Tuesday, July 15, 2025
Board Strategic Planning Meeting

July 15-17, 2025
Alderbrook Resort
10 E. Alderbrook Dr.
Union, WA 98592
Call to order: July 15 at 1:00 p.m.
Adjourn: July 17 at 11:30 a.m.

1. TUESDAY, JULY 15

2. Buffet Lunch (12:00p-1:00p)

3. Call to Order (1:00p)

4. Welcome and Announcements (1:00-1:15)

5. Strategic Plan Update (1:15-1:45)

A. 2025 Strategic Plan Update

6. Diversity, Equity, and Inclusion (DEI) Blueprint Update (1:45-2:05)

A. DEI Blueprint Update

7. Public Equity Annual Plan Update (2:05-2:30)

A. Public Equity Annual Plan Update

8. Education Session (2:30-3:15)

A. WSIB Audit Committee and Internal Audit Overview

9. Education Session (3:15-3:45)

A. Enterprise Risk Management

10. Break (3:45-4:15)

11. Executive Session (4:15-5:30)

A. Private Equity Annual Plan Update (4:15-4:40)

B. Tangible Assets Annual Plan Update (4:40-5:05)

C. Real Estate Annual Plan Update (5:05-5:30)

12. Reception (6:00-6:45)

13. Buffet Dinner (6:45-8:15)

14. WEDNESDAY, JULY 16

15. Buffet Breakfast (7:45-8:45)

16. Call to Order (9:00a)

17. Education Session (9:00-9:30)

A. Commingled Trust Fund Risk Management Approach

18. Education Session (9:30-10:45)

A. Climate Blueprint Update

19. Break (10:45-11:00)

20. Education Session (11:00-11:45)

A. Asset Class Roles in the Commingled Trust Fund

21. Education Session (11:45-12:15)

A. Perspectives on Illiquidity Part 1 - Commingled Trust Fund (CTF) Liquidity Profile

22. Education Session (12:15-12:45)

A. Perspectives on Illiquidity Part 2 - Commingled Trust Fund (CTF) and Peer Liquidity Experience

23. Buffet Lunch (12:45-1:30)

24. Education Session (1:30-2:15)

A. Perspectives on Illiquidity Part 3 - Commingled Trust Fund (CTF) Liquidity Modeling

25. Commingled Trust Fund (CTF) Strategic Asset Allocation Review, Modeling, and Discussion (2:15-5:30)

A. Part 1 - CTF Strategic Asset Allocation Review and Discussion (2:15-3:15)

B. Break (3:15-3:30)

C. Executive Session: Part 2 - Strategic Asset Allocation Modeling and Discussion (3:30-5:30)

26. Reception (6:00-6:45)

27. Buffet Dinner (6:45-8:15)

28. THURSDAY, JULY 17

29. Buffet Breakfast (7:45-8:45)

30. Call to Order (9:00a)

31. Governance (9:00-11:00)

A. Ad Hoc Governance Committee: WSIB Charter Review

32. Closing Remarks/Other Items (11:00-11:30)

33. Adjourn (11:30a)

WRITTEN PUBLIC COMMENT

Written Public Comment has been received from the following individuals:

- Chris Goelz
- Ken Yates
- Adam Lough, Washington Physicians for Social Responsibility
- Laila Saliba, Washington for Peace and Justice
- Kristin Edmark
- Bill Dole, Rachel Corrie Foundation for Peace and Justice
- Pam Haight, Palestine Action of South Sound
- Sallie Shawl, Jewish Voice for Peace Tacoma
- Rae Levine, Jewish Voice for Peace Seattle

Washington State Investment Board

2025 STRATEGIC PLAN UPDATE

JULY 15, 2025

Allyson Tucker, CFA, CAIA
Chief Executive Officer

VISION

As a leading institutional investor, we utilize diverse skillsets and perspectives to achieve investment and operational excellence with global and innovative approaches in service to our beneficiaries, state, communities, and one another.

We invest the funds entrusted to us with integrity, care, and skill to maximize return over the long term at a prudent level of risk for the exclusive benefit of beneficiaries.

MISSION

VALUES

- Integrity
- Patience
- Openness
- Belonging
- Excellence
- Service
- Innovation

WSIB GOVERNING BODY

- Independent Board comprised of 15 members
- 10 voting members
- 5 investment professionals
- Multiple appointment authorities

3 EX-OFFICIO MEMBERS

Kathryn Leathers DRS Director	**Joel Sacks** L&I Director	**Mike Pellicciotti** State Treasurer

2 LEGISLATORS

June Robinson Member of the Senate	**Mia Gregerson** Member of the House of Representatives

5 REPRESENTATIVES OF PUBLIC EMPLOYEE PENSION SYSTEMS

Greg Markley Chair Member of LEOFF	**Yona Makowski** Vice Chair State Pension System Retiree	**Tracy Stanley** Active Member of PERS	**Sara Ketelsen** Member of TRS	**Liz Lewis** Member of SERS

5 INVESTMENT PROFESSIONALS (NON-VOTING MEMBERS)

David Nierenberg	**Mary Pugh**	**Heather Redman**	**Ada Healey**	**George Zinn**

Historical Performance is…Historical
These key risks shaped our 2025 Strategic Plan, and they remain today

Sea Change in Investment Landscape

Geopolitical confrontation, escalating climate change, and inequality giving rise to social challenges. Potential recessions loom on the horizon, and global growth and interest rates are uncertain.

External Interest

Pressures across the pension industry bring heightened risks, especially with regard to environmental, social, and governance (ESG) factors.

Hybrid Workplace

Hybrid workplace creates challenges, particularly in developing new ideas and strategies.

Board Turnover

Higher Board turnover tends to accompany changes in state administration. Strong governance and processes in place, but additional support and other adjustments may be required.

Workload Growth and Retention

Mental health is a greater concern for all employees, and burnout continues to surface as a significant issue. Cost data shows WSIB is lean.

Value Will be Tougher to Deliver

Forward expectations for returns are lower than historical returns experienced.

STRATEGIC THEME

SUSTAINING EXCELLENCE

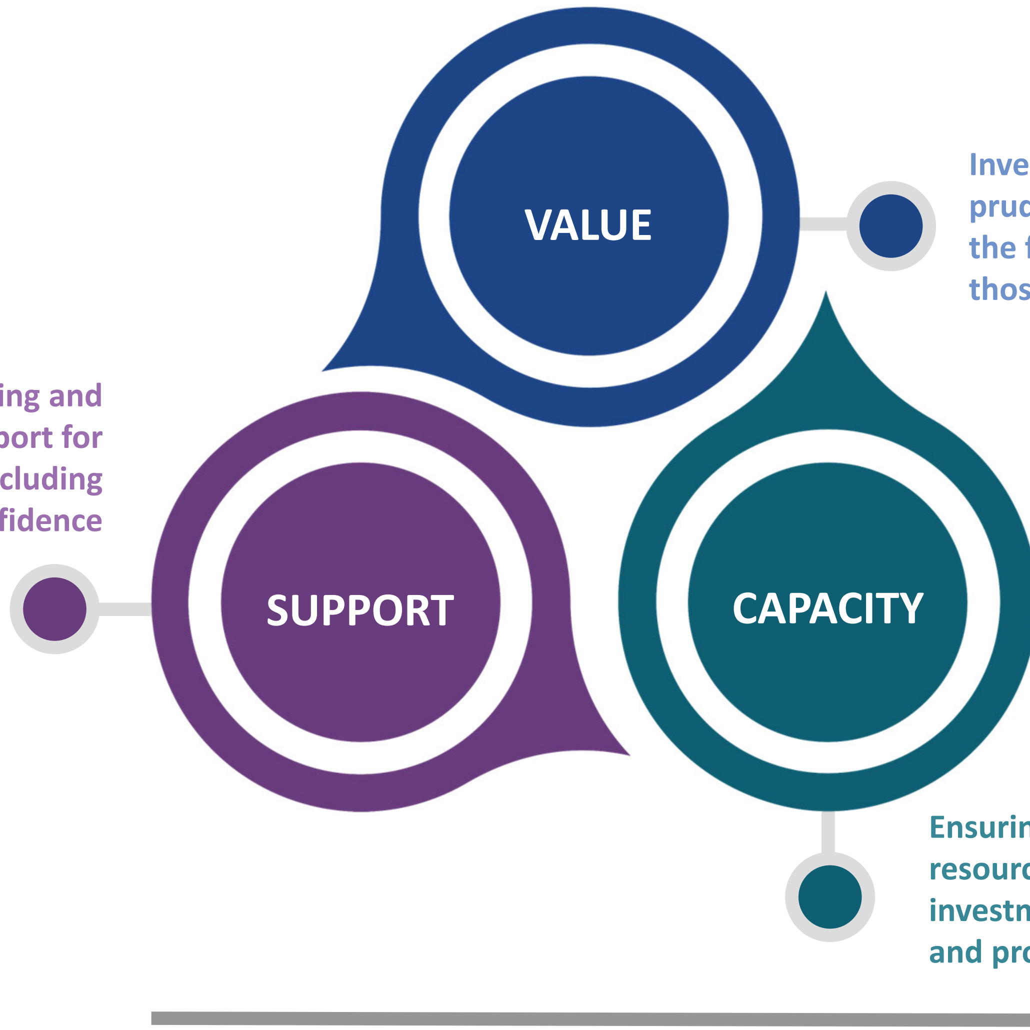
SUSTAINING EXCELLENCE

- We continue in a time of many transitions, challenges, and increasing complexity
  - Aspects of the challenges we have been referring to as “transition risk” are likely to be with us for some time
  - External factors beyond the WSIB’s control are creating stressors to which we need to respond in support of maintaining our culture and mission-focused work
  - Like other state agencies, WSIB is a lean organization that is experiencing workload growth amid an uncertain external environment
- We continue to be focused on a variety of ways to support our employees in the post-pandemic world
  - There are no simple, short-term answers for building resiliency
- The 2025 strategic plan, as updated, remains multi-pronged with targeted actions across the organization designed to meet the moment by:
  - Leaning into the WSIB’s mission, governance, and values that have been our platform for historical performance
  - Enhancing operational sustainability and external strategies to facilitate long-term success from today forward
- The WSIB’s hallmarks of prioritization, planning, and preparation are as important as ever
  - Process is prudence
  - Long-term thinking is essential

STRATEGIC ANALYSIS FRAMEWORK

Investing with integrity, prudence, and skill to meet the financial objectives of those we serve

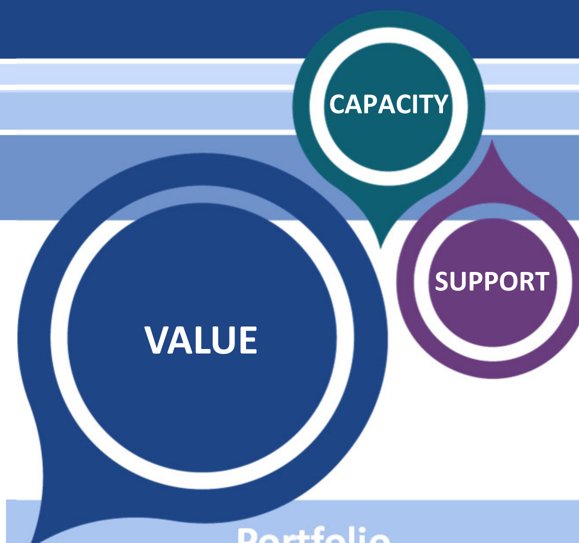
Building and maintaining support for our mission, including public confidence



Ensuring that we are adequately resourced to support a complex investment program, asset growth, and productivity improvements

SKILLFUL BOARD

VALUE



HOW THE WSIB WILL DELIVER AND SUSTAIN VALUE BY GENERATING EXCEPTIONAL LONG-TERM RESULTS

People	Process	Portfolio
Attract and retain the skilled talent necessary to develop and implement goal-driven, diversified, long-term investment strategies.	Design and implement a strategic investment process to meet or exceed long-term investment objectives at appropriate levels of risk.	Identify investment strategies and managers that enable an investment portfolio to meet or exceed investment objectives at appropriate levels of risk.

Asset Class Annual Plans

- Implement Board-approved annual plans
- In partnership with Department of Retirement Systems
  - Launch Defined Contribution/Deferred Compensation Program menu review
  - Review Target Date Fund glide path
    - Both projects will be launched by year end
- Rebid passive equity contracts
- Continue building private equity co-investment program
- Assess performance drivers of tangible assets program
- Standardize performance in certain private markets segments
- Launch Labor and Industries’ Self-Insurance Reserve Fund
  - On track for completion in July
- Monitor executive management turnover in general partnerships

On Track Underway/Ongoing On hold New initiative

Total Portfolio

- Guide Board through CTF Strategic Asset Allocation study (SAA)
  - Capital Market Assumptions
    - Adopted by Board in April 2025
  - Private Credit
- Complete Permanent Funds SAA
  - Approved by Board in February 2025
- Enhance reporting frameworks to address the increased complexity and nuance of proxy voting matters
  - Work on vote reporting framework is underway; engagement framework on track for completion by year end
- Transfer investment performance reporting to Risk Management and Asset Allocation data management and analysis team
  - Transfer completed in the first quarter of 2025
- Explore artificial intelligence use cases
- Enhance internal liquidity management tools

VALUE

2025 INITIATIVES

Investment and Financial Services

- Support One Washington (OneWA) financial system modernization overhaul
  - Delayed by Office of Financial Management
- Launch multi-year procurement for a portfolio verification system vendor to provide independent calculations of WSIB's book of record
  - On track for completion by year end
- Provide operational support to Labor and Industries' Self-Insurance Reserve Fund
  - Completion expected July 2025
- Procure tax consultant services for foreign market(s)
  - India tax consultant to be selected by year end

Investment Operations

- Implement the annual Internal Audit plan ✓
  - Provided assurances designed to add value and improve operations and support WSIB governance
- Provide high-quality legal, risk, and compliance services ✓
  - Partnering with Attorney General's Office to maintain strong relationship and delivery of service
- Respond to increasing public records requests, ensuring compliance in a rapidly changing environment ✓
- Support change management across the agency ✓
  - Third quarter Learning Lab to focus on project management/change management
- Evaluate travel support service provider options to better serve the agency ✓
  - Piloted an alternative travel system in first half of year

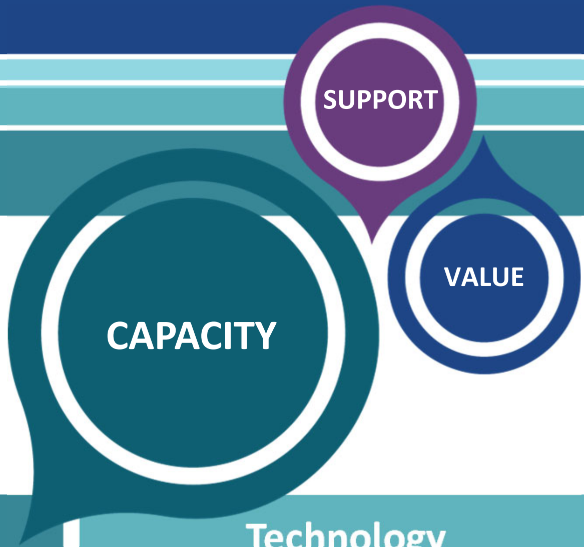
Climate Blueprint

- Evaluate explicit inclusion of climate scenarios into Capital Market Assumptions (CMAs) recommendation
  - CMAs adopted by the Board in April 2025
- Continue building ESG curriculum and Learning Library
  - The first phase of ESG curriculum is complete, and comprehensive Learning Library is available to staff
- Develop an onboarding process to train new investment staff on the WSIB's approach to ESG integration
  - On target for completion by year end
- Enhance total portfolio risk management
  - Calculate fixed income carbon footprint
    - On target for completion by year end
  - Gather private markets emissions data
    - Initial implementation phase to begin before year end
- Update WSIB's *Changing Energy Complex* paper, published in 2018
  - Scope of work outlined and update underway
- Refine proxy voting policies, as needed
  - Proxy voting guideline revisions approved by the Board in April 2025

Diversity, Equity, and Inclusion Blueprint

- Onboard new co-lead for DEI Committee
- Conduct Workforce Equity Assessment
  - On hold due to competing projects
- Initiate pulse surveys on inclusion and belonging
  - Staff survey to be conducted by year end
- Lead collaborative DEI early (journey) learning sessions
  - Sessions held in in first half of year
- Advise ILPA diversity in action initiatives
- Refine proxy voting policies, as needed
  - In consultation with the Board at its February 2025 meeting, direction was given to staff that no DEI-related proxy voting policy updates were necessary
- Deepen DEI engagement with investment partners
- Research to develop comprehensive insights into the legal, operational, and strategic implications

CAPACITY



ENSURING THAT WE ARE ADEQUATELY RESOURCED TO SUPPORT A COMPLEX INVESTMENT PROGRAM, ASSET GROWTH, AND PRODUCTIVITY IMPROVEMENTS

People	Process	Technology
Foster an open and inclusive environment with a firm commitment to professionalism and excellence. Celebrate curiosity and diligence, while providing opportunities for staff to leverage their skills to support the WSIB's mission.	Develop business operations that are scalable, adaptable, and cost-effective. Utilize best practices to minimize operational risk.	Embrace innovative technologies that enhance investment monitoring, portfolio risk analysis, and operations of the agency.

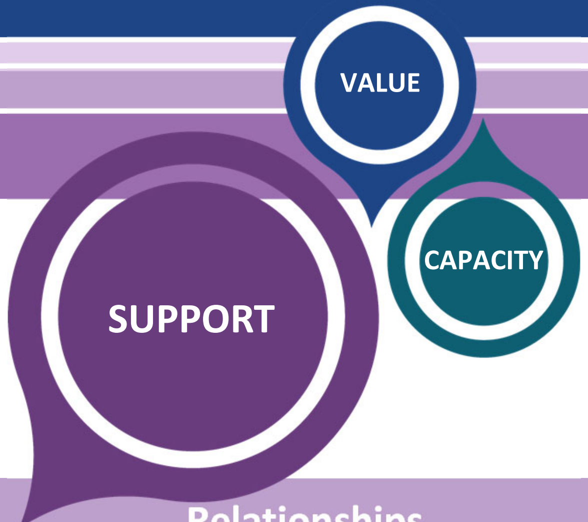
Investing in our Workplace

- Refresh Olympia office
  - Reconfigure select workstations
  - Add single-use restroom
  - Upgrade backup power source
  - Improve physical learning library
- Consider space planning options for Olympia location
- Implement service level agreements across multiple divisions to gather feedback and respond to ideas for improvement in a timely manner
- Refresh intranet and other internal workspaces to further adapt to hybrid working environment
- Develop new design concepts for external website and scope future enhancements

Investing in our People

- New people and new positions creating sustained transition risk
  - Refine new employee orientation
  - Integrate Vision, Mission, Values
  - Provide additional educational resources
  - Update and supplement desk manuals
- Post-pandemic national data suggests low employee job satisfaction
  - Support the Engagement Committee and activities
    - Adopted Engagement Committee Charter; enhanced activities
  - Create strategies to respond to gaps discovered in forthcoming engagement survey responses
- Succession planning and career development
  - Expand Career Pathways program to the entire organization
    - Consultant engaged for position competency review, beginning with key positions

SUPPORT



BUILDING AND MAINTAINING SUPPORT FOR OUR MISSION, INCLUDING PUBLIC CONFIDENCE

Reputation	Information	Relationships
Preserve, enhance, and shape the perception of WSIB as a successful steward of investment assets.	Provide an accessible and efficient flow of public information to keep stakeholders informed and connected to the WSIB.	Build and manage key relationships to offer a clear understanding of the WSIB's priorities and capabilities.

Governmental and Legislative Initiatives

- Provide Board member support for navigating inquiries on WSIB matters
  - Provided materials for Board member presentation to Retired Public Employees Council
  - Provided materials to support Board member interaction with activist and labor groups
- Enhance and strengthen processes and practices for responding to increasing levels of interest from external stakeholders and other groups
- Develop a comprehensive engagement framework for legislators and regulators
- Assess policy options to develop stakeholder engagement priorities and protocols
- Refine existing protocols and develop new guidelines to shape a consistent agency approach with external parties
  - An External Stakeholder Strategy to address these five areas of focus has been completed
- Transition the client stakeholder service function from Institutional Relations to Government and Public Affairs

Institutional Relations Initiatives

- Develop concise position statements for Board members that summarize key Board decisions related to items of high interest to beneficiaries, stakeholders, and others
  - Position papers on key issues now available
- Create straightforward public-facing content, articulating the agency's approach to issues that elicit significant stakeholder interest
  - Website updates highlighting key Sustainability Report information to be completed by year end
- Implement a more efficient management tool for public comment submissions to keep pace with increased volumes
  - Implementation of automated submission system scheduled for September 2025
- Drive greater transparency by making more agency materials available on the WSIB website
  - Now posting presented meeting materials to website
- Develop and implement an effective presentations process to ensure the information delivered to the Board promotes enhanced knowledge and understanding making best use of time

SKILLFUL BOARD

Suggested Board Education

- Alternative indexing
- Artificial intelligence
  - Moved to 2026
- Capital Market Assumptions
- Climate risks and opportunities
- Deficit spending and financing
- Digital currency
- Diversity, equity, and inclusion
- Fiduciary responsibilities
- Geopolitical risk and behavior of nations
- Interest rate and inflation scenario analysis
- Liquidity considerations
- National security policies
- Peer plan perspectives
- Roles of asset classes
- Venture capital

Board Investment

- Overhaul Board materials repository
  - Complete evaluation of secure repository options
  - Implement new Board repository workflow and interface application
    - Migration to Diligent Community scheduled for October 2025
- Continue to draw on non-voting Board member expertise in educational capacity
- Implement a comprehensive onboarding strategy for new Board members
  - Leverage institutional knowledge of longer-tenured members
  - Support onboarding partnership
    - Four most recently appointed Board members paired with established members
  - Recommend multiple education resources and formats
    - Institutional Limited Partners Association (ILPA) Private Equity for the Trustee session
    - Committee time utilized for education (June Public and Private Markets Committees)
  - Complete "advice for future Board members" series
  - Maximize utilization of non-voting Board member knowledge, experience, and skillsets
- Develop a China engagement framework

SUMMARY AND KEY TAKEAWAYS

Utilizing a consistent strategic planning framework over the last 20+ years has been an effective process for the WSIB

The WSIB has many strengths, yet cannot afford to be complacent in a complex world; the Board has a proven ability to adapt to meet future challenges that may arise

The 2025 Strategic Plan was thoughtfully developed with broad input, designed to reflect the strategic priorities of the Board and to position the organization for long-term success

This update reflects changes in strategic priorities and acknowledges the longer-term nature of the WSIB's initiatives

Washington State Investment Board

DIVERSITY, EQUITY, AND INCLUSION (DEI) BLUEPRINT UPDATE

JULY 15, 2025

Bobby Humes

Director of Human Resources

OVERVIEW

- Purpose and Approach
- DEI Framework
- DEI Journey
    - Past, Present, Next Steps
- Wrap Up

PURPOSE AND APPROACH OF DEI BLUEPRINT

The DEI Blueprint is a strategic tool to help define and advance our ability to address a systemic issue as an integral factor within our investment discipline and organizational mission

It will prioritize progress and consistency across agency DEI goals, investment portfolio activities, and industry participation

The Blueprint is not a published report with a definitive end product; it is a dynamic project plan that will evolve based on Washington State Investment Board (WSIB) priorities

PURPOSE AND APPROACH OF DEI BLUEPRINT

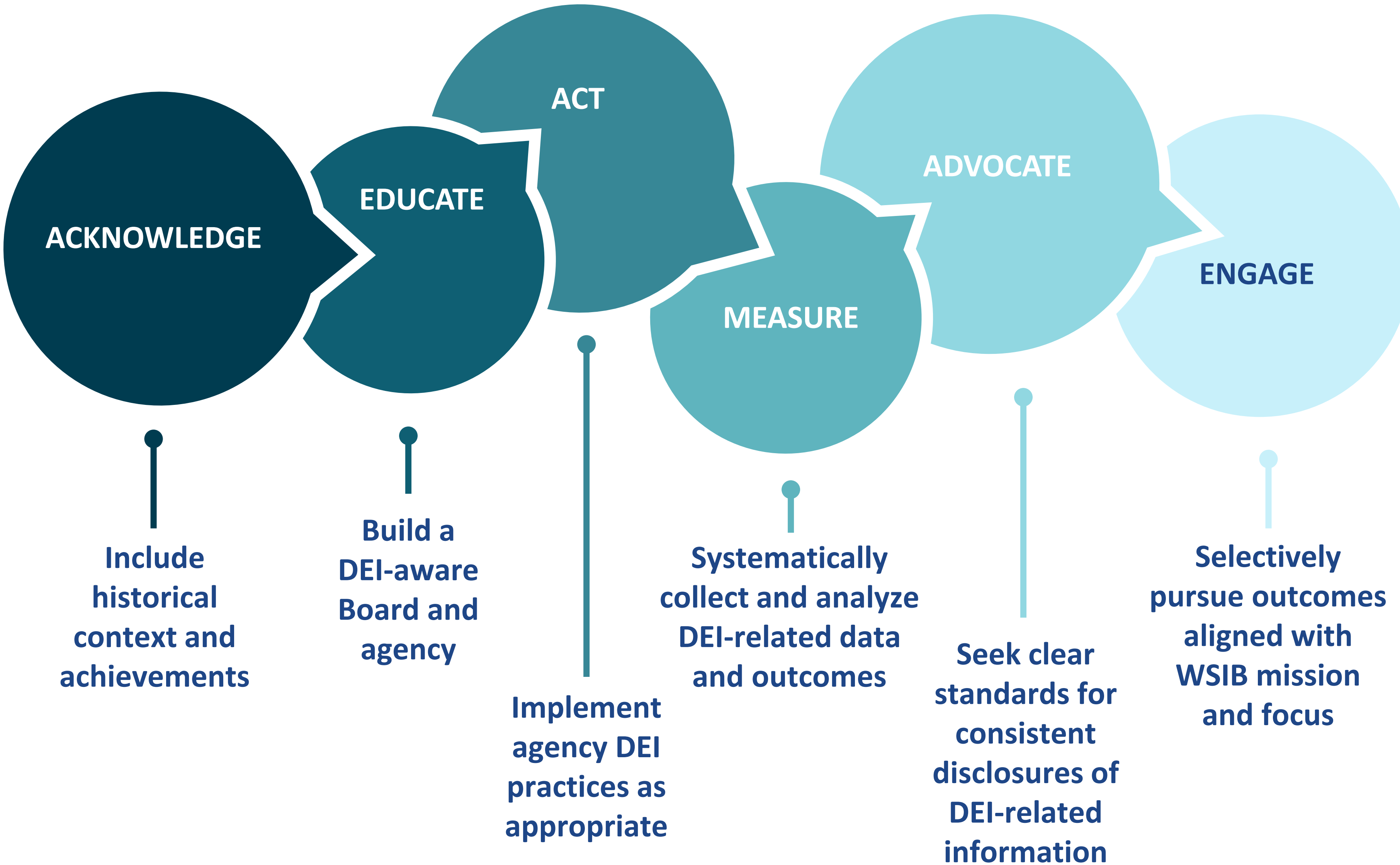
Benefits

- Begins with the end in mind and supports strategic awareness and outcomes
- Frames a path which allows the WSIB to navigate complex issues deliberately, responsibly, and thoughtfully
- Ensures consistency with fiduciary duty
- Aligns the Board's strategic direction and staff priorities
- Encourages contributions from across the organization

Ownership and Execution

- Chief Executive Officer (CEO) is the champion and owner of the blueprint and will provide updates as part of the annual Strategic Plan
- The Board is responsible for annual review and within approval of the strategic priorities as identified in the strategic plan
- The Human Resources Director is responsible for development and implementation
- A cross-functional team of staff members and a project manager has been identified for implementation of any Blueprint

DEI BLUEPRINT FRAMEWORK



DEI JOURNEY | PAST AND PRESENT

PAST ACCOMPLISHMENTS

- Developed a Partner ESG Assessment Process
- Joined and participated in ESG Data Convergence Initiative
- Joined the ILPA Diversity in Action Steering Committee
- Incorporate learnings from the Partner ESG Assessment framework into portfolio monitoring and due diligence efforts
- Established the DEI governance framework
- Identified DEI values through workforce Vision, Mission, Values
- Expanded the media library and provided education for staff

PRESENT

- Incorporate DEI goals in performance expectations and staff Individual Development Plans (IDPs)
- Understand and articulate what peers, companies, and other stakeholders are doing to ensure that DEI is a core part of organizational culture
  - This will include developing comprehensive insights into the legal, operational, and strategic implications
- Review recommendations from the DEI Committee taskforce on pulse surveys to measure inclusion and belonging

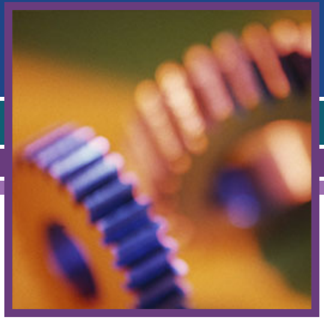
WRAP UP

This DEI Blueprint is a strategic project and a roadmap. It is not a definitive end product

- The DEI Blueprint creates a governance structure and sets staff direction and prioritization
  - DEI work is inherently deeply personal and takes patience and understanding to navigate effectively
  - Ongoing tension between differing perspectives should be anticipated and understood
    - This project is aimed at being responsive, but not necessarily reactive, to such influences
- The DEI Blueprint seeks progress and consistency across agency, portfolio, and industry activities related to DEI
- Everyone has a role to play – engagement is the key to success

Washington State Investment Board

PUBLIC EQUITY
2025 ANNUAL PLAN UPDATE



JULY 15, 2025

Phil Paroian, CFA, ASA
Senior Investment Officer – Public Equity

KEY INVESTMENT BELIEFS FOR 2025 ANNUAL PLAN

Select Investment Beliefs include:

- The mission of the Fund is to maximize returns at a prudent level of risk
- The time horizon for this mission is long term (i.e., 15+ years)
- Risk must be considered at the investment, asset class, and portfolio level
- Investment or asset class constraints and/or mandates will likely reduce investment returns
- The relative performance of asset classes and investment styles is generally subject to reversion to the mean, although timing such moves is challenging

Active management in an asset class is warranted if:

- The asset class, segment(s) of the asset class, or investment strategy is reasonably inefficient
- There exist managers or partners with skill, demonstrated performance, and sufficient capacity to meet the Washington State Investment Board's (WSIB's) needs
- The WSIB cost-effectively identifies and retains those skilled managers or partners

2025 PUBLIC EQUITY INITIATIVES
STATUS REPORT

Commingled Trust Fund (CTF) risk/return profile and downside protection

- Open rolling procurements for CTF active global and active emerging markets (EM) strategies

Passive equity management for most programs

- Rebid of passive equity contracts

Public equity strategies

- Further research on one or two topics drawn from the 2024 peer review study (presented at the December 2024 Public Markets Committee meeting)

Risk metrics and risk management

- Continued development of risk reports that increase actionable insights

2025 PUBLIC EQUITY INITIATIVES

Defined Contributions (DC) programs

- Recommendation of DC Investment Beliefs
- Potential re-consideration of the investment management of one of the Target Date Fund (TDF) components
- Working with Risk Management and Asset Allocation (RMAA) on a potential re-evaluation of the glide paths for the TDFs
- Prepare for the DC menu design project

Other projects

- Assist RMAA and public equity with the implementation of strategic asset allocation studies

Continuing educational sessions for Board and stakeholders

- March 2025 Public Markets Committee: small-capitalization active strategies
- Other educational sessions as developed throughout 2025

Investment in staff

- Recruit additional team member
- Developing team skills, resources, and industry connections

CONSIDERING THE BIGGER PICTURE: LONG-TERM RISKS FOR EQUITY MARKETS

Deglobalization is reshaping global trade dynamics

- Growing risks of sanctions, export controls, and strategic decoupling increase uncertainty for multinational corporations
- A fragmenting global economy may create new regional winners and losers

Geopolitical tensions are contributing to macroeconomic uncertainty

- Regional conflicts and great power competition add fragility to global supply chains and financial markets

U.S. equity market valuations remain elevated

- Historical precedent suggests a negative relationship between starting valuations and long-term returns

Technological disruption is accelerating — with uncertain economic consequences

- Rapid progress in artificial intelligence and other technologies could drive productivity and growth
- At the same time, technological innovation could also lead to greater market concentration, dislocation of workers, and uneven sector performance

CTF PUBLIC EQUITY PERFORMANCE
AS OF MARCH 31, 2025

	Market Value	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception
CTF Public Equity	$45,510,780,592	-0.9%	5.8%	7.3%	15.4%	9.0%	8.8%
MSCI ACWI IMI with U.S. Gross (and a Historical Custom Blend)		-1.5%	6.6%	6.6%	15.3%	8.9%	8.5%
Difference		0.6%	-0.8%	0.7%	0.1%	0.2%	0.2%

SCOPE OF THE PUBLIC EQUITY PROGRAM AS OF MARCH 31, 2025

Public Equity oversees approximately $64.5 billion*

10 Programs

- Commingled Trust Fund (CTF): $45.5 billion
- Plans 3, Deferred Compensation Program (DCP)*: $14.3 billion
- Judicial Retirement Accounts (JRA)*: $6.3 million
- Labor and Industries (L&I): $3.1 billion
- Guaranteed Education Tuition (GET): $695.3 million
- Developmental Disabilities Endowment Trust Fund (DDETF): $119.6 million
- Permanent Funds: $550.3 million
- Washington State Opportunity Scholarship (WSOS): $33.2 million
- Volunteer Firefighters’ and Reserve Officers’ Relief and Pension Fund (VFFRO): $186.0 million

* Plans 3, DCP, and JRA include TAP market values that are also counted in the CTF.

WSIB AUDIT COMMITTEE AND INTERNAL AUDIT

JULY 15, 2025

Marie Steffen, CPA, CIA

Audit Director

AGENDA

WSIB Audit Committee

- Responsibilities

WSIB Internal Audit

- Mandate and Global Internal Audit Standards, The Institute of Internal Auditors (IIA)
- Organizational positioning
  - Independence and objectivity
- Value proposition
- Activities

Assurance at the WSIB

- The IIA's Three Lines Model
- External assurance provider – external auditor

Final thoughts

- Due professional care
- Trusted advisor

WSIB AUDIT COMMITTEE

Responsibilities delegated to the Audit Committee

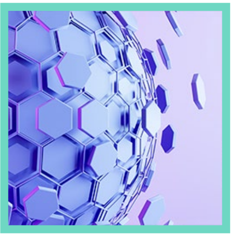
- Financial and related oversight of the WSIB
  - Risk management
  - Internal controls
  - Audits
    - Internal
    - External/examinations/investigations
  - Monitoring compliance
  - Financial reporting
- Audit-related charters
  - 1.00.130 Audit Committee
  - 1.00.190 Internal Audit

Composition

- 5 voting members
- 2 non-voting members

WSIB INTERNAL AUDIT

MANDATE AND GLOBAL INTERNAL AUDIT STANDARDS



Revised Code of Washington 43.88.160(4)(a)(i)

- State policy
  - Internal audit function required
  - Follow professional standards

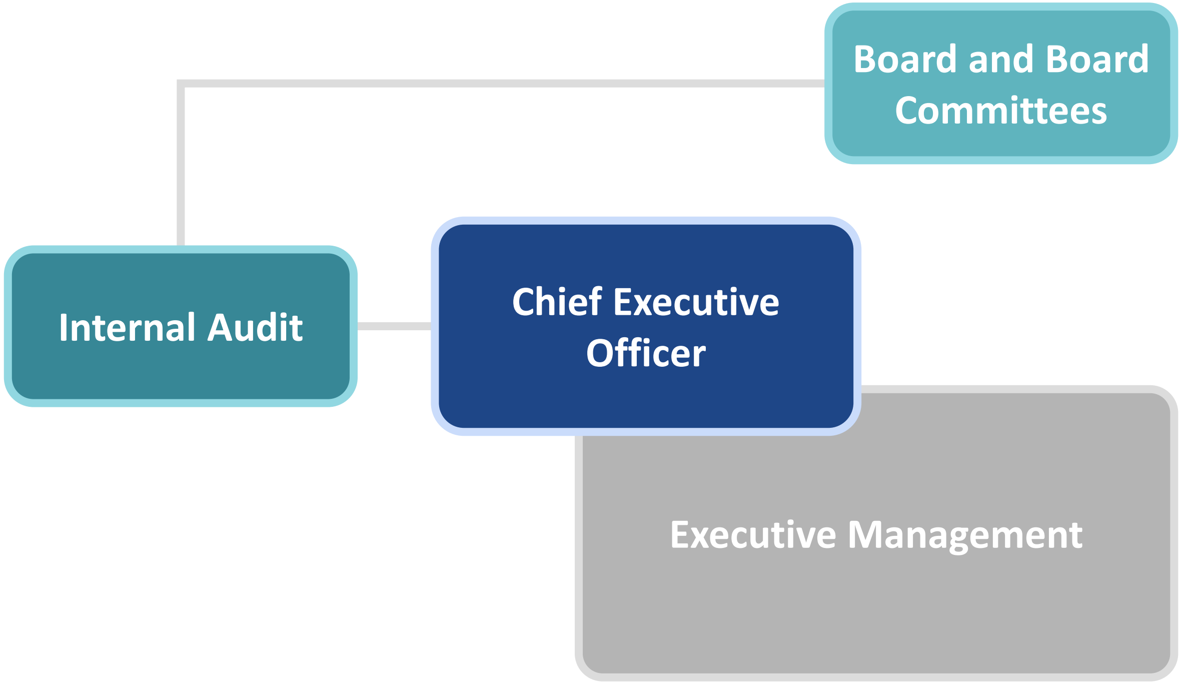
Global Internal Audit Standards, The IIA

- Guides the worldwide professional practice of internal auditing
- Serves as a basis for evaluating the quality of the internal audit function
- Purpose of internal audit
- Application in the public sector
  - Laws and/or regulations
  - Governance and organizational structure
  - Funding
- Quality assurance and improvement program
  - Periodic and ongoing monitoring
  - External assessment
    - At least once every 5 years

WSIB INTERNAL AUDIT
ORGANIZATION POSITIONING

Reporting lines

- Functionally to the Audit Committee/Board
- Administratively to the Chief Executive Officer



Internal Audit Value Proposition

An independent, trusted advisor that provides risk-based and objective assurance, advice, insight, and foresight to the Board and management designed to strengthen the WSIB's ability to create, protect, and sustain value

WSIB INTERNAL AUDIT ACTIVITIES

Annual Audit Plan

- Fiscal year
  - July - June
- Comprehensive risk assessment
  - Assurance mapping
- Presented to the Audit Committee
- Approved by the Board

Advisory Activities/Board-related

- Regular meetings with management
- Internal committees
  - Enterprise Risk Management
- *Ad hoc* requests
- Board and Committee meetings

Internal Audits/Advisory Engagements

- Audit areas cover all areas of the WSIB
  - Key service providers
- Assessment and recommendations
  - Control processes, risk management, and compliance
- Outsourced audits
  - 3-year Information Technology audit
- Audit recommendation follow-up
  - Status reports quarterly

External Audit Liaison

- Primary point of contact
- Contract manager for audit-related contracts
- Ensure audit reports are presented to the Audit Committee
- Main external auditors
  - Financial statement auditor
  - State Auditor's Office

Audit Committee Chair/Audit Director

- Quarterly briefing
  - Review Audit Committee agenda materials
  - Answer any questions
- Interim audit plan status (added or deferred audit)

Audit Committee Meeting

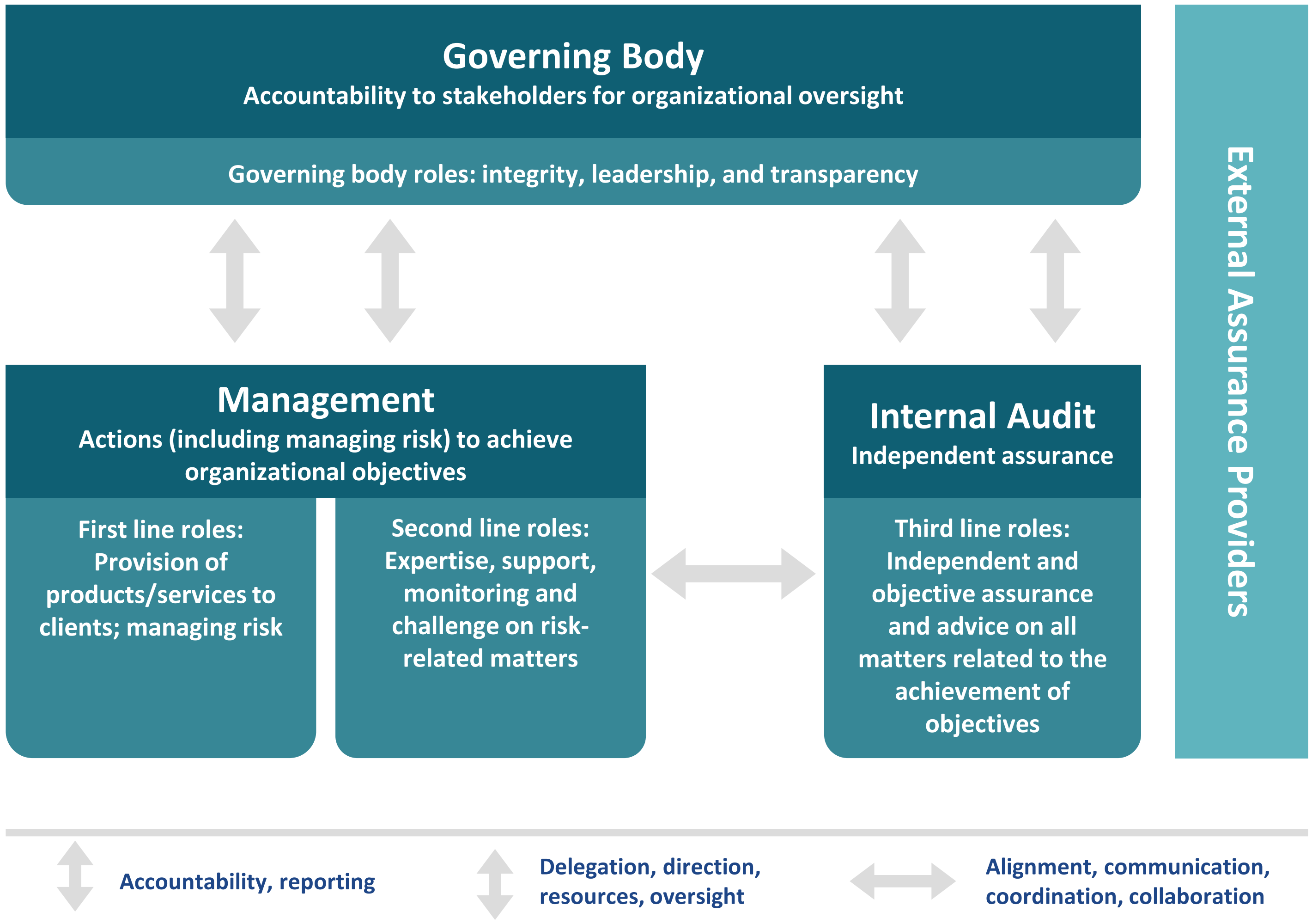
- Open public session
- Executive session
  - Audit Director personnel items
    - Annual performance evaluation
    - Compensation/salary adjustment
  - Other items as needed

Audit Committee Reference Guide

- Audit fundamentals
  - General information
  - Basic steps of an audit
  - Audit Committee Chair responsibilities
- Audit Committee and Internal Audit Charters
- Current year's approved Internal Audit Plan
  - Based on the state's fiscal year (July – June)
- Audit Committee Road Map for the calendar year
  - Agenda items at-a-glance
  - Charter to agenda items
- Additional resources

ASSURANCE AT THE WSIB

THE IIA'S THREE LINES MODEL



Source: "The IIA's Three Lines Model"

THE IIA'S THREE LINES MODEL

MANAGEMENT

First Line

- Business and process owners
- Manage risks
- Day-to-day activities
- Managerial/supervisory controls to
  - Ensure compliance
  - Highlight control breakdowns, inadequate processes, and unexpected events

Second Line

- Supports management
  - Expertise
  - Support
  - Monitoring
- Provides analysis and reports
  - Adequacy and effectiveness
  - Risk management
  - Internal control

INTERNAL AUDIT

Third Line

- Objective and organizationally independent
  - No management responsibilities
  - Primary reporting line to the Board
- Provides assurance and advice
  - Adequacy and effectiveness of governance, risk management, internal control
    - Management
    - Board

EXTERNAL ASSURANCE PROVIDERS

External Auditor

- Independent of the organization
- Understanding of operations *only* as needed to inform their specific audit
- Provide assurance to external stakeholders
  - Accuracy of reports
  - Compliance with laws and rules
  - Efficiency of operations
- Audits may be intermittent or routine (end of a fiscal period)
  - Primarily historical perspective

Examples

- Independent Financial Statement Auditor
- State Auditor's Office
- External Quality Assessor
  - Internal audit function

Professional Skepticism

"Due professional care requires the auditor to exercise professional skepticism. Professional skepticism is an attitude that includes a questioning mind and a critical assessment of audit evidence.

The auditor uses the knowledge, skill, and ability called for by the profession of public accounting to diligently perform, in good faith and with integrity, the gathering and objective evaluation of evidence."

Auditing Standards 1015.07

WSIB Internal Audit's view

- Autonomy/independence
- Inquisitive and thoughtful nature
- Seeking knowledge
  - Corroborated information
- Withhold judgment
- Appropriate and relevant evidence
- Self-esteem
  - Challenge assumptions
  - Resist pressure

"I believe that becoming a trusted advisor involves not just what you know (risk, control, and governance expertise) but also how you get things done (relationship acumen). Both are valuable attributes for internal auditors to possess, but it is only through their combination that one can truly become a trusted advisor."
Richard Chambers

Attributes of Outstanding Trusted Advisors

PERSONAL	Ethical Resilience	Results Focused	Intellectually Curious	Open-Mindedness
RELATIONAL	Dynamic Communicators	Insightful Relationships	Inspirational Leaders	
PROFESSIONAL	Critical Thinkers	Technical Expertise		

Source: Chambers, Richard, *Trusted Advisors: Key Attributes of Outstanding Internal Auditors*. Florida, Internal Audit Foundation, 2017.

APPENDIX

- 5 domains, 15 guiding principles, 52 underlying standards
- Essential conditions – expectations for boards and senior management

I: Purpose of Internal Auditing

II: Ethics and Professionalism

- Demonstrate Integrity
- Maintain Objectivity
- Demonstrate Competency
- Exercise Due Professional Care
- Maintain Confidentiality

III: Governing the Internal Audit Function

- Authorized by the Board
- Positioned Independently
- Overseen by the Board

IV: Managing the Internal Audit Function

- Plan Strategically
- Manage Resources
- Communicate Effectively
- Enhance Quality

V: Performing Internal Audit Services

- Plan Engagements Effectively
- Conduct Engagement Work
- Communicate Engagement Conclusions and Monitor Action Plans

Source: The IIA

PURPOSE OF INTERNAL AUDITING

Purpose Statement

Internal auditing strengthens the organization's ability to create, protect, and sustain value by providing the board and management with independent, risk-based, and objective assurance, advice, insight, and foresight

Enhances the organization's

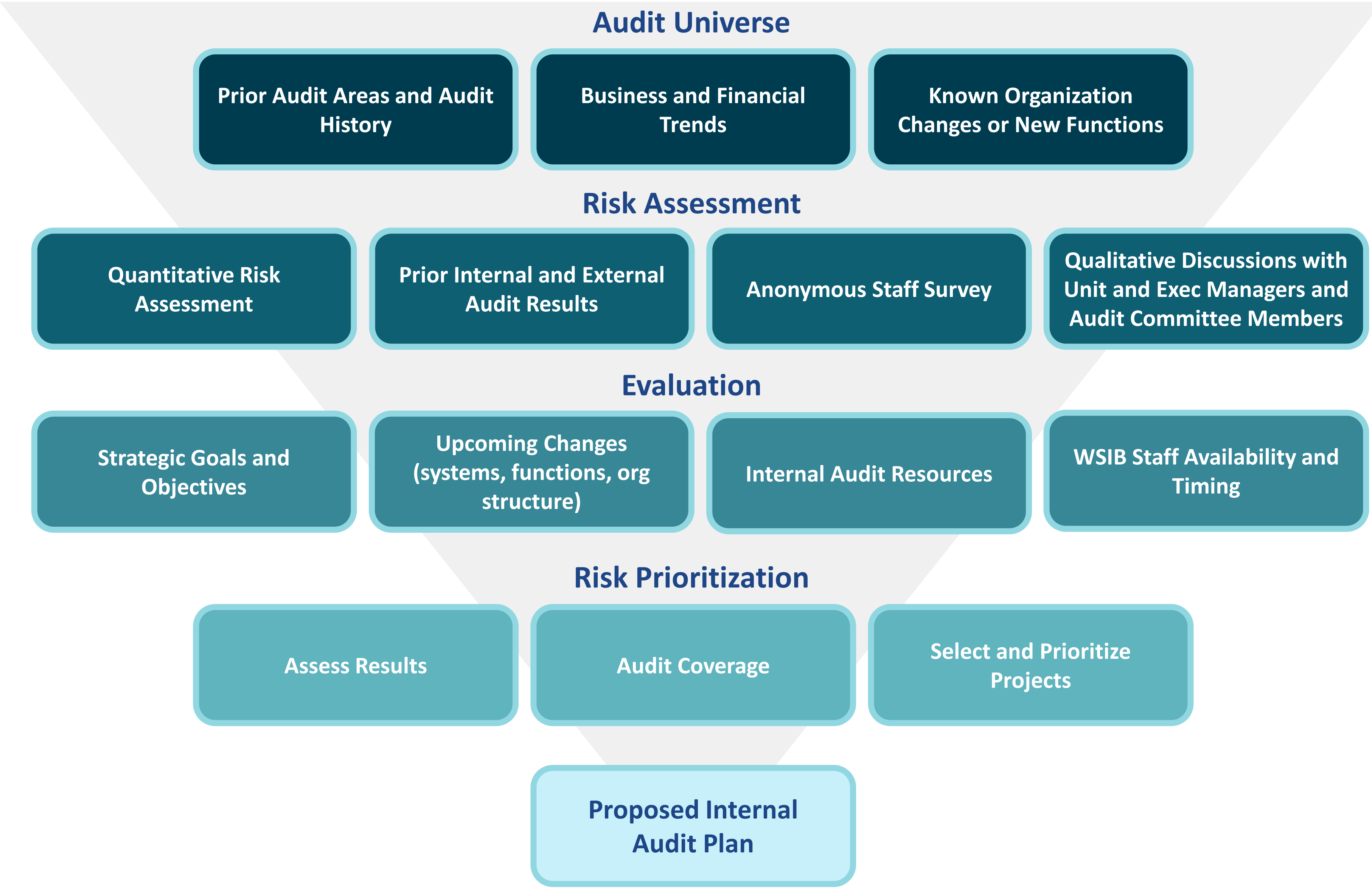
- Successful achievement of its objectives
- Governance, risk management, and control processes
- Decision-making and oversight
- Reputation and creditability with its stakeholders
- Ability to serve the public interest

Most effective when

- Performed by competent professionals
  - Conformance with Global Internal Audit Standards
- Function is independently positioned
  - Direct accountability to the board
- Free from undue influence
- Committed to making objective assessments

Source: Global Internal Audit Standards, 2024 Edition

AUDIT PLAN DEVELOPMENT PROCESS



EXTERNAL ASSURANCE PROVIDER – EXTERNAL AUDIT VERSUS INTERNAL AUDIT

External Auditor

- Independent of the organization
- Understanding of operations *only* as needed to inform their specific audit
- Provide assurance to external stakeholders
  - Accuracy of reports
  - Compliance with laws and rules
  - Efficiency of operations
- Audits may be intermittent or routine (end of a fiscal period)
  - Primarily historical perspective

Examples

- State Auditor's Office
- Independent Financial Statement Auditor

Internal

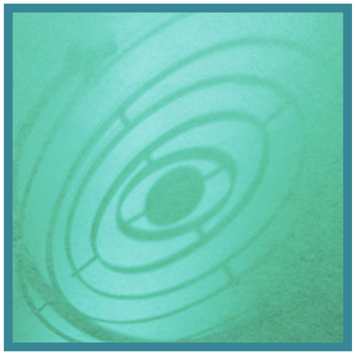
- Integral part of the organization*
  - Possess an in-depth understanding of the agency's culture, operations, strategies, and risks
- Holistic view on all functions and operations
  - Financial and non-financial
  - Historical and future perspective
- Provide assurance and advice to the Board and senior management
  - Continuous improvement
  - Governance, risk management, internal control
- Continuous basis
- Coordinate with external auditors
  - Leverage work

* Required to meet audit standards for organizational independence and to maintain objectivity while performing work

Washington State Investment Board

ENTERPRISE RISK MANAGEMENT (ERM)

JULY 15, 2025



Liz Smith, ERM Committee Co-Chair

OVERVIEW

WSIB's ERM framework

- Purpose and goals

Enterprise Risk Management

- What is ERM?
- Common misunderstandings
- Importance and benefits
- ERM in the Three Lines Model
- Role of Internal Audit

ERM at the WSIB

- WSIB risk management oversight
- WSIB ERM Committee

WSIB Risk Appetite Statements and Key Risk Framework

ERM Committee activities

WSIB'S ERM FRAMEWORK – PURPOSE AND GOALS

Strategic Importance
- Critical role of managing risks strategically

Alignment
- Risk management practices in line with strategic objectives

Risk Identification
- Systematic identification and monitoring of potential risks

Risk-Aware Culture
- Culture of risk awareness and proactive reporting

Integration
- Embedded in all functions and processes

Adaptability
- Tailored to WSIB's specific needs

Governance
- Transparency and accountability

WHAT IS ERM?

Comprehensive approach

- Rigorous method for assessing and addressing risks from all sources that could impact the achievement of the WSIB's strategic objectives

Organization-wide process

- Identifying, tracking, and monitoring across the entire organization

Holistic and strategic management

- Managing risks for alignment with the Board’s established risk appetite

Oversight and assurance

- Overseen by management
- Reports to the Audit Committee
- Assurance system for risk management

ERM – COMMON MISUNDERSTANDINGS

Not one-size-fits-all

- ERM is not the same for every organization
- It must be designed to meet the specific needs of each

Not risk elimination

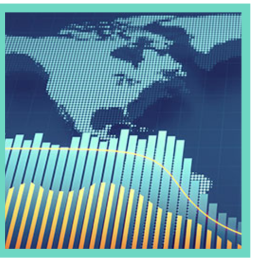
- Prudent level of risk
- Certain risks must be taken to innovate and create future value
- Other risks must be managed to protect existing value

Not static or rigid

- It must adapt and be fully integrated

Not a replacement for internal controls

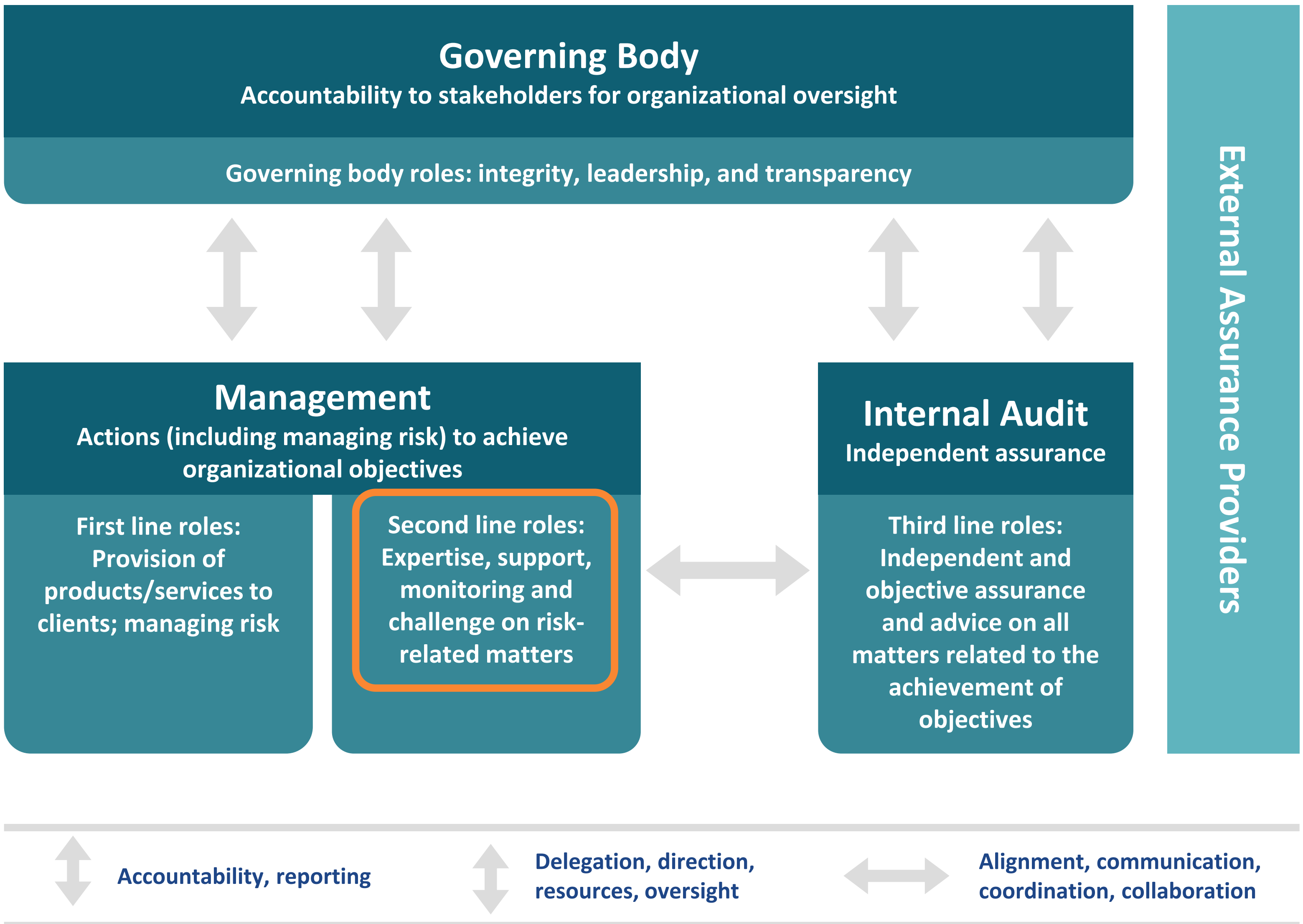
- Complements internal controls
- Broader framework for managing risks



ERM – IMPORTANCE AND BENEFITS

- **Informs and improves executive management's decision-making and resource allocation**
- **Fosters a risk-intelligent culture where risk awareness is embedded into daily operations across the organization**
- **Reduces silos of risk management activities**
- **Aligns and embeds risk management in key processes and functions**
- **Improves governance, transparency, and accountability**
- **Enhances the value driven by the Three Lines Model**

ERM IN THE THREE LINES MODEL



Source: "The Institute of Internal Auditors Three Lines Model"

ERM – ROLE OF INTERNAL AUDIT

COLLABORATION CAN LEAD TO STRONGER RISK PRACTICES

CORE INTERNAL AUDIT ROLES IN REGARD TO ERM

- Giving assurance on the risk management processes
- Giving assurance that risks are correctly evaluated
- Evaluating risk management processes
- Evaluating the reporting of key risks
- Reviewing the management of key risks

LEGITIMATE INTERNAL AUDIT ROLES WITH SAFEGUARDS

- Facilitating identification and evaluation of risks
- Coaching management in responding to risks
- Coordinating ERM activities
- Consolidated reporting on risks
- Maintaining and developing the ERM framework
- Championing establishment of ERM
- Developing risk management strategy for Board approval

ROLES INTERNAL AUDIT SHOULD NOT UNDERTAKE

- Setting the risk appetite
- Imposing risk management processes
- Management assurance on risks
- Taking decisions on risk responses
- Implementing risk responses on management's behalf
- Accountability for risk management

Source: The IIA

ERM AT THE WSIB – RISK MANAGEMENT OVERSIGHT

Governance Structure

- Board Charter Policy 1.00.110
- Audit Committee Charter Policy 1.00.130
- Delegation of Authority Policy 1.05.100
  - ERM Charter

Board Charter

Risk management

- Ensure effective process of ERM, risk governance, and culture
- Apprised of most significant risks and responses
- Communicate the WSIB’s risk tolerance in achieving strategic objectives

Audit Committee Charter

System of risk management

- Ensure effective process of ERM, cybersecurity risk management, risk governance, and culture
- Review scope of staff’s review of risk management and obtain risk assessment reports
- Review scope of any consultant’s review of risk management
- Review and recommend any changes to risk appetite statements for Board approval
- Review the cybersecurity and other information technology risks, controls, and procedures

Delegation of Authority

Risk management

- Chief Executive Officer (CEO) authorized to administer a risk management program
- CEO ensures effective process of ERM, risk governance, and culture
- CEO reports most significant risks and responses to Board for review
- Risk appetite statements subject to review and approval by the Board

ERM AT THE WSIB – RISK MANAGEMENT OVERSIGHT

ERM Charter

Documents WSIB ERM process and governance

Requires use of ERM Framework and Appetite Statements

- Board-reviewed and adopted

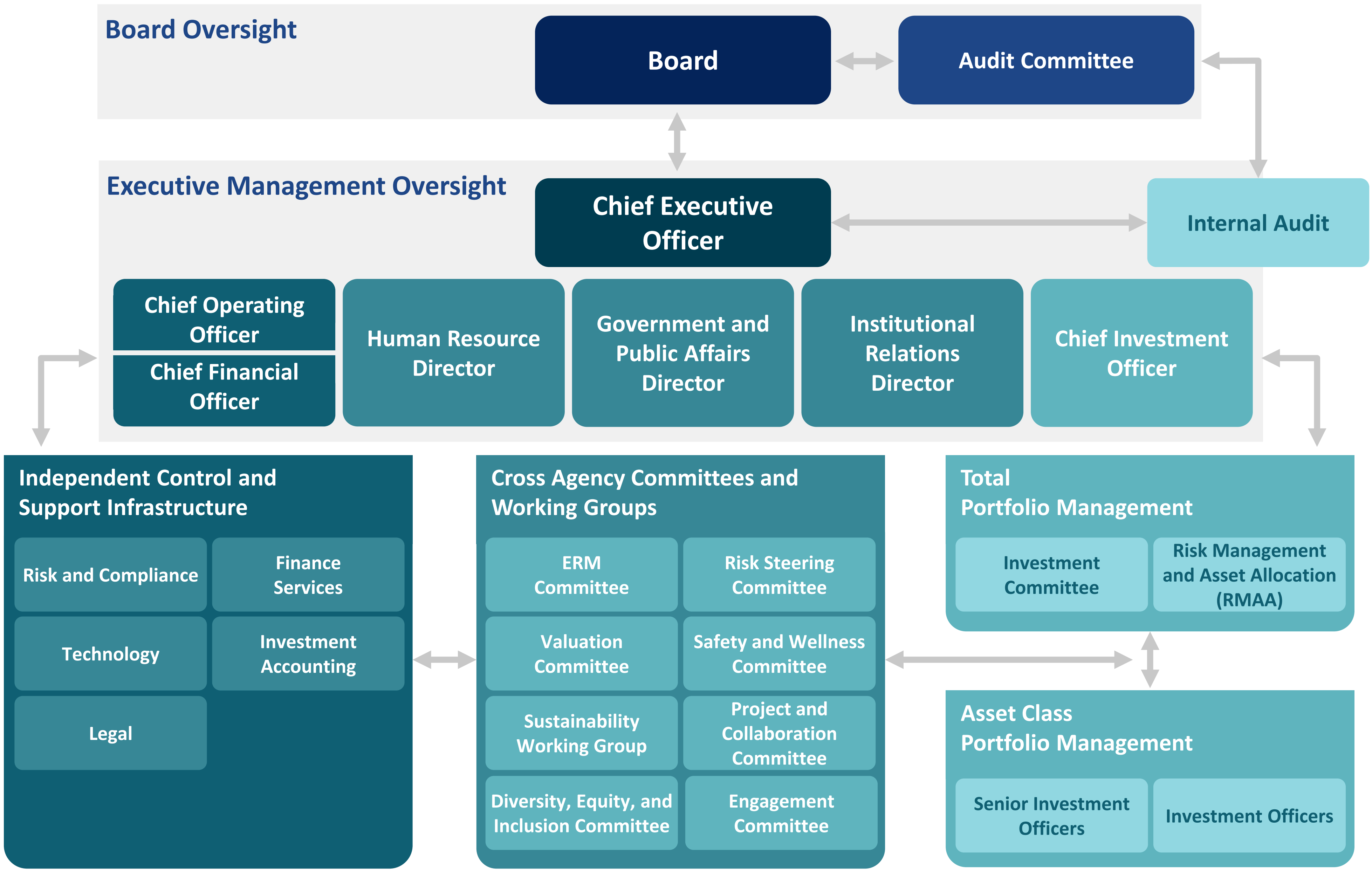
Requires risk identification, tracking, and discussions

ERM Committee risk culture goals

Establishes clear roles and responsibilities

- Executive Management
- CEO
- ERM Committee
- Co-Chairs
- ERM Committee Members
- Staff
- Internal Audit

WSIB RISK MANAGEMENT OVERSIGHT



WSIB ERM COMMITTEE

ERM Co-Chair
LIZ SMITH
Legal, Risk, and Compliance(LRC)

ERM Co-Chair
FRED GJERSTAD
Risk Management and Asset Allocation (RMAA)

LRC
Legal Services, Enterprise Risk, Investment Compliance, and Internal Compliance
Insurance and DES Risk Management
Internal Control Officer Reporting

RMAA
Risk Steering Committee

JAMES ABER
Institutional Relations Director

MICHAEL CHRISTOPHER
Director of IT Operations and Security

MEGAN DIETZ
Assistant Chief Financial Officer

LI GAO
Sr. Investment Officer, RMAA

CURT GAVIGAN
Chief Operating Officer

CHRIS HANAK
Chief Investment Officer

BOBBY HUMES
Human Resources Director

SHAWNA KILLMAN
Investment Operational Due Diligence Officer, LRC

WES LOYD
Asst. Sr. Investment Officer, Tangible Assets

CARMEN MATSUMOTO
Asst. Sr. Investment Officer, Private Equity

DAVID SCHUMACHER
Government and Public Affairs Director

BRIAN SHRADER
Asst. Sr. Investment Officer, Real Estate

NATE SOPER
Asst. Sr. Investment Officer, Fixed Income

KRISTINA TAYLOR
Chief Financial Officer

MEAGHAN THOMPSON
Senior Project Manager

FLETCHER WILSON
Asst. Sr. Investment Officer, Public Equity

MARIE STEFFEN
Audit Director, (Advisory)

WSIB RISK APPETITE STATEMENTS AND KEY RISK FRAMEWORK

WSIB Risk Appetite Statements

- Reflect strategy and organizational objectives
- Balance competing demands when managing the risks
- Consider the limitations of business resources and structure
- Document what we do for each key risk
- Acknowledge our willingness to take on certain levels of risk

Risk Appetite Definitions

Low	Cautious approach and intentionally conservative
	Very limited tolerance for uncertain outcomes relative to achieving the WSIB's mission, vision, or strategic objectives
	Avoids trading off the stated objective against achievement of other objectives
Moderate	Measured and deliberate approach
	Some tolerance for uncertain outcomes relative to achieving the WSIB’s mission, vision or strategic objectives
	Willing to accept selected risks but must be soundly justified
High	Flexible approach with higher possibility of failure
	Willing to take risks when long-term benefits are foreseeable and benefits outweigh risks
	Willing to trade off this objective against achievement of other objectives

MANAGING THE ASSETS

- Fiduciary Risk (Low)
- Investment Risk (Moderate to High)

MANAGING THE ORGANIZATION

- Strategic Risk (Moderate)
- Governmental Environment Risk (Moderate)
- Operational Risk (Moderate)

SAFEGUARDING OUR REPUTATION

- Reputation Risk (Low)

EXAMPLES OF RECENT ERM COMMITTEE ACTIVITIES

Annual ERM Charter Reviews and ERM Committee Overviews	Federal Administration Changes Risk Discussions	Risk Dashboard Ratings
Building Safety Briefings and Discussions	Geopolitical Risk Discussions	Risk Self Assessment Discussions
Organizational Risk Discussions	Internal Control Officer (ICO) and ERM Role Clarification	Risk Steering Committee Updates and Discussions
Burnout Discussions and Forums	Legislative Updates	Safety and Wellness Committee Updates and Discussions
Liquidity Monitoring	Tracked Risks Discussions	Silicon Valley Bank (SVB) Lessons Learned and Evaluating Counterparty Risk
Custody Bank Updates and Risk Discussions	Political Risk Updates and Discussions	Staff Risk Survey
Cybersecurity Travel Risks	Political Unpredictability Risk	Stakeholder Process Discussion
Cybersecurity Risks	Proxy Voting Risks	Supreme Court Cases
Emerging Risk Discussions and Roundtables	Recent 401K Cases on Fiduciary Duties	Third Party Risk Discussions and Roundtables
ERM All Staff Communication Tools	Recruitment, Retention, and Burnout Discussions	Valuation Committee Updates and Discussion
ERM Risk Control Self Assessment (RCSA) Process	Risk Appetite Reviews	

Washington State Investment Board

COMMINGLED TRUST FUND (CTF) RISK MANAGEMENT APPROACH

JULY 16, 2025

Chris Hanak

Chief Investment Officer

AGENDA

- Defining Risk
- The Washington State Investment Board (WSIB) Investment Mandate
- The CTF Investment Beliefs – Risk
- Select Risk Concepts
- The CTF Risk Management Approach
- Risk Considerations in Today's Agenda
- Appendix

Definitions of risk vary in scope and focus

"Risk, broadly speaking, is exposure to uncertainty."

– CFA Institute;
Introduction to Risk Management

"Risk to us is 1) the risk of permanent loss of capital, or 2) the risk of inadequate return."

– Charlie Munger,
2001 Berkshire Hathaway annual meeting

WSIB INVESTMENT MANDATE

The WSIB's mission is to invest the funds entrusted to us with integrity, care, and skill to maximize return over the long term at a prudent level of risk for the exclusive benefit of beneficiaries

To fulfill this responsibility, we rely on global diversification, long-term strategies, and rigorous research disciplines

CTF INVESTMENT BELIEFS – RISK

The CTF should be compensated for the investment risks it takes

- Staff considers both the expected return and the expected risk associated with every investment transaction we evaluate
- To the extent possible, staff considers both quantitative and qualitative information

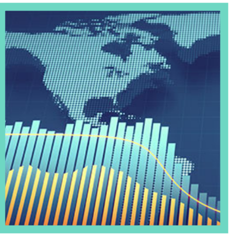
Risk must be considered at the investment, asset class, and portfolio level

- The Board takes an active role in managing risk
- We periodically undertake asset allocation studies to consider the portfolio impact of individual investment class decisions and related interactions

Only some investment risks can be clearly defined and measured

- Risk management is a top priority, and we are committed to identifying new risk management techniques as they develop
- We are persistent in our efforts to enhance our data quality and risk analytics platforms

SELECT RISK CONCEPTS



Risk is a key ingredient in the recipe for investment success; return without risk is generally a false hope and usually a prescription for falling short of one's goals

Good risk management does not prevent losses, but provides a full top-to-bottom framework that rigorously informs the decision-making process—before, during, and after a risk event

Risk management is not about minimizing risk; it is about actively understanding and embracing those risks that best balance the achievement of goals with an acceptable chance of failure, quantifying the exposure, and continually monitoring and modifying it

When effective risk management is truly integrated at all levels of the decision-making process and the overall management process, the organization has developed an effective risk culture

Taking risk is an active choice by boards and management, investment managers, and individuals

Source: CFA Institute; Introduction to Risk Management

CTF RISK MANAGEMENT APPROACH

A BLEND OF QUANTITATIVE AND QUALITATIVE RISK ANALYSIS

Certain risks can be measured using established quantitative metrics, while others are more challenging to evaluate

To manage risk effectively, the WSIB employs a combined quantitative and qualitative approach

	Quantitative Analysis	Qualitative Analysis
Purpose	To quantify patterns, relationships, and trends	To understand and interpret context and perspectives
Tools Used	Spreadsheets, statistical models, simulations	Judgment, observations, thematic analysis
Strengths	Enables measurement, forecasting and precision	Captures nuance and intangible factors
Limitations	May overlook context or qualitative factors; often relies on historical data	Lacks standardized frameworks and is challenging to validate or replicate
Common Applications	Risk metrics, portfolio modeling, performance measurement	Manager evaluation, macro risk analysis, governance assessment

FUNDAMENTAL RISK MANAGEMENT FRAMEWORK

Retirement Program-Driven

- The state's contributions are not determined by the WSIB; therefore, we appreciate that future contributions are uncertain, and we should incorporate this uncertainty into scenario analysis
- Focus on managing to the risk characteristics as defined by the nature of future cash flows
- Determining a prudent level of risk is not possible without acknowledging liabilities and related cash flows

Investment-Driven

- Manage risk by identifying active risk to determine if risk characteristics are in line with assumptions underlying the asset allocation
- Focus on comprehensive understanding of the total portfolio or "knowing what we own"
- Draw on existing risk management processes within asset classes for centralizing portfolio information into a periodic reporting package

Market-Driven

- Monitor changes in market environment that could alter our risk profile independent of any action on WSIB's part
- This framework supports monitoring of market data to draw insights about market risks and opportunities
- Market scenarios are modeled for discussion and insights from managers and partners are brought forward for discussion

CTF RISK MANAGEMENT APPROACH
PORTFOLIO DIVERSIFICATION STRATEGIES

Diversification is WSIB's central risk management strategy to achieve the portfolio's overall risk-return balance

The strategic asset allocation study includes a range of asset classes with distinct investment characteristics

- **Quantitative modeling incorporates measurable risk factors, such as volatility and correlations, to identify asset combinations that can reduce total portfolio risk**
- **Additionally, staff evaluates qualitative risk characteristics of each asset class to capture important dimensions not fully reflected in quantitative measures**

Portfolio construction is carefully implemented and monitored both within and across asset classes

- **Each asset class is intentionally diversified across strategies, managers, and vintage years to mitigate concentration risk**
- **Risk Management and Asset Allocation (RMAA) collaborates with each asset class to monitor evolving risk exposures and inter-asset relationships, supporting an integrated and resilient portfolio**

CTF RISK MANAGEMENT APPROACH
LIQUIDITY MANAGEMENT STRATEGIES

Liquidity management is critical for allocators with significant private market exposure; while the CTF's sizable private asset allocations contribute to strong long-term returns, they also introduce inherent liquidity risks

The strategic asset allocation study explicitly incorporates liquidity analysis

- Staff conducts liquidity coverage ratio analyses to assess the appropriate balance between public and private assets; both short-term and long-term stress tests are conducted to evaluate portfolio resilience under severe market conditions
- In addition, staff evaluates the tradeoffs between liquidity risk and expected investment returns to ensure risks are appropriately compensated

Ongoing, coordinated planning and monitoring are conducted across investment units

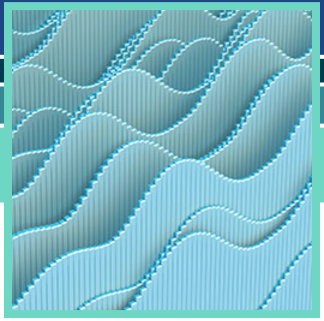
- Each private asset class develops annual plans
- RMAA works with each asset class to monitor cash flow needs and may raise liquidity if necessary, keeping the portfolio responsive to changing market conditions

RISK CONSIDERATIONS IN THE CTF STRATEGIC ASSET ALLOCATION STUDY

Risk considerations are key elements of the CTF strategic asset allocation study

The CTF strategic asset allocation education sessions will provide a review of relevant concepts and related risk considerations

Topic	Risk Consideration
Climate Blueprint Update	Climate Risk
Asset Class Roles in the CTF	Portfolio Diversification
Perspectives on Illiquidity ▪ Part 1: CTF Liquidity Profile ▪ Part 2: CTF and Peer Liquidity Experience ▪ Part 3: CTF Liquidity Modeling	Liquidity Risk
CTF Asset Allocation Review, Modeling, and Discussions	Review All Concepts Including: ▪ Asset Allocation Review ▪ Asset Allocation Modeling ▪ Board's Risk Preferences



APPENDIX

2025 CTF STRATEGIC ASSET ALLOCATION STUDY TIMELINE

BOARD MEETING TOPICS

July 2024

- Private Credit as an Asset Class
- Private Credit Landscape
- Sustainability Focus
- Macroeconomic Overview

November 2024

- Introduction to 2025 CTF SAA study

February 2025

- Fixed Income Review and Outlook
- 2025 Policy and Investment Outlook
- Private Credit Educational Overview
- Innovation Portfolio Review and Update

April 2025

- CTF Investment Beliefs
- 2025 Capital Market Assumptions
- WSIB Private Credit

June 2025

- The Energy Transition
- Geopolitical Outlook
- Economic Outlook

July 2025

- CTF Risk Management Approach
- Climate Blueprint Update
- Asset Class Roles in the CTF
- Perspectives on Illiquidity
  - Part 1: CTF Liquidity Profile
  - Part 2: CTF and Peer Liquidity Experience
  - Part 3: CTF Liquidity Modeling
- CTF Asset Allocation Review, Modeling, and Discussions

September 2025

- 2025 CTF Strategic Asset Allocation Recommendation
  - Policy Revisions and Implementation
- Peer Plan Perspectives

Washington State Investment Board

CLIMATE BLUEPRINT UPDATE

JULY 16, 2025

Sherrie Trecker, CFA, FSA Credential Holder

Head of Sustainability – Institutional Relations

Chris Green, Ph.D., CFA, CAIA

Assistant Senior Investment Officer – Risk Management and Asset Allocation

OVERVIEW

- Key Commingled Trust Fund (CTF) Investment Beliefs
- Climate Blueprint Update
- Energy Transition Research
- Total Portfolio Climate Risk Management
- Coal Analysis
- Summary

KEY CTF INVESTMENT BELIEFS

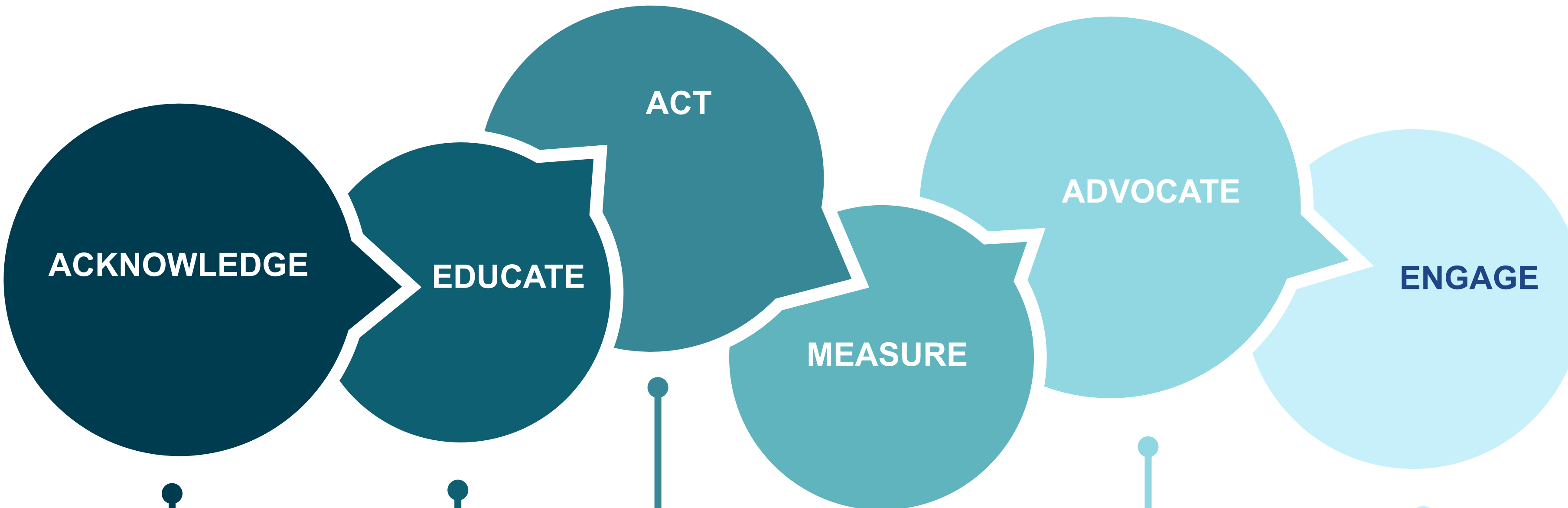
2 Sustainability: Investing for the Long Run

- The WSIB has a long investment horizon and is subject to complex and systemic global dynamics that unfold over time
  - These create risks and opportunities, including, but not limited to, environmental, social, and governance (ESG) considerations such as financial impacts resulting from climate change; improved economic outcomes from a more diverse, equitable, and inclusive work force; and governance practices that provide effective transparency and long-term sustainability

10 Active Management

- Investment or asset class constraints and/or mandates will likely reduce investment returns

CLIMATE BLUEPRINT UPDATE



Review existing climate-related capabilities and partnerships and conduct peer analysis

Build climate-awareness at both the Board and agency

Integrate climate considerations both within portfolios and across the agency

Systematically collect and analyze climate-related data

Seek clear standards for consistent disclosures of climate-related information

Selectively pursue outcomes aligned with the WSIB's mission and focus

CLIMATE BLUEPRINT ROADMAP: STEADY PROGRESS

2022

- Established Climate Blueprint
- Developed Partner ESG Assessments

2023

- Board education sessions on peer approaches to sustainability and the evolution of shareholder resolutions
- Joined ESG Data Convergence Initiative
- Increased disclosure of climate risk-related metrics
- Launched *ESG Curriculum* series and *ESG Learning Library*
- Enhanced climate-related proxy voting policy and guidelines

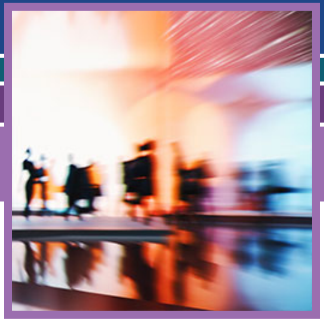
2024

- Enhanced climate reporting framework in line with Task Force on Climate-Related Financial Disclosures
- Assessed availability of greenhouse gas emissions data across WSIB portfolios
- Board education session on emissions data reporting
- Researched total portfolio climate risk management solutions
- Added a consultant with climate scenario capabilities

2025

- Evaluate the inclusion of climate scenarios into Capital Market Assumptions
- Develop an onboarding process to train new investment staff on ESG integration to complement the ESG Curriculum
- Calculate WSIB's corporate fixed income carbon footprint and gather private markets emissions data
- Update WSIB's *Changing Energy Complex* paper (to be published in 2026)
- Board education on current state of decarbonization

ENERGY TRANSITION RESEARCH



ENERGY TRANSITION RESEARCH

Deliverables

- WSIB staff is developing a white paper on the current state of the energy transition to be published in April 2026
  - This is an update to the 2019 white paper, *The Changing Energy Complex*

Timeline

- April 2025: Established project team; created draft outline
- May–August 2025: Gather external research on energy- and climate-related topics
- September 2025: Engage with an external consultant to provide expertise on climate scenarios
- October–December 2025: Assess impacts on the WSIB's overall portfolio
- December 2025–February 2026: Develop asset class-specific insights
- April 2026: Final paper published and presented to the Board

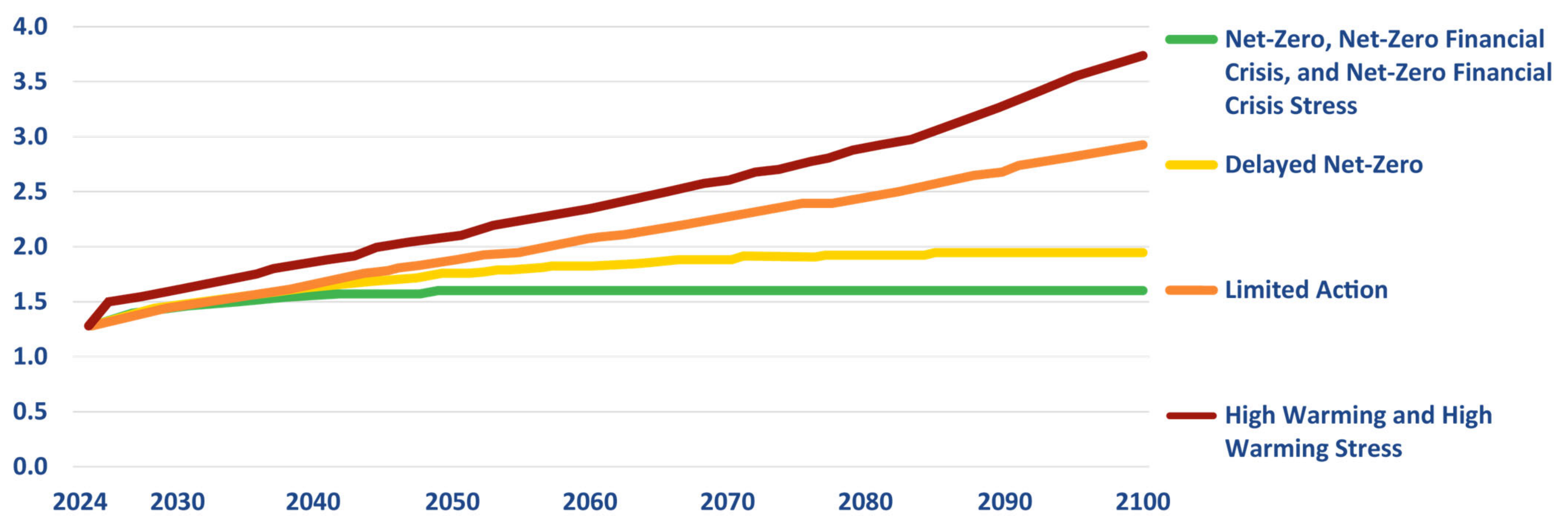
Project team

- Head of Sustainability, a representative from each asset class, RMAA, and a project manager

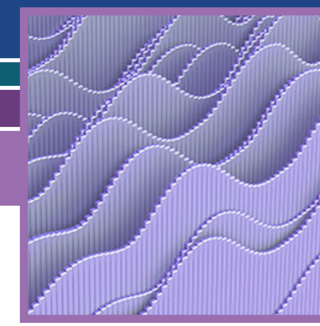
NET-ZERO BY 2050 NO LONGER REALISTIC

- Projections indicate it is unlikely that the rise in global temperature will be limited to 1.5°C
  - According to Ortec, a provider of climate scenarios, under the most ambitious climate scenario the world will not reach net zero until the mid-2050s, and temperatures will rise by 1.6°C by 2100
- Physical risk is becoming the dominant threat to investment returns
- This leads to heightened uncertainty as well as heightened urgency

Global Temperature Anomaly (°C) Ortec Finance Climate Scenarios 2025



Source: https://www.ortecfinance.com/



TOTAL PORTFOLIO CLIMATE RISK MANAGEMENT

INITIAL CLIMATE RISK MEASUREMENT FOCUSED ON FOSSIL FUELS

The WSIB's initial efforts at measuring climate-related risk were formalized in 2016, driven by stakeholders who were interested in understanding the CTF's exposure to fossil fuels. These stakeholders were primarily concerned with risks associated with stranded assets and the potential for significant portfolio losses

At that time, there was no agreed-upon definition of what constituted a fossil fuel company

Based on comprehensive research, staff concluded that the Global Industry Classification Standard (GICS), a commonly used standard in other risk management practices, would meet the agency's needs

- GICS is a standard way of associating an entity with a specific industry
- GICS is objective with assignments based on a company's "principal business activity"
- MSCI classifies most public equity securities using GICS
  - The WSIB follows GICS as closely as possible, and has created internal methodologies for classifying securities that MSCI does not cover (e.g., corporate debt, private assets, Treasuries)

The calculation of the WSIB's exposure to fossil fuel companies includes all securities that have the GICS "Energy" sector classification, excluding non-coal consumable fuel companies (e.g., uranium, biofuels)

FOCUS ON COMPANIES INVOLVED IN FOSSIL FUEL PRODUCTION

- The GICS Energy sector captures companies whose principal business activity is
  - Extracting oil, gas, and thermal coal
  - Transporting oil, gas, and thermal coal
  - Refining oil, gas, and thermal coal
- There is consensus among investors and stakeholders that such companies are fossil fuel companies
- To these companies, ending the use of fossil fuels is an existential risk
- This approach avoids "double-counting" the same energy assets
  - Fossil fuel assets are counted during the extraction and production phases, but not again when they are used (to generate energy, to make petrochemicals, etc.)
- Companies connected to fossil fuels but not classified in the GICS "Energy" sector are not included in this definition, as fossil fuels are not their principal business activity
  - Revenue earned from fossil fuel-related activity (percent generation for utilities) may vary from year to year
  - Loss of fossil fuel-related revenue is not an existential risk for the company due to diversified lines of business
  - Revenue/generation breakdown by business lines is often not readily available

BROADENING THE CLIMATE RISK FRAMEWORK

Risks associated with the impacts of climate change are no longer confined to fossil fuel companies

In 2023, staff expanded its climate risk disclosures to include industries at risk of being impacted by climate change, as identified by the Task Force on Climate-Related Financial Disclosures (TCFD)

- Key idea: better alignment with TCFD, which emerged as the standard for reporting climate-related risks
- Expanded disclosures allow stakeholders to see where potential climate risk lies beyond fossil fuel companies
- The TCFD disclosure relies on GICS industries and requires a manual mapping process to TCFD industries
  - The coal exposure included in the TCFD disclosure is consistent with the WSIB’s historical approach to measuring fossil fuels
- The TCFD disclosure is included in the Sustainability Report and the Quarterly Risk Report
  - The Sustainability Report also shows how coal exposure in the CTF has changed over time

Staff is also expanding its reporting of greenhouse gas emissions

- Public equity greenhouse gas emissions have been published in the Sustainability Report since 2023
- Corporate fixed income emissions will be reported in 2025
- Private markets emissions measurement is a work in progress

COAL ANALYSIS

MEASURING COAL EXPOSURE

FOCUS ON COAL PRODUCTION AND SALES

- The WSIB's coal company designation is focused exclusively on companies whose primary source of revenue is thermal coal, i.e., the mining, processing, or sale of thermal coal
- Staff does not include companies that transport coal or utilities that use coal as a power source
  - Staff also does not include diversified mining (where coal is not the main business focus) or metallurgical coal companies in its calculations
- Using the current GICS-based definition, as of March 31, 2025, the CTF held $44 million in investments in coal companies, around 0.02 percent of the CTF (almost entirely held within the public equity portfolio)

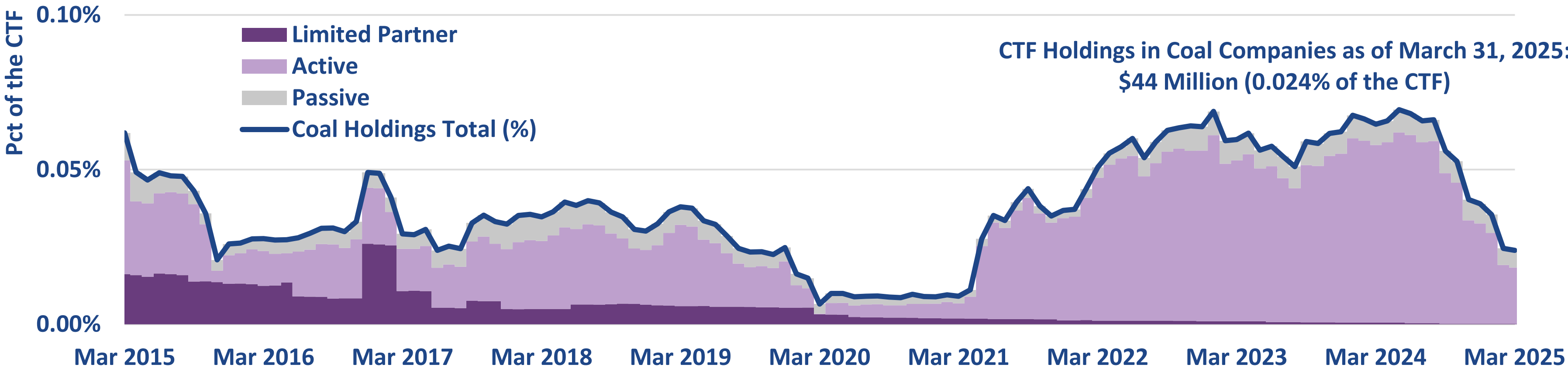
Top 10 Holdings in Coal Companies

Company	Country	Passive Mandates	Active Mandates	Exposure ($ Millions)	Percentage of CTF
Coal India	IN	BTC EM IMI	LSV Global, LSV EM	$14	0.0076%
China Shenhua Energy	CN	BTC EM IMI	GQG Global	$11	0.0062%
China Coal Energy	CN	BTC EM IMI	Arrowstreet, LSV EM	$4	0.0020%
United Tractors	ID	BTC EM IMI	LSV Global, LSV EM	$3	0.0019%
Alamtri Resources Indonesia	ID	BTC EM IMI	Arrowstreet, LSV Global, LSV EM	$3	0.0018%
WH Soul Pattinson	AU	SSgA		$2	0.0010%
Core Natural Resources	US	BTC US IMI		$1	0.0008%
Whitehaven Coal	AU	SSgA		$1	0.0006%
Peabody Energy Corp	US	BTC US IMI		$1	0.0003%
Exxaro Resources Ltd	ZA	BTC EM IMI	Arrowstreet	$1	0.0003%
Top 10				$41	0.0224%

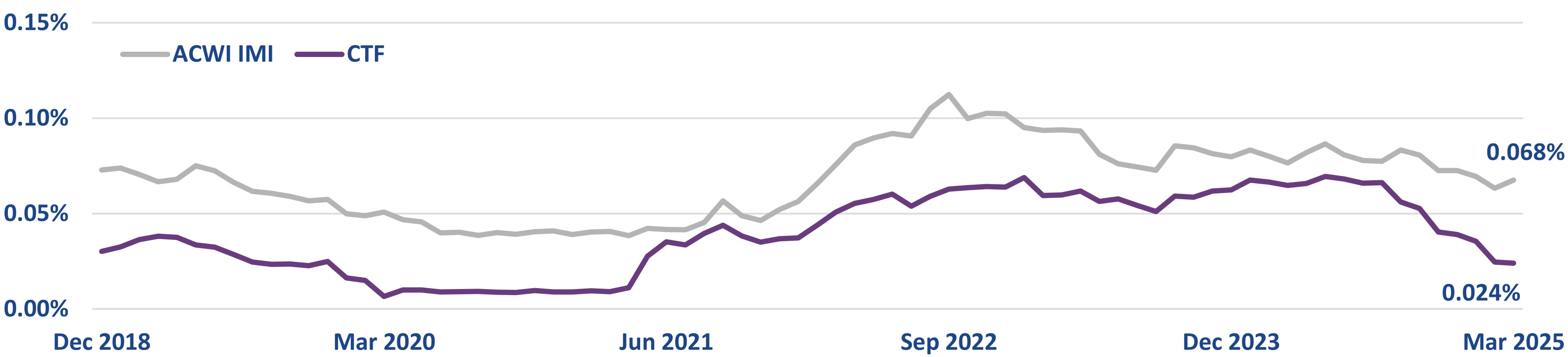
MEASURING COAL EXPOSURE

MINIMAL INVESTMENTS IN COAL COMPANIES OVER THE PAST DECADE

CTF Coal Company Holdings Over the Past 10 Years



CTF and ACWI IMI Coal Company Holdings Since December 2018



URGEWALD COAL EXIT LIST

FUNDAMENTALLY DIFFERENT DATA CENTERED ON DIVESTMENT

The Urgewald Global Coal Exit List (GCEL) was created as a tool for financial institutions interested in divesting their entire portfolios from any exposure to coal

The GCEL identifies companies along the entire thermal coal value chain

- The GCEL includes any company that
  - Is developing new coal mines, coal-fired power plants, or coal-related infrastructure
  - Has a coal share as a percent of revenue that is greater than 10 percent
  - Has a coal share as a percent of power production that is greater than 10 percent
  - Has annual thermal coal production greater than 10 million tons per annum
  - Has annual coal-fired generation capacity greater than 5 gigawatts

Using the GCEL as the basis for a coal exposure calculation

- Often counts the same units of coal multiple times throughout its lifecycle (e.g., by including mining and extraction, transportation, and utility companies)
- Includes companies where there is exposure to coal, but it is not the primary driver of revenue and production
- The data set has expanded over time; the list is updated annually, and inclusion thresholds have decreased since the list was first published

CONCEPT: TRIPLE COUNTING EXPOSURE THROUGH COAL LIFECYCLE

TCFD Sector and Industry (as of December 31, 2023)	Total Value ($ Millions)	Percent of CTF
Agriculture, Food, and Forest Products	$7,060	4.3%
Agriculture	$2,716	1.7%
Beverages	$1,069	0.7%
Packaged Foods and Meats	$2,265	1.4%
Paper and Forest Products	$1,010	0.6%
Energy	$7,445	4.6%
Coal	$109	0.1%
Electric Utilities	$1,827	1.1%
Oil and Gas	$5,510	3.4%
Materials and Buildings	$46,305	28.5%
Capital Goods	$6,242	3.8%
Chemicals	$1,808	1.1%
Construction Materials	$400	0.2%
Metals and Mining	$2,404	1.5%
Real Estate Management and Development	$35,451	21.8%
Transportation	$5,464	3.4%
Air Freight	$1,071	0.7%
Automobiles and Components	$2,104	1.3%
Maritime Transportation	$597	0.4%
Passenger Air Transportation	$569	0.4%
Rail Transportation	$867	0.5%
Trucking Services	$256	0.2%
Total Exposure to TCFD Sectors and Industries	$66,274	40.8%
Total CTF	$162,377[6]	

Dominion Energy (Energy/Electric Utilities)

- A U.S.-based electric utility whose mission is to provide the reliable, affordable, and increasingly clean energy that powers our customers every day
- Through 2023, Dominion has reduced emissions from power generation by 53 percent (2005 baseline) and is committed to achieving net zero emissions by 2050

Core Natural Resources (Energy/Coal)

- Owns and oversees 11 thermal and metallurgical coal mining operations throughout the United States
- Established in January 2025 through a merger between Arch Resources and CONSOL Energy
- Sustainability efforts focused on responsible mining, workplace safety, community engagement, and governance
- No decarbonization plan or net zero commitment

CSX Corporation (Transportation/Rail Transportation)

- Provides rail-based transportation services throughout the United States and Canada
- Railroads are the most environmentally friendly and energy-efficient way to move goods on land
  - On average, CSX moves a ton of freight 500 miles on a single gallon of fuel
- CSX Corporation is committed to reducing its carbon emissions by 37.5 percent by 2030 and achieving net-zero emissions by 2050

CONCEPT: USE OF REVENUES TO CALCULATE COAL EXPOSURE

Company	Urgewald % Coal Revenue	MSCI % Coal Revenue
Core Natural Resources	>90%	82.56%
Dominion Energy	14%	4.51%
CSX Corp	17%	N/A

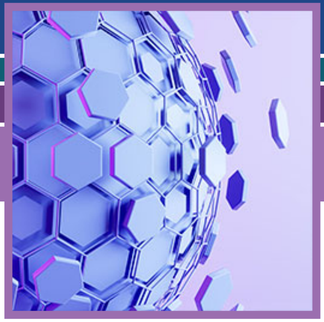
- The GCEL includes Core Natural Resources, Dominion Energy, and CSX Corp
- The WSIB's historical definition of coal only includes Core Natural Resources, as Dominion Energy and CSX Corp have limited revenues tied to coal

Data sets exist today that could help the WSIB calculate its exposure to coal and fossil fuels based on revenue rather than the entire market value of a company

However

- Large differences exist among the data providers for the companies that staff reviewed
- Private asset data is still a gap; would require direct collection from partners or reliance on a third party's efforts (which would be difficult to validate)
- Standardization of definitions among asset owners and stakeholders would help

SUMMARY



SUMMARY

- The WSIB continues to make consistent and measured progress towards its Climate Blueprint objectives
- Work is underway on an updated research paper on the current state of the energy transition, to be presented at the April 2026 Board meeting
- Staff are also focused on developing and enhancing our approach to total portfolio climate risk management aligned with the TCFD, the global standard in climate-related reporting
  - While the TCFD framework is our focus from a climate risk management perspective, we continue to be responsive to stakeholders who have a specific interest in particular areas of climate risk, such as thermal coal
- Staff will continue to adapt and evolve our approach as climate-related data improves and consensus grows around best practices in the area

ASSET CLASS ROLES IN THE COMMINGLED TRUST FUND (CTF)

JULY 16, 2025

Risk Management and Asset Allocation (RMAA)
Li Gao, CFA, CAIA, Senior Investment Officer
Julia Ferreira, CFA, Assistant Senior Investment Officer

OVERVIEW

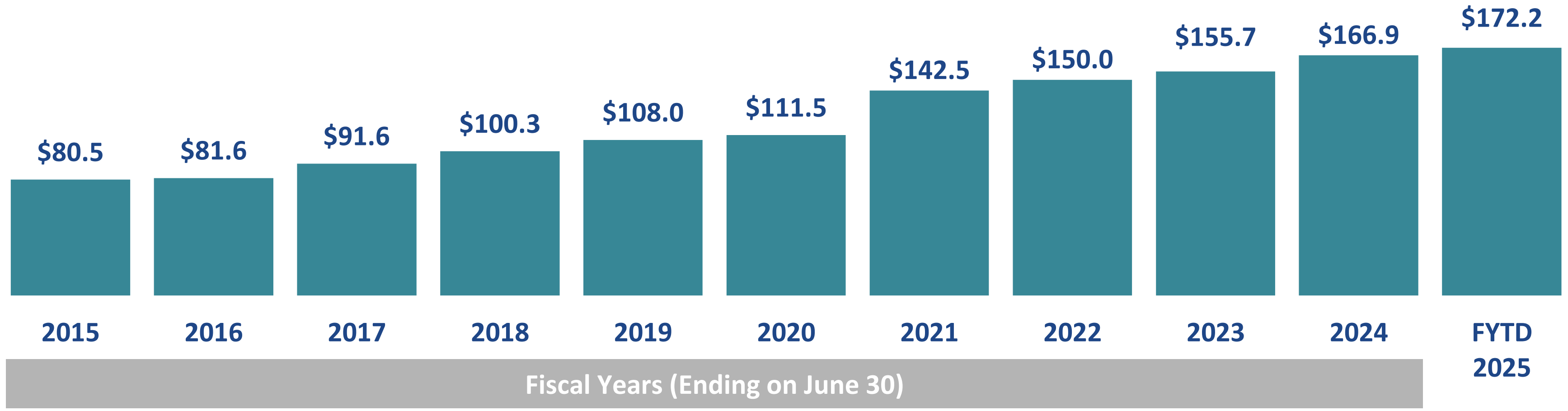
- CTF Overview
- Understanding Asset Class Roles within the CTF
- Managing Private and Public Market Assets
  - Private Equity
  - Real Estate
  - Tangible Assets
  - Public Equity
  - Fixed Income
- Geographic Diversification
- Asset Class Risk Contribution
- Developing New Investment Ideas – Innovation Portfolio
- Key Takeaways

CTF OVERVIEW

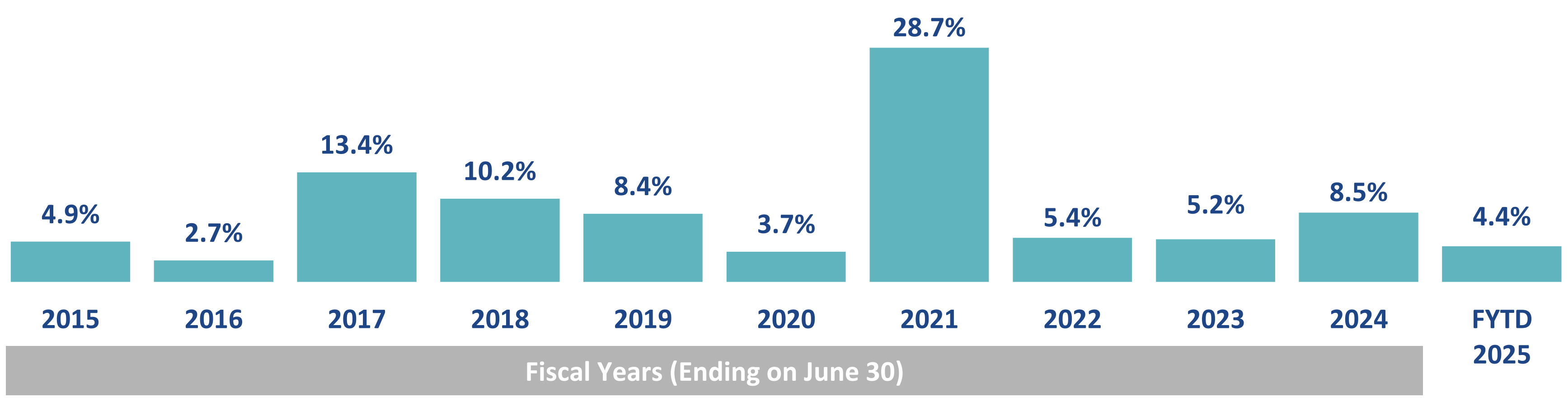
CTF OVERVIEW

HISTORICAL MARKET VALUES AND RETURNS AS OF MARCH 31, 2025

Historical Market Value ($ Billions)



Historical Fund Returns



CTF OVERVIEW

MARKET VALUES, RETURNS, AND ASSET ALLOCATION AS OF MARCH 31, 2025

Market Values ($Billions) and Returns

		1 Year	3 Year	5 Year	10 Year
Total CTF	$172.2	5.90%	4.60%	10.91%	8.93%
Passive Benchmark		6.21%	4.98%	10.64%	6.84%
IVA Benchmark		8.63%	5.12%	9.60%	8.02%
Fixed Income	$27.0	5.53%	2.12%	1.56%	2.66%
Tangible Assets	$12.4	7.93%	8.02%	9.88%	7.07%
Real Estate	$32.6	1.00%	4.05%	10.05%	10.47%
Public Equity	$45.5	5.80%	7.33%	15.43%	9.03%
Private Equity	$50.3	8.95%	3.20%	13.83%	13.40%
Innovation Portfolio	$2.1	8.57%	6.93%	10.96%	-0.75%
Cash	$2.4	5.17%	4.53%	2.75%	2.03%

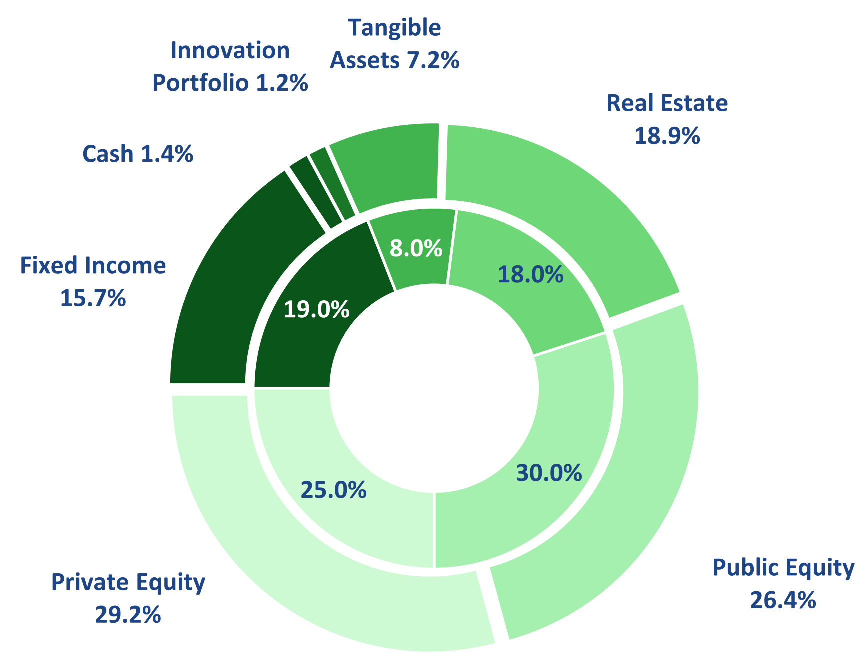
Since Inception Return

Since Inception Return of the CTF (June 1992)

8.88%

Actual Asset Allocation

Outer Circle – Actual, Inner Circle – Long-Term Target

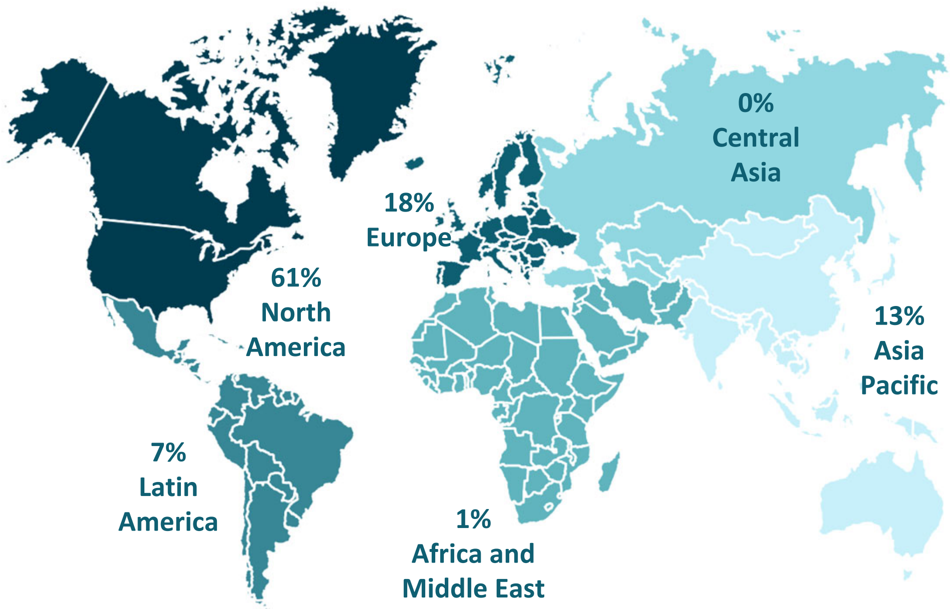


CTF Passive Benchmark: 69 percent MSCI ACWI IMI with U.S. Gross and 31 percent Bloomberg U.S. Universal, with a custom historical blend applied. The Implementation Value Added Benchmark consists of market indices, as defined in each asset class's policy, weighted according to the asset allocation targets. Totals in the pie chart may not add up to 100 percent due to rounding.

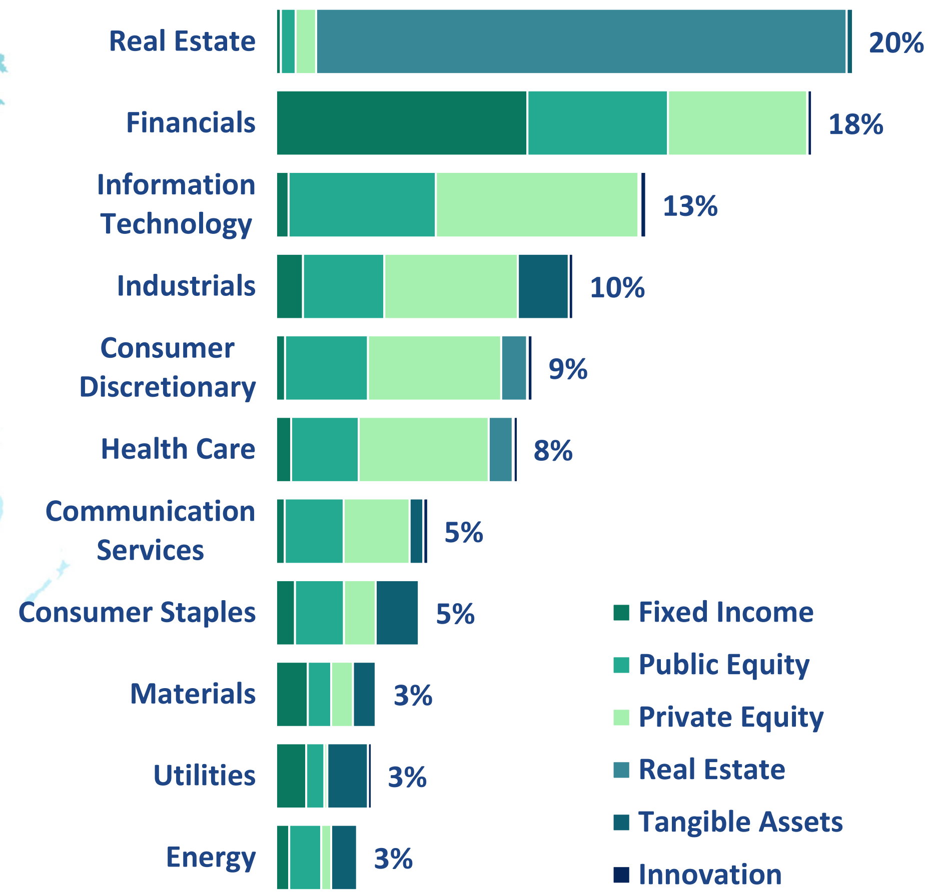
CTF OVERVIEW

GEOGRAPHIC AND INDUSTRY EXPOSURE AS OF MARCH 31, 2025

Geographic Exposure



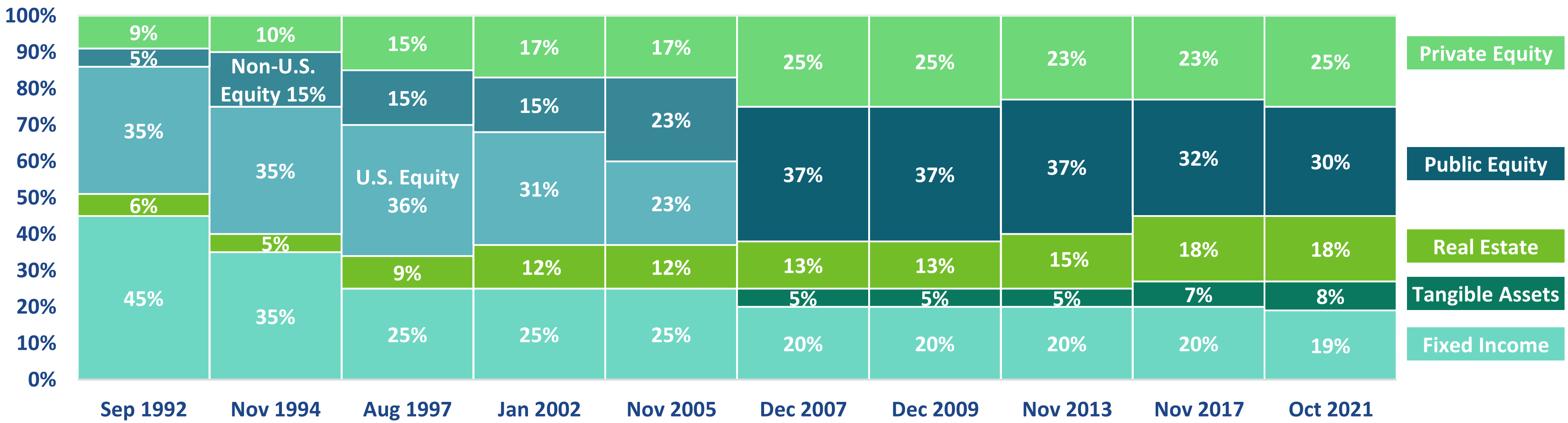
Industry Exposure



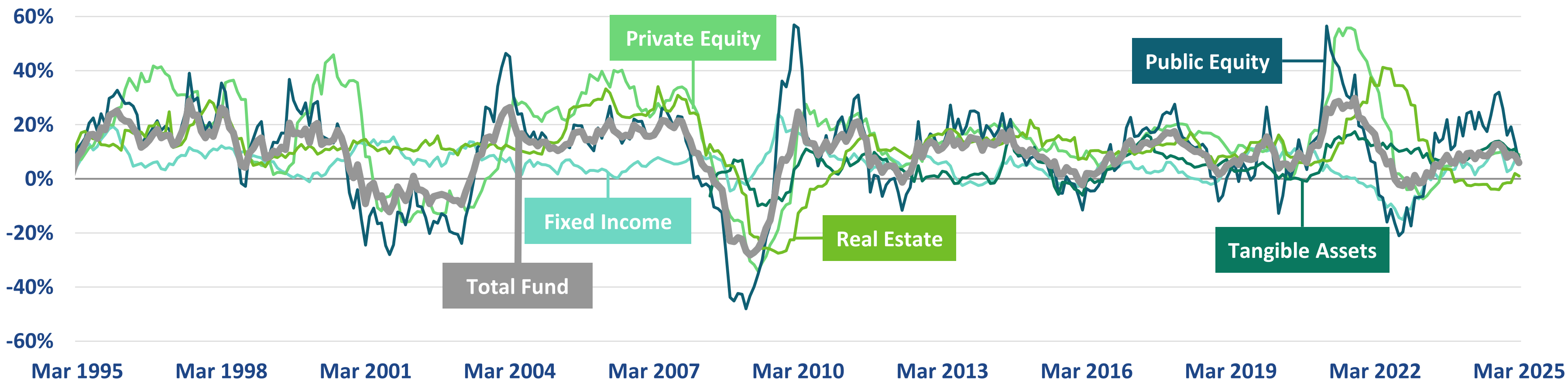
Not shown: Supranational exposures that total less than 2 percent. Country exposure is defined by a company's country of incorporation and by the exchange of its primary listing. CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners.

HISTORICAL ASSET ALLOCATION AND ROLLING 1-YEAR RETURNS AS OF MARCH 31, 2025

Historical Strategic Asset Allocation



CTF Rolling 1-Year Returns by Asset Class



UNDERSTANDING ASSET CLASS ROLES WITHIN THE CTF



ASSET ALLOCATION CONSIDERATIONS

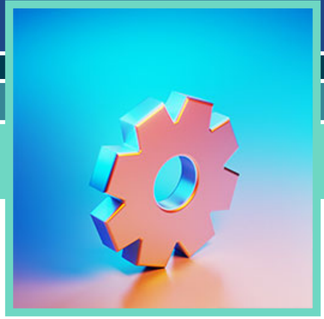
- **The Washington State Investment Board (WSIB) takes a total portfolio approach when making asset allocation decisions**
- **Specific attributes need to be considered when evaluating the role of each asset class**

UNDERSTANDING ASSET CLASS ROLES WITHIN THE CTF

Income-Oriented → Growth-Oriented

	Fixed Income	Private Credit*	Tangible Assets	Real Estate	Public Equity	Private Equity
Objectives	■ Liquidity ■ Current income ■ Deflation protection	■ Current income ■ Interest rate protection	■ Current income ■ Inflation protection	■ Current income ■ Capital appreciation ■ Inflation protection	■ Capital appreciation ■ Liquidity	■ Highest expected return
Characteristics	■ Active internal management ■ Credit oriented ■ Emerging market exposure	■ Externally managed ■ Illiquid, medium-term commitments	■ External and direct investments ■ Illiquid, long-lived assets ■ Upstream and midstream focus	■ Actively managed via external real estate operating companies ■ Diversification by geography and property type	■ Globally oriented ■ Externally managed ■ Mostly passive ■ Low cost	■ Externally managed ■ Long-term commitments
Key Risks	■ Interest rates ■ Credit ■ Inflation ■ Currency	■ Credit ■ Illiquidity	■ Supply/demand shocks ■ Illiquidity ■ Leverage ■ Deflation	■ Operating ■ Key person ■ Low growth ■ Currency ■ Illiquidity ■ Leverage	■ Low growth ■ Currency	■ Low growth ■ Illiquidity ■ Leverage ■ Currency

*Private credit is incorporated in the 2025 strategic asset allocation study for evaluation as a standalone asset class in the CTF.



MANAGING PRIVATE AND PUBLIC MARKET ASSETS

Objective

- Contribute to enhanced total returns through well-diversified, long-term exposure to select private equity partners and segments

Key Risks

- Low growth
- Illiquidity
- Leverage
- Currency

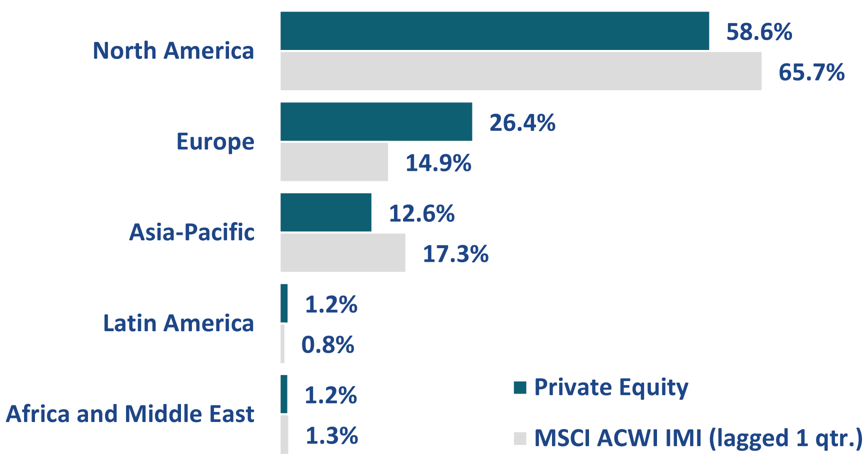
WSIB Approach

- Long-term commitments to general partners
- Diversified by fund, general partner, geography, strategy, sub-sector, industry, and vintage year
- Primarily comprised of buyouts with limited exposure to venture capital, which is a higher risk strategy
- Mature program
- Invest primarily with general partners who have extensive track records
- Preference for partners with successful existing WSIB relationships
- No direct investments
- Active and growing co-investment program
- Higher-cost asset class implemented with a lower-cost strategy

MANAGING PRIVATE AND PUBLIC MARKET ASSETS

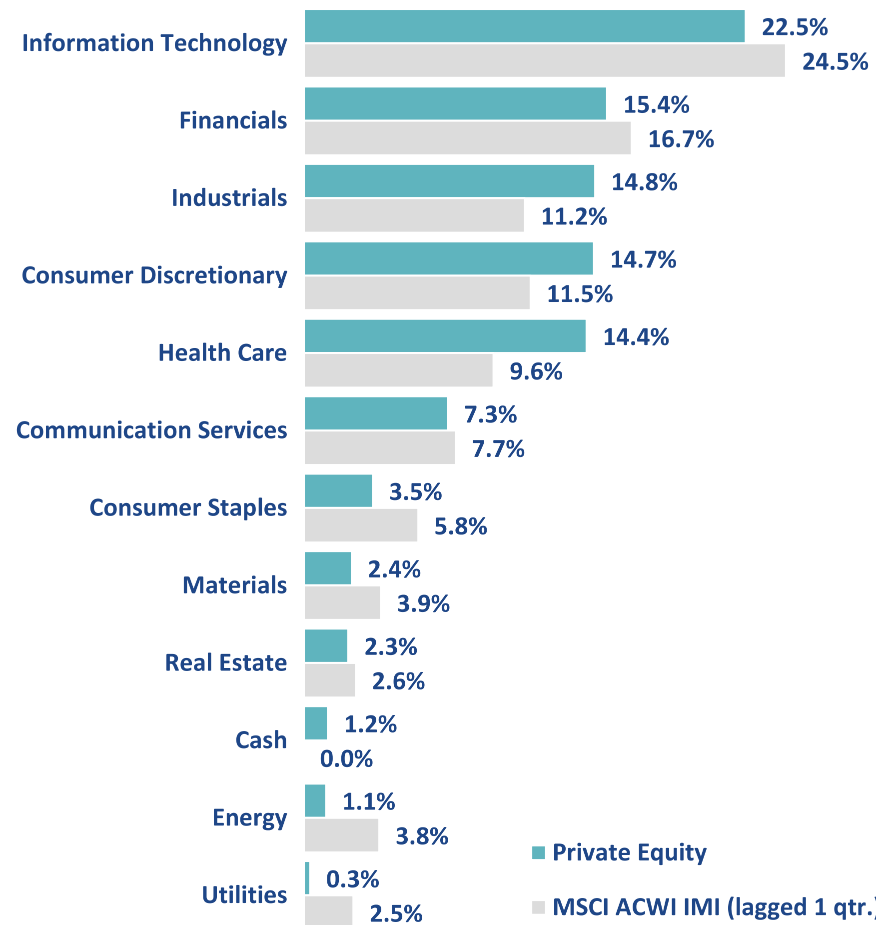
PRIVATE EQUITY

Geographic Concentration



	Market Value ($ Billions)	% of Asset Class	% CTF
UNITED STATES	$28,629	57%	16%
UNITED KINGDOM	$3,077	6%	2%
GERMANY	$2,244	4%	1%
CHINA	$1,995	4%	1%
INDIA	$1,926	4%	1%
Total of Top 5	$37,871	75%	22%

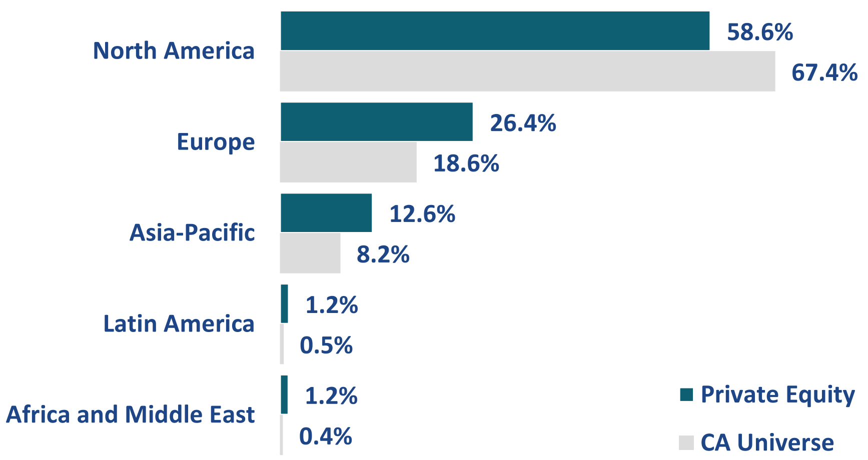
Industry Concentration



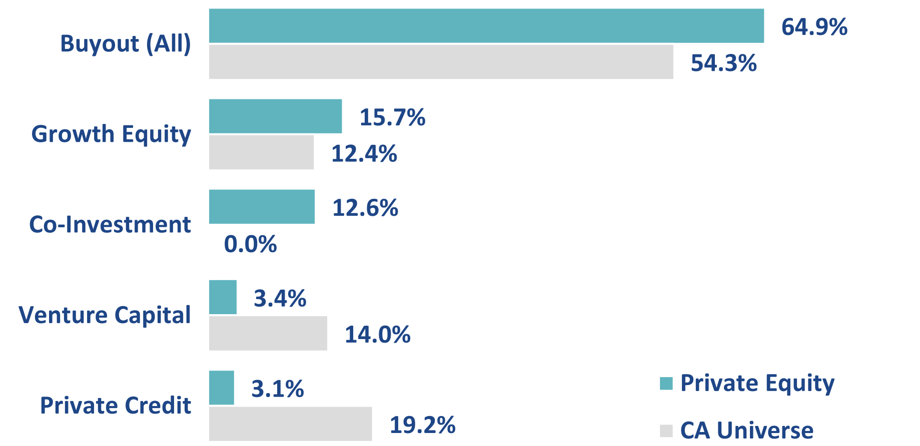
CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners. Totals may not add up to 100 percent due to rounding.

PRIVATE EQUITY – ALTERNATIVE CUSTOM COMPARISON

Geographic Concentration



Strategy Concentration

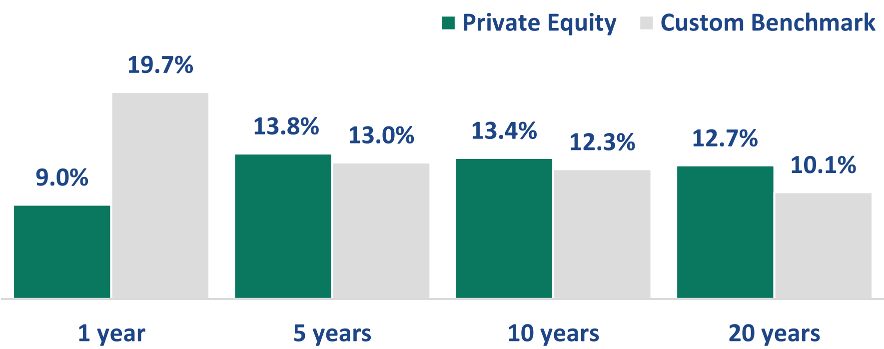


How does WSIB private equity compare to the private equity universe?

- The Cambridge Associates (CA) Index measures the composition and performance of limited partner investments in private assets
- To ensure a fair comparison, we consider only strategies in which WSIB private equity invests
  - Exclude real assets and secondary funds
  - Co-investment is an investment vehicle that could be used for multiple strategies. The majority of WSIB co-investment is buyout strategy

CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners. Totals may not add up to 100 percent due to rounding.

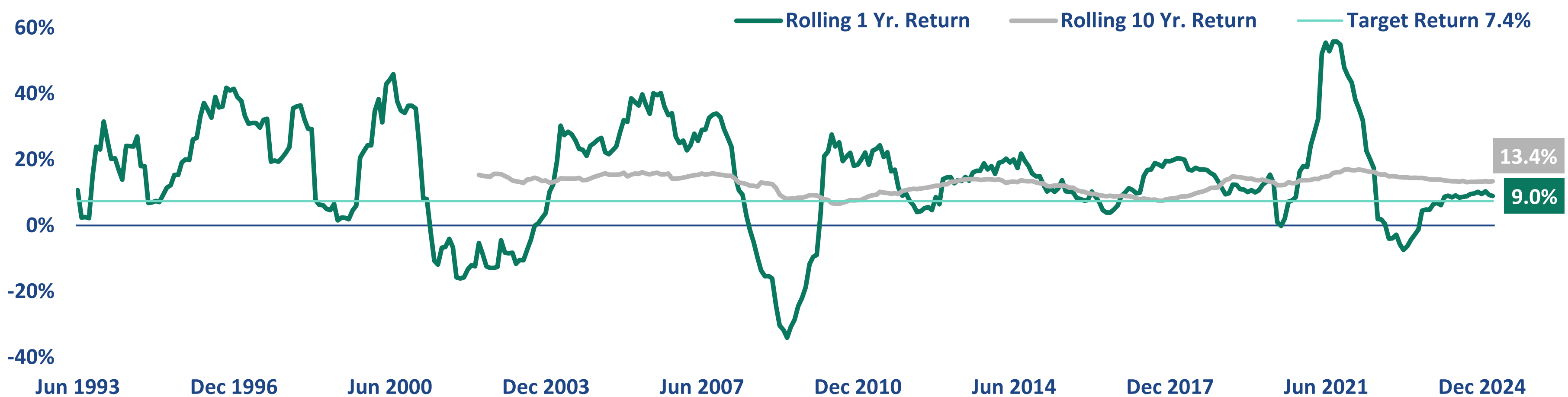
Annualized Returns



Current Capital Market Assumption

- 8.3 percent Compound Return
- 25.0 percent Standard Deviation

Rolling 1-Year and 10-Year Annualized Returns



Private equity benchmark is a custom historical blend; it is currently the MSCI ACWI IMI with U.S. Gross Total Return (lagged one quarter) + 300 basis points (bps). Performance numbers are as of March 31, 2025. Totals may not add up to 100 percent due to rounding. Target return refers to the median forecast 15-year return for the CTF of 7.4 percent based on the 2025 CMAs; the corresponding mean forecast return is 7.2 percent.

Objective

- Generate stable investment income and appreciation through long-term exposure to high-quality real estate
- Provide inflation protection

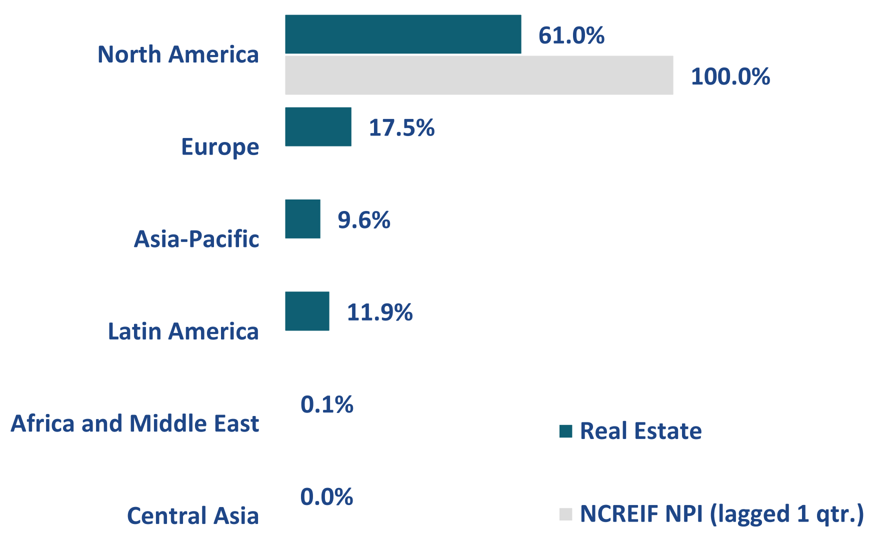
Key Risks

- Operating
- Key person
- Low growth
- Illiquidity
- Leverage
- Currency

WSIB Approach

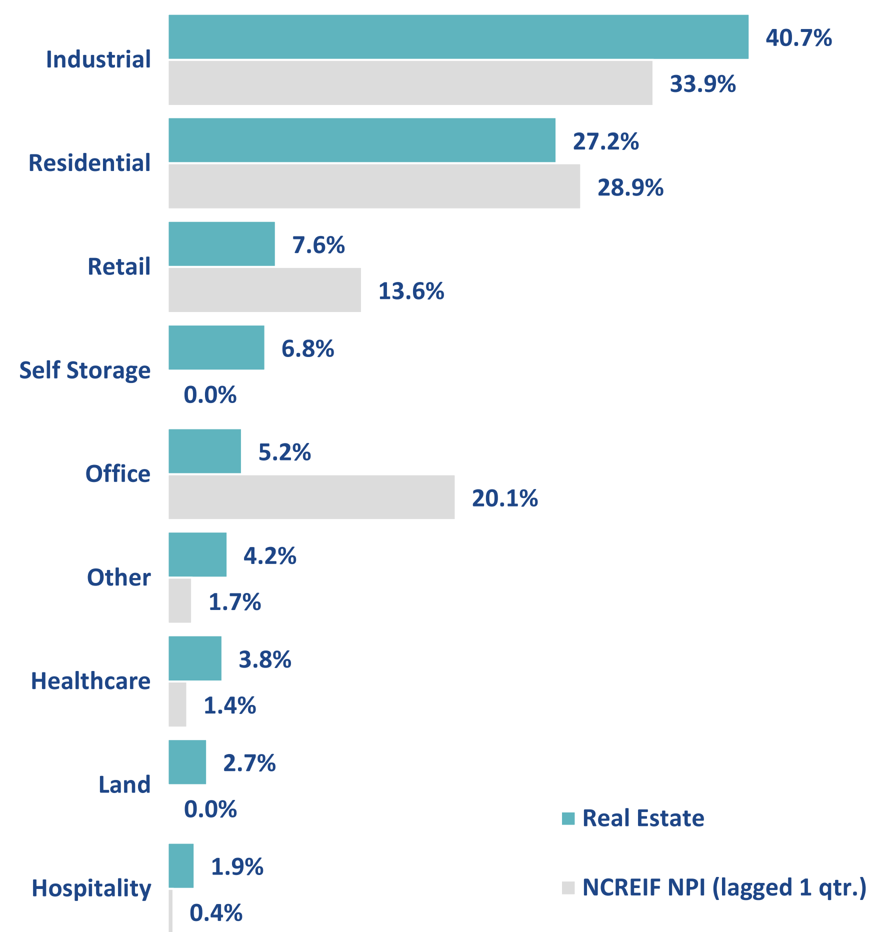
- Long-term commitments to real estate operating companies (REOCs) that invest on behalf of the WSIB
- Broadly diversified across multiple investment partners, property types, and geographies
- Mature program focused on broadening and deepening its strategy
- Low exposure to the historically more volatile sectors of the real estate market (e.g., office, hotels, malls)
- Majority of capital is focused on necessity-based property types
  - Includes grocery-anchored retail, industrial warehouses, self-storage, and middle-income housing
- Avoid trophy properties that are overvalued

Geographic Concentration



	Market Value ($ Billions)	% of Asset Class	% CTF
UNITED STATES	$21,396	61%	12%
MEXICO	$2,967	8%	2%
UNITED KINGDOM	$2,573	7%	1%
NETHERLANDS	$1,883	5%	1%
JAPAN	$1,163	3%	1%
Total of Top 5	$29,982	86%	17%

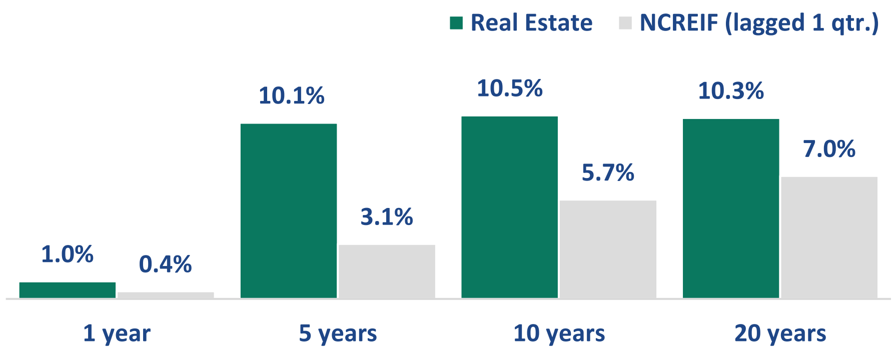
Industry Concentration



CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners. Totals may not add up to 100 percent due to rounding. NCREIF "Other" is composed of data centers, operating land, and parking. WSIB "Other" is composed of funeral homes, mixed use, and loan and mortgage pools.

REAL ESTATE

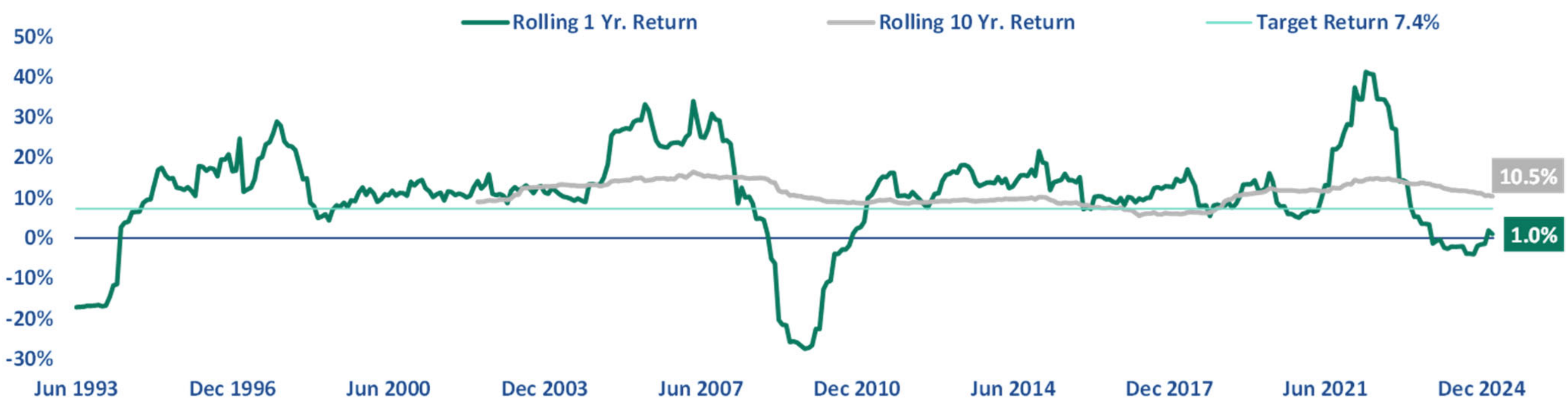
Annualized Returns



Current Capital Market Assumption

- 6.6 percent Compound Return
- 13.0 percent Standard Deviation

Rolling 1-Year and 10-Year Annualized Returns



Real estate benchmark is 8.0 percent return over a 10-year period. The National Council of Real Estate Investment Fiduciaries (NCREIF) National Property Index (NPI index) is used for comparison purposes. Performance numbers are as of March 31, 2025. Totals may not add up to 100 percent due to rounding. Target return refers to the median forecast 15-year return for the CTF of 7.4 percent based on the 2025 CMAs; the corresponding mean forecast return is 7.2 percent.

Objective

- Generate long-term, predictable and persistent income and appreciation at least commensurate with inflation
- Provide inflation protection

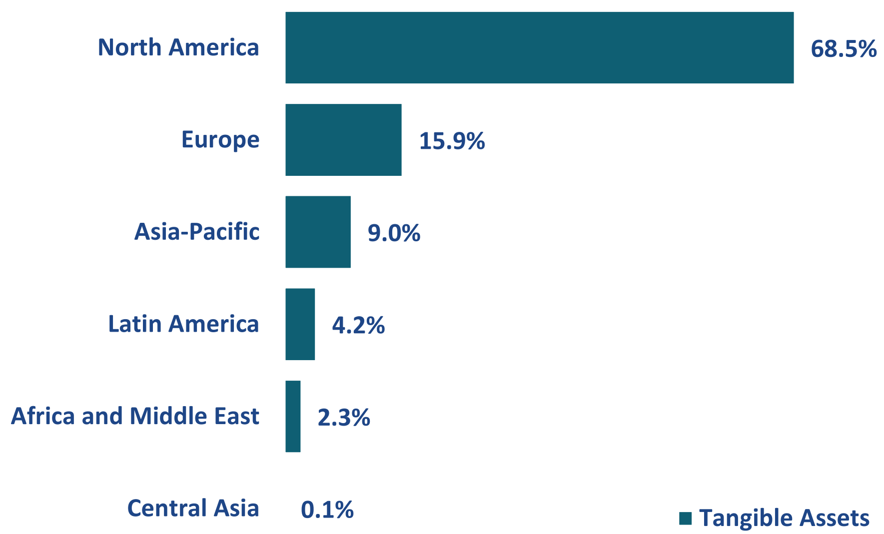
Key Risks

- Supply/demand shocks
- Illiquidity
- Leverage
- Deflation

WSIB Approach

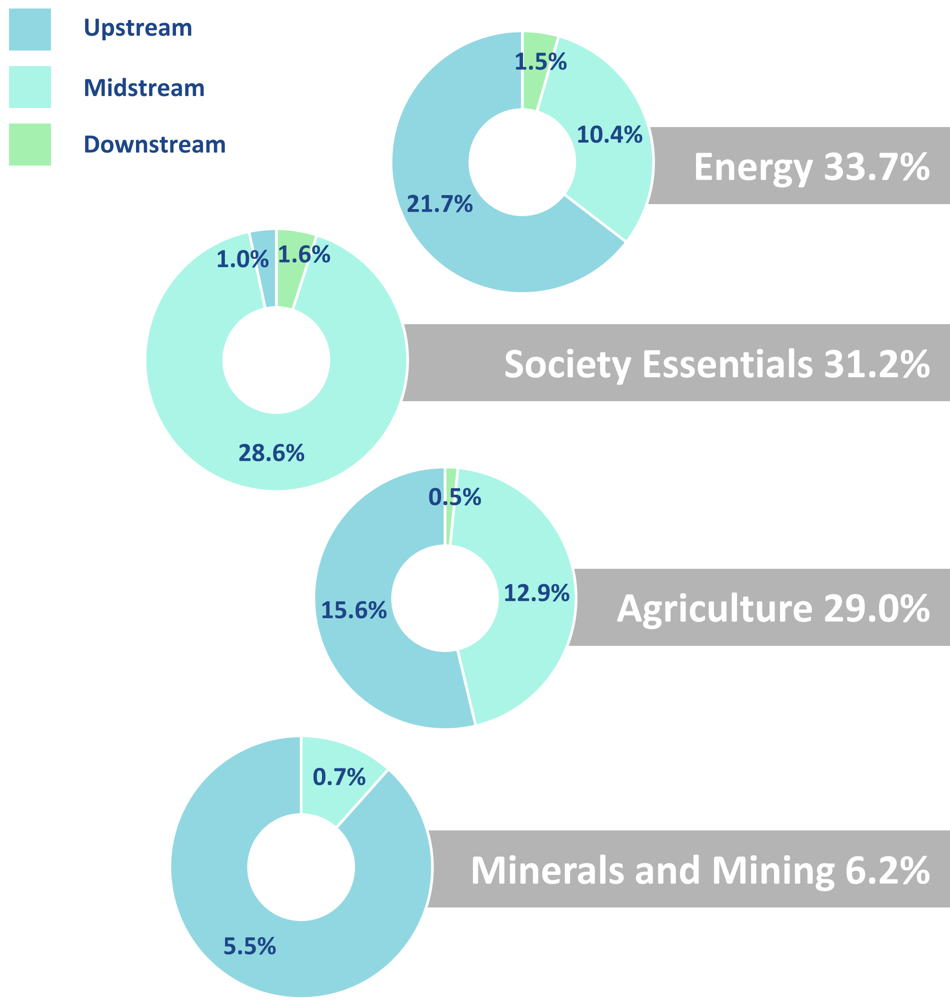
- Focus on upstream and midstream segments in four main industries: Minerals and Mining, Energy, Agriculture, and Society Essentials
- Diversified across industry, segment, and geography
- Newer and growing program
- Long holding periods, in line with the economic and/or physical lifespan of the asset
- Assets with lower leverage levels
- Asset mix weighted toward developed and operational versus non-contracted or long-duration buildouts

Geographic Concentration



	Market Value ($ Billions)	% of Asset Class	% CTF
UNITED STATES	$8,257	66%	5%
UNITED KINGDOM	$793	6%	0%
AUSTRALIA	$737	6%	0%
IRELAND	$430	3%	0%
GERMANY	$387	3%	0%
Total of Top 5	$10,604	84%	6%

Industry and Segment Concentration



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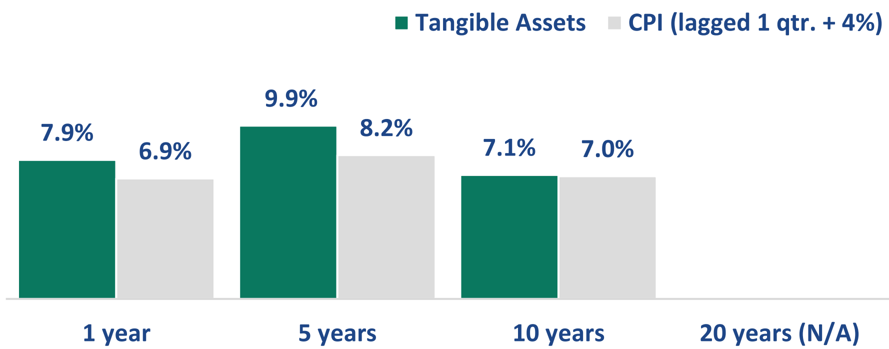
TANGIBLE ASSETS

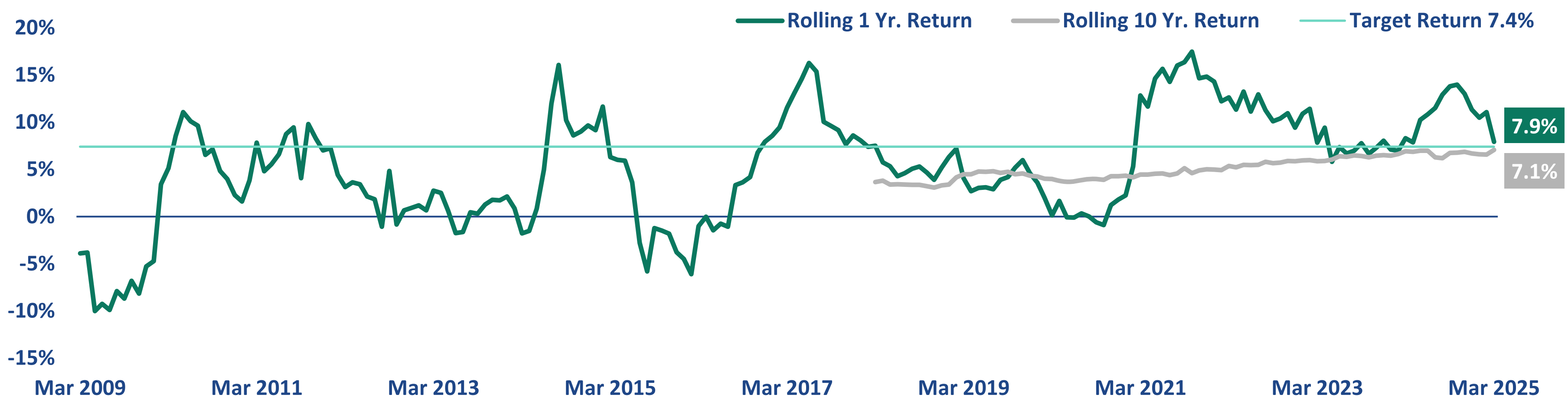
Annualized Returns



Current Capital Market Assumption

- 6.4 percent Compound Return
- 12.0 percent Standard Deviation

Rolling 1-Year and 10-Year Annualized Returns



Tangible assets benchmark is Consumer Price Inflation (CPI), lagged one quarter, plus 400 bps. Performance numbers are as of March 31, 2025. Totals may not add up to 100 percent due to rounding. Target return refers to the median forecast 15-year return for the CTF of 7.4 percent based on the 2025 CMAs; the corresponding mean forecast return is 7.2 percent.

PUBLIC EQUITY

Objective

- Long-term capital appreciation consistent with prudent risk management and the desire for downside protection
- Liquidity

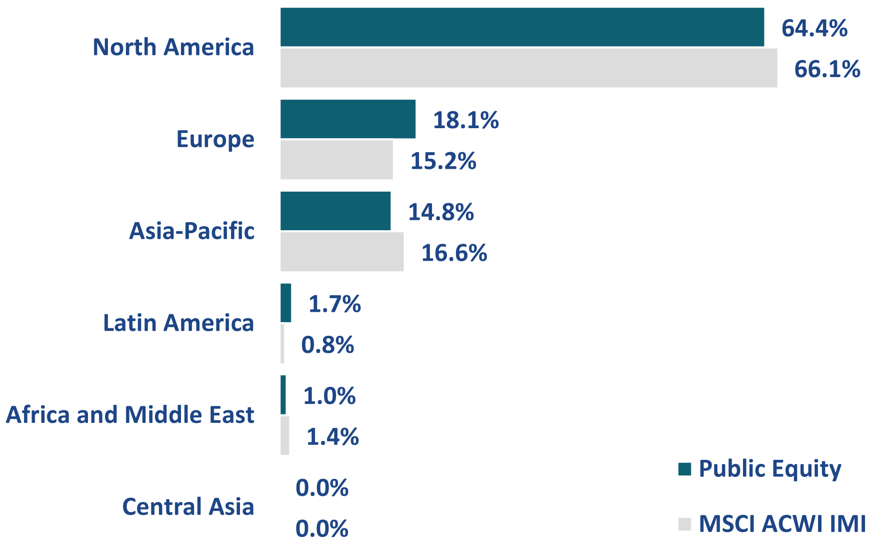
Key Risks

- Low growth environment
- Currency

WSIB Approach

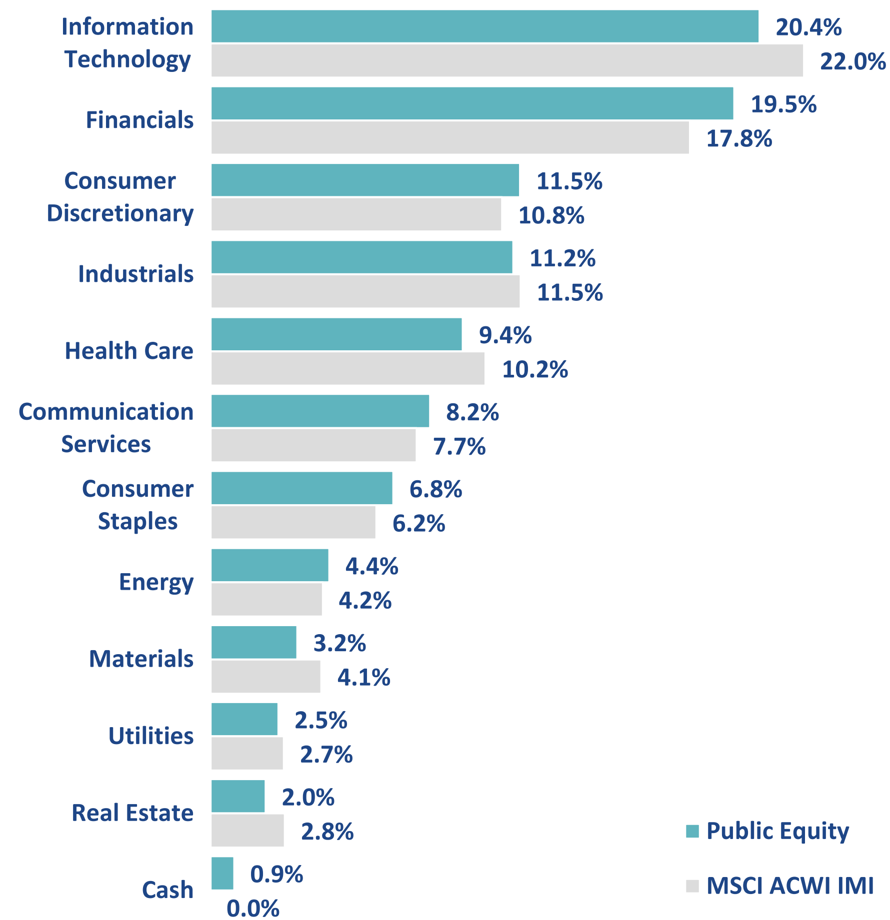
- Globally oriented
- Externally managed
- Significant passive management
- Selective active management
- Scale creates significant cost advantages

Geographic Concentration



	Market Value ($ Billions)	% of Asset Class	% CTF
UNITED STATES	$27,947	62%	16%
JAPAN	$2,078	5%	1%
UNITED KINGDOM	$1,712	4%	1%
CHINA	$1,467	3%	1%
CANADA	$1,281	3%	1%
Total of Top 5	$34,485	76%	20%

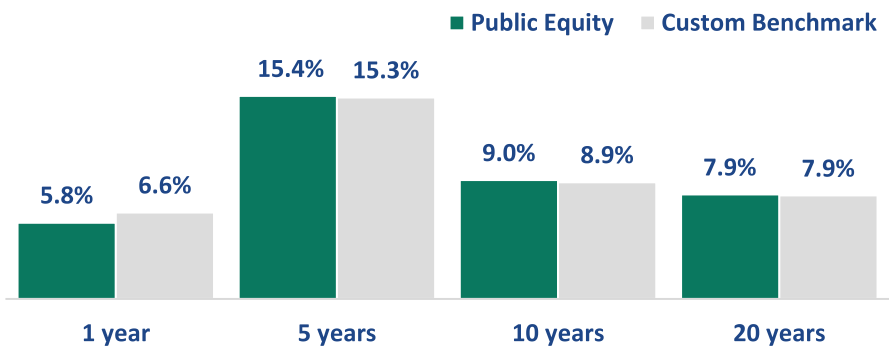
Industry and Segment Concentration



CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners. Totals may not add up to 100 percent due to rounding.

PUBLIC EQUITY

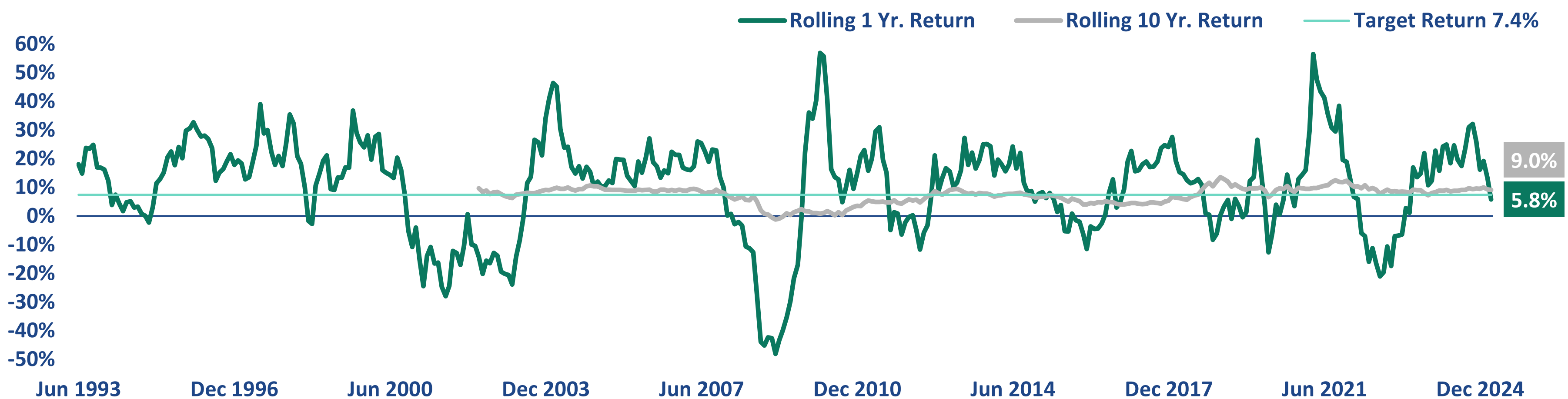
Annualized Returns



Current Capital Market Assumption

- 6.5 percent Compound Return
- 18.0 percent Standard Deviation

Rolling 1-Year and 10-Year Annualized Returns



Public equity benchmark is a custom historical blend; it is currently the MSCI ACWI IMI with U.S. Gross Total Return. Performance numbers are as of March 31, 2025. Totals may not add up to 100 percent due to rounding. Target return refers to the median forecast 15-year return for the CTF of 7.4 percent based on the 2025 CMAs; the corresponding mean forecast return is 7.2 percent.

FIXED INCOME

Objective

- Current income
- Diversification
- Liquidity
- Deflation protection

Key Risks

- Interest rates
- Credit
- Inflation
- Currency

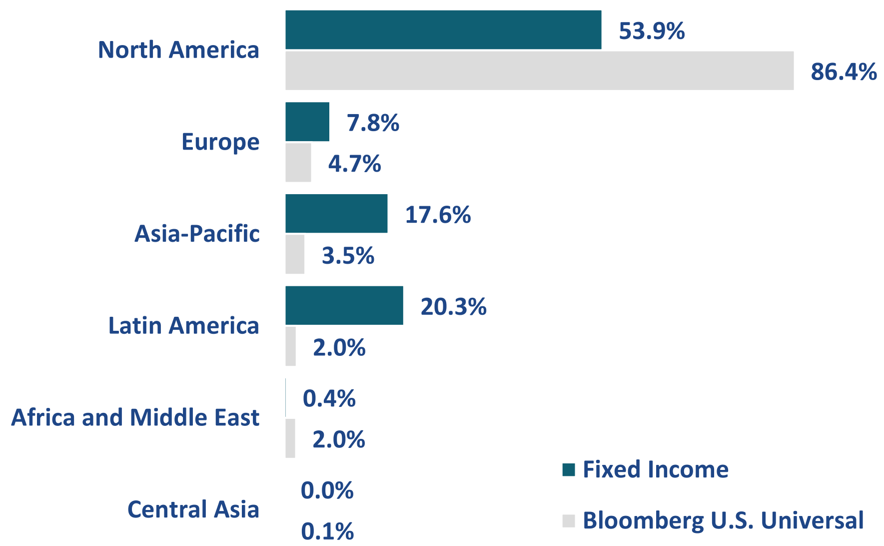
WSIB Approach

- Actively managed internally
- Primarily investment grade
- Large emerging market and credit exposures

MANAGING PRIVATE AND PUBLIC MARKET ASSETS

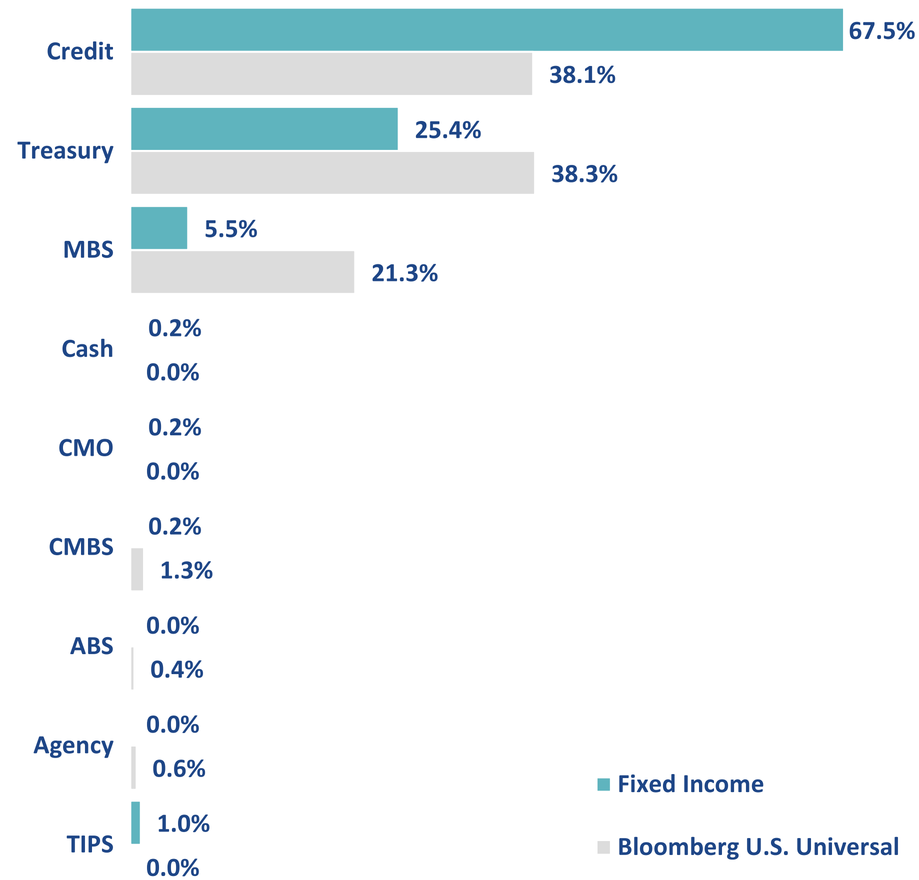
FIXED INCOME

Geographic Concentration



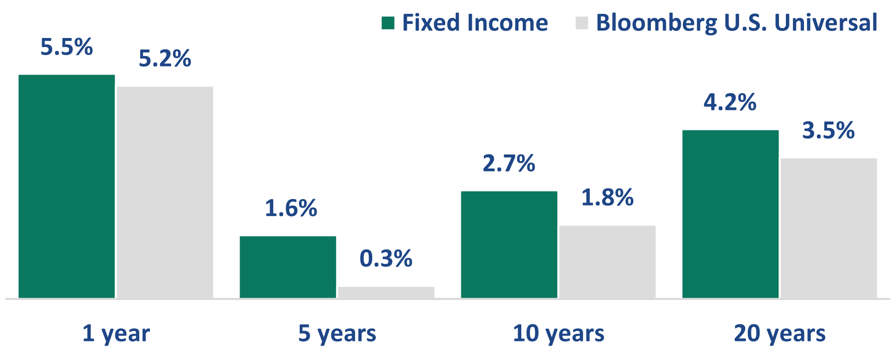
	Market Value ($ Billions)	% of Asset Class	% CTF
UNITED STATES	$13,899	52%	8%
BRAZIL	$1,900	7%	1%
AUSTRALIA	$1,334	5%	1%
CHILE	$1,208	5%	1%
JAPAN	$870	3%	0%
Total of Top 5	$19,211	72%	11%

Industry and Segment Concentration



MBS = Mortgage-Backed Securities; CMO = Collateralized Mortgage Obligation; CMBS = Commercial Mortgage-Backed Securities; ABS = Asset-Backed Securities; TIPS = Treasury Inflation-Protected Securities. CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners. Totals may not add up to 100 percent due to rounding.

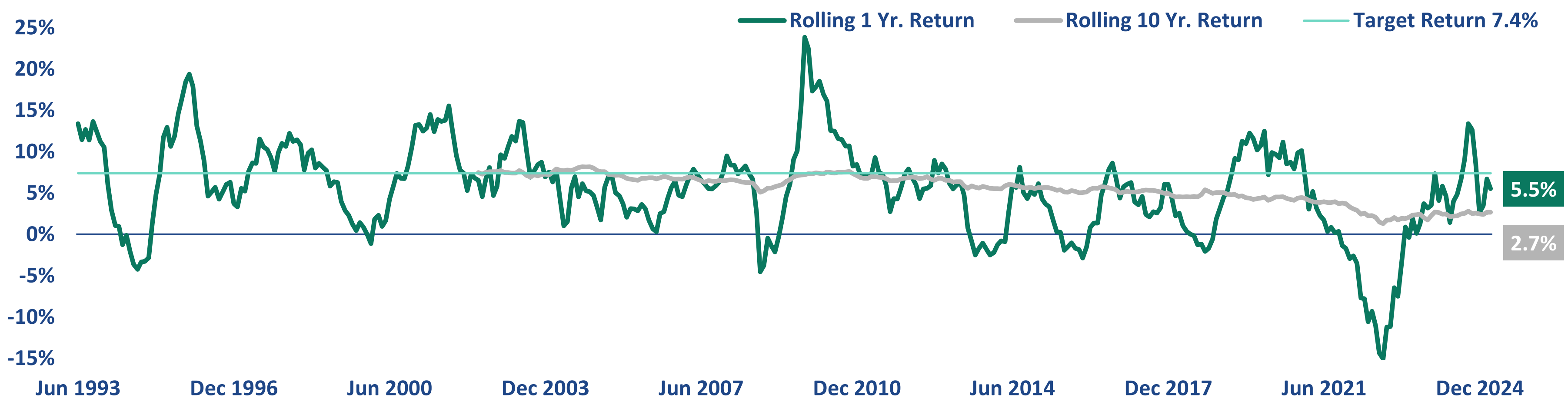
Annualized Returns



Current Capital Market Assumption

- **4.9 percent Compound Return**
- **6.0 percent Standard Deviation**

Rolling 1-Year and 10-Year Annualized Returns



Fixed income benchmark is the Bloomberg U.S. Universal. Performance numbers are as of March 31, 2025. Totals may not add up to 100 percent due to rounding. Target return refers to the median forecast 15-year return for the CTF of 7.4 percent based on the 2025 CMAs; the corresponding mean forecast return is 7.2 percent.

GEOGRAPHIC DIVERSIFICATION

GEOGRAPHIC DIVERSIFICATION

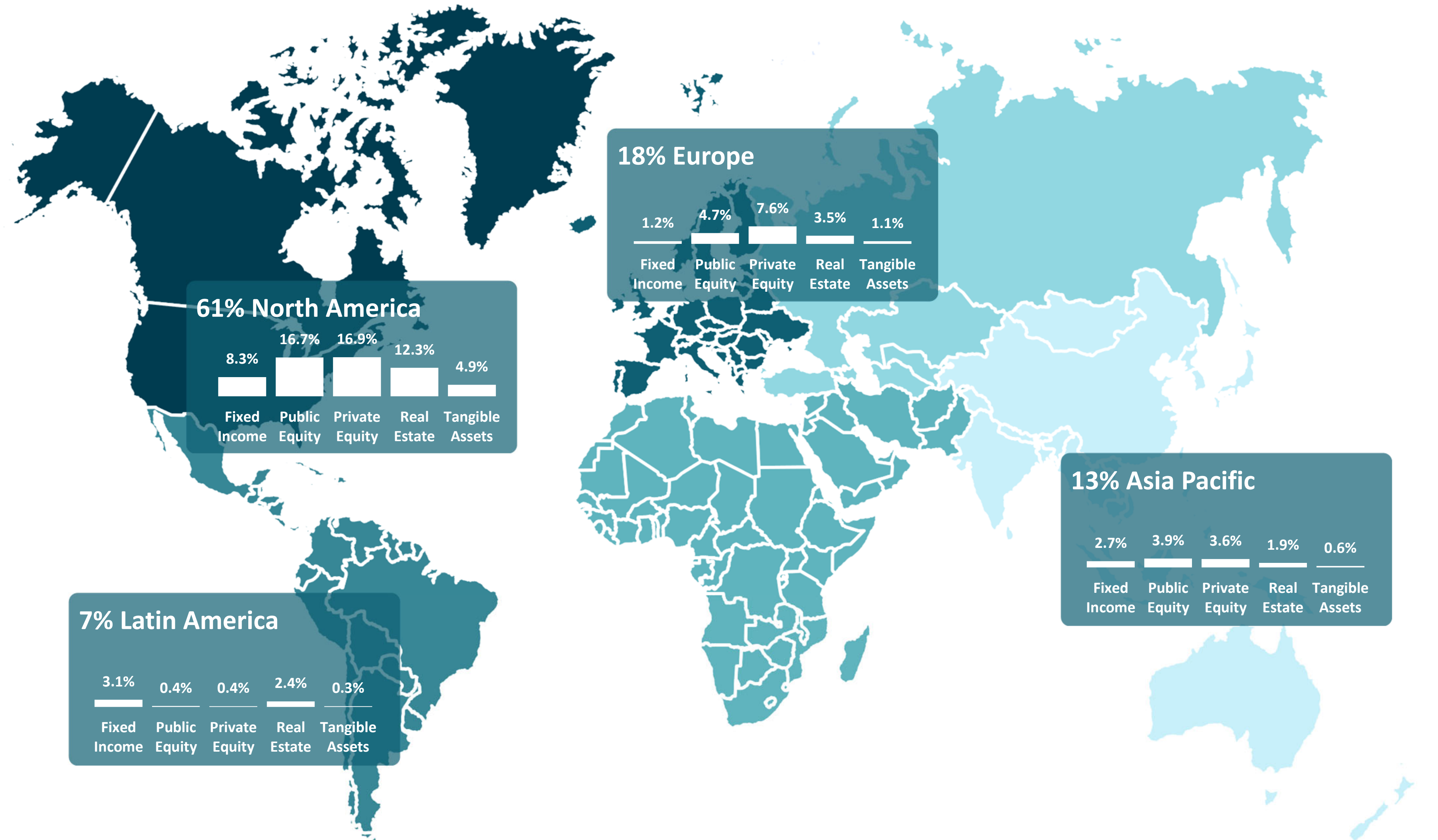
Geographic diversification is one way that investing across multiple asset classes enhances CTF diversification

- **The CTF's exposure to a single country might be concentrated in one or two asset classes**
  - **In a given country, some asset classes might not be available to the WSIB or might not be attractive from an investment standpoint for various reasons**
    - **For example, in Japan, the CTF investments are primarily through public equity, while investments in Brazil are primarily through fixed income**

At the CTF level, these country differences tend to balance each other out

GEOGRAPHIC DIVERSIFICATION

CONCENTRATION BY CONTINENT AS OF MARCH 31, 2025



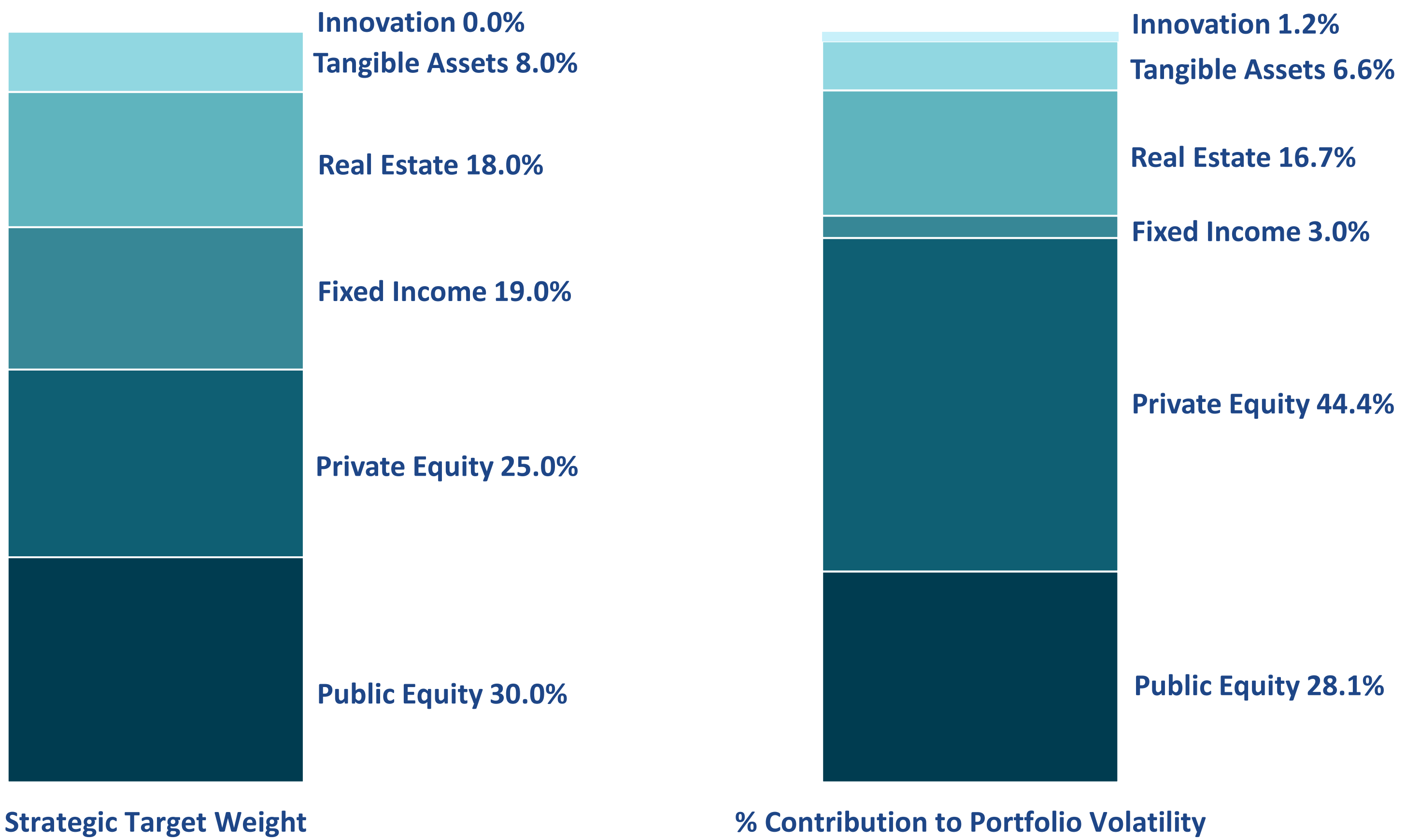
Not shown: Africa and Middle East, Central Asia, and Supranational exposures that total less than 2 percent. Country exposure is defined by a company's country of incorporation and by the exchange of its primary listing. CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners.

ASSET CLASS RISK CONTRIBUTION



ASSET CLASS RISK CONTRIBUTION

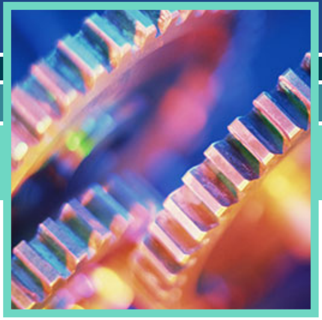
- About 72 percent of the forecast volatility for the CTF comes from equities, both public and private
- Fixed income only accounts for 3 percent of the forecast volatility



Risk forecast as of March 31, 2025. Source: BarraOne. CTF holdings are as of March 31, 2025, with private assets lagged 1-2 quarters based on when the data is received from partners. Totals may not add up to 100 percent due to rounding.

DEVELOPING NEW INVESTMENT IDEAS
INNOVATION PORTFOLIO





DEVELOPING NEW INVESTMENT IDEAS – INNOVATION PORTFOLIO

Objective

- Explore investment concepts that do not fit neatly into existing asset classes
- Potentially incubate scalable investment ideas for the CTF

Risk Constraints

- 0 percent to 5 percent allocation of CTF
- Each investment concept limited to 1 percent of CTF

Current Investment Ideas

- Data Infrastructure – $250M
- Private Credit – $1,875M

Graduated Investment Ideas

- Global Public Equity
- Tangible Assets
- Impact Equity

Investment Approach

- Consider the CTF context when introducing new investment ideas
- Flexibility to invest across asset classes and investment strategies
- Follow industry trends and incorporate forward-looking views
- Ability to take advantage of opportunistic investment concepts
- Prioritize differentiated and scalable investment ideas
- The portfolio is primarily composed of recent private market investments and is subject to the J-curve effect

RECENT INVESTMENT THEMES IN THE INNOVATION PORTFOLIO

Data Infrastructure

- **GI Data Infrastructure Fund – $175 million**
- **GI-MW Data Infrastructure Co-investment Fund – $75 million**

Impact Equity

- **Rise Fund I – $200 million**
- **Rise Fund II – $250 million**
- **The Rise Climate Fund – $325 million**

Private Credit

- **GSO Capital Solutions Fund III, L.P. – $200 million**
- **OHA Artesian Customized Credit Fund I, L.P. – $500 million**
- **Monarch Capital Partners V and IV, L.P. – $350 million**
- **Centerbridge Special Credit Partners IV and V, L.P. – $400 million**
- **Francisco Credit Partners II and III, L.P. – $225 million**
- **Sixth Street Lending Partners – $100 million**
- **Blue Torch Credit Opportunities Unlevered Fund III, L.P. – $100 million**

DEVELOPING A PRIVATE CREDIT PORTFOLIO

Private credit represents a large opportunity set that includes a wide variety of strategies

- **A potential standalone private credit asset class would focus on corporate private credit investments**
  - **Targeted strategies would focus on middle-market companies, typically characterized as below-investment-grade debt, offering diverse risk-return profiles**
    - **Core strategies would target capital preservation and income, such as direct lending**
    - **Satellite strategies would target return enhancement opportunities, such as opportunistic credit and distressed debt**

Current corporate private credit exposure of the CTF is concentrated in opportunistic credit and distressed debt, split between the private equity portfolio and the innovation portfolio

- **As of March 31, 2025, the total market value represented approximately 1.6 percent of the CTF**

Private credit could play a role in the CTF given its attractive risk-adjusted return, predictable income, and potential to enhance portfolio diversification

As the WSIB advances its 2025 strategic asset allocation study, the Board will evaluate private credit within the broader risk, return, and long-term sustainability framework

KEY TAKEAWAYS

KEY TAKEAWAYS

- Diversification is essential to achieving the CTF's mission to maximize return at a prudent level of risk
- The CTF is well-diversified across five asset classes – ranging from more income-focused to more growth-focused – which have their own objectives, characteristics, and risks
  - Private credit is being evaluated as a potential new asset class to further enhance portfolio diversification
- The WSIB leverages its expertise and long investment horizon through its chosen implementation strategy within each asset class
  - Public equity: global portfolio with a large passive management component
  - Fixed income: active internal management with large credit and emerging market exposures
  - Private equity: investing with high-quality general partners, focusing on buyout and growth strategies
  - Real estate: long-term commitments to real estate operating companies in which WSIB maintains strong governance rights
  - Tangible assets: focus on minerals and mining, energy, agriculture, and society essentials
  - Private credit (potential): focus on below-investment-grade private corporate credit investments
- The innovation portfolio seeks to explore newer investment concepts that do not fit neatly into existing asset classes

APPENDIX

CTF PASSIVE BENCHMARK

A custom benchmark consisting of public market indices designed to approximate the risk-return profile of a passive implementation

Current composition[1] – Board approved December 2007

- 69 percent MSCI ACWI IMI with U.S. Gross
- 31 percent Bloomberg U.S. Universal

CTF IMPLEMENTATION VALUE ADDED BENCHMARK

Represents the weighted average of strategic target allocations of CTF's asset classes

- A non-investable benchmark that provides a reference for the value added by staff's implementation of the CTF's strategic asset allocation

Current composition[1] – Board approved December 2007

- 19 percent Bloomberg U.S. Universal
- 30 percent MSCI ACWI IMI with U.S. Gross
- 25 percent MSCI ACWI IMI with U.S. Gross lagged one quarter plus 300 bps
- 18 percent NCREIF NPI Index lagged one quarter
- 8 percent U.S. CPI lagged one quarter plus 400 bps

[1] The benchmark has changed over time, resulting in a custom historical blend that reflects changes in allocation targets and evolving strategies.

CTF CURRENT BENCHMARKS
CTF ASSET CLASSES

Asset Class	Benchmark	Approval
FIXED INCOME	Bloomberg U.S. Universal Index	Board Approved June 2002
PUBLIC EQUITY	MSCI All Country World Index (ACWI) Investable Market Index (IMI) with U.S. Gross[1]	Board Approved December 2011
PRIVATE EQUITY	MSCI ACWI IMI with U.S. Gross lagged one quarter plus 300 basis points (bps)[1]	Board Approved December 2016
REAL ESTATE	8 percent annualized rate of return over the 10-year period[1, 2]	Board Approved February 2010
TANGIBLE ASSETS	U.S. CPI lagged one quarter plus 400 bps	Board Approved January 2008
INNOVATION PORTFOLIO	Capital-weighted average of the underlying benchmarks for each investment concept within the portfolio	Board Approved September 2005

[1] The benchmark has changed over time, resulting in a custom historical blend that reflects changes in allocation targets and evolving strategies.
[2] The National Council of Real Estate Investment Fiduciaries (NCREIF) National Property Index (NPI index) is used for comparison purposes.

PERSPECTIVES ON ILLIQUIDITY
PART 1: COMMINGLED TRUST FUND (CTF) LIQUIDITY PROFILE

JULY 16, 2025

Risk Management and Asset Allocation

Chris Green, Ph.D., CFA, CAIA, Assistant Senior Investment Officer

Matt Gay, CFA, CAIA, Investment Officer

AGENDA

- Summary
- Liquid and Illiquid Assets
- CTF Liquidity Profile
- Next Steps
- Appendix

SUMMARY

A key consideration in developing the CTF's asset allocation is its liquidity needs

- **Liquidity is defined as the ability to readily convert assets to cash**
- **Liquidity is needed to satisfy beneficiary payments as well as private market capital calls**
- **Liquidity needs may be significantly higher during and after a market crisis**
- **Insufficient liquidity on hand during a crisis might have adverse consequences for the portfolio and the agency**

The Board has historically sought to maximize long-term returns via material allocations to private markets investments

The purpose of the education sessions on liquidity is to familiarize the Board with the Washington State Investment Board's (WSIB's) contractual commitments over time and the sources expected to be used to fund those commitments

- **The CTF liquidity profile information provides context for the 2025 CTF Strategic Asset Allocation (SAA) study, specifically, the Board's decision regarding the public and private markets mix in the portfolio**

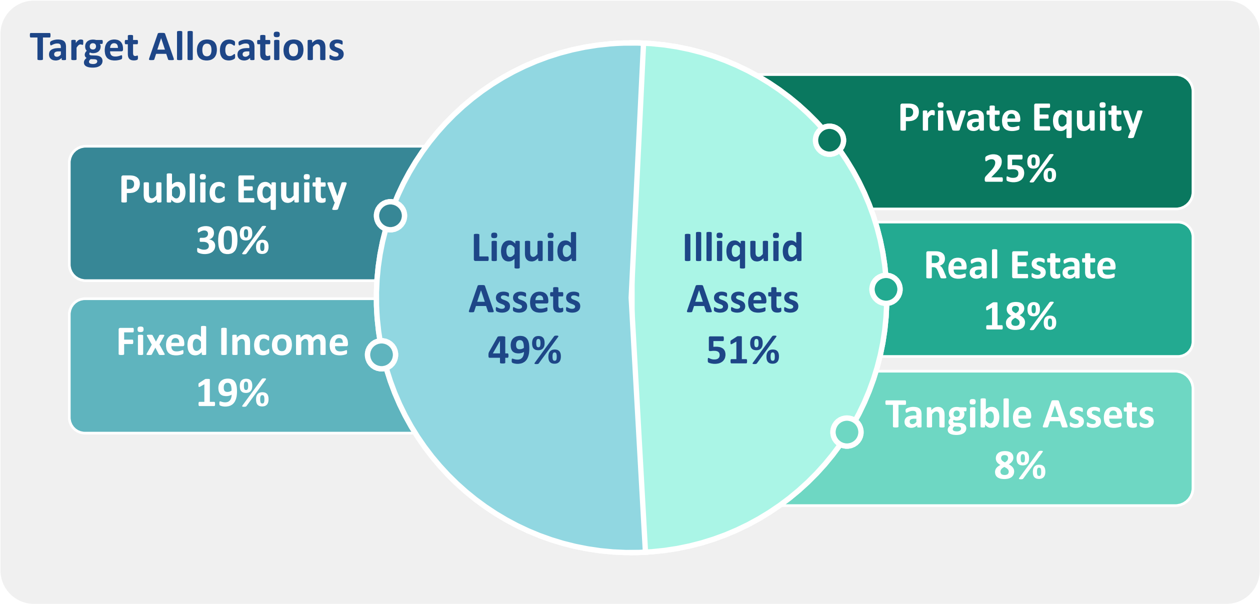
LIQUID AND ILLIQUID ASSETS
OVERVIEW

Liquid assets can be readily converted to cash, while illiquid assets cannot be readily bought, sold, or priced on an exchange

- The WSIB's private market investments are generally illiquid

The WSIB currently has target allocations to three private asset classes: private equity, real estate, and tangible assets

- A fourth private asset class, private credit, is under consideration in the 2025 SAA study



Illiquid private assets are expected to earn a premium above liquid public markets

- Private assets have allowed the CTF to achieve its mission
  - CTF Investment Belief: The CTF should maximize expected returns, at a prudent level of risk, over the long term
  - Private assets have been a major driver of the CTF's long-term performance
- Private assets are expected to compensate for illiquidity risk
  - CTF Investment Belief: The CTF should be compensated for the investment risks it takes

WSIB's private assets can help diversify the CTF

- Some markets are more easily accessed with private equity, private real estate, tangible assets, etc., than with fixed income and public equity
- WSIB's private asset classes are diversified by the variety of asset types, partners, and investment approaches

Allocations to private assets require prudent planning and liquidity management

- The number of partners and size of commitments must be managed
- Private investments call capital for deployment or distribute capital with timing that is outside the WSIB's control
- Periods of market stress can ramp up demand for capital while reducing cash returned

How large of an allocation to illiquid assets can the CTF have while still being able to meet all expected liquidity needs during a crisis?

This presentation will review the CTF's liquidity profile to provide context for the strategic decision about the allocation to illiquid assets

- What are the WSIB's contractual commitments, and how have these changed over time
- What liquidity sources are available to meet these commitments

The second presentation of this series, "CTF and Peer Liquidity Experience," staff will explore

- The purpose of maintaining adequate liquidity
- How asset owners respond to liquidity challenges

The third presentation of this series, "CTF Liquidity Modeling," will review

- How potential allocations to illiquid assets would perform under liquidity stress scenarios
- What is a reasonable limit on the CTF's allocation to illiquid assets that allows for asset allocations with higher expected returns and acceptable liquidity risk for the CTF
  - This limit will be used in the asset allocation modeling and discussion later today

CTF LIQUIDITY PROFILE



CTF LIQUIDITY PROFILE
OVERVIEW OF CTF LIQUIDITY NEEDS

The CTF primarily needs liquidity to meet

- Beneficiary payments
- Capital calls from private assets
- Total Allocation Portfolio (TAP) outflows from Defined Contribution (DC) and Deferred Compensation Program (DCP) participants
  - These could be larger than normal in severe market conditions

The CTF's liquidity needs are met from

- Liquid assets (cash, fixed income, public equity)
- Employer and employee contributions
- Private asset distributions

CTF LIQUIDITY PROFILE
OVERVIEW OF CTF LIQUIDITY NEEDS

The WSIB does not control the timing or amount of CTF liquidity needs

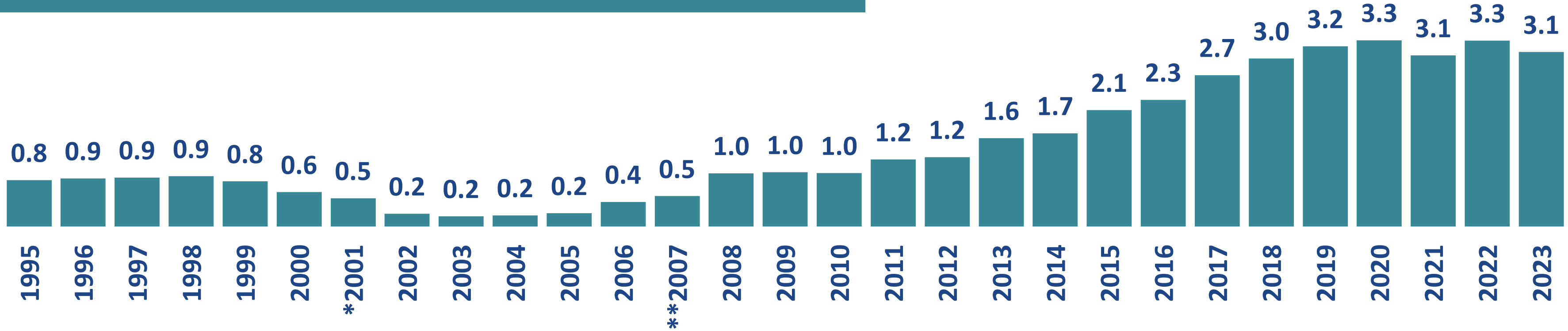
- The timing of contributions and beneficiary payments is fairly predictable
- The WSIB controls the amount of capital it commits to its partners, but it does not control the timing or amount of cash flows
  - The timing of capital calls and distributions are not predictable, and the pace of both can be impacted by market conditions
- The WSIB does not control the amount of TAP-determined cash flows but the timing of such cash flows is usually predictable

CTF LIQUIDITY PROFILE

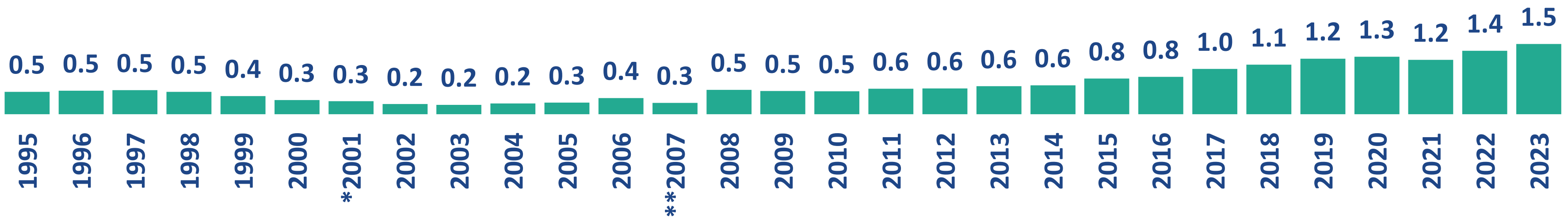
MEETING BENEFICIARY PAYMENTS ($ BILLIONS)

- The CTF is a pooled portfolio composed of assets of retirement plans managed by the WSIB
- Employers in recent history have contributed to Defined Benefit (DB) plans near or at the rates recommended by the Office of the State Actuary (OSA), which has helped bolster the CTF's liquidity

Employer Contributions



Employee Contributions

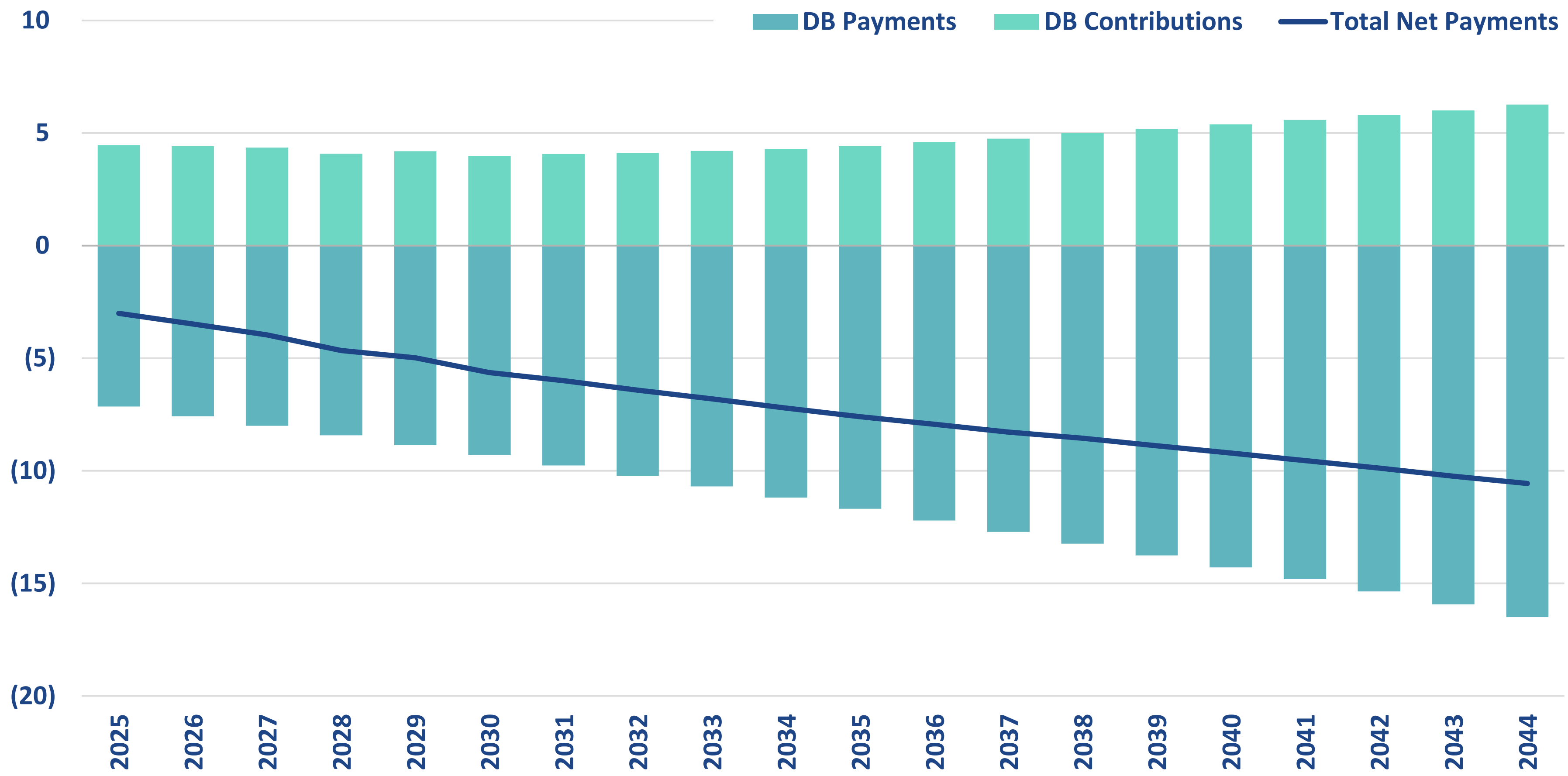


Sources: OSA Actuarial Valuation Reports and Department of Retirement Systems Annual Comprehensive Financial Reports. Dates represent fiscal years.
*Reflects 15-month period for TRS; 9-month period for other plans. ** Reflects 9-month period.

CTF LIQUIDITY PROFILE

MEETING BENEFICIARY PAYMENTS ($ BILLIONS)

- In aggregate, the dollar amount paid out in benefits each year exceeds the level of contributions received from employer and employee sources
- The chart shows projected DB cash flows across all plans



Source: OSA, Twenty-Year Cash Flow Analysis dated October 2024; dates represent fiscal years. Does not reflect the impact of legislation adopted in 2025.

CTF LIQUIDITY PROFILE
MEETING BENEFICIARY PAYMENTS

The CTF is projected to continue receiving less in contributions than it pays out in beneficiary payments

- **The gap between contributions and beneficiary payments is expected to be made up by the CTF's investment earnings**

Since the end of the global financial crisis, market value growth of the CTF has been strong (chart on next slide)

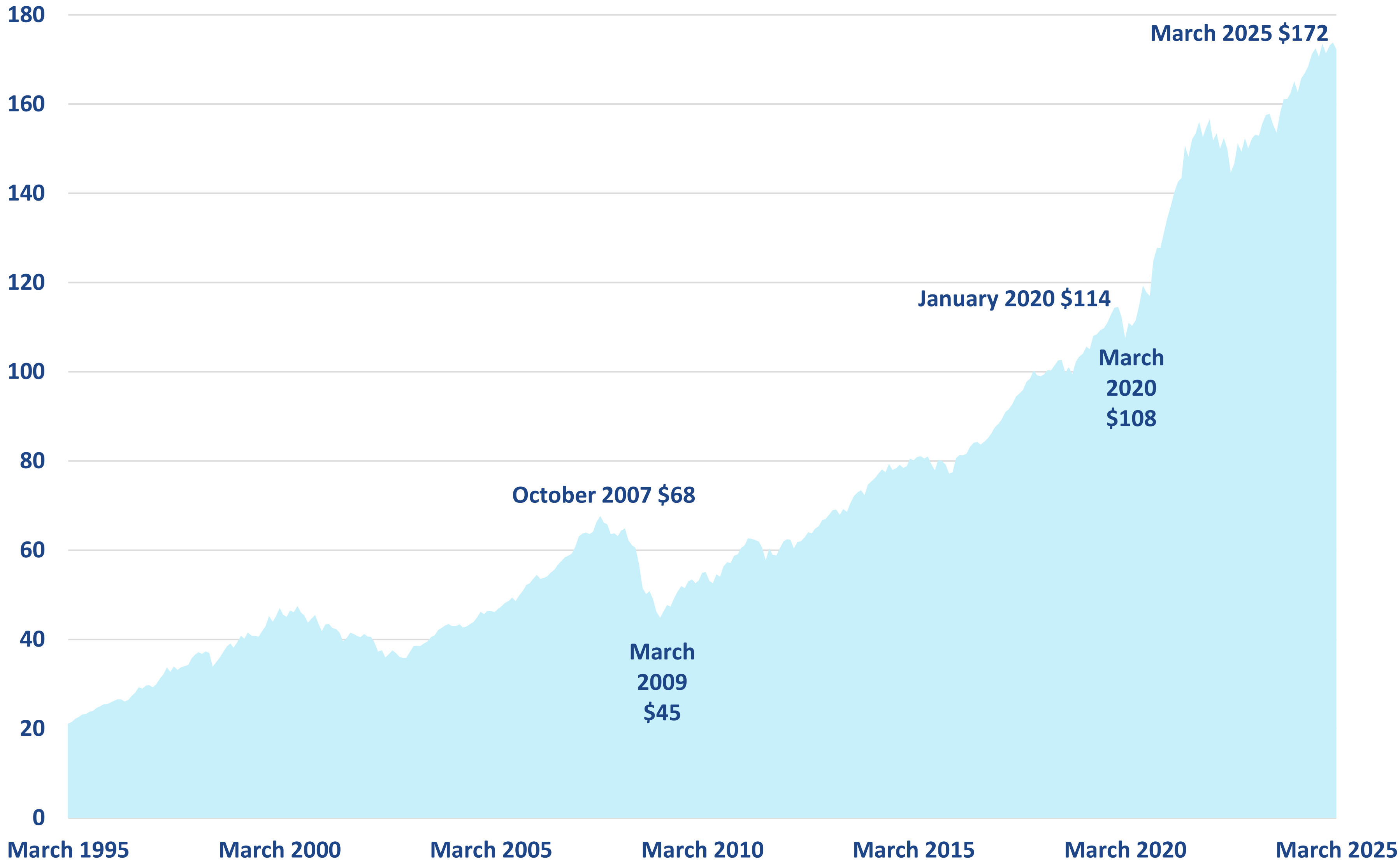
- **From a low of $45 billion at the end of the crisis to $172 billion as of March 31, 2025**

Over the long term, the growth of the CTF's market value has been primarily due to investment earnings

- **The CTF's growth has also been supported by employers making contributions near or at the OSA recommended levels in recent history**

CTF LIQUIDITY PROFILE

TOTAL CTF MARKET VALUE GROWTH OVER TIME ($ BILLIONS)



CTF LIQUIDITY PROFILE

MEETING BENEFICIARY PAYMENTS – THE NET PAYOUT RATIO

The net payout ratio is defined as the annual net benefit amount (contributions received less benefits paid) divided by the market value of the assets

- **Net payout ratio is negative when benefits exceed contributions**
- **The ratio varies through time due to changes in contributions, benefit payments, and market values (see chart on the next page)**
- **Net payout ratios of legacy DB Plans 1 are significantly different than open DB Plans 2 and 3**

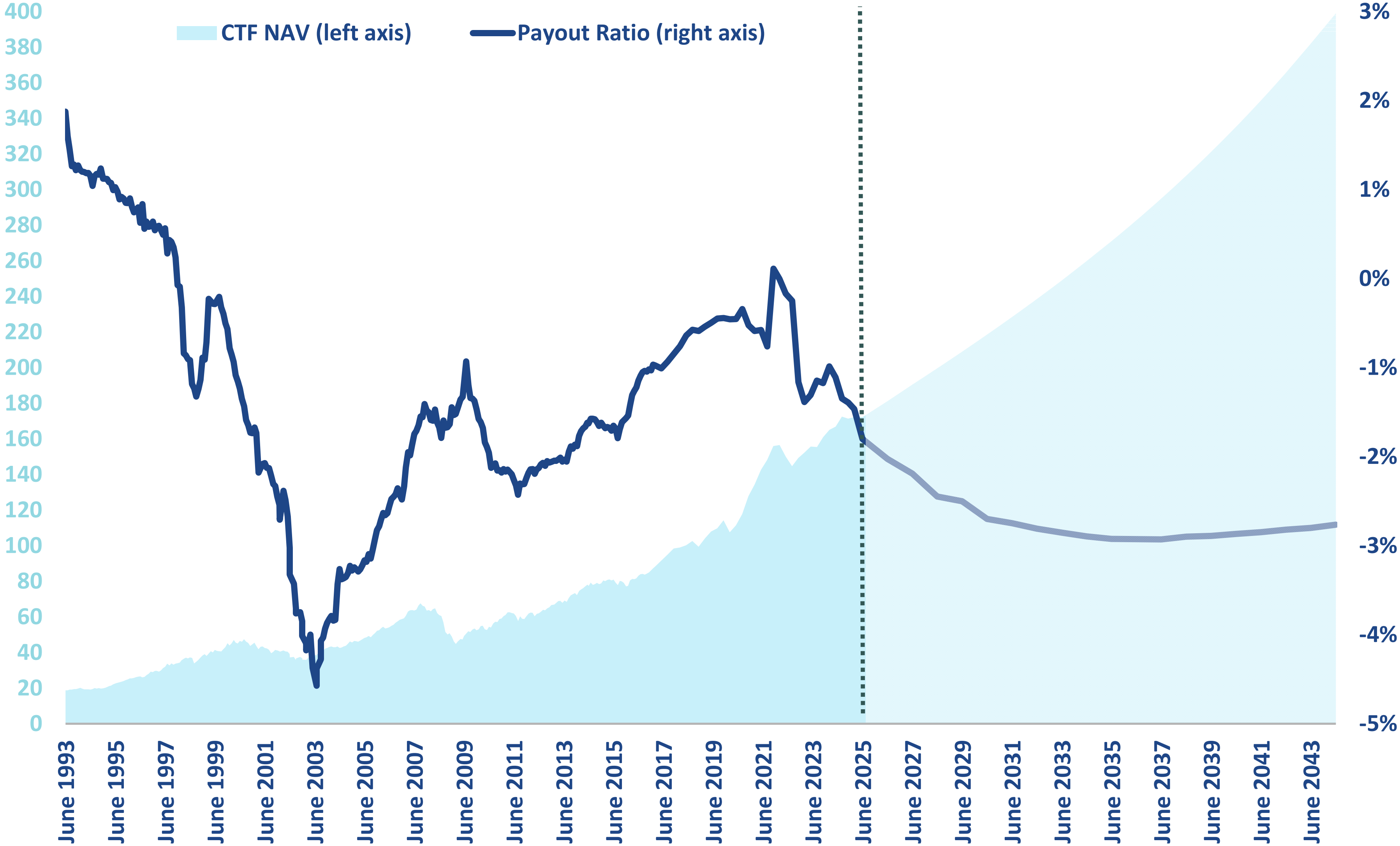
Forecasts for beneficiary payments and employer/employee contributions from the OSA show the net payout ratio becoming more negative in the future

- **Beneficiary payments are projected to increase faster than contributions**
- **Current forecast has the net payout ratio stabilizing around a 3 percent net outflow after 2032**

Source: WSIB and OSA, Twenty-Year Cash Flow Analysis dated October 2024. Does not reflect the impact of legislation adopted in 2025.

CTF LIQUIDITY PROFILE

HISTORICAL AND PROJECTED CTF NET PAYOUT RATIO AND CTF MARKET VALUE ($ BILLIONS)



Source: WSIB and OSA, Twenty-Year Cash Flow Analysis dated October 2024 024. Does not reflect the impact of legislation adopted in 2025.

CTF LIQUIDITY PROFILE
PRIVATE ASSET CAPITAL CALLS AND DISTRIBUTIONS

Capital calls are contractual obligations to provide cash to private markets partners upon request

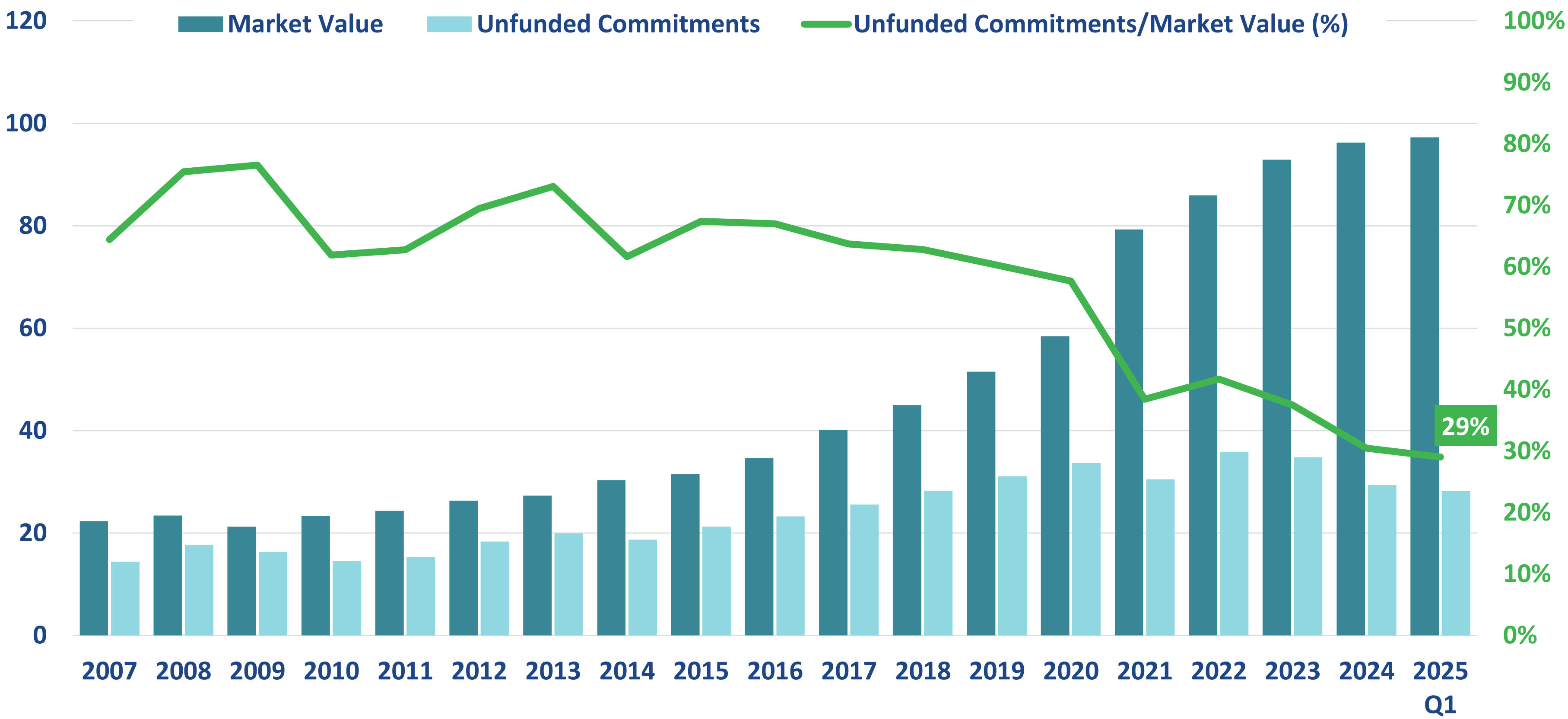
- **Defaulting on a capital call (breach of contract) is a serious matter and can result in the general partner asking for release of the entire commitment or pushing the investor to sell their interest**
- **A default would result in significant reputational harm for the investor and negatively impact its ability to invest in the asset class**
- **The severity of impact makes defaults very rare**

Distributions are cash flows that are received by the WSIB from private markets partners related to proceeds generated from sales of investments, dividends, and other income

PRIVATE ASSETS COMBINED HISTORICAL PACING ($ BILLIONS)

The chart shows the total year-end market value and committed, but not yet called, capital (unfunded commitments) for all CTF private assets over time

- **As of March 31, 2025, unfunded commitments were 29 percent of total private asset market value**
- **Corresponding asset class level charts can be found in the Appendix**



CTF LIQUIDITY PROFILE
PRIVATE ASSET CAPITAL CALLS AND DISTRIBUTIONS

A major driver of the CTF's liquidity position is the call/distribution environment

- **Private equity and real estate are mature portfolios with more balanced net calls and distributions**
- **Tangible assets is maturing; capital calls outpaced distributions prior to 2024**
- **Private credit, if added to the CTF as an asset class, would build up to its allocation in the coming years; hence, capital calls would outpace distributions**
  - **CTF exposure to corporate private credit, the intended focus of the private credit asset class, is currently held within the private equity and innovation portfolios**

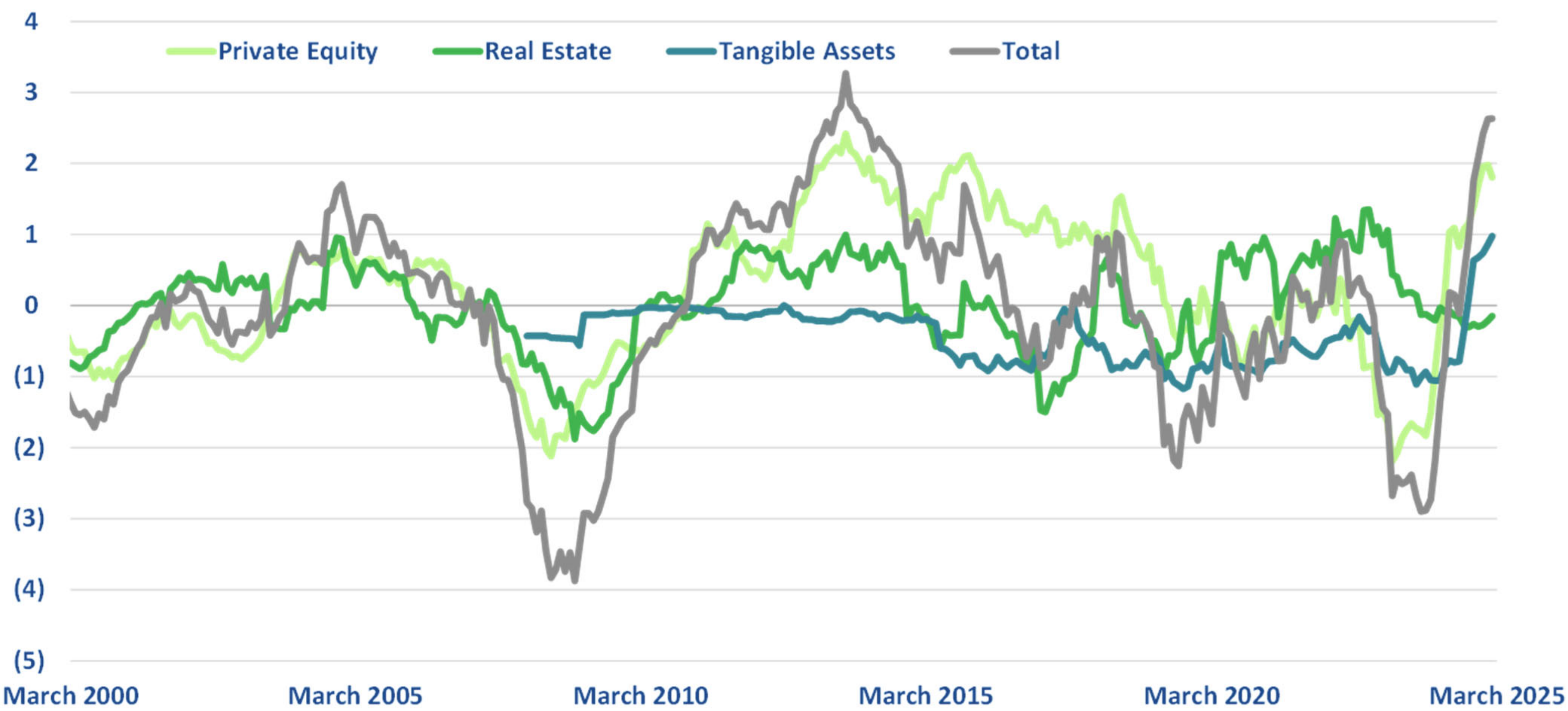
Unfunded commitments, as a percentage of the CTF's market value, have declined over the past 5 years

- **CTF market value growth has been robust; private assets performed well during 2021**
- **Unfunded commitments leveled out for private equity and real estate**

CASH FLOW DIVERSIFICATION ($ BILLIONS)

The chart shows the rolling 1-year net private asset cash flows by asset class and total

- **Cash flows post-pandemic were quite negative but not to the extent experienced in the 2008 financial crisis; in the past few months net flows have turned positive**
- **Typically, the timing of cash outflows and inflows from private asset classes is diversified, which tends to support a higher allocation to private assets in the CTF**



CTF LIQUIDITY PROFILE
DC AND DCP INVESTMENTS IN THE TAP OPTION

Plans 3 are hybrid DB/DC plans in which members receive a lower DB payment (relative to Plans 2) and the benefit of accumulated tax deferred DC savings

Members of TRS, SERS, and PERS Plans 3 can invest their DC contributions in the CTF through the TAP option

- **Participants can withdraw their investment in the TAP to invest in other DC options, but most do not move their investments after initial selection**

In October 2021, the TAP was incorporated into the Target Date Funds (TDFs), an investment option for both DC and DCP participants (TAP into TDF)

- **Gave DC participants another way to benefit from the TAP**
- **DCP participants cannot invest in TAP directly; TAP into TDF gave DCP participants a way to invest in TAP, albeit indirectly, for the first time**
- **Again, participants can withdraw from a TDF (and hence the TAP) to invest in another option, but generally switching options does not occur often**

The weight of the TAP in the CTF has been around 9.5 percent in recent history

TRS = Teachers' Retirement System. SERS = School Employees' Retirement System. PERS = Public Employees' Retirement System.

CTF LIQUIDITY PROFILE
LIQUIDITY SOURCES

The term "liquidity" is broader than cash; liquidity is first sourced through securities that can most readily be converted to cash

- Cash
- U.S. Treasuries and supranational bonds held in fixed income
- Passive public equity

Other fixed income holdings (e.g., credit bonds) and actively managed public equity can also be converted to cash

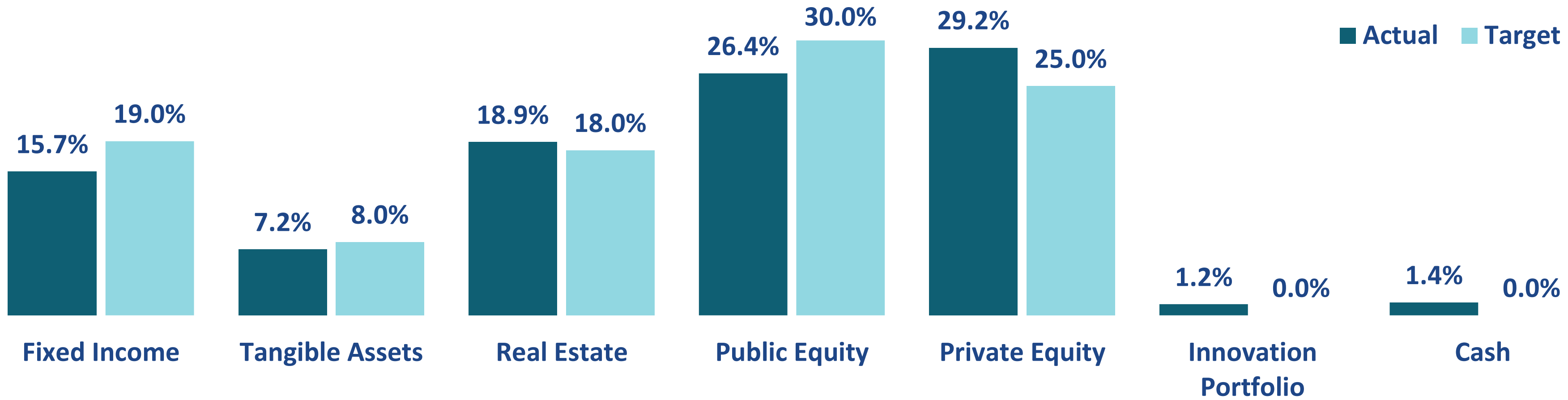
- For these securities, selling might take a bit longer and/or cost a bit more than securities above

Holdings in liquid assets are shown on the next slide

CTF LIQUIDITY PROFILE

CTF ALLOCATION AND LIQUIDITY COMPONENTS, MARCH 31, 2025

Asset Allocation



Liquidity Components (43.5 Percent)

Source: WSIB. Percentages are relative to the CTF total value as of March 31, 2025.

NEXT STEPS

NEXT STEPS

The “CTF and Peer Liquidity Experience” presentation will address CTF liquidity by examining

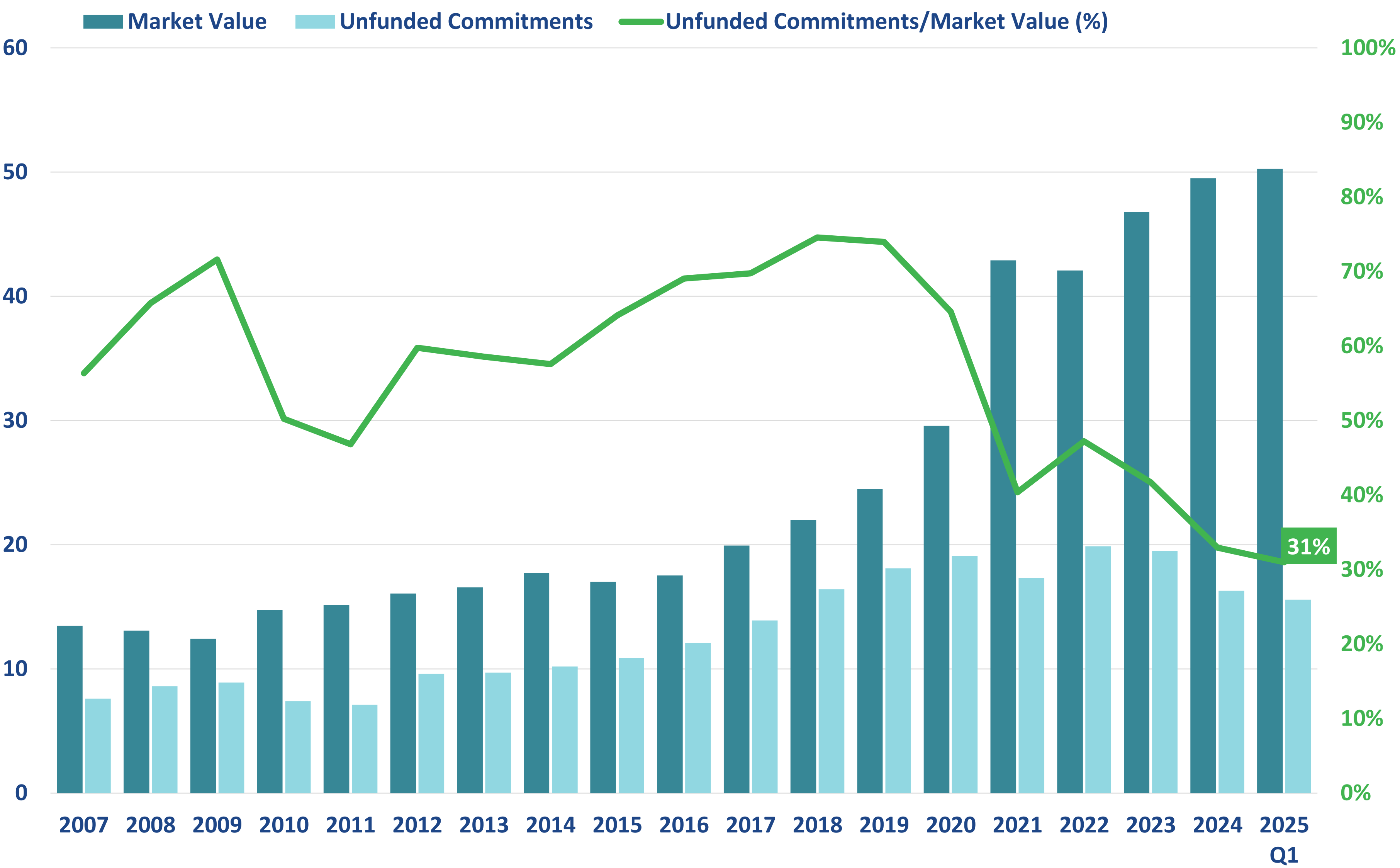
- **The purpose of maintaining adequate liquidity**
- **How asset owners respond to liquidity challenges**



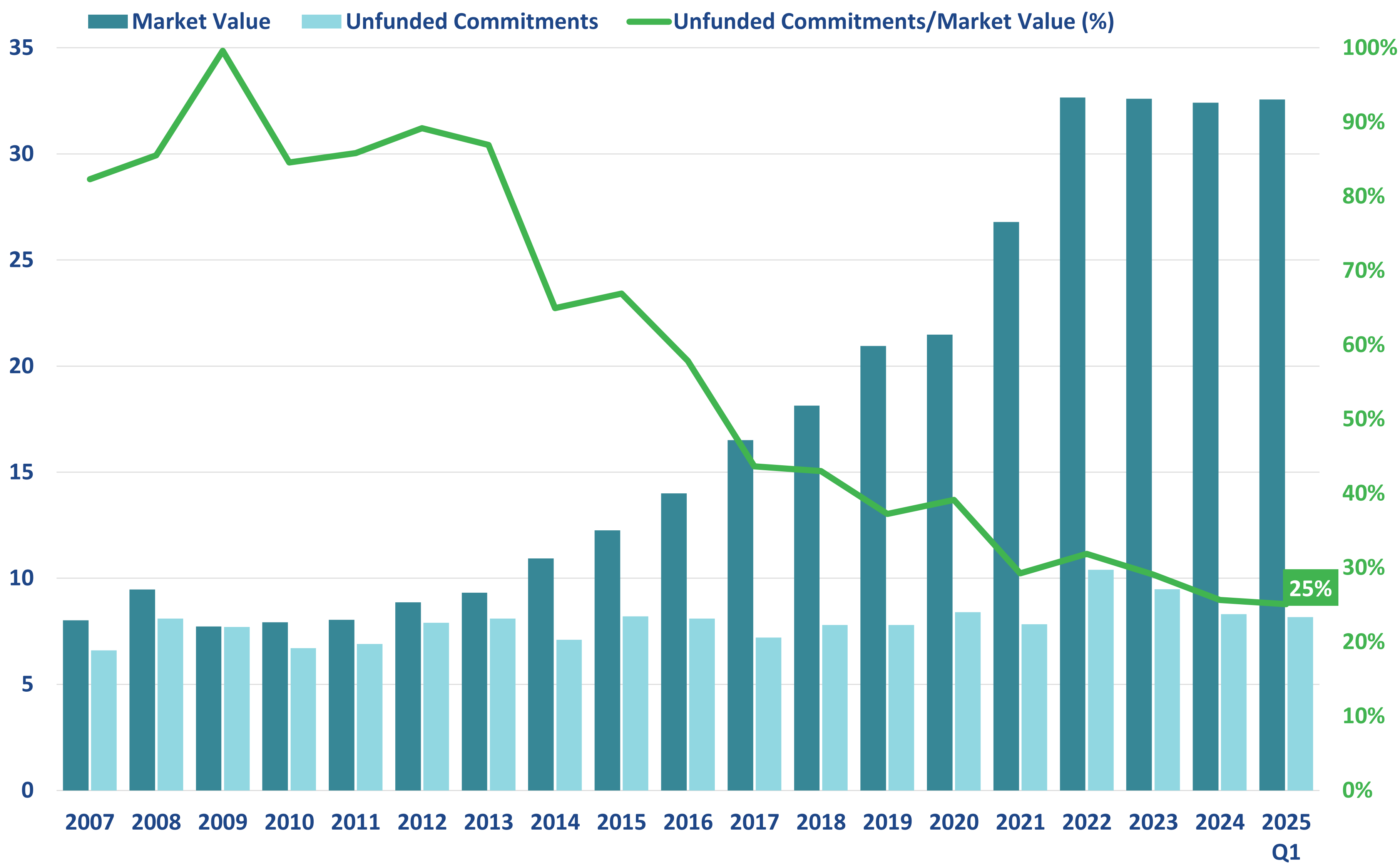
APPENDIX

PRIVATE ASSET CLASS MARKET VALUES AND UNFUNDED COMMITMENTS OVER TIME

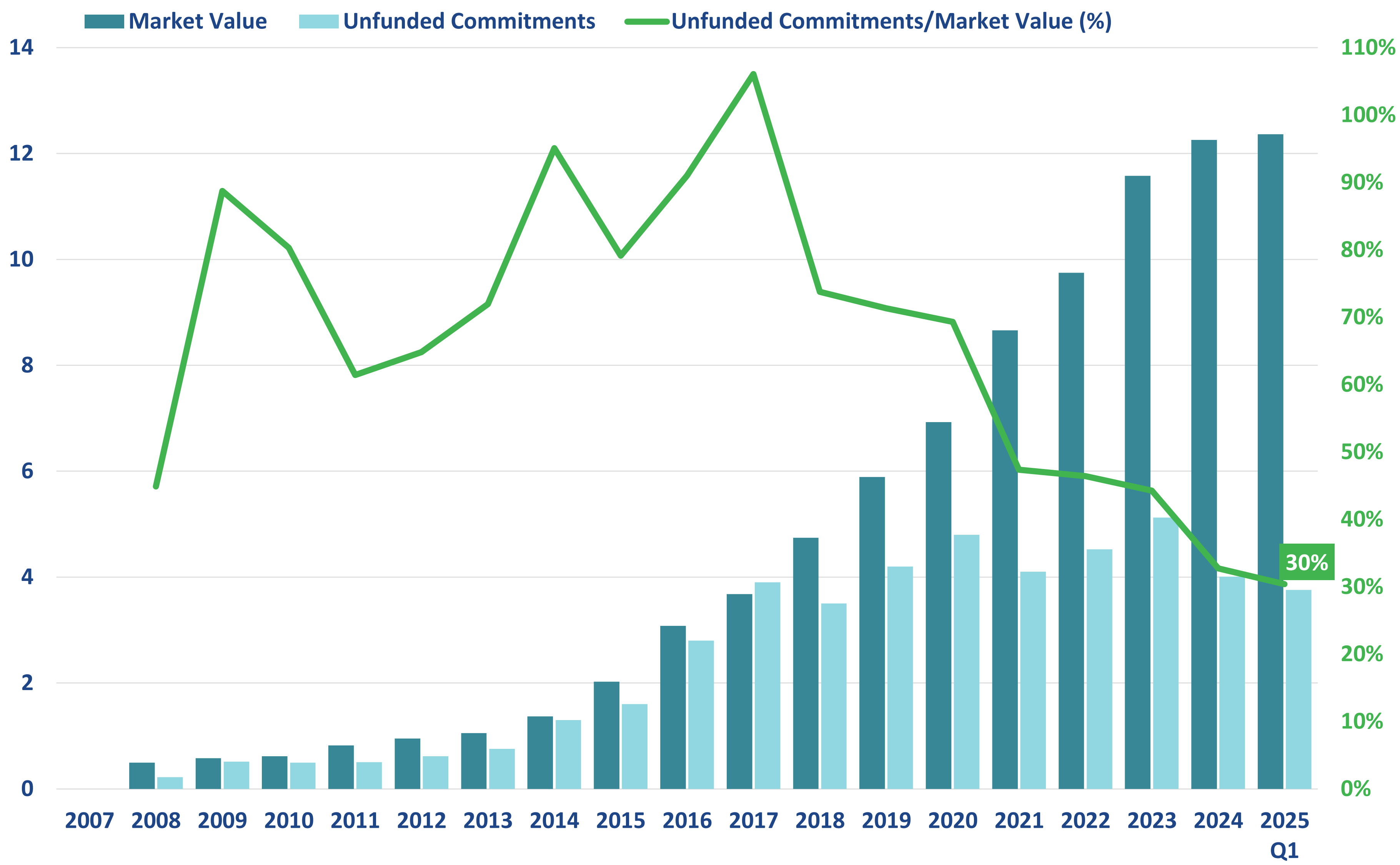
PRIVATE EQUITY PROFILE
($ BILLIONS)



REAL ESTATE PROFILE
($ BILLIONS)



TANGIBLE ASSETS PROFILE
($ BILLIONS)



PERSPECTIVES ON ILLIQUIDITY
PART 2: COMMINGLED TRUST FUND (CTF) AND PEER LIQUIDITY EXPERIENCE

JULY 16, 2025

Risk Management and Asset Allocation

Aileen Liu, Assistant Senior Investment Officer

AGENDA

- Summary
- CTF and Peer Illiquidity Comparison
- Illiquidity Experiences
- Next Steps

SUMMARY

The objective of this presentation is to review liquidity challenges and understand how asset owners respond to them

- **Compare CTF's liquidity profile relative to endowments, foundations, and pension peers**
- **Examine the need for heightened liquidity under stress environments**
- **Review the current liquidity environment**
  - **How institutional investors are raising liquidity and repositioning illiquid assets through secondary market sales**

Observations

- **The Washington State Investment Board (WSIB) has a significant allocation to illiquid assets compared to its peers**
- **The CTF's liquidity profile is stronger compared to the 2008 financial crisis era due to the establishment of additional liquidity buffers to help contain market dislocations**
- **Endowments and foundations are facing liquidity challenges due to a unique and evolving set of challenges**

CTF AND PEER ILLIQUIDITY COMPARISON

THE WSIB'S HISTORICAL ALLOCATION TO ILLIQUID ASSETS

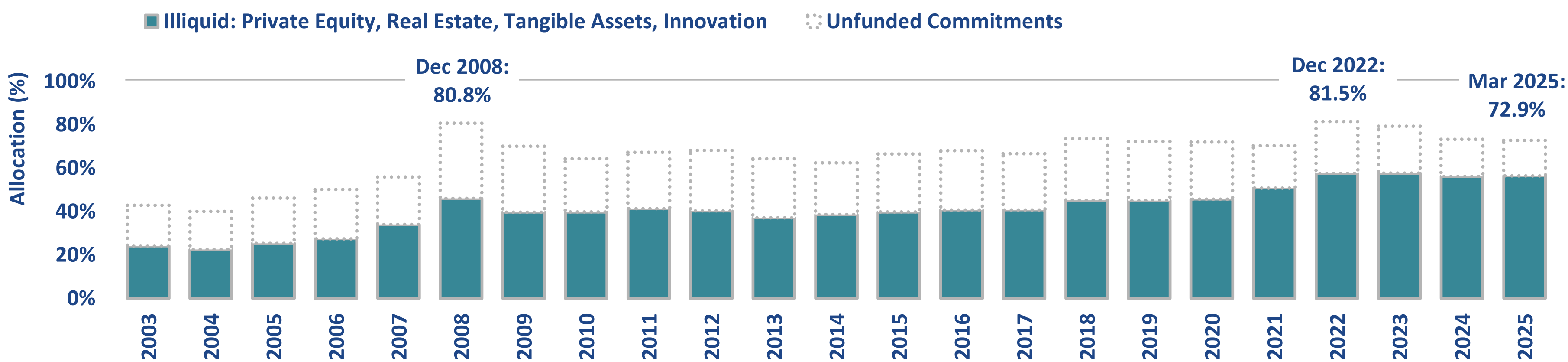
Between December 31, 2008, and March 31, 2025, the WSIB's actual allocation to illiquid assets ranged between 37.2 and 57.5 percent

- Actual exposure as of March 31, 2025, was 56.5 percent, versus a target of 51 percent
- CTF private assets performed well during the pandemic, lifting market values and the allocation to illiquid assets, but exits have been slow

Unfunded commitments as a percent of the total CTF are currently 16.4 percent, below the post-2008 average of 25.8 percent

- While we expect these commitments to be called over the next few years, if they were all called today, the CTF's allocation to illiquid assets would be 72.9 percent

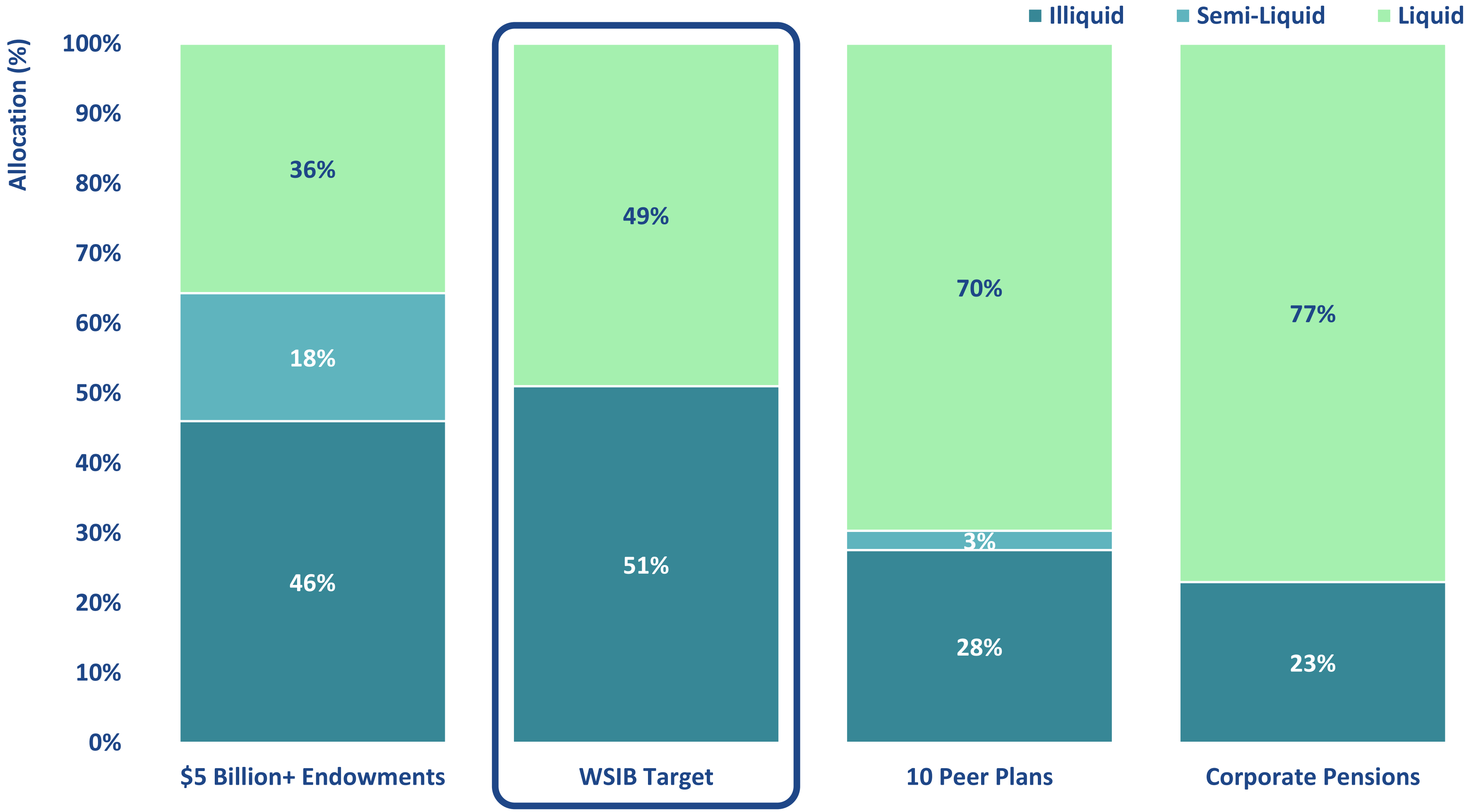
Illiquid Assets as a Percent of the CTF



CTF AND PEER ILLIQUIDITY COMPARISON

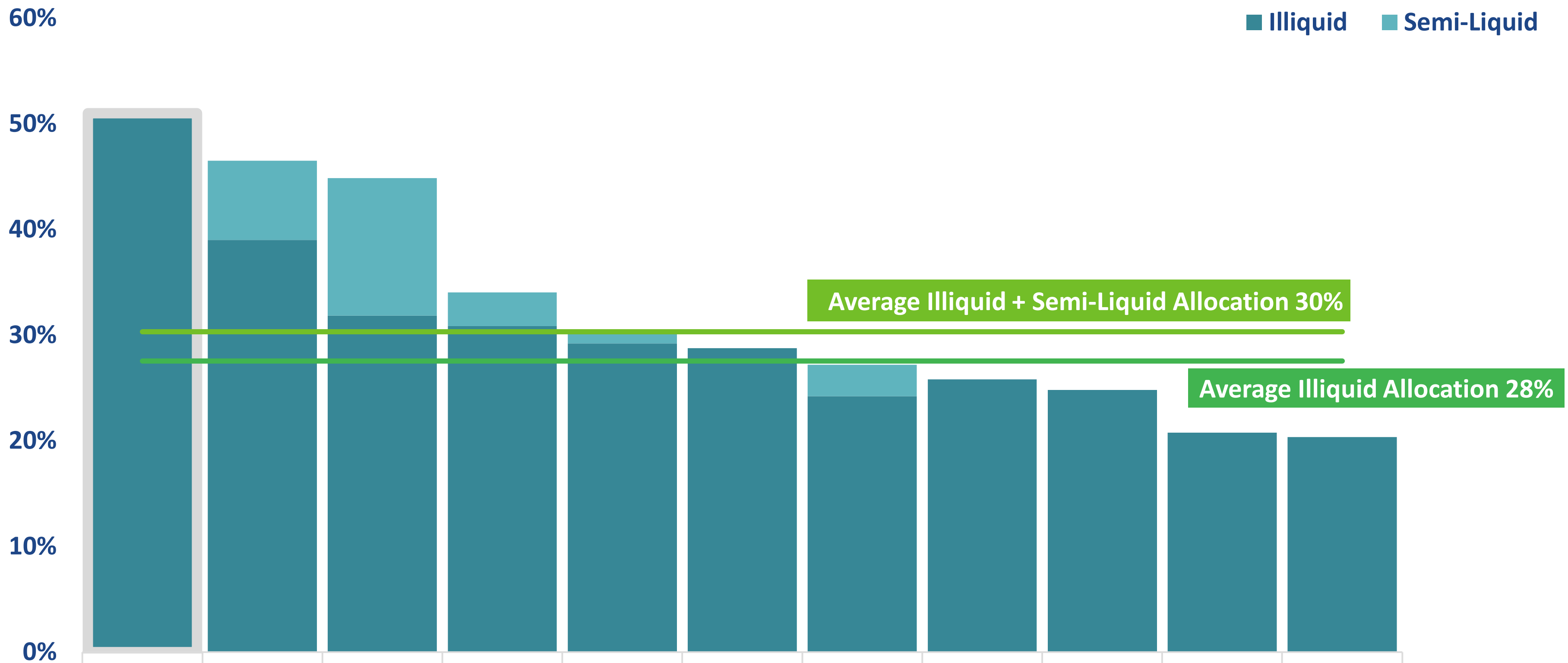
WSIB'S EXPOSURE TO ILLIQUID ASSETS IS HIGHER THAN THAT OF THE TYPICAL ASSET OWNER

Comparison of Illiquid Asset Exposure



Sources: Endowments are FY2024 via NACUBO-Commonfund Study of Endowments; 10 peer composite is FY2024 courtesy of Meketa; Corporate plans are FY2024 via 2025 Milliman Corporate Pension Funding Study.

WSIB has a higher allocation to illiquid assets compared to its peers



	WSIB	Peer 4	Peer 9	Peer 10	Peer 1	Peer 2	Peer 3	Peer 8	Peer 7	Peer 6	Peer 5
AUM Range ($Billions, FY 24)	150-400	75-150	150-400	75-150	75-150	150-400	150-400	75-150	75-150	150-400	75-150
% Illiquid + Semi-Liquid	51%	47%	45%	34%	30%	29%	27%	26%	25%	21%	20%
% Illiquid	51%	39%	32%	31%	29%	29%	24%	26%	25%	21%	20%

Sources: Meketa.

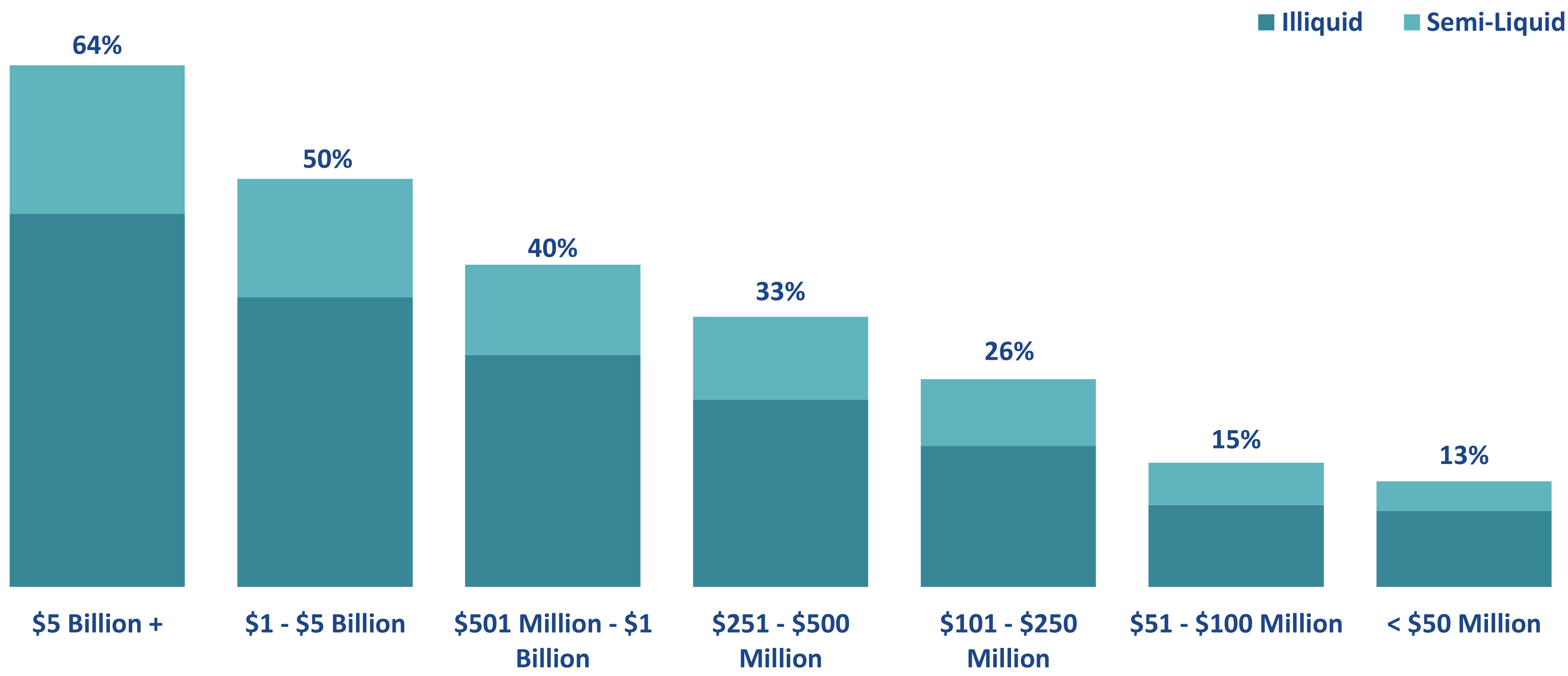
CTF AND PEER ILLIQUIDITY COMPARISON

HOW ARE OTHER ASSET OWNERS STRUCTURED: ENDOWMENTS

Endowments have been big proponents of large allocations to illiquid assets, a trend that was led by David Swensen of Yale, the pioneer of the "Yale model"

- **Endowments are often set up to exist in perpetuity and required payouts are typically 4-5 percent**

Allocation to Alternative Investments by Endowment Size

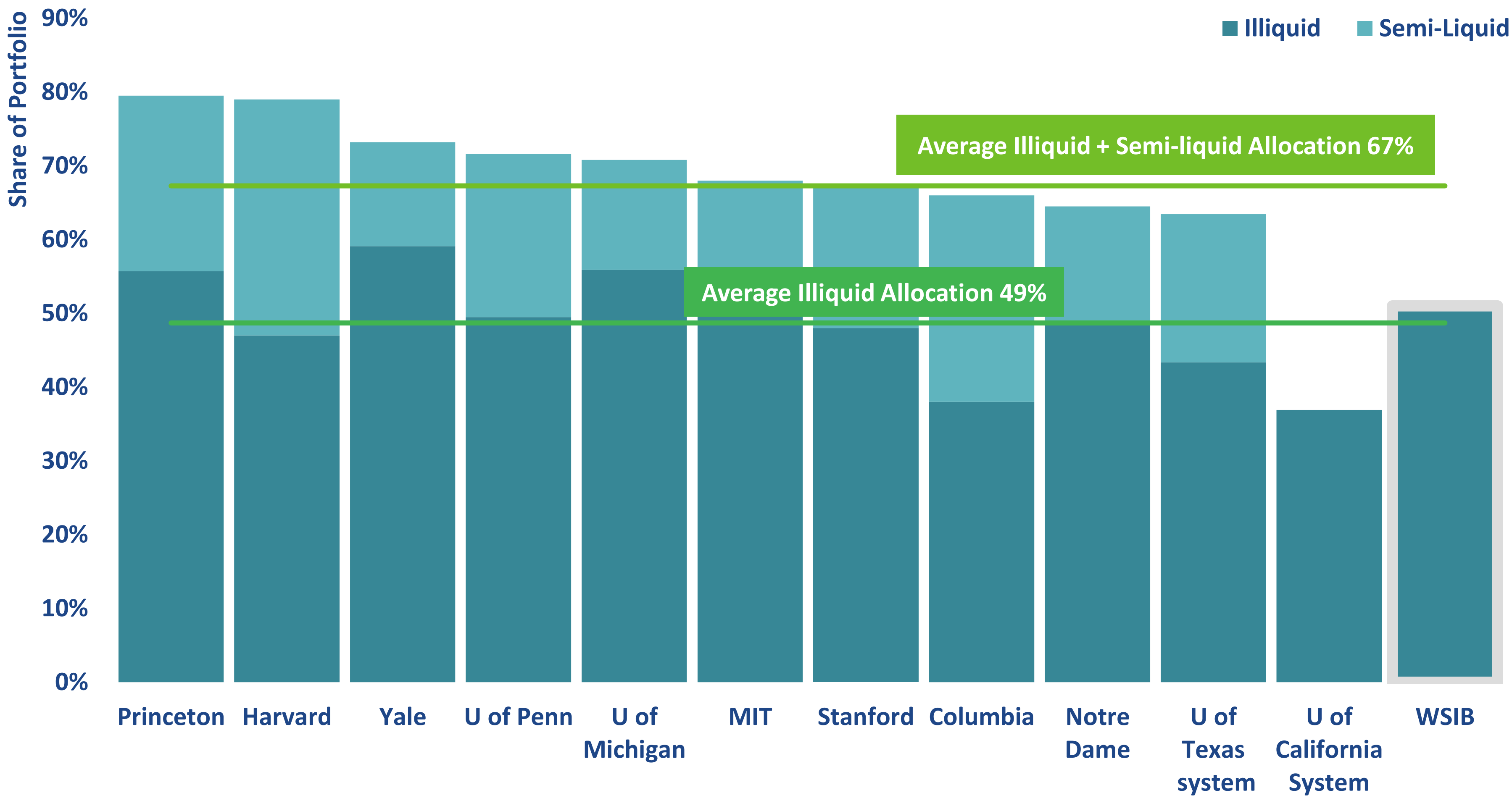


Source: 2024 NACUBO-Commonfund Study of Endowments.

CTF AND PEER ILLIQUIDITY COMPARISON

HOW ARE OTHER ASSET OWNERS STRUCTURED: ENDOWMENT ASSET ALLOCATIONS

- The WSIB looks more like an endowment in its allocation to illiquid assets, although it is not as illiquid as some of the largest endowments



Sources: 2024 NACUBO-Commonfund Study of Endowments and endowment investment reports

CTF AND PEER ILLIQUIDITY COMPARISON

HOW ARE OTHER ASSET OWNERS STRUCTURED: 11 LARGEST U.S. ENDOWMENTS

	6/30/24 Assets ($B)	10-Year Return	Allocation to Alternative Assets	Annual Budget Supported	Effective Spending Rate
WSIB (CTF)	$168.4	8.9%	56.7%	N/A	1.1%**
Harvard	$52.0	7.6%*	79.0%	37.0%	5.0%
U of Texas system	$47.5	7.6%	63.5%	8.3%	4.4%
Yale	$41.4	9.5%	73.2%	33.1%	4.8%
Stanford	$37.6	8.6%	67.0%	21.7%	5.0%
Princeton	$34.1	9.2%	79.5%	65.7%	5.0%
MIT	$24.6	10.5%	68.0%	23.0%	5.0%
U of Penn	$22.3	8.7%	71.6%	22.2%	5.1%
U of Michigan	$19.2	8.7%	70.8%	4.9%	3.7%
U of California system	$19.1	8.1%	36.9%	0.3%	4.9%
Notre Dame	$17.9	9.6%	64.5%	32.2%	3.7%
Columbia	$14.8	7.4%	66.0%	10.5%	5.2%

Sources: 2024 NACUBO-Commonfund Study of Endowments
* WSIB calculation. ** Net payout ratio.

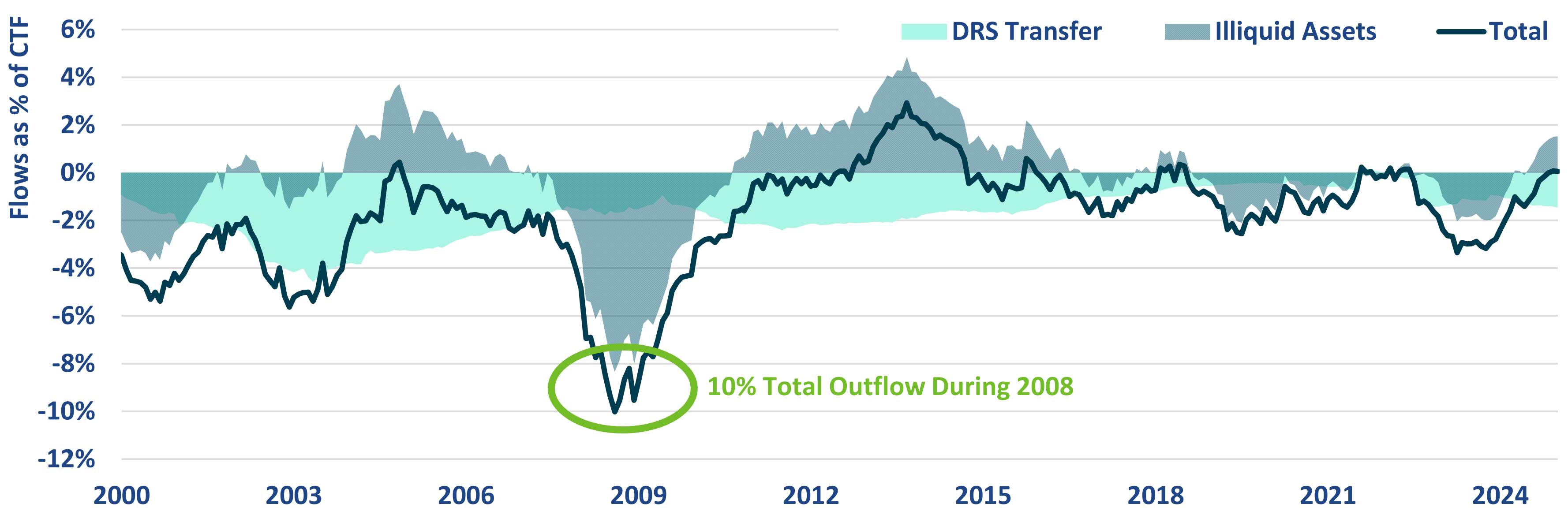
ILLIQUIDITY EXPERIENCES

HISTORICAL PICTURE OF CTF LIQUIDITY

The CTF has two primary uses of cash

- External: Monthly transfers to Department of Retirement Systems (DRS) for retirement benefits
  - These are somewhat predictable
  - In aggregate, they represent a reduction in the CTF's net asset value (NAV)
- Internal: Capital calls/distributions to/from illiquid assets
  - These are unpredictable and volatile
  - They stay in the CTF and are a part of its NAV

Net Cash Flow as a Percent of the CTF



ILLIQUIDITY EXPERIENCES
MANAGING LIQUIDITY IN A DOWNTURN

The liquidity profile of illiquid assets deteriorated markedly during the 2008 financial crisis

- **Private equity: Lack of exits depressed distributions**
- **Real estate: Paying off debt consumed cash**

Liquidity dried up when it was most needed

During the 2008 financial crisis, liquid assets (primarily fixed income) were sold to meet the CTF's cash flow obligations

Liquid assets were sold at depressed valuations to meet obligations during the crisis

Cash flows improved dramatically in years following the financial crisis as illiquid assets recovered and generated strong returns

Liquidity stress was temporary; the portfolio was constructed to weather the storm

Lessons learned during the 2008 financial crisis helped the CTF during Spring 2020

- More liquid assets available; avoided major liquidations of liquid assets
  - Treasuries were less than 2 percent of the CTF in 2008 but were over 6 percent of the CTF in early 2020
  - Aimed to hold 2 percent of CTF in cash during Spring 2020
  - Shifted away from commingled accounts to separately managed accounts in public equity
- The CTF was better diversified going into Spring 2020 compared to 2008
  - Gains in fixed income during the 2020 crash helped offset declines in public equity
  - Note the relative speed of the decline (and recovery) of markets during the COVID-19 crisis
- Maintained strategic asset allocation discipline; the WSIB was able to raise liquidity through fixed income to meet capital calls

Historical S&P 500 Crashes and Recoveries

Crisis	Pre-crash Peak		Lowest index value (peak-to-trough % decline)			Peak-to-Trough Months	Recovery to Pre-crash Peak		Months to Recovery
Dot-com Crash	3/24/2000	1,527.5	10/9/2002	776.8	-49%	31	5/30/2007	1,530.2	56
2007-2009 Great Financial Crisis	10/9/2007	1,565.2	3/9/2009	676.5	-57%	17	3/28/2013	1,569.2	49
COVID-19 Pandemic	2/19/2020	3,386.2	3/23/2020	2,237.4	-34%	1	8/18/2020	3,389.8	5

ILLIQUIDITY EXPERIENCES

LIQUIDITY PRESSURE DURING AN EXTREME MARKET DISLOCATION – PEER EXPERIENCES

Many endowments experienced liquidity problems during the 2008 financial crisis

Examples:

- Some endowments borrowed, including Harvard, Yale, and Princeton
- Some sold private assets on the secondary market, notably Harvard
- Many exerted soft pressure on general partners (GPs) not to call capital
- Yale’s unfunded commitments plus illiquid investments reached 130 percent of the total endowment in 2009
- Cogent Partners, a secondary advisor, reported that $2.5 billion in private equity sales it placed in the first half of 2009 received bids of 50 percent of NAV as of the end of 2008

Sources: Jefferies Private Capital Advisory, January 2025, “Global Secondary Market Review”; Neuberger Berman, December 2022, “The Rise of GP-Led Secondaries.”

ILLIQUIDITY EXPERIENCES

MANAGING LIQUIDITY IN THE CURRENT ENVIRONMENT — PEER EXPERIENCES

The recent slowdown in private equity distributions and realizations has weighed on liquidity for certain asset owners

- Distributions from buyout funds as a percentage of NAV have fallen from an average of 29 percent for 2014–2017 to only 11 percent in 2024
- There has been a rise in institutional investors accessing secondary markets to sell stakes in private equity funds
- Private market sales are in great demand as one of the limited options for liquidity
  - Global secondary volume reached a peak level of $162 billion in 2024, a 45 percent increase from the prior year, with growth continuing through 2025, as both limited partners (LPs) and general partners (GPs) are geared toward generating liquidity and accelerating distributions
  - Both the LP and GP market for secondary sales has grown
    - LP volume in 2024 was $87 billion, primarily driven by liquidity needs, and growing investor interest in large, diversified LP portfolio transactions
    - GP-led secondary deals in 2024 totaled $75 billion, rising sharply from $35 billion in 2020, primarily through continuation funds where PE fund managers hold onto portfolio companies to create value and offer liquidity to LPs in the process

Sources: Bain & Co., January 2025, "2025 Global Private Equity Report"; Jefferies Private Capital Advisory, January 2025, "Global Secondary Market Review"; Neuberger Berman, December 2022, "The Rise of GP-Led Secondaries."

ILLIQUIDITY EXPERIENCES

MANAGING LIQUIDITY IN THE CURRENT ENVIRONMENT — PEER EXPERIENCES

Endowments and foundations are facing liquidity challenges due to a unique and evolving set of challenges

- Potential limits on federal funding
- Threats to qualifying for 501(c)(3) tax-exempt status
- Progressive endowment income tax as high as 21 percent

Some endowments have considered secondary sales for financial flexibility, further accelerated by growing financial and political uncertainties facing universities

- The Yale endowment, with a 45 percent allocation to private equity and about $46 billion total asset under management (AUM) asserts that private equity remains "a core element" of their investment strategy
  - Selling up to $6 billion of its private equity interests
  - Attributing the sale to portfolio management needs, this comes amid potential federal funding challenges and increased scrutiny of top universities
- Harvard University is reportedly trying to offload up to $1 billion of its private fund portfolio through a secondary sale

Sources: H.R.446 Endowment Tax Fairness Act 119th Congress; Secondaries Investor, June 9, 2025, "HarbourVest, Blackstone, Pantheon to buy in Yale's PE portfolio sale."

ILLIQUIDITY EXPERIENCES

MANAGING LIQUIDITY IN THE CURRENT ENVIRONMENT — PEER EXPERIENCES

Secondary sales have been used as a tool for LPs, including major pension funds, to generate liquidity, remove non-core holdings and streamline their portfolios

- The global private secondary market reached record transaction volumes in 2024
- LP-led institutional investor transactions totaled $87 billion

Examples of large pension fund secondary sales experiences

- The New York City pension system, with an aggregate AUM of $279 billion (as of March 31, 2025), has sold $5 billion in private equity secondaries
  - Finalized in May 2025, this was one of the largest pension-led secondary sales in U.S. history
  - The motivation for the sale was not liquidity-driven but for strategic portfolio realignment
- Australian superannuation funds have seen increased secondary market activity, with the Australian superannuation fund, Aware Super, considering plans for a secondary sale later this year and monitoring bid-ask spreads

Source: Pensions and Investments, June 16, 2025, print issue, “NY CIO: $5B sale in PE stakes a ‘strategic alignment’.”


NEXT STEPS

NEXT STEPS

The "CTF Liquidity Modeling" presentation will review how potential allocations to illiquid assets in the CTF would behave in various liquidity stress scenarios

- **Provides insight on how illiquid the CTF can be while still meeting liquidity needs during a crisis**
- **Informs the CTF Strategic Asset Allocation discussion by suggesting an upper limit on the allocation to illiquid assets**

Washington State Investment Board

PERSPECTIVES ON ILLIQUIDITY
PART 3: COMMINGLED TRUST FUND (CTF) LIQUIDITY MODELING

JULY 16, 2025

Risk Management and Asset Allocation

Chris Green, Ph.D., CFA, CAIA, Assistant Senior Investment Officer

AGENDA

- Summary
- Liquidity Coverage Ratio (LCR) Introduction
- LCR Analysis
- Recommendation
- Appendix

SUMMARY

A key consideration in developing the CTF's asset allocation is its liquidity needs

How much can the CTF allocate to illiquid assets?

- Lower allocations to illiquid assets generally offer more resilience to severe market and liquidity events, with the tradeoff of lower expected returns
- Consider how the ability to meet forecast liquidity needs changes with the allocation to illiquid assets, and determine highest allocation based on stress tests

Summary of conclusions

- Assuming the CTF receives at least 80 percent of the contributions forecast by the Office of the State Actuary (OSA), staff's analysis indicates that the Washington State Investment Board (WSIB) should not allocate more than 70 percent of CTF assets to illiquid asset classes
- It is prudent to further reduce this limit by 10 percentage points, to 60 percent of the CTF, to allow for the remote possibility that, in a crisis, all Total Allocation Portfolio (TAP) owners request redemption of their units
- Staff recommends a maximum target allocation to illiquid assets of 53 percent, identical to the 2021 study, to better facilitate portfolio rebalancing needs and accommodate evolving market conditions

Source: OSA, Twenty-Year Cash Flow Analysis dated October 2024. Does not reflect the impact of legislation adopted in 2025.

LCR INTRODUCTION



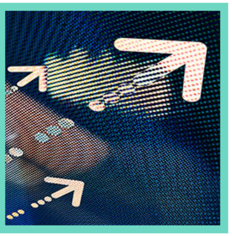
LCR INTRODUCTION
DEVELOPMENT OF THE LCR APPROACH

LCR was developed by the Basel III committee to provide a consistent standard for bank liquidity after the 2008 financial crisis

- **The LCR requirements ensure banks maintain an adequate level of readily available, high-quality liquid assets that can be quickly and easily converted into cash to meet liquidity obligations during a 30-day period of liquidity stress**

While the LCR was developed with banks in mind, the concept has been adapted to other institutions (e.g., Emory University's endowment)

DEVELOPMENT OF THE LCR APPROACH



The WSIB first introduced the LCR concept in 2017 as part of its CTF Strategic Asset Allocation (SAA) process

- **The 2017 SAA study used an 8-year LCR and historical market and liquidity stresses to understand how much the CTF could allocate to illiquid assets and still be able to meet its liquidity needs**
- **The 2021 SAA study added a 6-month LCR study examining the impact of a severe liquidity shock**

This year's study updates the 2021 analysis and provides further sensitivity analyses in support of the main LCR result

Caveats

- **The LCR analysis has many assumptions about cash flows during a crisis as well as returns over the test horizon; staff have examined the sensitivity of the results to the assumptions but it is impossible to consider all possibilities**

The WSIB's LCR definition

$$\text{Liquidity Coverage Ratio} = \frac{\text{Liquidity Sources}}{\text{Liquidity Uses}}$$

What does it mean?

- LCR > 1 means the CTF would have had enough cash to meet liquidity needs over the time horizon modeled
- LCR < 1 means the CTF may have had to resort to extraordinary measures to meet liquidity needs, such as selling illiquid assets on the secondary market or defaulting on capital calls

Liquidity sources include

- Market value of liquid public assets at the end of the time horizon that was modeled
- Distributions from private assets received during the model horizon
- Contributions from retirement plan members and employers received during the model horizon

Liquidity uses include

- Capital calls from private assets requested during the model horizon
- Beneficiary payments made during the model horizon

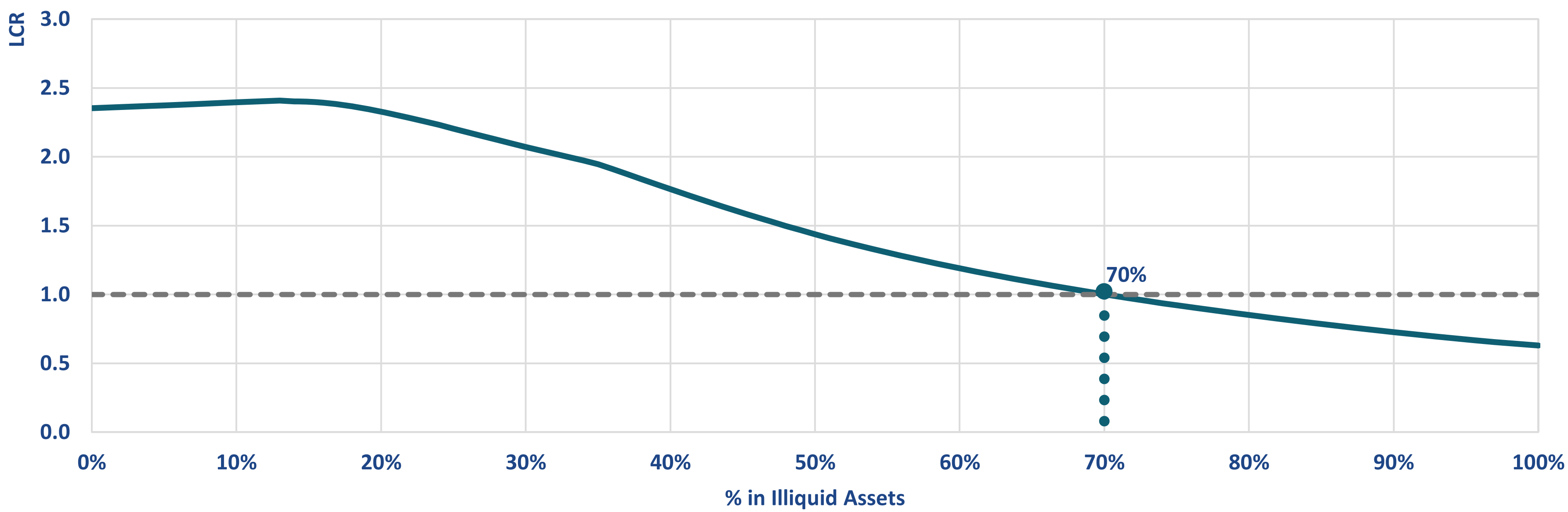
HYPOTHETICAL EXAMPLE: USING LCR TO DETERMINE THE MAXIMUM ALLOCATION TO ILLIQUID ASSETS

Given a set of assumptions about returns and cash flows, we can vary the allocation to illiquid assets to find where the CTF's supply of liquidity just meets its demand for liquidity (i.e., LCR = 1)

- **The LCR decreases as the illiquid assets target increases: smaller amount of liquid assets and more cash needed to fund capital calls**

The chart below illustrates (using hypothetical data) how this works: at a 70 percent allocation to illiquid assets, the LCR is just above 1

- **This hypothetical scenario would suggest not exceeding a 70 percent allocation to illiquid assets**



LCR INTRODUCTION
OVERVIEW OF 2025 LCR ANALYSIS

Staff considered two high-level liquidity stress scenarios

- Prolonged lower contribution levels over an 8-year horizon, with market and liquidity shocks
  - This scenario provides a longer-term test appropriate for an investor with higher allocations to illiquid assets
- A severe liquidity shock over a 6-month period, triggered by a market crash
  - This scenario is relevant for an investor looking to minimize the chance of a liquidity crisis

New for 2025

- Additional modeling
  - Compared to the 2021 analysis, staff has considered an additional market scenario and the impact of the choice of stress year on the 8-year LCR result

LCR INTRODUCTION

DEFINED CONTRIBUTION (DC) AND DEFERRED COMPENSATION PROGRAM (DCP) CONSIDERATIONS

DC and DCP considerations

- In the 2017 CTF SAA study, staff's modeling assumed a market crisis would prompt TAP owners (only Plan 3 DC participants at the time) to withdraw their funds
  - Subtracted 9 percentage points from LCR results based on the TAP's approximate 8.9 percent stake in the CTF at the time
- In the 2021 study, the TAP into Target Date Fund (TDF) project increased the TAP's stake in the CTF and hence the potential outflow in a crisis
  - Increased the TAP outflow allowance to 10 percentage points
- For today's study, 10 percentage points is still the appropriate estimate

The maximum allocations found via the LCR analyses should be adjusted for the possibility that 10 percent of the CTF's value could be liquidated in a crisis through DC and DCP participant actions



LCR ANALYSIS

LCR ANALYSIS
REVIEW OF 2021 RESULTS

- In 2021 staff considered an 8-year LCR analysis with two scenarios for contributions
  - Contributions are made at 80 percent of the OSA projections
  - Contributions are made at 50 percent of the OSA projections
- Staff introduced a 6-month stress test replaying some of the worst market and cash flow stresses that the CTF has experienced historically
  - The 6-month test served as an additional check on the 8-year results
- Based on the LCR analysis, the maximum allocation to illiquid assets when 80 percent of contributions are received was estimated to be 63 percent
- This led to staff's recommendation at the July Board meeting of a 53 percent allocation to illiquid assets after accounting for the potential TAP outflow (assumed 10 percent of CTF at the time)
- A final CTF SAA recommendation with a 51 percent target allocation to illiquid assets was approved by the Board at its October 2021 meeting

LCR ANALYSIS

STRESS TESTING FOR ILLIQUIDITY LIMITS: 8-YEAR SCENARIO

The 8-year liquidity scenario captures the combined impact of market stress, prolonged lower employer contributions, and higher than normal liquidity demands

- Stress the level of contributions from employers
- Stress market returns for the 8-year period based on historical periods of volatility for the CTF
- Consider reductions in income and distributions from private assets
- Consider having to pay off lines of credit and asset-level debt sooner than planned
- Further details are in the Appendix

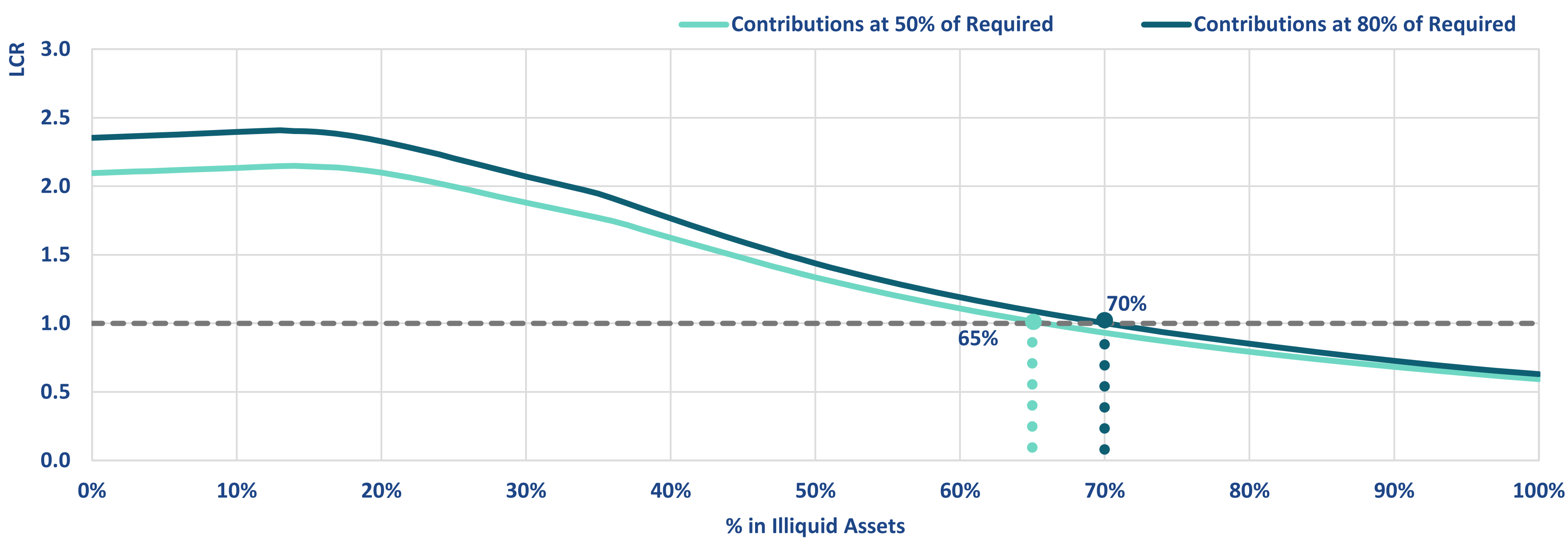
The 8-year scenario is useful for a long-term investor with a willingness to accept illiquidity risk to access the potentially higher returns of illiquid assets

- Determine what is the maximum allocation to illiquid assets that still allows the CTF to meet its liquidity needs during and after the scenario
  - The solution is the allocation at which the LCR equals 1

Results of the 8-Year LCR Analysis

- Assuming the stress occurs in Year 4, the maximum allocation to illiquid assets is 65 percent if at least 50 percent of the projected contributions are received
  - At an 80 percent contribution rate, the maximum illiquid allocation rises to 70 percent
  - These results are prior to accounting for potential TAP outflows, which will reduce the maximum allocation in each case by 10 percentage points

WSIB Projected Liquidity Coverage Ratio



LCR ANALYSIS

STRESS TESTING FOR ILLIQUIDITY LIMITS: SUMMARY OF 8-YEAR SCENARIO RESULTS

The 8-year LCR analysis indicates the CTF could allocate at most 70 percent of its assets to illiquid assets and still expect to meet its cash flow needs

- Assumes employers make at least 80 percent of the OSA's projected contributions to retirement plans over the next 8 years; this has been true in recent history
- To account for the possibility that all TAP owners in DC and DCP plans switch to other options during the 8-year period, the limit should be reduced by 10 percentage points, to 60 percent

Staff also considered how private credit, which is under consideration in the 2025 CTF SAA study, would change the 8-year LCR results

- Since private credit does not yet have a formal allocation; some assumptions must be made about allocation and funding
- Adding private credit yields a similar maximum level of illiquidity
  - Depending on its implementation, private credit might improve the CTF's cash flow profile once the asset class emerges from its initial J-curve period

LCR ANALYSIS
STRESS TESTING FOR ILLIQUIDITY LIMITS: 6-MONTH SCENARIO

The 6-month liquidity scenario captures a 2008-like market crash as well as severe liquidity demands

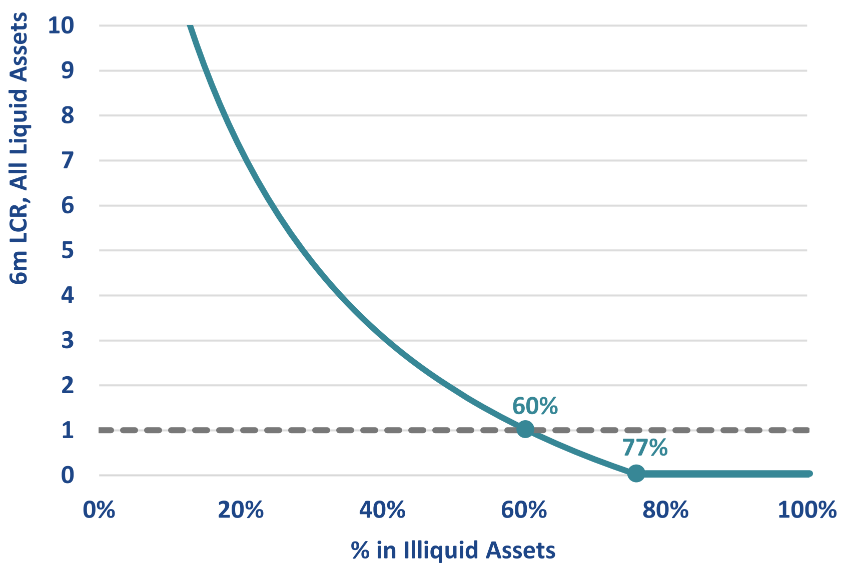
- Liquidity demands are based on the worst outflows experienced during the CTF's history
- Liquid assets are cash, fixed income, and public equity
  - "Highly liquid assets" — cash, Treasuries, and passive public equity — are sold first to meet liquidity demands; other fixed income and public equity can then be sold, possibly at a loss
- Further details available in the Appendix

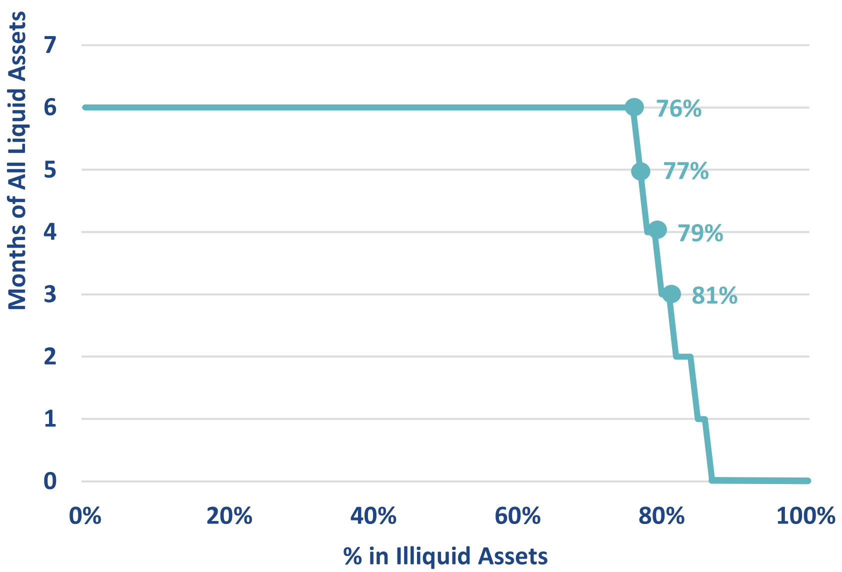
The 6-month scenario represents an unlikely occurrence but serves as a check on the 8-year result

- This modeled scenario is more severe than that experienced by the CTF during 2008
- As discussed in the prior presentation, improvements made to the CTF's liquidity profile and management after the 2008 financial crisis have strengthened the CTF's ability to navigate this type of environment

Results of a severe liquidity shock over a 6-month period, considering all liquid assets

- The maximum allocation to illiquid assets under this scenario is 60 percent
- While the 6-month LCR falls below 1 at higher allocations, the CTF would still be able to meet liquidity needs for 6 months if the allocation to illiquid assets is not larger than 76 percent
  - Liquidity needs are met, but the CTF might have difficulty meeting liquidity needs after 6 months
  - Similar charts considering only highly liquid assets can be found in the Appendix
- At higher allocations to illiquid assets, the CTF exhausts its liquid assets in less than 6 months
  - The WSIB would need to sell private assets to meet liquidity needs for the remaining months and beyond





STRESS TESTING FOR ILLIQUIDITY LIMITS: 6-MONTH SCENARIO

In the 6-month scenario, as higher allocations to illiquid assets are considered, more of the public assets must be sold to meet liquidity demands

- The portfolio, after 6 months, will be heavily tilted towards the illiquid assets, possibly well above its target allocation
  - Example: with a target allocation of 50 percent illiquid assets, the CTF ends the stress event with a 68 percent allocation to illiquid assets
  - The deviation from the target is higher with higher target allocations
- The resulting portfolio could make meeting future liquidity needs challenging

RECOMMENDATION

RECOMMENDATION

Staff's stress analysis indicates that the CTF's strategic allocation to illiquid assets should not exceed 60 percent

- The 8-year LCR analysis suggests the CTF's target allocation to illiquid assets should not exceed 70 percent (prior to potential TAP outflows)
  - This conclusion hinges on the CTF receiving at least 80 percent of OSA's current projected contribution levels over the next 8 years
  - Staff's conclusion is based on reasonable assumptions and historical observations, but the future could look worse than our forecast
  - Adding private credit yields a similar maximum level of illiquidity
    - Depending on its implementation, private credit might improve the CTF's cash flow profile once the asset class emerges from its initial J-curve period
- Despite evidence that TAP participants typically do not withdraw their funds in down markets, staff considered the potential of a mass redemption
  - If all TAP owners (including TDF investors) were to request redemption at the same time, 10 percent of the CTF would need to be liquidated

Staff recommends a maximum target allocation to illiquid assets of 53 percent, identical to the 2021 study, to better facilitate portfolio rebalancing needs and accommodate evolving market conditions

APPENDIX

APPENDIX
ASSUMPTIONS FOR THE 8-YEAR LCR SCENARIOS

Return Scenario A: Modeled CTF returns for the years 2001–2008

- Captures worst 8-year return period for the CTF to date; starts with dot-com crash and ends with financial crisis
  - In between crashes there is a strong market recovery
  - Tangible assets was not an asset class at the time and is modeled using proxies

Return Scenario B: Actual CTF returns for the years 2008–2015

- Post-financial crisis period was marked by a slow recovery; liquid assets would be reduced by the market stress, which might create challenges to meet cash flow needs

ASSUMPTIONS FOR THE 8-YEAR LCR SCENARIOS

Cash flow assumptions are based on private asset class pacing models and current OSA projections (contributions and beneficiary payments for Plans 1 and 2)

- Pacing models are adjusted after a “stress year”
  - Capital calls for new investments reduced, but paydown of lines of credit is accelerated
  - Reduced income and distributions from illiquid assets
- OSA projected contributions can change (e.g., employers could contribute less than recommended due to a prolonged economic slowdown)
  - 50 percent of required contribution (used in the 2017 and 2021 studies)
    - Based on the worst 8-year average contribution rate 2001–2008, 56.4 percent
  - 80 percent (used in the 2017 and 2021 studies)
- Include potential early paydown of credit lines and asset-level debt

Net outflows in the stress year can exceed 17 percent of the CTF and 51 percent of its liquid assets when the illiquid allocation is greater than 60 percent

New for 2025: consider 3 possible stress years: Year 2, Year 4, and Year 6

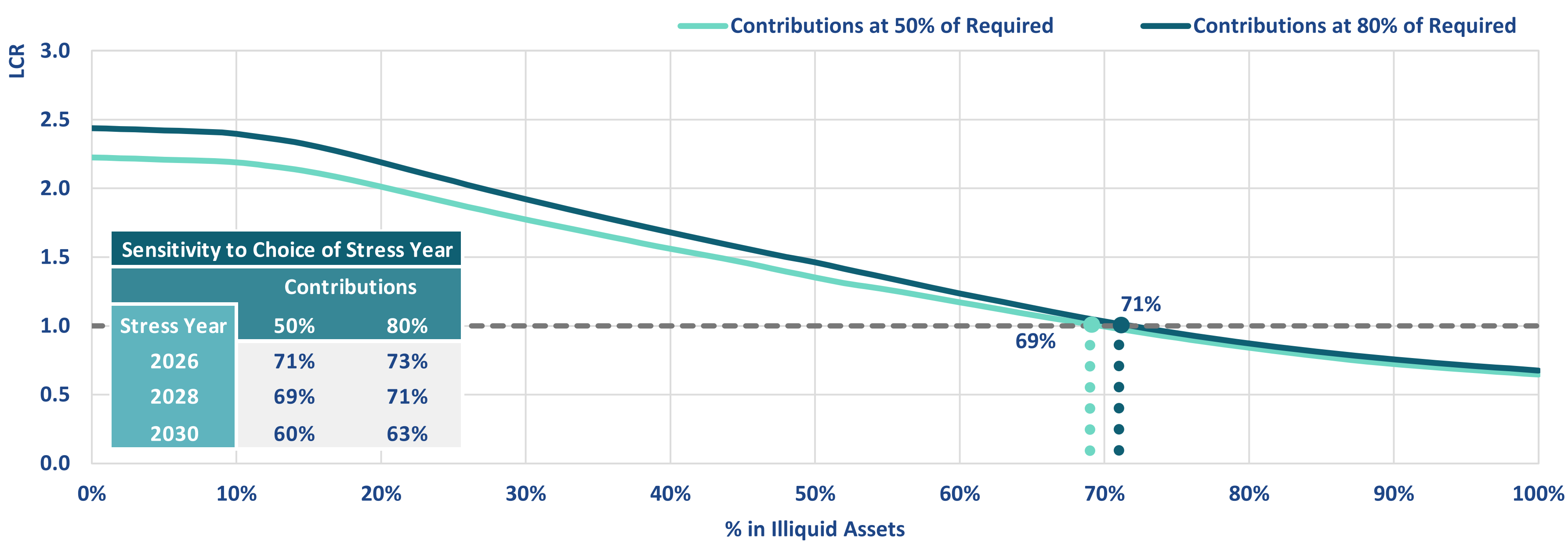
- The impact of a stress year after a crash can be offset by a market recovery
- Stress year just before a crash can be difficult for liquidity

STRESS TESTING FOR ILLIQUIDITY LIMITS: 8-YEAR SCENARIO

Results of the 8-Year LCR Analysis with Return Scenario A

- Maximum allocation is higher (lower) if the stress year is earlier (later) in the 8-year period
- Assuming the stress year is 2028 (Year 4), the maximum allocation to illiquid assets is 69 percent if at least 50 percent of the projected contributions are received
  - At an 80 percent contribution rate, the maximum illiquid allocation rises to 71 percent
  - These results are prior to accounting for potential TAP outflows, which will reduce the maximum allocation in each case by 10 percentage points

WSIB Projected Liquidity Coverage Ratio



Sensitivity to Choice of Stress Year		
	Contributions	
Stress Year	50%	80%
2026	71%	73%
2028	69%	71%
2030	60%	63%

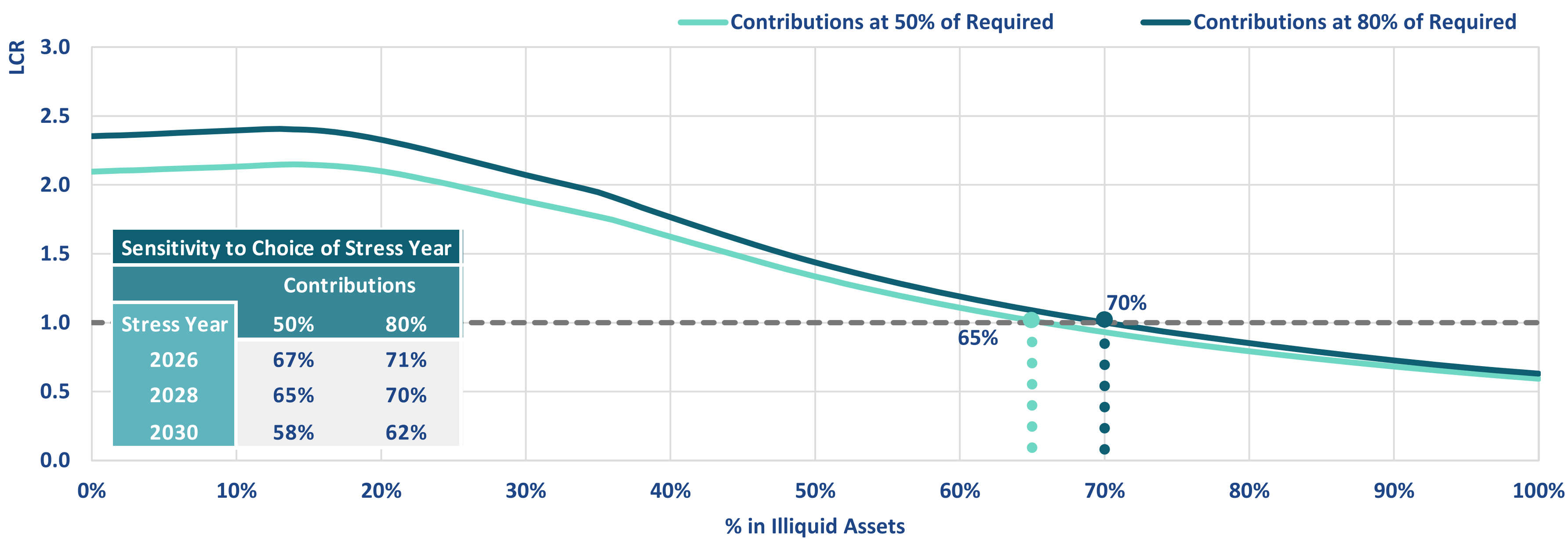
APPENDIX

STRESS TESTING FOR ILLIQUIDITY LIMITS: 8-YEAR SCENARIO

Results of the 8-Year LCR Analysis with Return Scenario B

- Maximum allocation is higher (lower) if the stress year is earlier (later) in the 8-year period
- Assuming the stress year is 2028 (Year 4), the maximum allocation to illiquid assets is 65 percent, if at least 50 percent of the projected contributions are received
  - At an 80 percent contribution rate, the maximum illiquid allocation rises to 70 percent
  - These results are prior to accounting for potential TAP outflows, which will reduce the maximum allocation in each case by 10 percentage points

WSIB Projected Liquidity Coverage Ratio



Sensitivity to Choice of Stress Year		
	Contributions	
Stress Year	50%	80%
2026	67%	71%
2028	65%	70%
2030	58%	62%

APPENDIX

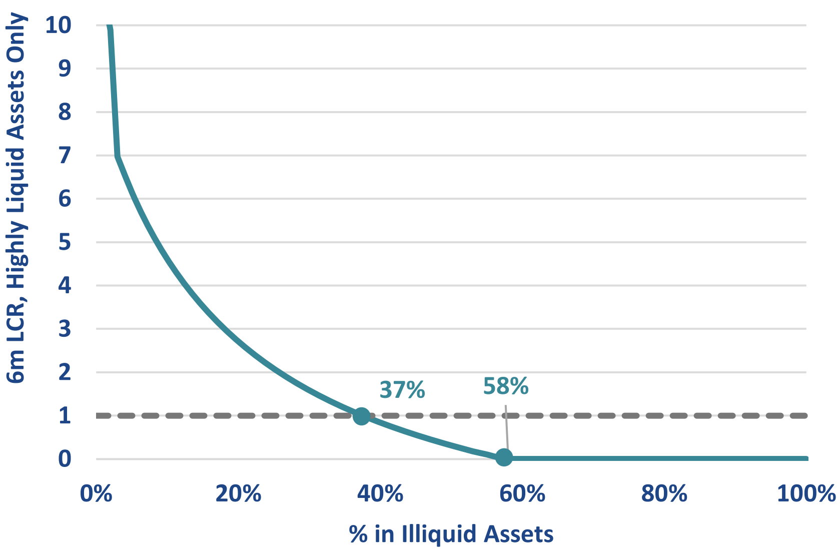
ASSUMPTIONS FOR THE 6-MONTH LCR SCENARIO

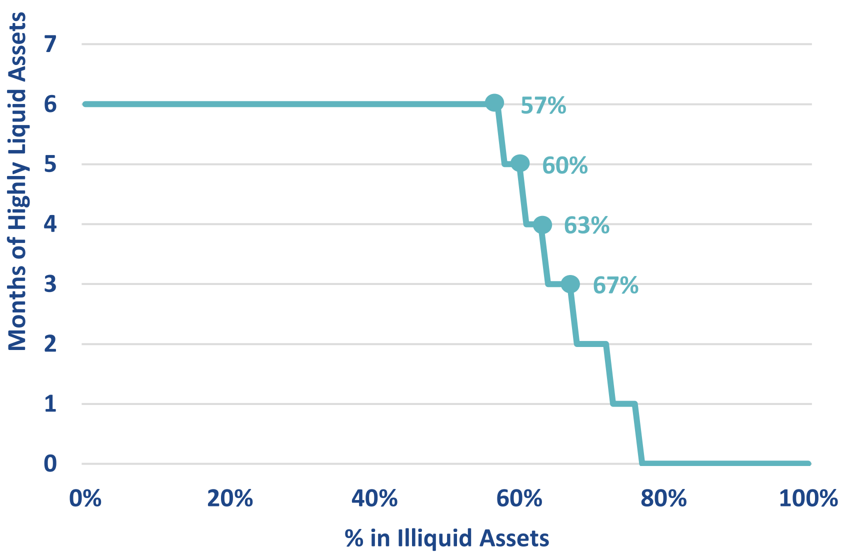
A severe liquidity shock over a 6-month period

- **Assume a 2008-like event occurs at the start of analysis; public equity is reduced in value by half, while Treasuries rise in value**
  - **Assume markets do not recover within 6 months, similar to post-2008 recovery**
- **Assume the worst 12-month net cash flows to beneficiaries and to private assets re-occur (outflow of one-twelfth the annual historical amount each month)**
  - **Net outflows for each case; hence, no cash inflows during the 6 months**
  - **Total outflow can exceed 8 percent of the CTF in one month**
- **Only cash, Treasuries, certain bonds, and passive public equity (“highly liquid assets”) are assumed to be liquid; all other fixed income and public equity can be sold, possibly at a loss, during a period of market stress**
  - **Assume illiquid assets cannot be sold within 6 months**
- **Assume we must pay down amounts outstanding on lines of credit immediately**

Results of a severe liquidity shock over a 6-month period, considering highly liquid assets only

- The CTF would have enough highly liquid assets to last 6 months if the allocation to illiquid assets is not larger than 57 percent
  - For allocations to illiquid assets up to 37 percent, highly liquid assets at the end of 6 months are equal to or greater than the CTF's expected liquidity needs beyond 6 months
  - For allocations between 37 and up to 57 percent, the CTF can last 6 months using only highly liquid assets but would need to tap other public assets to meet liquidity needs beyond 6 months
- At higher allocations to illiquid assets, the CTF exhausts its highly liquid assets in less than 6 months
  - The WSIB would then need to sell credit and liquidate active manager accounts in public equity to meet liquidity needs for the remaining months and beyond





MEKETA

INVESTMENT GROUP

Washington State Investment Board

July 16, 2025

CTF Strategic Asset Allocation (SAA) Voting Exercise

Part I

Project Agenda

Date	Agenda Item
November 2024	*Introductory Session*
February 2025	*Review the Private Credit Asset Class*
April 2025 (by WSIB)	*Consider WSIB Capital Market Assumptions*
July 2025 Offsite	CTF SAA Review, Modeling, and Discussions
September 2025	- Peer Plan Perspectives - Asset Allocation Recommendation
November 2025	*Possible Follow Up Items

Session Objective:

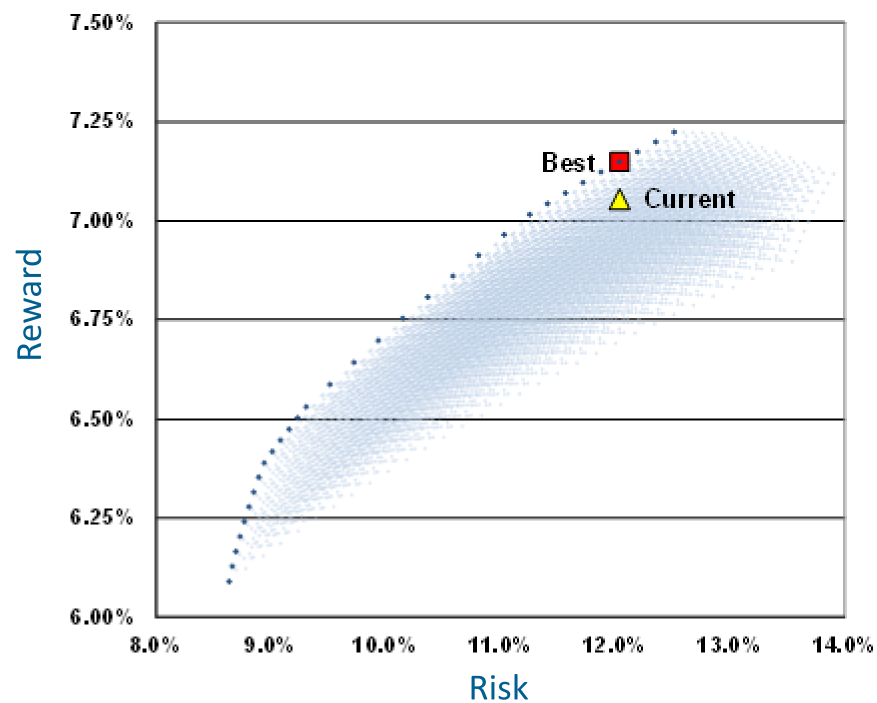
Establish the Board's portfolio priorities to guide staff's allocation and policy recommendations.

Outline of the session:

1. Modeling overview recap
2. Review System changes since last study
3. Review the decision factors that will be used to guide asset allocation
4. Review allocation modeling ranges

- Practitioners utilize some form of optimization to identify the best portfolio.
- Our process utilizes “decision factors” to allow the Board to express their risk and reward priorities.
- Ultimately, the decision factors are meant to differentiate characteristics of different asset allocations.
- This prioritization allows the model to identify a portfolio that appropriately expresses the Board’s preferences.

Risk/Reward Optimization



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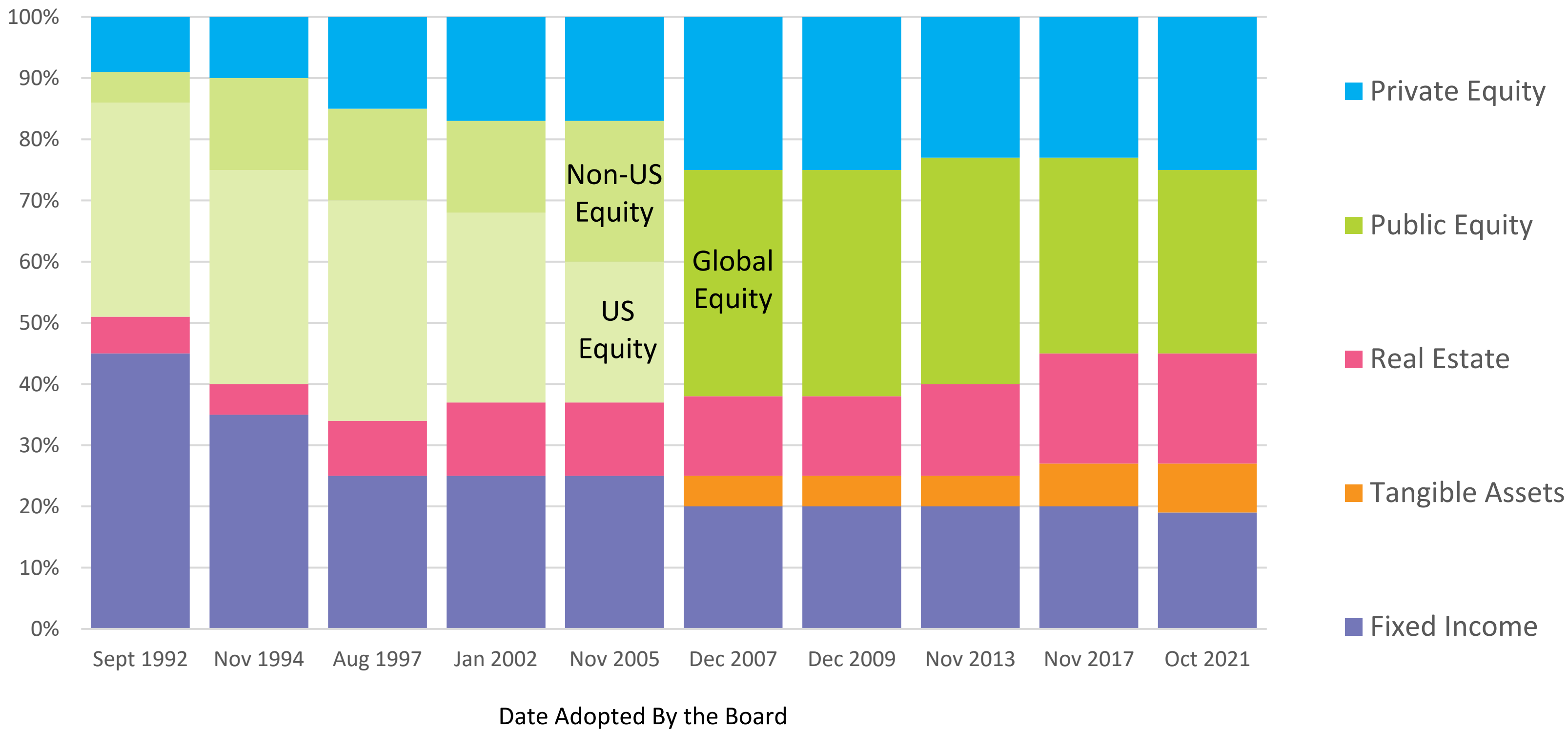
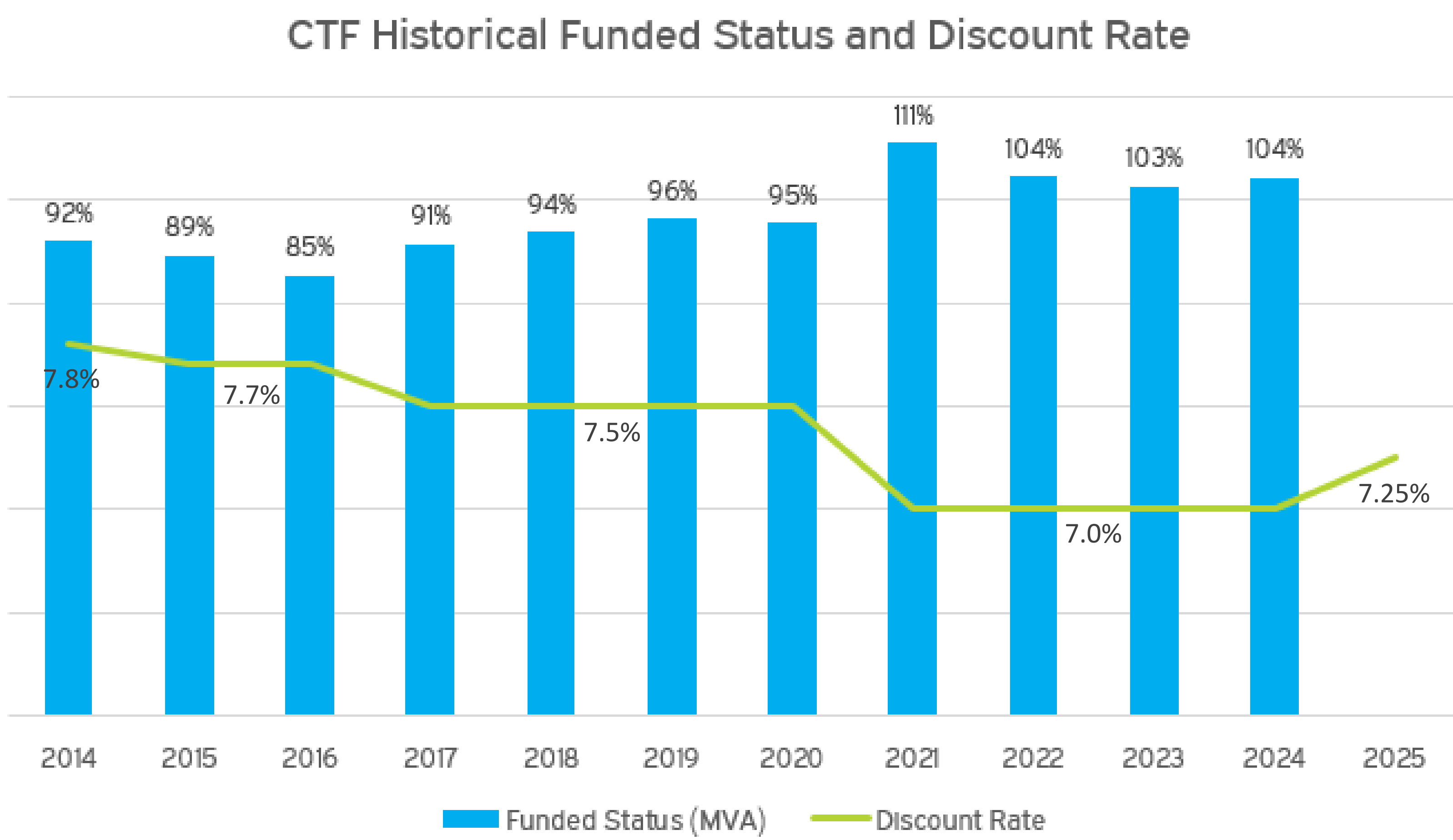
CTF Historical Strategic Asset Allocation Target



- Real estate has steadily increased in allocation through the years.
- Equities (public + private) increased through the 90's then decreased slightly.
- The fixed income allocation has steadily decreased as equities increased, then decreased further with the inclusion of tangible assets



* Source: leg.wa.gov/studies-audits-and-reports/actuarial-reporting/pensions/supporting-information/historical-valuation-data/. Historical discount rate for LEOFF differs from what is shown above.

Decision Factors

- **What is a Decision Factor?** Decision Factors are quantitative metrics that are used to measure and rank the importance of financial objectives across simulated results.

- Three financial objectives that generally indicate system-wide success:
  - √ **Sustain long-term funding progress**
  - √ **Manage funding costs**
  - √ **Mitigate severe downside event risk**

Decision Factors for 2025 Asset Allocation Study

Financial Objective	Decision Factor
Sustain Long-term Funding Progress	Maximize Long-term Compound Return
	Minimize Compound Return Volatility
	Stay Within a Funded Ratio Corridor
Manage Funding Costs	Minimize Employer Contribution Volatility
Mitigate Severe Downside Event	Minimize Rebalancing/Cash Flow Stress

BLUE
- "Risk-on"
- Favors long-term growth
- Private Equity and Public Equity

ORANGE
- "Moderate"
- Favors diversification
- Real Assets, Tangibles, Private Credit

PURPLE
- "Risk-off"
- Favors income and low vol
- Fixed Income

Decision Factor Overview (cont.)

Decision Factor		Rationale/Impact
#1	Maximize Long-term Compound Return	Maximizes compound return, which is equivalent to seeking highest possible funded ratio at end of horizon. Takes risk into account to a degree but can be influenced by outlying high returns.
#2	Minimize Compound Return Volatility	Seeks stable asset growth but will also lower expected returns. Minimizes downside risk but reduces potential upside gains. Lower-risk/lower-return portfolios require the support of higher contributions.
#3	Stay Within a Funded Ratio Corridor	Rewards portfolios that do not deviate from long-term actuarial funding path significantly. Places less emphasis on significant upside potential gains. Likely rewards most consistent-returning portfolios.
#4	Minimize Employer Contribution Volatility	Minimizes funding cost volatility which allows for improved budgetary planning. Lower funding cost volatility may lead to higher absolute funding levels.
#5	Minimize Rebalancing/ Cash Flow Stress	Liquidity stress typically occurs during severe downside return crises. Considers various portfolio characteristics. Focus on liquidity stress may lead to emphasis on public vs. private assets.

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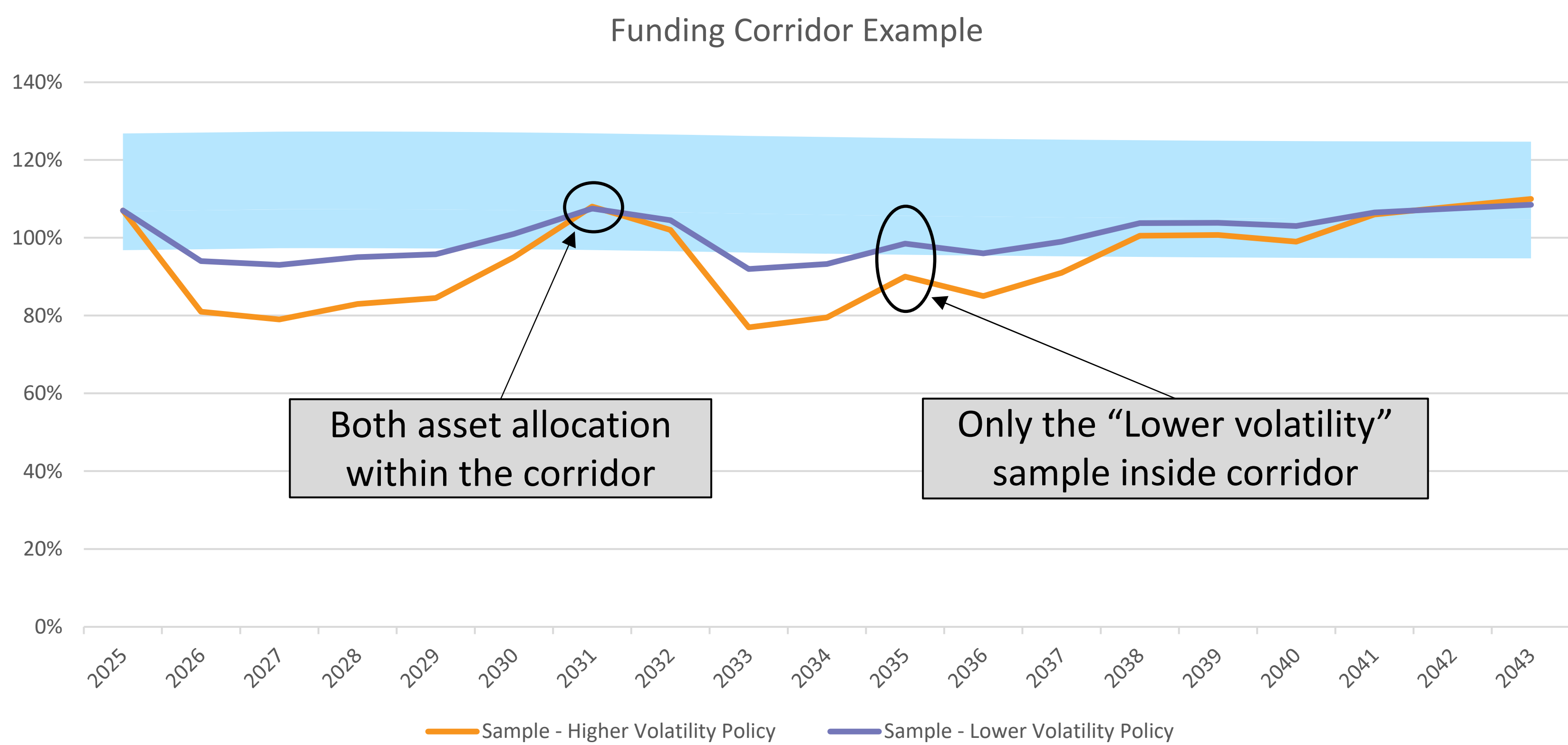
What is the funded status corridor?

- Projection points that overlap with the Corridor (blue shaded area) indicate successful outcomes.
- Although the orange sample ends with a higher funded status, the purple sample scored higher.



Modeling Allocation Ranges – CTF Strategic Asset Classes

	Modeling Ranges		
Strategic Asset Class	**Min**	**Max**	Current Target
Public Equity	**20%**	**50%**	30%
Private Equity	**18%**	**30%**	25%
Fixed Income	**15%**	**47%**	19%
Real Estate	**10%**	**21%**	18%
Tangible Assets	**5%**	**11%**	8%
Private Credit	**0%**	**7%**	0%
Private Assets	**33%**	**60%**	51%

- Public Equity and Fixed Income have a wide range of potential allocation outcomes
- Private Equity, Real Estate, Tangible Assets and Private Credit are constrained to reflect implementation considerations
- All asset classes cannot achieve their maximum allocation simultaneously. Corner solutions occur when some asset classes reach constrained levels.

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Frederick (Rick) Funston

Chief Executive Officer, Funston Advisory Services

Rick has over fifty years of experience in both not-for-profit and for-profit sectors. His career began in crisis intervention within the public sector. He later trained hostage negotiators, medical personnel, and public service workers in de-escalation techniques. He acted as a negotiator and facilitator in numerous stakeholder engagements, including working with the Canadian brewing industry during the NAFTA negotiations.

This evolved into consulting roles focused on strategy and operations, organizational leadership development, performance management, program evaluation, and survey research.

Between 1998-2010, he was the National Practice leader for Deloitte's Governance and Risk Oversight Services. In that capacity, he served many of Deloitte's largest domestic and global clients. In 2001, Rick created the concept of risk intelligence for value creation and protection.

He is a frequent public speaker and is the principal author of Surviving and Thriving in Uncertainty: Creating the Risk Intelligent Enterprise®, published by John Wiley & Sons in April 2010. This book specifically targeted the governance and risk oversight needs of boards and executives in both public and private sectors.

He served on the Board of Visitors for the Oakland University School of Business Administration from 2009-2011 and was an Adjunct Professor for the executive MBA program. Rick left Deloitte & Touche LLP in May 2010 and formed Funston Advisory Services LLC. Between 2011-2012, he served as special advisor to the Risk Institute of the Max Fisher School of Business at The Ohio State University.

Rick was the editor and a primary contributor to One of a Kind! A Practical Guide for 21st Century Public Pension Trustees published in 2017. Most recently, Rick is the principal author of a forthcoming book with Jon Lukomnik Adapt or Fail! A 5x5 Governance Framework for Board of Directors to be published by De Gruyter in March 2025.

He was awarded a B.A. from York University in Ontario and an M.S.W. from Tulane University.

Rick is based in Naples, Florida.

Washington State Investment Board

Ad Hoc Governance Committee (AHGC)

Charter Review 7 7 25

Funston Advisory Services LLC

Introductions

- Rick Funston is the CEO of Funston Advisory Services (FAS) - Governance, Risk and Compliance Solutions and Board Smart -online governance and fiduciary education.
- 50 years specializing in conflict resolution, de-escalation and consensus building.
- Before founding FAS, Rick was Deloitte's National Practice Leader for Governance and Risk Oversight and advised Fortune 500 companies across 20 different industries on governance, enterprise risk management and compliance.
- Began consulting with WSIB in 2008.
- In the past 15 years, he has led over 60 governance reviews for public retirement systems and institutional investors with nearly $3 trillion in assets under management (AUM) across a wide range of sizes and circumstances,
- Rick created the concept of Risk Intelligence. He is the principal author of 4 books, including most recently ***"Adapt or Fail"*** - for both for-profit and not-for-profit organizations and "***Transforming the Dialogue"*** specifically for public retirement systems and multi-employer plans.

Board Retreat Agenda July 17, 2025

1. Why Good Governance Matters
2. Board Structure Review Purpose and Process
3. Charter Options
4. Non-charter Recommendations
5. Next Steps

Part 1 – Why Good Governance Matters

"Even if you're on the right track, if you just sit there, you'll get run over." Will Rogers

Menti.com
1339 0618
Polling Question

Board Governance

When it's working well, it's almost invisible

When it's not, it's painfully obvious

1-3% investment premium*

Boston College Center for Retirement Research Issue in Brief (SLP 67) by Jean-Pierre Aubry et al., Aug 2019

Board Governance: Collective Decision-Making

The WSI Board is comprised of part-time volunteers

WA statutes prescribe Elected, Appointed and Ex Officio members

Must make decisions collectively to fulfill duties

Determine how to conduct business

Set direction and policy

Approve key decisions and then delegate authority and resources

Oversee the execution of direction within policy

Verify the reliability of information and advice received and the reports issued.

The Role of the Board and Its Committees in Collective Decision-Making

THE BOARD RETAINS THE ULTIMATE AUTHORITY AND RESPONSIBILITY FOR ALL MATTERS WITHIN ITS MANDATE

THE BOARD MAY PRUDENTLY DELEGATE AUTHORITY AND RESOURCES TO COMMITTEES, THE CEO AND OTHERS

COMMITTEES TYPICALLY RESEARCH, RECOMMEND, OVERSEE AND VERIFY BUT DO NOT MAKE THE FINAL DECISION

AHGC Example Findings

WSIB 3.0?

Purpose
WSIB
Mission, Vision, Values

Conflict resolution

Relationships
Proactive Stakeholder Engagement

Public Comment

Duties
Collective & Individual
Loyalty
Prudence
Compliance

Conduct
Charters
Use of Time/Consent Agendas
Consensus/Code of Conduct
Onboarding & Development
Relationship w ED/CEO

Set
Investment Beliefs
Investment Policy
Capital Market Assumptions
Asset Allocation

Approve then Delegate
Due Diligence
Authority & Resources
CEO Discretion

Oversee
Intelligence not just Information
Exception-based Reporting
Rapid Policy Escalation with Insights

Verify
Reasonable Assurance
Independent Reassurance
2nd Opinions
Expert Advice

Two Types of Conflicting Interests

Personal Conflicts

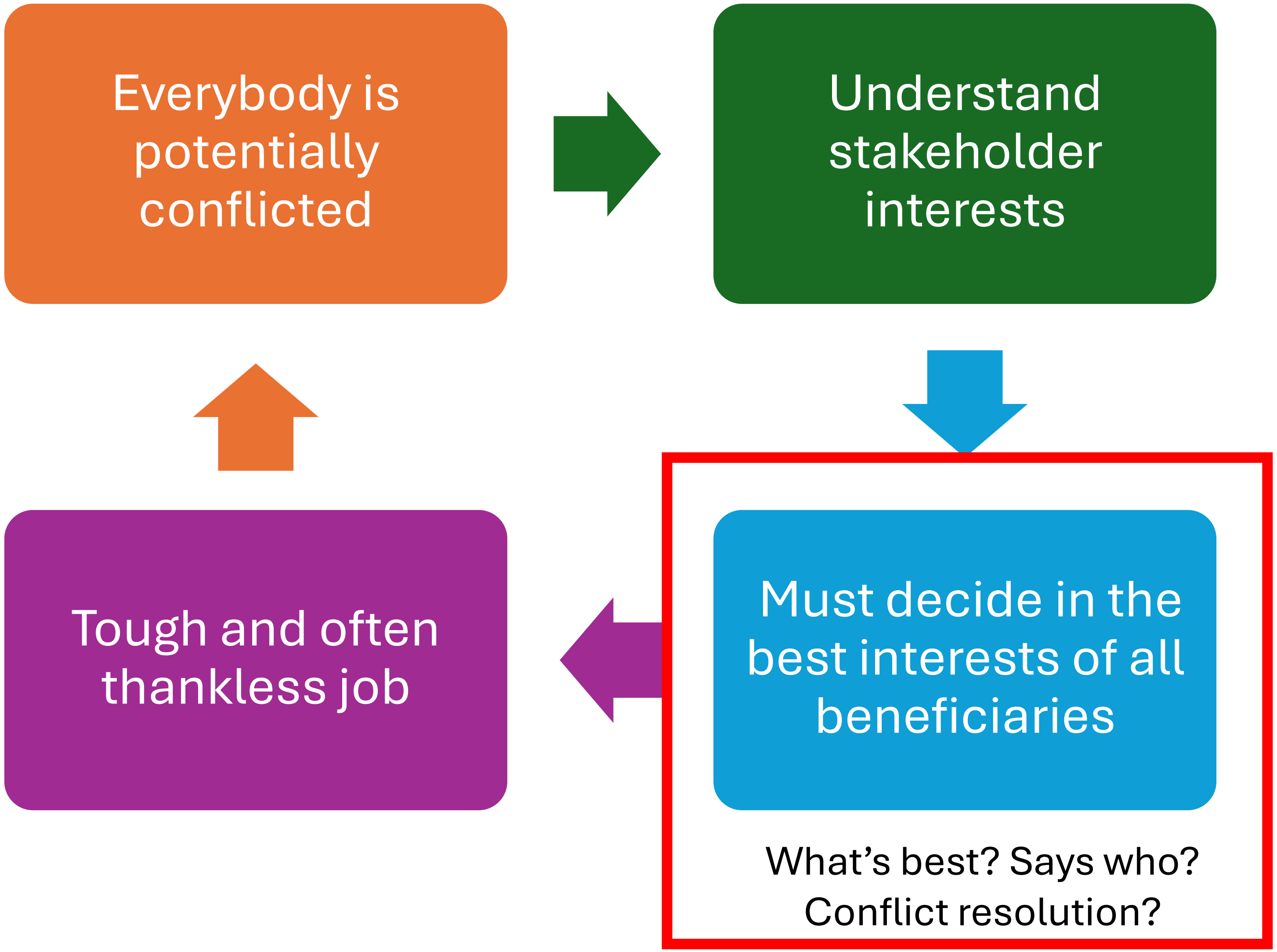
- Self-serving interests
- Addressed by statutes, codes and policies

Group Conflicts

- Inevitable conflicting stakeholder interests about what's best
- Currently no explicit process

Resolving Group Conflicting Interests

Legislation puts the key stakeholders in the same room and authorizes you to determine what is in the best interests of the beneficiaries



Part 2 –
Board Structure Review

It ain't what you don't know that gets you into trouble,
it's what you know for sure that just ain't so.' Mark Twain

Form follows function

Structure Foundational

Describes "How to organize"

- Purpose of Review
- Review Process
- Peer Benchmarking
- Later Policy and Process review will describe how to do the work

Board Structure Review Purpose

Ad Hoc Governance Committee (AHGC) formed as follow-up to the 2024 Board Self-Assessment – "Get the Board on the same page"

- David Nierenberg (Chair), Yona Makowski, Sara Ketelsen, Joel Sacks
- Conducted 25 interviews with current and former Board members and senior staff

FAS Report to the Ad Hoc Governance Committee (AHGC)

- Liaise with CEO, AAG and fiduciary counsel

Purpose

- Help the AHGC begin to develop a governance vision (WSIB 3.0) to address the results of the 2024 Self-assessment and the AHGC interviews.
- Conduct an independent review the Board's charters to assess whether there are better ways for the Board to organize its work, exercise its powers, constructively engage the entire Board and fulfill its duties.
- This did not include a review of WSIB's governance policies or practices.

Identify Opportunities for Improvement

What's leading, prevailing or lagging?

Our expert opinion is informed by decades of experience and quantitative benchmarking of peer practices.

- Lagging has fallen behind conventional usage for lack of effectiveness and/or efficiency.
- A prevailing practice is one that is common to many systems. Despite its prevalence, it may not be the most effective or efficient. Thus, the emergence of leading practices.
- Leading is a practical improvement over prevailing.

What's Best for WSIB?

- What's the issue?
- What are the options?
- Least to most?
- Pros and cons?
- Stay / Adjust / Change Course?

Board decides what's best for WSIB given its unique circumstances.

- One size fits one!

What are some of the governance issues?

“Getting on the same page”

- How do decisions get made collectively?
- How to resolve conflicts?
- How to constructively engage the entire board?
- How to clarify individual responsibilities?
- How to make the highest and best use of time of part-time volunteers?
- How to organize the work of the board and committees?

Board Charter Review Process

Ad Hoc Governance Committee Oversight

CONDUCT AN INDEPENDENT REVIEW OF BOARD CHARTERS

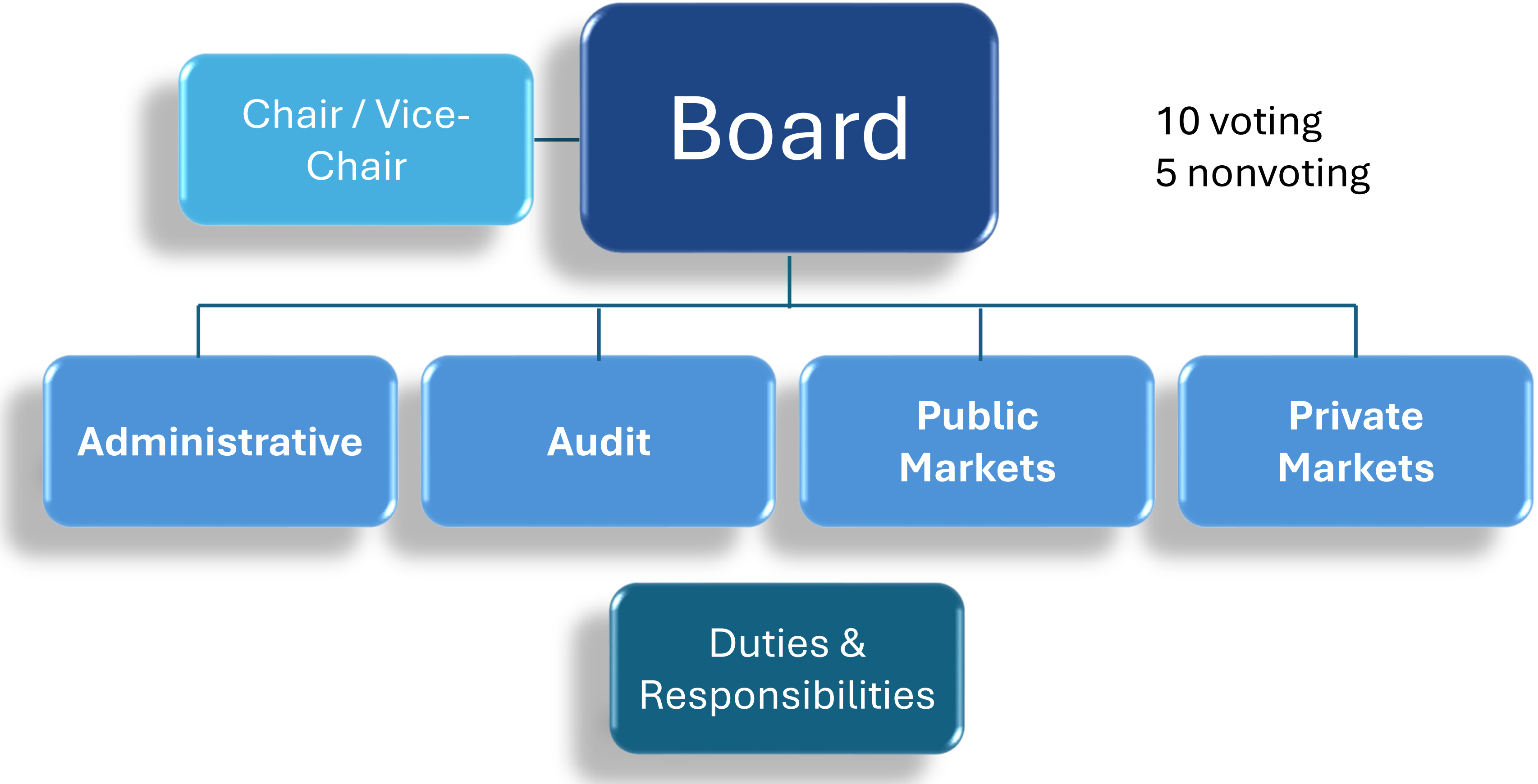
BENCHMARK PEERS

IDENTIFY OPTIONS FOR CHARTER AND OTHER IMPROVEMENTS

FACILITATE BOARD DISCUSSION AT THE JULY RETREAT

SUBMIT CHARTER REVIEW REPORT BY JULY 2025.

Current Board Structure



10 voting
5 nonvoting

Peer Benchmarking
(CEM 2023)

Performance

- Your 5-year net total return was 10.9%. This was above both the U.S. Public median of 8.7% and the peer median of 8.7%.
- Your 5-year net value added was 3.5%. This was above both the U.S. Public median of 1.2% and the peer median of 1.2%.
- Your 3.5% 5-year value added translates into approximately $21.7 billion of cumulative value added over 5 years.

Long-term performance

- Your 10-year net return of 9.2% was above both the U.S. Public median of 7.1% and the peer median of 7.1%.
- Your 25-year net return of 7.8% was above both the U.S. Public median of 6.6% and the peer median of 6.6%.
- Your 1.2% higher 25-year net return vs the peer median translates into approximately $23.3 billion over the period.

Cost and cost effectiveness

- Your investment cost of 58.3 bps was below your benchmark cost of 69.0 bps. This suggests that your fund was low cost compared to your peers.
- Your fund was below benchmark cost primarily because it paid less than peers for similar services.

WSIB is a very high performer. Value-added is exceptional.

But can you get even better?

WSIB is an outlier in several respects compared to peers
(FAS Proprietary Research)

Characteristic	Key Points
Total State Investment Boards (SIBs) (with AUM > $10B)	16 (7 are >$100 billion)
Asset Class Committees	WSIB and Mass PRIM are the only SIB's with asset class committees.
Nonvoting members	WSIB is the only board with non-voting members (statutory mandate).
Delegation of Investment Manager Selection	More than 70% of peers have delegated manager selection to staff and the trend toward further delegation is increasing.

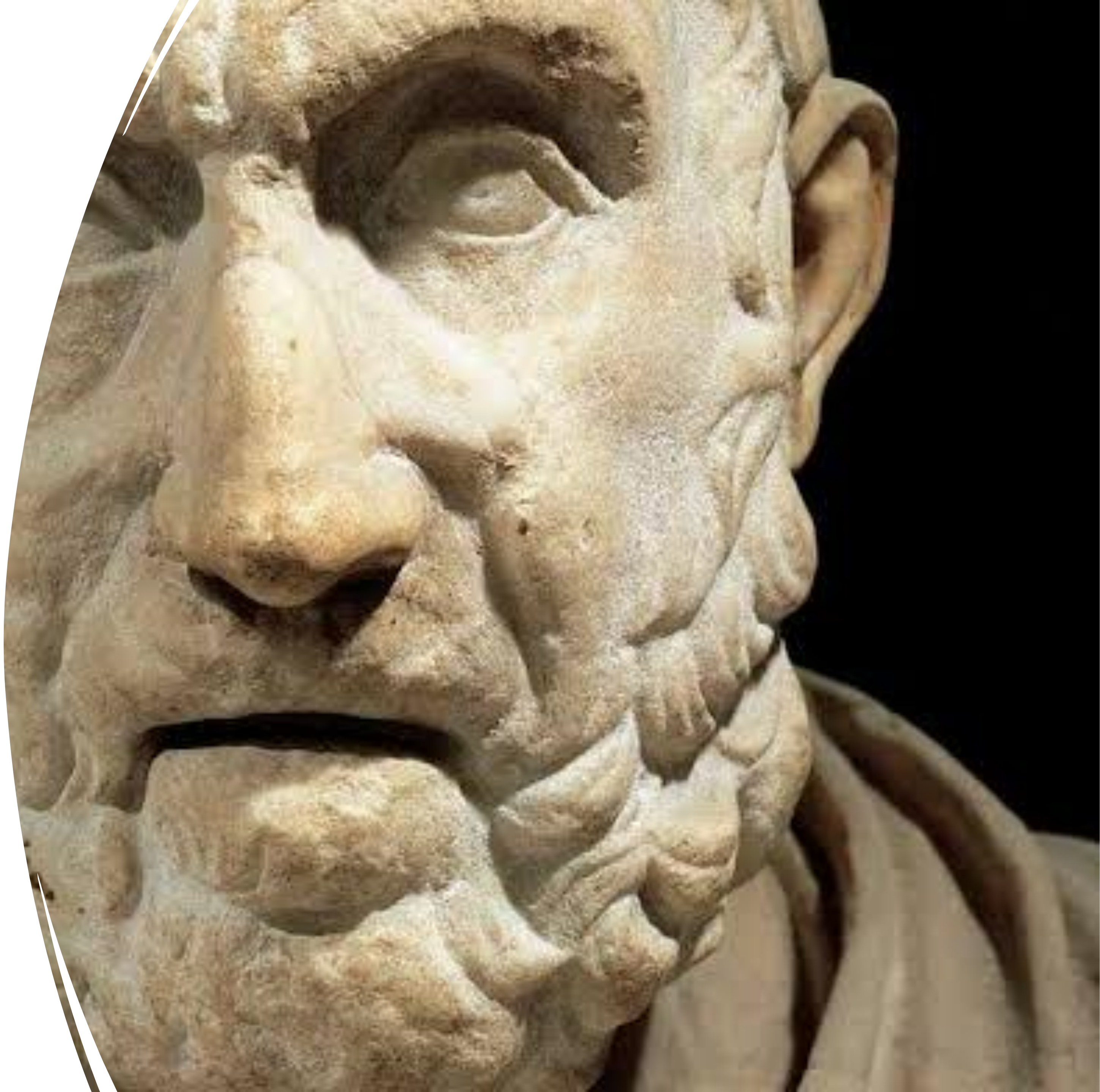
See Appendices for further Peer Benchmarking results

Part 3 Charter Options

"Life short, art long, opportunity fleeting, experience misleading, judgment difficult"

Hippocrates 400 BCE

Areas highlighted in yellow indicate a proposed change from the existing charters



Summary Options

WSIB Charter	Current Role	Compared to Peers	Charter Options	
			Incremental	Significant (excluding statutory changes)
Board	16 collective responsibilities and powers of the Board	Leading	Minor changes, reorganized by 5 powers reserved for Board WSIB 3.0	Bigger changes will come with policy & process improvements
Board Member (NEW)	11 individual responsibilities of Board members	Leading		Incorporates WA statutes, WSIB code of conduct and peer policies
Chair/Vice Chair	Leadership of Board	Prevailing	Refinements	Bigger changes will come with policy & process improvements
Administrative Committee	Operations, Finance & Accounting, Legal & Governance	Prevailing	Keep Ad Hoc Governance Committee for as long as needed	
Governance Committee (NEW)	Board Governance & Board Operations	Leading		Create a Standing Governance Committee
Audit Committee	Verifies Operational & Financial Integrity	Prevailing	No change	

Summary Options (cont'd)

Charter	Current Role	Compared to Peers	Charter Options	
			Incremental	Significant (excluding statutory changes)
Public & Private Markets Committees	Existing board charter delegates recommending manager selection to Public and Private Markets otherwise all other investment matters are addressed at the full board. Educate / Oversee current and future pipeline	Lagging		Delegate manager selection to Staff through CEO Build in appropriate checks and balances
Investment Board with no asset class committees (NEW)	All investment functions within Board Charter	Prevailing	Improve Board education Managers could present to full board from time to time	Eliminate asset class committees Bigger changes will come with policy & process improvements

A. Board Charter
(Reorganized by WSIB 3.0)

Conduct Business	Set Direction and Policy	Approve Key Decisions, then Delegate	Oversee Direction Within Policy	Verify Reliability
Establish Committees	Set Strategic Direction	Approve asset allocation	Oversee Performance and Risk	Verify audits are conducted
Establish Charters	Set Investment Policies	Approve the WSIB’s operating budget		
Appoint nonvoting positions	Set Governance Policies	Approve WSIB's annual report		
Select CEO and Confidential Secretary	Set Compensation Policies			
Select Service Providers				
Engage with Stakeholders				
Conduct Self-Evaluation				

Polling Question

B. Board Member Charter (new)*

A Board member should:

- Constructively engage
- Prepare for and participate in meetings
- Participate in continuing education / development
- Demonstrate solidarity in external communications
- Members have a co-fiduciary duty as trustees (no blind eye)

* A summarization of WA statutes, WSIB code of conduct, job descriptions from peers.

B. Board Member Charter (new)

A Board member should not:

- Accept employment by WSIB's service providers that might interfere or impair the exercise of their duties
- Accept gifts or things of economic value
- Engage in unauthorized personal trading, investment or borrowing
- Disclose confidential information including material non-public information (MNPI)
- Exercise undue influence
- Make significant requests of staff without prior approval

Polling Question

C. Chair / Vice Chair

Lead the Board/Set Tone at the Top

- Preside at meetings of the Board
- Facilitate Board deliberations
- Recommend the members and chairs to serve on each Committee.
- Coordinate Board business / agenda with CEO
- Discuss with Board members their performance / Vice-Chair will work with Board members on individual self-development plans as necessary
- Assure that the Board discharges its duties and responsibilities
- Facilitate effective and open communications between the Board and the CEO
- Serve as spokesperson for the Board in certain circumstances
- Be available to appointing authorities
- Approve CEO travel-related expenses

Polling Question

D. Administrative Committee

Conduct Business

- Recruit, select, evaluate and plan for the succession of the CEO

Oversee Performance and Risk

- Finance, Legal and Operations
- Oversee Compensation and Human Resources
- Oversee Appointment of Service Providers involving ED
- Monitoring and Reporting of Budget and Litigation
- Ethics, investment and legal compliance

Governance Options:

- Create a separate Standing Governance Committee or
- Continue Ad Hoc Governance Committee for as long as needed

E. Governance Committee (New or Ad Hoc?)

Excerpted from the Administrative Committee Charter

- Recommend governance direction and policy to the Board to ensure appropriate governance practices on the part of the Board, including appropriate and relevant ethics policies.
- Recommend to the Board charters for committees of the Board, the Board Chair, the Vice Chair, the Executive Director, and the Board itself.
- Recommend to the Board modifications to the Board Committee structure.
- Coordinate the Board (and committee) self-evaluation process.
- Nominate nonvoting candidates.
- Recommend the Board appoint such external experts as the committee deems necessary to support effective Board governance.

Option: Separating Governance from the Administrative Committee

Pros of Standing Committee

- Heightens focus on Governance
- Allows each committee to specialize effectively. Admin focuses on operations. Governance focuses on the Board
- Enhances accountability
- Clearer reporting and oversight of governance
- Reinforces Board commitment to good governance
- A Standing Governance committee is consistent with public company practice and WSIB’s proxy voting.

Cons

- An extra committee: Places more demands on busy part-time volunteers.
- Could just keep as Ad Hoc Committee for as long as needed.
- Workload may not justify creating a standing committee especially since the heaviest workload is likely to be at the front-end.

Polling Question

F. Audit Committee

Conduct business

- Conduct / oversee investigations
- Recruit, select, evaluate and plan for the succession of the Audit Director.

Oversee and Verify

- System of risk management.
- System of internal controls.
- Internal Audit process.
- External audits / examinations / investigations.
- Financial reporting.
- Process for monitoring compliance.

G. Public Markets Committee

Recommend for Board approval

- Policy, structure, and strategy for public market not delegated to the CEO
- Investments, including fixed income and public equity portfolios.
- Investments in public market opportunities.
- ~~The appointment of vendors pertaining to the investment management of the WSIB's public market portfolios that are retained in connection with such portfolios. Recommendations will be developed in a manner consistent with the Service Provider Policy 2.00.230~~ Delegate to Staff
- Investment due diligence and selection policies pertaining to the WSIB's public market investment portfolios.

Perform any other duties that may be assigned to it by the Board.

Regularly report to the Board on its activities.

H. Private Markets Committee

Recommend for Board approval

- Policy, structure, and strategy for private market investments (e.g., real estate, tangible assets, private equity) and other direct or private transactions not delegated to the CEO by policy.
- Investment due diligence and selection policies pertaining to private market investments.
- Investments in private market opportunities
- ~~The appointment of service providers pertaining to the WSIB's private markets portfolios that are retained exclusively in connection with the private markets portfolios. Such recommendations will be developed in a manner consistent with the Service Provider Policy 2.00.230 and~~ Delegate to Staff
- Any investment due diligence and selection policies pertaining to the WSIB's private markets portfolios.

Perform any other duties that may be assigned to it by the Board.

Report regularly to the Board on its activities.

Funds with Delegated Manager Selection

Trend is toward increasing delegation across all SIBs

DB and DC Assets Under Management	Largest U.S. State Funds (including Investment Boards)	Funds with Delegated Manager Selection			
		2015		2025	
		Number	%	Number	%
> $100 billion	14	8	57%	10	71%
$50-100 billion	15	6	40%	11	73%
$25-50 billion	15	2	13%	5	33%
$10-25 billion	24	6	25%	10	42%
Total	68	22	32%	36	53%

Option: Asset Class Committees Continue to Approve Investment Managers after Due Diligence by Staff

Pros

- Committees directly involved with line of sight for current and future pipeline
- Educates members
- Leverages specialized committee expertise.
- Committee review may further incent staff rigor

Cons

- Potentially slower decisions.
- Duplicate staff work
- Is this the highest and best use of committee time?
- Committees have not yet overridden staff recommendations in investment manager selection.
- May detract from policy and oversight focus
- A lagging practice among peers

Polling Question

Example Leading Practices in Effective Governance of Delegation of Manager Selection

Structure

- Staff Internal Investment Committee
- Effective internal audit capability
- Effective investment compliance function
- Other independent investment advisors to the Board

Policies

- Investment beliefs and policy statements
- Risk management policies
- Ethics and Compliance policies

Board Engagement Process

- Documentation of investment decisions and rationale
- Periodic risk and return reporting
- Pipeline reports including re-ups
- Annual asset class reviews

Option: Asset Class Committees Delegate Investment Manager Selection to Staff

Pros

- Reduces committee workload
- Allows focus on broader strategic direction and oversight rather than detailed investment manager decisions
- Higher and better use of time for committees and staff
- Speeds up decisions
- Reduces potential for personal conflicts of interest

Cons

- Less direct committee involvement:
- Relies heavily on staff
- May be more difficult to communicate Board investment beliefs to staff and consultants

Polling Question

I. Investment Board
(with no asset class committees)

Prevailing peer practice among SIBs

Board Sets Investment Direction and Policy

From the Board Charter: (not currently delegated)

- Investment Policy and Strategy.
  - Investment Beliefs (new)
  - Capital markets assumptions (new)
- Proxy Voting and Corporate Governance Guidelines.
- Review market investment opportunities.
- Sets asset allocation.
- Sets the amount and type of risk that the organization is willing to accept.
- Sets benchmarks.
- Sets policy, structure, and strategy for market (public and private) investments and other transactions not delegated to the CEO by policy.

9. Investment Board (cont'd) (with no asset class committees)

Board Oversees

From the Board Charter (not currently delegated)

- Oversee the investment performance of the WSIB.
- Oversee risk management including the most significant risks and management's response to these risks (Admin and Audit)
- Oversee investment due diligence and service provider selection policies pertaining to public and private market investments.*

*Currently delegated to the Public and Private Markets Committees

9. Investment Board (cont'd)
(with no asset class committees)

Board Verifies

From the Board Charter: (not currently delegated)

- Compliance with the investment policies, standards, and procedures established by the Board.
- An effective process of investment risk management, risk governance, and appropriate risk culture is in place.
- The WSIB operates within applicable laws and regulations as it pertains to investment.

Option: Investment Board with no Asset Class Committees

Pros

- All members actively participate in direction setting, approval and oversight
- Enhanced transparency for all Board members
- Enables a unified approach to investment oversight
- More time for discussion of direction and policy, less time on tactical decisions
- Better utilizes expert member time in setting overall direction and policy for the fund
- Prevailing practice among peers

Cons

- Potentially longer/more frequent meetings
- Reduced asset manager discussions
- May limit board's expert input in specific asset class discussions
- May reduce overall board efficiency

Polling Question

Part 4
Non-Charter Conclusions and Recommendations

"One ship drives east and another drives west
With the selfsame winds that blow.
Tis the set of the sails
And not the gales
Which tells us the way to go."

Ella Wheeler Wilcox, American Author and Poet

Non-Charter Conclusions and Recommendations

Conclusions:	Recommendations:
Investment performance is exceptional.	None at this time
Board member engagement is uneven	Improve the engagement of all board members (voting and nonvoting). Create individual development plans based on committee assignments. Offer coaching for the Chair.
Find ways to improve highest and best use of time	Agenda setting is strategic. Spend less time on materials review and more time in dialogue. Prudently delegate manager selection.
There is no easy way to access all governance policies and processes	Develop a comprehensive easy-to-access Governance Policy Manual written in lay terms
There is no explicit conflict resolution process	Agree on a conflict resolution process and build it in
There are no qualifications for Audit Committee membership	Consider ways to improve onboarding and continuing education for committee members and coaching for the Audit Committee chair
The terms CEO and Executive Director are used interchangeably	Clarify the use of the terms CEO and Executive Director for consistency. (ED is statutory language)

Polling Questions

Same Page?

Purpose
WSIB
Mission, Vision, Values

Conflict resolution

Relationships
Proactive Stakeholder
Engagement

Public Comment

Duties
Collective & Individual
Loyalty
Prudence
Compliance

Conduct
Charters
Use of Time/Consent Agendas
Consensus/Code of Conduct
Onboarding & Development
Relationship w ED/CEO

WSIB 3.0

Set
Investment Beliefs
Investment Policy
Capital Market Assumptions
Asset Allocation

Approve then Delegate
Due Diligence
Authority & Resources
CEO Discretion

Oversee
Intelligence not just Information
Exception-based Reporting
Rapid Policy Escalation with
Insights

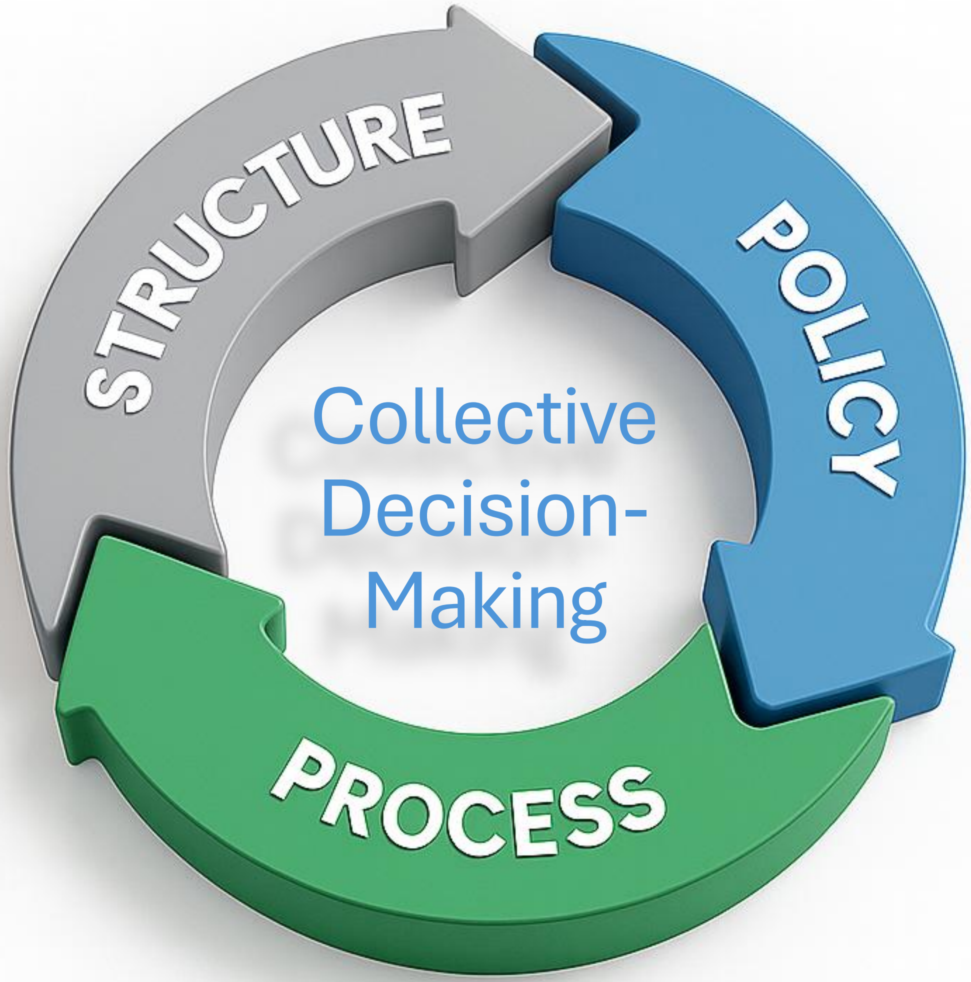
Verify
Reasonable Assurance
Independent Reassurance
2nd Opinions
Expert Advice

Part 5
Next Steps

"The journey of a thousand miles begins with one step."

Lao Tzu

Board Governance



Recommended Next Steps

FAS

- Incorporate Board feedback and submit Charter Review Report on Structure to AHGC

AHGC

- Review the charter conclusions and make recommendations to the full WSI Board
- Review the remaining governance charters, governance policies and processes
- Develop an integrated governance policy reference manual
- Consider a governance practice review (stated policy vs. actual practice)

Appendices
Peer Benchmarking

Investment Board Composition Comparisons

Type	DB/DC AUM $ Bil[1/]	Board Seats	Composition				Voting	Non-Voting
Trustee-Only Boards			Ex Offico	Appointed	Experts	Active/ Retired Members		
State of Wisconsin Investment Board	$150	9	1	8	8	2	9	
State of Michigan Investment Board	$127	5	2	3	3		5	
Oregon Investment Council	$105	6	2	4	4		5	1[2/]
New Jersey State Investment Council	$81	16		16	7	7	16	
South Carolina Retirement System Investment Commission	$58	8	1	7	7	2	7	1[2/]
Illinois State Board of Investment	$33	9	4	5	2[3/]	3[3/]	9	
Nebraska Investment Council	$25	7	2	5	5		5	2[4/]
West Virginia Investment Management Board	$22	13	3	10	10		13	
Montana Board of Investments	$16	11	2	9	3	2	9	2[5/]
South Dakota Investment Council	$16	8	3	5	5		8	
Rhode Island State Investment Commission	$14	10	3	7	6	1	10	1[2/]
North Dakota State Investment Board	$12	13	5	8	2	4		
Boards with Advisory Experts								
Washington State Investment Board	$187	15	3	12	5	5	10	5
Massachusetts Pension Reserves Investment Management Board (PRIM)	$111	9	2	3	1[6/]	5	9	
Ex-Officio Boards with Advisory Committees								
Florida State Board of Administration	$223	3	3				3	
Minnesota State Board of Investment	$112	4	4				4	

[1/] Based upon Pensions & Investments data for DB and DC assets from February 10, 2025 issue
[2/] Non-voting member is the Executive Director of the retirement agency
[3/] Number of members and experts for ISBI are not specified in statute
[4/] Non-voting members are the Executive Director of the retirement agency and the State Treasurer
[5/] Non-voting members are legislative liaisons, a State Representative and a State Senator
[6/] Mass PRIM has 22 advisory experts who serve on committees and vote

Investment Board Committee Comparisons

Type	Committees				
Trustee-Only Boards	**Investment**	**Audit**	**Governance**	**Compensation**	**Other**
State of Wisconsin Investment Board		Audit & Finance		Compensation	Benchmark & Performance; Strat. Planning & Corp. Gov.
State of Michigan Investment Board	No committees				
Oregon Investment Council	No committees				
New Jersey State Investment Council	Investment Policy; ESG	Audit	Governance & Operations		Executive; Nominating
South Carolina Retirement System Investment Commission		Audit & ERM		HR & Comp.	
Illinois State Board of Investment[1/]	Invest. Policy; Emerging Mgr.	Audit & Compliance			Executive; Defined Contribution
Nebraska Investment Council[1/]		Audit			
West Virginia Investment Management Board[1/]	Investment	Audit	Governance	Personnel	Legal & Legislative
Montana Board of Investments		Audit		Human Res.	Loan
South Dakota Investment Council[1/]		Audit		Compensation	
Rhode Island State Investment Commission[1/]	No committees				
North Dakota State Investment Board[1/]	Investment	Audit	Gov. & Policy	Exec. Rev. & Comp.	Securities Litigation
Boards with Advisory Experts					
Washington State Investment Board[1/]	Public Mkts; Private Mkts.	Audit			Administrative
Massachusetts Pension Reserves Investment Management Board (PRIM)[1/]	Investment; R.E. & Timber	Administration & Audit			Stewardship & Sustainability
Ex-Officio Boards with Advisory Committees					
Florida State Board of Administration	Investment	Audit			
Minnesota State Board of Investment	Investment				Administration; Proxy

[1/] Board does not delegate manager selection

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