed improvement, and a timeline for implementing such improvements. Taking these actions will help SWIB to collect and use comprehensive and accurate data to help the Board to consider SWIB's progress toward improving data management and assess SWIB's requests for future IT projects.

☑ Recommendation

We recommend the State of Wisconsin Investment Board:

- consistently assess its data management capabilities relative to the industry standard model it had previously presented to the Board of Trustees;
- report to the Board of Trustees at least annually the results of its assessments, areas of needed improvement, and a timeline for implementing such improvements; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement these recommendations.

Compensation Structure
Annual Bonuses
Long-Term Bonuses
Other Bonuses
Total Cash Compensation

Staff Compensation

The Board of Trustees approves staff compensation. The Board of Trustees approves staff compensation. For 2023 performance, SWIB paid its staff \$59.2 million for salaries and fringe benefits, signing bonuses, retention bonuses, and severance payments. In addition, SWIB paid 262 staff a total of \$30.6 million for annual bonuses. The annual bonuses increased 19.1 percent from the prior vear, while the five-year excess return for the Core Fund increased by an annualized 0.1 percent (from 0.47 percent to 0.57 percent). In October 2022, the Board approved new policies for awarding long-term bonuses to staff in senior positions, and SWIB paid 65 staff a total of \$4.2 million in long-term bonuses for 2023 performance. Long-term bonuses are in addition to annual bonuses. Salaries and bonuses reduce WRS assets and the amounts paid to annuitants. Overall compensation for SWIB's investment staff in 2022 was 65.2 percent of a comparison group's median compensation. We recommend SWIB document more-precise reasons for awarding salary increases, modify its policies to require it to document the reasons why it awards each signing bonus and each retention bonus, and modify its policies to require it to document how it determined the amount of each signing bonus and each retention bonus it awards.

Compensation Structure

Section 25.16 (7), Wis. Stats., authorizes SWIB to compensate its staff through salaries and bonuses. The Board of Trustees establishes the salaries for the executive director/chief investment officer and internal audit director, and the internal audit director establishes the salaries for other internal audit staff. The executive director/chief investment officer establishes the salaries for all other staff.

To help determine compensation levels, the Board of Trustees hires a consultant to make comparisons to selected banks, insurance companies, investment management firms, and internally managed and public pension plans. Policies identify a goal for total compensation, including salaries and bonuses, to:

- fall between the 25th percentile and the median total compensation of the comparison group for executive staff and senior investment management and administrative support staff; and
- approximate the median total compensation of the comparison group for all other investment management and administrative support staff.

In 2023, the average salary and fringe benefits paid to 291 SWIB staff was \$150,200. In 2023, the average salary and fringe benefits paid to 291 SWIB staff, excluding interns and limited-term employees, was \$150,200. The average amount paid to members of SWIB's Management Council was \$373,700. In total, staff were paid \$59.2 million in salaries and fringe benefits.

As shown in Table 9, SWIB's staff received \$1.9 million in salary increases in 2022 and \$1.3 million in 2023. SWIB increases salaries based on merit and promotions. Merit increases accounted for most of the salary increases in both 2022 and 2023. Staff may receive multiple types of salary increases in a given year.

Table 9

Salary Increases for SWIB Staff, by Type

	2022		2023	
Туре	Total Awarded	Number of Salary Increases	Total Awarded	Number of Salary Increases
	•			
Merit Increase	\$ 1,626,100	184	\$ 838,100	142
Promotion	319,500	19	444,000	32
Total	\$1,945,600	203	\$1,282,100	174

¹ Staff may receive multiple types of salary increases in a given year.

Policies indicated that market compensation rates, job performance, internal equity, retention, and the amount of available funding were factors to consider when increasing salaries. In report 22-8, we recommended SWIB document more-precise reasons for increasing salaries.

In our current audit, SWIB indicated it complied with our recommendation by developing seven standardized rationales for deciding whether to increase salaries and designated each staff member with one or more of these rationales. SWIB indicated these rationales complement the staff evaluations that help to determine salary increases. We found that SWIB designated the same rationale to some staff who did and did not receive salary increases. For example, in 2023 SWIB designated:

- 69 staff as "performing at expectations & goal(s) accomplishment" and increased their salaries, but it did not increase the salaries of 8 staff designated with this rationale;
- 36 staff as an "outstanding contributor" and increased their salaries, but it did not increase the salaries of 2 staff designated with this rationale; and
- 20 staff as "no or minimal adjustment given" and increased their salaries, but it did not increase salaries of 64 staff designated with this rationale.

SWIB should document more-precise reasons for awarding salary increases.

As we recommended in report 22-8, SWIB should document more-precise reasons for awarding salary increases. More-precise reasons should document the specific, individualized reasons why each staff member received a salary increase. Doing so will provide assurance that SWIB fairly and equitably increases salaries and will avoid situations in which, for example, only some staff who are designated as outstanding contributors receive salary increases.

We recommend the State of Wisconsin Investment Board:

- document more-precise reasons for awarding salary increases; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement this recommendation.

Annual Bonuses

Statutes permit SWIB, with approval from the Board of Trustees, to award bonuses to staff. Statutes permit SWIB, with approval from the Board of Trustees, to award bonuses to staff. The Board determined annual bonuses for the executive director/chief investment officer and the internal audit director, based on information provided by the deputy executive director/chief administrative officer and the compensation consultant. The executive director/chief investment officer recommended annual

bonuses for other staff. Annual bonuses are intended to help attract and retain qualified staff.

Annual bonuses were based on quantitative and qualitative performance measures the Board of Trustees adopted for:

- executive staff, who include the executive director/chief investment officer, deputy executive director/chief operating officer, chief of staff and strategy, and head of risk management;
- investment management staff, who research, select, and trade investments; and
- administrative support staff, who include accounting and operations, IT, finance, legal, and other services staff.

The quantitative performance measures were generally based on the Core Fund's one- and five-year performance, relevant asset classes, and relevant investment portfolios, compared to relevant benchmarks. The measures were weighted toward five-year investment performance.

The amount of annual bonuses awarded to individual staff depended on various factors. We found that:

- for executive staff, 50.0 percent of the amount was based on quantitative performance measures and 50.0 percent was based on qualitative measures such as demonstrating leadership, training and mentoring staff, and contributing to strategic planning;
- for investment management staff, between 15.0 percent and 30.0 percent of the amount was based on qualitative performance measures that depended on a given position and were based on goals approved by the executive director/chief investment officer; and
- for administrative support staff, the amount was based on an overall assessment of qualitative performance measures as well as quantitative measures that assessed progress towards enhancing SWIB's operations and technology infrastructure, and other initiatives.

For 2023 performance, 262 staff were awarded a total of \$30.6 million in annual bonuses, which was the highest amount awarded from 2019 through 2023. As shown in Table 10, 262 staff were awarded a total of \$30.6 million in annual bonuses for 2023 performance. This was the highest amount awarded over the five-year period from 2019 through 2023. Over this period, the total amount of bonuses increased steadily, and all or almost all eligible staff were awarded bonuses in a given year. SWIB attributed the increase in bonuses awarded to increases in the number of staff eligible for bonuses, increases in salaries because of merit increases and promotions, and improved investment performance.

Table 10 SWIB Staff Annual Bonuses, by Performance Year¹

		l	Number of Staff Awarded Bonuses			
Performance Year	Amount (in millions)	Investment Management	Administrative Support	Executive Staff	Total	Percentage of Eligible Staff
2019	\$13.9	72	97	3	172	98.9%
2020	21.5	87	124	3	214	100.0
2021	24.0	84	129	4	217	99.1
2022	25.7	82	143	3	228	97.4
2023	30.6	89	171	2	262	100.0

¹ Bonuses are paid in the following calendar year.

Policies allow the executive director/chief investment officer to award discretionary bonuses to staff who made important contributions. We found that 28 staff were awarded discretionary bonuses totaling \$595,000 for 2022 performance, and 47 staff were awarded such bonuses totaling \$643,000 for 2023 performance. Discretionary bonuses are part of the annual bonuses and are included in the amounts shown in Table 10.

For 2023 performance, annual bonuses awarded to individual investment management staff ranged from \$25,845 to \$677,069. As shown in Figure 11, annual bonuses awarded for 2023 performance to individual investment management staff ranged from \$25,845 to \$677,069, bonuses awarded to individual administrative support staff ranged from \$2,718 to \$318,625, and the bonuses awarded to two executive staff members were \$510,256 and \$1.0 million.

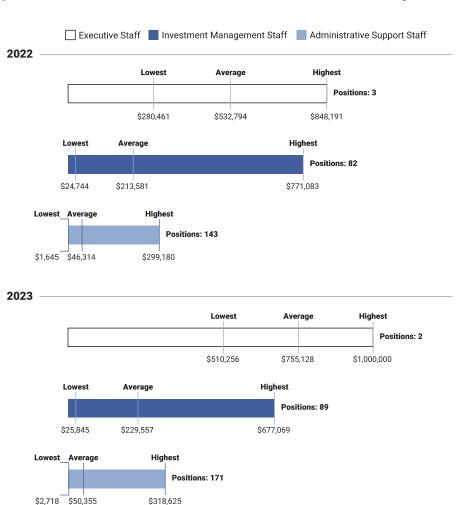


Figure 11

Range of Annual Bonuses Paid to Individual SWIB Staff Members, by Staff Type¹

¹ Bonuses are paid in the following calendar year.

One way to assess investment performance is by considering excess returns, which are the portion of investment returns that exceed market-based benchmarks. We compared changes in the total amount of bonuses awarded in a given year to excess returns for the Core Fund.

The amount of annual bonuses awarded for 2023 performance increased 19.1 percent from the prior year, while excess returns for the Core Fund increased slightly.

As shown in Figure 12, the amount of annual bonuses awarded for 2023 performance increased 19.1 percent from the prior year, while the five-year excess return for the Core Fund increased by an annualized 0.1 percent (from 0.47 percent to 0.57 percent) and the one-year excess return increased by 0.02 percent (from 0.37 percent to 0.39 percent).

0.2%

0.0%

2023

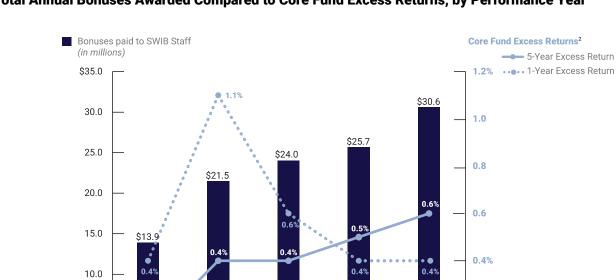


Figure 12 Total Annual Bonuses Awarded Compared to Core Fund Excess Returns, by Performance Year¹

2021

Overall compensation for investment management staff was 65.2 percent of the comparison group median for 2022 performance.

5.0

0.0

2019

As shown in Figure 13, overall compensation for investment management staff decreased from 69.8 percent of the comparison group median for 2018 performance to 65.2 percent for 2022 performance. For 2022 performance, salaries were 94.8 percent of the comparison group median, and bonuses were 49.7 percent. Information for 2023 was unavailable at the time of our audit.

2022

²⁰²⁰ ¹ Bonuses are paid in the following calendar year.

² Excess returns are the portion of investment returns that exceed market-based benchmarks, based on returns net-of-all-costs.

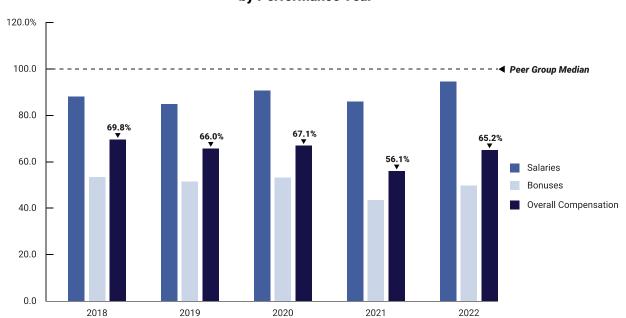


Figure 13

Investment Management Staff Compensation Relative to the Comparison Group Median,
by Performance Year^{1, 2}

Deferral of Annual Bonuses

Typically, the Board of Trustees decides in March of each year the amount of annual bonuses to award for performance in the prior calendar year. In 2009, the Board established a policy to defer payment of the bonuses if the Core Fund had a negative investment return in a given year. The policy required the deferral period to last at least two years and until the Core Fund had a positive one-year return, although the policy permitted the Board to waive a given deferral. After the Core Fund had a negative 0.7 percent return in 2015 and a negative 3.7 percent return in 2018, the Board waived the deferrals, and the bonuses were paid on time.

In December 2019, the Board modified the policy to specify that a deferral may occur only if the Core Fund has a one-year investment return of at least negative 10.0 percent, and that the deferral period will last for a maximum of 13 months.

In 2022, the Core Fund had a negative 12.9 percent return. Based on a recommendation from the executive director/chief investment officer, in March 2023 the Board of Trustees deferred paying annual bonuses to December 2023. However, the Board allowed staff to receive 50.0 percent of their deferred bonuses in summer 2023 if the Core Fund's year-to-date investment return on June 30, 2023, was at least 3.4 percent. Because the return was 6.5 percent on that date, staff were

¹ Bonuses are paid in the following calendar year. Excludes the executive director or the executive director/chief investment officer.

² Information for 2023 was unavailable at the time of our audit.

paid 50.0 percent of their bonuses in July 2023. In determining the deferral period, and as permitted by policies, the Board indicated it considered that the 1- and 5-year investment returns for the Core Fund exceeded the benchmarks, the 10- and 20-year returns for the Core Fund exceeded the long-term expected rate-of-return assumption, and WRS participants received a 1.6 percent increase annuity adjustment for the Core Fund in 2022.

As shown in Figure 14, Board of Trustees decisions in recent years have resulted in staff either receiving bonuses on time or with slight delay, regardless of the Core Fund's performance.

Figure 14

Board of Trustees Decisions about Deferring Payment of Annual Bonuses to SWIB Staff

Before December 2019

Policy

If the Core Fund had a **negative one-year return of any size** in a given calendar year



For at least two consecutive years and until the Core Fund had a positive one-year return, employees would not receive annual bonuses for that year, unless the Board of Trustees waived the deferral

2015 | One-year return for the Core Fund was negative 0.7 percent



Board of Trustees Decision

Bonuses were paid on time

2018 | One-year return for the Core Fund was negative 3.7 percent



Bonuses were paid on time

From December 2019 through October 2024

Policy [

If the Core Fund had a **negative one-year return of at least 10.0 percent** in a given calendar year



For **up to 13 months**, employees will not receive performance bonuses for that year, **unless** the Board of Trustees waives the deferral

2022 | One-year return for the Core Fund was negative 12.9 percent



Board of Trustees Decision

Payment of one-half of the bonuses was deferred until July 2023 and the other one-half until December 2023

Long-Term Bonuses

In October 2022, the
Board of Trustees
approved new policies
for awarding long-term
bonuses to staff in
senior positions.

In October 2022, the Board of Trustees approved new policies for awarding long-term bonuses to staff in senior positions, including executive staff, members of the Management Council, the chief financial officer, the chief legal counsel, the chief technology officer, the internal audit director, heads of investment strategies, and senior portfolio managers. Long-term bonuses are in addition to annual bonuses and are intended to make compensation more competitive with SWIB's peers, retain staff, and encourage long-term sustained investment performance for the WRS.

Eligible staff employed at SWIB on October 1 of a given year have the opportunity to earn long-term bonuses based on a three-year performance period beginning on January 1 of the following year. After a given three-year period ends, bonuses are awarded on June 30 of the following year. A new three-year period starts each January 1, beginning in 2023. Staff with more responsibilities and higher salaries than other staff can earn larger bonuses. Bonuses are calculated based on quantitative performance measures for the Core Fund, including 5- and 10-year investment returns as well as the 5-year return compared to the benchmark.

In October 2022, the Board of Trustees required staff to remain at SWIB until June 30 after a three-year performance period ends in order to be awarded a long-term bonus. However, the Board in March 2023 approved a proposal from the executive director/chief investment officer to award the bonuses for the performance period from January 2023 through December 2025 in one-third installments in June 2024, June 2025, and June 2026.

In June 2024, 65 staff were awarded a total of \$4.2 million in long-term bonuses. As shown in Figure 15, 65 staff were awarded a total of \$4.2 million in long-term bonuses in June 2024. The amounts for individual staff members averaged \$64,759 and ranged from \$10,729 to \$279,241.

Figure 15

Range of Long-Term Bonuses Awarded to Individual SWIB Staff Members in June 2024

Based on Performance in 2023



Other Bonuses

SWIB's policies allow the executive director/chief investment officer to:

- award signing and retention bonuses to staff; and
- make severance payments to staff.

Signing and Retention Bonuses

Board of Trustee approval is not required to award signing and retention bonuses, but the trustee who chairs the compensation committee must be notified before such bonuses are awarded. Policies include factors to consider before awarding such bonuses, including the amount of a bonus an individual will forego at a previous employer as a result of accepting employment at SWIB and the need to retain the specialized knowledge or skills of a current staff member. Policies limit signing bonuses to 300.0 percent of a staff member's first year salary and limit retention bonuses to 100.0 percent of a staff member's current salary.

Staff awarded signing bonuses are generally required to repay some or all of the bonuses if they leave SWIB within one year after having been awarded the bonuses. Staff who receive retention bonuses are generally required to repay some or all of the bonuses if they leave SWIB within one to three years after having been awarded the bonuses. However, the executive director/chief investment officer may waive repayment. The trustee who chairs the compensation committee must approve any waived repayments more than \$50,000.

In 2023, SWIB awarded nine staff a total of \$1.2 million in signing and retention bonuses. As shown in Table 11, SWIB awarded nine staff a total of \$1.2 million in signing and retention bonuses in 2023. We found that SWIB awarded all signing bonuses and retention bonuses in 2022 and 2023 according to its policies.

Table 11

Signing and Retention Bonuses Awarded to SWIB Staff

	2022		2023		
Type of Bonus	Total Awarded	Number of Staff	Total Awarded	Number of Staff	
Signing	\$ 387,500	8	\$ 900,500	6	
Retention	175,000	12	325,000	3	
Total	\$562,500	20	\$1,225,500	9	

Policies do not require SWIB to document the reasons why it awards each signing bonus and each retention bonus, or specify how each bonus amount is to be determined. In report 22-8, we recommended that SWIB modify its policies for awarding signing bonuses and retention bonuses by establishing more-precise criteria for determining the amounts to award. In our current audit, we found the Board of Trustees in September 2022 modified policies to specify additional factors—including seniority, job position, work performance, labor market conditions, and current staff vacancies—that should be considered before awarding signing bonuses and retention bonuses. However, the modified policies do not require SWIB to document the reasons why it awards each signing bonus and each retention bonus, or specify how each bonus amount is to be determined.

We found that SWIB documented the reasons why it awarded all 29 signing bonuses and retention bonuses in 2022 and 2023, how it determined the amounts of all 14 signing bonuses it awarded, and how it determined the amounts of 5 of the 15 retention bonuses it awarded. However, SWIB did not document how it determined the amounts of 10 retention bonuses it awarded.

SWIB should improve its policies for signing bonuses and retention bonuses. SWIB should improve its policies for signing bonuses and retention bonuses. SWIB should modify its policies to require it to document the reasons why it awards each signing bonus and each retention bonus. In addition, SWIB should modify its policies to require it to document how it determined the amount of each signing bonus and each retention bonus it awards. Taking these actions will help to ensure SWIB consistently and fairly awards and determines award amounts for these bonuses.

☑ Recommendation

We recommend the State of Wisconsin Investment Board:

- work with the Board of Trustees to modify its policies to require it to document the reasons why it awards each signing bonus and each retention bonus;
- work with the Board of Trustees to modify its policies to require it to document how it determined the amount of each signing bonus and each retention bonus it awards; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement these recommendations.

Severance Payments

Policies allow SWIB to make severance payments as part of a negotiated staff termination or resignation. Policies allow SWIB to make severance payments as part of a negotiated staff termination or resignation. Policies require the Board of Trustees to approve severance payments more than \$50,000, but only the trustee who chairs the compensation committee must approve payments less than that amount. SWIB indicated severance payments can mitigate risks associated with certain employee separations. In report 22-8, we noted that SWIB made one severance payment of \$180,000 in 2020 and no such payments in 2021. In our current audit, we found that SWIB made 10 severance payments totaling \$1.0 million in 2022 and 1 such payment of \$49,500 in 2023. SWIB documented how it determined the particular amounts of all 11 payments.

Total Cash Compensation

Based on performance in 2023, SWIB paid its staff a total of \$94.0 million. Based on performance in 2023, SWIB paid its staff a total of \$94.0 million, including:

- \$59.2 million for salaries and fringe benefits, signing bonuses, retention bonuses, and severance payments;
- \$30.6 million for annual bonuses; and
- \$4.2 million for long-term bonuses.

Certain SWIB staff have the potential to be paid considerable amounts beyond their salaries, including from annual bonuses, long-term bonuses, and signing bonuses and retention bonuses. These amounts reduce WRS assets and the amounts paid to annuitants.

Table 12 shows the salaries paid in 2023 to the six employees on SWIB's Management Council. In addition to the salaries, these six employees each received an average of \$903,500 in annual bonuses, long-term bonuses, and other types of bonuses.

Table 12

Salaries Paid in 2023 to the Staff on SWIB's Management Council

Position	Salary
Executive Director/Chief Investment Officer	\$475,010
Head Economist & Asset and Risk Allocation	
Chief Investment Officer	361,543
Chief Investment Officer, Private Markets and	
Funds Alpha	435,011
Deputy Executive Director/Chief Operating	
Officer	371,165
Head of Multi-Asset Strategies	297,003
Head of Fixed Income Strategies	302,515

Improving Strategic Planning

SWIB should improve its strategic planning.

SWIB should improve its strategic planning. As we noted in report 16-15, report 18-19, report 20-23, and report 22-8, SWIB had intended to increase the proportion of assets managed internally, which are less expensive to manage than assets managed externally. To help facilitate this increase, SWIB obtained approval from the Board of Trustees to create additional staff positions and undertake IT projects such as Project Centum. Since we released report 22-8 in June 2022, SWIB now expects the proportion of assets it manages internally will decrease, as a result of market conditions. In recent years, the Core Fund's investment returns decreased, and SWIB's staffing and other expenses increased considerably. Particularly in circumstances such as these, a multiyear strategic plan that includes the estimated costs and anticipated benefits of specific investment strategies it plans to manage internally and externally can help to ensure SWIB maximizes investment returns at a reasonable cost.

In report 22-8, we recommended that SWIB develop a multiyear strategic plan. We noted that such a plan should discuss the specific investment strategies that SWIB expects to manage internally, the parameters of the IT systems that SWIB will need to support these strategies, and the skills, expertise, and number of staff that SWIB will need to hire to successfully manage these investment strategies internally. We noted that such a plan can coordinate the development of the necessary IT systems, as well as efforts to recruit and compensate staff, in the most-efficient manner possible. We also noted that SWIB should have the flexibility to modify such a plan in order to respond to changing market conditions and other circumstances.

In our current audit, we found that SWIB developed a strategic implementation framework that it presented to the Board of Trustees

in December 2023. The framework includes factors SWIB plans to consider when determining whether particular investment strategies could be managed internally or externally, as well as whether particular investment strategies could be actively or passively managed. However, the framework does not discuss:

- the specific investment strategies SWIB expects to manage internally or externally in the future;
- particular components of IT systems that SWIB needs; or
- the skills, expertise, and number of staff SWIB needs to successfully support any changes to its management of investment strategies.

As we noted in report 22-8, SWIB had intended to increase the proportion of assets managed internally. As we noted in report 22-8, SWIB had intended to increase the proportion of assets managed internally because externally managed assets are more expensive. In September 2020, SWIB reported to the Board of Trustees that for every \$1.0 billion of assets transferred from external to internal management, SWIB could save approximately \$3.0 million in investment management costs annually. SWIB also provided the Board with information indicating its intent to increase the proportion of assets managed internally. For example:

- In September 2020, SWIB reported to the Board that Project Centum was the next step in delivering on its vision for managing more assets internally and reducing costs by shifting assets from external to internal management.
- In its annual budget for 2021, which the Board approved in December 2020, SWIB requested an additional 25.0 FTE positions to enhance its investment strategies and bring new investment strategies under internal management. SWIB indicated to the Board that adding staff to manage assets internally saves costs and provides value for the WRS.
- In its annual budget for 2022, which the Board approved in December 2021, SWIB requested an additional 29.0 FTE positions. SWIB reported to the Board that budgeted increases in staff compensation were driven by staffing to support internal management of assets.
- In June 2023, SWIB reported to the Board that Project Centum supported its strategic goal of increasing assets managed internally.

SWIB now expects that the proportion of assets it manages internally will decrease as a result of market conditions. SWIB now expects that the proportion of assets it manages internally will decrease as a result of market conditions. In June 2024, SWIB indicated to the Board it had increased its investment in private market assets, which are externally managed, and intends to continue doing so over the next decade because it expects higher long-term returns for private market assets, compared to other asset classes. As noted, the proportion of assets SWIB managed internally decreased from 53.5 percent in December 2019 to 45.4 percent in December 2023.

SWIB invests assets in the manner it considers will best allow it to meet the long-term expected rate-of-return assumption that the ETF Board establishes for the WRS. Doing so will at times require SWIB to modify the extent to which it manages assets internally versus externally, as well as actively versus passively. However, managing assets in a cost-effective manner requires SWIB to decide which staffing, IT, and other resources it requires not only at present but in the foreseeable future. A detailed strategic plan can help SWIB to plan appropriately for its staffing and IT needs.

The Core Fund's investment returns decreased in recent years. The Core Fund's investment returns decreased in recent years, and SWIB may face increased investment challenges in future years in order to achieve the long-term expected rate-of-return of the WRS, which was reduced from 7.2 percent in 2011 to 6.8 percent since 2022. As noted:

- the 20-year average annual investment return of the Core Fund declined from 8.4 percent as of December 2014 to 7.1 percent as of December 2023;
- the 30-year average annual investment return of the Core Fund declined from 9.6 percent as of December 2014 to 8.0 percent as of December 2023;
- the average annual investment return for the Core Fund for the five-year period ending in December 2023 was 9.3 percent, which was a decline from 12.5 percent for the five-year period ending in December 2021; and
- the five-year investment return of the Core Fund ranked fourth among a peer group of nine other large public pension plans as of December 2023, which was a decline from being ranked third as of December 2020.

In recent years, SWIB's staffing and other expenses increased considerably.

In recent years, SWIB's staffing and other expenses increased considerably. For example:

SWIB's expenses increased from \$480.3 million in 2019 to \$852.0 million in 2023 (77.4 percent), primarily because of increased management fees paid to external investment managers;

- SWIB's total investment expenses, including carried interest, increased from \$0.57 per \$100 of assets managed in 2019 to \$0.65 in 2023;
- the Core Fund's expenses were greater than the expenses of a peer group of 14 other large public pension plans by approximately \$0.05 per \$100 of assets managed in 2022, whereas such expenses in 2018 were lower than the expenses of this peer group by \$0.05 per \$100 of assets managed;
- the total amount of annual bonuses awarded to staff increased from \$13.9 million awarded to 172 staff for their performance in 2019 to \$30.6 million awarded to 262 staff for their performance in 2023;
- a new policy for awarding long-term bonuses to staff was established in October 2022, and 65 staff were awarded \$4.2 million in long-term bonuses in June 2024;
- expenses for Project Centum totaled \$19.2 million from 2019 through 2023; and
- the number of staff positions increased from 235.0 FTE positions in December 2019 to 298.0 FTE positions in December 2023, and salary, fringe benefits, and annual bonus expenses increased from \$44.1 million in 2019 to \$84.9 million in 2023.

SWIB should develop a multiyear strategic plan that includes the estimated costs and anticipated benefits of specific investment strategies it plans to manage internally and externally. SWIB should develop a multiyear strategic plan that includes the estimated costs and anticipated benefits of specific investment strategies it plans to manage internally and externally. The plan should assess the IT system functions and the numbers and types of staff needed to support current investment strategies and any changes to strategies, including the estimated costs and anticipated benefits of these functions and staff. In addition, SWIB should report to the Board of Trustees at least annually on its progress toward implementing the plan and any changes it proposes to make to its plan, such as to respond to changing market conditions and other relevant circumstances. Developing such a plan will allow the Board to thoroughly consider SWIB's proposed budgets, requests for additional staff positions and staff compensation, and requests for other significant expenses that SWIB believes are necessary within the context of a strategic plan.

☑ Recommendation

We recommend the State of Wisconsin Investment Board:

- work with the Board of Trustees to develop a multiyear strategic plan that includes the estimated costs and the anticipated benefits of specific investment strategies it plans to manage internally and externally;
- assess in the plan the information technology system functions and the numbers and types of staff needed to support current investment strategies and any changes to strategies, including the estimated costs and anticipated benefits of these functions and staff:
- report to the Board of Trustees at least annually on its progress toward implementing the plan and any changes it proposes to make to its plan; and
- report to the Joint Legislative Audit Committee by March 28, 2025, on the status of its efforts to implement these recommendations.



Appendix 1

Funds Managed by SWIB

As of December 31, 2023

Fund	State Agency	Investment Manager ¹	Market Value (in millions)	One-Year Benchmark	One-Year Investment Return ²
Wisconsin Retirement System Core Fund	Employee Trust Funds	SWIB and various external managers	\$122,578.0	11.0%	11.4%
Wisconsin Retirement System Variable Fund	Employee Trust Funds	SWIB and various external managers	9,831.0	23.1	22.2
State Investment Fund	Administration	SWIB	$19,853.0^3$	4.9	5.2
Injured Patients and Families Compensation Fund	Commissioner of Insurance	External managers: BlackRock, Inc., and Dodge & Cox	1,446.0	8.4	8.8
UW System Cash Management Fund	UW System	External manager: BlackRock, Inc.	681.0	9.4	9.4
UW System Long Term Fund	UW System	External manager: BlackRock, Inc., and StepStone Group LP	556.0	11.9	12.1
State Life Insurance Fund	Commissioner of Insurance	SWIB and external manager: BlackRock, Inc.	0.66	4-	6.7
Historical Society Trust Fund	Wisconsin Historical Society	External manager: BlackRock, Inc.	25.0	20.7	21.3

¹ SWIB hires external managers.

² For the WRS Core Fund and Variable Fund, returns include management fees and other costs, such as internal operating expenses. For all other funds, returns include management fees but exclude other costs.

³ Excludes \$2.7 billion in excess operating cash of the WRS that was invested in the State Investment Fund on December 31, 2023.

⁴ In September 2019, the Board of Trustees approved investment guidelines that removed the State Life Insurance Fund's benchmark. It did so after the Office of the Commissioner of Insurance asked SWIB to hold investments for as long as possible and avoid selling them in order to minimize taxes associated with those transactions.

Appendix 2

Participants in the State Investment Fund 1 As of December 31, 2023

Fund	State Agency	Pa	articipant Shares
STATE OF WISCONSIN AGENCIES			
General Fund	Administration	\$	7,804,442,000
Budget Stabilization Fund	Administration		1,840,512,000
Transportation Fund	Transportation		1,253,477,000
Capital Improvement Fund	Building Commission		537,112,000
Conservation Fund	Natural Resources		448,311,000
Medical Assistance Trust Fund	Health Services		353,120,000
State Building Trust Fund	Building Commission		332,690,000
Lottery Fund	Revenue		240,329,000
Hospital Assessment Fund	Health Services		122,212,000
Injured Patients & Family Comp	Commissioner of Insurance		115,433,000
Environmental Fund	Natural Resources		84,803,000
Utility Public Benefits Fund	Administration		62,118,000
Common School Fund	Board of Commissioners of Public Lands		52,174,000
Common School Fund Income	Board of Commissioners of Public Lands		50,703,000
Uninsured Employers Fund	Workforce Development		47,691,000
Universal Service Fund	Public Service Commission		46,144,000
Work Injury Supplemental Benefit Fund	Workforce Development		40,499,000
University Trust Fund-Income	UW System		37,689,000
Unemployment Program Integrity Fund	Workforce Development		34,518,000
Waste Management Fund	Natural Resources		25,244,000
Support Collections Trust Fund	Children and Families		23,688,000
College Savings Program Trust Fund	Financial Institutions		22,950,000
Public Employee Trust Fund	Employee Trust Funds		17,543,000
Petroleum Inspection Fund	Natural Resources		15,196,000
Agricultural Producer Security Fund	Agriculture, Trade and Consumer Protection		13,669,000
Agrichemical Management Fund	Agriculture, Trade and Consumer Protection		11,101,000
Economic Development Fund	Wisconsin Economic Development Corporation		10,138,000
Worker's Compensation Benefit Fund	Workforce Development		8,009,000
Environmental Improvement Fund	Administration		7,079,000
Election Administration Fund	Wisconsin Elections Commission		6,135,000

Fund	State Agency	Participant Shares
STATE OF WISCONSIN AGENCIES (continued)		
Normal School Fund	Board of Commissioners of Public Lands	\$ 5,061,000
Self-Insured Employers Liability Fund	Workforce Development	4,560,000
Land Information Fund	Administration	3,264,000
State Life Insurance	Commissioner of Insurance	2,743,000
Veterans Trust Fund	Veterans Affairs	2,567,000
Agricultural Chemical Cleanup Fund	Agriculture, Trade and Consumer Protection	2,199,000
Permanent Endowment Fund	Administration	1,761,000
Critical Access Hospital Assessment Fund	Health Services	1,641,000
History Preservation Partnership Trust Fund	Wisconsin Historical Society	1,414,000
Heritage State Parks and Forests Trust Fund	Natural Resources	1,309,000
Transportation Infrastructure Loan Fund	Transportation	1,145,000
Tuition Trust Fund	Financial Institutions	1,072,000
University Trust Fund-Principal	UW System	1,060,000
Bond Security and Redemption Fund	Building Commission	758,000
Military Family Relief Fund	Revenue	676,000
Dry Cleaner Environmental Response Fund	Revenue	392,000
State Capitol Restoration Fund	State Capitol and Executive Residence Board	207,000
Mediation Fund	Director of State Courts	198,000
Agricultural College Fund	Natural Resources	156,000
Working Lands Fund	Agriculture, Trade and Consumer Protection	151,000
Historical Society Trust Fund	Wisconsin Historical Society	129,000
University Fund	Board of Commissioners of Public Lands	116,000
Investment and Local Impact Fund	Investment and Local Impact Fund Board	87,000
Unemployment Interest Payment Fund	Workforce Development	87,000
Historical Legacy Trust Fund	Wisconsin Sesquicentennial Commission	82,000
Governor's Read to Lead Development Fund	Governor's Office	28,000
Benevolent Fund	Administration	15,000
Children's Trust Fund	Child Abuse and Neglect Prevention Board	10,000
Farms for the Future Fund	Agriculture, Trade and Consumer Protection	0
Vendornet Fund	Administration	0
Industrial Building Construction Loan Fund ²	Wisconsin Economic Development Corporation	(1,000)
Local Government Property Insurance Fund ²	Commissioner of Insurance	(1,000)
Police and Fire Protection Fund ² STATE OF WISCONSIN AGENCIES	Public Service Commission	(12,653,000)

STATE OF WISCONSIN AGENCIES SUBTOTAL

Fund	State Agency	Pa	articipant Shares
WISCONSIN RETIREMENT SYSTEM			
Core Retirement Investment Trust		\$	2,442,000,000
Variable Retirement Investment Trust			277,007,000
WISCONSIN RETIREMENT SYSTEM SUBTOTAL		\$	2,719,007,000
LOCAL GOVERNMENT INVESTMENT			
POOL		\$	6,168,257,000
TOTAL		\$2	22,572,226,000

¹ Includes fund names and participant shares, as reported by the Department of Administration in the December 2023 *Monthly Statement of Receipts and Disbursements by Fund* report.

 $^{^{2}}$ Negative values represent short-term inter-fund loans, as permitted by s. 20.002 (11), Wis. Stats.

Members of the Board of Trustees

September 2024

Department of Administration, Secretary

Kathy Blumenfeld

Public Members

Clyde Tinnen (Chair), term expires 2027 Foley & Lardner LLP, Corporate Partner

Tom Merfeld (Vice-Chair), term expires 2029 CUNA Mutual Group, Chief Risk Officer and Chief Financial Officer (Retired)

Esther Ancel, term expires 2027 University of Wisconsin-Milwaukee, Emeritus Professor of Finance

Barb Bolens, term expires 2027 University of Wisconsin-Madison, Director of the Nicholas Center for Corporate Finance and Investment Banking

Jeff DeAngelis, term expires 2029 Northwestern Mutual Wealth Management, Chief Investment Officer (Retired)

Local Government Representative

Robert Scott, term expires May 2029 City of Brookfield, Director of Finance and Administration

Wisconsin Retirement System Participants

John Voelker, term expires 2027 Department of Employee Trust Funds, Secretary

Dave Schalow, term expires 2025 University of Wisconsin-Stevens Point, Professor of Finance

Members of SWIB's Management Council

September 2024

Executive Director/Chief Investment Officer

Edwin Denson

SWIB Management Staff

Rochelle Klaskin Deputy Executive Director/Chief Operating Officer

Anne-Marie Fink
Private Markets and Funds Alpha Chief Investment Officer

Todd Mattina Head Economist, Asset and Risk Allocation Chief Investment Officer

Nick Stanton Head of Multi-Asset Strategies

Mike Shearer Head of Fixed Income Strategies

17 Statutory Provisions with Which SWIB Indicates It Is Not Required to Comply¹

Regarding SWIB's Management of WRS Assets

Statutory Provision	Summary of Provision
WRS-SPECIFIC ²	
25.17 (4)	No more than 2.0 percent of Core Fund assets may be invested in corporations or limited liability companies in the venture capital stage
25.17 (5)	No more than 2.0 percent of Variable Fund assets may be invested in securities of corporations in the venture capital stage
25.18 (2) (e)	No more than 20.0 percent of Core Fund assets and 20.0 percent of Variable Fund assets may be externally managed
OTHER ³	
25.17 (2) (a)	Pertaining to investing fund assets in loans to the Wisconsin University Building Corporation, the Wisconsin State Colleges Building Corporation, and the Wisconsin State Public Building Corporation
25.17 (3) (a) and (b)	Pertaining to investing fund assets in bonds
25.17 (3) (bh)	Pertaining to investing Core Fund and State Life Insurance Fund assets in loans secured by mortgages
25.17 (3) (dg)	Pertaining to investing fund assets in direct obligations, commercial paper, and certificates of deposits
25.17 (3) (dm)	Pertaining to loans secured by mortgages
25.17 (7)	Pertaining to restrictions on loans and investments from fund assets related to mortgages on real estate and certain loans, securities, and investments outside Wisconsin
25.17 (8)	Pertaining to quitclaim deeds or warranties on real property
25.17 (10)	Pertaining to the security of a loan for buildings
25.17 (11)	Pertaining to the authority to establish and maintain accounts in the Board's own name
25.17 (71) (a) and (b)	Pertaining to commitments to investments in venture capital investment firms before June 30, 2004
25.18 (1) (b) through (k), and (m) and (n)	Pertaining to additional powers of the Board for managing funds
25.18 (2) (a) through (d)	Pertaining to the authority of Board staff to serve in roles of other organizations related to investments
25.185 (1) through (3)	Pertaining to the proportion of funds required to be spent for the services of minority financial advisers and minority investment firms
25.186 (1) through (3)	Pertaining to the proportion of funds required to be spent on brokerage commissions to Wisconsin-based brokerage dealers

¹ SWIB indicates it is not required to follow these statutory provisions because of s. 25.182, Wis. Stats., and Attorney General Opinions 11-08 and 02-22.

 $^{^{\}rm 2}$ These statutory provisions are specific to the Core Fund or the Variable Fund.

 $^{^{\}rm 3}$ These statutory provisions are not specific to any particular fund that SWIB manages.

Wisconsin Retirement System Effective Rates and Annuity Adjustments¹

As of December 31

		Core Fund			Variable Fun	d
Year	Investment Returns	Effective Rate	Annuity Adjustment ²	Investment Returns	Effective Rate	Annuity Adjustment
2009	22.4%	4.2%	(1.3)%	33.7%	33.0%	22.0%
2010	12.3	4.8	(1.2)	15.6	16.0	11.0
2011	1.4	1.5	(7.0)	(3.0)	(3.0)	(7.0)
2012	13.7	2.2	(9.6)	16.9	17.0	9.0
2013	13.6	10.9	4.7	29.0	31.0	25.0
2014	5.7	8.7	2.9	7.3	7.0	2.0
2015	(0.4)	6.4	0.5	(1.2)	0.0	(5.0)
2016	8.6	7.9	2.0	10.6	10.0	4.0
2017	16.2	8.5	2.4	23.2	24.0	17.0
2018	(3.3)	5.0	0.0	(7.9)	(7.0)	(10.0)
2019	19.9	7.7	1.7	28.6	29.0	21.0
2020	15.2	10.9	5.1	17.5	18.0	13.0
2021	16.9	12.9	7.4	20.0	20.0	15.0
2022	(12.9)	6.5	1.6	(17.8)	(18.0)	(21.0)
2023	11.4	9.1	3.6	22.2	22.0	15.0

¹ The effective rate and annuity adjustments for the Core Fund are initially based on the actuarial assumed rate, although there is either an increase or decrease to this rate based on the actual investment returns earned during the prior five years. The increase or decrease smooths out large fluctuations in actual investments returns. Annuity adjustments take effect with the April annuities that are paid on May 1, based on the prior year's performance. Adjustments occur only if the amount changes the Core Fund annuity by at least 0.5 percent or the Variable Fund annuity by at least 2.0 percent. Annuity adjustments are generally 4.0 percent to 6.0 percent less than effective rate adjustments in order to account for the 5.0 percent investment return assumption factored into the annuities and other actuarial adjustments.

² The annuity adjustment is the maximum adjustment that may be applied to a retired participant's benefit payment. Adjustments that would reduce a benefit payment are limited to increases a retired participant received in prior years because post-retirement adjustments may not result in benefit payments that are lower than the base benefit payment at the time of retirement. Consequently, not all retired participants experience the full amount of reductions determined for years with negative adjustments.

Wisconsin Retirement System One-Year Investment Performance

As of December 31

	Cor	e Fund	Variab	le Fund
	Investment	Investment	Investment	Investment
Year	Benchmark	Return ¹	Benchmark	Return ¹
10002 3	07.70	07.00		00.00
1982 ^{2, 3}	27.7%	27.3%	_	22.2%
1983	13.3	12.5	23.1%	24.7
1984	12.3	12.8	6.3	5.8
1985	23.8	27.5	30.9	32.7
1986	14.0	14.5	17.1	11.5
1987	3.0	2.2	3.0	(1.1)
1988	13.6	14.4	18.4	21.7
1989	19.9	19.2	27.0	22.6
1990	(1.7)	(1.5)	(8.6)	(11.3)
1991	22.8	20.5	31.9	27.1
1992	5.9	9.7	7.1	10.7
1993	12.2	15.0	14.7	16.5
1994	(0.1)	(0.6)	1.7	0.8
1995	24.4	23.1	29.2	25.6
1996	12.7	14.4	18.6	19.8
1997	17.4	17.2	22.8	21.6
1998	15.5	14.6	17.4	17.5
1999	13.9	15.7	23.2	27.8
2000	(1.4)	(0.8)	(8.8)	(7.2)
2001	(4.5)	(2.3)	(12.9)	(8.3)
2002	(8.2)	(8.8)	(19.9)	(21.9)
2003	24.0	24.2	32.1	32.7
2004	12.1	12.8	13.4	12.7
2005	8.0	8.6	8.0	8.3
2006	14.6	15.8	17.6	17.6
2007	9.6	8.7	7.3	5.6
2008	(24.8)	(26.2)	(39.0)	(39.0)
2009	19.9	22.4	32.0	33.7

	Core Fund		Variab	le Fund
Year	Investment Benchmark	Investment Return ¹	Investment Benchmark	Investment Return ¹
2010	12.2%	12.4%	15.3%	15.6%
2011	0.9	1.4	(3.6)	(3.0)
2012	12.8	13.7	16.7	16.9
2013	12.9	13.6	28.0	29.0
2014	5.6	5.7	7.5	7.3
2015	(0.3)	(0.4)	(1.3)	(1.2)
2016	7.9	8.6	10.4	10.6
2017	15.7	16.2	23.1	23.2
2018	(3.5)	(3.3)	(7.8)	(7.9)
2019	19.2	19.9	28.3	28.6
2020	14.2	15.8	17.9	17.6
2021	16.3	17.1	20.2	20.1
2022	(13.3)	(12.9)	(18.1)	(17.8)
2023	11.0	11.4	23.1	22.2

¹ From 1982 through 2021, returns excluded management fees and other investment expenses. In 2022 and 2023, returns included management fees and other investment expenses. Returns that did not meet benchmarks are in shaded cells.

 $^{^{\}rm 2}$ The WRS was established in its current form on January 1, 1982.

 $^{^{3}}$ The investment benchmark for the Variable Fund is unavailable for 1982.

Wisconsin Retirement System Performance of Individual Asset Classes

Aso	f December	.31	2023
$\mathbf{A}\mathbf{S}\mathbf{U}$	i Decembei	JI	2020

22.6% 6.4 12.4 8.5	21.7% 6.0 12.1 8.2
6.4 12.4 8.5	6.0 12.1 8.2
6.4 12.4 8.5	6.0 12.1 8.2
12.4 8.5	12.1 8.2
8.5	8.2
8.5%	0.0%
8.5%	0.00/
	8.9%
(2.3)	(2.3)
2.2	2.3
2.3	2.4
3.9%	3.9%
(1.0)	(1.0)
3.2	3.2
1.9	2.0
(12.9)%	(7.1)%
6.2	8.0
4.7	6.2
7.1	8.5
6.4%	6.4%
14.9	16.1
13.0	15.4
11.8	14.3
	(2.3) 2.2 2.3 3.9% (1.0) 3.2 1.9 (12.9)% 6.2 4.7 7.1 6.4% 14.9 13.0

Asset Class	Investment Benchmark	Average Annual Investment Return ¹
Hadra Fried Christiani 2 3		

Hedge Fund Strategy^{2, 3}

1-Year	_	0.7%
3-Year	-	3.2
5-Year	-	4.0

¹ Returns that did not meet benchmarks are in shaded cells. Returns are net of management fees but exclude internal operating and other expenses.

 $^{^{2}}$ Performance of the hedge fund strategy was reported separately beginning in April 2015.

³ Based on the recommendation of its benchmark consultant, the Board of Trustees approved eliminating a benchmark for the hedge fund strategy, beginning in 2019.

As of December 31, 2022

Asset Class	Investment	Average Annual Investment Return ¹
ASSEL CIUSS	Benchmark	investment keturn
Public Equity Securities		
1-Year	(18.0)%	(17.8)%
3-Year	4.7	4.4
5-Year	6.0	5.7
10-Year	8.6	8.5
Fixed Income		
1-Year	(12.7)%	(13.9)%
3-Year	(2.2)	(2.3)
5-Year	0.4	0.4
10-Year	1.2	1.3
Inflation Protection		
1-Year	(11.9)%	(11.8)%
3-Year	1.2	1.4
5-Year	2.2	2.3
10-Year	0.6	0.7
Real Estate		
1-Year	21.0%	16.8%
3-Year	11.4	11.1
5-Year	9.3	9.4
10-Year	9.8	11.0
Private Equity and Debt		
1-Year	0.4%	3.9%
3-Year	16.7	20.5
5-Year	14.0	17.4
10-Year	12.5	15.1
Hedge Fund Strategy ^{2, 3}		
1-Year	_	3.1%
3-Year	_	6.0
5-Year	0.5%	3.8

¹ Returns that did not meet benchmarks are in shaded cells. Returns are net of management fees but exclude internal operating and other expenses.

² Performance of the hedge fund strategy was reported separately beginning April 2015.

³ Based on the recommendation of its benchmark consultant, the Board approved eliminating a benchmark for SWIB's hedge fund strategy beginning in 2019.

Comparison of Plan Structure for Selected Public Pension Plans¹

	Fiduciary Net Position		
	(in billions)	Return Assumption	Funded Rate ²
California Public Employees			
Retirement System	\$464.6	6.8%	72.0%
Florida State Board	187.4	6.7	82.4
Minnesota State Board	85.8	7.0	83.1
New Jersey Division of Investments	102.5	7.0	47.1
Ohio Public Employees Retirement System	114.8	6.9	83.8
Pennsylvania Public School Employees'			
Retirement System	72.8	7.0	61.9
Teachers Retirement System of Texas	187.2	7.0	77.5
Virginia Retirement System	98.1	6.75	84.8
Washington State Investment Board	125.0	7.0	95.7
Wisconsin Retirement System	127.7	6.8	98.9 ³

¹ As of June 30, 2023, for California, Florida, Minnesota, New Jersey, Pennsylvania, Virginia, and Washington. As of August 31, 2023, for Texas. As of December 31, 2023, for Ohio and Wisconsin.

² Funded ratios are calculated in accordance with Governmental Accounting Standards Board pension accounting standards.

³ Under GASB pension accounting standards, the WRS funded ratio was 98.9 percent as of December 31, 2023. The latest valuation performed by the actuarial consultant for the WRS, which is used to establish contribution rates, found that the WRS was 100.0 percent funded as of December 31, 2023.

External Investment Managers

2023

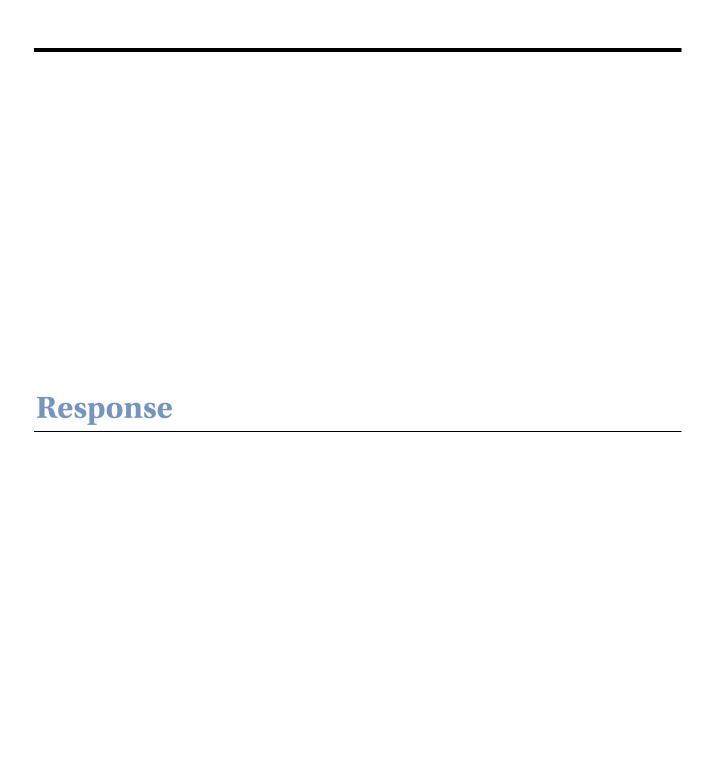
External Investment Manager	Investment Strategies Managed	Expenses ¹ (in millions)	WRS Assets Managed (in millions)
LATERIAL IIIVESTITIETT IVIAITAGE	ivialiayeu	(1111111110115)	(1111111110115)
Arrowstreet Capital	Public Markets	\$ 47.6	\$ 1,573.1
D.E. Shaw & Co., L.P.	Hedge Funds and Public Markets	38.1	2,840.6
Trident Capital	Private Equity	28.5	895.4
Symmetry Investments	Hedge Funds	28.0	353.6
Two Sigma Investments, L.P.	Hedge Funds	26.8	416.1
The Blackstone Group, L.P.	Hedge Funds, Private Equity and Real Estate	16.4	1,540.4
Holocene Advisors, L.P.	Hedge Funds	16.3	382.7
High Street Realty Company	Real Estate	16.1	145.6
Hellman & Friedman, LLC	Private Equity	16.1	230.1
Elliott Investment Management, L.P.	Hedge Funds	14.7	669.8
Dorsal Capital Partners, Ltd.	Hedge Funds	14.0	338.2
PIMCO	Hedge Funds	13.1	355.0
Vista Equity Partners, LLC	Private Equity	13.1	487.1
Brevan Howard	Hedge Funds	12.9	254.1
Leonard Green & Partners, L.P.	Private Equity	12.3	135.8
Rokos Capital Management	Hedge Funds	11.8	273.7
Inflexion Private Equity Partners, LLP	Private Equity	11.7	624.4
Arbor Investments Management, LLC	Private Equity	11.4	269.6
Voleon Capital Management	Hedge Funds	11.4	256.2
Kohlberg & Company, LLC	Private Equity	10.8	167.1
All Others	Various	457.5	69,811.6
Total		\$828.5	\$82,020.4

¹ Includes carried interest, which is a management fee related to private equity and real estate investments.

Top 10 External Support Services Vendors 1 2023

External Support Services Vendor	Services Provided	Expenses (in millions)
Bank of New York Mellon Corporation	Asset Custody and Investment Operations Services	\$12.3
Bloomberg Finance, L.P.	Benchmark, Company, and Market Information	4.8
FactSet Research Systems, Inc.	Financial and Economic Database	4.1
Markit North America, Inc.	Investment Data Management Software, Investment Consulting, and Risk Management Services	1.9
Charles River Systems, Inc.	Portfolio Management Trading Software	1.8
MSCI	Research and Data Services	1.7
SimCorp USA, Inc.	Investment Information Technology System	1.4
StepStone Group, LLC	Private Equity and Real Estate Consulting	1.1
Aksia, LLC	Hedge Fund Consulting	0.8
eFront Financial Solutions, Inc.	Portfolio Management Services	0.8

¹ Includes fees for services other than investment management, including asset custody, investment and operations consulting, and legal services.





November 8, 2024

Mr. Joe Chrisman State Auditor Legislative Audit Bureau 22 East Mifflin, Suite 500 Madison, WI 53703

Dear Mr. Chrisman,

Thank you for the opportunity to comment on the management audit of the State of Wisconsin Investment Board (SWIB). SWIB is pleased that no significant concerns were identified during the audit, and we would like to thank LAB staff for their hard work and partnership throughout the engagement. We are currently reviewing the recommendations from LAB, are working to address the recommendations, and look forward to providing the legislature an update on our progress in March 2025.

SWIB invests the assets of the Wisconsin Retirement System (WRS), one of the only fully funded public pension plans in the United States, as well as the State Investment Fund and other, smaller trust funds. Over the long term, SWIB has consistently exceeded the actuarial assumed rate for the WRS, beaten its benchmarks, and provided real value to the State. There are several ways to measure SWIB's success:

Exceeding the Target Rate of Return

The WRS's Core Fund has consistently exceeded the 6.8% actuarial assumed rate of return determined by the Department of Employee Trust Funds Board. As of December 31, 2023, the Core Fund had 5-, 10-, 20-, and 30-year net returns of 9.3%, 7.1%, 7.1%, and 8.0%, respectively. These consistently strong returns help drive the fully funded WRS, which has generated <u>five straight years of positive annuity adjustments</u>, including a 7.4% increase in 2021, the largest in over two decades. Further, the Core Fund's continued strong performance has translated to twelve consecutive years without a reduction to the annuity.

Returns Far Above Traditional "60/40" Passive Index Portfolio

When looking over the 20 years ended June 30, 2024, <u>SWIB's active management and diversified holdings generated \$18.3 billion for the Core Fund</u> above what SWIB would have earned by simply investing in a low-cost passive portfolio consisting of 60% global equities and 40% domestic bonds. That outperformance represents the benefit offered by employing a highly qualified staff.

Beating Benchmarks

SWIB evaluates its performance against industry benchmarks adopted by its Board of Trustees based on recommendations from an independent benchmark consultant. During the five years ended Dec. 31, 2023, after consideration of all expenses, costs, and fees, the WRS has outperformed its benchmark by an average of 57 basis points (0.57%) per year, resulting in more than \$3.1 billion in additional profits beyond what would have been generated by the benchmark portfolio. These profits directly benefit the participants in the WRS.

Strategic Use of Internal Management

Through its investments in technology and infrastructure, SWIB has the ability to internally manage several investment strategies. With these capabilities, SWIB can evaluate if a strategy would best be implemented internally or externally based upon a variety of factors. Currently, <u>SWIB manages approximately 45% of WRS and other trust fund assets internally</u>. Based upon data from CEM Benchmarking, an independent cost consultant, this compares favorably to the US public fund average of internal management of 16%, as well as the average among a select group of large, sophisticated public plans of 35%. As Callan Associates, Inc., states, "SWIB maintains a costeffective mix of internal and external investment management."

SWIB-Earned Returns Power the WRS

According to the National Association of State Retirement Administrators (NASRA), from 1993 through 2022, net investment income earned by SWIB represented 78% of the income needed to fund the WRS. The U.S. public pension average during that time was only 63%, meaning that taxpayers, public employers, and employees in Wisconsin bear less of the funding burden than those in most other states.

Public Spending on Pensions Is Much Less in Wisconsin Than Elsewhere

Another way to measure costs for taxpayers is to compare state and local spending on public pensions as a percentage of total government direct general spending. Per NASRA, average state and local government spending on pensions is 5.1% nationally. <u>In Wisconsin, that figure is less than half, at 2.1%</u>, and it has declined in the last decade.

Longstanding Strength and Stability

The WRS's consistent funding status and SWIB's prudent use of its balance sheet are well-recognized in both the pension and broader investment industries. One recent way in which this garnered acclaim was when the <u>WRS received a AAA credit rating</u>—the highest available—from S&P.

SWIB Benefits the State as a Whole, Not Just WRS Participants

One in five Wisconsin residents (or an immediate family member) is a member of the WRS. Approximately one third of the WRS's more than 691,000 participants are annuitants whose modest yet meaningful pension payments help support their retirement. The WRS paid over \$7 billion in retirement benefits in 2023. More than 85% of WRS pensions go to retirees living in Wisconsin, who purchase goods and services and pay taxes here. Also, SWIB has billions of dollars invested in companies based in Wisconsin or with some level of employment or operations in the State.

STATE OF WISCONSIN INVESTMENT BOARD Page 3

Thank you again for your time and consideration in completing this report. This audit and LAB's recommendations are valuable to our continued efforts to serve the WRS and its beneficiaries.

Sincerely,

Edwin Denson

Executive Director/Chief Investment Officer