

Washington State Investment Board: Performance, Preparation & Evolution



Theresa Whitmarsh, Executive Director
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Overview of Today's WSIB



Asset Management Profile

- ❑ \$141.8 billion assets under management as of September 30, 2019
- ❑ 17 pension funds
- ❑ 5 Labor and Industries insurance funds
- ❑ 12 Permanent and other trust funds

Strategies for Continued Success

- ❑ **Performance:** Maximize investment returns at a prudent level of risk in order to meet the financial objectives of those we serve
- ❑ **Preparation:** Meet uncertainty with discipline; rely on an consistent investment process
- ❑ **Evolution:** Respond to changes in both risk and opportunity

Global Focus

- ❑ Investing in 74 different countries, across 6 continents
- ❑ More than 14,000 investment holdings
- ❑ Large scale ensures both access and cost-efficiency



Market Value of Retirement Plans

September 30, 2019

- Multiple plan types with investments structured in a commingled trust fund
- LEOFF Plan 2 below includes LEOFF Benefit Improvement Fund = \$327.1 million

Defined Benefit and Hybrid Defined Benefit/Defined Contribution Plans	Market Value
Public Employees' Retirement System Plan 1 (PERS)	\$7,686,647,025
Public Employees' Retirement System Plan 2/3	\$44,452,879,657
Teachers' Retirement System Plan 1 (TRS)	\$5,745,739,022
Teachers' Retirement System Plan 2/3	\$21,718,512,439
Volunteer Fire Fighters' Relief & Pension Fund (VOLFF)	\$238,644,017
Washington State Patrol Retirement System Plan 1 (WSPRS)	\$1,255,993,920
Washington State Patrol Retirement System Plan 2	\$94,902,561
Law Enforcement Officers' & Fire Fighters' Plan 1 (LEOFF)	\$5,937,879,640
Law Enforcement Officers' & Fire Fighters' Plan 2	\$14,242,071,566
School Employees' Retirement System Plan 2/3 (SERS)	\$7,657,769,252
Public Safety Employees' Retirement System Plan 2 (PSERS)	\$728,815,505
Total	\$109,759,854,605

Defined Contribution Plans	Market Value
Plans 3 Outside of the CTF	\$5,473,281,721
Deferred Compensation Program (DCP)	\$4,749,110,844
Judicial Retirement Account (JRA)	\$9,278,375
Total	\$10,231,670,940



Investment Performance

September 30, 2019

Commingled Trust Fund (CTF) Market Values and Returns

	Market Value (000s)	1 Year	3 Year	5 Year	10 Year	20 Year	Since Inception
Total CTF	\$109,759,854,605	7.51%	10.01%	8.16%	9.46%	7.28%	8.75%
Fixed Income	\$22,770,682,217	10.97%	4.00%	3.77%	4.41%	5.78%	
Tangible Assets	\$5,718,030,409	4.18%	6.34%	4.24%	4.75%	N/A	
Real Estate	\$20,209,918,726	13.43%	11.44%	11.57%	11.00%	10.74%	
Public Equity	\$35,430,737,658	1.22%	10.15%	7.35%	9.17%	5.74%	
Private Equity	\$23,933,149,406	10.14%	15.14%	12.03%	14.17%	11.25%	
Innovation	\$164,864,574	19.22%	-15.28%	-12.96%	-0.12%	N/A	
Cash	\$1,532,471,615	2.47%	1.72%	1.14%	0.64%	1.61%	

Note: WSIB performance is for fiscal year versus CEM performance which is calendar year.

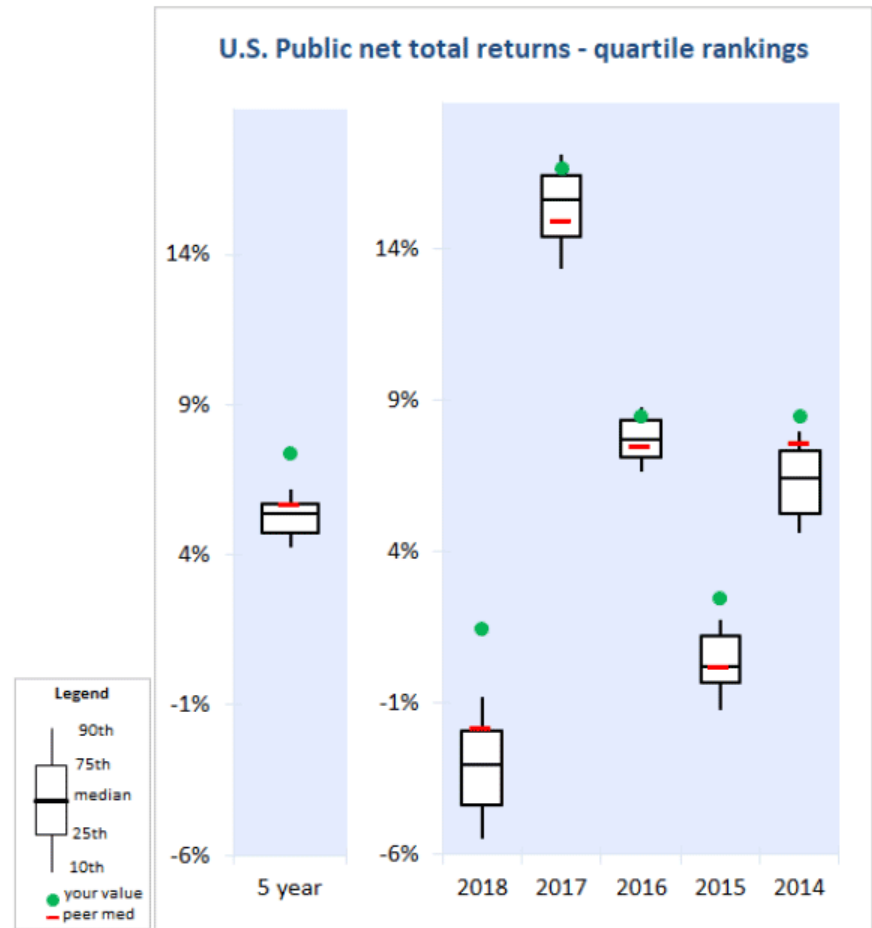
CEM Investment Benchmarking Analysis for WSIB

Your 5-year net total return of 7.5% was above both the U.S. Public median of 5.4% and the peer median of 5.8%.

Total returns, by themselves, provide little insight into the reasons behind relative performance. Therefore, we separate total return into its more meaningful components: policy return and value added.

	Your 5-year
Net total fund return	7.5%
- Policy return	7.9%
= Net value added	-0.5%

This approach enables you to understand the contribution from both policy mix decisions (which tend to be the board's responsibility) and implementation decisions (which tend to be management's responsibility).



CEM Investment Benchmarking Analysis for WSIB

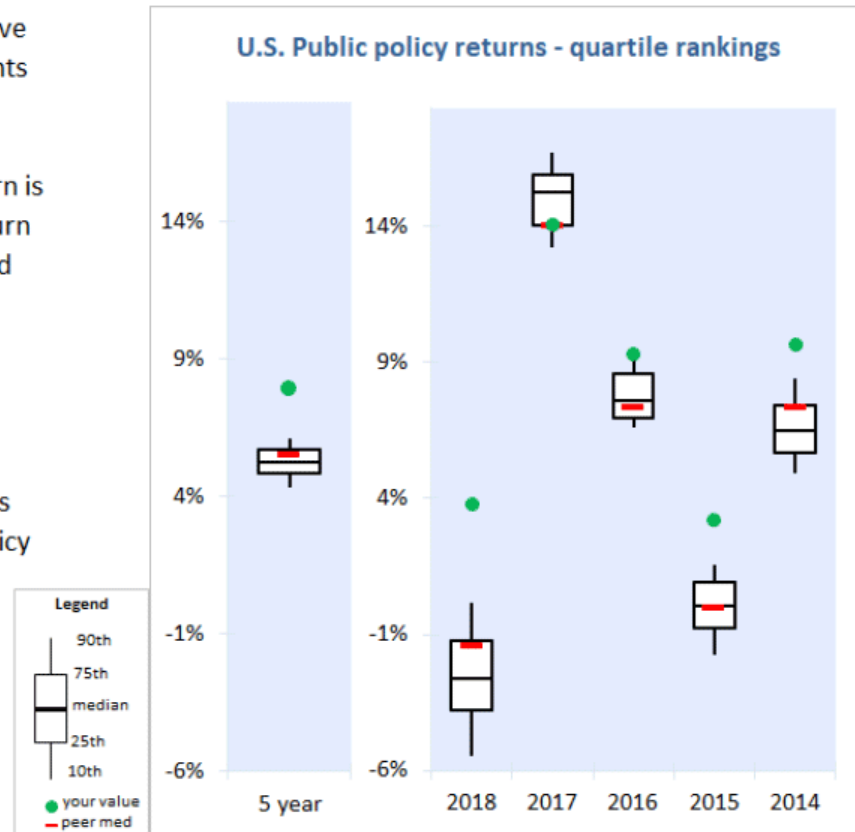
Your 5-year policy return of 7.9% was above both the U.S. Public median of 5.3% and the peer median of 5.6%.

Your policy return is the return you could have earned passively by indexing your investments according to your policy mix.

Having a higher or lower relative policy return is not necessarily good or bad. Your policy return reflects your investment policy, which should reflect your:

- Long term capital market expectations
- Liabilities
- Appetite for risk

Each of these three factors is different across funds. Therefore, it is not surprising that policy returns often vary widely between funds.



To enable fairer comparisons, the policy returns of all participants, including your fund, were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Prior to this adjustment, your 5-year policy return was 7.6%, 0.3% lower than your adjusted 5-year policy return of 7.9%. Mirroring this, your 5-year total fund net value added would be 0.3% higher.



CEM Investment Benchmarking Analysis for WSIB

Benchmark cost analysis suggests that your fund was low cost by 13.8 basis points in 2018.

Your benchmark cost is an estimate of what your cost would be given your actual asset mix and the median costs that your peers pay for similar services. It represents the cost your peers would incur if they had your actual asset mix.

Your total cost of 51.3 bp was below your benchmark cost of 65.1 bp. Thus, your cost savings were 13.8 bp.

Your cost versus benchmark

	\$000s	basis points
Your total investment cost	507,230	51.3 bp
Your benchmark cost	643,827	65.1 bp
Your excess cost	(136,597)	(13.8) bp

Cost analysis

- CTF's investment cost of 0.513% was lower than peer benchmark cost of 0.651%
- Differential of 13.8 basis points represents cost savings of \$137 million/year



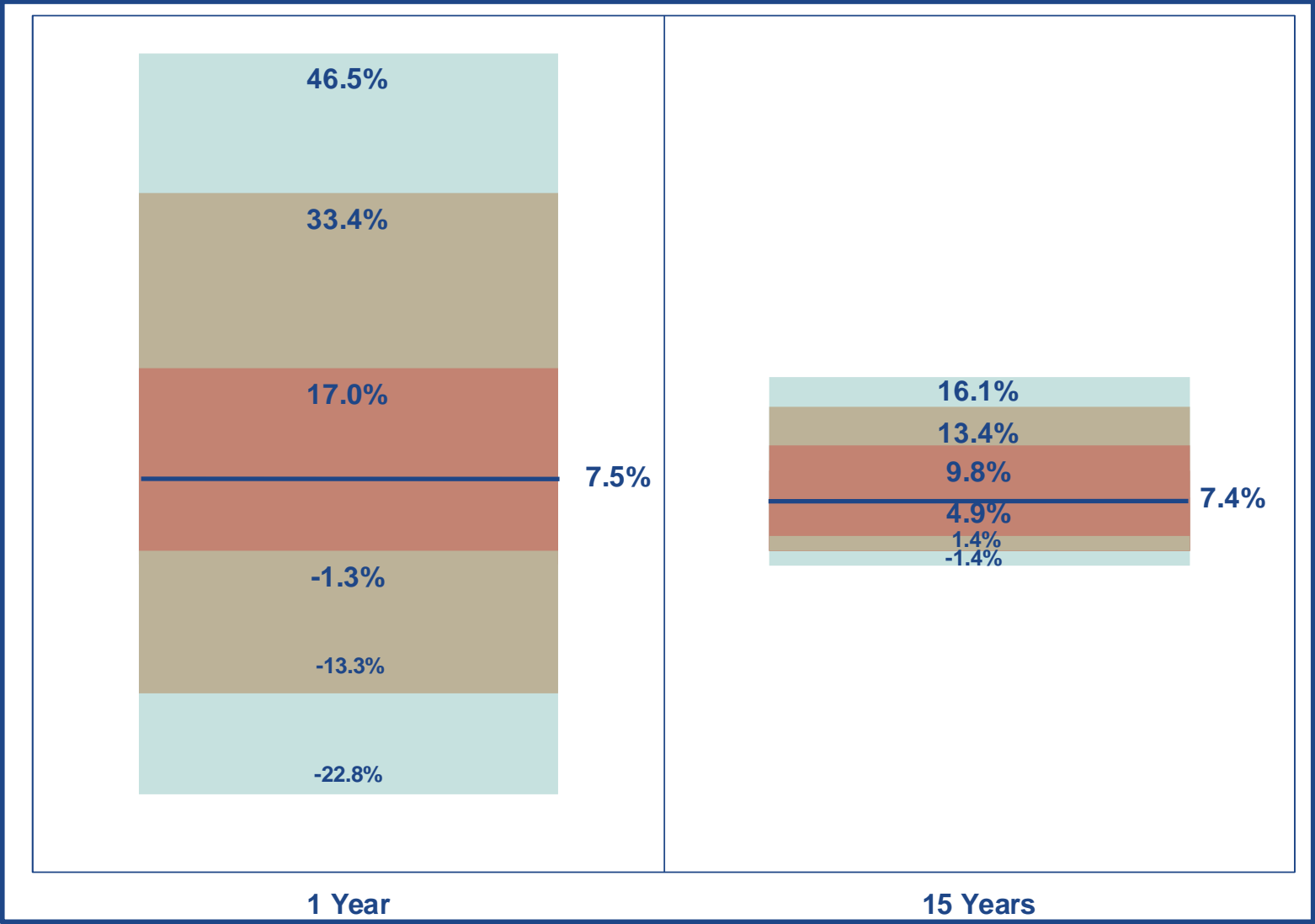
WSIB 2019 Capital Market Assumptions

	Arithmetic Return	Standard Deviation
Fixed Income	4.4	6
Tangible Assets	7.3	13
Real Estate	8	14
Global Equity	8.5	18.5
U.S. Equity	7.8	17.5
Non-U.S. Equity	9.4	20
Private Equity	11.5	25
Cash	2.6	1.5
Inflation	2.2	



CTF Return Expectations Using Latest Capital Market Assumptions

50.0% chance of making 7.5% in any 1 year
48.7% chance of earning 7.5% over 15 years





Market Conditions: Abundant “Wild Card” Factors Create Uncertainty



Geopolitical Tensions

- ❑ Political polarity is the norm
- ❑ U.S./China trade conflicts
- ❑ Populist sentiment emerging in many regions
- ❑ Globalization vs. isolation policies
- ❑ Brexit opens a Pandora’s box
- ❑ Foreign policy tensions encompass Syria, Turkey, Iraq, Iran, Ukraine, Russia and North Korea



Governance Tensions

- ❑ SEC revising rules for proxy voting advisory services
- ❑ Shareholder rights vs. corporate innovation and leadership
- ❑ Fiduciary duty vs. social/environmental agendas
- ❑ Take into account ESG risk and opportunity where material to investments



Market Conditions: Abundant “Wild Card” Factors Create Uncertainty



Mature Business Cycle

- ❑ Volatility is back
- ❑ Manufacturing surveys showed notable declines
- ❑ U.S. consumer confidence declined despite strength of equity markets
- ❑ The Fed lowered interest rates in July, September and October; target rate is now below 2%



Disruption and Transformation

- ❑ Social media has lost its innocence
- ❑ MeToo Movement
- ❑ Climate issues have potential to affect all sectors
- ❑ Energy industry faces fundamental transition
- ❑ Artificial intelligence will alter economic assumptions
- ❑ Technology faces regulatory/privacy issues
- ❑ Retail commerce is being revolutionized



Conclusion: Double Down on Investment Discipline Amid Uncertainty



- ❑ Retain focus on mission while managing evolving risks and opportunities
- ❑ Maintain strict investment discipline while advancing methodologies
- ❑ Withstand tests of market decline; avoid hubris during market surges
- ❑ Build high-integrity, longstanding relationships among stakeholders/partners
- ❑ Represent the best interest of all beneficiaries in every decision