Calgary

AGENDA

AUDIT COMMITTEE

June 13, 2024, 9:30 AM

ENGINEERING TRADITIONS COMMITTEE ROOM

Members

Councillor E. Spencer, Chair
Councillor R. Pootmans, Vice-Chair
Councillor C. Walcott
Councillor J. Wyness
Public Member K. Kim
Public Member C. McGillivray
Public Member J. Naicker
Mayor J. Gondek, Ex-Officio

SPECIAL NOTES:
Public are encouraged to follow Council and Committee Meetings using the live stream: www.calgary.ca/watchlive
Members may be participating remotely.

1. CALL TO ORDER

2. OPENING REMARKS

3. CONFIRMATION OF AGENDA

4. CONFIRMATION OF MINUTES

   4.1 Minutes of the Regular Meeting of the Audit Committee, 2024 May 23

5. CONSENT AGENDA

   5.1 DEFERRALS AND PROCEDURAL REQUESTS
   None

6. POSTPONED REPORTS
   (including related/supplemental reports)
   None

7. ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

7.1 The City of Calgary Investment Governance Review Report, AC2024-0459

7.2 External Auditor 2023 Management Letter, AC2024-0536

7.3 Calgary Municipal Land Corporation 2023 Annual Report, AC2024-0436

7.4 Utilities Delivery's Utilization of the Program and Project Management System (P2M) Audit, AC2024-0707

7.5 Proposed Amendments to Audit Committee Bylaw 33M2020 and City Auditor Bylaw 30M2004, AC2024-0182

7.6 2023 Civic Partner Audit Report, AC2024-0282
Attachments 4-32 held confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act*.

Review By: 2027 October 22

8. ITEMS DIRECTLY TO COMMITTEE

8.1 REFERRED REPORTS
None

8.2 NOTICE(S) OF MOTION
None

9. URGENT BUSINESS

10. CONFIDENTIAL ITEMS

10.1 ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

10.1.1 Supplier Billing Contract Compliance Continuous Auditing Project, AC2024-0708
Held confidential pursuant to Section 16 (Disclosure harmful to business interests of a third party) of the *Freedom of Information and Protection of Privacy Act*.

Review By: 2039 June 13

10.1.2 Audit Forum (Verbal), AC2024-0538
Held confidential pursuant to Section 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act*.

10.1.3 External Auditor (Verbal), AC2024-0537
Held confidential pursuant to Section 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act.*

10.1.4 City Auditor (Verbal), AC2024-0539
Held confidential pursuant to Section 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act*.

10.2 URGENT BUSINESS

11. BRIEFINGS
None

12. ADJOURNMENT

MINUTES

AUDIT COMMITTEE

May 23, 2024, 9:30 AM
ENGINEERING TRADITIONS COMMITTEE ROOM

PRESENT:	Councillor E. Spencer, Chair Councillor R. Pootmans, Vice-Chair Councillor C. Walcott Public Member K. Kim Public Member C. McGillivray Public Member J. Naicker (Remote Participation)
ABSENT:	Councillor J. Wyness (Council Business)
ALSO PRESENT:	Chief Financial Officer C. Male City Auditor L. Ormsby A/External Auditor N. Torgrimson Executive Advisor C. Smillie A/City Clerk S. Lancashire Legislative Advisor J. Booth

1. CALL TO ORDER

Councillor Spencer called the meeting to order at 9:30 a.m.

ROLL CALL

Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, Public Member Naicker, and Councillor Spencer

Absent from Roll Call: Councillor Wyness

2. OPENING REMARKS

Councillor Spencer provided opening remarks.

Public Member Naicker provided a traditional land acknowledgement.

City Auditor Ormsby recognized the month of May as Internal Audit Awareness Month.

3. CONFIRMATION OF AGENDA

Moved by Councillor Pootmans

That the Agenda for the 2024 May 23 Regular Meeting of the Audit Committee be confirmed.

MOTION CARRIED

4. CONFIRMATION OF MINUTES

4.1 Minutes of the Regular Meeting of the Audit Committee, 2024 April 18

Moved by Councillor Walcott

That the Minutes of the 2024 April 18 Regular Meeting of the Audit Committee be confirmed.

MOTION CARRIED

5. CONSENT AGENDA

5.1 DEFERRALS AND PROCEDURAL REQUESTS

None

6. POSTPONED REPORTS

None

7. ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

7.1 Financial Reserves Audit, AC2024-0569

Moved by Public Member McGillivray

That with respect to Report AC2024-0569, the following be approved:

That the Audit Committee:

1. Receive this report for the Corporate Record; and
2. Recommend that Council receive this report for the Corporate Record.

For: (6): Councillor Spencer, Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, and Public Member Naicker

MOTION CARRIED

7.2 Streetlights Maintenance and Repair Operations Audit, AC2024-0622

A presentation entitled "Street Lighting Maintenance & Repair Operations Audit" was distributed with respect to Report AC2024-0622.

Moved by Councillor Walcott

That with respect to Report AC2024-0622, the following be approved:

That the Audit Committee:

1. Receive this report for the Corporate Record; and
2. Recommend that Council receive this report for the Corporate Record.

For: (6): Councillor Spencer, Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, and Public Member Naicker

MOTION CARRIED

8. ITEMS DIRECTLY TO COMMITTEE

8.1 REFERRED REPORTS

None

8.2 NOTICE(S) OF MOTION

None

9. URGENT BUSINESS

None

10. CONFIDENTIAL ITEMS

Moved by Public Member Kim

That pursuant to Sections 17 (Disclosure harmful to personal privacy), 20 (Disclosure harmful to law enforcement), and 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act*, Committee now move into Closed Meeting, at 10:40 a.m. in the Engineering Traditions Committee Room, to discuss confidential matters with respect to the following Items:

- 10.1.1 Endpoint Management Continuous Auditing Project, AC2024-0630
- 10.1.2 Audit Forum (Verbal), AC2024-0636
- 10.1.3 External Auditor (Verbal), AC2024-0637
- 10.1.4 City Auditor (Verbal), AC2024-0638

And further, that the following be authorized to attend the Closed Meeting with respect to Items 10.1.1 and 10.1.3: Nicole Torgrimson and Simona Milojevik, External Auditors (Deloitte LLP).

And further, that pursuant to Section 6(1) of Procedure Bylaw 35M2017, Audit Committee suspend Section 78(2)(a) to forego the lunch recess to complete the Agenda.

For: (6): Councillor Spencer, Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, and Public Member Naicker

MOTION CARRIED

Committee reconvened in public meeting at 11:20 a.m. with Councillor Spencer in the Chair.

ROLL CALL

Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, Public Member Naicker, and Councillor Spencer

Absent from Roll Call: Councillor Wyness

Moved by Councillor Pootmans

That Committee rise and report.

MOTION CARRIED

10.1 ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

10.1.1 Endpoint Management Continuous Auditing Project, AC2024-0630

People in attendance during the Closed Meeting discussions with respect to Confidential Report AC2024-0630:

Clerks: S. Lancashire, J. Booth, and J. Phillips. Advice: C. Male, J. Bradley, L. Ormsby, R. Visscher, E. Guo, C. Smillie, and T. Andruschak. External: N. Torgrimson and S. Milojevik.

Moved by Public Member Naicker

That with respect to Confidential Report AC2024-0630, the following be approved:

That the Audit Committee:

1. Receive this report for the Corporate Record;
2. Recommend that Council receive this report for the Corporate Record; and
3. Direct that the Closed Meeting discussions, Confidential Report, and Confidential Attachment be held confidential pursuant to Section 20 (Disclosure harmful to law enforcement) of the *Freedom of Information and Protection of Privacy Act,* to be reviewed no later than 2039 May 23.

For: (6): Councillor Spencer, Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, and Public Member Naicker

MOTION CARRIED

10.1.2 Audit Forum (Verbal), AC2024-0636

No report given.

10.1.3 External Auditor (Verbal), AC2024-0637

No report given.

10.1.4 City Auditor (Verbal), AC2024-0638

Administration in attendance during the Closed Meeting discussions with respect to Confidential Verbal Report AC2024-0638:

Clerks: S. Lancashire, J. Booth, and J. Phillips. Advice: L. Ormsby and C. Smillie.

Moved by Public Member Kim

That with respect to Confidential Verbal Report AC2024-0638, the following be approved:

That the Audit Committee direct that the Closed Meeting discussions be held confidential pursuant to Sections 17 (Disclosure harmful to personal privacy) and 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act*.

For: (6): Councillor Spencer, Councillor Pootmans, Councillor Walcott, Public Member Kim, Public Member McGillivray, and Public Member Naicker

MOTION CARRIED

10.2 URGENT BUSINESS

None

11. BRIEFINGS

None

12. ADJOURNMENT

Moved by Councillor Walcott

That this meeting adjourn at 11:22 a.m.

MOTION CARRIED

The following Items have been forwarded to the 2024 June 18 Regular Meeting of Council:

CONSENT AGENDA

- Financial Reserves Audit, AC2024-0569
- Streetlights Maintenance and Repair Operations Audit, AC2024-0622
- Endpoint Management Continuous Auditing Project, AC2024-0630

The next Regular Meeting of the Audit Committee is scheduled to be held on 2024 June 13 at 9:30 a.m.

CONFIRMED BY COMMITTEE ON

CHAIR	CITY CLERK

Corporate Planning & Financial Services Report to Audit Committee
2024 June 13

ISC: UNRESTRICTED
AC2024-0459

The City of Calgary Investment Governance Review Report

PURPOSE

The purpose of the report is to review the results of an Investment Governance Review completed by Mercer (Canada) Limited (Mercer).

PREVIOUS COUNCIL DIRECTION

The investment governance review was undertaken pursuant to discussions had during the review of the 2022 City of Calgary Annual Investment Report on 2023 April 19.

RECOMMENDATION:

That Audit Committee receive the Investment Governance Report and supporting documents for the corporate record.

CHIEF ADMINISTRATIVE OFFICER/GENERAL MANAGER COMMENTS

The hallmark of a properly run and well executed investment program is its governance. Mercer's review concluded that The City takes governance seriously and has implemented necessary measures to ensure a robust governance structure. While the review also identified areas for improvement, The City is committed to addressing these recommendations promptly.

Governance practices evolve over time, and Mercer noted that The City exceeds best practices by recognizing the importance of regularly reviewing and adapting its governance to ensure continued adherence to industry standards. For there part in the governance process the Investment Advisory Committee (IAC) utilizes their expertise in providing me guidance and analysis to ensure a properly run and well executed investment program. As part of its commitment to a well-run city, The City prioritizes good governance as an essential component.

HIGHLIGHTS

The report by Mercer (Attach 1) indicates The City's governance structure and governance documents meets or exceeds the standards for good governance and best practice. Mercer highlights in the report:

- *The City investment policy documents are comprehensive and reflective of industry best practice.*
- *IAC composition is diverse, reflecting a spectrum of finance and investment knowledge both within the City organization and externally.*
- *…. the City has already exceeded best practices in governance through recognizing that processes and procedures must evolve over time, and that modifying, where necessary, existing processes to better suit current circumstances is essential in maintaining good and effective governance practices.*
- *…the current governance structure adopted in relation to Asset investment is efficient and operating with optimal consideration of timely and germane information examined by experts in the field of institutional investing…*

Although the review was generally positive, Mercer did identify where improvements could be made in areas such as document clarity, more detailed role definition, and IAC education.

The City of Calgary Investment Governance Review Report

DISCUSSION

The investment governance review undertaken by Mercer consisted of review of the current governance structure and whether it was sufficient to provide the necessary oversight for The City's assets invested in the capital markets. The report and recommendations generated were results of thorough review of legislation, governance and policy documents, minutes of investment meetings, and interviews conducted with members of the IAC.

Investment governance refers to the framework, processes, and practices that guide decision-making and oversight related to investment activities within an organization. It involves establishing clear objectives, implementing robust policies and procedures, and ensuring accountability and transparency in investment-related activities.

The report concludes that The City has established a robust framework of policies, procedures, and practices to ensure prudent, transparent, and accountable management of investment activities, ultimately aiming to maximize long-term returns while effectively managing risks.

Mercer's findings suggest the there are no inadequacies in the governance structure, as they have noted that the governance processes and documentations that have been developed and updated as necessary can navigate the varied legislative landscape and public expectations with respect to the investment of The City's assets. Although the structure and documentation require no substantive changes Mercer's has suggested items that may improve investment governance are:

- Expansion of IAC membership to include a third external member.
- Develop a pool of potential candidates for external IAC appointments to ensure continuity.
- and ease of succession transitions without interruption to overall IAC activities
- Expand the breadth of topics covered during IAC on-boarding.
- Make continuing education opportunities available to IAC members.
- Establish a consistent and documented definition of the Prudent Investor Rule.
- Update certain investment governance documents for purposes of clarity related to roles, responsibilities, and expectations.

Administration is committed to implementing the suggested changes where they align with current legislative requirements and City policies and procedures.

EXTERNAL ENGAGEMENT AND COMMUNICATION

☐ Public engagement was undertaken

☐ Public/interested parties were informed

☐ Dialogue with interested parties was undertaken

☒ Public communication or engagement was not required

IMPLICATIONS

Social

Not Applicable

Corporate Planning & Financial Services Report to Audit Committee
2024 June 13

ISC: UNRESTRICTED
AC2024-0459

The City of Calgary Investment Governance Review Report

Environmental

Not Applicable

Economic

Not Applicable

Service and Financial Implications

Other: Financial Integrity

Good governance is the hallmark of best practice in the investment management industry. An effective governance structure ensures proper oversight including that rigorous investment decision making processes, fulsome risk monitoring and mitigation, and robust financial controls are in place. The lack of good governance could put The City at risk both financially and reputationally.

RISK

An inadequate governance structure in its investment management can expose The City to a multitude of risks, potentially leading to financial losses, reputational damage, and legal liabilities. Key risks associated with inadequate governance include, but are not limited to, poor decision making, increased risk exposure, loss of stakeholder confidence, operational failures, financial underperformance, and missed opportunities.

The City's robust governance mechanisms are essential in mitigating these risks and safeguarding The City's financial health, reputation, and stakeholder trust.

ATTACHMENTS

1. Attachment 1 - Background and Previous Council Direction-AC2024-0459
2. Attachment 2 - Investment Governance Review-AC2024-0459
3. Attachment 3 - CFA Institute - Investment Governance for Fiduciaries-AC2024-0459
4. Attachment 4 – Governance Review Presentation-AC2024-0459

Department Circulation

General Manager/Director	Department	Approve/Consult/Inform
Carla Male	Corporate Planning and Financial Services	Approve

Author: Rodney Babineau, Senior Leader Investments

Background

The City of Calgary has allocated money to provide benefits for a variety of different purposes. While the monies are waiting to be disbursed the assets are invested to provide a rate of return in order to protect the funds from variety of different risks including, but not limited, to liability growth, cost inflation, and preservation of principle. The City of Calgary Investment and Governance Policy CP2020-02 governs the investments of The City.

Context

As part of the governance process The Annual Investment Report is presented to Audit Committee for its approval and for forwarding on to City Council. This report provides a summary of the years investment activity, asset mix, asset class and investment manager performance, as well as compliance information for Audit Committee.

As part of the discussion surrounding the 2022 Annual Investment Report, there were questions surrounding the governance structure and whether the current structure was sufficient for such a large pool of capital.

Previous Council Direction

Pursuant to The City of Calgary Audit Committee Meeting dated 2023 April 19, Administration undertook a review of the governance of the investment program by engaging a third party consultant to do the review.

DATE	REPORT NUMBER	DIRECTION/DESCRIPTION
2023 April 19	AC2023-0363	Chief Financial Officer's Report to Audit Committee 2022 Annual Investment Report

Bylaws, Regulations, Council Policies

City of Calgary Investment and Governance Policy CP2020-02

City of Calgary Investment and Governance Policy CP2020-02

Mercer

welcome to brighter

Investment Governance Review

Report and Recommendations

City of Calgary
15 March 2024

A business of Marsh McLennan

Contents

Section 1
Introduction

I. Objective

Mercer (Canada) Limited (**Mercer**) has been engaged by the City of Calgary (**City**) to conduct an extensive and in-depth review of the terms of reference and related governance structures and control processes currently in place for the Investment Advisory Committee (**IAC**).

The review was initiated to ensure that the IAC's terms of reference provide appropriate direction to the IAC, and to assess the governance and control processes in place in respect of the investment of City assets (**Assets**).

The review is also intended to evaluate the efficacy of existing investment governance in light of legal requirements and industry best practices. The review will ultimately culminate with the provision of recommendations, if applicable, for the overall governance of the investment of the Assets, as well as support the IAC in gaining a greater understanding as to how governance may need to evolve and change over time.

II. Format

This report (**Report**) contains Mercer's observations and recommendations with respect to the IAC and Asset investment governance, as determined in the governance documentation adopted by and for the City.

The discussion and recommendations contained in this Report are purposely addressed in separate sections. This is done to allow for greater context and background discussion to be presented as a foundation for the recommendations that are outlined in Section 7. The recommendations are set out separately to reflect a more concise presentation, as well as to ensure that the recommendations are not lost in the overall discussion of the relevant topics.

Section 2
Scope of Review

I. Process

The review process was divided into distinct phases, each of which has concluded in the observations and recommendations outlined in this Report. The phases are as follows:

Phase 1 - Preliminary and Initial Discussion: Mercer conducted an initial meeting with the City Investment Team (**CIT**), which supports the IAC, to ascertain the applicable phases of the governance review, and to define the scope of each phase;

***Phase 2 – Document Review**:* Mercer reviewed a comprehensive set of documents within the limited scope of the review mandate. The documentation provided for this purpose is listed in Section 5 and Appendix B;

Phase 3 – Interviews: Mercer conducted individual interviews with six (6) members of the IAC to collect information and understand perspectives regarding the governance of the Assets as well as the role of the IAC within the overall investment governance structure. Interviews were not conducted with external providers as they do not typically have direct involvement with governance and decision-making. Interview participants are listed in Appendix A; and,

Phase 4 – Final Report: The Report outlines our findings and observations, key guiding principles for governance as set out legislation (if applicable), as well as recommendations for prospective investment governance.

Although the documentation requested and interview topics discussed in relation to the preparation of this Report pertain to a number of the bodies associated with investment governance including, but not limited to:

- City Council (**Council**);
- the Audit Committee (**Audit Committee**);
- the IAC;
- the CIT; and,
- external investment advisors,

the scope of this Report focusses on the operational roles and responsibilities of the IAC in relation to investment governance.

II. Out of Scope

Some of the recommendations outlined in this Report may require the approval of the Audit Committee or Council in order to be implemented. However, this Report is not intended to be a review of the overall governance hierarchy within the City organization, and does not examine the process or considerations that may be associated with amendments to Council policies or bylaws.

III. Legal Advice

Mercer is not a law firm. This Report has been prepared for information purposes only for the benefit of the City; it is not intended to constitute or replace legal advice or an exhaustive legal opinion. This Report is not subject to solicitor-client privilege.

Should the City require legal advice with respect to the content of this Report, it is suggested that appropriate legal counsel be consulted.

Section 3
Executive Summary

This Report examines the governance processes and procedures currently applicable to the IAC in relation to its oversight, management and investment of the Assets.

I. Purpose

The purpose of this Report is to detail observations and recommendations based on our assessment of the current Asset governance structure, and identify areas where:

- Best practices are reflected;
- Potential gaps exist; and
- Changes/improvements could be made.

II. Observations

During both the documentation review and interview phases of the review process, several key themes were identified:

- Adequacy and scope of documentation
- Fulfillment of fiduciary obligations
- Breadth of IAC knowledge and experience

The information gathering phase of this review demonstrated an awareness by the City delegates, the IAC and the CIT of the purpose of good governance, and an intention to ensure that the Assets are governed well and invested appropriately. The IAC, in particular, with support provided by the CIT, operates from a place of fiduciary awareness, and a desire to ensure that process and governance are consistently applied. Oversight and monitoring tasks are completed directly by the CIT with respect to both internally invested assets and those invested through external consultants/managers, as well by the IAC through the receipt of regular reporting and interaction with the CIT.

III. Recommendations

Overall, the governance and decision-making processes associated with the Assets are undertaken with a view to governance best practices and intentions; this review process has sought to identify those areas where gaps persist, if any, or where a need to provide additional clarity or understanding is recommended.

In that regard, set out in this Report are a number of recommendations that pertain to the specific areas identified above, as well as other subjects of note identified during the course of the review.

Summarized below, in no particular order of priority, are those recommendations that, in our view, are integral to Asset governance going forward:

- Expansion of IAC membership to include a third external member
- Develop a pool of potential candidates for external IAC appointments to ensure continuity and ease of succession transitions without interruption to overall IAC activities
- Expand the breadth of topics covered during IAC on-boarding
- Make continuing education opportunities available to IAC members
- Establish a consistent and documented definition of the Prudent Investor Rule[1]
- Update certain investment governance documents for purposes of clarity related to roles, responsibilities and expectations

Not all of the recommendations contained in this Report are listed above. However, while each of the identified recommendations is discussed in greater detail below, in our view, each has been included on this listing due to it being a fundamental component of good governance.

[1] The terms "Prudent Investor Rule" and "Prudent Person Rule" are both used in this Report due to their respective incorporation into relevant City investment governance documents and applicable legislation. They are equivalent terms used interchangeably, reflective of the same concept and applicable standard of care.

Section 4

Assumptions and Legal Foundation

Under Canadian common law, a party becomes a fiduciary when "acting pursuant to statute, agreement or unilateral undertaking, [it] has an obligation to act for the benefit of another and that obligation carries with it a discretionary power."[2] A person acting in a fiduciary role is obliged to exercise a duty of skill and competence as well as a duty of trust, loyalty, and confidentiality with respect to the beneficiary.

I. Prudent Person Rule

The prudent person rule is a standard of care. It requires that individuals who are responsible for completing fiduciary tasks must exercise the care, diligence and skill that a person of ordinary prudence would exercise in dealing with the property of another person.

II. Knowledge and Skill

In addition to the prudent person rule, persons with fiduciary responsibilities are required to use all relevant knowledge and skill that they possess or, by reason of their profession, business or calling, ought to possess. At an organizational level, this requirement is generally interpreted to mean that relevant responsibilities are delegated to persons or bodies beholden of applicable expertise.

III. Delegation

While fiduciary tasks may be delegated, responsibility for the completion of those tasks to the appropriate standard of care cannot. Where it is reasonable and prudent to do so, parties with legal fiduciary responsibility may delegate relevant tasks to persons or bodies that are better suited by virtue of knowledge or skill. Nevertheless, the delegator must arrange for the prudent and reasonable oversight of the person or body to whom the responsibility is delegated. As the delegator remains ultimately responsible for the completion of the fiduciary tasks, the related standard of care will generally also extend to the person or body to whom such a responsibility has been delegated.

[2] *Hodgkinson* v. *Simms*, [1994] 3 S.C.R. 377

Section 5

Information Gathering

Phases 2 and 3 outlined in Section 2 comprise the information-gathering portions of the review process. For the purposes of this review, information-gathering comprised three distinct components:

1. Governance documents
2. Investment specific documents
3. Participant interviews

I. Document Review

The document review process entailed a detailed examination of legislation and governance materials deemed illustrative of the governance of Asset investment. It entailed an examination of documents related to the various bodies with the oversight of the Assets including, but not limited to:

- the Council;
- the Audit Committee;
- the IAC; and,
- CIT.

Not all documents reviewed are subject to the commentary below. The full list of documents reviewed is attached at Appendix B.

A. Governance Observations

A summary of the key points gleaned from the documents is outlined below:

Document	Commentary
IAC Terms of Reference Undated	• IAC composition is diverse, reflecting a spectrum of finance and investment knowledge both within the City organization and externally • Up to three external IAC members are contemplated - Currently only two IAC members are external to the City organization • Qualifications listed for external IAC members are appropriate - No minimum years of experience detailed other than requiring a person who has “senior financial executive experience” • External members “generally” serve no more than two consecutive terms, but provision is written as a guideline rather than policy - This could allow for an external IAC member to serve for more than two terms if desired • No express mechanism to resign and be removed from IAC participation outlined

Document	Commentary
City Employee Code of Conduct December 2022	• Prioritizes ethical behaviour from all employees • Emphasizes the high standard of behaviour expected of City personnel, and desire to meet public expectations • Reminder of need to avoid conflicts of interest, and to act without influence from personal or other outside interests • Code sets expectations for internal IAC members and CIT • Does not apply to external providers / advisors • Is not investment or finance specific
Administration Policy: Conflict of Interest 01 June 2022	• General applicability to City personnel • Elected officials, and their office staff, are exempt from policy • Sets clear and reasonable expectations with respect to conduct as a City employee, including use of City assets • Does not apply to external providers / advisors • Is not investment or finance specific
Delegation of Authority 26 February 2016	• General delegation to General Managers, by the City Manager, to sign agreement, orders or other documents that primarily relate to Departments under their supervision • Supports delegation to CFO regarding investment policies and related actions
IAC Orientation June 2023	• Outlines employees and positions within CIT • Details which portions of the Assets are internally-managed versus externally-managed • Summary of asset mix • Substantive detail related to specific investments / managers • No review of IAC roles and responsibilities • No review of reporting hierarchy and/or expectations • No discussion of fiduciary standard of care
Ellement Investment Governance Presentation 13 September 2018	• Review of general governance principles • Not specific to public sector • Does not consider potential limitations or investment objectives of a municipality • No subsequent investment governance training noted
IAC Meeting Materials 10 January 2023	• Agenda reflects reliance for discussion items on CIT • Meeting attended by numerous individuals, the majority of whom are not IAC members

Document	Commentary
	- Two external IAC members in attendance • Minutes from prior meeting reflect reasoned and detailed discussions on key points - Expertise in investments clearly present and relevant to the discussion - Points raised by City Mangers reflective of City objectives and Council considerations - IAC members keenly aware of fiduciary obligations and considerations within context of discussions • Significant revisions to IAC and Asset governance documentation • Materials are detailed and informative
IAC Meeting Materials 28 September 2022	• Agenda reflects reliance for discussion items on CIT • Meeting attended by numerous individuals, the majority of whom are not IAC members - Three external members appointed, only one in attendance - Noted as last meeting for one of the external members • Minutes reflect consideration of Council questions applicable to investments • Materials are detailed and informative
IAC Meeting Materials 25 July 2022	• Agenda reflects reliance for discussion items on CIT • Meeting attended by numerous individuals, the majority of whom are not IAC members - Two external IAC members in attendance • Minutes note composition and support changes - Changes to CIT specifically noted - External member retiring; process for finding replacement discussed including who not to approach for purposes of avoiding conflicts of interest (i.e., asset managers) • Review of 2021 Annual Investment Report to Audit Committee - Detailed presentation reviewing investment classes and related returns - Resulting detailed discussion related to purpose of report and best means to present to Audit Committee to ensure understanding; consequent changes to report made and distributed • Materials are detailed and informative
IAC Meeting Materials 8 April 2022	• Agenda reflects reliance for discussion items on CIT • Meeting attended by numerous individuals, the majority of whom are not IAC members

Document	Commentary
	- Two external IAC members in attendance • Annual Investment Report to Audit Committee reviewed - Noted purpose is a summary of the asset mix, investment activity, asset class, investment manager performance and compliance information • Materials are detailed and informative
Audit Committee Bylaw 26 October 2020	• Broad mandate includes assisting Council in the fulfilment of responsibilities related to: City financial statements; governance, risk management and compliance; oversight of the external and City auditors; the Whistleblower program; and, additional matters as may be assigned - Oversight and decision-making related to the investment of City assets is not specifically contemplated • Council and public members are appointed for two-year terms - Current longest serving member is a public representative appointed in 2020 • Education opportunities are to be provided by the City, the City Auditor, the External Auditor "or through outside programs" to address identified gaps in knowledge
Audit Committee Agenda Package 15 June 2023	• Broad scope of topics • Received 2022 Annual Investment Report
Audit Committee Agenda Package 19 July 2023	• Broad scope of topics • Investments not discussed except in general reference to Risk Matrix review

B. Investment and Governance Policy Observations

The majority of the documentation provided by the City falls with each of the governance and investment categories. However, the Investment and Governance Policy[3] falls within both spheres necessitating comment from both points of view:

Point of View / Focus	Commentary
Investment Observations	• Recommend including a definition of the Prudent Investor Rule as all portfolios are subject to it. This will help ensure that all parties involved in the investment process are following the same rules, and removes the potential for different interpretations of the rules.

[3] Council Policy 2020-02 dated 15 June 2020

Point of View / Focus	Commentary
	• Given the large role of the CIT in the investment management process, recommend adding the CIT under Roles and Responsibilities - High level description would be sufficient - Consider adding the term 'Investment Team' to the Definitions/Glossary schedule to avoid confusion as external investment managers have investment teams • Recommend making it clear who has the responsibility for approving the following: - Asset mix changes - Investment manager changes • Recommend adding the Compliance report to the list of required reports from the CIT - The compliance report would cover both internally managed funds and externally managed funds. - This is a very important report that the CFO and IAC rely on as part of their governance oversight.
Governance Observations	• Council policy, renders amendment or modification difficult • Joint delegation from Council to Administration and the City Chief Financial Officer (**CFO**) to execute on the policy • Audit Committee is not included as having a specific role in the governance of Asset investment despite being delegated certain key tasks (i.e., approval of the Annual Investment Report, presenting the Annual Investment Report to City Council, etc.) • As noted under Investment Observations, the term "Prudent Investor Rule" is not defined in the Policy or Glossary - Documentation assumes reference to be a common term with a single interpretation / understanding - Should be defined to ensure a common understanding and application at all levels of governance • CFA Institute Code of Ethics and City Code of Conduct apply to standard of care - Unclear if external providers are provided a copy of this Policy, or compliance with the CFA Code is confirmed on an annual or regular basis • Compliance with OSFI Securities Lending Guideline referenced - Confirm applicability to lending in municipality setting as Guideline drafted for financial institutions subject to the regulatory authority of OSFI • "Investment Team" is referenced throughout, but not defined

Point of View / Focus	Commentary
	- It is assumed this is in reference to the CIT, but should be clarified for purposes of certainty related to roles and responsibilities • Roles and responsibilities of IAC do not include meeting with the CIT similarly to external managers, yet alluded to in description of tasks • IAC reviews and advises on the IGP, Funds Policy and Portfolios Policy, including amendments, to the CFO - No approval authority delegated to the IAC • Role of City Manager listed solely as oversight of the CFO - This role, as written, is unrelated to the investment of the Assets and is generally completed by virtue of the City's employment structure • Approval process for the Annual Investment Report is unclear - Clause 6.11(a)((ii) states that Council "receives" the Annual Investment report from the CFO through the Audit Committee; however, the definition of "Annual Investment Report" outlined in the Policy Glossary states that the report is "approved by Audit Committee and Council"

C. Investment Documentation Observations

The City investment policy documents are comprehensive and reflective of industry best practice. No material omissions were identified. In the review process, several areas were identified for improvement. It is generally recommended that some of the language be made clearer to avoid confusion. As turnover will occur on the IAC and CIT, it is important to have documents that can be well understood by any new individuals brought into the investment management process.

It is also recommended some enhanced reporting to the CFO and IAC be implemented. It was noted that the reporting for the internally managed strategies did not match the level of reporting for the externally managed strategies. The rules for monitoring and reporting should apply to both internally and externally managed strategies, as manager performance evaluation should apply to both internally and externally managed strategies.

A summary of the key points gleaned from the investment documentation is outlined below:

Document	Commentary
Investment Portfolios Policy 01 July 2023	• Approved by the IAC • Global fixed income securities are an allowed investment in the Short-Term Fixed Income Portfolio; however they are not part of the Target Asset Mix. Is the intent that it is part of Canada Short-Term Fixed Income? - To avoid confusion, recommend either adding it to the asset mix table, or including a comment on how global fixed income fits into the asset mix as an eligible investment.

Document	Commentary
	• Section 4, Table 4 – recommend providing definitions for Core and Non-Core equities as defined by the City. This will aid in the evaluation of the strategy and with compliance. • Recommend adding foreign currency risk to the list of risks in the Short-Term Fixed Income Portfolio section. - Global fixed income securities are allowed, which introduces foreign currency risk. • Foreign Currency - Consider if the Universe Fixed Income Portfolio benchmark should be hedged to CAD. It is not common to see fixed income benchmarks unhedged. - In Section 7.5, Foreign Currency Exposures, recommend better defining currency risk and how it is managed. • Section 7.4 Segregated Accounts - It is not clear why there would be a distinction between segregated accounts with an IMA and segregated accounts without an IMA. o Why would the City not have an IMA in place? o Why would the investment constraints be different? - Many of the investment restrictions are duplicated in other areas of the policy making it confusing to the reader. Suggest removing duplications and move these limits to the various sections to which they apply. • Real Asset investment description in Section 5.3 is real estate focused. As real assets include both real estate and infrastructure, recommend a description that covers both by referencing things like sector/subsector, geography, development stage (greenfield, brownfield), style (core, core-plus) and underlying source of revenue. • Section 6.4 External Management - Under Risk Management, recommend including the use of risk management systems by the investment manager. • Performance Measurement Periods - Recommend adding a performance evaluation period in which manager performance is evaluated. - It is industry best practice to evaluate an investment manager's performance over a stated period. For example, suggested wording "performance will be measured over a 4-year rolling basis". This measurement period is based on the client's objectives. Typical measurement periods are 4 or 5 years. • Performance Objective – gross or net of fees - It is common practice to state whether performance evaluation is based on gross or net of fees. The policy is silent on this.

Document	Commentary
	- The annual and quarterly performance reports show performance on a net of fee basis.
Funds Policy 01 July 2020	• Approved by the IAC • Section 2 – Portfolio Rebalancing - Recommend making it clear which group (presumably CIT) has responsibility for rebalancing and if they have some amount of discretion • Section 3.6 – Income Allocations - The process for addressing assets that are under their allocated weight is not clear. Recommend rewording to make this section clear to the reader.
External Portfolio Update	• Description of currency overlay mandate suggests the overlay is solely designed for alpha (i.e. versus a zero benchmark). This does not align with the descriptions of active currency risk management outlined in the Investment Portfolios Policy document. • As the Economic and Internal Portfolio Updates are very similar, there may be an opportunity to consolidate the two reports into one.
Internal Portfolio Update	• Recommend including data source for all charts. • As the Economic and Internal Portfolio Updates are very similar, there may be an opportunity to consolidate the two reports into one.
Annual Investment Report & Quarterly Investment Reports	• Report references Commercial Paper Program. The policy documents do not reference a Commercial Paper Program - Not clear on how this fits into the reporting on the City's investment funds • Reporting standards for the City's internally managed portfolios (Short Term Liquidity Portfolio and Short Term Internal Bond) should be the same as for external managers. The CFO and IAC should be evaluating the performance and compliance of all strategies. This will allow stakeholders to determine if any changes should be made as the decision to invest internally or externally is part of the governance process. We recommend the following reporting for the internally managed portfolios: - Separate reporting for each internally managed fund, not combined, to be able to evaluate performance of each strategy separately. - Performance benchmarks should be assigned and reported on for both internally managed portfolios: Short Term Liquidity Portfolio and Short Term Internal Bond portfolio (page 9 of the Annual report). - Contribution to Return chart should show the contribution from each internal portfolio, separately, not combined (page 10). - Compliance reporting (page 25) should also include the City's internally managed portfolios. - Appendix I – Mandate Level Returns table should also include the City's internally managed portfolios.

Document	Commentary
	- Reporting standards for internally managed assets should be the same as for external managers. For the Short Term Fixed Income portfolio (page 14), the yield and duration are not provided for the Short Term Bonds (internal) portfolio, however are provided for the external managers. • The addition of manager universe comparisons in the performance tables (Appendix I – Mandate Level Returns) would provide additional insight in the evaluation of investment manager performance for Management and the IAC • Appendix I – Mandate Level Returns – are returns gross or net of fees? This should be stated to avoid confusion.

II. Participant Interviews

A. Process Overview

In conjunction with the document review process, a series of interviews were conducted with IAC members. The purpose of these interviews was to:

- Develop an appreciation of how the investment governance process operates in practice;
- Address questions arising from the document review process;
- Gather additional information and perspectives with respect to specific questions and concerns posed during the initial stages of this review; and
- Develop a broader understanding of the City organizational environment to better appreciate the integration and interaction between the IAC, Council and the Audit Committee as it pertains to the investment of the Assets.

In total, six interviews were conducted.

A dynamic interview process was followed whereby the questions for the interviewees were formulated with a view to the points noted above , as well as information collected from previous interviews.

Interview questions were provided to each interviewee prior to their interview. The same instructions and background in relation to the governance review were provided to all interviewees at the start of each meeting. Specifically, interviewees were informed that the questions and discussion topics were intended to guide the scope of the interview, but that the format of the discussion was to be open-ended in order to gather perspectives and information regarding the practical implications of the existing processes and procedures. This approach was purposely intended to develop a more complete understanding of the governance process, and the roles of decision-makers and their supporting entities (*e.g.*, CIT, IAC) in that process.

In an effort to encourage open and candid responses, interview participants were assured that discussion content would remain anonymous.

B. Observations

Several key themes emerged during the interview process that were consistently expressed by interviewees. Such themes include, but are not limited to:

- Importance of investment expertise and objectivity
- Diversity of perspectives
- Composition of IAC
- Support from the CIT

The below chart summarizes the key points made in relation to the above-noted themes, as well as other matters that were articulated during the interviews.

Topic	Interview Commentary
IAC Membership	• Majority of IAC membership has less than four years of Committee tenure • Current range of knowledge and experience between internal and external IAC member is essential to well-rounded discussions • Varied levels of investment expertise result in discussions that consider issues and topics that are not always driven by the investment mandate (i.e., ensure City objectives are represented) • Inclusion of a third external member would be beneficial - Three external members previously participated and the breadth of expertise was invaluable
Governance Structure	• It is appropriate that Council approves the long-term investment strategy - There is no direct relationship between Council and the IAC • IAC unlikely to seek direction from Council as investments are not in its wheelhouse and not expected to be - City investments need to remain outside the political sphere • IAC is intended to be operational in nature, acting as an advisor to the City CFO - Reports annually to the Audit Committee in fulfilment of its oversight and monitoring obligations • Delegating approval authority to the CFO allows for timely, responsive and objective decision-making • No changes to the current governance structure were suggested by any interviewee
Expertise	• Technical understanding regarding investment risk is essential • External members are exceptional resources and key contributors to discussions • Diversity of backgrounds for external members results in meaningful and topical discussions • Due diligence and day-to-day operations are managed and overseen by the bodies most familiar with investment trends and risks

Topic	Interview Commentary
IAC Education	• Onboarding of new IAC members is efficient - Provides solid introduction to investments, City objectives and purpose of IAC - Not as thorough as it could be • No ongoing training for IAC members outside IAC meetings
City Investment Team	• CIT has depth that goes beyond an investment advisor - CIT is relied on by IAC to ensure timely and relevant information is brought to the attention of IAC • Heavy reliance on CIT for analytics - More than just advisors • Great reliance on senior members to ensure continuity • It is understood and accepted that turnover at the mid-career range is going to happen - City is unable to compete with private sector investment opportunities for compensation and career growth - Viewed as a “training ground” for private sector - Some concern raised related to succession planning
Prudent Investor Rule	• Some IAC members are well-versed in this rule, while others are not - One IAC member independently researched the “prudent investor rule” to better understand its application • IAC has not discussed or adopted a common meaning of the “prudent investor rule”

III. Legislative Authority

IAC responsibilities, and those delegated to other departments within the City framework, encompass a broad spectrum of governance, and mandates the priorities and objectives of the City, acting through the Council. These objectives include responsibility for ensuring City Assets are invested and re-invested to develop and maintain the sustainability and availability.

In conjunction with the information gathering process undertaken for the purposes of this Report, legislation applicable to the City and its investments were also examined, including the:

- *Municipal Government Act*, R.S.A. 2000, c. M-26 (**MGA**), Section 250
- *Municipal Investment Regulation,* A.R. 149/2022 (**MIR**), Section 7

These enactments, when read together, dictate the parameters within which Council, the Audit Committee and the IAC, collectively, are expected to invest the Assets. Of particular note is MIR, subsection 7(a) and, by definition, MGA, section 250. Combined, these sections require that in making investments in accordance with applicable legislation, at all times the City (and its delegated bodies) must be governed “by the prudent person rule as understood generally by the investment community in Canada and Alberta…". The term "prudent person rule" is not defined in either the MGA or the MIR.

Section 6

Observations and Discussion

The governance review process that was undertaken examined a variety of factors in determining which, if any, aspects of the current governance practices and procedures warrant comment or additional consideration. While the fundamental governance structure within the City is dictated by legislation and bylaws and is outside the scope of this Report, the manner in which that structure can perhaps be better utilized is open for comment. In that regard, the observations garnered from the document review and information provided by key participants in the governance of the Assets are set out below, in no specific order of importance.

I. Governance Structure

To lay the groundwork for the discussion and recommendations set out in this Report, a common understanding of the governance hierarchy applicable to the invest of City Assets is necessary.

Under the current governance structure, City Council is responsible for the long-term investment strategy through its approval of the Investment and Governance Policy (**IGP**). Although not directly acknowledged in the IGP, the Audit Committee, established through Bylaw 33M2020, has a broad mandate encompassing oversight and stewardship responsibilities related to City financial statements, the external auditor and governance, risk management and compliance. Specifically with respect to the Assets, the Audit Committee is also responsible for:

- Providing annual reporting to City Council on behalf of the CFO;
- Receiving annual reporting from the CFO; and,
- Receiving recommendations from the IAC.

The purpose of the IAC is discussed throughout this Report, but at a high level is advisory body comprised of external investment experts and City investment, governance and operational experts tasked with the oversight of Asset investment. The IAC has no direct interaction with City Council, but works closely with the CIT to support the CFO, and reports annually to the Audit Committee.

The IAC also works closely with the CIT which is responsible for, among other things:

- Monitoring and reporting on internally-invested Assets;
- Oversight of external investment consultants and managers;
- Monitoring externally-invested Assets; and,
- Supporting and advising the IAC and Audit Committee.

External investment consultants and managers are each responsible for the specific mandates and scope of services they have been engaged to provide with respect to the investment of a portion of the Assets.

It is noteworthy that the governance of the City Assets is complex, which necessitates a high level of knowledge and subject-matter expertise.

II. Observations

A. General

The IAC is keenly aware of its responsibilities and the tasks that have been delegated to it. IAC members, individually and as a committee, strive to ensure that the Assets are appropriately invested and realizing the best possible returns, and that investments are aligned with City philosophies and objectives. This is evidenced through the dedication of time and attention to detail required of a position on the IAC, as well as the length of tenure of several of the current members. While the IAC membership is not of the same experience and knowledge with respect to institutional investing, a consistent theme noted throughout this review is the common objective of IAC members of ensuring that the Assets are sustainable, managed appropriately and available for the purposes of fulfilling City objectives.

Despite the complexities of the City's governance structure, as it applies to the investment of the Assets, the documentation and information provided during the course of this review demonstrate a commitment to effective and consistent governance and administration. Substantial time and effort has been invested by the IAC in the establishment and maintenance of appropriate governance processes and documentation capable of navigating the varied legislative and public expectations that apply to the investment of the Assets.

The fiduciary responsibilities applicable to Asset investment are seriously undertaken by the City, acting through the Audit Committee, the IAC and the CFO, with recommendations and decisions being clearly made with a view to fulfilling those obligations to the best of their abilities. It is the varied extent of those abilities that must, however, be taken into consideration.

It is recognized that this investment governance review was done so with the specific intent of substantiating that relevant fiduciary obligations are being adequately carried out. In embarking on this review process, the City has already exceeded best practices in governance through recognizing that processes and procedures must evolve over time, and that modifying, where necessary, existing processes to better suit current circumstances is essential in maintaining good and effective governance practices.

B. Disclaimer

The observations and discussion set out in this Section 6, and the recommendations outlined in Section 7, are based solely on the review of those documents (1) made available by the City; or, (2) that were located as part of public record. In the event actual governance practices do not mirror those set out in the documentation, kindly advise Mercer as that may impact the conclusions and recommendations discussed. However, this too would evidence the need to revisit current governance practices in order to ensure that policies and practices are fully aligned.

III. Fiduciary Obligations

The interview and document review findings outlined in Section 5 highlight several recurring areas for clarification in relation to the structure and operation of the IAC and investment governance:

- roles and responsibilities within the City investment governance hierarchy;
- on-boarding and education; and,
- overall structure and composition.

Each of these areas are discussed below.

A. Roles and Responsibilities

1. Governance Hierarchy

City Council and, commensurately, the Audit Committee are comprised of elected representatives with varied backgrounds and experiences. The Audit Committee also comprises several citizen representatives. None of the members of either City Council nor the Audit Committee are required to have a working knowledge of institutional investing or governance as a requirement for election or committee membership.

Based on the existing governance hierarchy, Council is responsible for approving the IGP which forms the long-term investment strategy for the City. This responsibility is clearly outlined in the IGP, and understood among the CFO, the IAC and CIT. The conclusions reached, and the feedback provided, through the information gathering process support Council as the appropriate level for approval of such a strategy. No information was reviewed that would refute that conclusion or support a recommendation for a change to this current level of approval.

While the Audit Committee receives annual reporting from the IAC, with respect to the Assets, there is no obligation on Audit Committee members to gain or expand their knowledge of institutional investing, and neither is there an onus on City Council or Audit Committee members to seek out educational opportunities on this topic. From a risk management perspective, placing the highest level of operational decision-making with the bodies that have the least experience and subject-matter expertise could be problematic from a fiduciary perspective, particularly where those bodies have already delegated a number of related tasks and responsibilities to other bodies with extensive expertise in the relevant areas (*e.g.*, IAC, CFO).

The IAC does not have direct decision-making authority; however, it is comprised of individuals, both internal and external to the City organization, with a spectrum of relevant knowledge and expertise that is relied on for investment recommendations. External IAC members are closely vetted and recruited based on their recognized knowledge and expertise in the field of institutional investing and investment theory and strategy. Internal IAC members are chosen for a variety of reasons and bring a range of perspectives relative to investments, fiscal policy and the overall objectives of the City. As a Committee, the IAC is able to apply a combination of objective viewpoints and specialized knowledge in the completion of the due diligence process, on behalf of the City, such that appropriate and fulsome consideration of pertinent issues is undertaken. This allows the IAC to develop and present well-reasoned recommendations for approval and implementation by the CFO (through delegated authority) and Council, as appropriate under the current governance framework.

Given the scope of the Assets, the public scrutiny associated with municipal investment decisions (and related returns) and the fiduciary obligations attached to those decisions, it would be atypical for a public entity to have its council or committee members directly involved with the administration and operational policy development of its asset investment. What is more common is for the elected officials and/or direct fiduciaries to maintain a hands-off approach through delegation to those with the expertise to maximize decision-making, and ensure that fiduciary tasks are appropriately completed to the applicable standard of care. Such an approach generally entails the receipt of annual (or more frequent) reporting, which is seen through the IGP and IAC Terms of Reference, and the retention of responsibility for overall oversight and material decision-making.

While Council, acting through the Audit Committee, maintains oversight with respect to the investment of the Assets, active and direct decision-making is neither necessary nor recommended. Further, it must be considered whether involvement with operational investment decision-making is the best use of the time and resources for either Council or the Audit Committee given the scope of their respective responsibilities and their relative skillsets.

Given the above commentary, the current governance structure adopted in relation to Asset investment is efficient and operating with optimal consideration of timely and germane information examined by experts in the field of institution investing and the City organization. In our view, modifying the composition of the IAC to incorporate greater involvement from either the Audit Committee or City Council is not recommended.

2. Policy Approval

As noted above, Council is responsible for approving the IGP, and has delegated the remainder of its direct authority over Asset investment to various persons or bodies within the City organization. However, a discrepancy between delegated authority and the completion of similar related tasks was noted during the review.

The Background sections of both the Funds Policy and the Investment Portfolios Policy state the following:

> Administration has concluded that it would be best to separate the Investment Policy Statement into three documents: and Investment & Governance Council Policy, as CFOD Funds Policy, and a CFOD Investment Portfolios Policy.

The policy information listed on both the Funds Policy and the Investment Portfolios Policy indicate that they were each approved by the IAC. However, this does not align with the authority delegated in the IGP.

The IGP details the roles and responsibilities of the various parties associated with Asset governance, and effectively operates as the delegation of Council's authority with respect to Asset governance. IGP, clause 6.11(c)(ii) states that the CFO "[a]pproves the CFOD Funds Policy and CFOD Investment Portfolios Policy and provides updates to the City Manager". Whereas clause 6.11(d)(iii) requires that the IAC "[r]eviews and advises on the Investment & Governance Policy, the Funds Policy and the Portfolios Policy (and amendments) to the CFO". Although the CFO is a member of the IAC, the authority delegated to that position does not transfer to the IAC by virtue of membership, and does not, therefore, ensure that the Funds Policy and the Investment Portfolios Policy were appropriately approved.

While it is within the authority of Council to modify the IGP for purposes of delegating policy approval to the IAC, for this purpose, it has not yet been done. In the absence of such an amendment to the IGP, the Funds Policy and the Investment Portfolios Policy should be formally approved by the CFO, per the IGP. If this is a situation where the approval was not accurately reflected on either of the policies and the CFO did, in fact, approve them, this too should then be updated on the policies to ensure they reflect the applicable delegated authority.

B. Due Diligence

The concept of due diligence is central to risk management, risk mitigation and the fulfilment of fiduciary obligations. It equates with the level of judgement, care, prudence, determination and activity a person would reasonably be expected to undertake in making decisions related to the property of another. This may apply, for example, to actions taken, research conducted or the engagement of third party expertise where a decision-maker cannot reasonably be expected to have the knowledge and/or skills to consider pertinent questions or scenarios. In the context of institutional investing, the application of these concepts are directly related to the duties of prudence and diligence within the realm of fiduciary responsibility.

As discussed above, the IAC is responsible for the completion of the due diligence process in Asset investment decision-making. In conjunction with the CIT, the IAC:

- engages with third party advisors (*e.g.,* investment consultants and managers);
- considers relevant questions;
- gathers applicable information; and
- makes recommendations based on fact and information.

When the IAC makes a recommendation based on the due diligence it has completed, the proposed course of action is strongly defensible if challenged, assuming the approved decision aligns with the conclusions resulting from the due diligence process. If the Audit Committee or Council make a decision based on a recommendation from the IAC, the decision is still founded on a reasoned basis that aligns with the fiduciary task assigned.

III. On-Boarding and Continuing Education

Neither the documents reviewed nor the comments shared during the interviews indicate that ongoing education opportunities are available for IAC members. Notwithstanding the individual professional expertise held by the external IAC members and several of the internal members, ongoing education is essential in ensuring that Asset investment matters are approached using a common foundation of information and understanding.

It was further noted that topics such as, but not limited to, fiduciary obligations and the prudent person rule are not broached with IAC members during the on-boarding process or after. It is likely that individual IAC members have an understanding of how fiduciary obligations apply in the context of institutional investing based on their own personal and professional experiences, however, it is an important element of the on-boarding process to inform (and re-inform) individuals as to how those responsibilities relate to the IAC mandate and the tasks it has been delegated to perform.

IV. Prudent Person Rule

Subsection 7(a) of the *Municipal Investment Regulation* requires that, when investing the assets of a municipality, the "prudent person rule as understood generally by the investment communicated in Canada and Alberta" must be applied. The difficulty with this requirement is that while the prudent person rule is often discussed, and applied, through a discussion of legal requirements and fiduciary responsibilities, unless an individual operates within the context of the investment community, a single clear definition is not easy to ascertain. This is further complicated by the fact that the term is not defined in the MIR.

The IGP, adopted by Council effective June 15, 2020, applies the concept of prudence throughout its provisions. Of note, Subsection 6.1(a) details the standard of care that is to be applied with respect to the investment of the Assets and specifically states that "[t]he Prudent Investor Rule shall prevail over all portfolios". As written, the term "Prudent Investor Rule" is applied with a sense of expectation and authority, yet it is not defined in the IGP and is notably absent from the IGP glossary.

For the external IAC members who are recognized as experts in the field of institutional investing, and those internal to the City organization who are exposed to investments on a daily basis, the concept of the prudent investor rule is a natural inclusion in the fabric of that industry. For those IAC members, however, who do not regularly operate in the domain of institutional investing, it is a phrase without true meaning. In the absence of a clear, accepted and communicated definition, the phrase "prudent investor rule" is open to interpretation and means that the IAC is not able to confirm that a single cohesive position or common understanding of the standard of care is being employed.

V. Documentation

Meeting documentation is intended to evidence that the due diligence process has been exercised in decision-making and act as a means of risk mitigation, particularly where decisions or recommendations are made within the scope of fiduciary considerations.

Meeting agendas and minutes were reviewed as part of the information gathering phases of this review through the provision of sample IAC meeting packages and Audit Committee meeting minutes.

A. Agenda

IAC meeting agendas are clearly set out, providing relevant materials for advance review to ensure appropriate preparation for committee discussions. They reflect a detailed and methodical approach to topics and issues ensuring that all relevant information is made available to the IAC for review and discussion.

It was noted that an annual activities calendar/agenda was not made available for review, and likely has not been developed. While many committees benefit from such structured approaches to their annual tasks, the specific mandate of the IAC does not truly warrant the need for such a document particularly when broad quarterly and annual agenda topics are identified in the IAC Terms of Reference.

B. Minutes

1. IAC Minutes

Meeting minutes are a record of the discussion and decisions that take place. While they are not intended to be a *verbatim* chronicle of the meeting, their purpose is not only to ensure the creation of historical documentation, but also to evidence that due diligence and prudence have been exercised in relation to the issues at hand. This is especially important where discussions related to topics that are fiduciary in nature.

The IAC Minutes reviewed in Section 5 are extremely thorough and provide a complete record of each IAC meeting thus evidencing:

- consistent adherence to the governance framework;
- diligent assessment of topics and issues;
- reasoned discussions inclusive of a variety of perspectives and the application of pertinent expertise; and,
- reliance on third-parties where appropriate.

The Minutes reviewed generally reflect the inclusion of the quarterly and annual (where applicable) agenda items required per the IAC Terms of Reference, with the possible exception of a robust self-evaluation process as one was not provided for purposes of this review.

2. Audit Committee Bylaw and Minutes

The Audit Committee is appointed for the purpose of supporting Council in the completion of specific audit, governance and compliance responsibilities, as well as “other matters” that may be assigned to it. Oversight and decision-making with respect to City Assets is not a task that has been specifically named for the Audit Committee, but rather falls within the scope of “other matters”.

Given the breadth of the Audit Committee responsibilities, as evidenced in review of sample meeting Minutes and the Audit Committee Bylaw, it is neither expected, nor reasonable, for Audit Committee members to have expertise or relevant experience in the field of institutional investing. Consequently, reliance on the IAC to oversee and provide reasoned recommendations with respect to the investment of the Assets is an acceptable delegation of the assigned task.

C. Reporting Schedule

As noted in Section 5, reporting requirement for the CIT are not the same as those required for the external advisors. Further, no reporting schedule was included with the documents provided for review. Given the complexity of the City investment governance framework, it would be reasonable for the CIT to develop a robust reporting schedule for all parties associated with Asset investment to ensure that fulsome reporting is provided, and all parties are aware of reporting expectations.

VI. Structure and Composition

The IAC Terms of Reference provide broad information in relation to the objectives and responsibilities of the IAC; however, term durations for internal members, required skills (for internal members) and recruitment are not addressed.

A. Terms

The IAC Terms of Reference specify the general composition of the IAC including which individuals, from within the City organization, are required to, or otherwise may, participate on the committee. However, with the exception of the CFO (named as IAC Chair) and the City Treasurer, no other specific positions are named. While this does allow for flexibility in the IAC make-up, it provides little direction in identifying the skills and/or backgrounds that are considered beneficial to the overall IAC mandate. Further, no terms for participation are referenced for internal IAC members.

For those individuals who are required to participate on the IAC by virtue of their employment with the City, it would be counter-intuitive to include a term of membership. For those other participants from within the City, it is recognized that it takes time to acclimatize to the nuances of the IAC in order to gain sufficient comfort with the topics necessary to be an effective IAC member. Yet, while it is likely accepted that, for those internal IAC members who have volunteered to participate, resignation from the committee is an informal process, currently there is no stated mechanism for any IAC member (save those who are appointed by position) to provide notice to ensure a smooth transition in filling a vacancy.

B. Skills

The IAC Terms of Reference identify, at a high level, “experience in managing institutional investments and [a] solid understanding of investment finance and portfolio management” as external skills integral to the success of the IAC. No similar skillset is required for internal IAC members.

A skills matrix applicable to the IAC was not provided for review. While it may be concluded that such an assessment is not required given the narrow focus of the IAC, the creation of a skills matrix may still be a valuable exercise for ensuring that the well-rounded representation of view-points and perspectives remain a consistent presence on the committee.

C. Recruitment

It was consistently acknowledged during the interview process that the current composition of the IAC is well-balanced in its representation of viewpoints and diversity of knowledge. However, it was also regularly expressed that the IAC would benefit from maximizing its external membership. The IAC Terms of Reference currently contemplate the participation of up to three (3) external members.

It is understood that the IAC currently undertakes an informal recruitment process, as it relates to external members, for purposes of efficiency and timeliness. The consistent approach to recruitment discussed during the interviews indicated that external IAC members are identified by contemporaries on the IAC or through other reliable sources, and then approached based on their expertise, reputation and relative experience. Although this approach has resulted, to date, in the participation of highly qualified experts, it means that external IAC members are recruited from a relatively small number of prospects. To our knowledge, a pool of prospective candidates for external IAC membership is not maintained.

It is recognized that there are issues inherent in engaging in a wider recruitment process. Such obstacles may include, but are not limited to:

- **Adequacy of Applicants**: an adequate pool of qualified applicants may be difficult to amass. Not only will they need to have the skills and currency of knowledge necessary to be a contributing member of the IAC, but they must also have the available time to commit which may be more limited for individuals nearer to the beginning of their careers than to the end;
- **Fit**: recruiting IAC members based on past experience with current IAC members allows for an informal assessment of knowledge and experience, as well as a prospect's ability to work with others, prior to committing to bringing them on to the IAC. However, because the candidate pool is limited to those known to the individuals being consulted, it remains possible that other qualified candidates may be overlooked;
- **Conflicts of Interest**: many of the individuals who would most likely be ideal candidates for membership on the IAC, are also likely to be working for investment managers or consulting firms who do, or would like to, act in an advisory capacity to the City. While these individuals may be precluded from participating on the IAC based on City policies, it also means that membership with an ulterior motive is a realistic possibility and should be avoided thus further limiting the potential candidate pool; and,
- **Residency**: The City is a municipality located in Alberta. It is our understanding that not every external IAC member has been a resident of Calgary, yet there is no recollection of an external member with residency outside of the province.

For purposes of clarity, the adoption of a formal recruitment process is not an approach that is recommended for the IAC. It has been demonstrated throughout the information gathering process that the current recruitment process has, and continues, to work well in ensuring the participation of external members with a high level of relevant expertise. The within discussion is included for the purposes of developing a pool of potential candidates, as needed, to ensure the efficient succession of highly qualified external members.

VII. Advisory Resources

The City engages both internal and external investment consultants/managers to advise on the investment of the Assets. These groups provide direct support to the IAC in their deliberations of the issues before them, and in their development of recommendations related to Asset investment.

A. External Advisors

IAC meeting packages indicate that external investment consultants and/or managers regularly attend meetings for purposes of leading or participating in discussions related to topical investment issues and/or the presentation of investment returns. Quarterly investment reporting is provided prior to, and in, each IAC meeting and, as expressed during the interview process, outlines sufficient information with respect to that portion of the Assets under external management. While suggestions were provided with respect to the potential for streamlining external reporting, overall satisfaction was expressed with the type and level of reporting from external sources.

B. City Investment Team

As is evidenced throughout the documentation and in the interviews, the CIT is a key resource for the IAC. While one of the functions of the CIT is to monitor and advise on the performance of those Assets that are internally managed, the CIT is much more than just an advisor. Not only do CIT members actively participate in preparing for, and leading the discussion on, agenda items in each IAC meeting, but the CIT monitors and liaises with the external investment advisors, IAC members and others within the City organization to provide timely, accurate and fulsome information. Reliance on the CIT is, in fact, of such significance that it was suggested during one interview that the City could save consulting fees by bringing a greater portion of the Assets under the CIT umbrella. However, this comment was qualified by concern over CIT turnover.

Turnover within the CIT was conceded as inevitable during the interviews. It was openly acknowledged that the City seeks to hire “the best and the brightest” for the CIT, yet the City cannot compete with the private sector in terms of compensation and development opportunities. Because of this, keeping CIT members, particularly at the mid-range of their career trajectories, is difficult.

When queried whether regular turnover impacts the ability of the CIT to adequately support the IAC, responses noted significant reliance on senior members of the CIT to provide the continuity and historical knowledge that is key to consistent support. However, while the senior CIT members are tenured and well-versed in the operations of the IAC, the City and the investment strategies being employed, the regularity of the turnover poses a significant challenge to the development of historical knowledge and succession planning within the CIT.

Section 7
Recommendations

Sections 5 and 6 of this Report detail the findings and observations gathered through the document review and interview processes in collaboration with the IAC. In consideration of those findings, and recognizing potential legislative and political constraints, outlined below are Mercer's recommendations as they apply to the IAC and the governance of Asset investing.

The recommendations are grouped in accordance with the order of the discussion in Section 7, and are listed in no particular order of priority:

I. Fiduciary Obligations

Fiduciary tasks can be delegated, but ultimate responsibility for how they are carried out cannot. In the context of fiduciary obligations, delegating the completion of a fiduciary task to, or reliance on, a body that is recognized as having greater knowledge and experience in the relevant area is not only acceptable but the oft-endorsed best practice.

A. Decision-Making

The IAC is composed of engaged, experienced and knowledgeable individuals who, together, provide valuable insights in the consideration of investment topics. **It is recommended that**:

1. IAC membership be maintained in accordance with the composition set out in the IAC Terms of Reference; and,

2. The governance hierarchy currently employed with respect to Asset investment decision-making be maintained without modification.

B. Due Diligence

Risk mitigation is optimized where due diligence is undertaken from a position of knowledge and practical understanding. **It is recommended that** the IAC remain the primary body responsible for the operational oversight and due diligence processes related to the development of the institutional investing strategy and recommendations for operational decision-making as they relate to the Assets.

II. On-Board and Continuing Education

Current on-boarding practices focus largely on the IAC mandate and current asset classes, rather than the overall roles and responsibilities of the IAC. While many IAC members are knowledgeable and experienced with respect to institutional investing, a broad range of practical understanding exists on the committee. As a principle of good governance, substantive on-boarding and continuing education opportunities should be made available.

It is recommended that:

1. On-boarding sessions be conducted for new IAC members that not only provide an overview of investment profile, but also focusses on the roles and responsibilities of the IAC including, but not limited to: mandate and objectives; fiduciary responsibilities; governance and reporting; and, risk management and related controls applicable to the Assets.
2. Continuing education opportunities be made available to IAC members and other relevant stakeholders (i.e., Audit Committee), at least annually, on a variety of topics applicable to the IAC, including, but not limited to: institutional investing; City financial objectives and priorities; and, investment impact on City operations.

   While external investment consultants and/or managers may be identified as relevant presenters, in this regard, it is recommended that other perspectives and viewpoints be considered to ensure a breadth of available education opportunities.
3. Relevant, external education opportunities be made available to IAC members, as each may deem appropriate. These would include, but are not limited to: seminars, conferences, workshops and networking sessions.
4. A budget be dedicated for the purposes of IAC education, subject to any limitations the City may deem appropriate (*e.g.,* annual expense per IAC member; travel restrictions; number of opportunities per IAC member each year).

III. Prudent Person Rule

As discussed in Section 6, a common understanding of the prudent investor rule has not been established for purposes of the IAC.

It is recommended that:

1. A clear definition of the “Prudent Investor Rule” be developed by the IAC and incorporated into the IGP and other documentation relevant to the governance of Asset investment.
2. Orientation to the “Prudent Investor Rule”, as developed by the IAC, be socialized as part of the on-boarding process to ensure a common and foundational understanding of the concept and the expectations related to it.

IV. Reporting Schedule

Overall, the documentation relied on, and developed by, the IAC and other bodies associated with Asset governance are thorough, easy to follow and complete. However, **it is recommended that** a reporting schedule be developed to ensure that all investment advisory documentation is consistent (be it internally or externally provided), and that all parties, at all levels of the governance hierarchy, are aware of the frequency and level of reporting required.

V. Structure and Composition

The below recommendations relate specifically to IAC self-governance.

A. Terms

The IAC currently does not employ limits on the length a voluntary internal IAC member may serve, or reflect a process by which any member (except for those appointed by virtue of their employment position) may resign.

It is recommended that:

1. Terms be considered for voluntary internal IAC members to ensure a rotation of relevant knowledge and experience through IAC membership.
2. Alternatively, incorporate a formal process for resignation for external and voluntary internal IAC members to ensure sufficient time for succession thus supporting the continued optimal operation of the IAC.

B. Skills

The skills, expertise and breadth of knowledge required for the effective operation of the IAC should be assessed and reviewed in light of the committee's current roles and responsibilities.

It is recommended that:

1. The IAC undertake an assessment of all skills and expertise that may be relevant to the oversight of Asset investment taking into consideration not only expertise in institutional investing, but also, for example, risk management, governance and City operations.
2. A skills matrix be developed to aid in the identification of potential candidates for internal and external recruitment purposes.
3. In accordance with principles of good governance, the IAC undertake, and document, an annual self-evaluation process reviewing such areas as, but not limited to: member engagement; meeting preparedness; strategic priorities; and, effectiveness of communication.

C. Recruitment

The current practice of informally approaching peers for external IAC membership has its advantages, but it results in a small pool of candidates who tend to be of similar career stage and background.

It is recommended that:

1. The IAC engage the CIT to develop a pool of potential candidates for external IAC membership based on a variety of factors including, but not limited to: background; expertise in institutional investing; career stage; and, breadth of knowledge as compared with current external members.
2. Assess whether industry organizations, such as the CFA Society, are willing and/or able to advertise available external IAC positions, subject to limitations imposed by City committee recruitment processes.

3. Assess whether recruitment from private sector consultant firms, investment managers, etc. would constitute an inherent conflict of interest, and, if possible, connect with a senior consultants for purposes of identifying potential candidates.

VI. Advisory Resources

A. External Advisors

Reliance on external investment consultants and/or managers provides a spectrum of investment philosophies and strategies from which the IAC, and the City by turn, have benefitted.

It is recommended that:

1. Clear reporting processes and expectations are communicated, reducing or eliminating any extraneous information that may be identified by the IAC.
2. External advisors invited to present at an IAC meeting be requested to provide an summary or overview of the intended discussion for inclusion in the meeting package to ensure that all IAC members attend with an understanding of the materials and the purpose of the discussion.

B. City Investment Team

The CIT engages in a partnership with the IAC beyond just that of an advisor; however, its future effectiveness may be hindered by regular turnover and its impact on succession planning. While it is recognized that this is a City employment matter, and not one the IAC is responsible for, or has influence over, **it is recommended that:**

1. Where possible, the IAC expand reliance on members of the CIT beyond senior leaders in an effort to increase exposure to the complexities of Asset investment and related development opportunities.
2. The IAC support succession planning within the CIT where possible.

VII. Investment Documents

A. General

The City investment policy documents are comprehensive and reflective of industry best practice. Specific recommendations have been provided in Section 5. At a summary level, **it is recommended that:**

1. Language be made clearer and remove duplication in policy documents to avoid confusion.
2. Define roles and responsibilities clearly, specifically for the CIT and in respect of approval of the asset mix and investment manager changes.

B. Investment and Governance Policy

Although many of the recommendations specific to the IGP are outlined in Part B, Section 5, **it is recommended that:**

1. The Investment and Governance Policy be revised to more clearly articulate and incorporate the roles and responsibilities of the Audit Committee and the CIT within the Asset investment governance structure.
2. Subject to Council agreement, Investment and Governance Policy clause 6.11(d)(iii) be revised to delegate approval authority with respect to the Funds Policy and the Portfolios Policy to the IAC.

This Report, along with all observations, recommendations and appendices, has been prepared for the exclusive use of the City of Calgary, and is based on documentation specific to, and provided by, the City of Calgary. This Report is intended for internal use only, and should not be copied or distributed to third parties without the express consent of Mercer (Canada) Limited.

Should any of the included commentary require elaboration or explanation, we would be happy to provide such upon request.

Mercer thanks the City of Calgary for the opportunity to be part of the review process and the preparation of this Report.

Prepared 15 March 2024 by:

Kristin Smith, B.A., LL.B.
Principal / Senior Legal Consultant

Gayle McDade
Principal

Appendix A

Interview Participants

The below listing details the name and role of each interviewee as they were at the time of their respective interviews.

Name	Role/Position	IAC Membership
Katie Black	City General Manager – Community Services	Internal
Michael Thompson	City General Manager – Infrastructure Services	Internal
Carla Male	City Chief Financial Officer	Internal / IAC Chair
Les Trocher	Deputy Chief Financial Officer	Internal
Ian Bourne	Expert in institutional investing	External
Thomas Holloway	Associate Professor, Haskayne School of Business, University of Calgary	External

Appendix B

Documents Reviewed

Document Name	Date Executed / Adopted
2022 Annual Investment Report	Undated
2022 Q3 Investment Report	Undated
Administration Policy: Conflict of Interest	01 June 2022
Audit Committee Bylaw 33M2020	26 October 2020
Audit Committee Agenda Package	15 June 2023
Audit Committee Agenda Package	19 July 2023
City of Calgary Organization Chart	Undated
City of Calgary Reserves and Long-Term Liabilities: Balances 2022	September 2023
City Employee Code of Conduct	December 2022
Delegation of Authority per Bylaws 43M99 and 8M2001	26 February 2016
Economic & Portfolio Update (IAC)	10 January 2023
Economic & Internal Portfolio Update (IAC)	10 January 2023
External Portfolio Update (IAC)	10 January 2023
Funds Policy	01 July 2020
Funds Policy	01 April 2022
Investment Advisory Committee Terms of Reference	Undated
Investment Advisory Committee Orientation	June 2023
Investment Advisory Committee Meeting Materials	10 January 2023
Investment Advisory Committee Meeting Materials	28 September 2022
Investment Advisory Committee Meeting Materials	25 July 2022
Investment Advisory Committee Meeting Materials	8 April 2022
Investment Advisory Committee Terms of Reference	Undated
Investment Advisory Committee Orientation	June 2023
Investment Advisory Report – Q3 2022	10 January 2023
Investment and Governance Policy – Draft	Undated
Investment and Governance Policy	15 June 2020
Investment Governance Presentation (Ellement Consulting Group)	13 September 2018
Investment Portfolios Policy	01 July 2020
Municipal Government Act, R.S.A. 2000, c. M-26	
Municipal Investment Regulation, A.R. 149/2022	

Mercer (Canada) Limited
222 - 3rd Avenue SW, Suite 1100
Calgary, Alberta T2P 0B4
www.mercer.ca

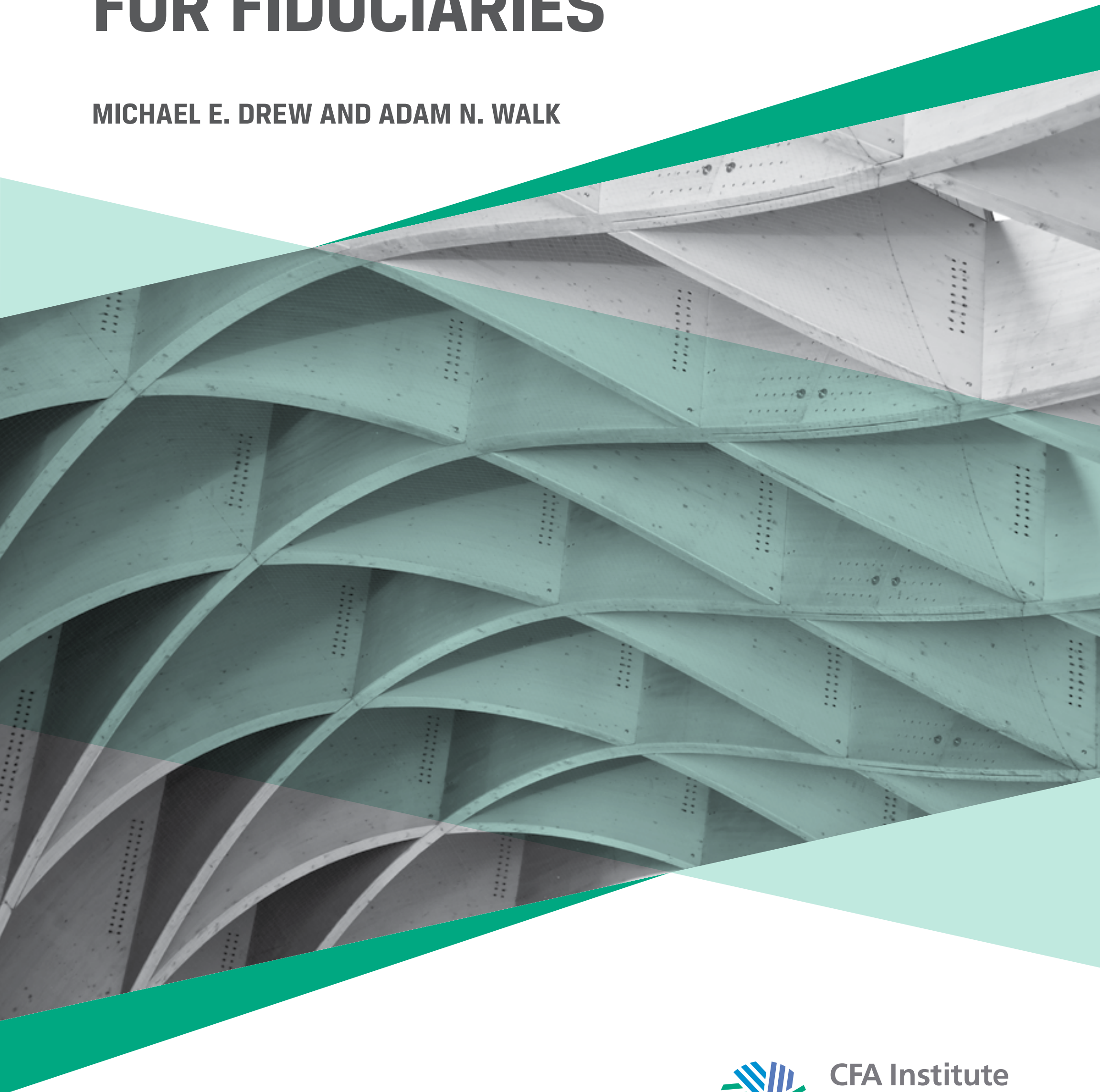
A business of Marsh McLennan

AC2024-0459
Attachment 3

CFA INSTITUTE RESEARCH FOUNDATION / **MONOGRAPH**

INVESTMENT GOVERNANCE FOR FIDUCIARIES

MICHAEL E. DREW AND ADAM N. WALK



CFA Institute Research Foundation

ISC: Unrestricted

AC2024-0459
Attachment 3

INVESTMENT GOVERNANCE FOR FIDUCIARIES

Michael E. Drew and Adam N. Walk

CFA Institute Research Foundation

Statement of Purpose

The CFA Institute Research Foundation is a not-for-profit organization established to promote the development and dissemination of relevant research for investment practitioners worldwide.

Cover photo credit: Roland Shainidze Photography / Moment / Getty Images

ISBN 978-1-944960-69-8

Disclosure

The authors of this book are partners of Stonechat Capital. The views in the book are the authors' views. Such opinions are subject to change without notice. This publication has been distributed for educational purposes only and should not be considered as investment or legal advice or a recommendation of any particular security, strategy, or investment product. Information contained herein has been obtained from sources believed to be reliable but is not guaranteed.

This publication contains a general discussion of investment governance and should not be used or relied upon as a substitute for professional advice or as a basis for formulating business decisions. The analysis does not take into consideration any particular investor's financial circumstances, objectives, or risk tolerance. Investments discussed may not be suitable for all investors.

Nothing contained herein is intended to constitute accounting, governance, legal, tax, securities, or investment advice or an opinion regarding the appropriateness of any investment or a solicitation of any type, and nothing in this book should be acted upon as such.

Biographies

Michael E. Drew is managing partner of Stonechat Capital; a director of Drew, Walk & Co.; and a professor of finance at Griffith University. He is a financial economist specializing in the areas of investment governance, pension plan design, and outcome-oriented investing. Professor Drew's research has been published in leading practitioner journals, including the *Journal of Pension Economics and Finance*, the *Journal of Portfolio Management*, and the *Journal of Retirement*. He has been invited to make submissions and to testify before numerous committees, including the US Department of Labor and the SEC joint hearing on target-date funds. Professor Drew serves as a specialist member of the QSuper Investment Committee and is a member of the Investment Advisory Board of the Petroleum Fund of *Timor-Leste* (East Timor). He received his PhD in economics from the University of Queensland, is an Accredited Investment Fiduciary Analyst®, and is a Life Member of FINSIA, the Financial Services Institute of Australasia.

Adam N. Walk is a partner of Stonechat Capital; a director of Drew, Walk & Co.; and an adjunct professor at the University of Notre Dame–Australia. He is a financial economist specializing in the areas of investment governance, pension finance, and investments. Dr Walk's research has been published in the *Journal of Portfolio Management* and the *Journal of Retirement*. He serves as an alternate director of Rest and adviser to the Group Capital and Investment Committee at RACQ Group, is a board member of the Archdiocesan Development Fund of the Roman Catholic Archdiocese of Brisbane, and is deputy chair and a trustee of Campion College Australia. Dr Walk received his PhD in financial economics from Griffith University, Queensland, Australia. He is an Accredited Investment Fiduciary Analyst® and a Certified Investment Management Analyst® designee.

Contents

CE Qualified Activity CFA Institute This publication qualifies for 5 CE credits under the guidelines of the CFA Institute Continuing Education Program.

Foreword

To say that the financial well-being of hundreds of millions of people around the globe rests on the performance of the tens of trillions of dollars held in funds with long-term investment horizons is not hyperbole. Whether these assets belong to defined-benefit or defined-contribution retirement plans, endowments or foundations, or other special-purpose funds, and whether the funds are large or small, public or private—virtually all of us have a stake in their successful investment. But who are the people who oversee these investments, and what are their credentials?

According to the Greenwich Roundtable, the United States alone is home to more than 100,000 asset pools with investment horizons exceeding 10 years and a total of more than US$14 trillion invested in just the largest pools. (The numbers are much greater, of course, on a global level.) Moreover, according to estimates, in the United States alone, more than 500,000 individuals sit on the governing boards of these funds and another 500,000 people have responsibilities for investing the assets.[1] We often hear news about the boards of large public pension funds. Left unmentioned are the defined-contribution plans of small companies or the capital improvement funds of local religious institutions. Although the large funds have greater societal impact, how well the people overseeing modestly sized funds carry out their duties matters just as much to the funds' beneficiaries as the decisions of the board of, for example, the huge California Public Employees Retirement System matter to its many plan participants and other stakeholders.

Billions of dollars are spent annually on the services of investment managers, consultants, recordkeepers, and auditors—all with the intent of keeping the system functioning smoothly and effectively. Compared with the immense resources devoted to directly implementing the investments of these asset pools, disappointingly little time and money is spent on one of the fundamental underpinnings of successful investment programs: sound investment governance.

Most individuals who serve on fund governing boards and investment committees were selected for reasons other than their explicit understanding of investments and investment governance issues. Virtually all wish to do well in their roles, but most initially come to the table without the knowledge required to function confidently. From an educational perspective, these people often receive little attention. Typically, they learn on the job. Even

[1]See McMenamin (2015).

for those board or committee members who proactively want to become better informed, resources are limited. The few investment governance materials that are available usually address narrow legal issues. With some exceptions, largely missing are practical discussions intended to help those people charged with high-level oversight of pools of invested assets do better at their jobs.

Facing this dearth of educational resources, *Investment Governance for Fiduciaries* by Michael Drew and Adam Walk is a welcome addition to the investment governance library. With their grounding in the "real world," combined with their academic training, the authors' backgrounds make them highly qualified to address this topic. They put their professional knowledge and experience to use in developing a simple and straightforward approach to fulfilling the role of fund "fiduciaries"—those people with investment program oversight.

To the layperson, the role of an investment fiduciary may seem like an overwhelming task. The many decisions that are involved and the weight of the responsibilities are daunting. Whereas the fiduciaries of large funds have the budgets to hire outside consultants and legal experts, the fiduciaries of small funds may be left to rely on their own knowledge and good intentions. For either group, however, authors Drew and Walk provide a simple and logical framework around which investment fiduciaries can organize and evaluate their own governance practices and make structural improvements.

Drew and Walk define investment governance as ". . . the effective use of resources—people, policies, processes, and systems—by an individual or governing body (the fiduciary or agent) seeking to fulfill a fiduciary duty to a principal (or beneficiary) in addressing an underlying investment challenge." The authors identify five components of this investment governance framework: setting objective(s), policy, execution and resources, implementation, and superintending (or overseeing). Within their discussion of each component, the authors do an excellent job of explaining the key aspects, delving into more nuanced considerations, and providing helpful recommendations. The bibliography gives readers the opportunity to do further research on various aspects of investment governance.

I highly recommend this book not only to all investment fiduciaries but also to the consultants, investment managers, recordkeepers, lawyers, and anyone else who works with the unsung and dedicated people who keep our invested assets safe and productively invested.

Jeff Bailey
Finance Lecturer, University of Minnesota
Former Senior Director, Benefits, Target Corporation

Preface

This book is the product of 25 years or so of professional experience across industry and academia, during which we have worked—mostly with each other—on matters of investment governance. Our professional collaboration began when we worked as the senior investment *governance* officers of a pension fund that offered both defined-benefit and defined-contribution plans and for which the investment function was substantially delegated to external parties (some of which were related). The investment governance ecosystem in which this fund existed was formative to our views on the subject. We began as staff acting as gatekeepers for lay fiduciaries who were faced with the best (and worst) the industry had to offer during the best and worst of times (including the global financial crisis of 2007–2008).

Now, as independent consultants and fiduciaries, we see the same issues from a slightly different perspective. Some of our views have been confirmed, others challenged. What has become patently obvious to us is that *good process* has *common elements* and (near) *universal application* irrespective of the fiduciary role and the underlying investment challenge.

The intent of this book is to share with fiduciaries ideas that may help them fulfill their duties to beneficiaries (and other stakeholders). Asset consultants and investment managers may find it useful in establishing their credibility among, and pitching their services to, fiduciaries. The book was primarily written for fiduciaries, however, who, in our experience, take seriously the underappreciated role for which they are appointed (many on a *pro bono* basis). Some of the words may grate on the nerves of various industry players because we challenge them to follow the advice of Charles D. Ellis, CFA, in his well-known *Financial Analysts Journal* paper "The Winners' Game" (2011): Prioritize the *values* of the profession (i.e., serve those it should be serving) over the *economics* [original emphasis] of the business (its own commercial interests).

For those readers who are time poor—most of you we suspect—we have added at the end of each chapter a list of "points for reflection." Those who want to quickly determine whether this book is relevant to them may wish to begin there. If you can answer most of these points in the affirmative, you are likely well on your way to investment governance best practice. If you don't understand what the points are asking you, the answer is in the negative, or the answer is "somebody else does that," you might want to delve into the book a little farther.

MED and ANW
Brisbane, Australia
February 2019

Acknowledgments

We thank Chris Anast, Michael Block, Josh Cohen, Catherine Collinson, Lee Freitag, Brad Holzberger, J. Richard Lynch, Lew Minsky, Karl Morris, Danielle Press, Sonya Sawtell-Rickson, Stacy Schaus, David Skinner, Pauline Vamos, and Sue Walton for generously providing their thoughts on investment governance—"in their own words"—contained in this book.

The following people, although they might not know it, have had an influence on how we think about investments in general and investment governance in particular: Keith Ambachtsheer, Carl Bacon, Philip Booth, Tom Brakke, Stephen Brown, Gordon Clark, Charles Ellis, Marty Gruber, Philippe Jorion, François-Serge Lhabitant, Olivia Mitchell, Ashby Monk, Alicia Munnell, David Neal, Adrian Orr, Bill Sharpe, Larry Siegel, Frank Sortino, David Spaulding, Roger Urwin, Geoff Warren, Russ Wermers, and Dariusz Wójcik. Their insights are formally acknowledged throughout the book.

The following colleagues have made the years of experience that went into this book more rewarding and, at times, entertaining. We acknowledge Mary Adams, Blaine Aikin, David Andrew, Mark Arnold, Kevin Bailey, Hamish Bain, Dan Baxter, Lorraine Berends, Barry Bicknell, Kate Bromley, Drew Carrington, Kim Chew, (the late) Mark Christensen, Stephen Christie, Adam Clements, Chris Condon, Andrew Cooke, Jeremy Cooper, Glenn Crane, Laurence Crawley, Dan Daugaard, Ollie De Castro, Jane Dharam, Aaron Drew, Jeremy Duffield, Jeff Falvey, Simon Fenwick, Anne Finney, Ross Fowler, Michael Furey, Sandy Grant, Philip Greenheld, Steve Hackworth, Scott Healy, Gary Humphrys, Walter Ivessa, ("Slammin'") Sam Kendall, (the late) Don Kofoed, Allan Layton, Colin Martin, Michael Matthews, Russell McCrory, Shane McGarry, Len McKeering, Doug McTaggart, Con Michalakis, Beth Mohle, Claire Molinari, (the late) Tony Naughton, Scott Pappas, Mark Pearce, Michael Pennisi, John Polichronis, James Power, Deborah Ralston, Evan Reedman, Troy ("the Rhino") Rieck, Adriaan Ryder, Jim Sia, Kulwant Singh-Pangly, Jason Smith, Nick Stewart, Nigel Stewart, Sh'vorn Sumner, Tørres Trovik, Paul Umbrazunas, Nick Vamvakas, Rosemary Vilgan, Chris Wells, (the late) Bob ("Mr. Bob") Wilson, Jane Wilson, Steve Wilson, and Kathryn Young.

To our much-admired academic collaborators, Anup Basu, Robert Bianchi, Jacqueline Drew, Mike Evans, John Fan, Jon Stanford, Madhu Veeraraghavan, Jason West, Tim Whittaker, and Osei Wiafe, we give thanks for sharing your space on the academic treadmill with us.

We thank the CFA Institute Research Foundation for its support and encouragement. In particular, we would like to sincerely thank Bud Haslett, executive director of the CFA Institute Research Foundation, and Larry Siegel, the Gary P. Brinson Director of Research at the CFA Institute Research Foundation, for seeing this project from three pages of ideas to the current volume. We also thank the editorial staff and Jessica Critzer for their kind assistance.

A special vote of thanks goes out to Jo Butler and Grace Cooke, our patient practice managers who faithfully make the trains run on time (well, most of the time).

Finally, we would like to extend our sincere gratitude to our respective families—Jacqueline, Nicholas, and Alexander Drew and Megan Walk—for their love and support. Without it, we would be lost.

1. Why Investment Governance?

> "The finance sector *devotes too little attention to* the search for new investment opportunities and *the stewardship of existing ones*, and far too much to secondary-market dealing in existing assets."
>
> —*John Kay (2016); italics added*

The word "governance" is increasingly heard and written about in modern times. *Global governance* is a question that exercises the minds of national governments when attending multilateral meetings on subjects ranging from trade to climate change. Effective *corporate governance* is what boards of directors attempt to provide for the corporations they represent and is the standard to which investors and activists increasingly hold them. In this book, we focus our attention on the rapidly growing field of *investment governance*.

Before proceeding, it is important to outline exactly what we mean by *investment governance*:

> Investment governance refers to the effective use of resources—people, policies, processes, and systems—by an individual or governing body (the fiduciary or agent) seeking to fulfill a fiduciary duty to a principal (or beneficiary) in addressing an underlying investment challenge.

Let's consider each of the elements of this definition in turn. First, the functional *purpose* of investment governance is to address an underlying investment issue. This investment challenge depends on a range of factors, discussed in detail in Chapters 2 and 3, that deal with, respectively, investment beliefs and investment objectives. Importantly, throughout this book the investment issues we discuss are usually found in one of three contexts: (1) defined-contribution (DC) plans, (2) defined-benefit (DB) plans, or (3) endowments and foundations (E&Fs). Why we chose these three contexts will become apparent by the time the reader has completed this chapter. At this point, we note only that each context brings with it a different set of investment beliefs and objectives and a different institutional setting.

Second, investment governance involves a *relationship* between the fiduciary (the agent) and the beneficiary (or principal), on whose behalf the fiduciary discharges legal obligations, customarily known as "fiduciary duties."[2] Agency theory, although not formalized until the 20th century, was

[2]The specific legal obligations of fiduciaries vary by jurisdiction. For this book, we are defining it broadly as a relationship of trust and confidence involving the highest standards of care, loyalty, good faith, and prudence. Fiduciary duty also usually involves duties of confidentiality and disclosure.

foreshadowed in 1776 by Adam Smith (1937) when he wrote of joint-stock companies:[3]

> The directors of such companies, however, being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master's honor, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company. (p. 700)

Fiduciary duty exists to allow specialization and to ensure, as far as possible, that "anxious vigilance" is applied on behalf of the beneficiary (the principal), thereby minimizing agency risk.[4] As the reader will see when considering our three contexts—DC plans, DB plans, and E&Fs—the ability of fiduciaries to understand the interests of myriad principals can make practical investment governance a challenge. For example, in a DC plan with 500,000 beneficiaries, how does a fiduciary fulfill her fiduciary duty? We grapple with this question as we discuss investment objectives in Chapter 3.

In their own words …

> "The QSuper Board considers investment governance as a crucial and fundamental cornerstone in the fulfillment of its fiduciary duty."
>
> —*Karl Morris, Chair, QSuper*

Although the potential for divergent interests between the fiduciary and beneficiary is certainly of concern in investment governance, another potential divergence of interest relates to asset (or investment) *consultants* and their

[3]Although Smith is known by many as an economist, when considering a duty to others, recall that he was a moral philosopher first and foremost; see Smith's *The Theory of Moral Sentiments* ([1759] 2016). For the moral grounding for fiduciary duties, readers are directed to Young (2007) for an overview.

[4]Agency risk is broadly defined as the risk of the agent prioritizing his or her divergent interests over those of the principal. More technically, Jensen and Meckling (1976) summarized agency risk as the "divergence between the agent's decisions and those decisions which would maximize the welfare of the principal" (p. 5). In the same paper, the authors defined agency costs as "the sum of: (1) the monitoring expenditures by the principal; (2) the bonding expenditures by the agent; and, (3) the residual loss" (pp. 5–6).

sometimes-conflicted role in advising fiduciaries on matters of both investment policy and investment selection. We turn to this issue later in this chapter when we introduce our investment process and what we call the *fiduciary line*.

The final element of our definition of investment governance relates to the need to effectively use resources to properly carry out governance. Regulators and other interested parties are keen to ensure that the resources used in governance are appropriate in light of the underlying investment challenge.[5] As complexity increases, for example, a concomitant increase in the quality and/or quantity of resources used to address the investment issue would be expected. For example, the interaction between the role of DC plan fiduciaries and their capabilities is widely debated. Such fiduciaries are often appointed to represent individual beneficiaries by a particular beneficiary group—for example, a union official representing police officers; however, an additional requirement is that each fiduciary be able to contribute to the governance of complex investment portfolios. Thus, tension may exist between the fiduciary's role and his or her capability.

Can we make a distinction between *investment governance* expertise and *investment* expertise? As the reader will see, we believe such a distinction exists and that lay fiduciaries—for whom the fiduciary aspect of their role is prioritized over their capabilities—are appropriate in certain circumstances.

Before turning to the central concern of this chapter—why investment governance is important—some other terms need to be defined. A term that is used widely by fiduciaries is "stewardship," especially in the context of not-for-profit organizations, such as E&Fs. For such entities, fiduciaries are required to trade off the achievement of objectives today (say, fulfilling the foundation's charitable purpose with respect to current needs) with future achievement (responding to future needs). Successfully achieving this balance is what we would describe as *good stewardship*, and it requires effective investment governance in cases in which investable assets are involved. Although effective investment governance is necessary to good stewardship, it is not sufficient. The steward's remit is broader than investment-related decision making.

[5]For example, Australia's prudential regulator, the Australian Prudential Regulation Authority, requires pension plans (or what in Australia are called "superannuation funds") to have an investment governance framework "appropriate to the size, business mix and complexity" of the regulated entity's operations (APRA 2013a).

The Significance of Investment Governance

Effective investment governance enables good stewardship. For this reason, it should be of interest to all fiduciaries, no matter the size of the pool of assets they handle or the nature of the beneficiaries. The importance of effective investment governance for various types of organizations is why we consider governance in three contexts. The elements of effective investment governance apply universally.

A philosophical or principle-based argument reveals the importance of investment governance, but in addition, certain secular trends make raising standards even more urgent. These trends are related and, at the same time, self-reinforcing.

First, the task is of increasing importance because of the sheer weight of money. Global pension assets in 22 major markets were estimated at US$36.4 trillion at the end of 2016—or 62% of the GDP of these countries—having grown 4.3% during the previous year (Willis Towers Watson 2017a). Although this number is large, the World Economic Forum (2017) estimated that the retirement savings gap—the gap between retirement assets and the liabilities they exist to finance—was US$70 trillion in 2015, and the gap is predicted to be around US$400 trillion by 2050 (admittedly, forecasts over such a long time horizon are susceptible to substantial error). Importantly, these retirement gap figures relate only to the eight largest established retirement systems; the true asset shortfall is much larger.[6]

In addition to, it is hoped, closing the gap, some factors complicate the task of managing the existing retirement assets (World Economic Forum 2017).[7] Such factors are as follows:

- *Increasing life expectancies and lower birth rates*—Relatively static retirement ages mean that whatever savings are generated are required to finance increasingly longer retirements. High *dependency ratios* (i.e., the number of dependents birth to 14 years old and over the age of 65 to the total population age 15 to 64) mean that public finances will be increasingly unable to make up for any inadequacy in private retirement savings.

[6]A growing body of literature addresses the gaping difference between retirement liabilities (or planned/hoped-for consumption) and the assets held to back them. For example, see the work of Olivia S. Mitchell, University of Pennsylvania (e.g., Mitchell, Maurer, and Hammond 2014); Alicia H. Munnell, Boston College (e.g., Clark, Munnell, and Orszag 2006; Munnell and Sass 2008; Ellis, Eschtruth, and Munnell 2014); and Laurence B. Siegel for the CFA Institute Research Foundation (e.g., Siegel 2015; Sexauer and Siegel 2017).

[7]Interestingly, Natixis Global Asset Management (2017), in its Global Retirement Index, identifies (p. 7) poor governance as a "key driving force" behind the "below-average performance" of the BRIC countries (Brazil, Russia, India, and China).

- *Lack of easy access to pensions*—Not all individuals have access to pensions. If these individuals were included, the retirement savings gap would be even larger than official estimates.
- *Long-term low growth environment*—The consensus (to be discussed) is that investment returns are unlikely to be able to make up for inadequate savings rates.
- *Low levels of financial literacy*—Limited financial literacy leads to poor financial decisions, increasing the threat to retirement savings.
- *Inadequate savings rates*—Savings rates are presently insufficient to produce an adequate *income-replacement ratio* (a person's gross income after retirement divided by his or her gross income before retirement) in retirement. The World Economic Forum (2017) estimated that income-replacement ratios need to be increased between double and triple current levels (i.e., from around 5% to 10%–15%) to close the gap.
- *High degree of individual responsibility to manage pensions*—The responsibility for retirement security remains with the individual in DC plans, but the investment management function is often provided by a financial services firm. To the extent that a financial services firm acts (or ought to act) on behalf of the individual, the importance of the investment governance issues we discuss increases.

In addition to the issues surrounding retirement savings, E&Fs (including charities) remain an important part of civil society and a valuable source of funds and services for certain sectors in the economy (e.g., education, social services). The tax benefits (usually) extended to these organizations, and the public policy consequences of their failure, mean that the public has an interest in how E&Fs are governed.

Second, this "weight-of-money" argument has been reinforced by the *rising standards of behavior* expected of financial service providers. Since the financial crisis of 2007–2008, the financial sector's place in the economy, its methods, and its ethics have been (rightly, in many cases) under scrutiny. In parallel, and fed by the expectations for higher standards, has come the rise of a type of investing known as "socially responsible investing" or several other more-or-less synonymous names: "ethical investing" or "investing that takes into account environmental, social, and governance (ESG) factors." These tendencies have had the effect of shining a light on the way financial resources are governed.

Third, and finally, generally higher expectations have fed into *regulation and activism*. Perhaps the most prominent example of *proposed* new regulation is the US Department of Labor Fiduciary Rule, which set out to hold those providing retirement investment advice to employee benefit plans to a fiduciary standard.[8] The proposed Fiduciary Rule explicitly stated the rationale for the imposition of this standard:

> Under this regulatory structure, fiduciary status and responsibilities are central to protecting the public interest in the integrity of retirement and other important benefits, many of which are tax-favored.[9]

Thus, although the Fiduciary Rule never came into being, it shows the momentum toward codifying heightened standards to protect the public interest.

Furthermore, nongovernmental entities have begun, ostensibly in the public interest, to hold fiduciaries to these heightened standards. Such entities include global pension funds, activist investors, and issue-specific activist groups (e.g., those working to eliminate the use of fossil fuels or the sale of tobacco). For example, in the United Kingdom, increasing numbers of pension funds, citing "both ethical and financial reasons for reducing exposure" (Mooney 2017), are divesting from fossil fuel producers. Data from the activist group 350.org suggest that some 700 investors have committed to "cutting their exposure to fossil fuels" (Mooney 2017).

In short, several factors are conspiring to raise expectations regarding the conduct of investment governance by fiduciaries.

The Response from Fiduciaries

As asset owners grow larger, and because they are being held to the higher standards, the need for effective investment governance processes and practices increases. This idea is widely accepted by fiduciary bodies, but the responses from asset owners have been mixed.

We categorize the responses from what we define as least desirable to most desirable as follows:

- *Negative*—The negative response has a narrow focus on legal compliance. Such a fiduciary is most interested in keeping off the radar of the regulator—and out of court.[10] Although all approaches should pursue

[8]Debate about the Fiduciary Rule is ongoing. The rule was proposed and promulgated by the Obama administration but has not been fully implemented. On 29 June 2017, the Department of Labor released a request for public comments—the fifth such request—on its new "investment advice" fiduciary definition and related exemptions.

[9]Employee Retirement Income Security Act; Fiduciary Rule, 81 Fed. Reg. 20946 (8 April 2016) (to be codified at 29 C.F.R. pts. 2509, 2510, and 2550).

[10]See Aikin (2017) for a high-level discussion.

these legal goals, the negative approach is principally concerned with what is in the *fiduciary*'s best interests, namely, management of the fiduciary's career risk. According to this view, the best interests of the beneficiary will be served by the fiduciary complying with the letter of the law. When the law codifies a standard that provides only a minimum of protections, the beneficiary misses out on the higher standards we advocate in this study.

- *Positive*—A positive response occurs when the institution's governing body takes a more *strategic approach* to investment governance—that is, using it to improve decision making and facilitate risk management with a view toward adding value for beneficiaries and other stakeholders. Such a response sees investment governance as a means of ensuring compliance (as one element of risk management) *and* as a driver of excellence and continuous improvement.
- *Best-practice stewardship*—What we argue is the ideal response is one that satisfies the prior two categories but is guided by a sincere commitment to act in the interests of the beneficiary. The principal weakness with the positive response is that, although it does *seek* to add value and drive excellence, these benefits may not necessarily accrue to the beneficiary. Instead, the benefits might accrue to management (and/or their agents) at the expense of the beneficiaries. For instance, at a pension plan, the short-term interests of management may be served by adopting a certain investment strategy but one that does not benefit long-term performance. For example, the plan may seek to better its peer-relative performance, for which management earns short-term incentives, at the expense of the long-term interests of beneficiaries. Although such behavior is suboptimal for beneficiaries, it could be seen as excellent by some standards. In contrast, best-practice stewardship is defined as putting the interests of the beneficiary (the principal) central in such a way that orients investment governance structure and mechanims to this purpose (refer **Exhibit 1**).

This study identifies and discusses the essential components of an investment governance framework that allows fiduciaries to fulfill their duties diligently and effectively (e.g., see the OECD framework in **Exhibit 1**).

A Framework

Having defined and discussed the *why* of investment governance, we turn to the question of *how* to bring it to bear as an essential component of good fiduciary practice. In this chapter, we provide only a basic outline of the

Exhibit 1. OECD Guidelines for Pension Fund Governance

Governance Structure	• Identification of responsibilities • Governing body • Accountability • Suitability • Delegation or expert advice • Auditor • Actuary • Custodian
Governance Mechanisms	• Risk-based internal controls • Reporting • Disclosure

Source: OECD (2009).

framework and give a small number of practical examples. The balance of the book elaborates on this framework.

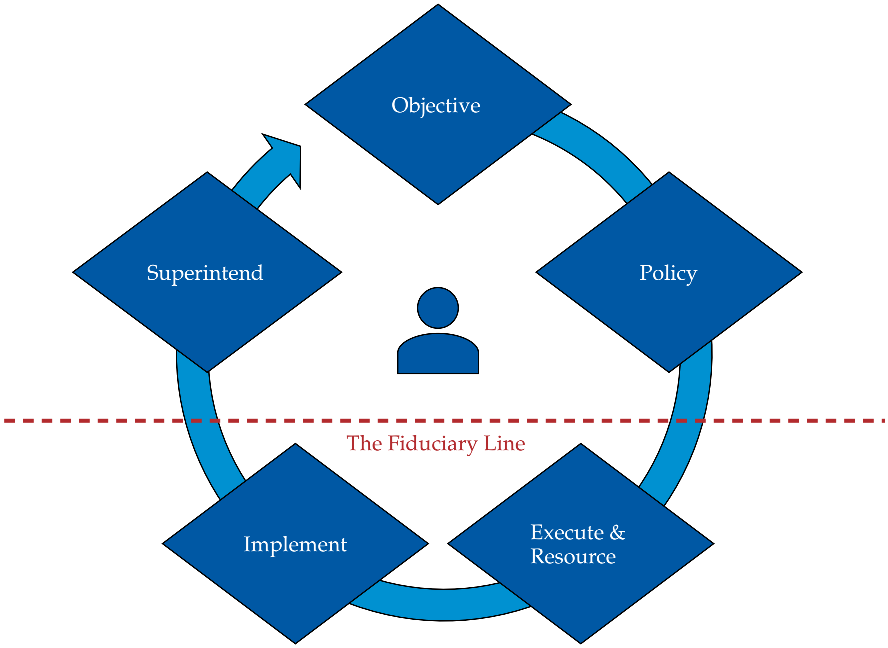
The framework we are introducing is not, in and of itself, fully original. We have worked in institutional investing for many years and have come across various versions of this framework and the process that is central to it.[11] Over time, the framework has been added to and edited such that it appears in its current form (see the *OPERIS* framework in **Exhibit 2**).

At this point, the reader might expect investment professionals to launch into a discussion about an investment process focused on the *best* way to capture returns. We take a different view. Achieving outcomes on behalf of beneficiaries is as much about *managing risks* as it is about *capturing returns*—and we mean "risks" broadly construed, not simply fluctuations in asset values.

Our preferred metaphor for this investment process emphasizes the *defensive* aspects of solving the investment challenge, especially defending the beneficiary from risk events and/or uncompensated risks (as well as capturing returns). Given the uncertainty around investment decision making, the

[11]In particular, we would like to acknowledge the following organizations and their past and present staff: the Myer Family Company, QSuper, QIC, Willis Towers Watson (and its former manifestations), and Equipsuper. Through our work at and with these organizations, and through our work with individuals who have worked at these organizations, we have developed and improved this process.

Exhibit 2. The *OPERIS* Investment Governance Framework



fiduciary investor—that is, the body or person managing the assets of another group of people—is left to rely on a robust process.

To underscore the idea of defense, we have adopted a Latin word used to describe field defenses, *operis*, as the way to remember the key steps of our investment process.[12] Exhibit 2 shows the outline of the investment governance framework, which calls to mind the shape of a medieval form of fortification known as a bastion fort, or *trace italienne*.

We cover this process in detail in subsequent chapters, but at this point, note that the first letters of the key steps spell out the defensive approach of *OPERIS*: **O**bjective, **P**olicy, **E**xecute and **R**esource, **I**mplement, **S**uperintend.

First, by "defensive" we do not mean what a professional investor might think of as being defensive (i.e., holding a large weight in bonds or low-risk

[12]Our reference in this regard is a passage out of *The Gallic Wars* by Julius Caesar (Book 1, Chapter 8), as follows: "The Helvetii, disappointed in this hope, tried if they could force a passage (some by means of a bridge of boats and numerous rafts constructed for the purpose; others, by the fords of the Rhone, where the depth of the river was least, sometimes by day, but more frequently by night), but being kept at bay by the strength of our works [*operis mūnitiōne*, in the original Latin], and by the concourse of the soldiers, and by the missiles, they desisted from this attempt" (emphasis added).

stocks), we mean the fiduciary *defending* the beneficiary, to the greatest extent possible, from the misadventures that the investment industry can offer.

Second, the process is continuous. It is not simply considered and approved by the governing body, put in place, and then consigned to the filing cabinet to reappear only when the regulator asks to see it. Implemented as intended, *OPERIS* is an *ongoing* process (of defense) that is repeatedly revisited to facilitate continuous improvement. Consistent with a commitment to best-practice stewardship, our concern is to do the best by the beneficiary. The fiduciary achieves this goal not only by making effective strategic decisions but also by having a defensible, repeatable, and documented process as evidence of due diligence.

Third, the process is designed to be universal, in that any investor can apply it to solve any investment challenge. The process does not provide a universal answer. It is flexible; it is only a framework. Some readers may find this aspect of the study unsatisfying because we do not give an *n*-step formula for certain investment success. We believe our industry may contain too much of this type of "silver-bullet" thinking. Some people seem to believe that there exists some *magic strategy* or product that greatly simplifies investing or assures success. This misperception is probably a function of the business realities of modern financial firms. The promise or perception of a silver bullet may allow investment firms to spend more time, in Ellis's terms, on "the economics of the business"—that is, attempting to drive investment firm profitability through the sale of highly scalable products—than on "the values of the profession"—pursuing the idiosyncratic, and notoriously difficult to achieve, investment objectives of real, human clients (Ellis 2011).[13]

Fourth, the "fiduciary line" shown in Exhibit 2 is of great importance because it separates the key strategic governance steps above the line from the implementation functions that take place below the line. The fiduciary line has important implications for investment governance that will be explored throughout this study.

The fiduciary line also reveals one of the great challenges to effective investment governance. As mentioned previously, the interests of asset consultants can diverge from those of the fiduciaries they are advising if they are providing advice on matters of both investment policy (above the fiduciary line) and investment selection (below the line). The conflict arises when the consultant earns more money below the fiduciary line (which we would argue they do) but use their influence among fiduciaries to advocate decisions above the fiduciary line that benefit them.

[13]Ellis has always brought to the debate a nice balance between academic rigor and practitioner pragmatism. See, for example, Ellis (2013, 2016) and Malkiel and Ellis (2013).

A classic example is the question of whether to implement the investment policy portfolio by using active managers or by using index funds. If the consultant earns significant fees from manager selection services, they have an incentive to advocate for active management as an investment belief, or deemphasize the case for passive management. In such a case, the consultant might be tempted to prioritize "the economics of the business" (i.e., earning fees from manager selection) over the "the values of the profession" (i.e., ensuring portfolio positions are appropriate for the fiduciaries acting on behalf of beneficiaries) (Ellis 2011).

Finally, this process does not exist in a vacuum. Every process takes place in an organizational context, and investment governance is no different. The context must be considered.

Contextual Issues

Several key contextual issues may affect the way in which the investment governance process is implemented.

Nature of the Investment Challenge. Not all investment issues are the same, so the best way to implement the process will vary accordingly. On one hand, for a DC plan with thousands, or even hundreds of thousands, of plan members ranging in age from early 20s to mid-60s, with diverse careers, simplifying the plan's investment objectives is difficult. Some plan members will be focused on accumulating wealth; others will be more focused on protecting the wealth it has taken a working life to build. Thus, the DC plan may seek to segment its membership by age, occupation, or another meaningful attribute. Such an approach will likely result in several investment portfolios—target risk, target date, or some other design—each pursuing differently framed objectives. On the other hand, the investment issue may be relatively simple for a charitable trust. In many jurisdictions, such trusts have a minimum spending rate (e.g., 5% of the corpus), which leads neatly into a headline investment objective: inflation plus 5% per year. The headline objective might be neat, but the likelihood of achieving it in current market conditions is another issue.

Organizational Context. A range of professionals assists fiduciaries in addressing the investment task they face.[14] These professionals may be

[14]See the ongoing research program on pension fund capitalism by Gordon L. Clark, University of Oxford (Clark 1993, 2000, 2003, 2012, 2017). We commend Clark's latest research collaboration with Ashby Monk, Stanford University, on institutional investors in global markets (Clark and Monk 2017). We also recommend the work of Keith P. Ambachtsheer, who has written extensively on pension fund governance and management over many years (see Ambachtsheer and Ezra 1998; Ambachtsheer 2007, 2016).

employees of the organization for which the fiduciaries fulfill their governance role, or they may belong to one of several service providers (e.g., asset consultants, actuaries). The resources used by fiduciaries in fulfilling their investment obligations according to the preceding investment process are a function of such factors as scale, complexity, and nature of the investment problem.

The simplest structure might entail the board of trustees of, say, a small school foundation, which outsources the investment problem to one or more qualified outsourced chief investment officers—for example, an "implemented" consultant. At the other end of the spectrum, the complexity of investment arrangements is virtually unlimited. We have been involved with organizations that have significant internal teams that are supplemented by a panel of asset consultants and a large number of investment managers and general partner relationships.

The nature of the particular organization may also influence the way the investment task is managed on an ongoing basis. For example, a pension fund might see the investment function as very much part of its core value proposition—and for this reason it is not surprising that the investment process of the largest pension funds in many countries is substantially internalized. In contrast, some corporations with pension obligations may prefer to outsource the investment function because pension investing is not viewed as part of that corporation's core business. This form has become common in the United States.

Governance Budget. The nature of the investment challenge and the organizational context influence (or ought to influence) what has become known as "the governance budget" (Clark and Urwin 2008). The governance budget is the "finite and conceptually measurable resource" (such as "time, talent, and treasure") allocated to "create value from effective actions in the chain of institution-defined tasks and functions" (Clark and Urwin, pp. 4–5; see also Watson Wyatt 2004). We return to this idea of a metaphorical chain of trusted relationships in Chapters 6 and 7. The size of the governance budget ought to be consistent with the nature of the task at hand. A simple investment task, therefore, should require a modest governance budget; a highly complex investment challenge, a significant one.

Who Decides What? Who Does What? Investment governance is essentially about effective investment decision making in pursuit of some set of investment objectives designed to address a given investment challenge. Related questions include who, or what body, makes which investment decisions and to whom are certain investment functions delegated? These questions are especially relevant for large and/or complex investment challenges for which significant governance and management resources must typically be dedicated. For example, at a large DC pension plan, a governing body (e.g., a board of trustees), an investment committee consisting of a subset of the board,[15] a chief executive officer, a chief investment officer, one or more asset consultants, an internal investment team, and many external investment managers—all are likely. Considering the multiple roles and array of resources, who decides what and who does what?

In answering these questions, we emphasize that, no matter how the roles are assigned and the responsibilities delegated, the accountability remains with the governing body. For this reason, roles and responsibilities must be understood by all parties and be documented in a statement (or matrix) of delegations. We return to the issues about clarity of roles and responsibilities in Chapter 8 when we consider the "*OPERIS* stack."

In their own words …

> "Investment governance is critical to long-term investment success. It allows the board and investment committee to set very clear objectives and priorities, while explicitly grappling with risk trade-offs, and to clearly articulate the 'rules of play.' Thereby, good investment governance empowers management to exercise its delegations with confidence, knowing that it is making decisions which are fully aligned with what the board and investment committee are seeking."
>
> —*Sonya Sawtell-Rickson, Chief Investment Officer, HESTA*

Use of Metaphors

Throughout this book, we use metaphors that, we hope, bring to life the ideas we discuss, namely, flying and driving. The flying/airplane metaphor, having been suggested by Blake, Cairns, and Dowd (2009) as appropriate for illustrating DC plans, is relatively common in pension finance. Furthermore, the "glidepath" referred to in the design of target-date funds is suggestive of a successful flight achieved by negotiating the descent and safe landing of the aircraft.

The Nobel Laureate Robert Merton preferred the automobile metaphor. He considered the automobile to be the metaphorical vehicle that gets one to

[15]See the excellent work of Bailey and Richards (2017) on understanding investment committee responsibilities.

the desired destination—that is, "an appropriate standard of living in retirement" (Merton 2007).[16] Merton's key point was that you do not have to know how to build a car to drive a car; investment strategies designed for the individual, in his view, should have the same characteristic—easy to use although possibly concealing sophisticated design under the hood.

The point is that this investment governance framework, and the associated investment process, is designed to achieve an investment objective—that is, *get to a particular destination* (by metaphorical plane or car). Properly defining and communicating the investment objective (i.e., the destination) is the necessary first step in effective investment governance. As noted, we look at the nature of the investment objective from three perspectives: a DC plan, a DB plan, and an endowment or foundation.

The car and plane metaphors are rich in meaning. Take, for example, the plane analogy. The destination (investment success) is usually some distance (time) away (in the future). To reach the destination, the investor must

- select an appropriate aircraft (investment strategy) for the task,
- appoint a qualified and capable crew (investment organization),
- chart the journey (set the investment policy),
- operate the plane (manage the portfolios), and
- respond to prevailing flying conditions, which can be difficult and change suddenly (adjust the portfolio for changes in markets or in the investment objective).

We are talking about inputs *into* the process and outputs *from* the process. This *dual focus* is a theme of this study.

These metaphors clearly, however, have limitations.[17] For example, buying a plane ticket almost always results in the traveler reaching her or his destination even if for some reason arrival is delayed. The same cannot be said of investment objectives. The probability of achieving reasonable investment objectives is lower (actually, much lower) than the probability of arriving

[16]Note that Merton's essential point is less about the investment objective—although that does feature—than about the design of the automobile (i.e., plan design). Merton used the metaphor to discuss the ride more than the destination. He argued that, given the complexity of the retirement planning challenge and the limited skills and motivations most individuals have to solve it, those who design DC plans must make "driving" to the destination as simple as possible.

[17]Yet, Blake et al. (2009) contended, and we agree, that even the deficiencies of the metaphor are "highly instructive" (p. 39).

for your Hawaiian vacation. We will acknowledge when the metaphor is stretched.

A Final Word

As mentioned earlier in the chapter, an important distinction must be made between *investment governance* expertise and *investment* expertise. This study focuses primarily on the former, though it does touch on the latter. One need not have a Ph.D. in finance to be an effective investment fiduciary. Being a fiduciary who is competent in matters of investment governance is more about good *process* than it is about technical knowledge in finance, in the same way that being a nonexecutive director of General Motors does not require one to be an automotive engineer or mechanic. Nevertheless, investment governance does require the "effective use of resources" (i.e., people, policies, processes, and systems) to solve the underlying investment issue, including engaging and overseeing the work of investment experts.

Points for Reflection: Chapter 1. Why Investment Governance?

As a fiduciary:

- Can I succinctly summarize the underlying investment challenge?
- Do I know who my principals (or beneficiaries) are? Do I understand what they might expect of me as a fiduciary?
- Have I thought about how agency risk might apply to my situation?
- Am I comfortable with my level of capability in light of the complexity of the investment portfolios I govern?
- Am I aware of the expectations of stakeholders (defined broadly) regarding my role as a fiduciary?
- Do I fit the definition of a best-practice steward?
- Am I involved in a continuous investment process (i.e., one that is periodically revisited and revised)?
- Do I have a complete understanding of the context—economic, strategic, and so forth—in which the organization exists?
- Can I succinctly summarize what investment success for my beneficiaries looks like?

2. Investment Beliefs: Decision Making in Context

> "To believe in something, and *not to live it*, is dishonest."
>
> —*Mahatma (Mohandas K.) Gandhi*[18]

Before we embark on a more detailed exploration of the *OPERIS* investment governance framework, we return briefly to the investment process introduced in Chapter 1.

In this chapter and Chapter 3, we focus exclusively on the first step in the process, defining the **O**bjective (Step O), as highlighted in **Exhibit 3**. This step is the most important one for fiduciaries because it results, if done properly, in as complete an understanding of the underlying investment issue as can be achieved. By properly defining and documenting the investment challenge, the governing body, to use our metaphors, correctly identifies the journey's *destination* (i.e., the investment objective or objectives) and the preferred *way to make the journey* (i.e., the investment strategy). If the destination is incorrectly identified, then a fiduciary is prone to use an ill-suited vehicle (automobile or aircraft), or give incorrect instructions to the driver/pilot and crew (who operate mostly below the fiduciary line). If the preferred type of journey is not understood (the investment strategy), the ride may be such that reaching the destination will be difficult or impossible (because of, say, capitulation risk[19]).

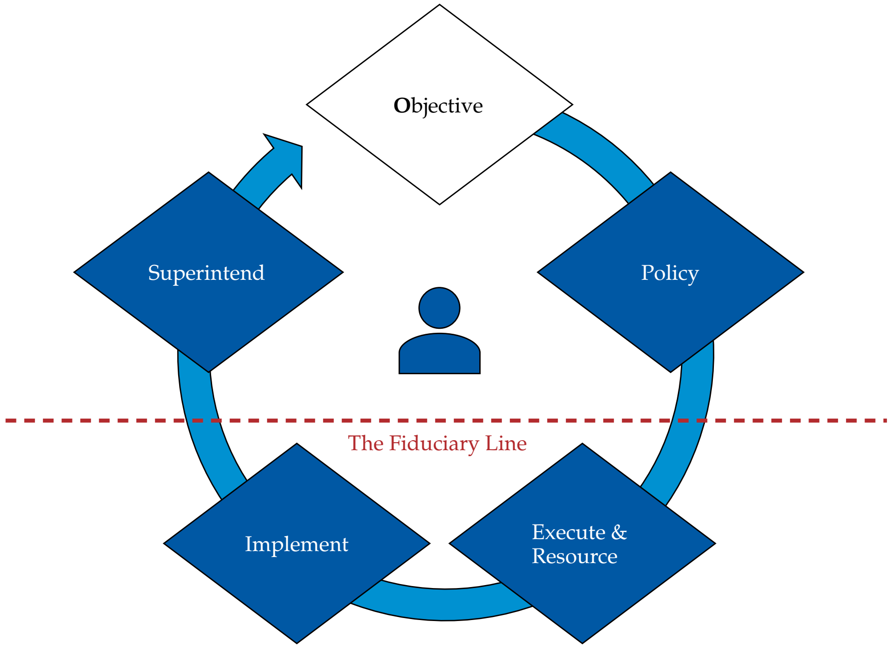
Furthermore, because of the fiduciary's duty to, and relationship with, the beneficiary, the fiduciary is the party best placed to—and in some cases, the only party able to—understand the details and nuances of the investment problem to be solved. Investment managers, who are employed below the fiduciary line, often cannot directly observe the needs or behavior of the beneficiaries, nor do they necessarily know the headline investment objectives of the overall investment program. Instead, they are hired to fulfill a defined mandate that, in turn, has its place in the investment policy approved by the governing body and implemented via (internal and/or external) management.

---

[18]Mohandas K. Gandhi was an Indian lawyer, politician, social activist, and writer who became the leader of the Indian independence movement.

[19]Capitulation risk is the term used "to describe the risk that investors will abandon equities at the worst possible time" (Drew and Walk 2016, p. 28). From the perspective of our metaphors, an overly aggressive investment strategy (a rough ride) might result in capitulation risk, thus jeopardizing the beneficiary's chances of achieving the objective (reaching the destination). To our knowledge, the term "capitulation risk" was first coined by Simon Kitson of QDRA.

Exhibit 3. ***OPERIS*** **Framework: Objective, Part 1**



The setting of objectives also drives (or should drive!) all subsequent decisions, and any actual or potential investment decision can and should be evaluated in light of the objective. Thus, Step O establishes the necessary context for all subsequent decisions that management makes to implement the investment policy arrived at by fiduciaries on behalf of beneficiaries.

These principles may seem obvious, but we devote two chapters to setting objectives because, first, this primary step is the critical step for fiduciaries. It is the task for which they bear the greatest responsibility and to which they can add the greatest value because of their knowledge of the beneficiary. Therefore, to act in the interests of the beneficiaries, fiduciaries ought to know the interests of the beneficiary well, and act in those interests (and not in their own). Second, we focus on this first step because *much of the investment industry is not the slightest bit interested in it.*

Investment managers are generally interested in their own process and the extent to which it results in product sales. According to this view of the world, one dollar of assets under management (AUM) is as good as another as long as the dollar generates the same level of fees. Put another way, to secure the marginal dollar of AUM, investment managers are incentivized to convince fiduciaries, and the executives who act on behalf of fiduciaries, that their product is helpful to fiduciaries in solving their investment problem, whether or not the manager knows what it is.

We would argue that some investment managers do not have a great basis on which to make the claim that their product will be useful. Moreover, a number of the incentives confronting investment managers militate against their acting in the interests of beneficiaries, who are, more or less, unknown to them. For example, managers and beneficiaries have opposing interests in relation to management fees. That investment products have a role to play is undisputed; that all of them are equally beneficial is obviously untrue. Investment beliefs, and properly framed investment objectives, can help fiduciaries sift through the universe of investment opportunities by evaluating each opportunity for its alignment with the beneficiary's interests.

Investment Beliefs

We define investment beliefs as the governing body's set of guiding principles for investing. Some might prefer to call these principles a "philosophy" or something less emotionally loaded than beliefs, but whatever the preferred term, we consider *having* investment beliefs and *holding true* to an investment philosophy as synonymous and treat them as such in this chapter.

The risk when talking about investment beliefs is that the conversation can become an exercise in *abstract* generalities. To make the discussion concrete, we begin by outlining a set of beliefs. We are not trying to convince the reader of the truth of these beliefs; we are simply outlining a set of beliefs to highlight how one might go about expressing them. The form and expression of the following beliefs are thus more important for the reader than their content.

This working set of investment beliefs is as follows:

1. *Rigorous simplicity is best.* Given the nature of the financial sector, unnecessary complexity is easy to create. When considering initiatives, we carefully consider whether any additional complexity is outweighed by expected benefits.

2. *Markets are dynamic.* Not only are financial markets dynamic, so too are the interrelationships between markets. They are subject to rapid and unpredictable change. We design, invest, and monitor investment portfolios with this dynamism in mind.

3. *Asset pricing anomalies abound.* Research shows that financial markets exhibit multiple asset pricing anomalies. To efficiently and effectively capture returns, we design, invest, and monitor investment portfolios with these anomalies in mind.

4. *The error term is large.* Acknowledging the limitations of the state of the art and the scientific methods used in the industry, we admit that the probability of being incorrect is significant. We attempt to invest in a way that is robust to error.

5. *End-investor objectives are paramount.* Investing should be conducted with a view toward helping beneficiaries achieve their goals (meet the investment challenge). All other considerations are subordinated to this goal.

6. *Asset allocation is the central focus.* Research shows that the asset allocation decision is a key driver of portfolio returns. It accounts for a significant portion of the differences between outcomes of different portfolios (Brinson, Hood, and Beebower 1986; Ibbotson and Kaplan 2000; Statman 2001; Scott, Balsamo, McShane, and Tasopoulos 2017). Therefore, fiduciaries should spend a significant amount of time agreeing on an asset allocation policy with the highest probability of achieving investment objectives and proportionally less time on subordinate (but perhaps more interesting) decisions (e.g., manager selection). Implicit in this belief is a further belief: a diversified portfolio of market returns—or beta exposures, in the vernacular—does most of the heavy lifting when it comes to achieving investment objectives.

7. *Timeframes matter.* For pension finance applications, the investment time horizon is a critical variable.[20] When designing portfolios—particularly those that are not perpetual in nature—the different investment horizons of beneficiaries must be considered.

[20]Much of finance theory assumes that a given return—say, 10%—is of equal significance whether it is earned in the first or the last year of a period over which an investment is held. This equality is true only if no cash flows in or out of the portfolio (no contributions or withdrawals are made). Obviously, when considering a person saving for retirement or spending down assets in retirement, this assumption is completely wrong. Only in the special case of no contributions or withdrawals are time-weighted returns the appropriate lens through which to evaluate performance. In a pension finance context—in which wealth is a function of returns and contributions and withdrawals and compounding effects—the timing of a return is critical. To illustrate the point, consider this: If you earned a –10% return, would you prefer it to be in Year 1 of your working life (on an account balance of, say, $5,000) or in Year 39 of your working life (on an account balance of, say, $500,000)? Obviously, the latter loss of 10% is far more destructive because a loss applies to all previous years' compounded wealth and contributions. In this context, money-weighted or dollar-weighted returns are the appropriate lens through which to evaluate performance. The portfolio size effect (the dynamics of wealth accumulation) and sequencing risk (the risk of receiving a disadvantageous sequence of returns rather than the mean of the return path) underline the importance of an investment horizon in practical investing (Basu and Drew 2009; Milevsky and Macqueen 2010; Basu, Byrne, and Drew 2011; Bianchi, Drew, Evans, and Walk 2014; Bianchi, Drew, and Walk 2014, 2016 [a]). In Chapter 9, we advocate a dual focus when evaluating performance.

8. *Risk must be defined and managed.* Traditional finance theory and practice tend to define risk as the standard deviation of arithmetic (time-weighted) returns. Behavioral research has revealed that real humans—as opposed to the (fictitious) rational *homo economicus*—experience risk differently, with measures like drawdown being more representative of actual risk attitudes than, say, standard deviation. Furthermore, research shows that risk preferences are a more sophisticated concept than simply risk tolerance.[21] Therefore, we define risk in ways meaningful for both fiduciaries and their beneficiaries and then manage portfolios in light of these settings.

9. *Active skill is rare but valuable.* The debate regarding the benefits or detriments of active management is extensive and ongoing. We believe that generating excess returns after fees and taxes is a challenging proposition and that identifying such active skill *ex ante* is equally challenging. Therefore, we target markets and strategies for which prospective active opportunities are likely to be most attractive (i.e., where a skill premium is most likely to exist) within an agreed fee budget.

10. *Effective implementation adds value.* Implementation takes the approved investment policy and brings it to life. Efficient and effective implementation (e.g., hedging, tax management, liquidity management) can add value through incremental return, avoided costs, and/or improved risk management.

We recommend that the following aspects be considered by fiduciaries when resolving and documenting investment beliefs:

- *Clear statement*—Briefly state the belief in such a way that it can be comprehended by all stakeholders.
- *Implications*—Preempt the question "so what?" That is, rather than leaving the reader of the beliefs to imagine what a belief might mean in terms of tangible action, spell out the implications explicitly.
- *Evidence*—To demonstrate that the beliefs "are lived"—as our opening quote from Gandhi exhorts us to do—evidence of the belief in action would be beneficial. Fiduciaries might ask the question, "Is this initiative consistent with our investment beliefs?" as a way of holding management accountable to the agreed investment beliefs. If management doesn't have a satisfactory answer to this question, perhaps the management is not integrating investment beliefs into the investment process.

[21]We discuss risk preferences in detail in Chapter 3.

- *References*—Being academics as well as practitioners, we cannot resist the temptation to recommend citing academic and/or practitioner research to validate beliefs. Having such support is not necessarily proof positive that a belief is well founded, but it does demonstrate that the fiduciary has researched the belief and found scientific evidence that the belief is reasonable. Having a belief that has no academic evidence to support it is something we would not recommend without significant further research and consideration.

Exhibit 4 provides an example of how to document an investment belief.

To advocate for the resolution and documentation of investment beliefs, one must see in them a purpose or set of benefits. We contend that the

Exhibit 4. Important Elements of Investment Beliefs/Principles: Element Example

Element	Example
Clear Statement	• Asset allocation is the central focus — Research shows that the asset allocation decision drives portfolio returns, accounting for 80% or more of the differences between outcomes of different portfolios
Implications	• Fiduciaries should spend a significant amount of time agreeing on an investment policy with the highest probability of achieving investment objectives • Fiduciaries should spend proportionally less on subordinate (but perhaps more interesting) decisions (e.g., manager selection) • A diversified portfolio of market returns — or beta, in the vernacular — does most of the heavy lifting when it comes to achieving investment objectives
Evidence (in practice)	• Asset allocation is a permanent agenda item on the agendas of all board and management boards/committees • Minutes record significant discussions regarding asset allocation • Manager and investment selection is less of a priority for the board and/or is delegated to management • Fees and costs are spent on asset allocation more than on other activities
References	• Brinson, Hood, and Beebower (1986) • Ibbotson and Kaplan (2000) • Statman (2001) • Scott, Balsamo, McShane, and Tasopoulos (2017)

following are main reasons for having an agreed and documented set of investment beliefs:

- They clarify and summarize the essential investment philosophy of the governing body.
- As Lydenberg (2011) noted, investment beliefs act as "a bridge between high-level goals and practical decision making." Thus, beliefs may be used as criteria for evaluating marginal investment decisions and prioritizing initiatives, ensuring alignment between philosophical outlook and action.
- They provide a single set of truths to be held (at least for the purposes of investing at the particular entity), thus superseding the personal views of individuals involved in the investment ecosystem.[22]
- When market conditions are volatile, investment beliefs can be used to stiffen—or, given the *OPERIS* framework, fortify—resolve by providing a set of well-thought-through and closely held truths.

In their own words . . .

> "By being clear about investment beliefs, delegations, and accountabilities the investment organization—boards, investment committees and investment professionals—can focus on creating outcomes for end beneficiaries."
>
> *—Danielle Press, Commissioner, Australian Securities and Investments Commission*

Types of Investment Beliefs

Investment beliefs generally fall into one of two categories:

- *Positive beliefs*—Many investment beliefs—for example, the belief outlined previously relating to asset allocation—emerge from the positive insights of peer-reviewed scientific (or social scientific) research. Put simply, positive beliefs represent *the way the world is*.

[22]A hallmark of professionalism is that the investment staff serving a governing body subordinate their personal investment beliefs to those of the organization for which they work. If a member of the investment staff finds he or she cannot act according to the organization's beliefs, that staff person should resign.

- *Normative beliefs*—Other investment beliefs focus more on the fiduciary's vision for the world. For example, when the empirical evidence regarding environmental, social, and governance (ESG) factors in investing is mixed, some fiduciaries pursue such an approach on normative grounds.[23] That is, fiduciaries form the view that investing by considering ESG factors is consistent with their fiduciary duty to beneficiaries and indicative of good stewardship. By defining beneficiaries in this context, fiduciaries tend to take an expansive view of their duties by including other stakeholders (e.g., the community) within their definition of what is meant by a beneficiary. Normative beliefs represent *the way the world ought to be*.

For investment governance, not only will the fiduciary benefit from being aware of the nature of the investment belief, but it is also important to ensure that the type of investment belief is consistent with the role the fiduciary plays in the investment ecosystem. By this we mean that the investment belief ought to be *relevant* in light of the nature of a fiduciary's role.

As discussed, in a large pension fund, numerous parties are involved in fulfilling the investment function, including the following:

- *Ultimate governing body*—Because of its legal duty to beneficiaries, this body must represent the beneficiary's best interests.
- *Investment committee*—Due to the complexity of investment arrangements, key investment accountabilities are sometimes delegated to a committee of the governing body so that greater scrutiny can be applied to important investment questions. Increasingly, we see investment committees consisting of highly expert members, including those who are otherwise independent from the investment organization.
- *Management*—Internal management, including the chief investment officer and their staff, also may be delegated certain tasks (e.g., those tasks that require more frequent attention than the governing body or the investment committee is able to devote to the task because of a limited governance budget).

[23]Some fiduciaries have been reluctant to incorporate ESG factors in their investing approach because the empirical evidence about its added value is not convincing. These fiduciaries take their (common law) fiduciary duty to beneficiaries to mean maximizing financial return. From this perspective, the thought is that fiduciaries expose themselves to legal liability by pursuing an investment belief for which the evidence is mixed at best. We will discuss ESG factors in investing in detail in the next section.

- *Asset consultant(s)*—At large pension funds, one or more consultants may be used to assist with tasks related to the investment challenge (e.g., actuarial modeling, manager selection).
- *Investment manager(s)*—Complex pension plans typically have numerous investment managers appointed across the full range of asset classes and investment strategies. Each of these investment managers (internal or external) is evaluated before being appointed to fulfill a particular role in the plan, according to a documented mandate.

Clearly, each of these parties could have his or her own investment beliefs (although those of the governing body and the investment committee should be the same). The point is that each party's investment beliefs should be relevant *to each one's role*. For example, it is entirely reasonable—we would say desirable—for a governing body to have one or more investment beliefs that focus on the beneficiary. After all, the beneficiary should be the prime object of the fiduciary's attention. We would be much more surprised for a governing body's investment beliefs to include a highly technical opinion about a particular asset class (e.g., that backwardation is a feature of the markets for commodity futures that makes it a desirable investment proposition). Such a belief may be supported by evidence, but how might this belief be acted upon by the governing body (as opposed to one of its delegates)? Investment beliefs should be consistent with the remit of the party that holds the beliefs.

Conversely, an active investment manager in US equities should quite rightly have investment beliefs that relate to the manager's ability to earn a skill premium from a preferred opportunity set (e.g., small-capitalization stocks). For such a manager to have explicit views about how to serve beneficiaries would be unusual—beyond the truth that any active return earned, after fees and taxes (and after adjustment for any risk taken beyond that of the benchmark), assists fiduciaries in achieving their investment objectives on behalf of beneficiaries. The role of the asset managers is to act in their client's best interests by fulfilling the mandate for which they have been appointed—for example, by beating an appropriately chosen benchmark for that particular mandate.

ESG Issues

The investment industry has seen increased interest in a type of investing that is known variously as ethical investing, socially responsible investing, sustainable investing, or investing by considering ESG factors.[24] The ESG label is

[24]See the work of Woods and Urwin (2010) on frameworks that fiduciary investors can consider for the implementation of a sustainable investing strategy.

currently the preferred one, because the others, such as ethical investing, are thought to be overly normative. (In this context, by *normative*, we mean advocating a defined set of ESG beliefs that may or may not be universally held.) From personal experience at a large pension plan, we argue that it is impossible to identify ESG factors that are universally accepted by plan members. For some memberships—for example, ones built around a religion or institutions associated with a religion (such as Catholic schools)—some sort of consensus on priority ESG factors, if not on all such factors, may be possible.

ESG investing is discussed here because it is an increasingly common investment belief among investment fiduciaries, and it raises complex issues. Fiduciaries usually take the view that it is incumbent on them, as the stewards of significant wealth on behalf of members of the community, to maximize risk-adjusted return but also to do so in a way that avoids harm and/or promotes good. Such a view leads to two questions:

- What does the fiduciary define as *harmful* and *good*?
- How does the fiduciary avoid harm (however defined) and promote good (however defined)?

As the ESG label suggests, the definitions of harmful and good may be divided into three broad categories: environmental, social, and governance factors. Within these categories there are relatively obvious criteria. On one hand, given the present focus on the use of fossil fuels, so-called *carbon intensity* is a reasonably predictable environmental criterion by which to judge an investment proposition. Respect for indigenous rights, on the other hand, is a social criterion that might not immediately spring to the mind of every fiduciary. When ESG factors figure in the investment beliefs of the governing body, an important role of fiduciaries, together with their advisers, is to determine the set of ESG criteria that properly represents the views of plan membership.[25]

To give the reader a sense of the possible range of approaches, we provide the following examples:

- Sustainalytics, a global leader in ESG and corporate governance research, uses 145 ESG indicators to evaluate companies. The STOXX ESG Leaders Index—a global index published by STOXX based on Sustainalytics research—identifies the "best performing" companies

[25]An approach we have observed is for fiduciaries to establish an ESG investment option that plan members may select as an alternative to applying ESG criteria to all plan investment options. Even in this case, fiduciaries need to define the ESG criteria for such an option, and not all plan members may be satisfied with the ESG criteria.

based on 134 "financially material" ESG indicators. In addition to using these criteria to identify the best performers, STOXX automatically excludes companies if they are involved in "controversial weapons" (e.g., antipersonnel mines and cluster munitions) and/or are identified as the "worst offenders" according to United Nations norms.

- One way to look at activities that cause *harm*, and might be considered in defining the fiduciary's ESG criteria, is to consider a "unique" investment process. The Vice Fund "is designed for investors seeking to capture better long-term risk-adjusted returns than the S&P 500 Index by investing in stocks within industries that demonstrate significant barriers to entry, including tobacco, alcoholic beverages, gaming and defense/aerospace industries" (USA Mutuals 2017). Note that the purported rationale for the investment strategy is "barriers to entry," but the fund is unashamedly named "The Vice Fund." The suggestion is that the "vice" aspects of these investments are at least acknowledged by the distributors of the fund. The rationale for the investment opportunity is that ESG investors, by avoiding these stocks, make the prices more attractive to non-ESG investors. It suffices to say that these are some of the exposures that would be excluded by fiduciaries that take a strict view in relation to ESG criteria.[26]

The reader may have noticed that a question embedded in these two examples is *how* these ESG criteria are reflected in portfolios under the governing body's stewardship. To carry out the ESG strategy, the fiduciary must decide whether to use a negative or a positive screen:

- *Negative screen*—The classical approach to ESG investing is to *screen out* those companies or investments that are inconsistent with the fiduciary's ESG criteria. For example, like the STOXX ESG Leaders Index, the screen might exclude controversial weapons and perhaps other activities that may be viewed as undesirable (e.g., uranium mining). As suggested in Chapter 1, a popular negative screen seeks to exclude those companies involved in the production of fossil fuels. Social activists might negatively screen out those companies that have poor worker rights records or that have been shown to use child labor in their supply chains. Religious investors might exclude companies that are involved in activities inconsistent with their own moral teachings (e.g., pornography, contraception, abortifacients).
- *Positive screen*—Instead of punishing activities inconsistent with a plan's ESG criteria, one approach is to reward positive activities. For example,

[26]For further discussion on this sort of investment strategy, see Richey (2016).

a company that commits to using renewable energy might attract the interest of those investors that positively screen the opportunity set for responsible environmental decision making.

Although these approaches seem simple enough, several complicating questions need to be addressed before an investment portfolio can reflect ESG principles. For example, negative screening, by its nature, means that "ethical" investors cease to have any involvement with companies that are involved in activities the fiduciary judges to be undesirable. So, the share registry of these companies is left to those investors with fewer scruples or different standards. If the objective of ESG investing is to improve corporate behavior, abstaining from investing in a company is unlikely to work well.

Positive screening seeks to reward positive ESG performance. Positive behavior may exist, however, in industries or companies that might also be excluded via negative screens. For example, take a mining company that has some exposure to fossil fuels but has industry-leading corporate governance and environmental reporting practices. Should such a company be excluded because of the fossil fuel exposure alone or retained because of its admirable approach to corporate governance? Ultimately, not all ESG decisions are clear-cut; they often involve uncomfortable judgment calls.

Also, in practice, practical questions exist about the materiality of a company's exposure to the desirable or undesirable activity. A pure approach would see a company screened out (excluded) if it had any exposure to a negative ESG factor. Thus, a company with minor exposure would be dealt with in the same way as a company whose only line of business is the undesirable activity.

A more pragmatic approach to, say, negative screening would exclude a company only if the exposure to the undesirable activity is beyond a certain threshold (e.g., the company earns greater than 20% of total income from the activity). Such an approach is practical, but it does leave the fiduciary open to the critique that, after all, things are not just 20% undesirable; they either are desirable or not.

In introducing this section, we said that fiduciaries usually regard it as their obligation to invest in a way that avoids harm and/or promotes good. This concern has not always been considered. Earlier in our careers, we often heard the refrain from fiduciaries that their role was solely to maximize returns, and to force their ESG perspective on the beneficiaries would be highly presumptuous. The concern at the root of this view was that litigious beneficiaries might argue that returns forgone by applying ESG principles are a loss caused by fiduciary decision making. ESG investing was seen as almost a contravention of the fiduciary's duty to act in the beneficiary's best (financial) interests. As the ESG movement has become more widespread, and as the relevant laws have been clarified and tested, this concern has, to some extent, disappeared from the public debate. Put another way, incorporating ESG principles into the investment program is increasingly seen as a core part of the fiduciary's role.[27]

In their own words …

"Funds need to look at the bigger picture, they need to understand that they are investment stewards, they must invest for the longer term, they must understand the intangible risks that can affect the sustainability of an investment or organization, and they must become active in ensuring or at least knowing how those risks are managed across their portfolios—and if it is not right—do something about it."

—Pauline Vamos, former CEO, Regnan, and independent non-executive director, Mercer Superannuation (Australia) Limited

Alignment

As suggested by Gandhi, it is reasonable to expect *alignment* between the words and deeds of fiduciaries as they govern the wealth of beneficiaries. To the extent that there is a *dissonance* or inconsistency between promulgated investment beliefs and the management of the pool of wealth, actions will speak louder than the words.

This point introduces a feature of the debate about investment beliefs that we sometimes notice: fiduciaries who appear to profess certain investment beliefs *because they believe they are expected to hold them*, not because they actually do hold them. What should be a firmly held investment belief becomes a form of "virtue signaling" or marketing gimmick. Inevitably, this clash creates the potential for incoherent management actions and mixed signals between fiduciaries and their key stakeholders—beneficiaries, organization managers, asset consultants, and investment managers.

We would argue that it is better to *not have* explicit beliefs than to *fail to act* according to promulgated ones.

[27]For an excellent set of resources, see the CFA Institute Future of Finance webpage at www.cfainstitute.org/learning/future/pages/esg.aspx.

We mention alignment between stated beliefs and actions here—and will return to it throughout this book—because echoes of a governing body's investment beliefs should be heard throughout the investment process. If investment beliefs do not have implications, then why hold them in the first place?

For example, if the governing body has a belief that asset allocation is the most important driver of investment outcomes, then a reasonable expectation is that fiduciaries and management will focus much of their attention on this issue. If much of the governing body's (or investment committee's) agenda is focused not on asset allocation but rather on investment selection—for example, so-called beauty parades (see Chapter 7), manager appointments, and approving unlisted investments—then whether the professed investment belief is being "lived out" is questionable. As we will discuss in Chapter 3, an especially important aspect of investment governance is alignment between investment beliefs and both investment objectives and risk preferences. It is through these settings that fiduciaries connect the interests of beneficiaries and the philosophy of the governing body with the concrete objectives given to management to achieve.

Before moving on to Chapter 3, we consider how investment beliefs fit the aviation analogy.

Investment Beliefs and the Airplane Analogy

Suppose we see the aircraft as the investment vehicle, the destination as the investment objective, and the passenger as the beneficiary (say, a defined-contribution [DC] plan member). The passenger's experience is, of course, a function of many factors, including the class of travel and distance, which are, in turn, defined partly by what the airline holds itself out to be.

In the context of the airplane analogy, the closest parallel to investment beliefs would be the strategic approach of the airline's board of directors. For example, a premium international flagship carrier is likely to have new, well-appointed, long-haul aircraft with compelling offerings for first class and business class passengers. Such offerings are how the airline became a successful carrier. In contrast, a short-hop regional carrier is likely to have small, modest aircraft because flying times are shorter, passengers (per flight) fewer, and runways at regional airports are appropriate only for small aircraft. For a premium airline to operate 76-seat Bombardier Q400s on international routes would be as absurd as for a regional airline to operate Airbus A380s with first-class private suites.

The investment organization of a DC plan ("airline") should be aligned with its underlying *raison d'être*, which might be described as achieving retirement security for DC plan members. The governing body can signal how this objective is to be achieved by being clear about its investment beliefs. With this clarity, fiduciaries and management have a common understanding of the strategic context and can seek to fulfill the vision for the plan (airline). Communicated effectively, the vision also signals to stakeholders what the plan offers.

Investment beliefs define the (investment) strategic context for the organization whether it is a DC plan, defined-benefit (DB) plan, endowment, or foundation. Done properly, investment beliefs act as a guiding philosophy ensuring coherence between what the fiduciary decides about the vision for the investment organization, what management does to bring this vision to life, and what the beneficiary ought to expect.

Of course, metaphors have their limitations and, as we promised, we will be clear when the metaphor is being stretched. The attentive reader may have already identified the fact that travelers get to select their preferred airline on the basis of a synthesis of factors, including destination, length of trip, class of travel, loyalty program, and preferred brand. This freedom is not always the case with beneficiaries and the provider of their retirement plan. In practice, at least in the United States, one's retirement plan is usually linked to one's employment relationship; thus, the "airline" is selected for the worker. In Australia, where "choice of fund" legislation enshrines nearly complete portability, a person can select a retirement plan provider (the airline). In practice, despite such portability, default choices (in which a preferred airline is selected by the employer) remain powerful for unknown reasons (Gigerenzer 2008; McKenzie, Liersch, and Finkelstein 2006).

Points for Reflection: Chapter 2. Investment Beliefs: Decision Making in Context

As a fiduciary:

- Do I know my organization's investment beliefs (or principles) or philosophy? Can I list the beliefs or describe the philosophy?
- Do I understand the implications of our investment beliefs or philosophy?
- Does the investment portfolio reflect our investment beliefs or philosophy?
- Do I understand the approach of my organization to investing in relation to ESG factors? Does this approach reflect the views of our beneficiaries?

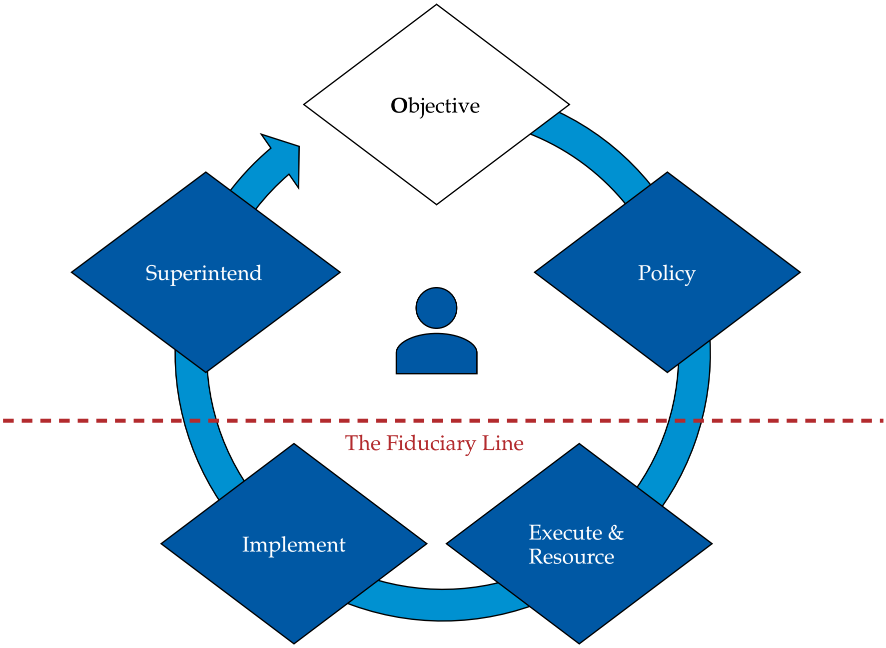
3. Investment Objectives: What's the Destination?

"A goal *properly set* is halfway reached."

—*Zig Ziglar*[28]

To remind the reader where we are in our *OPERIS* framework, we restate the investment process in **Exhibit 5**. Step O continues to be the focus of our discussion. In Chapter 2, we dealt with only the first consideration in Step O: investment beliefs. By the end of this chapter, you will have covered the key remaining elements for a complete understanding of the underlying investment issue. In the metaphor of the airplane, you will have a detailed

Exhibit 5. *OPERIS* Framework: Objective, Part 2



[28]Hilary Hinton (Zig) Ziglar (1926–2012) was an American author, salesman, and motivational speaker. See www.ziglar.com/quotes/goals-2/.

understanding of the destination and an understanding of other important factors regarding the nature of the journey.

Before we proceed to the important investment-specific elements of this chapter—investment objectives and risk preferences—we consider certain other factors that influence the context in which investment decisions are made.

Approval and Oversight Processes

To efficiently and effectively conduct an investment process, the governing body must make certain decisions and oversee their implementation. The whole organization must be clear, therefore, about which party approves what and what oversight is required of fiduciaries for them to fulfill their duties under the law. Such processes would usually form part of an organization's overall corporate governance and/or risk management framework. We believe that investment-related approval and oversight processes also must be explicit and documented and that all relevant stakeholders must have the understanding necessary to fulfill their roles in said processes.

The way a governing body exercises oversight and facilitates the necessary approvals to execute investment policy is a function of several factors:

- *Complexity*—Complexity in an investment process can have several sources. For example, the underlying investment issue may itself be complex; that is, the plan may have a significant number of heterogeneous beneficiaries with investment horizons ranging from one day to 45 years. At other plans, complexity may come from the existence of several important stakeholders (e.g., labor unions), each with a critical role to play in investment governance. In yet other cases, complexity may increase with scale, with myriad underlying exposures obtained through a variety of investment vehicles and strategies. Whatever the source of complexity, approval and oversight processes should ensure that the party best equipped to approve or oversee an activity is assigned that responsibility.
- *Governance model*—Although an investor's governance model is usually influenced by the complexity of the overall investment process, fiduciary bodies usually have some latitude to adopt a certain model as long as their fiduciary duties are properly carried out. A centralized, calendar time–based style of investment decision making may be suitable for a simple investment challenge, whereas a relatively complex investment issue or an advanced investment capability may require a delegated, real-time style of

investment decision making.[29] In any event, the governance model ought to fit the purpose.

- *Governance budget*—The complexity of the investment arrangements and the governance model typically call for certain governance resources, which are both finite and (relatively) expensive (Clark and Urwin 2008). Therefore, the governance budget ought to be spent in a way that is consistent with the approval and oversight processes determined by the governing body.
- *Legal and regulatory requirements*—Whatever a governing body's view on complexity or the most appropriate governance model, the legal or regulatory requirements must be complied with. In most cases, the law will require what might be described as the bare minimum; thoughtful deliberation about the complexity, model, and budgetary restraints will lead beyond this minimum toward good practice, even best practice.

Instead of recommending a *best model*, as if there were only one, we recommend that the governing body do the following:

- *Deliberate*—The governing body needs to reach some consensus, based on balancing the preceding criteria, about the most appropriate approval and oversight processes. In Chapter 8, we offer the *OPERIS* framework as a way of thinking about how roles and responsibilities are to be allocated.
- *Document*—Once the approval and oversight processes have been agreed upon in principle, the governing body needs to document and approve them through the usual governing body process.
- *Promulgate*—The documented processes should be shared, as needed, with stakeholders, including all those who have a role to play in the investment process, especially those parties with a role above the fiduciary line (i.e., investment committee, management, asset consultants).
- *Reinforce*—Because approval processes are not necessarily referred to regularly, reinforcing the roles of each party in relation to approvals and oversight is beneficial. For example, we know of one governing body that

[29]An authoritative source on pension fund governance is Clark and Urwin (2008), in which the authors suggest three governance types: Type 1 sees a board making centralized decisions on a calendar-time basis. Type 3 envisages decision making being delegated (to some degree) by the board to an investment committee and an executive, with the investment committee making calendar-time decisions and the executive making real-time decisions. Type 2 sits somewhere in between, with the investment committee retaining investment decision-making powers.

has a laminated statement of delegations in front of all fiduciaries at all meetings as a convenient point of reference.

- *Revisit*—Finally, as with most policies and processes, reviewing the approval and oversight processes at an agreed interval (say, every one to three years) is desirable to ensure their ongoing appropriateness.

In their own words …

"Governance takes many shapes for DC plan fiduciaries, whether it's identifying desired participant outcomes, assigning committee responsibilities, or selecting investments. However, one thing is certain: Oversight is critical."

—Lee Freitag, Head of Investment Strategy, Northern Trust Asset Management

Uses of Entities and Structures

Although some investment organizations involve a single entity with a straightforward legal structure, not all organizations are so simple. Therefore, we recommend that the governing body understand the entities and structures within the organization and make investment decisions with them in mind.

For example, we know of one hybrid pension plan—that is, a plan with elements of both defined-contribution (DC) and defined-benefit (DB) plans—that has both tax-paying and tax-exempt entities and more than one oversight body with (legal or informal) fiduciary duties. Such complexity will dictate how investment objectives are framed, what investment policy is adopted, and how money is invested.

Another circumstance that demands understanding of the entities and structures is the high-net-worth, ultra-high-net-worth, and family office world. In this environment, one or more individuals may be involved in addition to one or more investment trusts. The family may also have a foundation for its charitable activities, and other types of entities may be involved that are jurisdiction specific. For example, Australia makes provision for a vehicle known as the self-managed superannuation fund (SMSF).[30] In a family group, the range of entities and structures may be multiplied horizontally within a generation and vertically between generations. The complexity is almost endless.

The range of complexities may sound daunting, but fiduciaries must grapple with the issues *as they are*, not as they might wish them to be. If the complexity of entities and structures is such that it poses a risk for fiduciaries, that problem must be addressed.

A solution is possible: Such risk can be reduced by, for example, increasing the governance budget or simplifying the range of entities and structures. In extreme cases, the individual fiduciary may decide that the risk is so great that to remain involved is not worth the *career risk*.

Financial Objectives

The investment objective may be but one objective among a range of other *financial* objectives. This book is concerned primarily with investment governance by fiduciaries. Naturally, the investment decision is the primary subject of our attention. Because of circumstances, however, the fiduciary needs to consider the investment decision within a broader context.

For example, the chief financial officer (CFO) of a corporation would most certainly be interested in the ongoing *fundedness* (i.e., the ratio of assets to liabilities) of that corporation's DB plan. The *investment* objective of the DB plan might be described, for example, as "minimizing the probability of underfundedness" (however assets and liabilities are measured[31]). In all likelihood, the CFO is interested in minimizing the probability of a call being made on the corporation to use the corporation's out-of-plan assets to make

[30]"Superannuation" refers to a tax-preferred environment providing an incentive for Australians to fully or partially fund their retirement, thus reducing the pressure on public finances. In World Bank terms, "superannuation" can involve mandatory "first" and "second" pillar and voluntary "third" pillar elements (World Bank 2008). As defined by the Australian Securities and Investments Commission, an SMSF is "a private superannuation fund," regulated by the Australian federal taxation authority, that plan members can manage themselves. SMSFs can have up to four members. As Australia's securities regulator notes, "All members must be trustees (or directors if there is a corporate trustee) and are responsible for decisions made about the fund and for complying with relevant laws" (Australian Securities and Investments Commission 2017). For those of means, SMSFs have traditionally been a way of managing taxes (in addition to providing for retirement).

[31]Two possibilities would be the accrued benefits index and the vested benefits index, which are the ratio of the net market value of assets to, respectively, accrued and vested benefits.

good on future shortfalls between pension fund assets and liabilities.[32] When fiduciaries consider a broader financial objective, they *may* approach the investment challenge differently

For another example, consider a wealthy entrepreneur with a significant shareholding in a listed company and a portfolio of financial assets. To focus his attention on the success of the listed business, the entrepreneur has delegated to a fiduciary the role of managing the portfolio of financial assets. How should the fiduciary approach this task? Should he consider the financial assets in a vacuum and seek to maximize risk-adjusted returns? Or consider the entrepreneur's *financial objectives* (and other factors, such as risk preferences) and design the investment strategy for the portfolio of financial assets with the broad financial objectives in mind? Perhaps, the fiduciary may even consider incorporating the entrepreneur's human capital when considering the most appropriate investment strategy for the financial asset portfolio (Bodie, Merton, and Samuelson 1992; Strangeland and Turtle 1999; Milevsky 2009, 2010; Mitchell and Turner 2010). We will return to this example later in this chapter to draw out other relevant points.

Two truisms should be apparent by now:

- These Step O settings are highly interrelated, and they need to be considered comprehensively *before* an investment strategy is resolved.
- This investment governance framework, and the associated process (Exhibit 5), are universal, in that they can be applied to investment issues from pension finance to private wealth management.

Sources and Uses of Funds

Much of finance theory views wealth as a function of returns earned over a given investment horizon and based on a single initial contribution to the portfolio. Cash flows that occur throughout the horizon—like contributions to a DC pension plan—tend to be ignored. Although this assumption may be reasonable when considering one aspect of finance (say, portfolio choice or manager evaluation), it is inaccurate (in the extreme) when considering pension finance and private wealth applications. In this section and the next one, we entertain the idea of *intervening cash flows*. As in the previous section,

[32]This factor is one reason behind the rise of DC plans and the demise of DB plans (Drew and Walk 2016). The effect of underfunding has been such an issue for corporations that to avoid this risk, many boards have decided to close DB plans—because they posed too great a risk to their company's balance sheet—and replace them with DC plans, in which the plan participants (consciously or not) take responsibility for financing their retirement (Milevsky and Song 2010).

the elements we consider here, sources and uses of funds, extend beyond the conventional way the investment challenge is defined.

"Sources and uses of funds" refers to cash flows into and out of the investment portfolio from sources or for uses external to the asset vehicles being directly governed by the investment fiduciary. Such sources include, for example, donors in the case of a charitable foundation and the corporate sponsor in the case of a DB plan; uses would typically be payments to beneficiaries. Why might the cash flows to or from these parties be interesting to the fiduciary? Like financial objectives (the previous factor), intervening cash flows *may* affect how the portfolio is designed and managed.

To understand the practical implications of sources and uses of funds, we will revisit the entrepreneur from the previous section. Suppose one of his broad financial objectives is to scratch his entrepreneurial itch by investing cash from his financial portfolio in early-stage venture investments (the timing of which is unknown). Armed with this additional context, the investment fiduciary who takes a holistic view of his principal's best interests may, in concert with the principal, design a financial asset portfolio with slightly lower risk but greater liquidity than previously. The reason is to balance the investor's allocation to relatively risky venture capital investments with a relatively low-risk bond portfolio with easy liquidity. Ready liquidity will enable the investor to promptly fund cash outflows for his venture investments (a *use* of funds).

The reader's reaction may be as follows:

- Why should I (the fiduciary) take into account wealth that is apparently beyond my remit?
- What if the entrepreneur—being a seasoned risk taker—does not want liquid low-risk bonds in the portfolio?

These questions are both reasonable. The concerns most definitely need to be resolved and would naturally be considered if our framework is used as intended. First, to what extent the fiduciary takes into account the beneficiary's (or principal's) entire circumstances depends on such factors as how the fiduciary defines her or his role, what the principal's expectations of the fiduciary's role are, and what the law says about the fiduciary's role. In some cases, the law will oblige an adviser (acting as a fiduciary) to consider the principal's "personal circumstances" (or the legalese equivalent of this formulation). With an entrepreneur such as the one in the example, we see at least two possibilities. The investor could approach the fiduciary for investment advice regarding the financial assets portfolio and explicitly exclude anything else from the scope of the engagement (presumably because he is confident of his abilities to manage the balance of his wealth). Or the investor could engage the fiduciary to consider his wealth in aggregate, thus introducing the possibility of, and the need to consider, sources and uses of funds.

Second, this investor may indeed not wish to proceed with the proposal to hold liquid bonds as a strategy to balance risk and ensure liquidity for cash calls. In practice, the fiduciary would make such a recommendation or take such action only after understanding the principal's investment objectives (as a subset of the investor's financial objectives) and risk preferences. We discuss these two important factors in detail later in this chapter.

For another example, consider a foundation that has been established to fulfill a charitable purpose. The governing body governs the corpus of assets to finance the foundation's spending policy by designing (see Chapter 4) and implementing (see Chapter 7) an appropriate investment policy (see Chapter 5). In this case, the use of funds is to finance the spending policy. If the foundation is subject to a minimum spending rate—typically, 5% of the corpus per year—then the use of funds is likely to affect the investment policy of the foundation. The fiduciaries are left with a choice between targeting an "inflation plus 5%" (or higher) investment objective to maintain the real value of the corpus or setting a lower target and eating into the real value of the corpus. In the economic environment of 2019—in which inflation plus 5% appears to be an ambitious target—this trade-off is real in the minds of many fiduciaries. And we have not even mentioned the risks of this trade-off, which are likely to bias the decision toward the lower return target.

If, as is often the case, the foundation actively raises funds to further its charitable purpose, then donations may be a valuable "source" of funds that builds the foundation's corpus and/or supports an expanded spending policy.

Do not let the specific facts of these examples obscure the point being made: fiduciaries need a clear understanding of the sources and uses of funds they oversee because those factors may affect investment objectives, risk preferences, and investment policies later in the investment process.

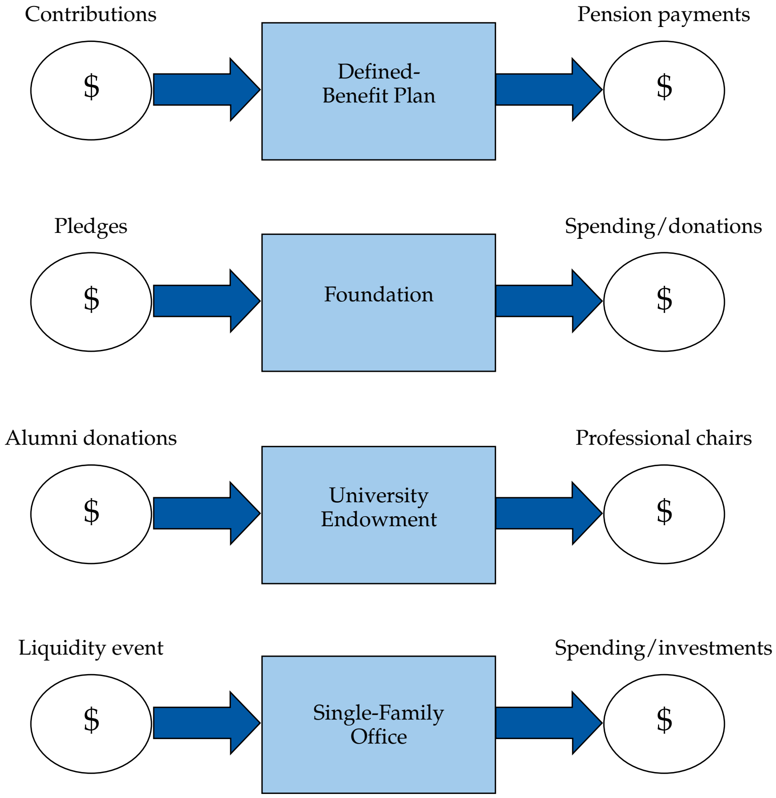
Detailed Cash Flow Budgets

To make planning as effective as possible, the ideal approach is, whenever practical, to prepare detailed cash flow budgets (inflows, which will be positive, and outflows, which will be negative) as a prelude to designing the governing body's investment policy. **Exhibit 6** shows a framework for this consideration.

The following simple examples illustrate situations in which detailed cash flow budgets *may* be possible:

- a DB plan estimating future contributions (inflows from working plan members) and pension payments (outflows to retired plan members);

Exhibit 6. Sources and Uses of Funds and Cash Flows



Note: A "liquidity event" would be a cash inflow from, for example, the sale of property.

- a foundation preparing a cash flow budget for pledges (inflows from donors) and spending to fulfill the foundation's charitable purpose (outflows to recipients);
- a university endowment planning for gifts (inflows from, say, alumni) and funding endowed chairs (outflows to university departments and professors); and
- a single-family office anticipating a liquidity event (inflow from the sale of a business or parcel of shares in a business) and planning allowances for family members (outflows to finance the acquisition of Ferraris and super yachts).

The timing, magnitude, and certainty of cash flows—especially inflows—are the variables that make cash flow budgeting difficult and thus introduce additional uncertainty into investment policy development and implementation.

From a textbook perspective, the ideal situation is one in which fiduciaries can design the asset portfolio to match liabilities, thus immunizing against any asset/liability mismatch.

In their own words …

"[O]nly with appropriate plan design, investments, and communications will a DC participant have a high probability of meeting his or her retirement goals."

—Josh Cohen, Managing Director,
Head of Institutional Defined Contribution, PGIM

Investment Objectives

The heart of the investment challenge is to meet the set of investment objectives that, when achieved, define success for the beneficiary. The importance of investment objectives is what motivated us to name the first step in the *OPERIS* framework **O**bjectives. After the importance of objectives is noted, the other aspects of Step O discussed in this chapter provide indispensable additional context for the investment objectives.

Fiduciaries need to be realistic about the challenges they face. First, in most cases, the fiduciary must interpret the investment objectives of the beneficiary on their behalf. Rarely does a fiduciary get the opportunity to confirm the investment objectives of the beneficiaries directly with them for one or both of the following reasons. High levels of *financial literacy* are rare, so the chances of having a fruitful discussion about the beneficiary's investment objectives are remote.[33] In addition, many fiduciaries—for example, DC plan sponsors—will never set eyes on their beneficiaries because the beneficiaries are so numerous and because of the delegated nature of their relationships.

Furthermore, *information asymmetries* make it difficult for the fiduciary to gather enough information to formulate an ideal set of investment objectives for the beneficiary. That is, the fiduciary of a DC plan is likely to observe only a subset of the full set of variables needed to understand the beneficiary's

---

[33]See the important work on financial literacy by Mitchell and Lusardi (2011) and Lusardi and Mitchell (2014).

complete investment challenge. And that statement assumes there is only one beneficiary; in practice, the beneficiaries of most DC plans are a numerous and heterogeneous group of workers. Therefore, assumptions will need to be made about the beneficiaries as a group to make a solution tractable, and even then, it will be only approximately correct. Only in certain circumstances do fiduciaries understand the full details of the beneficiary's circumstances; such a circumstance would involve a financial planner and her client.[34]

Finally, the terms in which the investment challenge is expressed are important. Because this study is principally focused on *investment governance*, the temptation is to launch into a technical discussion expressed in terms familiar to investment professionals—"inflation plus 5%" or "maximizing the portfolio's Sharpe ratio." Indeed, because investment specialists are usually the ones who generate investment recommendations for fiduciaries, the conversation at the fiduciary board level can become narrowly focused on investment specifics rather than on how investment policies and results affect beneficiaries.[35]

The best way to change this emphasis is for fiduciary bodies to express investment objectives in a way that *both* they and their beneficiaries can understand. For example, instead of "inflation plus 5%," fiduciaries might select a headline investment objective such as "maximizing the likelihood of replacing 70% of preretirement income."

Framing investment objectives in this way has several benefits. First, every person can understand this objective. Everyone with a calculator can compute what 70% of their current salary is and can, with a little budget thinking, come to some sort of conclusion about the adequacy of such an income. Few

[34]A cynic might call into question this statement. One critique of the typical financial planner/client relationship goes as follows: Financial planners learn as much as they need to know about their clients to demonstrate a legal standard of due diligence and then provide an investment solution based on the clients' risk tolerances. Because financial planners are increasingly compensated by fees only (not by fees based on assets under management), the best way to maximize the margin on each marginal client is to minimize the amount of time spent on that client. Again, we see an example of the tension identified by Ellis (2011). This example is not intended to reflect poorly on all financial planners. In our experience, a growing number of financial planners are taking their commitments to clients very seriously indeed.

[35]The pure investment orientation of many discussions at the fiduciary board has other negative side effects. For example, some important variables in pensions finance—such as contributions—tend to be overlooked in favor of investment issues, such as changing asset allocations, new managers, or new investment selections. In some cases, fiduciaries might be better served by recommending that plan members increase contributions instead of increasing investment risk. In our pessimistic moments, we wonder whether such considerations ever really get a fair hearing. A comprehensive understanding and examination of the dynamics of retirement investing is necessary to make effective decisions on behalf of beneficiaries.

individuals other than investment professionals are capable of translating an "inflation plus" investment objective, expressed as an annual rate of return on the dollar amount invested, into an equivalent sustainable retirement income.

Second, the objective of a 70% replacement rate is expressed as income, which is how the average person thinks about finances. Converting an estimated final account balance—technically, estimated wealth at time *T*—into a sustainable income is also beyond the financial skills of most people.

Third, income replacement at a certain level—in this case, 70%—is a measure that is at the same time universal and specific. It is universal in that "70% income replacement" can be applied to everyone, no matter what their wealth or occupation; it is specific in that it targets a *level* of income that is a function of preretirement earnings, which the literature shows to be an important driver of expectations about retirement income (Baker, Logue, and Rader 2004; Basu and Drew 2010).

Fourth, the objective as stated is expressed in *probabilistic terms*. This approach is important as a communication tool because it gives the beneficiary a sense that, although 70% income replacement is the target, this level might not be achieved. It is misleading to leave the beneficiary with the impression that any reasonable investment objective can be achieved with certainty.[36]

Finally, the framing of this investment objective can be used to motivate action on the part of the beneficiary. For example, a DC plan might report in its communication with plan members that the "probability of replacing 70% of preretirement income" is 50%—the toss of a fair coin. Rather than leaving the information at that, the DC plan could use this estimate and the plan member's reaction to it to drive positive retirement investing behavior, such as suggesting that members

- contribute more to raise the probability of achieving the objective;
- take more, or a different type of, investment risk to raise the probability of achieving the objective;[37]
- defer the retirement date to raise the probability of achieving the objective by accumulating more retirement savings during the additional working

[36]By buying laddered portfolios of US Treasury Inflation-Protected Securities or inflation-linked annuities, a retirement outcome can be more or less guaranteed, but such approaches are expensive (in terms of the amount that needs to be saved).

[37]This lever is overused, however, relative to the others because investment professionals tend to dominate investment discussions among governing boards. Also, this lever allows the investment industry to come up with innovative solutions or silver bullets that they assert will "add value." In short, this course of action is good for "the economics of the business" (Ellis 2011).

years and shortening the retirement phase (assuming the date of death in the calculation remains constant); and

- seek personal financial advice.[38]

In translating the investment problem into a set of investment objectives, fiduciaries would do well to keep in mind the following circumstances:

- *Multiple, competing objectives*—We have encountered few examples of fiduciaries having in mind a single, all-encompassing investment objective that adequately distills the investment need. In practice, the fiduciary faces multiple objectives of the beneficiary(ies), including projected retirement incomes, return targets, risk expressed multiple ways, fee budgets, and so on. In almost every case, the set of investment objectives involves trade-offs. The trade-offs contained in the investment objective *must* be explicitly identified and understood by fiduciaries.
- *Objectives needing to be prioritized*—Because trade-offs exist, the hierarchy of objectives must be clarified. Priorities, provided they are shared by all beneficiaries, greatly assist in making on-balance and marginal decisions.
- *Stated versus revealed objectives and priorities*—Sometimes the stated priorities of fiduciary bodies conflict with the priorities revealed by their actual behavior. For example, in Australia, where near-universal portability results in a significant focus on "league tables" (i.e., rankings of pension funds by realized return), fiduciary bodies seem to think that ranking *peer-relative* performance too high in the order of priorities sends the wrong signal to plan members about the importance of absolute performance. Therefore, they tend to rank absolute performance higher than peer-relative performance in their *stated* objectives. This choice is completely defensible, but it is a good practice if and only if the stated objectives are the governing body's *real* objectives. The risk is that the *revealed* objectives—the ones focused on around the fiduciary table—may be different from the stated ones. For example, in this case, the fiduciaries may act strongly to reward good peer-relative performance. We recommend

[38]We are often asked to provide our view about what is "the best" way to achieve retirement adequacy for plan members. Whatever the audience, the answer is for plan members to obtain (and follow!) high-quality personal financial advice. We usually follow this statement with some clarifying points. For example, the proportion of plan members who seek personal financial advice is low; therefore, DC plan fiduciaries have an important part to play in at least positively influencing retirement outcomes. Our point also underlines the importance of the availability of high-quality personal financial advice. In many jurisdictions, the need for high-quality financial advice is driving the focus of policymakers on financial planner competence and incentives (especially avoiding perverse ones).

that the governing body honestly deliberate over and document its objective set with the goal of setting clear marching orders for management.

While we may have made the process sound straightforward, objective setting brings with it some challenges, as follows:

- *Objectives that change*—In a perfect world, investment objectives ought to remain relatively constant over time. In practice, reasons may arise for introducing new objectives or priorities may change. While we advocate making sure that the officially promulgated investment objectives are complete and accurate at all times, we also counsel against their being changed too often. Significant changes in investment objectives may result in equally significant changes to the investment program, with negative side effects (such as transaction costs and other costs associated with turnover).
- *Interaction with market conditions*—A common reason for changes in investment objectives is prevailing *market conditions*. For example, when markets become more volatile, risk-related investment objectives tend to increase in importance in the minds of fiduciaries. Discipline among fiduciaries is required to differentiate between permanent changes in investment objectives—which should be relatively rare—and short-term responses to market conditions. Mistaking the short term for the long term may send confusing signals to stakeholders (especially management).
- *Future expectations*—Objectives are usually developed, at least in part, on the basis of previous experience. The future, however, may be materially different from the past (see Bianchi, Drew, and Walk 2016a), which may require change in objectives. Fiduciaries are encouraged to make their objectives as achievable as possible to avoid setting unrealistic expectations among stakeholders and/or inducing actions counterproductive to the interests of beneficiaries. For example, fiduciaries are currently faced with the choice between maintaining arguably unrealistic return targets—say, inflation plus 5% per annum—and taking the associated high level of investment risk or lowering return targets and reducing the probability of achieving the retirement income expectations of beneficiaries.
- *Agency risk*—Whatever objectives fiduciaries choose, the risk remains that the objectives are inappropriate for at least some beneficiaries. Given the size and heterogeneity of some groups of beneficiaries—for example, the plan members of a public DC plan—this risk is to be expected. We recommend that fiduciaries combine a range of measures to ensure that the interests of all beneficiaries are served. For example, fiduciaries can

create well-designed age-based defaults with clever design features, such as *auto-escalation* features, but also provide plan members access to financial advice in case beneficiaries need a different design. Whatever course of action the governing body decides to take, the agreed investment objectives should focus on measurable investment aspects of the offering. Other elements of the offering—such as how best to deliver personal financial advice to plan members (e.g., face-to-face, telephone, or robo-advice)—can and should be discussed during broader product and service deliberations.

The final element of our discussion of investment objectives is a tool that assists fiduciaries with marginal decision making. How might fiduciaries compare the expected outcomes from two (or more) competing investment strategies in the context of the multiple, competing objectives we have discussed? The answer is the *hierarchy of investment objectives* (HIO), an example of which is shown in **Exhibit 7**.[39]

As the reader has no doubt realized, the HIO is merely an expedient for recording and prioritizing the investment objectives that, in the fiduciary's view, *best capture* the essence of the underlying investment problem. Obviously, framing, agreeing, and prioritizing is the difficult task; recording the objectives is trivial. We think presentation of the HIO is important, however, because good presentation can assist decision making as much as poor presentation can hamper it.

An HIO is only as good as the criteria within it, and the analysis that underlies it. If the HIO criteria (i.e., the investment objectives) are misspecified or the analysis is deficient, the inferences drawn from the HIO and the decisions made will be incorrect. In this chapter, we have discussed some issues to consider when resolving investment objectives in the form of HIO criteria. In Chapter 4, we discuss how the HIO drives portfolio choice.

[39]As with the investment process we introduced earlier in this study, this tool is not original. We have come across various versions of it in our professional travels in financial services and beyond, mainly in the form of a balanced scorecard (which builds on the work of scholars such as Kaplan and Norton 1992). A cursory examination of the range of scorecards available via the internet reveals they are used for many different purposes. We have selected one we believe best summarizes the task at hand—using a prioritization of investment objectives as a tool for decision making. In particular, we would like to acknowledge the following organizations and their past and present staff: the Myer Family Company, QSuper, QIC and Equipsuper. Through our work at and with these organizations, and through our work with individuals who worked at these organizations, we have developed and improved this tool to its current form.

Exhibit 7. Hierarchy of Investment Objectives

Governing Body Priorities

	Excellent Result	Good Result	Poor Result	Failure
1. Probability of achieving CPI+3.5% p.a. (after fees) over rolling 10-year periods	80%	70%	60%	50%
1. Probability that drawdowns will be worse than –12% in TTR phase	5%	10%	15%	20%
2. Probability that RWR will be greater than or equal to 8× at retirement	100%	75%	50%	25%
2. Probability that RR will be greater than or equal to 60% in retirement	100%	75%	50%	25%
3. Probability of a negative return over any one-year period	10%	15%	20%	25%
3. Return volatility over rolling five-year periods	5%	7%	9%	11%
3. Nominal expected returns over rolling five-year periods	6.0%	4.5%	3.0%	1.5%

Notes: CPI is the consumer price index; TTR is the transition to retirement phase; RWR is retirement wealth ratio; RR is replacement rate.

Risk Preferences

The classical approach in finance sees risk preferences as largely a function of risk tolerance. According to this view, the risk a fiduciary ought to take for an individual or organization should be the maximum that the individual or organization can reasonably tolerate. Such an approach appears to neatly match the typical approach to investing, which views wealth maximization as the desirable outcome; that is, individuals will seek to maximize wealth in light of their personal risk tolerance.

In practice, we observed two particular manifestations of this focus on risk tolerance.

First, *DC plan members* have responsibility for their own retirement outcomes and, therefore, must themselves make investment decisions (guided or not) to secure their own retirement. DC plan fiduciaries usually make available to plan members a menu of options. Historically, these have been "target risk" in nature; that is, the option's investment strategy is designed to target a given level of risk, and the label gives the plan member some intuition about the option's risk profile (e.g., "conservative" or "aggressive"). Recently, fiduciaries have extended the range of options to "target date" or "life-cycle" options, in which the amount of risk depends on the plan member's time to retirement. This development is an implicit recognition that investing for an individual's retirement is a much more complex problem than target risk–style investment options might lead one to believe.

Second, when an individual becomes a client of a financial planner, one of the first things the person is typically asked to do is complete a risk questionnaire. Such questionnaires are supposed to translate the client's responses into some sort of risk profile that is consistent with that client's predisposition to risk. When taken together with the client's personal circumstances (hopefully!), this risk profile leads to a recommended investment strategy.

Good reasons may support an approach driven by risk tolerance—for example, it arguably minimizes *capitulation risk* (i.e., selling after a drawdown) by matching portfolio risk to risk attitude. Some fairly significant questions remain, however, about a risk-tolerance-only approach

- *Stability of risk tolerance measures*—While the evidence for and against the stability of risk tolerance measures remains mixed, those that advocate for the importance of risk tolerance—e.g., purveyors of risk questionnaires—acknowledge that "risk behavior will be a function of a number of factors, the one most relevant to behavior during market turmoil being risk perception" (Davey 2012).[40] To us the argument seems a little self-defeating; risk tolerance is an important indicator, but "risk behavior" is much more complex than just risk tolerance.

- *Other factors*—We argue that other aspects of risk are important to achieving investment objectives. We discuss this view in further detail below.
- *Real rationale*—We sometimes wonder whether the rationale for the focus on risk tolerance is to serve the interests of the client or plan member, on the one hand, or, instead, the interests of the financial planning firm or DC plan on the other hand? This question provides an excellent illustration of the tension between the "the economics of the business" and "the values of the profession" (Ellis 2011). Risk questionnaires allow financial planners an efficient, evidence-based mechanism for matching clients to a small number of off-the-shelf investment strategies (so-called model portfolios). That the mechanism is evidence based means the financial planner has undertaken some due diligence; that it is efficient means that the returns to scale are greater as a result of little client-by-client tailoring. Because true tailoring is time consuming and, therefore, expensive, the financial planner—or her employer—has a strong incentive to industrialize the process to the greatest extent possible. In short, risk questionnaires are good for the "economics" of the business because they neatly sift a heterogeneous client base into a small number of (hopefully, well-governed) model portfolios. But do risk questionnaires really demonstrate the "values" of the profession by seeking to devise the best financial plan to address the idiosyncratic investment objectives of real, human clients? For the sake of clients, we hope they do, but we wonder.

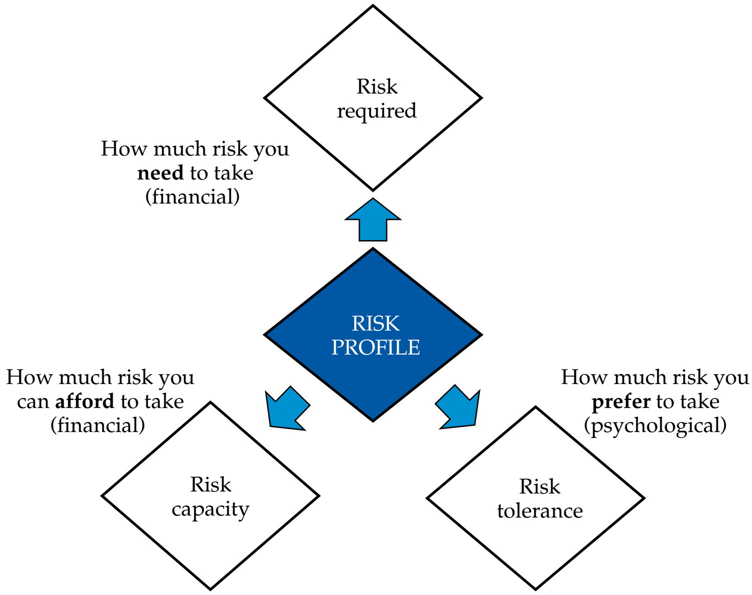
As we have stated, we believe a beneficiary's risk profile should consider aspects of risk beyond risk tolerance. Our preferred characterization reflects the work of Davey (2015), as shown pictorially in **Exhibit 8**.

The model in Exhibit 8 deems a beneficiary's risk profile to be a balance of three competing aspects of risk:

1. *Risk required*—Depending on the beneficiary's circumstances, investment risk will play a greater or lesser part in achieving the person's goals. Risk required is a judgment about the financial risk that *needs* to be assumed

[40]Some research has suggested that risk tolerance is unstable (e.g., Yao, Hanna, and Lindamood 2004), although in some cases these findings have been revisited and clarified (Hanna and Lindamood 2009). Other research suggests that financial risk tolerance is a "genetic and predispositional stable personality trait and, as such, is highly unlikely to change over the life of an individual" (Van de Venter, Michayluk, and Davey 2012, p. 800]).

Exhibit 8. Risk Profile



Source: Davey (2015).

to have a reasonable probability of achieving the agreed set of investment objectives. Importantly, risk required might be different from the level of risk implied by a beneficiary's risk capacity or risk tolerance.

2. *Risk capacity*—The beneficiary's overall financial situation will indicate the level of risk the person can *afford* to take in pursuit of the objective. Risk capacity is, at its core, a judgment about the ability of the client to withstand negative events (e.g., lower or negative contributions because of sudden job loss).

3. *Risk tolerance*—As discussed, risk tolerance is an indication of the amount of risk a person *prefers* to take. In this context, we assume that risk tolerance is a psychological predisposition that is relatively constant over time.

These aspects of risk compete with each other in that they often tend to send opposite signals about what the beneficiary's risk profile ought to be. To bring to life these mixed signals, and the trade-off that results, let us consider two examples.

First, consider a career public employee with modest personal assets in addition to his residence and his DC plan account. Typically, such a worker will use systematic withdrawals from his DC plan to finance his retirement spending (Milevsky 2012; Vernon 2012; Drew and Walk 2015). In such a case, the worker will usually need to take moderate-to-high levels of investment risk to generate a sufficiently large retirement income; thus, his *risk required* will be relatively high. But such a worker might also have a relatively low *risk tolerance*; after all, he has selected a career that has relatively secure tenure and, as Milevsky (2009) might say, bondlike cash flows. This secure job tenure will likely result in great certainty that he will be able to contribute more to his DC plan than he currently is because as he enters his late 50s and early 60s, other spending commitments—such as raising and educating children—will decrease. In other words, his *risk capacity* may be significant. Note that one of these aspects of risk—risk tolerance—is suggesting a more modest risk profile, whereas the other two aspects—risk required and risk capacity—point in the other direction.

Second, consider a self-made ultra-high-net-worth individual. With significant net worth, such a person may not need to take much risk to meet her financial commitments (even if those commitments are more significant than an average person's). For this individual, a low-risk portfolio might produce enough income to pay the bills as well as allow saving for significant wealth. So, *risk required* is low. Because our hypothetical individual is self-made, however, she is likely to have generated her wealth by taking significant business and/or financial risks. Therefore, her *risk tolerance* is probably high—certainly higher than that of the average person. Similarly, because of her significant wealth, she may be able to afford to take significant financial risks, which suggests a high *risk capacity*. In this case, then, we also see a tension between the three aspects of risk. Two aspects are pointing to a risk profile that is high risk, and the third aspect points in the opposite direction.

The key lesson from these examples is that, as with setting investment objectives, resolving a risk profile is not always simple; ultimately, it requires some sort of trade-off.

Note that each of the preceding aspects of risk is *endogenous* to the investment issue; that is, each aspect is judged with respect to the beneficiary's situation as though the investment world did not exist. No consideration of *exogenous* risk, such as prevailing risk levels in a given market, has been made.[41]

This distinction is important. The risk preferences discussed here are only about the investment challenges facing the fiduciary, and this discussion

[41]An example of prevailing risk levels in a given market is the CBOE (Chicago Board Options Exchange) Volatility Index (the VIX), which is "a key measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices" (CBOE 2017). As such, it is exogenous to the fiduciary's investment decision, although market volatility doubtless has a bearing on risk attitudes among the beneficiaries fiduciaries seek to serve.

should necessarily be about the beneficiaries and what is in their interests. The fiduciary might also have a belief, or set of considerations, about *exogenous* risk. For example, the fiduciary might believe—as we suggest in the second belief in Chapter 1—that markets are dynamic, and that risk is, as a result, time varying. Such a view ought not impact on the risk preferences of the beneficiary as discussed in this chapter, but it may have implications in other parts of the investment process, such as the desirability of a dynamic asset allocation process and the need to commit resources sufficient to properly implement such an approach.

Having completed our consideration of Step O in the investment process, in Chapter 4, we start to grapple with the issues associated with *solving* the investment problem.

Points for Reflection: Chapter 3. Investment Beliefs: What's the Destination?

As a fiduciary:

- Are approval and oversight processes appropriate in light of the complexity, governance model, governance budget, and legal and regulatory requirements of the organization?
- Do I understand who makes which investment decisions? Are approval and oversight processes, including any delegations (to, say, implemented consultants), documented and monitored?
- Do I have a clear understanding of the entities and structures at play at my investment organization and how they may influence investment decision making?
- Am I aware of all other financial objectives (if any) that may influence the investment decision?
- Do I have a complete understanding of the sources and uses of funds that will influence the investment decision? Have I considered the need for detailed cash flow budgets?
- Can I accurately define "the destination": the critical investment objectives, in order of priority, that correctly and comprehensively summarize the investment problem?
- Am I prepared to make trade-offs in achieving critical investment objectives?

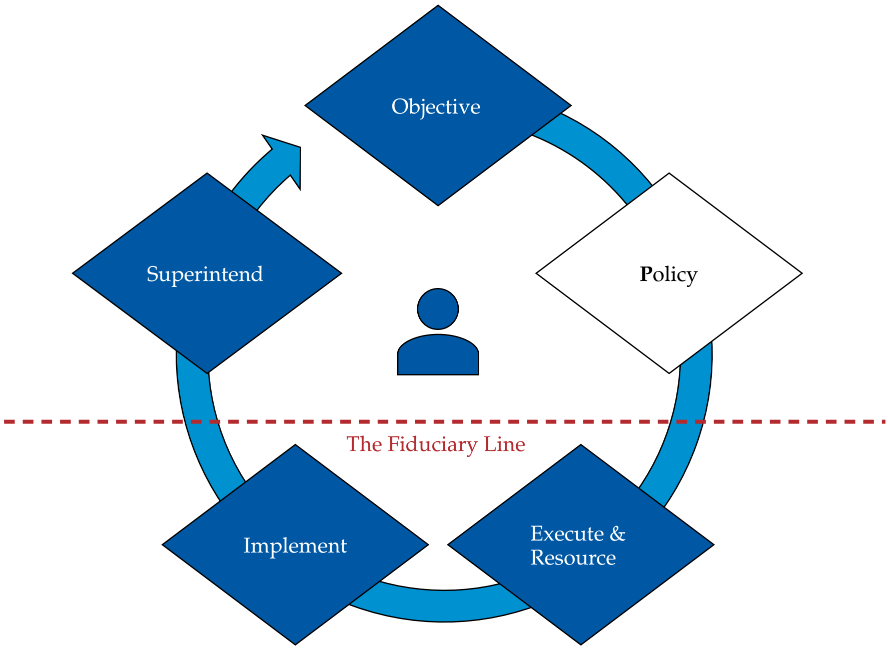
- Am I comfortable that beneficiaries understand this destination (i.e., the critical investment objectives)? Are they likely to understand the terms in which the destination is expressed?
- Do I ensure that new investment ideas are evaluated in light of "the destination?" For example, are those who make investment recommendations required to show that any new recommendation will result in an improved journey to the destination?
- Do I have a clear understanding of the risk preferences of beneficiaries?

4. Portfolio Choice: Getting to the Destination

> "Our goals can only be reached through a vehicle of *a plan*, in which we must fervently believe, and upon which we must vigorously act. There is no other route to success."
>
> —*Pablo Picasso*[42] *(emphasis added)*

In Chapters 2 and 3, we discussed a range of contextual issues that affect investment objectives, such as investment beliefs, and how to identify and enunciate investment objectives that represent the way the governing body interprets the underlying investment challenge. In this chapter, we leave Step O and move to Step P, **P**olicy, in the *OPERIS* framework, which is highlighted in **Exhibit 9**.

Exhibit 9. *OPERIS* Framework: Policy, Part 1



[42]Picasso (1881–1973) was a Spanish painter, sculptor, printmaker, ceramicist, poet, and playwright. This quote is often attributed to Picasso; see https://www.pablopicasso.org/quotes.jsp.

Step P, **P**olicy, relates the "how" to the "what" of objectives. In other words, Step O told us what the fiduciary sets out to achieve for beneficiaries; Step P outlines, in the form of a policy (or what Picasso called "a plan"), *how* the objectives will be achieved.

Portfolio Choice under Uncertainty

As Merton (1997) put it in his Nobel Prize lecture, financial economics is a discipline principally concerned with the "allocation and deployment of economic resources, both spatially and across time, in an uncertain environment." Simply put, financial economics, or finance, is the study of decision making under uncertainty and across time. The reader will notice from these definitions that decision making under uncertainty is precisely what the fiduciary faces in Step P of the *OPERIS* framework. How does the fiduciary allocate wealth—on behalf of beneficiaries—among the range of investment propositions to achieve the investment objectives outlined and prioritized in the hierarchy of investment objectives (HIO)?

When it comes to this investment decision—or, in formal terms, portfolio choice—we can rely on one of the most famous financial theorists for the guiding philosophy—namely, the pioneering work of Markowitz (1952). His seminal work presenting the basics of modern portfolio theory was the first formal treatment of the benefits of portfolio diversification. The work showed that by constructing a portfolio of imperfectly correlated assets, one can reduce portfolio risk for a given level of expected return. Since Markowitz, diversification has remained the essential principle for investment practice, even though the weaknesses of diversification have been acknowledged and the literature has advanced.[43] As we will see later in this book, the classical asset-class approach to diversification is but one potential way of framing an investment policy.

Research has shown that the portfolio choice decision—that is, asset allocation—is responsible for a significant portion of total portfolio outcomes. Depending on the authority one refers to, up to 90% of the differences between portfolio outcomes can be explained by asset allocation.[44] This fact is important for two reasons. First, because of its importance, this chapter will focus primarily on portfolio choice and how to use asset allocation to achieve the investment objectives. And, second, and most notably for the fiduciary

[43]As examples of discussions of weaknesses, see the debate on the diversification delta by Vermorken, Medda, and Schröder (2012) and Flores, Bianchi, Drew, and Trück (2017). The common critique of diversification is that its main benefit—spreading of risk—tends to disappear during periods of market dislocation, such as the financial crisis of 2007–2008. In such market environments, realized correlations rise and most (if not all) asset prices fall in unison.

[44]See Brinson et al. (1986), Ibbotson and Kaplan (2000), Statman (2001), and Scott et al. (2017).

reader, the importance of asset allocation gives a strong hint to what ought to be the focus of the marginal governance hour.

The governance budget is a limited resource that needs to be devoted to activities that result in better outcomes for beneficiaries. If one believes the research that 80%–90% of portfolio outcomes are the result of asset allocation, then does the governing body devote 8 out of every 10 minutes to this decision? Or is time best spent on investment manager beauty parades, discussing the latest hedge fund strategy, or poring over slickly presented PowerPoint slides? From an investment governance perspective, when contrasted with the asset allocation decision, these other activities are so low in value added (in a *relative* sense) that they should be delegated to staff members who have the time and expertise to properly evaluate the claims made.[45] We grapple with these issues and related questions in this chapter.

What Is "Optimality"?

Before explaining how we link the asset allocation decision to the HIO, we will define some terms. The word "optimality" can be used in at least two senses. The first is technical. In a Markowitzian paradigm, an optimal portfolio is the one that, given a set of assumptions and constraints, provides the mathematically determined best trade-off of expected reward for risk.[46] Variations on Markowitz (1952) tend to revolve around how the risk aspect of this trade-off is measured. For example, Xiong and Idzorek (2011) evaluated "optimal" mean-conditional value-at-risk (CVaR) portfolios for several levels of expected return.[47] The authors compared this approach to the Markowitz mean–variance equivalents. Markowitz optimality in other settings depends on one or more of the following factors: the assumption set, the constraints applied, and/or the target levels of return or risk. Whatever the case, the first sense of the word "optimality" is mathematical and precise.

Optimality in its second sense—the one for which we have more sympathy in the context of this study—is of the qualitative, judgmental variety. The governing body must *interpret* the investment challenge facing the beneficiary and *enunciate* it in the form of investment objectives that are *documented* and

[45]In making this statement, we are assuming that the fiduciary is not an investment expert, which is, in our experience, true—particularly in our dealings with DC plans.

[46]One problem with this interpretation of optimality is that, because it is mathematically determined, it has the appearance of precision. In practice, the results of such optimization routines are highly sensitive to assumptions and constraints.

[47]CVaR defines risk as left-tail risk; that is, this measure acknowledges that substantial negative returns loom large in the minds of most investors and are particularly damaging to portfolio wealth (especially in a pension finance paradigm).

prioritized in the form of the HIO. Because no objective interpretation of the investment issue exists (i.e., it was not handed down on tablets of stone), two fiduciaries could view optimality differently and define and prioritize the investment objectives quite differently from each other. The qualitative and judgmental aspects of this second view of optimality need not be a problem as long as the governing body has a process for translating objectives into an appropriate asset allocation and for making marginal decisions. We present just such a process in the next section of this chapter.

Optimality understood in this second sense is, in our view, the most appropriate and honest way of grappling with multiple objectives. The fiduciary has the option to hide the complexity of the investment issue behind a caricature of it—such as to "maximize the Sharpe ratio"[48]—or to confront the complexity head on by identifying the multiple, sometimes competing, objectives and seeking the best trade-off. What this approach may lack in mathematical elegance, we argue, it makes up for in realism. What is sought is the asset allocation that maximizes the probability of achieving the governing body's investment objectives.

As for realism, the process outlined in the next section is founded on certain preferences:

- *Parametric versus nonparametric methods*—In a world of plentiful data, we would prefer to use nonparametric methods to conduct all financial modeling because the richness of the data is retained (rather than being lost in the process of parameterization).[49] Regrettably, such a world does not exist, and with the ongoing emergence of new asset classes and investment propositions, the problem of data scarcity is getting worse, not better. We are thus left with parametric methods. Because of the extensive evidence regarding the empirical distributions of financial returns, in the

[48]There is nothing wrong with the Sharpe ratio if one knows the implications of using it as the basis for selecting an optimal portfolio. The main argument in favor of the Sharpe ratio is the fact that it is a reward-for-risk measure (see Sharpe 1966) and, therefore, explicitly recognizes both sides of the investment coin (return and risk). The measure has several weaknesses, however, when used naively. For example, it is a return-only measure—that is, it does not capture other variables that matter in retirement investing, such as contributions and compounding. Also, the risk measure used in the denominator—standard deviation—is a measure of volatility that treats upside and downside variation equally. In reality, volatility above the mean is not really what nonfinance people have in mind when they think of risk.

[49]"Parameterization" is reducing a full data set to a small list of statistical attributes, such as mean, standard deviation, and correlation.

analysis that follows, we use parametric methods that permit the use of the higher moments—that is, skewness and kurtosis.[50]

- *Multiple techniques (unconstrained and constrained)*—To build a rich picture of the portfolio choice problem, to validate the modeling output, and to observe the impact of constraints on results, we consider seven portfolio selection techniques. They range from pure Markowitz mean–variance optimization to target-CVaR optimization in both unconstrained and constrained variations.
- *Simulation techniques*—The essence of decision making under uncertainty is our lack of knowledge about the future. To understand how the "optimal" portfolio might perform in the future, we use simulation techniques that generate synthetic return paths that can be analyzed. With a sense about how competing strategies might perform in the future, we can evaluate which strategy might be superior at meeting the investment objectives set by the governing body.
- *Flexible outputs*—As time passes, and the academic and practitioner literature evolves, new measures, analytical tools, and visualization techniques emerge. Ultimately, these methods seek to turn raw data and analytics into insight and effective decisions. Therefore, we developed the models

[50]Much of finance (and economic) theory—including the modern portfolio theory of Markowitz—is based on a range of simplifying assumptions that make the underlying models tractable and implementable. One such assumption is the traditional, but much criticized, use of the normal (or Gaussian) probability distribution. Granger (2005), for example, noted that "much of early econometrics used . . . a Gaussian assumption simply for mathematical convenience and without proper testing" (p. 17). Vocal critics include Taleb (2004, 2007), who asserted, for example, that the normal distribution misrepresents risks posed by fat tails on the left (negative) side of the distribution. A Gaussian distribution can be described with two parameters—the mean and the variance. By characterizing the distribution of asset returns in the first moment (mean) and second moment (variance), the analyst is implicitly accepting that the distribution of all individual assets in the portfolio (and, therefore, the joint distribution) is Gaussian and that mean and variance are sufficient to describe the entire distribution of each portfolio asset. Empirical research has shown that such assumptions are not reasonable and that other distributions—for example, the stable Paretian distribution (Mandelbrot 1963, 1967; Fama 1965)—are superior. The stable Paretian is offered as a superior alternative because "in contrast to the normal distribution, which is symmetric and cannot account for the heavy-tailed nature of returns of financial variables, the class of nonnormal stable distributions has skewed and heavy-tailed representatives" (Rachev, Stoyanov, and Fabozzi 2008, p. 120). A significant amount of research in finance has focused on understanding and properly characterizing empirical return distributions and developing quantitative methods that improve analysis and decisions. To account for the "skewed and heavy-tailed" nature of return distributions, we use techniques that allow the third moment (skewness) and fourth moment (kurtosis) to be specified for each eligible asset class.

so that the outputs would be highly flexible and could be presented in numerous ways to appeal to diverse groups of fiduciaries.

Like the investment beliefs outlined in Chapter 2, by listing these preferences, we seek neither to convince the reader that they must follow such a path, nor to imply that they represent the only worldview one might hold. We have two goals: first, we want to give fiduciaries a sense of some of the choices embedded in the analysis they consider when making portfolio choices, and second, we wish to present the main *lessons learned* from our time as scholars and practitioners. As Otto von Bismarck—the 19th-century Prussian statesman and early pioneer of pensions—is thought to have said, "Only a fool learns from [their] own mistakes. The wise [person] learns from the mistakes of others."

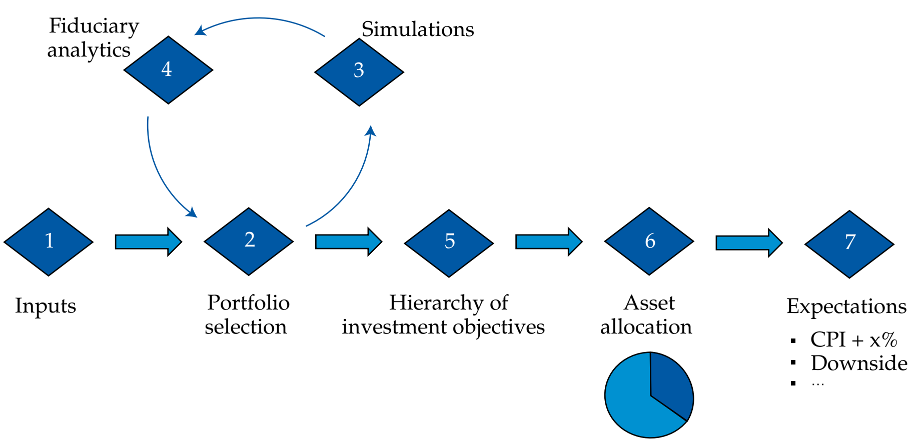
Having provided some background about portfolio choice and the way we prefer to approach it, we now turn to our process within the process to identify the optimal asset allocation for a specific governing body's HIO.

A Process within the Process

To generate an asset allocation and complete the essential parts of the Step P in the *OPERIS* framework, we follow the seven steps in the investment process shown in **Exhibit 10**.

To begin, we draw the reader's attention to Step 5, Exhibit 10, denoted "Hierarchy of Investment Objectives." The HIO is the mechanism for linking the investment policy development process—which we are about to discuss—to the governing body's interpretation of the beneficiary's underlying investment challenge, which we discussed in Chapters 2 and 3. We set out to

Exhibit 10. The Investment Process



identify, using a rigorous, systematic approach, the optimal investment policy or asset allocation (see Step 6, Exhibit 10), where "optimal" is used in the "qualitative, judgmental" sense. Moreover, we seek to identify the policy in a way that is in complete alignment with the settings agreed to by the fiduciaries in Step O of the *OPERIS* framework. For example, if the governing body has a documented investment belief that passive management of, say, large-capitalization equities is to be preferred, then the assumptions to be developed in Step 1, Exhibit 10, would apply to a large-cap equity index fund.[51]

Now consider each of the seven steps in this process within a process in turn.

Step 1: Inputs. An important element of any investment policy is the list of eligible asset classes and investments, sometimes known as the "opportunity set." **Exhibit 11** provides an example opportunity set. In the simplest

Exhibit 11. Illustrative Asset-Class Opportunity Set

Growth Assets	Defensive Assets	Alternative Assets

• Domestic equities
  • By capitalization
  • Factor investing
• Global equities
  • Developed market equities
    —By region, by country
  • Emerging market equities
    —By region, by country
• Private equity
  • Buyouts
  • Venture capital
	• Fixed interest
	  • Inflation-linked bonds
	  • Sovereign bonds
	  • Corporate bonds
	• Cash
		• Real estate
		  • Commercial
		  • Industrial
		  • Office
		• Timberland
		• Farmland
		• Infrastructure
		• Private loans
		• Hedge funds
		• Commodities
		• Insurance-linked securities (includes catastrophe bonds)
		• Intellectual property funds

Notes: This opportunity set is illustrative only. We expect that more than one of these categorizations would be cause for debate. For example, in Australia, real estate is not usually categorized as an alternative asset. Also, some asset classes are so broad that they could reasonably fit into all categories. "Infrastructure" assets, for example, can be extremely growth oriented (like private equity), can be defensive (like inflation-linked bonds), or can provide alternative return drivers.

[51]We are not expressing a view about passive management. We are merely highlighting that investment beliefs have implications throughout the process. If they do not have implications, they are not investment beliefs. By way of example, some of our clients believe in a skill premium for large capitalization equities and add their targeted value-added to the expected asset class return.

of investment portfolios, such asset classes would be limited to stocks (or equities), bonds (or fixed income/fixed interest), and cash (or Treasury bills). In more complex investment portfolios, the number of asset classes can grow to a dozen or more as investors seek new and attractive sources of return and diversification. Some of the more exotic asset classes could include insurance-linked securities and intellectual property funds.

Asset classes themselves include subordinate classes. For example, equity investments may be viewed granularly by geography (e.g., United States), by stage of economic development (e.g., emerging markets), by capitalization (e.g., small cap), by index (e.g., S&P 500 or Russell 1000), and by benchmark construction (e.g., equal weighted instead of cap weighted). For international investments, currency hedging is also a consideration when precisely defining the opportunity set. Asset-class returns may be accessed through public markets (e.g., listed equity) or through private markets (e.g., private equity), which introduces the question of liquidity. Sometimes, investors group assets according to a defining characteristic. For example, growth assets are usually return seeking, defensive assets are commonly thought of as risk reducing, and alternative investments are considered to be diversifying because they access relatively uncorrelated (alternative) risk premiums. We reiterate that we are not seeking to force our views regarding asset classes onto others.

We explore asset-class issues at a high level to highlight the diversity of practice. Index-fund investors typically have a relatively simple opportunity set that they seek in an investment policy—cheap, widely available asset-class exposures (“betas”). Highly sophisticated investors may have highly granular investment policies that target numerous idiosyncratic investment propositions. At its root, the matter of eligible asset classes or investments is about how *best* to capture returns, which we discuss in detail in Chapter 6.

When making selections, the fiduciary board should consider the following points about the eligible asset classes:

- *Consistency with investment beliefs*—Sometimes an investment belief has precise implications for the opportunity set. For example, a governing body may take the view that because of the nature of the investment challenge (e.g., a short-term time horizon), ready liquidity is required of all investments. We would be surprised to see a board holding such an investment belief consider private equity to be an eligible asset class. As noted in Chapter 2, in agreeing on investment beliefs, the board must consider their implications because any inconsistency between beliefs and actions leaves the governing body open to criticism.

- *Governance budget*—Some asset-class exposures should only be taken on by organizations that have the governance budget to properly judge the investment proposition, monitor its ongoing management (internally or externally), and evaluate performance. In this regard, the concept of a governance budget features (at least) two aspects: (1) the capacity required to fulfill the governance role and (2) the willingness to fulfill it. Events like the Bernie Madoff investment scandal reveal how governance misadventures occur again and again (see Chilton 2011). Even if a Madoff investor had the capacity to understand the type of investment strategy Madoff purported to operate—a split-strike conversion—that strategy was not actually being used. Madoff was running a Ponzi scheme, with no funds invested. Even a sophisticated investor would have had to have both the ability and willingness to discern whether Madoff was actually pursuing a split-strike conversion strategy or doing something else. Clearly, many investors were not willing to carry out this part of their governance role. Instead, they relied on Madoff's reputation and track record for assurance.
- *Approval processes*—New asset classes are constantly appearing on the scene.[52] The appetite for investing in new asset classes is a function of several factors, including investment beliefs, the governance budget, and the strategic settings of the organization itself (e.g., Are we leaders? Or are we fast followers?). To the extent that the organization has an appetite to consider new asset classes eligible, we recommend that fiduciary bodies have a documented process for approving such new asset classes.[53]

In the end, the investment policy must outline the list of *eligible* asset classes or investments because doing so sends a clear signal to management

[52]The debate about what constitutes an asset class is ongoing and, at times, heated. We could write a separate book on the topic and still not resolve the debate. The literature on risk factors has brought new focus to this debate because it seeks to reduce asset classes to underlying risk factors, some of which cut across asset classes. We return to these topics in Chapter 6.
[53]For example, at a relatively simple, modestly sized foundation, the set of eligible asset classes might be fixed and the adoption of new asset classes rare. A large, complex pension fund may consider new asset classes regularly according to a documented process. We know investors who adopt a gate-based approach to new asset classes, in which investment committee approval is required for an idea to proceed through each gate. Once through the approval process, the new asset class is allowed an "incubator allocation" (say, less than a 1% allocation of the overall fund level), which allows the investor to become familiar with the investment proposition before committing (or not) to more significant allocations.

about what is the permissible opportunity set. It also serves as an important risk control.[54]

Once the opportunity set has been agreed upon, it is necessary to produce inputs (sometimes called capital market expectations) for use in the investment policy development process. In practice these inputs can be generated internally by an investment team or acquired through asset consultants and/or information providers.[55] We have observed a variety of practices in this regard.

An internal investment staff might generate assumptions by synthesizing multiple views (e.g., from consultants, investment managers, consensus estimates). At the more complex end, a substantial internal investment team with a complete research capability might be able to add value by managing assets internally using proprietary models. If that is the case, fiduciaries may need to assess the trade-off between an expensive internal capability (with known costs) running a proprietary process (with, it is hoped, well-managed risks) and the uncertain future benefits of taking such an approach.

For example, the inputs our model requires are expected returns and volatilities for each of n asset classes, skewness and kurtosis either by asset class or asset class grouping (i.e., growth vs. defensive), an $n \times n$ correlation matrix, and any asset-class restrictions, such as minimum and maximum allocations.[56] Ultimately, the precise set of inputs for a given organization will be very much a function of the organization's process. It is our view that a fiduciary should, as a minimum, develop an understanding of

- the high-level nature of the process and its inputs (e.g., Exhibit 10 and some further detail), and
- some intuition about the views being expressed through the prevailing set of inputs.

We are not saying that the governing body needs to be able to give a detailed account, such as a chief investment officer (CIO) might. We are

[54]To the extent that portfolios are implemented through delegated investment managers, the mandates for such managers must be documented so that eligible asset classes and investments are consistent with those expressed in the higher-level investment policy. In practice, subordinate mandates are merely a more granular version (say, at the security level) of mandates in the investment policy (typically, at the asset-class or sub-asset-class level).
[55]We acknowledge Shane McGarry, CFA, for his contribution to our thinking on this point.
[56]Constraints, like minimum and maximum allocations, ought to be aligned with the governance settings of the organization. Narrow ranges usually imply tighter control and less delegation to management to manage the portfolio, whereas wide ranges (especially for riskier asset classes like equities) usually imply more delegated management and a greater degree of trust in management on the part of fiduciaries.

suggesting that the governing body be diligent in its oversight of *the process*. This diligence might be as simple as having the CIO (or the most senior investment resource, internal or external) justify her or his inputs. Because good process is about *demonstrating* diligence on the part of the fiduciary, documenting and keeping records about such inquiries of management is critical.

Step 2: Portfolio Selection. Armed with the agreed-on inputs from Step 1, the analyst can model potential asset allocations for inclusion in the investment policy. As noted, we have a preference for using multiple techniques when estimating asset allocations because doing so helps us build intuition about what is optimal for a set of inputs. Looking at unconstrained portfolios—that is, ignoring minimum and maximum allocations to each asset class that was specified in Step 1—gives a sense of the impact of constraints.

The purpose of the investment policy development process is to determine the asset allocation that best addresses the HIO criteria in Step 5. But having only estimated first-pass asset allocations, one cannot understand what performance might look like beyond expected portfolio return and risk. As we emphasize in this study, we believe time-weighted returns by themselves are inadequate as a measure of performance, especially when considering retirement investing.[57] To understand what future performance *might* look like, we (1) *simulate returns* (see Step 3, Exhibit 10) and then (2) *analyze expected performance* (see Step 4, Exhibit 10).

Once we have completed Steps 2–4, we have finished the first iteration of the process aimed at finding the optimal investment solution. This process could be repeated several times for one or more reasons, such as the following:

- to explore alternatives aimed at improving expected outcomes, such as what happens if we increase the maximum allowable allocation to stocks;
- to consider marginal analysis—for example, what is the marginal impact of introducing a new asset class; or
- to conduct scenario testing, such as what happens to expected outcomes if, as some research suggests, the equity risk premium is going to be materially lower in the future than in the past.

The loop within this process may be repeated as many times as is required for the governing body to be satisfied that the investment objectives in the

[57]See Bianchi, Drew, and Walk (2013); Bianchi, Drew, Evans, and Walk (2014); and Drew, Stoltz, Walk, and West (2014).

HIO are being traded off optimally. Furthermore, the HIO should *always* be the touchstone for any changes to the investment portfolio.

When management comes to fiduciaries with their Next Big Idea, we recommend that fiduciaries respond with the question: How does this improve expected HIO performance? If management cannot answer the question *in terms of the HIO*, then the idea is not such a great one or the investment objectives have not sufficiently entered the managers' consciousness.

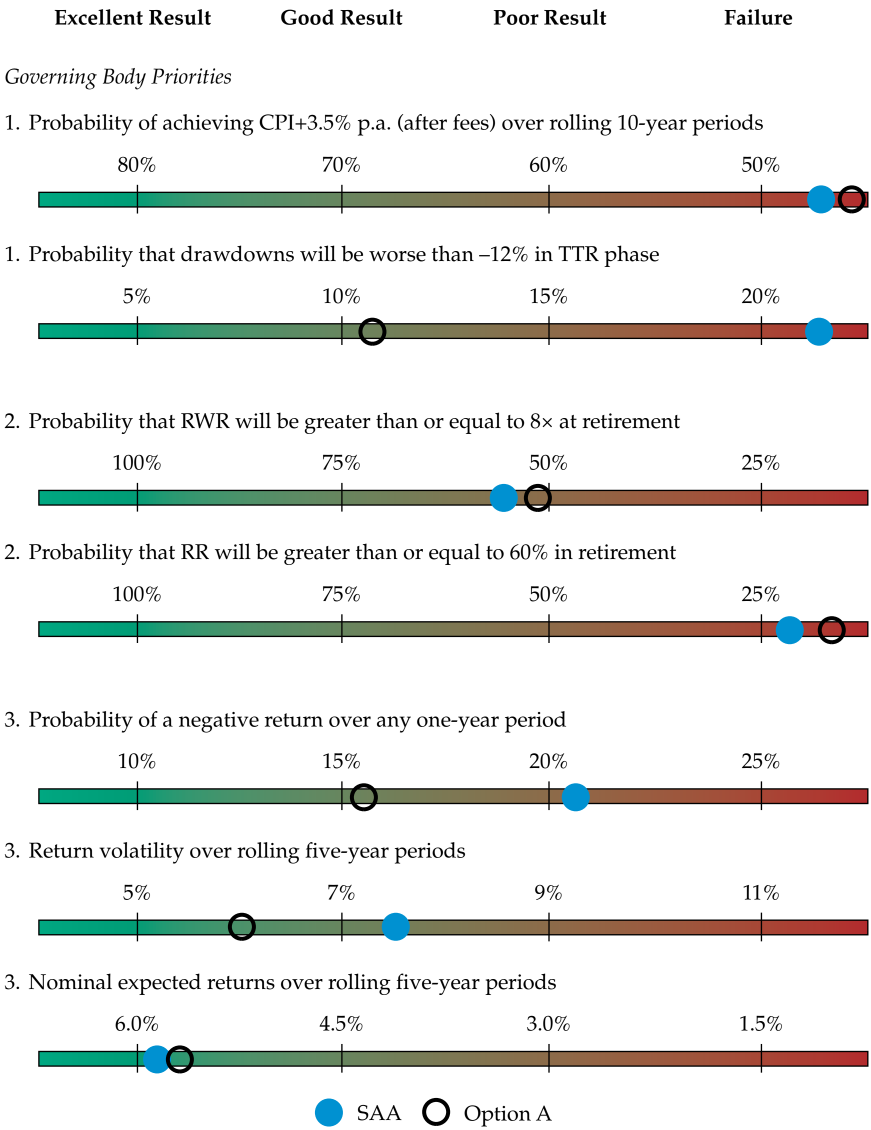
Step 3: Simulations. Before we consider the HIO, we will briefly review how we approach Steps 3 and 4, because the process outlined in this book is merely one way of developing investment policy. The details of our process may be of limited interest to readers with a different approach to investment policy development. If we hope to achieve anything it is to stimulate the interested fiduciary to get to know the processes they govern so as to become a more effective fiduciary for the benefit of beneficiaries.

With the inputs and results from previous steps, we can simulate each portfolio selection technique for a specified number of trials over a specified time horizon. For example, in practice, we might use four different simulation methods to model seven portfolio techniques over a horizon of 20 years, thus generating 10,000 synthetic return paths. Because this output is impossibly complicated, we need *effective* visualization to summarize the results. In this way, we will be able to compare the investment journey offered by each of the "optimal" strategies. When we view these strategies through the lens of the HIO, the strategy that optimally trades off the investment objectives comes into focus.

Step 4: Fiduciary Analytics. With the simulated return paths from Step 3, we are in a position to generate wealth paths by applying returns to other variables, such as current account balance (technically, wealth at time t, w_t) and contribution rates. With return paths and wealth paths, we can measure and illustrate performance in a variety of ways, such as time- and money-weighted measures, distributional properties, risk-adjusted performance measures, downside risk metrics, and visualization. We use this battery of analytics to create a three-dimensional view of expected performance in order to work through the trade-offs captured in the HIO. As the reader will see in Chapter 9, we also use these fiduciary analytics as standard when evaluating historical investment performance.

Step 5: Hierarchy of Investment Objectives. To give the reader a sense of what a HIO is and how it can be used, we reproduce one such hierarchy in **Exhibit 12**. This example includes seven prioritized investment

Exhibit 12. Example of a Hierarchy of Investment Objectives



Notes: CPI is the consumer price index; SAA is strategic asset allocation.
A. Assumes long-term inflation rate of 2.5%.
B. Assumes transition to retirement (TTR) commences at 55 years of age.
C. Assumes member with a starting balance of US$250,000 at age 45, salary of US$85,000 a year, contribution rate of 10% a year, and salary growth rate of 3.0% a year. The retirement wealth ratio (RWR) compares the final accumulated balance with the assumed final-year salary of US$153,519.
D. The replacement rate (RR) is the estimated equivalent annual annuity (EAA) value for 25 years (for a life expectancy of 90 years of age) and an interest rate of 3.5%.

objectives (priorities numbered at left) and qualitative categories to allow for assessment of results from "excellent result" to "failure."

In the HIO shown in Exhibit 12, two competing investment policies are compared—the strategic asset allocation (SAA), which is the prevailing default option for a defined-contribution (DC) plan, and Option A, which is an alternative that is being considered. The reader will note the following in examining this illustrative HIO:

- Each alternative has similar performance from the perspective of return, or wealth outcomes, although in each case SAA performs marginally better.
- From a risk perspective, the differences between the two are clearer, with "Option A" being the preferred alternative.
- As expected, an obvious trade-off exists between the two alternatives. In this simple example, the fiduciary must decide between targeting a marginally better return and wealth outcome that assumes more risk or accepting a more modest outcome that assumes less risk.

Steps 6 and 7: Asset Allocation and Expectations. Once the governing body has determined which alternative offers the best strategy, it would then (1) approve and promulgate the selected asset allocation, as in Step 6, Exhibit 10; and (2) communicate the expected performance to stakeholders, as in Step 7, Exhibit 10.

These final steps must not be overlooked. Approving and formally promulgating the investment policy makes it the official investment approach of the organization. In Chapter 5, we consider in greater depth why clear and comprehensive documentation of the investment policy, in the form of an investment policy statement, is so crucial.

The final step (Step 7) is an acknowledgment that investment governance serves the broad objectives of the fiduciary investor, be that a DC plan, a defined-benefit (DB) plan, an endowment, or a foundation. For example, DC plan providers will probably have a product management group that manages the relationship between the DC plan and the plan member as a user of a product. Communication between the plan and plan member usually includes framing expectations about what the product might be expected to achieve in terms of investment performance. Some plan members may have good reason to want to know this information. For example, their financial advisers may wish to incorporate the expected return and risk of the plan member's retirement plan into a comprehensive financial plan. Whatever the reason, the "expectations" referred to in Step 7, Exhibit 10, ought to be based on the approved and promulgated investment policy of the DC plan that records what the governing body has approved, what management has implemented, and what the plan member ought to expect.

In their own words …

> "I am concerned that the overwhelming aim of most funds might really be to achieve a higher raw investment return than peers. This is left unsaid whilst we all pretend to manage to a CPI+ benchmark. As a result, investment managers find themselves without mission clarity and torn between the competing aims of members' best interests and managing peer risk."
>
> —*Michael Block*

Other Ways to Think about the Issue

In the preceding HIO example, we used a single pool of assets for which a simple investment policy is being developed. In practice, there are many other ways to think about the investment problem that typically lean on the behavioral literature, especially that relating to mental accounting (Thaler 1980). Dividing the portfolio into two or more pools not only is an intuitive way of achieving multiple objectives but also avoids the situation in which the beneficiary asks too much of one portfolio, such as switching between maximizing return and minimizing risk depending on market conditions.

For example, we have used what might be described as a "two bucket" approach (see Badaoui, Deguest, Martellini, and Milhau 2014), in which we view the portfolio as having two distinct pools of assets with separate and distinct sets of objectives:

- *Liability hedging portfolio* (LHP). This kind of portfolio is a type of "safety-first" portfolio designed to maximize the probability of meeting the beneficiary's liabilities (or commitments) when they fall due (Waring 2011; Rengifo, Trendafilov, and Trifan 2014). The LHP represents the responsible risk-minimizing part of the beneficiary's investment instincts. Its investment policy seeks to hedge liabilities to a high level of probability—or to minimize the probability of "ruin" (Telser 1955).[58]

[58]"Ruin" in this context means the permanent inability to finance liabilities, not losing all capital, which would be its normal interpretation.

Generally speaking, the greater the certainty of return that is required, the greater the capital that needs to be committed to the LHP. In our experience, the only types of investor that can legitimately aspire to fully hedging all future liabilities are fully funded (or over-funded) DB plans and ultra-high-net-worth investors.

- *Performance-seeking portfolio* (PSP). Once (or rather if) the beneficiary's liabilities have been financed, the remaining capital can be dedicated to maximizing performance. It is available to do so because the beneficiary (theoretically) "does not need the capital." So, the ramifications of risk events are not as damaging, and their timeframe is (arguably) perpetual. This type of portfolio also appeals to the risk-seeking instincts of some investors (e.g., entrepreneurs, some of whom are the same ultra-high-net-worth investors able to successfully use such an approach). A risk we have observed is that if the PSP performs well, the investor inevitably wants to adopt the PSP investment strategy for LHP capital. In such situations, the counsel of the adviser or consultant can *remind* the beneficiary of the distinct purposes (and objectives) of the LHP and PSP.

Obviously, available capital can be divided in many other ways into conceptual "pools," and an investment policy can be established for each pool. In creating pools, we believe the following points are key:

- Whatever the number of pools, the process outlined in this chapter can serve as a blueprint for how each portfolio's investment policy can be developed.
- The overall investment policy—that is, the weighted sum of the investment policies of the individual pools—should be checked to ensure that it fits with the overall levels of risk the fiduciary board has in mind for the beneficiary.
- The fiduciaries must press management (and any asset consultants) to make the case that the additional complexity of having multiple pools, sets of investment objectives, and investment policies, and so on, will be rewarded with superior outcomes. As the global financial crisis of 2007–2008 showed us vividly, in matters of investment, complexity is not free.

Myriad Issues to Consider

With portfolio selection there are myriad settings that will, or may, influence investment policy that aren't addressed specifically in this book because the details—as opposed to the high-level settings—are more than a fiduciary would be reasonably required to understand:

- whether the portfolio has a static or dynamic asset allocation;
- income and liquidity requirements;
- frictions—the impact of fees, taxes, and turnover and how these aspects are managed and controlled in capturing returns;
- policies toward hedging, rebalancing, and so on; and
- risk management considerations, both in an investment sense and in terms of the broader organizational risk context.

Most of these policies are related to how returns are captured. We discuss these issues at length in Chapter 6.

In ending this chapter, we leave the final word on portfolio choice to Ben Bernanke, former chairman of the US Federal Reserve: "Economic engineering is about the design and analysis of frameworks for achieving specific economic objectives" (Bernanke 2010). Portfolio choice is essentially an economic engineering task that uses portfolio selection principles and techniques to solve the problem of "optimally" trading off competing investment objectives.[59]

Points for Reflection: Chapter 4. Portfolio Choice: Getting to the Destination

As a fiduciary:

- Can I explain how the specification of the investment challenge—that is, the critical investment objectives in order of priority—results in an "optimal" asset allocation?
- Do I have confidence that the investment process is defensible, repeatable, and documented?
- Do I understand how the organization defines the investment opportunity set (eligible asset classes), and is the opportunity set consistent with the organization's investment beliefs and philosophy?

[59]Before our friends in the hard sciences take exception, we are not implying that said principles, and related techniques, are as mathematically certain as some that physical scientists deal with. We would argue that if there is an analogy to the sciences it might be medicine. Like medicine, we don't always understand the underlying process, but we can observe symptoms upon which to base diagnosis and treatment.

- Am I aware of the kinds of assumptions that underlie the investment process and how they are determined and approved?
- Can I comfortably say that the investment portfolio is the best way to achieve the investment objectives of our beneficiaries?
- Can I say that when we reconsider the investment strategy, we evaluate proposed changes in light of the marginal benefit/cost in achieving the HIO?
- Am I comfortable that those parts of the organization that need to know about the outcomes of the investment policy development process do know?
- Do asset consultants play a significant part in the investment policy development process? Do I understand how they generate their contribution?
- Does the investment policy development process reasonably balance simplicity and complexity?

5. The Investment Policy Statement: Publishing the Battle Plan

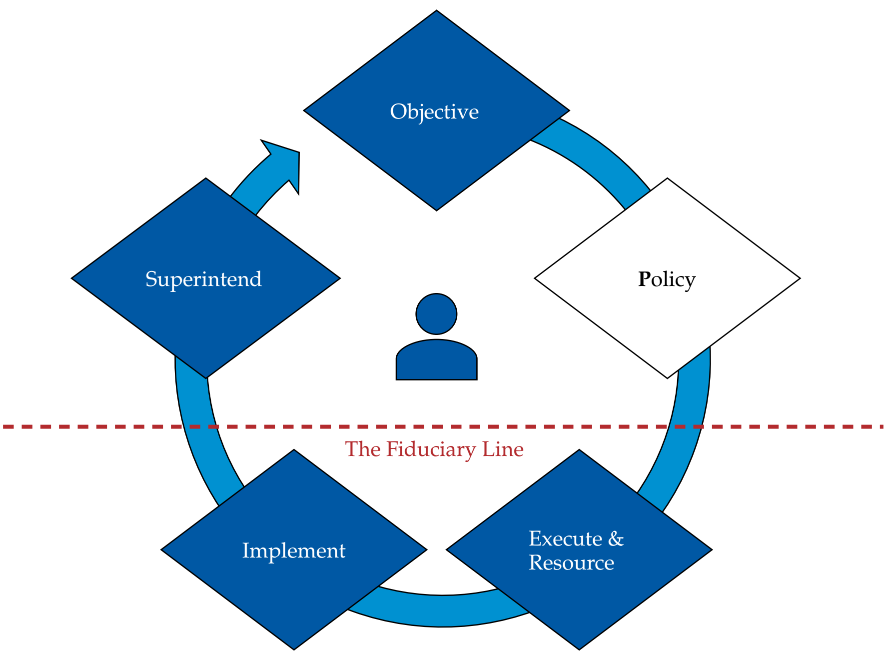
"No battle plan survives contact with the enemy."

—*Helmuth von Moltke, the Elder ([1871] 1971)*[60]

In this chapter, we conclude Step P in the *OPERIS* framework, as shown in **Exhibit 13**, by documenting the essential elements of the investment policy approved by the governing body in the form of an investment policy statement (IPS). The aim of the stated IPS is to give all stakeholders a *common understanding* of how fiduciaries plan to "solve" the beneficiary's investment problem.

Opening a chapter that emphasizes the importance of documenting the investment policy with a quote like von Moltke's may seem strange. If an investment policy, like a battle plan, is not much use when it meets reality,

Exhibit 13. *OPERIS* Framework: Policy, Part 2



[60]Helmuth von Moltke, the Elder (1800–1891), was a German/Prussian general and military strategist.

then why bother? We think that Dwight D. Eisenhower, 34th president of the United States and former five-star general, had the answer when he stated, "Plans are worthless, but *planning* is *everything*"[61] [emphasis added].

With this statement we most certainly agree. A documented investment policy may look less than advisable in light of prevailing market conditions, but it still represents the *planning* undertaken by the governing body on the part of beneficiaries to address the underlying investment challenge. As we have noted, the planning, and subsequent decision making, is conducted in a context of uncertainty.

Does a documented investment policy not then have the advantage of recording the *substance* of the investment decisions made to achieve the investment objectives contained in the hierarchy of investment objectives (HIO)? Surely, such an investment policy at least results in a common understanding about how best to proceed to achieve the investment objectives of beneficiaries in volatile market conditions. We address these assumptions in two parts:

- Yes, we agree that creating a common understanding about the substance of the governing body's decisions is desirable.
- No, we do not believe that this common understanding always happens in practice.

In their own words …

> "Carefully considering the true objective for the plan and measuring success relative to that objective is critical to success as well as to guarding against the risk of ruin. Defined-contribution plans generally should be judged based on how well they are meeting or are likely to meet the worker's need for retirement income."
>
> —*Stacy Schaus, Founder and CEO, Schaus Group LLC*

War Stories from the Field

To make our point, we share two anecdotes. The first comes from a consulting engagement we conducted with an institutional investor, and the second, an experience as a member of an investment committee.

[61]Dwight D. Eisenhower, *Public Papers of the Presidents of the United States* (Washington, DC: Federal Register Division, 1957): 818.

Consulting Engagement. We were engaged by a foundation to test its prevailing investment policy in light of the objectives outlined in its documented IPS.[62] At the outset, we asked the internal investment staff to provide us with the IPS and other relevant documentation. By interpreting what we read, and with no other input, we listed and prioritized what we thought the investor's investment objectives were. We then asked the internal investment staff and the investment committee (the delegate of the board of directors on investment matters) what they thought the foundation's investment objectives were and in what order of priority.

What did we find?

Somewhat surprisingly, each of the three parties had different objectives *and* different priorities. The list of objectives we generated had five objectives ranked in order of importance from most important (1) to least important (5). The final, moderated list of objectives, using the same numbers for the items in the list, was 3 (most important), then 2, and then 1 (least important). Our objectives 4 and 5 were not even considered important enough to be objectives. Our different readings of the IPS not only resulted in different sets of objectives in different priorities but also revealed a difference in emphasis. Our set of objectives prioritized return over risk, whereas the client's priorities showed that risk management was more decisive than return generation.

For us the experience was instructive. Without a shared mission—or a common destination, to use the aviation metaphor—solving the beneficiary's investment challenge is fraught at best. It is for this reason that we provided a chapter on documenting the investment policy (we return to this issue in Chapter 8).

Investment Committee Experience. The second anecdote is related to membership of the investment committee of a charity. By way of context, the governance arrangements of the broader charitable group were what might be described as complex, with governance responsibilities shared among multiple bodies.

In particular, the main governing body—to which the aforementioned investment committee was accountable on investment matters—had broad responsibilities and consisted mainly of volunteers. This circumstance created a desire for efficiency so as to spend the limited governance budget wisely. Efficiency was such a priority that the governing body called for a revision of the IPS from a modest length to an even more modest length. What was already a relatively short IPS became shorter still.

[62]As with many investors, the client wondered whether its inflation-linked investment objective was achievable in the context of the modest returns expected from most asset classes. For a discussion on the "mystery" of low and negative interest rates, see Siegel and Sexauer (2017).

Although the IPS might have been becoming too short, this exercise was not the real problem. According to our diagnosis, the investment committee had at least two serious problems:

1. *Content.* In shortening the IPS, the secretary to the investment committee had changed the IPS in substance as well as form, thus undermining the original intent.

2. *Role clarity.* The most substantial (proposed) change was the role of the investment committee itself. According to the "long" (original) IPS, that role was relatively broad: to provide advice and make recommendations on investment policies. According to the condensed IPS, the role was qualitatively different and more narrowly defined, namely, the committee was tasked with the oversight of management and the provision of advice on the implementation of the IPS.

We thus see the second-order impacts of the pressures facing the governing body. In an effort to shorten and simplify the IPS, the investment governance apparatus called into question elements of the IPS and, arguably, undermined the IPS as a "source of truth" regarding investment *planning*. This resulted in an investment policy that was less clear and had more ambiguous roles and responsibilities than the original.

This example also underlines our point that the governance budget should be aligned with the prevailing governance arrangements. With relatively complex arrangements, involving multiple bodies with overlapping (investment and noninvestment) responsibilities, the governance budget ought to be relatively significant. Unfortunately, given its nature as a charity, this organization's governing bodies consisted of volunteers (or those providing *pro bono* services), which introduced the opposite pressure on the governance budget—that is, one of minimizing it.

We have told this story not as a gratuitous critique of the particular charity. All the individuals were acting professionally and inspired by the right motives. Rather, this example reveals the reality that most fiduciary investors face. The real world of investing on behalf of others is a great deal more complex—involving uncomfortable trade-offs—than a standard investment textbook would have one believe. The challenge becomes an exercise in dealing with the facts *as they are* and (hopefully!) making sensible decisions that are based on a defensible, repeatable, and documented process, such as *OPERIS*.

In their own words …

"Investment governance is one of the strongest levers that enables superannuation fund trustees to deliver the best retirement outcomes for their members. It matters because those that actually do the investing cannot also perform a true governance function."

—Pauline Vamos, former CEO, Regnan, and independent non-executive director, Mercer Superannuation (Australia) Limited

Universal Principles

This book is not about mandating a worldview (as if that were possible). We seek to present universal principles that, if applied faithfully, will serve all fiduciaries.

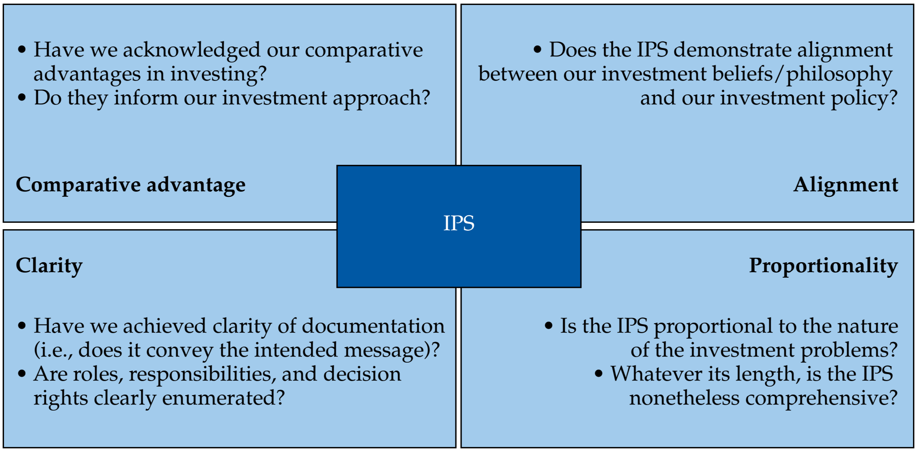
When it comes to documenting an investment policy there are usually sufficient differences between fiduciary investors, where the task is a function of the beneficiary and the investment problem. Put another way, when it comes to drafting an IPS there are dangers to industrialization. Therefore, in developing an IPS, the following principles (summarized in **Exhibit 14**) are helpful:

- *Comparative advantages.* Fiduciary investors usually have one or more comparative advantages in investing. For example, defined-contribution (DC) plans usually have long investment horizons, and endowments usually have relatively certain commitments year to year. We would be surprised if an IPS did not record such comparative advantages (to the extent they exist), and use them as the motivation for the actual investment approach contained in the IPS.

- *Alignment.* The IPS should demonstrate that there is alignment throughout the investment policy. For example, the IPS should record the governing body's investment beliefs and then enumerate an investment policy that *aligns* with those beliefs.

- *Clarity.* As our anecdotes demonstrate, clarity is an important principle when documenting the investment policy. First, an IPS should be written in plain language. In addition (as shown in the first anecdote), *clarity*

Exhibit 14. Principles for Documenting an Investment Policy Statement



of documentation is required; that is, the written IPS should faithfully recount the *substance* of the investment decisions made by the governing body. Moreover (as the second anecdote highlights), the *roles*, *responsibilities*, and *rights* of the bodies and individuals need to be clear. The IPS should clearly state which parties bear what responsibilities.

- *Proportionality.* The IPS ought to be proportional to the nature of the investment challenge. Relatively simple investment issues can be addressed with a brief IPS; complex investment problems may need to be much longer to reasonably document how the governing body sets out to achieve the investment objectives on behalf of beneficiaries. For example, as of April 2017, the California Public Employees' Retirement System had a "total fund investment policy" that was 98 pages long (CalPERS 2017).[63] We are aware of IPS for ultra-high-net-worth (UHNW) individuals that have separate and distinct investment strategies for the numerous entities involved (e.g., the UHNW individual, the spouse, one or more investment trusts, a foundation).

Some of these themes will be revisited in later chapters as we investigate steps below the fiduciary line.

[63]CalPERS is the pension scheme for public employees of the State of California. As of 30 June 2016, it had 1.8 million members representing 3,021 employers and $302 billion in funds under management (CalPERS 2016).

We do not intend to provide a *pro forma* IPS for the reader's consideration, but the following list provides a start as to the sections or headings the IPS should contain:

- *Context*—Important background should be discussed in a section to provide context for the remainder of the document. This background might include higher-level financial objectives within which the investment objectives exist (see Chapter 3).
- *Investment beliefs*—The outline of the investment beliefs should be included as suggested in Chapter 2.
- *Roles, responsibilities, and delegations*—A section should identify all of the stakeholders and specify who has the right to make what decisions; the approval and oversight processes should be explained (see Chapter 3).
- *Investment purpose*—A section should provide a qualitative description of the purpose of the pool of assets. This section might include a discussion of entities and structures, sources and uses of funds, cash flow requirements, and risk preferences (see Chapter 3).
- *Strategy toward environmental, social, and governance (ESG) factors*—If the governing body has investment beliefs relating to ESG factors in investing (see Chapter 2), this information should be spelled out. Detail may need to be documented to outline how these beliefs are to be reflected in the investment portfolio.
- *Investment objectives*—The document should provide, from the perspective of the *OPERIS* framework, a list of all investment objectives, in order of priority, in the form of an HIO for each pool of assets (see Chapters 3 and 4). Such objectives are likely to include one or more risk-related criteria, in which risk is measured in a way that is consistent with the risk preferences of the governing body.
- *Asset allocation strategy*—For each distinct pool of assets, documentation of the investment strategy should be stated in terms that are consistent with the approved opportunity set (see Chapter 4). The opportunity set—the asset classes and sub-asset-classes eligible for investment—can be outlined in separate sections or as an appendix to the IPS (to allow for change without the need to formally amend the whole IPS).
- *Benchmarks*—The benchmarks that represent each asset or sub-asset-class in the approved opportunity set (see Chapter 6) should be spelled out.

- *Due diligence requirements*—The due diligence requirements for all investments (be they securities, funds, limited partnerships, or assets) and investment managers (see Chapter 7) should be stated.
- *Monitoring and reporting requirements*—The document should identify the monitoring and reporting requirements necessary for the governing body and/or its delegates to exercise oversight over the investment portfolio and all parties to whom tasks are delegated (see Chapters 8 and 9).
- *Risk management*—Sections should deal with all relevant risk management considerations, such as investment risk management, derivatives and counterparty risk, and so on. Drafting such requirements in conjunction with the risk management and compliance functions of the investment organization is advisable to ensure alignment with broader internal requirements as well as legislative and regulatory requirements (see Chapters 8 and 9).
- *Custody*—A separate section should outline how safe custody of investments is ensured (see Chapter 8).
- *Other issues*—Details regarding accounting for fees and expenses, liquidity, rebalancing, hedging, leverage, securities lending, and so on (see Chapter 7) should be stated.

Other sections may be important to specific investment committees. They would depend on the nature of the beneficiary or the investment challenge. For example, tax matters are likely to be more important for UHNW individuals than for, say, a tax-exempt government defined-benefit plan.[64]

We end this chapter by returning to another aspect of Herr von Moltke's strategic thought: "Strategy is a system of expedients." The process of planning that results in an investment policy, if effective and clearly communicated, can assist fiduciaries, and those that act on their behalf, to expediently deal with what financial markets throw at them to the benefit of beneficiaries.

[64]For further guidance on IPS construction, see Boone and Lubitz (2004), DiBruno (2013), and fi360 (2016).

Points for Reflection: Chapter 5. The Investment Policy Statement: Publishing the Battle Plan

As a fiduciary:

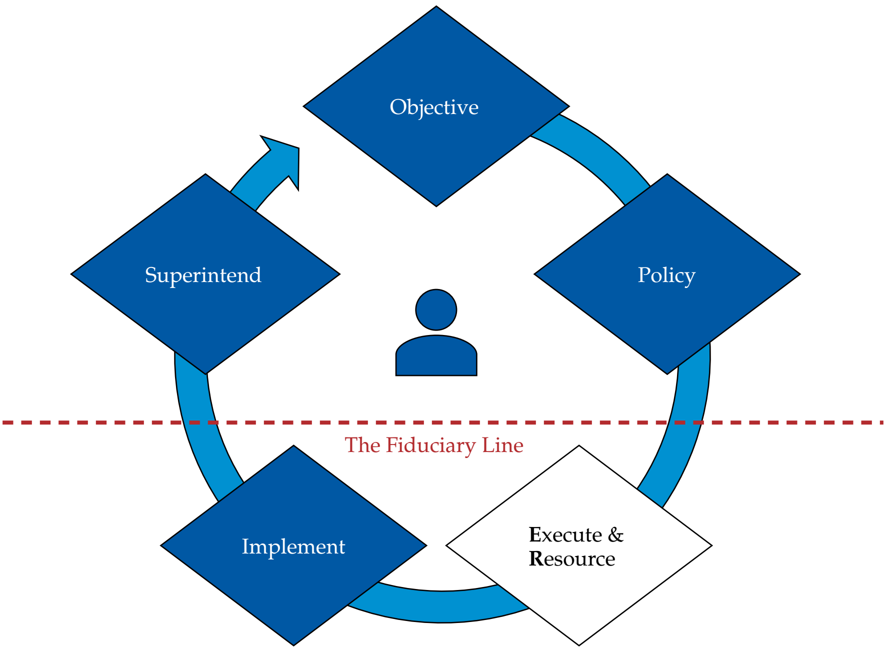
- Could I present a copy of my organization's current IPS if requested?
- Am I satisfied that the IPS represents a common understanding—among fiduciaries, management, consultants, and so on—of the HIO and how they are to be achieved?
- Am I comfortable that our organization's IPS is consistent with the universal principles suggested in this chapter—namely, comparative advantages, alignment, clarity, and proportionality?
- Can I say that our organization's IPS contains all necessary information?

6. Below the Fiduciary Line: "The Doing"

> "We need a mutual fund industry with both vision and values; a vision of *fiduciary duty* and shareholder service and values rooted in the proven principles of long-term investing and of *trusteeship* that demands integrity in *serving our clients*."
>
> —*John C. Bogle*[65]

In the previous four chapters, we were concerned with beliefs (Chapter 2), investment objectives (Chapter 3), portfolio choice (Chapter 4), and the investment policy statement (IPS; Chapter 5). These are all important considerations *above* the fiduciary line in *OPERIS*. We now enter Step E&R of the framework—that is, **E**xecute and **R**esource (see **Exhibit 15**).

Exhibit 15. *OPERIS* Framework: Execute & Resource



[65]John C. Bogle (1929–2019) was the founder of the Vanguard Group. Quote is from John C. Bogle, "Designing a New Mutual Fund Industry," Bogle Financial Markets Research Center (20 February 2007): www.vanguard.com/bogle_site/sp20070220.htm.

We have reached the point in the investment process at which the fiduciary typically has less visibility, and more work and responsibility are delegated to others. These delegations must be understood. As we move to Step E&R, opacity is increasing. The challenge before the governing body on matters below the fiduciary line is to ensure the alignment of this and Step I (**I**mplement) with the settings above the line, in the presence of heightened opacity.

The issues discussed in the previous chapters still apply, with the most important being that *fiduciaries cannot delegate accountability*.[66] As we will discuss, although agents are both important and useful in fulfilling some of the roles required to be undertaken in both Step E&R and Step I, accountability ultimately rests with the fiduciary.

In the *OPERIS* framework, activities below the fiduciary line may be thought of as the "doing" steps—where the rubber meets the road. Strategy formulation has ended, and investment policy *implementation* has begun. Below the fiduciary line is also, on many occasions, where the trouble starts. Most important for the beneficiary, alignment is sorely tested.

Given the increased opacity of what is going on below the fiduciary line, all those who serve the fiduciary investor, above and below the line, must have clear roles and responsibilities—that is, decision rights. **Exhibit 16** provides an example from a pension fund of how this information can be spelled out.

While reading this chapter, keep in mind the origins of the theme that underpins this book: Governance is a way of fulfilling a fiduciary duty. *Executing* good governance ensures compliance and promotes a culture of beneficiary-centric decision making across the investment organization. We explore the practicalities of *resourcing* "the doing" and discuss the importance of the governing body concentrating its scarce governance resources on high-value-added activities. Finally, much of this chapter is dedicated to how the governing body executes and resources its policy to capture returns in light of its beliefs (Chapter 2).

In the following consideration of some of the issues fiduciary investors face in *executing* and *resourcing* the agreed strategy, we do not claim that the discussion is comprehensive. We illuminate some of the challenges facing the governing body when going below the fiduciary line. As history has taught us, any fortress—military or metaphorical—is only as strong as its weakest link.

[66]Fiduciaries cannot delegate accountability for their duties to beneficiaries (Bailey and Richards 2017). They can, however, share responsibility with delegates. In this chapter and Chapter 7, we delve into what might be required to share this responsibility and provide oversight in an effective way.

Exhibit 16. Example of Delegation and Clarity of Decision Rights: New Zealand Super Fund

Who Makes Investment Decisions?	
Who	**What Decisions**
Board	• Sets investment policy for the Fund • Decides on an appropriate total level of risk for the Fund • Approves and monitors investment strategies • Appoints the Fund's Custodian (a custodian holds all of the Fund's listed assets and provides investment administration services) • Approves new investment managers (where there is an Investment Management Agreement)
Management	• Provides investment policy advice to the Board • Decides how to allocate total Fund risk between baskets of assets with similar characteristics, and then within each basket • Implements agreed investment strategies and identifies investment opportunities • Monitors and reports on the performance of investment strategies and of the Fund as a whole • Monitors the ongoing suitability of appointed investment managers
Appointed external investment managers	• Make investment choices on behalf of the Guardians, subject to an Investment • Management agreement or the terms of a collective investment vehicle

Source: Guardians of the New Zealand Super Fund (2017).

We will show that the effective fiduciary executes and resources a defensible, repeatable, and documented investment process to protect the beneficiary.

Executing Good Governance

In Chapter 1, we said that investment governance referred to the effective use of resources—people, policies, processes, and systems—by an individual or governing body (the fiduciary or agent) to fulfill a fiduciary duty. We emphasize the importance of "effective use" and the challenges facing the governing body to execute and resource good investment governance. Faced with the specter of reduced transparency in governing Step E&R in the *OPERIS* framework, it is timely to revisit the formal link between the enduring principles of good governance and fiduciary duty.

In their own words …

"[T]he pillars of a strong investment governance program are transparency, independence, and diversity of input and oversight. Governance and decision making should ultimately be focused on ensuring a plan participant's financial security."

—*David Skinner, Executive Director, PGIM Real Estate*

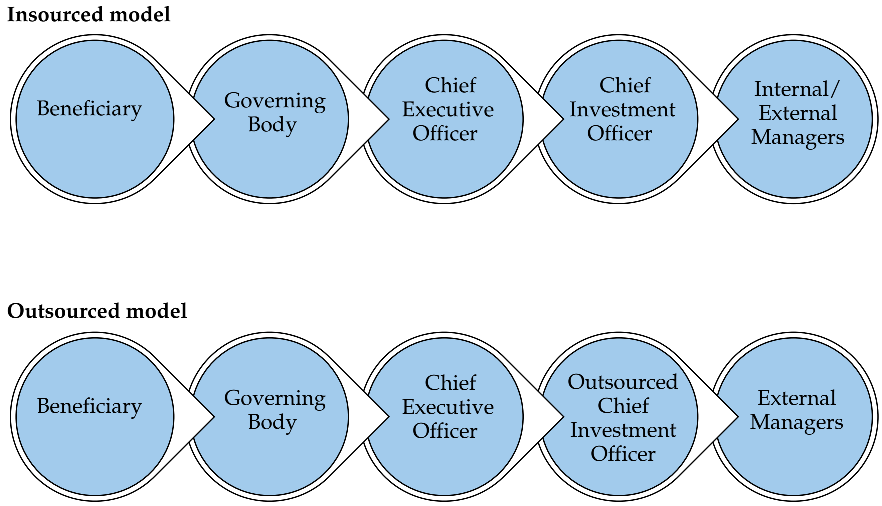
Unlike the etymology of the word governance—which has Greek origins, *to steer* (see Scharfman 2015)—fiduciary comes from the Latin *fiducia*, meaning to trust.[67] A fiduciary is one who is trusted. In the presence of opacity and increasing complexity, however, fiduciaries are called upon to place their trust in others (say, external investment managers). They must share responsibility as they steer the investment organization toward achieving the beneficiary's objectives. This sharing introduces the idea that in the execution of governance, more than one trust relationship is present. As we discussed in Chapter 1, the classical relationship is that between the beneficiary and the fiduciary. Only in the simplest of cases, however, does it end there. In practice, the fiduciary trusts others to act according to the delegations agreed to by the fiduciary to facilitate the execution and implementation of the IPS (Chapter 5). In this context, a metaphorical chain of trusting relationships exists, as shown in **Exhibit 17**.[68]

As noted in Chapter 1, the specific legal definition (and obligations) of fiduciaries (incorporating their chain of trusting relationships) varies between jurisdictions and investor types (in our three contexts: defined-contribution [DC] plans, defined-benefit [DB] plans, and endowments and foundations

[67]Rahaim (2005) explained that, "in its basic meaning, a fiduciary is a person charged by law and equity with a higher duty to care for another person. Developing from Latin, the word *fiducia* means 'trust' and carries connotations of total trust, good faith and honesty. Fiduciary may be defined as to be in trust, in confidence." The word "fiduciary" may trace back to the third century BCE and the work of a Roman playwright, Titus Maccius Plautus. It applies to a situation in which someone (or something) has been entrusted to another (Watson 1991). This author also notes the link that fiducia has with the Roman goddess of faith, Fides.

[68]Increasingly, the media and literature reflect debate about who in the financial services industry should be held to a fiduciary standard—and the answer is not always the party who has the relationship with the principal. We think this debate is healthy for an industry that is still trying to regain the trust it had before the global financial crisis of 2007–2008.

Exhibit 17. Links in the Chain of Trusting Relationships



[E&Fs]).[69] Moreover, as noted by Rahaim (2005), the laws relating to governance and fiduciary duty are ever changing.

A fiduciary is not sismply an *agent* of a principal. Agents are obliged to carry out the wishes of a principal, whereas a fiduciary's obligation is to exercise independent judgment on behalf of a beneficiary (Bower and Paine 2017). This distinction is important. As Bower and Paine noted, "An agent is an order taker, whereas a fiduciary is expected to make discretionary decisions." Thus, fiduciary duty entails higher obligations of care; it cannot be fulfilled by simply ticking off the right boxes in the right order.

OPERIS is a continuous process that fortifies investment governance. We reject the idea that the investment governance process is "set and forget" in nature. Investment governance is a dynamic, ongoing process of continuous improvement that reflects that "anxious vigilance" (Smith [1776] 1937) expected of a fiduciary that we discussed in Chapter 1. Having a defensible, repeatable, and documented investment process may be one of the few comparative advantages a fiduciary may hold over other investors. This idea is

[69]Logue and Rader (1998) noted that US DC plans entail an even more stringent standard of care for fiduciaries. The Employee Retirement Income Security Act of 1974 (ERISA) requires the fiduciary to use "care, skill, prudence and diligence" and to act in the same way that someone "familiar with such matters"—in short, a "prudent expert"—would act (p. 40). The Australian Prudential Regulation Authority (APRA) requires trustees of superannuation plans to have an investment governance framework "appropriate to the size, business mix and complexity" of the regulated entity's operations (APRA 2013a).

underpinned by the work of Clark and Urwin (2008, 2010), who noted the contribution of good governance to value creation among institutional asset owners. Other research has suggested that the gains to good governance, in a return sense, might be as high as 1%–3% per annum (Watson Wyatt 2006; Ambachtsheer 2007).

We turn now to Step E&R—the execution and resourcing of the strategy, the doing.

Resourcing "the Doing"

Excellence of execution requires both appropriate resourcing and efficient and effective implementation to achieve objectives in the hierarchy of investment objectives (HIO). We begin with resourcing and the governance budget.

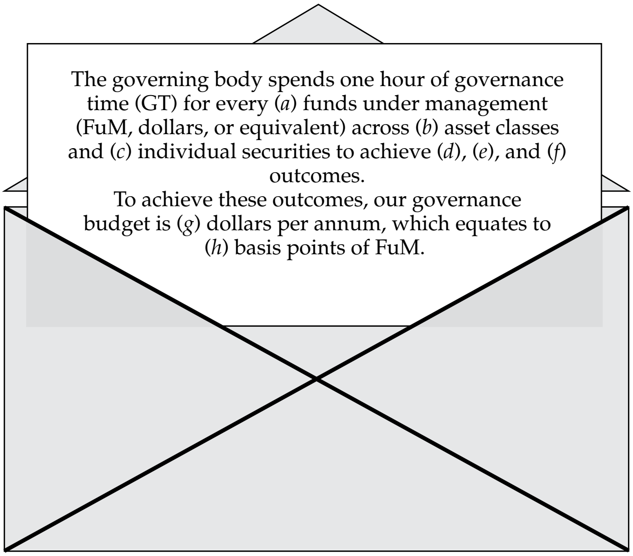
Unfortunately, fiduciary investors all too commonly frame resourcing as a type of insurance issue—that is, a known cost today for an uncertain future benefit. We challenge this framing throughout the chapter. Moreover, we conceptualize the governance budget for the fiduciary investor in broad terms, including time (and the focus of governance time [GT]), talent (the composition and complementarity of the skills of those who serve on the governing body and the delegates who serve them), and resourcing support for investment-related risk management (and integration with enterprise-wide systems of control). The quantity of resourcing and governance budget required should be consistent with the scale, complexity, and nature of the investment challenge the beneficiary faces (see Chapter 1).

To begin, consider time as a component of the governance budget. As a simple heuristic, consider, for your organization, the ratio of funds under management (FuM), given in dollars or the equivalent, to GT, given in hours—that is, FuM:GT.[70] For every one hour of GT, how much FuM is being governed?

A common practice is for the investment committee of a fiduciary investor to meet for, say, 2 hours, bimonthly—a not-grand sum of 12 hours a year—to govern many hundreds of millions (commonly, billions) of dollars of "other people's money." For some large DB and DC plans (and some large endowments), the FuM:GT ratio, standardized by time, is a flabbergasting sight. We encourage fiduciary investors, as an exercise, to find out for their organizations what parameters *a* through *h* are in the "resourcing envelope" (the investment governance budget) shown in **Exhibit 18**.

[70]Governance time is only one part of the governance budget as discussed previously, but here we are trying to draw the connection between the time spent by the governing body with the magnitude of the responsibility they discharge as proxied by FuM.

Exhibit 18. The Resourcing Envelope



When the parameters are filled in, you can consider the most important questions. Are you, as the fiduciary, comfortable that the investment organization is sufficiently resourced to execute the investment strategy and achieve the objectives consistent with a fiduciary standard of care?

At this juncture, we want the reader to understand what we are *not* saying:

- We are not suggesting that more time is necessarily better. In fact, we believe that *role clarity* is critical because delegations become increasingly important as FuM increases.[71]
- We also are not saying that throwing more money at investment governance guarantees success. We have observed, however, that many fiduciary investors are chronically underresourced from a governance perspective, particularly as they reach for return (and assume the complexity that typically comes with such a decision) in the low-expected-return world in which we currently live.[72]

[71]We encourage the reader to think specifically about the talent (or lack of talent) and alignment of those sitting around the fiduciary table and those who serve the board.

[72]For a survey of capital market expectations of leading investment houses, as of 7 May 2017, see Santoli (2017). See also Siegel and Sexauer (2017) on asset allocation in a low-expected-return world.

Given the magnitude of the task, we are saying that the fiduciary must be *satisfied* that the execution and implementation of the strategy are appropriately resourced. An investment process is only as strong as its weakest link, so we encourage all fiduciary investors to formally consider, on a regular basis, the link that is the governance budget in light of the complexity of the investment organization.

If GT is a scarce commodity, our observations suggest that the time dedicated to future-oriented, strategic investment decisions is even more scarce. For example, consider the investment committee agenda of the hypothetical ABC Fund as given in **Exhibit 19**. This investment committee meets six times a year for two hours per meeting. Total FuM at the ABC Fund currently stands at US$12 billion.[73]

We can begin to estimate for the ABC Fund some of the parameters in the resourcing envelope using simple calculations. This approach will shed some light on the task before the committee. First, you should know that at a recent offsite strategy session, the ABC Fund Investment Committee confirmed that shorter, more frequent (every other month) meetings would allow investment governance to be more *nimble*, *agile*, and *responsive* to manager selection issues and market events.

We support the idea that the investment process should not be held hostage to the rigidities of the investment committee cycle (and we encourage the use of circular resolution and other formal vote-outside-committee mechanisms, when required). It is fascinating, however, that important motivators for the investment committee at the hypothetical ABC Fund—that is, agility, nimbleness, and responsiveness—are linked with *manager selection* and *market timing*. More important, both of the agenda items related to these topics are there for *decisions* and account for *two-thirds* of the total meeting time. Why?

At the recent offsite strategy meeting of the ABC Fund, the members would have been prudent to reflect on some of the following, perhaps more difficult, questions regarding the allocation of time on the agenda:

[73]We have kept the mathematics simple in our example for ease of interpretation of the FuM:GT. To provide some context, at the end of 2016, the top three pension funds by FuM (US$ million) in the Pensions & Investments/Willis Towers Watson 300 ranking were the Government Pension Investment of Japan, with total assets of US$1,237,636; the Government Pension Fund of Norway, with US$893,088; and the US Federal Retirement Thrift, with US$485,575. For further details and the full listing, see Willis Towers Watson (2017b). In our hypothetical example, FuM of US$12 billion would not result in the fund being in the largest 300 pension funds in the world (number 300 is Telstra Super of Australia with US$13.3 billion).

Exhibit 19. Agenda of the Hypothetical ABC Fund

Meeting of the Investment Committee of the ABC Fund

July XX, 20XX

9:30am to 11:30am

1. Committee-Only Session: Open Agenda	[5 minutes]
2. Review and Approval of May XX, 2018 Investment Committee Minutes	[5 minutes]
3. June Quarter Performance Review (includes manager evaluation)	[15 minutes]
4. FOR DECISION: Private Real Estate Core Manager Search	
• Manager presentations:	
i. "DEF Investment Management"	[30 minutes]
ii. "XYZ Capital Investors"	[30 minutes]
5. FOR DECISION: Market Timing Position	
• Reduction in Fixed Interest Weights	[30 minutes]
6. Other Business	[5 minutes]

- Is manager selection a source of comparative advantage for the investment committee?
- Does the committee have an informational advantage or a special competence regarding manager selection in any asset class (in the example, core managers in private real estate are mentioned)?

- Is this approach to manager selection and market timing consistent with the investment beliefs of ABC Fund? If so, over what time horizon: day-to-day, week-to-week, or month-to-month?[74]
- On controversial matters, such as manager selection and market timing, are these decisions best made by the investment committee? If not, what are the appropriate resources and governance processes required to delegate these decisions?
- Most important, will undertaking these two activities at the committee level improve the probability we will achieve our investment objectives?

We are not suggesting that issues of manager selection and market timing are irrelevant and unworthy of fiduciary consideration. Quite the contrary. We are challenging whether these decisions are best made *directly* by the investment committee or by *delegating*—the sharing of responsibility—to specialized experts advising the committee. Without such role clarity, we have witnessed, first-hand, how the one hour dedicated to agenda item 4 can go by quickly when working through impressive PowerPoint presentations and chatting with smart investment professionals (with a side of coffee and freshly baked muffins, of course).

The doing must start with—and always be crafted, executed, and resourced by—the governing body—that is, those above the fiduciary line. If the governing body does not tell service providers (say, investment managers) what they are supposed to achieve (their objective, as an input to achieving the HIO), how they are to do it (the mandate), and how their performance will be monitored and rewarded (*superintending* will be discussed in Chapters 8 and 9), the fiduciary investor has, in our view, commenced the governance process *below the line*, which is the wrong place.

Governing bodies (and/or their delegates) can—unthinkingly, at times—jump above and below the fiduciary line with disconcerting ease. The cause is either ambiguous roles and responsibilities or an unwillingness to carry out the defined roles and responsibilities outlined in the IPS (see Chapter 5). Precision regarding decision rights—above and below the fiduciary line—is critical for the effective conduct of Step E&R in the *OPERIS* framework. Given that the fiduciary cannot outsource accountability, how the fiduciary investor executes and resources the investment process becomes paramount to fulfilling her or his duty to the beneficiary.

[74]See Bauer and Dahlquist (2001) and Drew (2006) for the forecast accuracy required for successful market timing on a monthly basis.

The Key Challenge: Accountability Cannot Be Outsourced

The fiduciary lives in a world in which accountability cannot be outsourced. Regulators seem to codify further duties for the fiduciary every day (in addition to fiduciary duty at common law in relevant jurisdictions). That oversight is not necessarily a bad thing. Capital market history is littered with tales of questionable behavior by fiduciaries toward those to whom they owed their duty. So, adherence to a defensible, repeatable, and documented investment process that *binds the fiduciary to the beneficiary* is an important step in meeting fiduciary duty.[75]

Given this context, a key issue for the fiduciary is how to understand the division of labor (roles and responsibilities) across the investment process. The distinguishable, but aligned, roles must work in concert in the best interests of beneficiaries.

Unfortunately, investment governance is an activity prone to *ambiguity*. A common understanding seems to be absent.[76] In too many instances, the location of the fiduciary line is typically known only *after* an adverse event has affected the investment organization:

- Something has apparently gone wrong.
- Accusations are made.
- Records (e.g., minutes and committee papers) are checked.
- Answers are found (or not).

The best way to bring these ideas to life is by example: The cash portfolio at the hypothetical ABC Fund has performed well for many years (i.e., has produced superior risk-adjusted returns over the agreed Treasury bill index). The mandate for the fund is broad and allows the investment manager to hold "cash and cash-like securities." The fiduciary has been happy with the portfolio's returns over cash. Unbeknown to the investment committee, however, the source of the reported alpha has been an active program of capturing the credit premium (call it "alpha lite," "beta prime," or less charitably, an

[75]The role of the governing body is not simply to review and approve investment strategies. The governing body needs to also satisfy itself that an effective system of risk management and internal control is established and maintained and that the organization's managers monitor the effectiveness of the risk management practices. Such a disintermediated approach to risk management reflects the "three lines of defense" paradigm, which we return to in Chapter 9.

[76]In this circumstance, an IPS can come in handy because it can record a common understanding. Done poorly, however, the IPS can both enshrine the ambiguity and record the misunderstanding.

unconscious or concealed "credit bet"). A negative credit event occurs. Purely for the purposes of illustration, let's call it a global financial crisis.

Suddenly, those above the line discover new clarity about the actual objective for the cash portfolio; that is, it needs to be a source of liquidity. This new clarity results in the investment committee demanding that the portfolio be more "cash" and less "cash-like." In this story:

- Something apparently goes wrong—a negative credit event occurred.
- Accusations are made—investment managers are summoned to the investment committee for "a meeting."
- Records (e.g., minutes and committee papers) are checked—"So much alpha; where has it all gone?" "Why is alpha so negative?" "This is not the process we wanted (*in hindsight*); we need liquidity." "This manager is not achieving the objectives we want. Let's terminate this manager and revise the mandate."
- Answers are found (or not)—"What do they mean by 'cash-like'?" "Why were we not informed that cash-like meant mortgage-backed securities?" "Who is responsible?"

Investment managers are literal.

Indeed, all those below the line are *literal*. They *literally* read "cash and cash-like" within the policy settings, and *literally* acted within the confines of that policy (as they are permitted to do) to meet the stated objectives. The easiest way to beat a cash benchmark for a "cash and cash-like" portfolio is to take more risk—for example, credit risk.[77]

Therefore, mandated documentation, service-level agreements, and investment administration are key pillars to the implementation of any strategy. How the fiduciary *superintends* those with whom they have shared responsibility (see Chapters 8 and 9)—including drafting, updating, and implementing the necessary documentation—is critical.

The parable of the "cash and cash-like" portfolio at the ABC Fund raises many issues. What is a better way for the ABC Fund investment committee to spend time—listening to manager presentations for an hour or spending an hour on *superintending* the process of manager selection? Spending 30 minutes on a short-term market-timing decision or ensuring that the

[77]This example highlights some of the unappreciated elements of documenting mandates. Unintended latitude may allow investment managers to "easily earn alpha" by accessing an unintentionally broad opportunity set, reporting good performance, and potentially, earning performance fees. Nevertheless, the manager is almost always acting within his or her mandate. We see the importance of properly documenting the mandate *ex ante*.

process underlying the decision is robust, aligned, risk controlled, and contributing to achievement of the objective?

We acknowledge that listening to manager presentations and messing about with market timing have more sizzle. Superintending the process and ensuring that the process is correct, however, are more closely aligned with how the beneficiary might expect the investment committee to spend its scarce GT. Being an effective fiduciary is less about the ability to technically evaluate manager selection or market-timing calls and more about managing risk and overseeing a defensible, repeatable, and documented investment process.

In their own words …

"Good investment governance is not only the right thing to do, it makes good business sense. It requires a prudent process that ultimately puts the best interest of the customer first. We continually see assessed firms transition from poor to excellent investment governance and not only significantly reduce their fiduciary liability, but save significant amounts of money."

—*J. Richard Lynch, Director, fi360, Inc., and CEFEX*

Finally, we have discussed the role of time in the context of *governance* in this section. For completeness, the concept of time must also be considered by the fiduciary in terms of the *investment horizon*.[78] The setting of the time horizon over which to achieve the objective is central to understanding how intertemporal choices are made (Mosakowski and Earley 2000).[79] In the case of the three specific fiduciary investor contexts we are considering (DC plans, DB plans, and E&Fs), the challenges of intertemporal decision making and "myopic loss aversion" are real.[80] For DC plans, the challenge may involve cohorts of plan members journeying through various life stages, commencing with the accumulation phase through the transition years into retirement (see Basu and Drew 2009). For E&Fs, the challenge may involve grant

[78]For further discussion of long-term investing and potential agency issues, see Ambachtsheer (2014). For responsible entities and hedge funds, see, respectively, Bianchi (2010) and Bianchi and Drew (2010).
[79]Intertemporal choice is a characteristic of decisions in which costs and benefits are spread out over time (Loewenstein and Thaler 1989).
[80]For a full discussion of behavioral finance and myopic loss aversion over short horizons, see Benartzi and Thaler (1995).

programs, scholarships, and capital works that have different time horizons. In DB plans, the challenge is matching of liability profiles. The investment time horizon (and related commitments) are best known by the fiduciary and, therefore, must be incorporated into Step E&R and Step I of the *OPERIS* framework.[81]

Focusing on High-Value-Added Activities

Which high-value-added activities should fiduciary investors focus on? The much-cited paper by Brinson, Hood, and Beebower (1986) provided some early clues, which have been confirmed by numerous researchers, including the recent work of Scott et al. (2017). The authors reported that around 80% of the portfolio variability for international investors (in Australia, Canada, Japan, Hong Kong, the United Kingdom, and the United States) is attributable to *asset allocation policy*. **Exhibit 20** compares their results with those of Brinson et al. (1986).

These median results suggest that for outcome-oriented investors, *strategic* asset allocation decisions (as distinct from market-timing decisions) should be prioritized over less influential tasks.

Is the fiduciary of the ABC Fund spending 8 out of every 10 minutes on the long-term asset mix? Is the fiduciary solving the important asset allocation problem in a manner that maximizes the probability of achieving the objectives contained within the HIO? The agenda suggests otherwise.

Exhibit 20. Role of Asset Allocation Policy in Return Variation of Balanced Funds

Country	United States	Canada	United Kingdom	Australia	Japan	Brinson et al. (1986)
Number of balanced funds in each market sample	709	303	743	580	406	91
Median percentage of variation in actual returns explained by policy return	92%	86%	81%	89%	88%	94%

Sources: Brinson et al. (1986); Scott et al. (2017).

[81]A challenge is the seeming disconnect between the long-term investment horizons of, say, plan members and the myopic investment policies or mandates issued by plan sponsors to mutual funds and the broader investment management community (Drew 2009). Blake (1995) criticized pension funds for having an obsession with generating short-term investment returns whatever the longer-term costs.

A cursory review of the investment committee agendas for many investors suggests that the proportion of GT devoted to the asset allocation task (and testing of the investment thesis in terms of the likelihood of achieving investment objectives) is only *2 out of every 10 minutes*. We are reminded of the wisdom of economist Vilfredo Pareto, who might counsel investment committees to focus on asset allocation because most of the outcome is determined by a small number of causes.

Another aspect that should receive relatively more GT is long-term investing, which we view as a potential source of comparative advantage for the fiduciary over other investors. We use the word "potential" consciously. We have observed investment committees that, over time, suffer from a form of "cognitive dissonance" in the matter of long-term investing. This cognitive dissonance takes the form of an apparent inconsistency between the challenge the committee faces (in most cases, long-term results) and the behavior it sometimes displays (a fascination with short-term performance). As we discussed in Chapter 2, governing bodies need to have an honest conversation about what their investment beliefs are and act accordingly.

This discussion underscores the importance of fiduciary investors understanding the interactions between investment horizon, on the one hand, and alignment and delegations, on the other. This idea is neatly summarized by Neal and Warren (2015):

> Investment organizations intending to pursue long-term investing should aim to create an environment where all principals and agents along the chain of delegations are aligned, engaged on an ongoing basis, incentivized to work towards long-term outcomes, and committed to investing for the long run.

In DC plans, DB plans, and E&Fs, the level and sophistication of delegations can, for good reasons, vary wildly. Therefore, the development of a tailored, agreed-on, and understood "delegation matrix" is critical.[82] A delegation matrix shows who does what and where their authority comes from. The delegation matrix can provide clarity as to exactly where *above-the-line* strategy stops and *below-the-line* implementation begins.[83] It can be

[82]Neal and Warren (2015) explored various delegation models specifically for remote monitoring and immersed monitoring. According to the authors, remote monitoring, which is the more traditional approach, is undertaken through a set of contracts and protocols. Immersed monitoring involves a series of overlapping links that make use of judgment (supported by data) when the time comes to evaluate managers and are abetted by a deep understanding of investment decisions.

[83]For an excellent discussion of these issues, see Rice, DiMeo, and Porter (2012).

a catalyst for a range of important governance issues to be considered and formalized by the fiduciary. Formal delegations should be included with the investment committee papers as standard to ensure consistent application of the agreed-on process. The investment committee should remain ever vigilant as to the emergence of blind spots in the matrix.

Delegation—or the sharing of responsibility—by fiduciary investors is a critical skill.[84] This issue is of sufficient importance that we encourage governing bodies to hold an *in camera* session to reflect critically on how they delegate responsibility and whether their approach exhibits any "self-enhancement bias," which is described by Pfeffer, Cialdini, Hanna, and Knopoff 1998) as follows:

> One of the most widely documented effects in social psychology is the preference of most people to see themselves in a self-enhancing fashion. As a consequence, they regard themselves as more intelligent, skilled, ethical, honest, persistent, original, friendly, reliable, attractive, and fair-minded than their peers or the average person; they even consider themselves better and safer drivers than average after having been involved in a serious automobile accident. (p. 314)

This discussion session would, without question, be a difficult conversation. Delegating, giving up being the go-to expert, takes tremendous confidence and perspective, even in the healthiest of environments (Gallo 2012). In our experience, a source of ongoing challenge regarding delegations is ensuring consistency between *stated* investment policy and *actual* investment implementation to capture returns—an issue we explore in the next section.

Capturing Returns: Consistency between Policy and the Portfolio

The fiduciary plays the critical role in governing and *fortifying* the investment process. This role requires something more than simple compliance with regulations. It involves how the fiduciary investor operationalizes and aligns the investment organization to achieve outcomes in the presence of opacity and complexity. Neal and Warren (2015) noted:

> For multi-layered investment organizations, the challenge is to align principals and agents all along the entire chain of delegations in terms of shared mission, investment objectives, risk definitions and appetite, beliefs and cultures, and so on.

[84]For an interesting discussion of why delegation may not be happening, see Gallo (2012).

Neal and Warren (2015) specifically mentioned *beliefs* and cultures in the context of organizational alignment. We believe investment beliefs are an *apex* issue for the fiduciary (Chapter 2). Beliefs are important in the *OPERIS* framework because they guide the approach that the fiduciary investor takes to capture investment returns.

While there is some *positive* evidence to guide the formulation of investment beliefs, the specific challenge—finding the *best* way to capture returns—is largely a *normative* one.[85] Good governance requires the fiduciary to deliver excellence of execution (below-the-line activity) in a manner consistent with available resources and implementation capabilities, investment beliefs, and objectives.

We make two cautionary points. First, on many occasions, responses to the issue of how best to capture investment returns are framed as a *binary choice*—that is, this versus that, one or zero, all or none. One reason why this framing occurs may be the powerful incentives resulting from the "economics of the business" (Ellis 2011). Another reason may be that investment products are usually sold, not bought. Selling predisposes the conversation to a one-or-the-other-type paradigm. We encourage all governing bodies to challenge such framing and enshrine their views formally as part of their investment beliefs. We caution fiduciary investors to be wary of ideological-based framing in investment policy debates. Rarely, in our experience, do discussions that take the form of this-versus-that result in great outcomes for beneficiaries. As will be considered throughout this chapter, an objective-led, evidence-based framing of debates is consistent with a fiduciary standard of care and is best for beneficiaries.

Second, governing bodies without documented beliefs leave themselves open to the unwitting adoption of the strongest set of views among their service providers. This persuasion could result in a relatively frequent change in, say, unconscious (perhaps, low-conviction) beliefs, as investment managers are all-too-frequently hired and fired.

Some of the topics we discuss in this section have been topics of voluminous research and have led to the Nobel Memorial Prize in Economic Sciences being awarded to leading scholars in the field. In the context of Step E&R of the *OPERIS* framework, we consider only a handful of the practical

[85]Waring and Siegel (2005) noted the (all too common) confusion regarding many investment issues, such as alpha with beta, skill with luck, expected return with realized return, and style bets with true active bets.

Exhibit 21. Choices Relating to Execute and Resource

Choice	Category	Associated Belief
Passive vs. active	Execute	Skill premium?
Smart beta vs. not-so-smart beta	Execute	Factor premiums?
Public vs. private markets	Execute	Illiquidity premium?
Developed vs. emerging markets (EM)	Execute	EM risk premium?
Unlisted funds vs. exchange traded funds (ETFs)	Resource	Implementation efficiency
Cost vs. quality	Resource	Value for money
Physical vs. synthetic	Resource	Capital efficiency

choices that fiduciaries grapple with. In **Exhibit 21**, these choices are categorized by how they relate to Step E&R.[86]

Our objective is neither to prosecute (again) some of the most hotly contested ideas in financial economics nor to convince the reader of our views. Rather, we provide the list to assist fiduciaries in grappling with the issues related to the "best way to capture returns." We will discuss each of these points in Exhibit 21.

In their own words ...

> "There are real tensions between a fiduciary focus and a plan entity's business imperatives. Acknowledging those tensions—while retaining a commitment to a fiduciary focus—is an important first step. Adhering to proven governance best practices can help to ameliorate those tensions and lead to better decision making."
>
> —*Lew Minsky, President and CEO, DCIIA*

As we work through the following issues related to the "best way" to capture returns, paths other than the ones we discuss may become apparent to the reader. In our minds, the key questions are as follows: (1) Does the fiduciary have a comparative advantage over other investors that would support

[86]On occasion, the line between execution and resourcing is blurred. For example, a governing body may find that using an exchange traded fund (ETF) to capture a particular return is the most efficient way. An unlisted fund may be the only way, however, in which a particular asset class can be accessed. In this instance, the choice of unlisted fund versus ETF becomes a matter of execution rather than resourcing.

one approach to capturing returns over another?[87] And (2) does the fiduciary have a belief that provides a rationale for certain behavior?[88]

Passive vs. Active. The market efficiency debate generates far more heat than light. As noted by Lo (2008), an engineer would look quizzically if asked to determine whether an engine was perfectly efficient. So we must have sympathy for the more pragmatic *degrees of efficiency*, or continuum of efficiency, approach to the issue. Malkiel's (2012) insight is important: "The efficient market hypothesis . . . does not imply that prices are always correct, or that all market participants are rational." Framing market efficiency in an either/or manner may lead the governing body to think that only two paths are worthy of consideration—capturing returns through traditional market capitalization–weighted benchmarks or capturing a skill premium through active investing.

It is not uncommon for governing bodies to be *both/and* in their approach by holding different beliefs within and among asset classes. For instance, the fiduciary may believe in holding *passive* and smart-beta exposures for public equities in developed markets but be *active* in emerging markets. Similarly, the investment policy may be passive for public markets (e.g., listed equity) and active for private markets (e.g., private equity). Such approaches to implementation are not inconsistent unless they are in conflict with the investment beliefs of the fiduciary above the line.

Smart Beta vs. Not-So-Smart Beta. The last decade or so has seen a rapid expansion in the amount of capital allocated to so-called smart-beta (or factor-based) approaches to capturing returns. It sometimes seems like there are as many different factors as there are days in the year. An important study by Harvey, Liu, and Zhu (2016) analyzed hundreds of scholarly articles on the topic of factor investing, and the authors cataloged some 316 different factors. Not one for every day of the year, but close![89] The proliferation of factors has been described by Cochrane (2011) as a "zoo of new factors."

[87]We acknowledge Adrian Orr, former chief executive officer of the New Zealand Super Fund, for challenging sovereign wealth funds to understand, document, and operationalize their advantages (or "endowments"). For the New Zealand Super Fund, these advantages are long horizon, certainty of liquidity, operational independence, and sovereign status. For more details, see www.nzsuperfund.co.nz/how-we-invest/endowments.

[88]This is where documenting beliefs as outlined in Chapter 2 has its benefits. If you can say why you have a belief, then you have a defensible reason to hold true to that belief. An observation we would make is that on more than one occasion in this industry, the "economics of the business" (Ellis 2011) has defined certain investment beliefs.

[89]Harvey et al. (2016) noted, "Our collection of 316 factors likely underrepresents the factor population."

From the pioneering work of Lefevre (1923) on time series and cross-sectional momentum to the value-investing paradigm of Graham and Dodd (1934), investors have long sought to understand the factors that persist in driving investment returns.[90] Similarly, some of the most common factor-based strategies—value, momentum, size, quality, volatility, and yield—are designed to capture the systematic elements of specific investment styles or strategies (as distinct from cap-weighted indexes that aim to represent the broad market beta; MSCI 2015).

Regarding the specific issue of how best to capture returns, fiduciary investors might have a positive belief regarding the benefits that accrue to systematically harvesting factors (i.e., factor premiums). In that case, some agreed-on rationale must exist for each factor selected (with supporting academic evidence as suggested in Chapter 2).[91]

The challenge for the fiduciary is to look through the asset classes to ascertain the drivers of returns. We encourage a line of inquiry that seeks to understand, *ex ante*, the types of factor premiums (or rewarded risks) that are to be harvested:

- Do, say, artificially erected barriers, regulations, or restrictions create some structural impediments to markets operating efficiently?
- Do investor biases or behavioral issues create persistent opportunities?

Answers to these questions might lead to a subsequent question about resourcing. For example, can we capture returns via an exchange traded fund (ETF), or are unlisted funds the only method of implementation? (We provide a fuller discussion of these issues later.)

These questions can perhaps be reduced to the fiduciary investor's belief (or otherwise) that the (*ex post*) drivers of past performance will persist into the (*ex ante*) future. Hsu and Kalesnik (2014) reminded us that "one cannot make intelligent choices regarding smart betas without first forming a view on which factors are for real." One way to be explicit about this issue is to have a cited investment belief in this regard (see Chapter 2).

Today, the fiduciary must have cogent answers to these questions not only for equities but also for bonds (with the rise of quality and value factors in the fixed-interest asset class) and commodities (Bianchi, Drew, and Fan 2015,

[90]Lefevre (1923) famously observed, "I noticed that in advances as well as declines, stock prices were apt to show certain habits, so to speak. I looked for stock prices to run on form. I had 'clocked' them. You know what I mean."

[91]Bender, Briand, Melas, and Subramanian (2013) explained that "a factor can be thought of as any characteristic relating to a group of securities that is important in explaining their return and risk."

2016).[92] Moreover, academic evidence suggests that the selection of risk factors, portfolio selection method, and investment horizon may also have material effects on resultant outcomes when investing by way of a smart-beta or factor-based approach (Bianchi, Drew, and Pappas 2017).

Although the nomenclature used for smart betas has reassuring terms—such as "harvesting," "systematic capture," and "rewarded factors"—the challenge of capturing these premiums in a transparent and repeatable manner is much harder than these terms imply. As Brakke (2016) bracingly observed,

> In terms of investor behavior, the evidence is that factor investing looks much like traditional active investing, with investors moving from factor strategy to factor strategy, depending on the environment and, of course, performance. (p. 1)

Again, this is more anecdotal evidence of cognitive dissonance on the part of investment committees—dedicated to long-term investing, until, well, they're not.

Fiduciaries can either grapple with this sort of complex issue and attempt to both navigate the competing arguments and tame the factor zoo, *or* they can delegate the matter of how best to capture returns to the parties best able to judge the merits of the strategies and then hold those parties to account. No two fiduciary bodies will make the same decision because it will be a function of the governance budget, the nature of the investment problem, and other factors. What does not change is that the governing body bears the ultimate accountability for the decision.

Public vs. Private Markets. Over the past decade, fiduciary investors have developed a growing interest in (and allocation to) private-market opportunities (such as private equity, infrastructure, and real estate). Also, to improve geometric returns, new research is looking at combining sleeves of public- and private-market exposure (such as real estate via REITs and direct holdings) in a multiasset setting (Drew, Walk, and West 2015a).

We believe that discussion of public markets versus private markets is best framed when the governing body clearly defines what are (and are not) asset classes.[93] As discussed in Chapter 4, the eligible asset classes become the

[92]In the case of smart-beta strategies for equities, the objective of the investment program needs to be clearly stated. Because equities typically represent the largest portion of risk allocation in multiasset portfolios, the timeframe for evaluation needs to be clear (see Chapter 7). Smart-beta approaches can be very different from traditional (market cap–weighted) methods of capturing returns. Without robust strategy, implementation, and monitoring, these approaches can deliver investment outcomes that, with hindsight, may be, well, not so smart.
[93]See the influential work of Merton (1973).

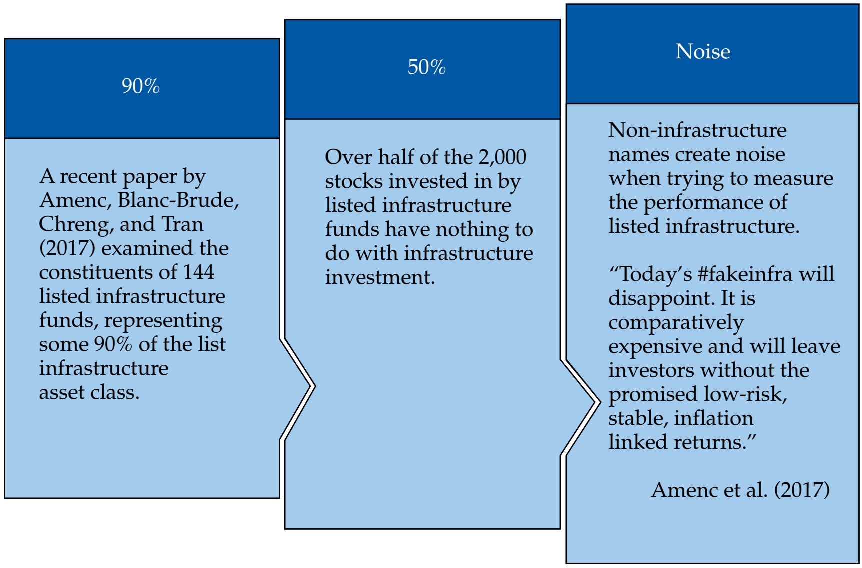
opportunity set that is modeled in our investment process (see the "Inputs" in Exhibit 10). Despite the extensive use of the term "asset class" in the vernacular of modern finance, there is a paucity of literature that genuinely attempts to define and classify its meaning.[94] The definition by Greer (1997) suggests that "an asset class is a set of assets that bear some fundamental economic similarities to each other and that have characteristics that make them distinct from other assets that are not part of that class." Several articles testing these ideas (by using various methodologies) have been presented for a range of asset classes, as follows:

- commodities: Ankrim and Hensel (1993) examined commodities as an asset class. Mongars and Marchal-Dombrat (2006) also examined commodities and argued it is a distinct asset class;
- hedge funds: Oberhofer (2001) examined whether hedge funds are an asset class or a subset of other assets;
- private equity: Fraser-Sampson (2010) provided a detailed rationale for private equity as an asset class;
- private real estate: Hudson-Wilson, Gordon, Fabozzi, and Giliberto (2005) argued the benefits of adding real estate as an asset class; and
- infrastructure—perhaps the most controversial in recent times, whether it is public or private: Bianchi, Bornholt, Drew, and Howard (2014) found that the variation of US infrastructure index returns can be readily explained by a holding of broad US stocks and the US utilities industry. Finkenzeller, Dechant, and Schafers (2010) argued that listed infrastructure is a separate asset class because it does not exhibit the same return and risk properties as real estate. Newell, DeFrancesco, and Peng (2011) showed that listed infrastructure is highly correlated with stock returns. Rothballer and Kaserer (2011) reported similar results.

The current debate regarding whether the returns from infrastructure are best captured through public (listed) or private markets is emblematic of a broader debate regarding the future of real asset investing. Some analysts have suggested that listed infrastructure is a *fake* asset class because it is fully subsumed by existing asset classes or risk factors (see Bianchi, Drew, and Whittaker 2017; Blanc-Brude, Whittaker, and Wilde 2017). **Exhibit 22** examines the idea that it is fake. As to be expected, such findings have

[94]The discussion in this section is based on the work of Bianchi, Drew, and Whittaker (2017). We thank and acknowledge Robert J. Bianchi at Griffith University and Tim Whittaker at EDHEC for their contributions to and insights for this important debate.

Exhibit 22. The Rise of #FakeInfra



Source: Amenc, Blanc-Brude, Chreng, and Tran (2017).

received heavy criticism from those managing money in this asset class (see Newell 2017; Southwell 2017).

Whether an asset class is real or fake is a debate for another forum. The substantive issue is how best to capture returns—through public markets, private markets, or a combination. Fiduciaries do not have the luxury of endlessly debating what an asset class is; they must define the opportunity set so that the IPS can be resolved and the beneficiary's interests served (Chapter 5).

Investment professionals are trained to think in the twin domains of reward and risk. Consideration of how best to capture returns demands that the fiduciaries also formalize their views on risk—not simply at the asset-class level but for the total portfolio. This is best captured as an investment objective in the HIO as it will then become a criterion by which competing asset allocations are judged.

Let us agree that in a multiasset portfolio setting, equity risk is the *primus inter pares* (first among equals). So, should not the addition of, say, real assets to the portfolio be considered in terms of their contribution (or not) to diversifying equity risk, ability to access the illiquidity premium, and thus ability to improve the likelihood of achieving outcomes? If, for example, the fiduciary does not believe in the presence of an illiquidity premium, their assessment of the marginal benefit of holding real assets might not be positive.

The key issue is that fiduciary investors should be spending far more GT on managing risk exposures, and marginal benefits and costs, at the *total portfolio* level (Gupta 2016). This issue is far more relevant than second-order debates about, for example, public versus private assets.

Although private assets entail additional cost and complexity, research highlights the accretive nature of the asset class at the total portfolio level (Harris, Jenkinson, and Kaplan 2014). Before we search for any incremental yield, however, we need to satisfy ourselves that it exists. This due diligence would normally be done, as suggested in Chapter 4, when the governing body defines its opportunity set of eligible asset classes. In some cases, organizations express such strong conviction in things like the illiquidity premium that they appear in the governing body's set of investment beliefs (Chapter 2). Counterbalancing such a belief are other important considerations, such as the need for liquidity to meet cash outflow requirements and fee budgets. Again, we see the tension between a purportedly good thing (the positive illiquidity risk premium) and a competing obligation (the need to finance cash outflows). The governing body must balance these competing forces.

Assuming that the governing body has formed a positive view about the illiquidity premium—and given the increasing allocations to private markets around the world—we now consider how best to capture the illiquidity premium (an incremental yield) from private markets. In our discussions with fiduciary investors, we typically find good discipline regarding the reward-to-illiquidity ratio on *entering* private-asset transactions. Good governance would require fiduciaries not only to consider this ratio on acquisition but also to monitor how the ratio might change through time. Good governance calls for a disciplined process for exiting. The global financial crisis of 2007–2008 highlighted how suddenly the degree of illiquidity in a portfolio can change.[95]

This issue is important for the governing body because, arguably, one of the (many) effects of quantitative easing by central banks in recent times has been compression of the illiquidity premium for private assets. Investors holding long-duration assets have greatly benefited over the past decade from such compression. Therefore, a fiduciary may argue that a defensible rationale exists for the active management of private assets to dynamically manage the idiosyncratic nature of these assets over time. The higher-order issue for the fiduciary relates to whether a *skill* in capturing the liquidity premium is

[95]We encourage governing bodies to have a way to monitor portfolio illiquidity—either through liquidity bucketing (see Kentouris 2017) or liquidity cascades.

needed by those below the line to achieve targeted hurdle rates of return.[96] And, if so what evidence does the investment organization have that it can identify such skill *ex ante*?

Again, the central issue is not liquidity versus illiquidity. The key issue for those above the line, informed by the investment objectives in the HIO (Chapter 4), is whether those below the line can use Steps E&R and I to create a cogent investment program at the total portfolio level that clearly guides how returns are best captured. In this case, "best" is to be judged in the context of beliefs (Chapter 2) and investment objectives (Chapter 3) because no universal set of beliefs, or HIO, is objectively best. "Best" depends, in part, on the beneficiary and the investment challenge the beneficiary faces. The investment policy should formalize for those below the line:

- *aims*—including documentation regarding the role of the asset-class, intra-asset-class diversification guidelines, the sensitivity of the asset class to economic activity and public equities, and its inflation-hedging qualities;
- *expected returns*—which may be benchmark related, peer related, and/or absolute, such as CPI plus 5% per year;[97] and
- *risks*—including the policy on volatility and the risk budget; for private assets in particular, the fiduciary needs to *articulate* the organization's appetite for idiosyncratic risk, liquidity, leverage, the valuation cycle, and fees.

Clear policy about private-market exposures is required for those below the line to ensure that return hurdles are set *ex ante* and reviewed over time in light of the opportunity cost of capital. Moreover, the fiduciary must provide settings for sector exposures, manager arrangements (including country limits), and mandate structures.

Finally, a useful approach is for those above the line to recall that many of the features that make private assets attractive are the result of complexity and private, asset-level information. Unlike public markets, private-market holdings can be (dramatically) affected by the decisions made by co-investors. The governing body might assess what could happen if a patient co-investor is

[96]One school of thought about private assets is that once you have purchased the asset, you have basically decided the value of its future cash flows. For this reason, many investors are very careful about the price they pay for private assets. A second school of thought says that, even after the asset is bought, a manager can add significant value over time through active management of the asset. An understanding of how a manager approaches this active management is a criterion that the governing body, or its delegate, should consider in evaluating the manager during manager selection.

[97]Benchmark selection for private asset classes is the world's biggest can of worms, which we will note, but not cover, here.

no longer patient about tying up capital. Fiduciaries should keep in mind that investment returns are not only a function of the economics of the underlying business.

In short, a well-functioning, collaborative, and trust-based *culture* between those above and those below the line can generate significant value. We would go so far as to assert that such a culture would be a source of comparative advantage for the fiduciary investor.

Developed vs. Emerging Markets. Equities are a key return and risk driver of portfolios governed by fiduciaries, and historically, equity portfolios have been heavily home biased. Some portfolios still are. Globalization, however, has nudged investors to think about return drivers outside of their home countries.[98] A popular way of approaching global diversification within equities (and, increasingly, in other asset classes) is by investing in emerging economies.

The phrase "emerging markets" (EM) was coined by Antoine van Agtmael in 1981.[99] Setting aside the important definitional debate regarding EM (e.g., is EM defined by region or by income; what about frontier markets?), EM appears to form a significant portion of the opportunity set for fiduciary investors both now and in the future. So, what is the best way to capture the EM risk premium across the universe of eligible securities?

Although we explore the issues related to the development of investment strategy for EM in this section, keep in mind the potential for "silo" thinking in regard to sub-asset-classes. To avoid such thinking, the governing body needs to be clear about such issues as how including EM equities in the opportunity set facilitates *capturing the equity risk premium*.

Fiduciaries do not need to become subject-matter experts in EM equities in order to invest in them. They do need to govern a process, however, in which the case can be made or refuted that the EM risk premium will assist with the achievement of investment objectives (Chapter 3) in the HIO (Chapter 4). Therefore, fiduciaries need to be aware of some of the practical governance considerations when including sub-asset-classes, such as EM equities. For example:

- *Typology*—Is categorizing equities into developed versus EM equities the right way to think about the total opportunity set for equities?
- *Heterogeneity*—Each emerging economy has its own characteristics, opportunities, and risk. *Prima facie*, implementing an allocation to, say,

[98]For an excellent discussion of multiasset investing in the Asia-Pacific region, see Gupta (2016).
[99]A description of Van Agtmael's work can be found in "An Emerging Challenge" (2010).

public equities in Chile or Poland is a very different proposition from doing so in, say, India. Does the organization have the capabilities to assess and manage such variations *within* a sub-asset-class?

- *Access*—Should we capture returns via a broad EM index or allocate capital to a country-specific active (or passive) manager, or both? Indexing provides broad diversification, and allocations to specific areas or countries may provide the opportunity to hire or acquire skills to take advantage of the particular country's idiosyncrasies. In short, each method of capturing EM returns brings with it its own risks. It is the role of the fiduciary to interrogate the investment case.
- *Portfolio construction*—Is the allocation to EM a source of diversifying market return (a beta) or an opportunity set within which to earn a skill premium? Put another way, is EM a beta play or an alpha play or some combination of the two?
- *Implementation approach*—Depending on the answers to the previous questions, the fiduciary might be drawn to a particular implementation approach (see Chapter 7). For example, an index exposure to EM without any physical presence in the country is relatively easy to achieve by using a delegate of the governing body. Active management, in contrast, is challenging without a physical presence in the country.[100]

Finally, a variety of below-the-line issues regarding EM investing have not been explored here, including hard versus local currency,[101] to hedge or not to hedge, and the rapid growth in the issuance of sovereign and corporate bonds and loans. Many of these nuances will be decided by the governing body with advice or will be delegated to internal or external management.

Unlisted Funds vs. Exchange Traded Funds. Concerning this decision, the reader might fairly ask, what's the fuss? Why are we even debating this? Passive beta for, say, US equities can be easily accessed via mutual funds or ETFs. Providers such as the Vanguard Group offer both structures and the same methodologies to capture returns.[102] Surely, this decision is a no-brainer, a simple operational matter best delegated to management.

[100]Fiduciary investors should also control the EM indexes against which performance is benchmarked. At times, the concentration in market cap–weighted benchmarks in EM can be particularly backward looking (and with heavy exposure to commodities and manufacturing).
[101]See Wojcik, MacDonald-Korth, and Zhao (2017) for the financial geography of foreign exchange trading.
[102]We thank and acknowledge Kathryn Young, CFA, for her insights regarding this issue.

Even when the underlying exposures of two instruments are the same (or substantially the same), certain issues require policy guidance for those charged with below-the-line implementation. These policy issues include the fiduciary investor's views on

- investment horizon,
- ongoing investment management fees,
- transaction costs, and
- the tax implications of capturing returns in the various structures.

Analysis of the combined effect of these four factors is far from straightforward. Consider, for example, the impact of the redemption process on the taxation of returns. In the case of an investor using unlisted funds, the redemption from other investors in the pool can trigger a capital gains tax (CGT) liability for all investors. In the ETF context, one investor's decision to redeem (sell) has little impact on other investors holding the same ETF. These ETF units are not canceled but rather are purchased by other investors at the prevailing market price.

ETFs may be favorable for fiduciary investors who prefer their CGT liability to be deferred into the future—with more money deployed in markets for as long as required (i.e., a form of capital efficiency). Both instruments pay the same tax rate on the gains, but the timing of the liability can be different. So, the present value of the tax paid over time is different. Ultimately, developing above-the-line guidance to address these matters can be largely resolved through clarity of (to name but a few)

- legal personality of the investor,
- taxation status of the investor,
- the fee budget, and
- the cash flow profile.

Fiduciary investors know all too well that beneficiaries receive after-fee, after-tax returns. A combination of good investment strategy and sensible management should translate into improved outcomes for the investment objectives (HIO; Chapter 4). We encourage fiduciaries to consider issues of implementation efficiency when formulating their views on the best way to capture returns. The effective fiduciary balances execution (capturing returns) with the resourcing required to efficiently execute the plan. As with the investment objectives outlined in the HIO, this balancing act involves trade-offs.

Cost vs. Quality. A classic trade-off facing the fiduciary is cost versus quality. One issue is whether a positive relationship might exist between cost and quality. Can we build a simple economic model in which higher costs incurred by the customer yield higher quality? If the management expense ratio is used as a proxy for cost, risk-adjusted returns as a proxy for quality, and the beneficiary as a proxy for the customer, evidence from the investment management industry would reject the hypothesis in a simple model (Malkiel 1995; Gruber 1996; Drew and Stanford 2003; Harbron, Roberts, and Rowley 2017). A less generous critique of a simple model would be that, given the evidence, the sign of the predictor should be changed from positive to negative.[103]

In this section, we consider cost and quality in the context of the best way to capture returns.[104] Specifically, we use a *continuum* approach to allow the fiduciary to control for cost and quality of activities below the fiduciary line. We view the setting of a fee budget as a critical task for the governing body in determining the resourcing required to **I**mplement (Step I) the IPS (Chapter 5). The concept of *value for money* is important for the governing body both to fulfill its fiduciary duty and to signal to the beneficiary the value proposition of the investment organization they have a relationship with.

The very discipline of formally setting a fee budget allows the fiduciary investor to seek the benefits of scale and allows for a form of self-imposed scarcity as a discipline for the investment program. For instance, a governing body with a fee budget of, say, 20 basis points announcing that it is seeking to earn illiquidity premiums through a significant private-assets program would be inconsistent. Remember, alignment between settings within the *OPERIS* framework results in coherence between the ambitions of the governing body and their realization.

As a way to illustrate the trade-off between cost and quality, we return briefly to our earlier discussion on how best to capture the equity risk premium:

- *Traditional market cap–weighted beta*—If the objective is to capture the returns of a traditional market cap–weighted index, passive strategies are the obvious choice. Costs are very low, and quality can be gauged by simple metrics, such as tracking error. The vehicle through which access is obtained remains a matter of choice (see the previous section).

[103]For evidence on DC plans with respect to fees and risk-adjusted performance, see Drew and Stanford (2003).
[104]We consider the broader issues of monitoring, reporting, and review in the next two chapters.

- *Factor premiums*—If the fiduciary investor is seeking to harvest factor premiums (or smart betas) in equities, cost is a little higher than with an index strategy. Quality in this context would be the efficiency and effectiveness with which the factor is harvested. Success would have to be considered against an appropriate factor-based benchmark (*not* a traditional market cap–weighted index). The wisdom of a strategy of harvesting factor premiums can (and should) be tested, however, by comparing the results with those of a passive, cap-weighted benchmark.
- *Skill premium*—Finally, voluminous research is available on the challenges facing the fiduciary wishing to earn a skill premium through active management in equities. Such an approach requires a profound understanding of how the active manager attempts to add value over time (Schaus and Gao 2017). This decision would take more than the 30 minutes allocated in our hypothetical investment committee agenda. An issue worthy of considerable investigation is whether the investment thesis of the active manager is capacity constrained. We encourage those seeking to capture a skill premium to consider the kinds of partnerships they wish to form with active managers. If a long investment horizon is a source of comparative advantage for the fiduciary investor, it would seem to follow deep, long-horizon partnerships with a select group of active investment managers—perhaps through an equity stake or a management expense ratio that reflects the fiduciary as a cornerstone investor in the fund. This strategy encourages alignment of behavior, incentives, and outcomes.

We could apply the same ideas regarding cost, quality, and the capturing of skill premiums to private assets (such as private equity addressed earlier). Given that many fiduciary investors attempt to capture the equity risk premium—through a traditional market cap–weighted beta, factor premiums, and/or a skill premium—we encourage investment committees to provide guidance on cost and quality not only at the asset-class level but also specifically at the sub-asset-class level. Such a decision is, by design, constrained within a given fee budget set by the fiduciary to demonstrate value for money. This approach also encourages the fiduciary's scarce capital resources to be allocated below the line to capture those premiums with the highest probability of contributing to the achievement of the investment objectives (Chapter 4).

Physical vs. Synthetic. Although fiduciary investors typically do a good job of setting practical parameters through a risk budget and a fee budget, a final area worth considering for the best way to capture returns is the capital efficiency of the investment program—that is, a formal capital budget. Does the IPS provide clear guidance on whether holding the agreed investment exposures should be undertaken physically, synthetically, or both (which affects the amount of capital deployed)? Fiduciary investors want their investment capital to be working for them as efficiently as possible to provide the best probability of achieving outcomes with minimum risk.

In practical terms, does the IPS allow those below the line to consider the most efficient way to gain liquid exposures—such as equity beta—through an equity index futures contract instead of, say, an unlisted fund or ETF? Such an implementation policy would potentially free up scarce capital (and possibly a portion of the fee budget) for, say, illiquid exposures (such as an allocation to private core real estate). This approach necessitates greater-than-usual governance oversight (and resourcing) of those activities below the line that would, in effect, coordinate, deploy, and manage capital across the investment program. A fiduciary with an internal treasury-like function and a mandate to capture returns in the best way possible (where "best" is a function of capital efficiency) could provide another source of comparative advantage over other investors.

In the DB plan context, completion portfolios are commonly used to reduce the risk of mismatches between existing assets and liabilities.[105] This approach has applications in other contexts; overlays might be used to efficiently implement, say, dynamic asset allocation decisions.[106] We are aware of DC plans with very strong cash inflows. Without the ability to capture returns via synthetic means, it is virtually impossible to be fully invested at all times. Therefore, derivatives are a vital tool to capture returns and ensure capital efficiency for the benefit of a DC plan member.

Some large fiduciary investors start the process of portfolio construction in the context of a *reference portfolio*—a simple investable benchmark portfolio that guides the risk budget (and other parameters) for the actual portfolio.[107] In this context, capital efficiency, using both physical and synthetic levers, is

[105]For more on the role of equities and portfolio completion, we refer readers to an interesting interview with Björn Kvarnskog from Australia's Future Fund (White 2017). For more on liability-driven investing and the role of the completion manager, see Max Guimond, "Completion Management: The Capstone of an LDI Strategy," LDI Programme Series (December 2015): www.standish.com/us/en/Research-and-Insights/asset_upload_file629_190487.pdf.

[106]For further discussion of the efficient implementation of dynamic asset allocation decisions, see Elder (2016).

[107]Reference portfolios typically take the form of an investable, liquid, public-market proxy (including some combination of growth and fixed-income betas). For a practical example, see New Zealand Super Fund's transparency regarding their reference portfolio composition at www.nzsuperfund.co.nz/how-we-invest/reference-portfolio.

central to the value proposition of the approach. We have consciously raised the issue of the capital budget last because for fiduciary investors, a capital budget requires a governance budget and sophistication (typically the purview of large sovereign wealth funds and large fiduciary investors). These ideas are rapidly gaining adoption, however, by large DC plans, DB plans, and E&Fs. Regardless of the size and scale of the fund, good investment governance demands that those above the line acknowledge the role of capital efficiency when considering the best way to capture returns.

And, as the fiduciary investor knows, capturing returns is not cost free. Unfortunately, the global fee debate is commonly framed in terms of the "money" component of a value-for-money assessments. We suggest the perhaps unpopular view that the fees paid are more than simply active investment manager remuneration; rather, they are the cost associated with pursuing an outcome.[108]

By appropriately executing and resourcing the process in Step E&R, the governing body can improve alignment with those below the fiduciary line, sharpen decision rights across the investment organization, and reduce opacity. Such a process—characterized as defensible, repeatable, and documented—provides the foundation from which implementation excellence can be pursued, which is the topic of the next chapter, Step I (**I**mplement).

Points for Reflection: Chapter 6. Below the Fiduciary Line: "The Doing"

As a fiduciary:

- Can I say that the governing body appropriately delegates responsibilities (when relevant) while retaining ultimate accountability?
- In situations in which we share responsibility with delegates, am I clear as to their decision rights?
- Can I point to evidence of a culture of beneficiary-centric decision making across the investment organization?
- Can I point to a documented chain of trusted relationships across the investment organization that is well governed?
- Am I involved in approving an investment governance budget annually?

[108]For a study regarding the use of tail risk hedging, see Basu and Drew (2015).

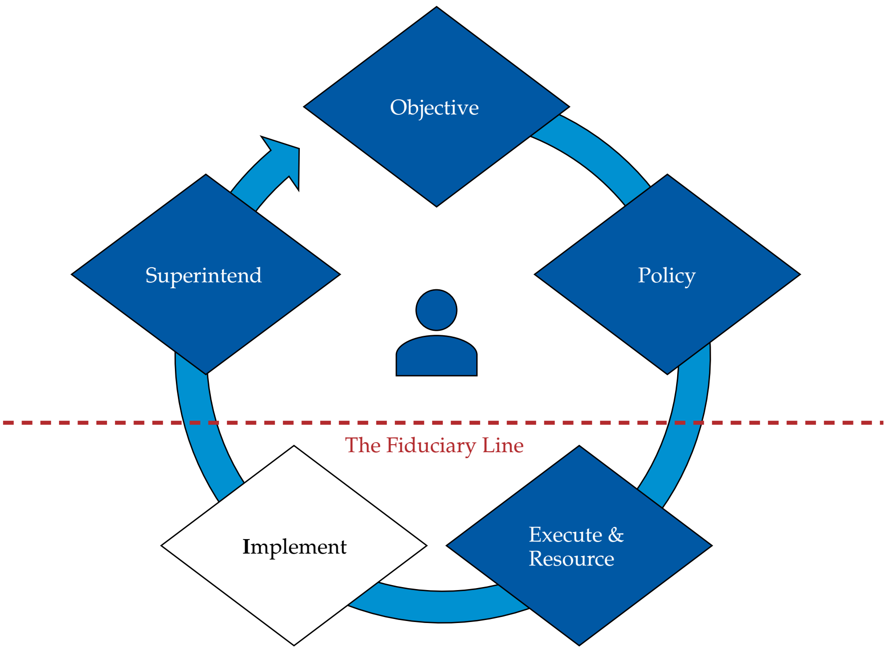
- Can I convincingly argue that our investment governance budget reflects the scale, complexity, and nature of the investment issue before the beneficiary?
- Can I show that our investment committee's use of time and resources mirrors our priorities?
- Do I ensure that asset allocation matters receive due attention? If not, why not?
- Is manager selection a source of comparative advantage for the investment committee or me? Does the presence (or absence) of this advantage determine the time spent on this activity?
- Can I recall the last time that we considered how best to execute and resource the investment program?
- Can I explain how cost considerations are incorporated into deliberations about capturing returns?
- Can I show how the governing body considers value for money in relation to investing?

7. The Many Paths to Implementation

> "In general, an implementation must be *conservative* in its sending behavior and *liberal* in its receiving behavior."
>
> —*Jon Bruce Postel*[109]

We are now entering the penultimate step in the *OPERIS* framework—Step I, **I**mplement (see **Exhibit 23**). As discussed in previous chapters, the governing body can craft the investment strategy in a variety of ways to solve the investment challenge. The seeds of the implementation step were sown in Step E&R—executing and resourcing the investment strategy (Chapter 6). As with the crafting of investment strategy above the fiduciary line, many paths lead to implementation—a continuum stretching from outsourced through insourced.

Exhibit 23. *OPERIS* Framework: Implement



[109]Jon Bruce Postel (1943–1998) was a computer scientist known for his contributions to the development of internet standards. Quote from "Internet Protocol: DARPA Internet Program Protocol Specification," RFC 791 (September 1981): https://tools.ietf.org/html/rfc791.

Step I is the least transparent of all the steps in the investment process. It is at this point in the process that the governing body's reliance on delegations is at its greatest. During implementation, the guardian of "other people's money" literally hands that money to someone else—typically, an investment manager.[110] In Step I (**I**mplement), links are added to the governing body's metaphorical chain of trusted relationships, a concept first introduced in Chapter 1. Not unexpectedly, any misalignment of the links in this metaphorical chain can severely damage not only Step I but also the entire investment process.

As with Step E&R, we conceptualize Step I as also being located below the fiduciary line. The colocation of these two steps below the line is important. For investment governance to go from "good to great" (to use Collins's much-quoted 2001 epithet), the governing body's efforts need to illuminate a clear path, aligned with the investment policy statement, toward implementation guided by Smith's ([1776] 1937) "anxious vigilance." In fact, achieving ongoing implementation excellence can be a source of considerable comparative advantage over other investors. In this chapter, we consider the following essential problems facing the governing body as it oversees Step I of the *OPERIS* framework:

- beauty parades, the accidental fiduciary, and insourcing;
- due diligence investigations;
- the role of the asset consultant; and
- conflicts of interest.

Before we discuss these problems, we acknowledge that they are but a subset of the complete set of implementation issues below the fiduciary line. We selected them because of their challenging and pervasive character. Selecting them is also an admission that in our professional journey, the search for the one "right" way to implement investment strategy has been futile. The effective fiduciary is pragmatic in following an implementation path, which must be led by the investment objectives and must agree with that most important concept—the hierarchy of investment objectives (HIO) in the governance of the investment process (Chapter 4).

[110]The reader might think the use of "guardian" in this context is gratuitous, but the fiduciaries of the sovereign wealth funds of both Australia and New Zealand—respectively, the Future Fund and the New Zealand Super Fund—are called "guardians."

Beauty Parades, the Accidental Fiduciary, and Insourcing

Traditionally, fiduciary investors have delegated some—or all—of the responsibility for the management of the beneficiary's assets to external investment managers. In this section, we explore some of the challenges of implementation paths that tend toward "outsourced" implementation and those that tend toward "insourced" implementation. We pause here to stress (again) that the fiduciary cannot outsource accountability. The governing body must have clarity (and ongoing assurance) about delegated responsibilities relating to investment implementation.

We begin with the role of beauty parades as a method of vetting investment managers to undertake implementation on behalf of the governing body. Beauty parades have played an important role in what Clark and Monk (2017) have described as the "precontract screening" of investment managers. Beauty parades provide a forum in which the investment management firm can emphasize the benefits of *its* investment process (Clark and Monk 2015). These parades allow the governing body to metaphorically "kick the tires" of a potential vendor—or as much kicking as can be done in, say, 30 minutes (see Chapter 6). Governing bodies typically work with their asset consultant to create a shortlist of managers that will "stand out from their peers, or those that will at least be a safe pair of hands" (Clare and Wagstaff 2011).[111]

We believe any manager selection process that relies heavily on a beauty pageant is largely ineffectual. As noted by Tan Bhala, Yeh, and Bhala (2016), when manager selection is based on beauty parades, the governing body may "conflate 'liking' the applicant fund manager with future good performance." The risk is that the governing body may "hard bake" representative bias into the implementation process, which prioritizes traits such as attractiveness, appearance, and personality, perhaps unwittingly, as being related to superior *future* investment performance (Tan Bhala et al. 2016). As many readers have witnessed first-hand, such a process can border on the farcical when the short-listing criteria are based primarily on historical investment performance.[112] As Clare and Wagstaff (2011) noted, "If you have never experienced a fund management beauty parade before be prepared for lots of sharp suits and dazzling PowerPoint wizardry."

How did we get to this place? Is this really the best path to implementation?

[111]As we discuss later in this chapter, the criteria used to generate the shortlist are critical.

[112]An important field of academic and industry research is concerned with whether the track record of an asset manager is information rich regarding future performance—namely, the hot-hand anomaly, see Hendricks, Patel, and Zeckhauser (1993); Brown and Goetzmann (1995); Gruber (1996); Carhart (1997); and Wermers (2000).

Exhibit 24 provides a statistical look at the backgrounds of people serving in fiduciary positions. As the reader can see, the service of many of them could be described as *accidental* in nature. We do not use the term as any form of disrespect, only as descriptive of how the people became fiduciaries. As we suggested in Chapter 1, many individuals become fiduciaries as a function of their roles:

- the human resources (HR) professional who becomes a fiduciary as a result of her daily responsibilities with the company's retirement plan,
- labor representatives (or union officials) and employer representatives who are appointed to the fiduciary board of a defined-contribution (DC) plan,
- the chief financial officer who, having had a long and distinguished career as a widget counter, is an *ex officio* member of the widget company's defined-benefit (DB) plan board, or maybe
- a leading college professor of oncology who is appointed to the board of a large charitable fund that supports cancer research.

The substantive point is that, in many instances, some of those above the line have limited technical ability to independently evaluate various managers in accordance with the fiduciary obligation of care. Many fiduciaries are not in the governing body because of their technical abilities but because

Exhibit 24. Who Are the Decision Makers? Who Are the Voting Committee Members for Administration- and Investment-Related Decisions for the DC Plan?

Administration-Related Decisions		Investment-Related Decisions	
Job/Department	Percentage	Job/Department	Percentage
Human resources	**64.9%**	Executives (e.g., CEO, CIO, CFO)	50.3%
Executives (e.g., CEO, CIO, CFO)	50.3%	Treasury/Finance	49.7%
Treasury/finance	39.7%	**Human resources**	**42.4%**
Legal	29.8%	**Investment staff**	**37.1%**
DB plan fiduciaries	23.2%	DB plan fiduciaries	33.8%
Other	16.6%	Legal	23.8%
Investment staff	**10.6%**	Other	17.2%
Unsure	1.3%	Unsure	0.7%

Note: Multiple responses were allowed.
Source: Callan Associates (2017).

they represent a beneficiary (or group of beneficiaries). So, the term "limited" should not be taken as a criticism, merely an observation.

The information asymmetry between, say, an experienced HR professional (above the line) and a seasoned investment manager (below the line)—even with the best of professional development—is significant. To be fair to HR professionals, even for an investment professional with a PhD in financial economics and many years of experience, the most likely outcome after evaluating anything for a short time (say, 30 minutes) is debatable (see Chapter 6). In this light, manager selection by beauty pageant is a symptom of a much larger implementation problem, *not* the cause of the problem many governing bodies face.

Reliance on beauty parades (as a manager selection process) can create a cycle that compounds the impact of poor decisions over time. As observed by Arnott, Kalesnik, and Wu (2017), "Institutional investors often sell funds (or fire managers) once they have underperformed the market over the last two to three years, typically replacing them with funds or managers that recently outperformed." This sort of implementation is value destroying.[113]

We suggest that beauty parades and an overemphasis on past performance in manager selection have been a catalyst for the trend toward *insourcing* investment implementation. Up to this point, we have assumed that the fiduciary uses only outsourced investment implementation. As scale increases, however, an insourced model can reduce costs (with the fee budget being a known and significant source of cost for the governing body) and potentially mitigate some of the concerns that keep fiduciaries awake at night, including the following:

- alignment and information asymmetry;
- fee levels (base and incentive);
- risk (in all its forms) and assurance;
- environmental, social, and governance issues; and
- culture, myopia, tailoring, control, fraud, scalability, flexibility, liquidity, and many more.

[113]An important counterintuitive insight is provided by Arnott et al. (2017): "If a manager has performed brilliantly and the manager's assets are at record-high valuations relative to the market, investors should arguably redeem, not invest more. If a manager has performed badly and the manager's assets are at an exceptionally cheap relative valuation, investors should seriously consider topping up, rather than firing the manager. We are not suggesting that past performance is irrelevant, only that it's a terrible predictor of future prospects. Likewise, past success is not always a sell signal."

Fiduciary investors can evaluate the decision to partially (or fully) insource investment implementation by using traditional business methodologies (such as net present value [NPV] calculation). We encourage the fiduciary to consider the following issues regarding the decision to insource or not:

- Will insourcing investment management increase the probability of the investment organization achieving its investment objectives? As we could see from the HIO in Chapter 4, objectives can be about much more than simply time-weighted returns.
- Will the decision to insource be positive in an NPV sense? Again, finding an answer would require more than simply evaluating the net cash flow resulting from fee savings; it also would have to formally incorporate cash flows associated with noninvestment staff, technology, systems, processes, and heightened governance *resourcing*. Net cash flow can be estimated with (some) accuracy; the much harder question is the selection of the discount rate.
- Does the broad investment organization have the maturity and necessary infrastructure to support running internal investment management mandates? What would be the "interaction costs" of insourcing for the rest of the organization?[114]

In their own words ...

> "Appropriate resources can improve efficiency . . . [allowing] focus on participant outcomes and plan utilization."
>
> —*Chris Anast and Sue Walton,*
> *Senior Vice Presidents, Capital Group*

The move to insourcing, as expected, also requires due diligence to be applied to vendors (benchmarking services, order management, risk management, performance, and data vendors) and a range of other operational and

[114]An excellent note by Williams (2017) explores insourcing (and associated costs and benefits) for large fiduciary investors, specifically DC plans in Australia.

regulatory issues. In addition, items such as culture and people are harder to capture in an NPV analysis evaluating an insourcing decision.[115]

In this regard, we think of culture and people in a broad sense. Would the move to insourcing investment implementation result in more conservatism in the investment approach (e.g., we cannot lose money)? The same variation in performance observed in outsourced investment managers will inevitably be observed in internal investment processes. Now the fiduciary faces the challenge of when to fire internal staff. How would the governing body handle this issue? Would research and investment innovation be sacrificed on the altar of cost efficiency? Would a culture of *empire building* within the investment organization flourish? How would the culture of, say, a charitable or not-for-profit organization, coexist with the culture (and remuneration) of an internal investment team?

For us, these really difficult questions deserve much consideration (and critical reflection) by the governing body, even if that body is not the party that makes the eventual decisions in the particular circumstances (because it has been delegated to someone else). Williams and Cornelius (2016) described the deliberations regarding the insourcing of investment as "the asset owners' conundrum."

The outsource-versus-insource investment implementation debate is an important one. Although any new business venture (and associated business planning) is risky, the decision to insource will be financed indirectly by those to whom the fiduciary duty is owed (i.e., the beneficiary). Therefore, due diligence on any decision should arguably be made in accordance with fiduciary obligations of care. One might even argue that the fiduciaries ought to behave like they are protecting an equity investment owned directly by the beneficiary (which it essentially is).

The move to insourcing also requires a high level of organizational maturity to ensure its success. What happens when, say, the governing body assesses the balance of benefits and costs of internal management as *inferior* to the external equivalent (see the Harvard Management Company as a living

[115]We believe that risk management deserves a special mention in this context. Fiduciary investors do not have the long risk management experience of banks, mainly because of differences in regulatory treatment, which in turn, resulted from fiduciary investors typically not being highly leveraged organizations like banks (Drew and Walk 2016).

case study)?[116] Our working hypothesis is that it may be far more difficult to dislodge an entrenched internal process within the investment organization than it is to issue a termination letter to an external party.

These remarks are not intended to be discouraging for fiduciary investors. Far from it. The extraordinary growth in funds under management in the investment organizations we recount in this book—DC plans, DB plans, and endowments and foundations—could enable insourced investment implementation to become another source of comparative advantage that the fiduciary holds over other investors.

Due Diligence Investigations

Due diligence investigations are a vital component of the fiduciary's overall process of assurance. These evaluations typically begin with consideration of a screen based on the manager's investment performance: performance measurement (track record), attribution (the "how"), and performance appraisal (skill or luck). From this initial screen, good practice considers wider matters, such as people, organizational capacity, investment process, and broad operational due diligence concerns. Good resources are available to fiduciaries for the standardized process of manager due diligence; they ensure that a consistent, evidentiary process is followed for both external and internal managers.[117] Brakke's (2016) work again underscores the importance of being

[116]At the time of writing, Chung and Lim (2017, for example) are reporting on the Harvard Management Company's 2017 annual report in the *Wall Street Journal*. This provides those above the line with a living case study of the costs of going, perhaps against the current tide, from a predominantly insourced model to an outsourced design. Chung and Lim quoted the new CEO, N. P. "Narv" Narvekar, saying that the returns from the endowment are a "symptom of deep structure problems" with the US$37 billion endowment fund. Chung and Lim (2017) note that "Mr. Narvekar said the endowment was working to be viewed as a reliable client after years of leadership churn that had cast its appeal as an investor into question. 'It will take about five years to remake its illiquid (private) investments and two years for its public markets,' he wrote. It will also take time to upsize investments with money managers who are not accepting much money anymore." We will watch this unfolding story with much interest—what an interesting topic for a (Harvard) case study!

[117]An excellent resource has been developed by the Australian Institute of Superannuation Trustees entitled "Investment Manager Operational Due Diligence Guidance Note" (AIST 2016). We also recommend the outstanding work by fi360 (2016) in developing their "Prudent Practices for Investment Stewards" and Tipple's (2010) work on the tangible "4 P's" (people, process/philosophy, portfolios, and performance) and the intangible "4 P's" (passion, perspective, purpose, and progress) is required reading for CFA® Program candidates. A good practice is to formally incorporate operational due diligence matters into Tipple's framework to evaluate such issues as compliance systems; operations, trading, and technology platforms; third-party vendors; disaster recovery; organizational structure, ownership, and incentives; and the investment managers' key service providers, including banking arrangements, custodian, and auditors (hopefully, you will find no "auditor shopping").

forward looking when undertaking the due diligence required to implement the investment strategy:

> Due diligence in manager selection has become too much of a standardized documentation process. It should be an investigative discovery process. Rather than focusing on past performance of individual managers, the focus in due diligence should be on the defining characteristics of the investment management organizations where the managers work. In the long run, organizational structure, not past performance, is likely to drive future performance. (p. 1)

The decision by the governing body to add another link to its metaphorical chain of trusted relationships (i.e., appointment of an investment manager) requires high-quality manager due diligence. This comes at a considerable cost (e.g., governance time, internal resources, asset consulting fees).[118] This is another practical example of the importance of due diligence in the governance budget of the fiduciary investor.

As economists, we view the resources dedicated to due diligence as being a sort of "production possibilities frontier" for the investment program—a way of answering the question, what's possible? Low budgets will naturally lead to an implementation path that is largely passive. In such a model, the prudent practice is to allocate much of the budget to routine operational due diligence. As Brakke (2016, p. 2) wisely reminded us, however, what seems on the surface like "fairly modest" due diligence requirements for passive investing still require "careful consideration." **Exhibit 25** showcases Brakke's thoughts on due diligence in manager selection. When more of the governance budget is made available for due diligence, additional paths to implementation emerge.[119]

Fiduciaries with strong investment beliefs (Chapter 2) will have due diligence processes and procedures that are consistent with those beliefs. For example, a governing body that has a strong belief in the illiquidity premium and the role of private assets in portfolios would be expected to devote

[118]For instance, if the due diligence process is being largely conducted by staff within an investment organization, good practice would require at least two senior investment staff members to conduct every evaluation. This practice assists with mitigating key-person risk, fraud, and potential misadventure. For specialist asset classes, processes and managers, asset consulting advice, and academic advice might also be sought as standard.

[119]We hold the work of Tom Brakke in very high regard. His blog on the research puzzle (see http://researchpuzzle.com/)—is the gold standard regarding the practical challenges of due diligence and investment manager selection. Brakke (2016) cautions that, when evaluating claims of true skill, "although a tremendous amount of information is available on active managers, getting useful, differentiated information is difficult, time-consuming, and expensive." Do we, as fiduciary investors, have the governance budget to implement an investment program dedicated to earning, say, the skill premium across all asset classes?

Exhibit 25. On Manager Selection: Organizational Alpha versus Portfolio Alpha

Qualitative versus Quantitative Information

"We need to favor qualitative information over quantitative measures. Reputation is a lagging factor, and the real organization is hidden from us. We must uncover it—that is what due diligence is all about. I suggest grading organizations ex-performance."

The Perils of the Popularity Cycle

"We should buy and sell against the popularity cycle by basing decisions on the quality of the organization, not what its recent performance has been, and analysts should act as if they have 10-year investment horizons."

Adding Value for Clients

"To add value on behalf of clients, we have to change the way we are making decisions. The focus should be on the organization and how decisions are made. We should be looking for organizational alpha, not portfolio alpha."

Source: Brakke (2016).

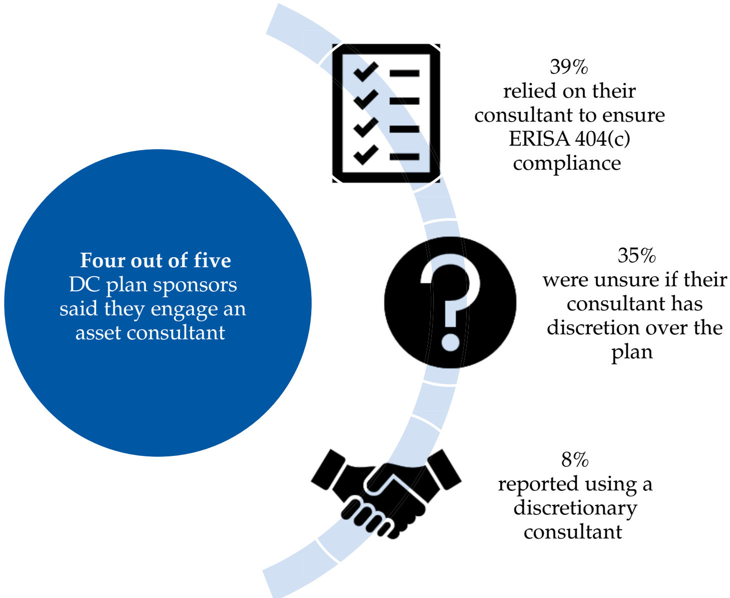
a significant portion of its governance budget to due diligence because the investments that flow from that body's beliefs necessitate doing so.

In many instances, much of the heavy lifting regarding due diligence and manager selection is conducted on behalf of the fiduciary by one or more asset consultants. That such important functions are outsourced to an asset consultant emphasizes the fact that fiduciaries must be comfortable with the expertise of their delegates and must have independent processes in place to evaluate performance. We explore these ideas in the next section.

The Role of the Asset Consultant

Asset consultants can play a critical and, at times, contested role in supporting the fiduciary investor. We suggest that the most substantial part of the "contested" nature of this relationship can (as in so many areas) be attributed to the imprecision of decision rights (Chapter 6)—a theme that will permeate this and the next section. We cannot overstate the importance of asset consultants in Step I of the *OPERIS* framework. Many asset consultants are the delegated gatekeepers between the fiduciary investors and their investment managers. **Exhibit 26** provides a 2017 survey of the role of asset consultants in DC plans. When the relationship is at its best, the asset consultant can be a "medium" through which governing boards learn about developments in their field, thereby "empowering" the fiduciary (Clark and Monk 2017). Asset consultants can greatly assist the fiduciary to ensure that the metaphorical chain of trusted relationships is aligned. And, as some have attributed to Voltaire (and others, to Spiderman), "with great power comes great responsibility."

Exhibit 26. The Role of Asset Consultants in DC Plans: A Recent Survey of 165 DC Plan Sponsors



Source: Callan Associates (2017).
Note: The plans were primarily large and mega 401(k) plans.

The governing body can take many paths to implementation. Some fiduciary investors engage asset consultants to provide an outsourced chief investment officer (or fiduciary management) function, usually abbreviated to OCIO—completely outsourcing all investment implementation. This path is popular in the endowment and foundation arena, where a third party manages the day-to-day running of the investment portfolio. Some fiduciary investors invest through the implemented consulting service of an asset consultant; this path is functionally equivalent to an OCIO. Others retain an asset consultant to undertake asset allocation strategy and manager selection. Large fiduciary investors may have a panel of asset consultants and engage consultants only for matters on which their specific expertise is highly regarded (say, an asset consultant specializing in alternatives). Some fiduciary investors have no ongoing relationship with an asset consultant; instead, they resource their internal team (and may use an asset consultant only for periodic external review)—effectively insourcing all investment implementation.

The continuum of outsourced to insourced approaches to implementation (and all the potential paths in between) must be considered in light of the fact that implementation decisions are rarely static. Consider for a moment how investors' beliefs *and* approaches to capturing returns have evolved since Markowitz's original work.[120] Investment markets are, by their nature, dynamic. Ongoing investment implementation resourcing and dynamism are thus inextricably linked. Therefore, governing boards are also constantly evaluating, testing, and in a controlled way, experimenting with their approaches to implementation. In fact, the governing body may decide at a certain juncture that a hybrid path to implementation should be followed for a particular asset class.[121]

As we know, change of any kind—in this case, the implementation path—can create ambiguity of roles and responsibilities. Clark and Monk (2015) recently observed that the relationship between governing bodies and their asset consultants is worryingly "characterized by ambiguity." And just as the costs associated with conducting investment manager due diligence can be substantial, so too can asset consulting fees account for a substantial portion of the fiduciary investor's governance budget.[122]

Obviously, specifying with precision the decision rights of the delegated asset consultant is important if the investment strategy is to be successfully implemented, but such rights are also emerging as an area of interest for *regulators*. Regulators are increasingly examining the role and responsibilities of asset consultants and have flagged a range of issues they are concerned about. The following statement from Britain's Financial Conduct Authority (FCA 2017) discusses managing conflicts of interests:[123]

---

[120]For an interesting discussion on the impact of Markowitz (1952) on professional practice, see Kaplan and Siegel (1994) and Frankfurter and Phillips (1994), both in the same edition of *Journal of Investing*.

[121]By "hybrid path," we mean the governing body is using controlled experimentation of different implementation paths in a prudent way. For instance, we could imagine a mega-hypothetical DC plan that for many years has used a good external manager for, say, private infrastructure transactions slowly building an internal capability in that area. The governing body would need to keep its assurance processes in place for the external manager (outsourced) and, at the same time, crank up an equivalent level of assurance for its emerging internal (insource) capability—a form of hybrid implementation.

[122]For instance, Hoyle (2017) reported that, for 2016–2017, the California Public Employees' Retirement System (CalPERS) expects to spend more than US$20 million on asset consulting fees alone (and around US$896 million in total external manager fees). We commend the board of administration and executive officers of CalPERS for their transparency regarding this issue.

[123]We regard the recent final report by the United Kingdom's peak regulator, the Financial Conduct Authority (FCA 2017) as a must read for those above the line when formulating policy around the role of the asset consultant (more commonly referred to as "investment consulting" in the United Kingdom). See Leahy and Drake (2017) for an excellent summary of the FCA's (2017) report. See also Smith (2016) for a discussion on the current state of the asset consulting industry in Australia.

> Although there are inherent conflicts of interest in the investment consulting business model, these must be properly managed to prevent distortions in competition that disadvantage investors. Our interim findings suggested that there were differences between firms in how they were managing these conflicts. We are encouraged that a number of asset consultants' responses suggested they are improving their policies to manage conflicts of interests. However, we are still concerned about how effectively conflicts are being managed, particularly conflicts that arise from offering both advice and fiduciary management.

Our motivation in raising these issues is *not* to take one side over another. We are motivated to shed light on some of the reasons why such ambiguity may arise when governing bodies consider the many paths to implementation in Step I. Large fiduciary investors are increasingly insourcing functions, reducing demand for the services of asset consultants, and thus placing downward pressure on their fees. In parallel, fiduciary investors and investment managers are attracting asset consultants to work for them as employees. These currents conspire to push consultants to generate alternative sources of income, such as fees for manager selection or implemented consulting.

The simultaneous provision of *above-the-line* strategic advice and *below-the-line* implementation activity creates the impression of a conflict of interest. This becomes especially apparent when the above-the-line strategic advice is both increasingly low margin for the consultant, yet valuable in that it can influence settings below the line (e.g., a preference for active management). The temptation that is created for the consultant without scruples is to create a demand for its own, more lucrative, below-the-line services. At firms that have delegated roles and responsibilities, a belief in active management among the governing fiduciaries ought to be sincere, not merely a function of the "economics of the business" (Ellis 2011). We say this knowing full well that the vast majority of asset consultants are excellent, ethical professionals.

We argue that, in the absence of good governance (Step O and Step P *above* the fiduciary line), the asset consultant will be forced to fill the governance vacuum to implement the investment program. This should *not* be the responsibility of the asset consultant alone. The beneficiaries are best served by the fiduciary's ensuring that they have an investment governance process—including the effective employment of asset consulting resources—to fulfill their fiduciary duty to the beneficiary. Without a defensible, repeatable, and documented investment governance process, the governing body can only *hope* that asset consultants are aligned with the beneficiary. Hope is not an investment policy. Hope does not achieve objectives. And hope is not a defense when the fiduciary is on the witness stand.

We encourage readers to seek out those fiduciary investors who provide an evidentiary basis for claiming best practice regarding the roles and responsibilities of their delegated asset consultants. For example, CalPERS exhibits excellence as a fiduciary investor on the topic of asset consulting and investment implementation.[124] The point is that excellence *and* independence of asset consulting advice costs something; it is up to the governing body to decide the extent of the governance budget they wish to dedicate to such peace of mind.

Conflicts of Interest

It perhaps goes without saying that conflicts of interest are, unfortunately, inherent in fiduciary investing. David Swensen, quoted in CFA Society of the UK (2013), neatly summarized that "the whole investment management area is cluttered with conflicts of interest and agency problems." Those with deep investment governance experience and extensive networks—that is, those with potentially the highest conflicts—may in fact be best placed to help the governing body obtain the assurance it requires regarding investment implementation.

The identification, monitoring, management, and mitigation of conflicts—both real and perceived—should be more than simply a standing item on the board agenda (such as a fiduciary declaration or responsible person declaration) for Step I of the *OPERIS* framework. We assume that a standard suite of policies—including a code of conduct, gifts policy, client confidentiality policy, and personal investing policy—are in place and are defensible. Those governing bodies striving for best practice in the management of conflicts of interest must exhibit an "anxious vigilance" (Smith [1776] 1937) that is formally signaled across the investment organization. From the chair and members of the governing body through management and all service providers, a shared commitment to managing conflicts of interest must be present.

How well does the fiduciary govern potential conflicts of interest with, say, investment managers, asset consultants, accountants, actuaries, lawyers, insurers (including instances in which insurances are provided to plan members), banks, custodians, and in the endowment and foundation context,

[124]In terms of examples of good practice on this issue, we formally acknowledge and commend the transparency of CalPERS, which recently released its "Review of Survey Results on Board Investment Consultants." See the relevant board submission (CalPERS 2017a) and the accompanying survey results (CalPERS 2017b).

major donors?[125] Again many excellent resources and prudential standards are available to assist in policy development for fiduciary investors (such as APRA 2013b). We acknowledge that this topic is worthy of a book-length exploration.[126] Fiduciary investors have a responsibility to ensure that their reputation is not compromised by poorly managed, real or perceived, conflicts of interest through the implementation of the investment strategy.

A Final Word

We know that investment implementation is not free, but "good" investment implementation is priceless. It seems that holding investment beliefs is one thing (Chapter 2), but successfully implementing those beliefs is quite another matter.[127] Even if we were to assume that significant governance resources were dedicated to due diligence investigations, decision rights for the asset consultant were clear, and an "anxious vigilance" (Smith [1776] 1937) was demonstrated by the investment organization to manage real and perceived conflicts of interest, alignment in the chain of trusted relationships still might not be achieved.

In Australia, we use the colloquial expression "bush lawyer" to describe someone who is completely unqualified to provide legal opinion but does so anyway. The bush lawyer might say, "You do not go to jail for bad outcomes, you do go to jail for bad process."[128] The substantive point is that good practice in investment implementation (and investment governance in general) requires a significant, ongoing commitment to process improvement. This foundational work must be undertaken above the fiduciary line in Steps O and P and must then inform activities in Steps E&R and I below the line.

So how does the governing body close the loop? What is the place of Step S (**S**uperintend) at which point we move back above the fiduciary line? In Chapters 8 and 9, we explore the concept of the fiduciary "closing the loop." We make the case that the role of governing bodies as superintendents of the investment governance process is as much about the alignment (and clarity) of roles and responsibilities across the investment organization as it is about technical matters (such as performance evaluation).

[125]One situation that can be "tricky" is when an asset consultant is appointed to advise on, say, asset allocation (**Step P**) and manager selection (**Step I**) but is also used to monitor the fiduciary investor's performance, sorry, *their* performance (**Step S**).
[126]See Paul and Kurtz (2013) as these issues relate to nonprofit boards.
[127]As neatly observed by Brakke (2016), "In most organizations, I do not see the necessary resources, or the proper organization of resources, to act on that belief."
[128]In no way do these "bush lawyer" remarks constitute legal advice.

Points for Reflection: Chapter 7. The Many Paths to Implementation

As a fiduciary:

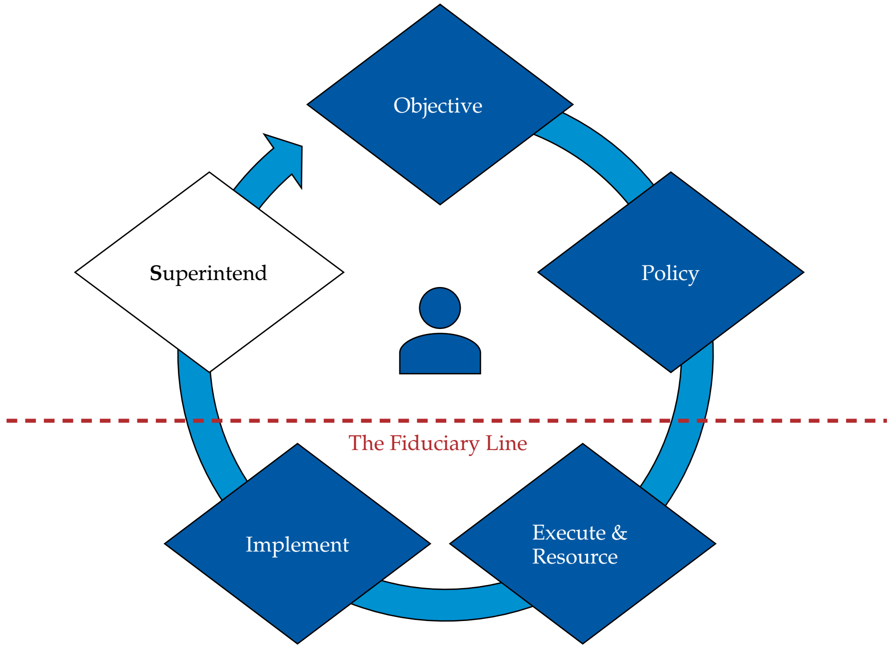
- Given the many paths to implementing an investment strategy (from outsourced through to insourced), can I point to a rationale for why our approach is the best way to deliver the HIO?
- Can I explain simply the steps that have been taken to align investment implementation with our investment policy statement?
- Do I consider the risk of representative bias when involved in manager selection?
- Will insourcing investment management increase the probability of the investment organization achieving its investment objectives? Can I point to a well-documented, evidentiary approach to formulating our views regarding this issue?
- Am I involved in regular assessments of the balance of benefits and costs of external management versus an internal equivalent? Can I point to the decision rules we use to make these trade-offs?
- Am I satisfied that our governance budget is sufficient to oversee an investment program that seeks to earn a skill premium across, say, all asset classes? Can I point to evidence that this question has been formally considered?
- Do I have a clear understanding of the nature of our relationship(s) with our asset consultant(s)? Can I point to a mechanism for resolving any ambiguity that may exist in such relationships?
- Can I practically illustrate how the asset consultant's role is aligned with achieving the HIO?
- Am I satisfied that we have a process to disclose and resolve (real and perceived) conflicts of interest with our investment managers, asset consultants, accountants, actuaries, lawyers, insurers (including instances in which insurances are provided to plan members), banks, custodians, and in the endowment and foundation context, major donors?

8. Closing the Loop: Superintending Roles and Responsibilities

> "Everything that *can* be counted does not necessarily count; everything that counts *cannot* necessarily be counted."
>
> —*Albert Einstein*[129]

Within the *OPERIS* framework, the fifth and final step is, as shown in **Exhibit 27**, **S**uperintend (from the Latin, to oversee).[130] The reader might think that "superintend" is an unusual choice of word when alternatives such as *supervise* are available. Our rationale is that, other than its appropriate technical meaning—"to oversee"—superintend suggests a sense of formality

Exhibit 27. *OPERIS* Framework: Superintend, Part 1



[129]Nathan Palmer, "Einstein Was a Qualitative Researcher," *Sociology in Focus* (3 November 2014): http://sociologyinfocus.com/2014/11/einstein-was-a-qualitative-researcher/.
[130]Cresswell (2010) explained that the Latin *intendere* means intend, extend, direct, literally to stretch towards; *superintendere* means to oversee.

and accountability.[131] In this light, the governing body is the ultimate authority with the accountability to *superintend* the governance process.

In this chapter, we make the case that superintending is something more than basic compliance and investment reporting (while acknowledging the important role that both of these activities play in assurance; see Chapter 9). To **S**uperintend requires the governing body to target investment objectives (as specified in the hierarchy of investment objectives [HIO]; Chapter 4) *and* regularly evaluate whether the investment policy is achieving those objectives. In this chapter we specifically consider

- outcomes that are unknown and unknowable,
- the governing body as superintendent,
- compliance with mandates, and
- the journey from risk silos to risk assurance.

We do not specifically consider matters of performance evaluation and other important issues, such as reporting and review, in this chapter—we leave those matters to Chapter 9. Our motivation is to encourage governing boards to begin thinking about Step S, ***Superintend***, with the big picture in mind—that is, investment objectives. As this chapter (and the next) develops, we will move into greater detail.

Outcomes Are Unknown and Unknowable

The challenge facing the fiduciary investor is that, particularly over short horizons, investment outcomes are unknown and largely unknowable. Is the fiduciary investor in the business of taking risk? Yes. Can there be a confluence of bad luck and/or bad circumstances and/or bad markets? Yes. When outcomes are uncertain, a defensible, repeatable, and documented investment process is critical; in fact, it is all that one has to rely on. Step S is about closing the loop—monitoring, reporting, and review. At this step in the process, the governing body ***Superintends*** the investment process, above the fiduciary line, and considers questions such as the following:

- Are we on track to achieve the investment objective?
- Do we need a midcourse change of direction?

[131]In the State of Queensland, Australia, where we live, "superintendent" is a senior police officer rank.

Answers to these questions typically involve some form of trade-off for the governing body.[132] For instance, the compression of real interest rates over the past decade has resulted in the present value of future liabilities being materially larger today than in the past. As we stated in Chapter 3, meeting these liabilities (commitments) requires a trade-off that will require the fiduciary investor to, for example,

- acquire a larger asset base (not an option in many circumstances),
- aim for much higher expected returns and "push the boat out" on risk, or
- have a difficult conversation with the beneficiaries—acknowledging that the probability of meeting the investment objective is negligible and that the beneficiaries will receive less than promised.[133]

Let's consider a recent real-world version of such trade-offs that has been played out in the media. In testimony, Michael S. Rawlings, the mayor of Dallas, said that the city's unfunded pension liabilities were of such a scale that the city might "walk . . . into the fan blades (of municipal bankruptcy)" (Rawlings quoted in Walsh 2016). An unpalatable trade-off must be made. If one thing can be learned from the parlous state of many US public pension plans, it is that deferring such decisions to a later date rarely results in a better outcome. As we suggested in Chapter 7, hope is not a strategy.

We raise the Dallas experience as being emblematic of what Step S is about. Achieving investment objectives is the *raison d'être* of the fiduciary investor. Good practice demands that fiduciary investors find an appropriate balance between dedicated measurement and monitoring of the outcome (say, meeting liabilities) and governing the inputs (say, manager performance).

Governing inputs is a necessary but insufficient condition to achieving investment outcomes. We can envision a situation in which the inputs may have been excellent (best in class, well governed, strongly aligned), but because of, say, underfunding and political realities, the fiduciary was induced into taking more risk than the inputs could reasonably sustain. Governing bodies must balance monitoring the details (say, individual investment manager returns) *and* the bigger picture (progress toward investment objectives as expressed in the HIO; see Chapter 4).

[132]If the beneficiary had a sufficient corpus (assets) to meet their needs (liabilities) today and into the future, the role of the fiduciary would be reduced to an immunization issue—that is, an income-only investment strategy (Schaus 2010). Few fiduciary investors have this luxury.

[133]Lin (2017) noted that "increasingly, pension costs consume 15% or more of big city budgets, crowding out basic services and leaving local governments more vulnerable than ever to the next economic downturn." The upshot is some unpalatable choices (and liabilities of all kinds) for "someone" (read "the fiduciary") in the not-too-distant future.

In their own words ...

"Retirement systems around the world, specifically social security-type benefit programs, are facing funding shortfalls and undergoing strain. As a result, people are becoming increasingly responsible for their long-term financial security—and that requires saving and planning."

—Catherine Collinson, President,
Transamerica Center for Retirement Studies

The Governing Body as Superintendent

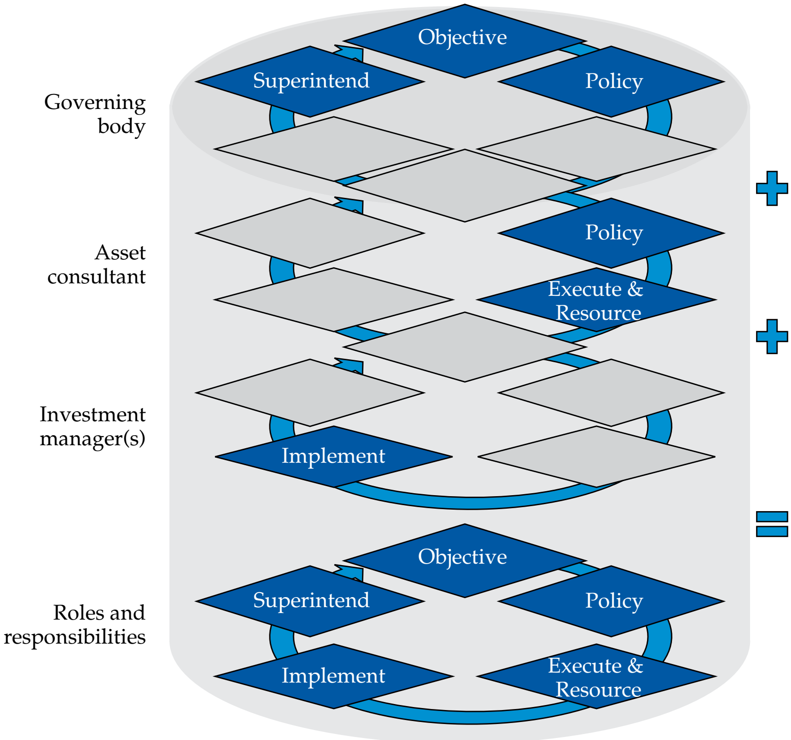
When we are asked by fiduciary investors to give one—and only one—priority that must be monitored with "anxious vigilance" (Smith [1776] 1937), we point to the oversight of the roles and responsibilities across the investment process. As discussed previously, the *OPERIS* framework tells us that the investment process is only as strong as its weakest link (Chapter 6). In our experience, when any (or all) of the five steps are under stress (regardless of whether the source of the stress is endogenous, exogenous, or both), the problem can typically be linked (if only in part) to the ambiguity of roles and responsibilities.

So, how can the fiduciary investor oversee roles and responsibilities? Where is the best place to begin? We start by surveying key groups across the investment organization to form what we call an "*OPERIS* stack."

The *OPERIS* Stack. Most fiduciary investors receive incredibly detailed information that is intended to be used for monitoring, say, investment manager performance (see Chapter 9) and how that performance is tracking in aggregate against investment objectives (perhaps in the form of an HIO). But is the fiduciary monitoring how the fiduciary and the delegates are discharging their roles and responsibilities? We have developed a simple exercise to look at monitoring, in a way not usually used, by "stacking" how different groups in the investment process view their roles and responsibilities across the investment process. The stack shown in **Exhibit 28** illustrates this idea. First, we gather all those serving:

- *above the line*—we run separate exercises for the governing body (and their investment committee, where it exists);
- *below the line (internal)*—we arrange additional separate exercises for internal investment staff (say, the chief investment officer and investment strategy team) and internal investment managers; and

Exhibit 28. The *OPERIS* Stack



- *below the line (external)*—we have key service providers (say, the asset consultant(s), external investment managers, the actuary, administration, custody) undertake the exercise as well.

Each of these groups gathers for only 30 minutes (with this time allocation strictly enforced) in separate rooms. Each room has a large picture of the *OPERIS* framework (the five steps *and* detailed tasks within each step, some of which we have described throughout the book). Each group is armed with three colored sticky note pads—green, red, and yellow—and 20 blue dots:

- *Green means yes*—We undertake the specific task in the step.
- *Red means no*—We have no practical role in completing this task. In the case of the governing body, it may be that this role is operationally delegated.
- *Yellow means unsure*—We are not sure who is responsible for this task and want clarification.

- *Blue means priority*—Each group must place the number of blue dots against the tasks within each of the steps that they believe to be the most important that they undertake.

The rules are simple. All exercises must be run separately. Each group must assign a green (yes), red (no), or yellow (unsure) sticky note against *all* specific tasks within each of the five steps in the *OPERIS* framework. Each group must also allocate all 20 blue dots against those tasks within each step they deem most important. Following the completion of the exercise by the respective groups, we layer the results to create what we call an *OPERIS* stack. What are we looking for? What are the potential takeaways from the exercise? In summary:

- *Resourcing*—We are interested in which of the five steps (and tasks within each of these steps) the various groups prioritize and spend their time on.
- *Alignment* (or lack thereof)—We are particularly interested in testing the alignment of roles and responsibilities across the investment organization (in each of the five steps as well as broader subgroupings, say, those above the fiduciary line against those in roles below the fiduciary line).
- *Gaps and overlaps*—If any task within a step (or steps) does not have at least one party with a yellow or green sticky note against it, there might be a gap in the process and some uncertainty as to roles and responsibilities. The converse occurs when all parties put a green sticky note (and lots of blue dots) on, say, one task within a step. In this case, even though many *claim* responsibility, we question whether the *real* responsibility is very clear.
- *Ambiguity*—More yellow means more ambiguity. Through simple visualization, we are interested in the proportion of yellow (unsure) sticky notes across the groups. Are they clustered in the same steps or specific tasks within a step?

We share this outline of our *OPERIS* stack as a possible way for governing bodies to think about monitoring in a much broader way than perhaps undertaken traditionally. The *OPERIS* stack is our attempt to directly target, as stated at the start of this section, one of the most pressing challenges facing those who govern the investment process. Our anecdotal observations suggest that the very process of undertaking this exercise produces positive outcomes for the investment organization. It can be the catalyst for a shared framework for understanding and new opportunities for trust-based engagement for those above and below the fiduciary line.

We think of the *OPERIS* stack as being akin to using drone technology on a building site: perspectives are changed, and from those different perspectives, new insights are formed. Governing bodies that formally monitor roles and responsibilities are building an investment process by acknowledging a world in which outcomes are unknown and unknowable.

Mandate Compliance

We now move from the bigger picture of the *OPERIS* stack to the detail required to monitor investment restrictions and guidelines—what we consider mandate compliance.[134] Good governance requires the governing body to ensure, typically through delegation, daily investment compliance, including the monitoring of limits, restrictions, and investment guidelines sourced from key policy documents, such as the following:

- the IPS (see Chapter 5),
- investment management agreements (IMAs),[135]
- investment policies and guidelines,
- a derivative risk statement, and
- any investment-related policies that form part of the governing body's wider enterprise risk management system.

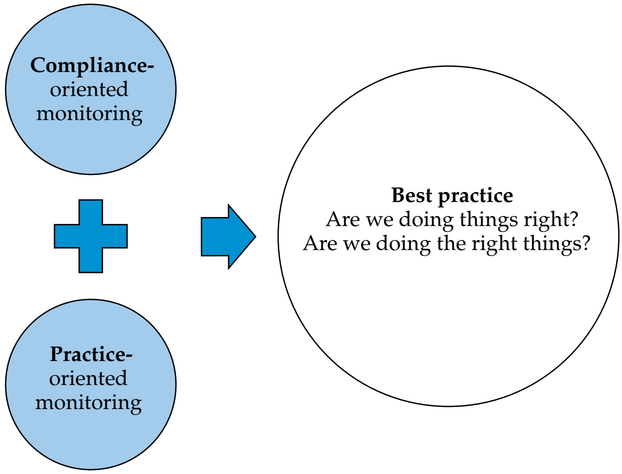
In our experience, mandate compliance has been, for very sound reasons, largely delegated. Governing bodies typically marshal resources to answer the question, are we doing things right? Mandate compliance–oriented tasks provide oversight and validation of the custodian, external investment managers, and, when applicable, the internal investment office on behalf of the fiduciary.[136] A host of industry-leading resources is available for those fiduciary

[134]We are focusing on the investment aspects of the compliance of delegates with their approved mandates. The matter of regulatory compliance is separate, and we return to it in Chapter 9.

[135]There will be IMAs with external investment managers (as standard) and, increasingly, IMAs with internal investment teams.

[136]Some of the major tasks undertaken by the compliance-oriented function include building and implementing systems of compliance that provide a clear, aligned, unambiguous, and consistent approach to the interpretation and monitoring of IMAs; delivery of accurate compliance monitoring reports; ensuring adherence to procedures and control checks; conducting trade compliance monitoring and reporting (external and internal); evaluating and monitoring key service providers; providing an investigative function when breaches of mandate occur and recommendations for improvement; and monitoring all organization settings (such as currency exposures, counterparty exposures, credit support annexures), and other compliance requirements (e.g., excluded securities) and relevant legislation (say, anti-money-laundering and counterterrorism financing). As fiduciary investors continue to source and appoint investment managers from around the world, an accompanying increase will be needed of governance resources to coordinate compliance activities internationally. Research in the field of financial geography may provide insights for such cross-border coordination; see Wojcik, Knight, and Pazitka (2017).

Exhibit 29. Evidentiary Basis for Best Practice



boards seeking to move their mandate compliance–oriented activities toward best practice.[137]

If the challenges facing those delegated by the governing body with mandate compliance were not substantial enough, best practice requires that fiduciary investors also engage in *practice-oriented monitoring* of investment activities. Practice-oriented monitoring seeks assurance that "we are doing the right things." Specifically, the question for the governing body is, are we doing the right things to achieve our investment outcomes? As **Exhibit 29** illustrates, we do not view compliance-oriented and practice-oriented monitoring as distinct domains. Quite the opposite, we see compliance-oriented monitoring as enabling practice-oriented monitoring. We believe that the governing body is providing an evidentiary basis for claiming best practice by undertaking both compliance- and practice-oriented monitoring.

Risk Assurance

In this book, we have largely confined our discussion to those risks most closely associated with investment governance and left a detailed discussion of noninvestment enterprise-wide risks to others.[138] We assume that the wider

[137]For an example, see State Street Global Services (2014) on the current and future challenges of compliance for asset owners.

[138]The various non-investment-related risk categories require careful governance by the fiduciary investor, of course, as they would in any other form of industrial organization. For further discussion about enterprise-wide risk management, see OECD (2014).

organization has identified, defined, evaluated, and prioritized all the risk categories that constitute its *enterprise-wide risk management* (ERM) system. Given the nature of the economic activity undertaken, a prioritization of risks based on, say, potential impact and likelihood would result in investment-related risks being ranked as one of the highest, if not the very highest, risk facing the fiduciary investor.[139] Therefore, the governing body would "own" (i.e., have accountability for) these investment-related risks and seek ongoing assurance of the management of such risks. It is vital that the governing body—and its delegates—incorporate its investment-related risk assurance activities in Step S of the *OPERIS* framework *within* the investment organization's broad ERM system. As noted in Chapter 1, just as there are as many investment issues as there are fiduciary investors, there is no "one-size-fits-all" solution to investment-related (and enterprise-wide) risk assurance.

To build an effective, independent investment-related risk management process, the governing body may delegate assurance responsibilities to a chief risk officer (CRO), or equivalent—a delegate who is becoming increasingly important in the fiduciary investor context. The CRO's role in defined-benefit (DB) plans, defined-contribution (DC) plans, and endowments and foundations (E&Fs) is critical in providing enterprise-wide (including investment-related) assurance and meeting the ever-increasing requirements of regulators. The CRO can also be delegated to help the governing body implement a "three lines of defense" model for the investment organization. **Exhibit 30** illustrates these three lines.

Readers who are familiar with the traditional "three lines of defense" framework will note that in our definition of the third line, we have explicitly

Exhibit 30. Three Lines of Defense

First line	Management controls and internal controls
Second line	Risk management, compliance, and specialist reports
Third line	Internal and external audit, regulators

[139]We strongly encourage fiduciary investors to formally develop an ERM system that includes the documenting of a risk assurance map.

included "external auditors" and "regulators."[140] The rationale for this decision, particularly in the context of financial institutions, is provided by Arndorfer and Minto (2015).

Although the CRO's role is critical, the governing body should *actively discourage* any perception that risk management tasks are only undertaken by the risk and compliance team (or, equivalent, reporting to the CRO). We encourage the fiduciary investor to formally enshrine that the CRO has a direct line to the governing body (or perhaps a direct line to the audit and risk committee). Risk and compliance hurdles should be formally embedded in the remuneration structures of investment-related staff (sometimes referred to as the "front office"). Furthermore, the remuneration of staff in the investment-related risk function "should not be linked to the performance of the activities it monitors" (Chiu 2015)—otherwise, the staff will tolerate too much risk in the hope of a big payoff.[141] This is particularly important for those delegated by the governing body to provide assurance regarding the performance of external *and* internal investment teams.

Good investment governance requires that assurance regarding the investment-related risks arising from Steps E&R and I of the *OPERIS* framework be an ongoing process. A topical debate for governing bodies in recent years is how "best" to apply the three lines of defense not only as related to enterprise-wide risks but also specifically to the investment-related risks faced by the fiduciary investor. Abbott and Devey (2017) argued that governing bodies should be more proactive and less reactive in their approach to risk assurance. This admonition is a valuable reminder for governing bodies that investment-related risks are *prospective* not retrospective. Risk assurance practices should not solely involve preparing for yesterday's financial crisis; more crises surely will come, but they most assuredly will not be exactly like the last one. The challenge in moving to a more proactive approach is that it requires the governing body to not only have clarity about risk tolerances (see the Davey 2015 model in Chapter 3), but also develop a higher-level statement related to its investment risk attitude—more commonly referred to as its "risk appetite."

Risk Appetite. According to ISO 31000:2009, risk appetite is defined as the "organization's approach to assess and eventually pursue, retain, take or turn away from risk."[142] In moving to best practice, governing bodies must practically ensure ongoing assurance regarding their *tolerance of* and *appetite*

[140]See the excellent work of the Institute of Internal Auditors (2013).
[141]Chiu (2015) noted, "U.K. legislation specifically provides the Chief Risk Officer's remuneration should be decided by the Board."
[142]See ISO 31000:2009: Risk management at www.iso.org/obp/ui/#iso:std:iso:31000:ed-1:v1:en.

for investment-related risks.[143] As discussed in Chapter 3, the governing body must have clarity regarding its "risk tolerance"—the tactical, operational framing of acceptable variations surrounding investment-related risks (Rittenberg and Martens 2012).

In our experience, governing bodies typically have defensible processes or standards regarding their investment-related risks. For example:

- *benchmark based*—benchmark plus 2%;
- *inflation based*—CPI plus 5%;
- *risk based*—expect a negative return, say, one in every five years; or
- *peer based*—we aim to beat the median peer group performance over rolling three-year periods.

In their own words …

> "A further cause of confusion is that in many funds the (unspoken) objective is peer relative returns, usually over a single year. So, the CIO's priority is relative returns. The problem is relative returns only represent a very small part of the real risk borne by default members. Should not the task of the most senior investment staff be to manage the bulk of the risk?"
>
> —*Brad Holzberger, Chief Investment Officer, QSuper*

We strongly support governing bodies in seeking ongoing assurance of these important investment-related "risk tolerances." But what if the beneficiary's objective (see Chapter 3) is a little more nuanced and located more in the strategic domain? Consider the following investment-related outcomes that a beneficiary might be seeking:

- *DB plans*—Success may be defined as having sufficient assets to meet the present value of all future liabilities.
- *DC plans*—The beneficiaries may seek a proportion (say, 70%) of their preretirement income as a real-income stream over their retirement years.
- *E&Fs*—The board of an endowment fund may have to meet an agreed-on (or statutory) spending objective (say, 5% per year) to support a multiyear cancer research study.

[143]Investment risk appetite is defined by Pompian (2017) as the "willingness to take risk."

Investment-related risks framed in this way require the governing body to be (very) clear—particularly with those to whom responsibility is delegated—on how much investment-related risk the board is willing to take to "solve" the beneficiary's investment problem. From a practical perspective, the governing body might consider an investment-related risk "dashboard" (or similar mechanism) to formally oversee metrics related to their agreed-on risk tolerance and risk appetite on an ongoing basis.[144] For the governing body to seek assurance over investment objectives that are framed in a broader and more strategic domain, the governing body must articulate and oversee assurance of investment-related risks informed by documented risk appetite. Given the *OPERIS* framework discussion, the natural way of framing risk ought to be found in the investment objectives, captured in the HIO (Chapter 4). We would be most surprised to find an important investment-related risk measure not captured in the HIO.

A Final Word

In "closing the loop," the governing body must carry out its role as superintendent of the investment process. Our discussion regarding the final step of the *OPERIS* framework began with the governing body seeking assurance regarding the *alignment* of the chain of trusted relationships across the investment process, establishing the need for mandate compliance, and specifying an ongoing process that ensures that investment-related risk tolerance and risk appetite settings will be obeyed. Some readers may be surprised that we have dedicated a chapter to different ways of seeking alignment and assurance of risk management practices across the investment organization. We view those governing bodies that can move their investment organization to best practices in these areas as not only fulfilling their fiduciary duty to the beneficiary but also as creating a source of comparative advantage over other investors. Our observation from the field is that many "other" types of investors see step five in the *OPERIS* framework as little more than monthly performance reporting and largely operational investment-related reviews (compare the investment committee agenda of the hypothetical ABC Fund in Chapter 6). The world's leading fiduciary investors understand that the management of investment-related risks must be informed by (and aligned to) the beneficiary's investment challenge and the broader enterprise-wide risk settings. That is, "success" is to be evaluated

[144]For an enterprise-wide perspective on the ongoing monitoring of risk appetite, see Corbett (2017).

in terms of whether the investment objectives were achieved as part of a broader set of organizational objectives.

As introduced in Chapter 3, achieving investment outcomes for the beneficiary is *not*, in many instances, simply a function of investment returns. Outcomes can be driven by expected returns *and* a range of additional factors, including, to name but a few,

- cash flow profile,
- time horizon,
- interest rates (and what they mean for discount rates),
- price of inflation-hedging assets,
- longevity and tail of the liabilities, and
- risk aversion.[145]

To illustrate this idea, we will use the DC plan context during the global financial crisis (GFC) of 2007–2008. Imagine a scenario in which the governing body of a DC plan was formally reviewing its investment-related risks on 30 June 2009. The risk assessment report noted that "we were only down 19% during the GFC, when comparable DC plan peers fell 29%." Such an assessment takes a "peer-based" view of risk—the investment process worked (very) well when compared with comparable approaches (as one view of "risk tolerance"). Imagine a member of the same the DC plan reviewing her investment-related risks on the same date. Her "personal" risk assessment may have said something like, "I retired on 1 July 2009 and have started drawing on my retirement nest egg. Yikes, I experienced a 19% fall in my DC plan balance!" Our hypothetical DC plan beneficiary rightly takes a broader (and dimmer) view of "risk appetite" that includes other investment-related risks—for instance, the risk of *not* "replacing 70% of preretirement income" (Chapter 3).[146]

This discussion leads us neatly to the final tasks within the **S**uperintend step—namely, monitoring, reporting, and review. We consider these issues in Chapter 9.

[145]Wilkinson (2017) considered these specific issues in the context of DB plans.
[146]For further discussion of sequencing risk, see Basu and Drew (2009); Milevsky and Macqueen (2010); and Basu, Doran, and Drew (2012).

Points for Reflection: Chapter 8. Closing the Loop: Superintending Roles and Responsibilities

As a fiduciary:

- Am I clear about how to determine whether we are "on track" (or not) to achieving our investment objective? Can I say what would necessitate a midcourse change of direction and what evidence would be required?
- Can I explain, at a high level, the process for determining the likelihood of meeting the beneficiary's HIO?
- Am I involved in a regular process of monitoring how the governing body and its delegates are discharging their roles and responsibilities over time?
- Do I ensure an appropriate balance of resources dedicated to mandate compliance–oriented tasks ("are we doing things right?") and practice-oriented monitoring ("are we doing the right things?")? Can I point to an evidentiary basis for claiming best practices in both of these areas?
- Am I comfortable that the governing body clearly "owns" (i.e., has accountability for) investment-related risks and seeks ongoing assurance of the management of such risks across the organization?
- Can I explain how investment-related risks are placed within the ERM system to ensure ongoing assurance regarding the management of such risks?
- Does evidence support that risk management has the appropriate level of organizational visibility? Have I considered whether, as part of our enterprise-wide assurance, the appointment of a CRO is appropriate for the organization?
- Can I describe how the governing body uses the three lines of defense model in day-to-day risk assurance?
- Can I articulate, in simple terms, the governing body's risk appetite? Can I point to evidence about how our risk appetite is practically embedded in the investment process?

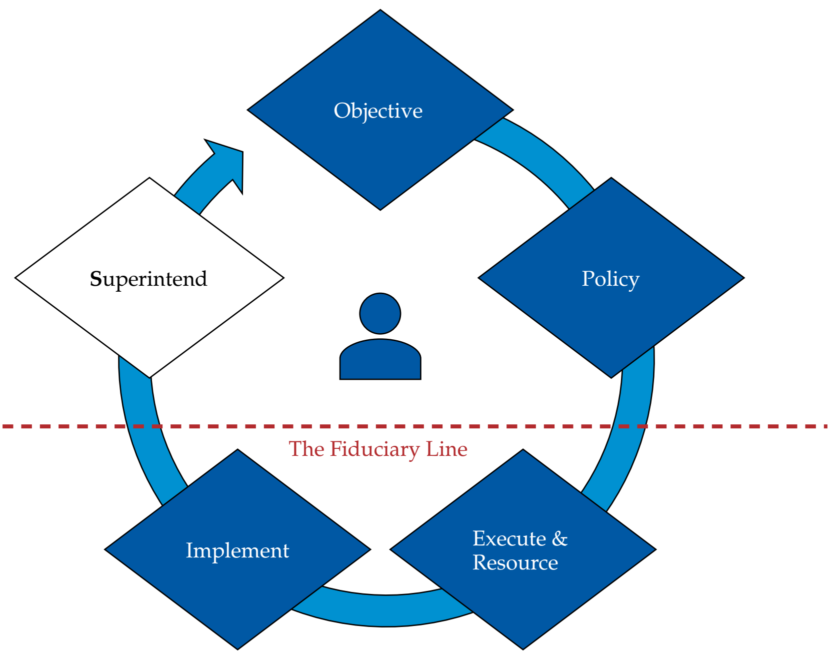
- Do I regularly consider an investment-related risk dashboard (or similar method), and can I describe how this dashboard is used in monitoring risks?
- Do I understand, and can I explain, the key drivers of success from an investment perspective? Do I have clarity on what we can and, perhaps more important, what we cannot control?
- Is my perception of risk peer based or beneficiary based? Can I provide an evidentiary basis for such a view?

9. Monitoring, Reporting, and Review

> "Investment concepts are generally taught, learnt and spoken about among professionals in time-weighted terms. According to this view of the world, returns are the sole determinant of performance and risk, and a given return has an identical impact no matter its timing. We find that time-weighted measures overlook important aspects of retirement investing, whereas wealth-denominated, target-relative measures more accurately capture the dynamics of retirement investing. Thus, we see *the two faces of investment performance and risk*."
>
> —*Bianchi, Drew, Evans, and Walk (2014)*

The final step in the *OPERIS* framework, ***S****uperintend*, as shown in **Exhibit 31**, requires the governing body to ensure effective *monitoring*, *reporting*, and *review* of the investment process. The tasks undertaken as part of Step S are a component of the investment organization's process of risk management and assurance (see Chapter 8). Step S is critical for providing those serving above the fiduciary line with the transparency they need—disclosure,

Exhibit 31. *OPERIS* Framework: Superintend, Part 2



clarity, constancy, and accuracy—to evaluate activities throughout the investment process. The results should be documented and reported both internally and, as required, externally. Moreover, the results provide the evidence base on which the governing body can build a culture of continuous improvement across the investment process.

We make the case in this chapter for the governing body to take a *dual-focused* approach to monitoring. This approach acknowledges that activities undertaken below the fiduciary line—the performance of investment managers—are typically measured by time-weighted return metrics. In many instances, however, the beneficiary's investment objective—meeting a liability (defined-benefit [DB] plans), retirement adequacy (defined-contribution [DC] plans), and grant programs (endowments and foundations [E&Fs])—are money-weighted in nature. In this regard, dual-focused monitoring requires consideration of time- and money-weighted returns, estimation of the probability of achieving the investment objective, and multidimensional risk analysis. In this chapter, we specifically consider

- the two faces of performance and risk,
- escalating issues—what to do with red flags,
- reporting—who gets what, and
- review—the foundation of continuous improvement.

We again acknowledge that the topics we have selected are only a sampling of those that governing bodies can consider when deciding on their approach to monitoring, reporting, and review in Step S. We assume that the governing body is following CFA Institute Global Investment Performance Standards (GIPS®) to calculate and present investment results.[147] We also assume that the investment organization takes a structured approach to enterprise-wide risk management, such as the ISO 31000 international standard, and has also adopted ISO-like standards for the governing body, such as the Prudent Practices for Investment Stewards by fi360.[148] Similarly, we assume that the governing body has met its reporting and assessment responsibilities to regulators and additional requirements as, say, a signatory to the United Nations–supported Principles for Responsible Investment.[149] Finally, it is a

[147]For more on the GIPS® standards, see www.cfainstitute.org/ethics/codes/gipsstandards/Pages/index.aspx.
[148]For fi360's approach, see fi360, *Prudent Practices for Investment Stewards* (Pittsburgh: 2013). In the interests of full disclosure, both authors hold the designation of Accredited Investment Fiduciary Analyst® and are CEFEX Analysts (www.cefex.org/IndustryExpertise.aspx).
[149]For a discussion of PRI's standards, see, www.unpri.org/pri.

given that all the individuals involved across the investment organization follow the letter and spirit of their profession's code of ethics and professional standards.[150]

The Two Faces of Performance and Risk

Fiduciary investors have, as a core task, the responsibility of earning investment returns for their beneficiaries.[151] So, return-based performance and risk measures are of central concern to those above and below the line and, of course, the beneficiary. Although such measures will always have a place in investment governance, management, and communications, our motivation in this section is to consider whether a singular focus on these measures—which typically relate to inputs—obscures a more complete understanding of the investment objective.

As discussed previously, the beneficiary's investment objective—in our three contexts (DC plans, DB plans, and E&Fs)—are typically money-weighted in nature; that is, outcomes are a function of both returns *and* the amount of capital to which the return applies. For governing bodies, returns are but one—albeit an important—determinant of the investment outcome. Note the institutional setting in which the governing body operates. In, say, a DC plan context, retirement adequacy at an individual level becomes the objective of retirement savings. This reality shines a bright light on what's important for the beneficiary, the *individual* DC plan member, and the prescriptions it has for both the monitoring of DC plan performance (the focus of this chapter) and future investment strategy.

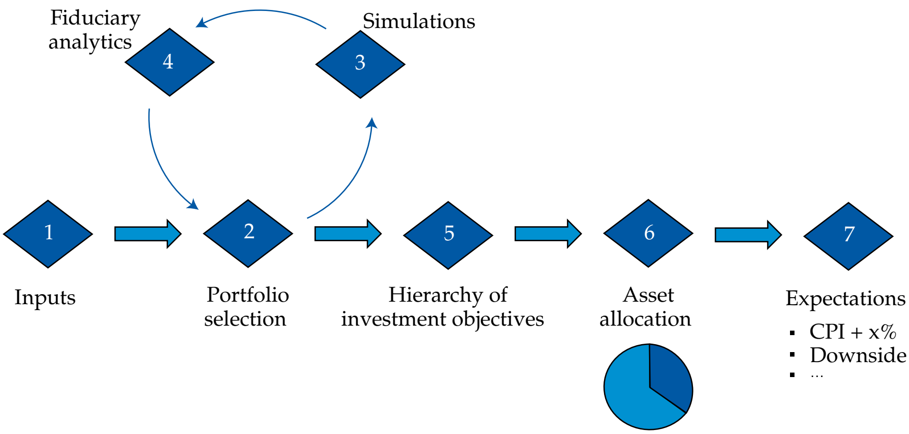
Given this circumstance, what is the most appropriate way to consider investment outcomes for governing bodies? We suggest that those above the fiduciary line develop a dual-focused approach to monitoring—a set of fiduciary analytics that can be used to evaluate both historical performance *and* expected future performance. We first introduced this idea of fiduciary analytics as part of the investment process discussed in Chapter 4. We can see from **Exhibit 32** that fiduciary analytics (Step 4) is an integral part of the process of evaluating competing asset allocations to achieve an HIO (Step 5). A poorly considered "battery of fiduciary analytics" may result in an incorrect inference about what constitutes "optimality" (as defined in Chapter 4).

---

[150]See the CFA Institute Code of Ethics and Standards of Professional Conduct at www.cfainstitute.org/ethics/codes/ethics/Pages/index.aspx.

[151]This discussion is based on our work with Robert J. Bianchi (Griffith University) and Michael Evans. See Bianchi, Drew, Evans, and Walk (2014) and Bianchi, Drew, and Walk (2013, 2014, 2016 [a and b]) for further discussion.

Exhibit 32. Fiduciary Analytics and the Investment Process



Recall from Chapter 4 that we use a battery of fiduciary analytics to measure and illustrate performance in a variety of ways, such as time-weighted and money-weighted measures (incorporating distributional properties, risk-adjusted performance measures, downside risk metrics, and visualization). We encourage governing bodies to use this same battery of analytics to create a three-dimensional view of performance to monitor those below the fiduciary line. Finally, we suggest to governing bodies that, given the use of fiduciary analytics in asset allocation *ex ante* (Step 4 of Exhibit 32), they also be used to evaluate performance *ex post* (Step 6 of Exhibit 32).

Following the same approach we used to discuss investment beliefs in Chapter 2, we outline our standard battery of fiduciary analytics, shown in **Exhibit 33**, as a starting point for consideration by the governing body. Our motivation is not to convince the reader that our approach is the final word on fiduciary analytics. This approach is our *standard* set of analytics; we tailor the monitoring metrics that would best align with the fiduciary's investment challenge. The process of ensuring consistency between the time- and money-weighted measures and the essence of the investment challenge is an order of magnitude more important than secondary debates about one specific metric over another.

A *dual-focused* approach to fiduciary analytics—the monitoring component of Step S of the *OPERIS* framework—can be likened to a global positioning system for the fiduciary investor. To use our aviation metaphor, where exactly are we in relation to the destination (where the destination is the set of investment objectives as they relate to the investment issue)? In our experience, such an approach to fiduciary analytics can provide evidence-based

Exhibit 33. Dual-Focused Analytics

Time-Weighted Analytics	Money-Weighted Analytics
Mean	Median retirement wealth ratio
Standard deviation	Probability of shortfall
Sharpe ratio	Expected shortfall
Negative return 1-in-*X* years	Sortino ratio

Source: Bianchi, Drew, Evans, and Walk (2014).

insight into questions regarding time- and money-weighted performance issues:

- *Time-weighted perspectives*—As noted by Bacon (2004), performance measurement answers three basic questions: (1) "What" is the return on assets? (2) "Why" has the portfolio performed that way? (3) "How" can we improve performance? Work on the practice of performance measurement and attribution is voluminous, but we particularly note the many contributions by William F. Sharpe (1966)[152] of Stanford University, Martin J. Gruber (1996) of New York University, and Russell Wermers (2000) of the University of Maryland. We also recommend works by practitioners such as Carl Bacon (2004), François-Serge Lhabitant (2004, 2017), and David Spaulding (1997, 2003).
- *Money-weighted perspectives*—We incorporate the distributional properties, risk-adjusted money-weighted performance measures, and downside risk metrics. Note the work of Philippe Jorion (2007), Philip Booth (1997),[153] and Frank A. Sortino (2010).[154] Again, this is not a complete catalog of resources for governing bodies, but it is a starting point to consider evaluating past performance and the likelihood of achieving future investment outcomes.

The fiduciary reader may wonder where all the detail is. As noted, the numerous excellent resources about performance evaluation can be consulted *once* the governing body has reflected on the investment challenge it faces and how it proposes to evaluate and monitor performance. The risk of adding the details at this point would be that this book stops being one about

[152]Sharpe's contributions to the field earned him a share in the 1990 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, commonly referred to as "the Nobel Prize in Economics."
[153]For an actuarial perspective on risk, also see Clarkson (1989) and Booth and Yakoubov (2000).
[154]Also see Sortino and Price (1994).

investment governance for fiduciaries and becomes an instruction manual on performance evaluation that would, appropriately, be filled with equations. Modestly, we hope that we have given the fiduciary some things to think about when the governing body next meets.

In their own words …

> "Strong investment governance allows fiduciaries to make decisions, assess investments and monitor performance against well-structured and relevant criteria."
>
> —*Danielle Press, Commissioner,*
> *Australian Securities and Investments Commission*

Escalating Issues—What to Do with Red Flags

The **S**uperintend step in the *OPERIS* framework requires the governing body to provide evidence that monitoring, reporting, and review are undertaken to meet the highest standards. Whereas we engaged with some of the challenges of monitoring in Step I by suggesting the use of dual-focused fiduciary analytics, we now turn to matters related to reporting and review. In the wake of the Bernie Madoff scandal, criminology and finance scholars have revisited the important role of enterprise-wide risk *reporting*—particularly the role of reporting red flags in a wider system of internal and external controls.[155,156] Capital market history suggests that the stronger the investment returns, the weaker investor and regulator vigilance becomes, with vigilance returning only when the party is over (Jickling 2009).

Red flags (or anomalies) are a set of circumstances that are unusual in nature or vary from the normal activity. They are a signal that something out of the ordinary has occurred (or is occurring) and may need further investigation (Grabosky and Duffield 2001). A deep dive into the mechanics of red-flag systems as part of a broader assurance system is beyond the scope of this book. To readers with an interest in this important topic, we recommend the work of Cressey (1953) on the social psychology of embezzlement (and the fraud triangle). We encourage governing bodies to exhibit an "anxious

[155]The discussion of red flags, Ponzi schemes, and white-collar crime is based on our research collaboration led by Jacqueline M. Drew, Griffith University; see Drew and Drew (2010a, 2010b, 2012).
[156]Gregoriou and Lhabitant (2009) described the Madoff case as a "flock of red flags."

vigilance" (Smith [1776] 1937) when identifying, escalating, and acting on red flags across the investment organization. We envision delegating the daily responsibility for this issue to the chief risk officer.[157]

Perhaps the bigger issue related to the escalation of red flags across the investment organization is the problem of hindsight bias. As noted by Gregoriou and Lhabitant (2009) and Drew and Drew (2010a), the (many) red flags associated with the Madoff case seem alarmingly obvious "in hindsight." The challenge for the governing body when designing fraud detection systems relates directly to this most critical of features—overcoming hindsight bias. Fischhoff's (1975) seminal work on the effect of outcome knowledge on judgment under conditions of uncertainty is important in this regard. Fischhoff, supported by subsequent studies, suggested that hindsight bias is hardwired into the human condition.[158] Fiduciary investors need to apply a multidimensional approach—proactive and preventative—to risk detection, acknowledging the complementarity of internal and external controls (Drew and Drew 2010b).[159]

Reporting—Who Gets What

Fiduciary investors have a duty of care to keep written financial and investment records. Assuming the governing body has ensured its ongoing fulfillment of duties under general law and statutory obligations, the issue we seek to briefly explore in this section is the role of reporting—specifically, who gets what, how often do they get it, and most important, what are the effects of such decisions? Ultimately, this set of questions reduces to one challenge: ensuring the consistency of the governance budget with the investment governance settings and the nature of the investment challenge. For example, we despair at the low priority placed on what we believe to be such high-value-added functions like a secretariat that ensures that meetings are arranged, invitations are sent, and governing body papers are delivered so that fiduciaries have the time necessary to deliberate on their contents before the meeting. The risk is that the governing body—and those who support it—will

[157]For those readers seeking further discussion, see Baldwin and Cave (1998).

[158]We can, sadly, recall the various investigations into the 9/11 terror attacks, or more recently, the subprime lending crisis, the collapse of Lehman Brothers, and the long list of red flags that were supposedly clearly evident in the lead-up to those events (Drew and Drew 2010b). As Daniel Kahneman, awarded the Nobel Memorial Prize in Economics Sciences in 2002, observed, "hindsight bias makes surprises vanish."

[159]Some literature also considers the role of financial literacy levels and fraud victimization, see Drew (2013) and Drew and Cross (2013).

focus not on what might be described as "good administration" but on "the shiny new concept" they read about in yesterday's trade press.

With the award of the 2017 Nobel Prize in Economics to behavioral economist Richard Thaler of the University of Chicago, we are reminded of the importance of human behavior in economic decision making. For example, the work of Kraft, Vashishtha, and Venkatachalam (2018) has reignited the myopia debate regarding the quarterly reporting requirement for corporations in the United States. Specifically, Kraft et al. (2018) found that increased reporting frequency is associated with an economically large *decline* in investments made by corporations. Although the debate regarding myopia will continue in scholarly, practitioner, and regulator circles, it is important that the governing body provide the investment organization with clarity on *who* gets *what* reporting and *when*. Acknowledging that formal reporting on myopia-related issues can be both complex and multidimensional, we suspect that the governing body will seek assurance regarding, for example,

- the corporate governance preferences of fiduciary investors and the impact on returns (McCahery, Sautner, and Starks 2016),
- the ability to check for myopia in the mandates issued by the fiduciary investor (Drew 2009),
- *myopic loss aversion* by investment managers (Eriksen and Kvaløy 2010; Benartzi and Thaler 1995), and
- myopia exhibited by the companies in which the governing body invests (Stein 1989).

We could devote a whole chapter to each of these issues; the difficulty of the task is not a reason that it should be ignored by the governing body. Each of these matters is worthy of formal reporting and consideration by the governing body and can be used to improve the investment process in the future.

Review—The Foundation of Continuous Improvement

As we come to the end of the *OPERIS* framework, Step S, Parts 1 and 2, we see the process of formal review as evidence of good practice. It is an opportunity for the governing body to evaluate the various strategic settings made in Steps O (Chapters 2 and 3) and P (Chapters 4 and 5) and their implementation in Steps E&R (Chapter 6) and I (Chapter 7). It also provides a regular review of the efficacy and conviction with which investment beliefs are held (Chapter 2). This review process allows the governing body to formally consider—and prioritize—prevailing endogenous and exogenous challenges facing the investment organization. Most important, marginal decisions that may result from the ongoing review process can be considered in light of the HIO (Chapter 4).

We are reminded of Tilles's (1963) remarks about how to evaluate corporate strategy, "No good military officer would undertake even a small-scale attack on a limited objective without a clear concept of his (her) strategy." The work by Tilles is relevant in the fiduciary context because it reminds governing bodies of the need to formally review the investment process in light of the beneficiary's investment objective, including internal and external consistency, the appropriateness of strategy given the level of resourcing (governance budget), risk tolerance and risk appetite of the governing body, precision in defining decision rights, time horizon, and alignment. Tilles's work largely focused on the qualitative aspects of a strategic review; we also encourage governing bodies to complement this analysis with quantitative evidence, including an agreed-on battery of fiduciary analytics as first introduced in Chapter 4. We expect that any decisions made as a result of the review be documented in the investment policy statement (Chapter 5) and the settings contained in it (e.g., the fee budget, risk budget).[160]

In our experience, Step S of the *OPERIS* framework is often considered an "administrative necessity" rather than a source of comparative advantage over other investors. We contend that this step can align the investment process, provide ongoing assurance, *and* develop an evidence base for the marginal decision by the governing body.

A Final Word

Finally, we recommend that the governing body ***S****uperintend*—specifically, monitor—the investment-related communications of the fiduciary investor to gain assurance that the beliefs "are lived" across the investment organization. Our argument is that "alignment" is about both policy and behavior.[161]

Take the case of a governing body whose investment objective is, say, meeting the liabilities of a DB plan 30 years in the future. If the executives who act on behalf of the fiduciary sound like media commentators who opine on day-to-day movements in markets or boast that "we beat peers over the past year," they are not behaving in accordance with the principles discussed in this book. If the discussion focuses on, say, the extent to which the fiduciary

[160]We suggest that governing bodies ensure that foundational governance documents, such as the IPS, be controlled in a manner consistent with ISO 9001:2015.
[161]We first indicated how the *OPERIS* framework can assist in framing communications—in relation to investment objectives—in Chapter 3.

is on track to meet liabilities in 2049 or how the funding ratio of the plan is improving, that approach is a different and much better story. Such framing is clearly aligned with the investment objective of the beneficiary.

We raise this issue within the context of Step S because the governing body seeks to superintend the investment process *in its entirety*—including how the investment organization frames its communications with beneficiaries. If the governing body—and its delegates—are in the "public square" engaged in a running commentary on, say, daily market action, the same governing body should not be surprised when beneficiaries also make decisions that are short term in nature (Drew 2009).

Points for Reflection: Chapter 9. Monitoring, Reporting, and Review

As a fiduciary:

- Do I ensure that the governing body allocates appropriate governance time to consider both time- and money-weighted performance metrics?
- Can I explain, at a high level, why this dual-focused approach is critical to achieving objectives?
- Can I point to an agreed-on (and documented) set of fiduciary analytics that evaluates both historical performance and expected future performance?
- Am I able to point to evidence as to why our particular set of performance metrics has been selected to monitor performance?
- Can I describe how we use dual-focused analytics to ensure that we address the investment problem we seek to solve?
- Given our approach to performance monitoring and risk controls, do I understand the actions that will result if certain predetermined thresholds are breached?
- Am I conscious of the role that myopia may play across the investment organization? Do I seek assurance regarding the impact of myopia on matters such as mandate design, investment manager behavior, and our corporate governance policies?

- Can I attest that, as an investment organization, we are authentic in our communication to beneficiaries and external stakeholders?
- Is my private and public discourse on investment matters aligned with our investment beliefs?
- Can I confidently say that we are consistent in the way we frame the investment issue throughout the investment organization?

Postscript

By now, we hope the reader agrees that the individual fiduciary and the governing body to which the fiduciary is appointed both face a difficult task. How does one faithfully represent the interests of beneficiaries when making complex investment decisions in the presence of uncertainty and competing interests? We argue that the best that can be hoped for, in the context of complexity and uncertainty, is a high *probability* of success. We humbly submit that anyone who thinks differently ought to walk a mile in the shoes of a "real-life" fiduciary.

In this book, we provided fiduciaries with some ideas that raise the probability of success. Almost all our suggestions have revolved around *good process*. It is through a defensible, repeatable, and documented process that fiduciaries give *evidence* of their efforts to serve beneficiaries and manage complexity and uncertainty. After those efforts have been made, the outcomes are what they are, and fiduciaries respond through a process of continuous improvement aimed at reaching the destination.

In making the case for good process, we shared with the reader a high-level outline of the process we use when consulting and counseling our fiduciary clients. We find that this process provides a nearly universal blueprint—noting that the investment challenge, and the investment policy statement that flows from it, can vary widely among, say, pension funds, endowments, and ultra-high-net-worth individuals—for addressing the issues all investors face. We emphasize one last time that we are *not* selling our process as the only possible path to success (or, at least, defensible fiduciary practice). We assert that having *a* process is more important than having *this* process.

A book about investment governance for fiduciaries is important because the task they face is of increasing importance the world over. Fiduciaries are trusted with being stewards of *other people's money*, money that has been set aside for important societal purposes, be that the retirement savings of thousands of workers, the wealth of nations, or the legacy and good works of a charity. We trust that this book makes a modest contribution to raising the standards of fiduciary practice.

References

Abbott, J., and C. Devey. 2017. *The Three Lines of Offense: When Uncertainty Is the Only Certainty, Is It Time for Companies to View Risk Management as a Competitive Advantage?* EY Insights (May). www.ey.com/Publication/vwLUAssets/ey-three-lines-of-offense/$FILE/ey-three-lines-of-offense.pdf.

Aikin, B. 2017. "Who Is a Fiduciary and What Does a Fiduciary Investment Advisor Do?" Investments & Wealth Monitor (September/October): 24–28.

AIST. 2016. *Investment Manager Operational Due Diligence*. Australian Institute of Superannuation Trustees. AIST Guidance Note (June). www.aist.asn.au/media/837834/aist_odd_guidance_note_9_sept_2016.pdf.

Ambachtsheer, K. 2007. *Pension Revolution: A Solution to the Pensions Crisis*. New York: Wiley.

———. 2014. "The Case for Long-Termism." *Rotman International Journal of Pension Management* 7 (2): 6–15.

———. 2016. *The Future of Pension Management*. New York: Wiley.

Ambachtsheer, K., and D. Ezra. 2007. *Pension Fund Excellence*. New York: Wiley.

Amenc, Noël, F. Blanc-Brude, A. Chreng, and C. Tran. 2017. "The Rise of 'Fake Infra'." EDHEC Infrastructure Institute.

Ankrim, E., and C. Hensel. 1993. "Commodities in Asset Allocation: A Real Asset Alternative to Real Estate?" *Financial Analysts Journal* 49 (3): 20–29.

Arndorfer, I., and A. Minto. 2015. *The Four Lines of Defence Model for Financial Institutions*. BIS Occasional Paper 11 (December). www.bis.org/fsi/fsipapers11.pdf.

Arnott, R., V. Kalesnik, and L. Wu. 2017. *The Folly of Hiring Winners and Firing Losers, Part III of Alice in Factorland*. Research Affiliates Fundamentals (September). www.researchaffiliates.com/content/dam/ra/documents/630%20The%20Folly%20of%20Hiring%20Winners%20and%20Firing%20Losers.pdf.

APRA. 2013a. *Prudential Standard SPS 530: Investment Governance*. Australian Prudential Regulation Authority (July). www.apra.gov.au/Super/PrudentialFramework/Documents/Final-SPS-530-Investment-Governance-July-2013.pdf.

———. 2013b. *Prudential Standard SPS 521: Conflicts of Interest*. Australian Prudential Regulation Authority (July). www.apra.gov.au/Super/PrudentialFramework/Documents/Final-SPS-521-Conflicts-of-Interest-July-2013.pdf.

Australian Securities and Investments Commission. 2017. "Self-Managed Super Fund (SMSF)." Money Smart (20 June). www.moneysmart.gov.au/superannuation-and-retirement/self-managed-super-fund-smsf.

Bacon, K. 2004. *Practical Portfolio Performance Measurement and Attribution*. Hoboken, NJ: Wiley.

Badaoui, S., R. Deguest, L. Martellini, and V. Milhau. 2014. "Dynamic Liability-Driven Investing Strategies: The Emergence of a New Investment Paradigm for Pension Funds." Research paper. EDHEC Business School.

Bailey, J., and T. Richards. 2017. *A Primer for Investment Trustees: Understanding Investment Committee Responsibilities*. Charlottesville, VA: CFA Institute Research Foundation.

Baker, A., D. Logue, and J. Rader. 2004. *Managing Pension and Retirement Plans: A Guide for Employers, Administrators, and Other Fiduciaries*. Oxford, UK: Oxford University Press.

Baldwin, R., and M. Cave. 1999. *Understanding Regulation: Theory, Strategy and Practice*. Oxford, UK: Oxford University Press.

Basu, A., and M. Drew. 2009. "Portfolio Size and Lifecycle Asset Allocation in Pension Funds." *Journal of Portfolio Management* 35 (3): 61–72.

———. 2010. "The Appropriateness of Default Investment Options in Defined Contribution Plans: Australian Evidence." *Pacific-Basin Finance Journal* 18 (3): 290–305.

———. 2015. "The Value of Tail Risk Hedging in Defined Contribution Plans: What Does History Tell Us." *Journal of Pension Economics and Finance* 14 (3): 240–265.

Basu, A., A. Byrne, and M. Drew. 2011. "Dynamic Lifecycle Strategies for Target Date Retirement Funds." *Journal of Portfolio Management* 37 (2): 83–96.

Basu, A., B. Doran, and M. Drew. 2013. "Sequencing Risk: The Worst Returns in Their Worst Order." *JASSA: The Finsia Journal of Applied Finance* 43 (4): 7–13.

Bauer, R., and J. Dahlquist. 2001. "Market Timing and Roulette Wheels." *Financial Analysts Journal* 57 (1): 28–40.

Benartzi, S., and R. Thaler. 1995. “Myopic Loss Aversion and the Equity Premium Puzzle.” *Quarterly Journal of Economics* 110 (1): 73–92.

Bender, J., R. Briand, D. Melas, and R. Subramanian. 2013. *Foundations of Factor Investing*. MSCI Research Insight (December). https://ssrn.com/abstract=2543990.

Bernanke, B. 2010. *Implications of the Financial Crisis for Economics*. Speech presented at the Conference Co-sponsored by the Center for Economic Policy Studies and the Bendheim Center for Finance, Princeton University, Princeton, NJ (24 September). www.federalreserve.gov/newsevents/speech/bernanke20100924a.htm.

Bianchi, R. 2010. “Principal and Agent Problems in Australian Responsible Entities.” *Deakin Business Review* 3 (1): 24–31.

Bianchi, R., and M. Drew. 2010. “Hedge Funds, Regulation and Systemic Risk.” *Griffith Law Review* 19 (1): 5–27.

Bianchi, R., M. Drew, and J. Fan. 2015. “Combining Momentum with Reversal in Commodity Futures.” *Journal of Banking & Finance* 59: 423–444.

———. 2016. “Commodities Momentum: A Behavioral Perspective.” *Journal of Banking & Finance* 72: 133–150.

Bianchi, R., M. Drew, and S. Pappas. 2017. “The Predictability of Risk-Factor Returns.” In *Factor Investing: From Traditional to Alternative Risk Premia*, ed. E. Jurczenko, 99–126. London, UK: ISTE Press–Elsevier.

Bianchi, R., M. Drew, and A. Walk. 2013. “The Time Diversification Puzzle: Why Trustees Should Care.” *JASSA: The Finsia Journal of Applied Finance* 43 (1): 51–55.

———. 2014. “Time Diversification and Contributions.” *Academy of Taiwan Business Management Review* 10 (3): 75–83.

———. 2016a. “The Equity Risk Premium in Australia (1900–2014).” *Financial Planning Research Journal* 2 (1): 80–99.

———. 2016b. “The Time Diversification Puzzle: A Survey.” *Financial Planning Research Journal* 2 (2): 12–48.

Bianchi, R., M. Drew, and T. Whittaker. 2017. *Is Listed Infrastructure a Fake Asset Class? An Asset Pricing Approach*. EDHEC Working Paper (July). http://edhec.infrastructure.institute/wp-content/uploads/publications/bianchi_whittaker2017_wp.pdf.

Bianchi, R., G. Bornholt, M. Drew, and M. Howard. 2014. "Long-Term U.S. Infrastructure Returns and Portfolio Selection." *Journal of Banking & Finance* 42: 314–325.

Bianchi, R., M. Drew, M. Evans, and A. Walk. 2014. "The Two Faces of Investment Performance and Risk." *JASSA: The Finsia Journal of Applied Finance* 44 (1): 6–12.

Blake, D. 1995. *Pension Schemes and Pension Funds in the United Kingdom*. Oxford, UK: Oxford University Press.

Blake, D., A. Cairns, and K. Dowd. 2009. "Designing a Defined-Contribution Plan: What to Learn from Aircraft Designers." *Financial Analysts Journal* 65 (1): 37–42.

Blanc-Brude, F., T. Whittaker, and S. Wilde. 2017. *Searching for a Listed Infrastructure Asset Class*. EDHEC Working Paper (June). http://edhec.infrastructure.institute/wp-content/uploads/publications/blanc-brude2016c.pdf.

Bodie, Z., R. Merton, and W. Samuelson. 1992. "Labor Supply Flexibility and Portfolio Choice in a Life Cycle Model." *Journal of Economic Dynamics & Control* 16 (3–4): 427–449.

Boone, N., and L. Lubitz. 2004. *Creating an Investment Policy Statement: Guidelines and Templates*. San Francisco, CA: FPA Press.

Booth, P. 1997. *The Analysis of Actuarial Investment Risk*. Actuarial Research Paper No. 93. London, UK: City University, London.

Booth, P., and Y. Yakoubov. 2000. "Investment Policy for Defined-Contribution Pension Scheme Members Close to Retirement: An Analysis of the 'Lifestyle' Concept." *North American Actuarial Journal (NAAJ)* 4 (2): 1–19.

Bower, J., and L. Paine. 2017. "The Error at the Heart of Corporate Leadership." *Harvard Business Review* 95 (3): 50–60.

Brakke, T. 2016. "Rethinking Due Diligence and Manager Selection." *CFA Institute Conference Proceedings Quarterly* 33 (2): 10–16.

Brinson, G., L. Hood, and G. Beebower. 1986. "Determinants of Portfolio Performance." *Financial Analysts Journal* 42 (4): 39–44.

Brown, S., and W. Goetzmann. 1995. "Performance Persistence." *Journal of Finance* 50 (2): 679–698.

Caesar, J. *The Gallic Wars*. Translated by W.A. McDevitte and W.S. Bohn

CalPERS. 2016. *CalPERS at a Glance*. California Public Employees' Retirement System. (30 June). www.calpers.ca.gov/docs/forms-publications/calpers-at-a-glance.pdf.

———. 2017a. *Review of Survey Results on Board Investment Consultants*. California Public Employees' Retirement System. (14 August). www.calpers.ca.gov/docs/board-agendas/201708/invest/item07a-00.pdf.

———. 2017b. *Board Consultant Review & Evaluation Project Results—FY2016–17*. California Public Employees' Retirement System. (14 August) www.calpers.ca.gov/docs/board-agendas/201708/invest/item07a-01.pdf.

———. 2017c. "Total Fund." *Investment Policy* 17 (April).

Callan Associates. 2017. 2017 Defined Contribution Trends: 10th Anniversary Edition (7 April). https://www.callan.com/wp-content/uploads/2017/01/Callan-2017-DC-Survey.pdf.

Carhart, M. 1997. "On Persistence in Mutual Fund Performance." *Journal of Finance* 52 (1): 57–82.

CBOE. 2017. CBOE Volatility Index® (VIX®). Chicago Board Options Exchange (6 October). www.cboe.com/products/vix-index-volatility/vix-options-and-futures/vix-index.

CFA Society of the UK. 2013. *Conflicts of Interest*. Position Paper (April). https://secure.cfauk.org/assets/3769/CFA1192_Conflict_Interest_Position_paper_v2.pdf.

Chilton, B. 2011. *Ponzimonium: How Scam Artists Are Ripping Off America*. New York: Commodity Futures Trading Commission.

Chiu, I. 2015. *Regulating (from) the Inside: The Legal Framework for Internal Control in Banks and Financial Institutions*. London, UK: Hart Publishing.

Chung, J., and D. Lim. 2017. "Harvard Endowment Chief Pushed for Steeper Devaluation of Assets." *Wall Street Journal* (15 December). www.wsj.com/articles/harvard-endowment-chief-pushed-for-steeper-devaluation-of-assets-1513252800

Clare, A., and C. Wagstaff. 2011. "Manager Selection: How Do You Choose a Good Fund Manager?" In *The Trustee Guide to Investment*, ed. A. Clare and C. Wagstaff. London: Palgrave Macmillan.

Clark, G. 1993. *Pensions and Corporate Restructuring in American Industry: A Crisis of Regulation*. Baltimore, MD: Johns Hopkins University Press.

———. 2000. *Pension Fund Capitalism*. Oxford, UK: Oxford University Press.

———. 2003. *European Pensions and Global Finance*. Oxford, UK: Oxford University Press.

———. 2012. “From Corporatism to Public Utilities: Workplace Pensions in the 21st Century.” *Geographical Research* 50 (1): 31–46.

———. 2017. “The Financial Legacy of Pension Fund Capitalism.” In *Handbook on the Geographies of Money and Finance*, ed. R. Martin and J. Pollard, 348–374. London, UK: Edward Elgar Publishing.

Clark, G., and A. Monk. 2014. “The Geography of Investment Management Contracts: The UK, Europe, and the Global Financial Services Industry.” *Environment & Planning A* 46 (3): 531–549.

———. 2015. *The Contested Role of Investment Consultants: Ambiguity, Contract, and Innovation in Financial Institutions*. Working Paper (June).

———. 2017. *Institutional Investors in Global Markets*. Oxford, UK: Oxford University Press.

Clark, G., and R. Urwin. 2008. “Best-Practice Pension Fund Governance.” *Journal of Asset Management* 9 (1): 2–21.

———. 2010. “Innovative Models of Pension Fund Governance in the Context of the Global Financial Crisis.” *Pensions: An International Journal* 15 (1): 62–77.

Clark, G., A. Munnell, and M. Orszag, eds. 2006. *Oxford Handbook of Pensions and Retirement Income*. Oxford, UK: Oxford University Press.

Clarkson, R. 1989. “The Measurement of Investment Risk.” *Journal of the Institute of Actuaries* 116 (1): 127–178.

CNBC. 2016. U.S. State Public Pension Unfunded Liabilities to Hit $1.75 trillion: Moody’s. Staff Reporter, CNBC.com (7 October). www.cnbc.com/2016/10/07/us-state-public-pension-unfunded-liabilities-to-hit-175-trillion-moodys.html.

Cochrane, J. 2011. “Presidential Address: Discount Rates.” *Journal of Finance* 66 (4): 1047–1108.

Collins, J. 2001. *Good to Great: Why Some Companies Make the Leap . . . and Others Don’t*. New York: HarperCollins.

Commonwealth Bank of Australia. 2016. *Record Passengers on Sydney-Melbourne Route*. Economic Insights (23 March). www.commsec.com.au/content/dam/EN/ResearchNews/ECO_Insights_230316.pdf.

Corbett, M. 2017. What is the director's role in evaluating an organisation's risk appetite? Australian Institute of Company Directors. https://aicd.companydirectors.com.au/membership/membership-update/what-is-the-directors-role-in-evaluating-an-organisations-risk-appetite.

Cressey, D. 1953. *Other People's Money: A Study in the Social Psychology of Embezzlement*. Glencoe, IL: Free Press.

Cresswell, J. 2010. *Oxford Dictionary of Word Origins*. New York: Oxford University Press.

Davey, G. 2012. *On the Stability of Risk Tolerance*. FinaMetrica (June). www.riskprofiling.com/WWW_RISKP/media/RiskProfiling/Downloads/On_the_Stability_of_Risk_Tolerance.pdf.

———. 2015. "Getting Risk Right." *Investments & Wealth Monitor*, 33–39.

DiBruno, R. 2013. *How to Write an Investment Policy Statement*. Hoboken, NJ: Wiley.

Drew, J. 2013. "Cold, Warm, Warmer, Hot! Locating Financial Literacy Hot Spots." *Journal of Financial Services Marketing* 18 (3): 220–226.

Drew, J., and C. Cross. 2013. "Fraud and Its PREY: Conceptualising Social Engineering Tactics and Its Impact on Financial Literacy Outcomes." *Journal of Financial Services Marketing* 18 (3): 188–198.

Drew, J., and M. Drew. 2010a. "The Identification of Ponzi Schemes: Can a Picture Tell a Thousand Frauds?" *Griffith Law Review* 19 (1): 48–66.

———. 2010b. "Ponzimonium: Madoff and the Red Flags of Fraud." *Deakin Business Review* 3 (1): 5–17.

———. 2012. "Who Was Swimming Naked When the Tide Went Out? Introducing Criminology to the Finance Curriculum." *Journal of Business Ethics Education* 9 (2): 63–76.

Drew, M. 2006. "Superannuation: Switching and Roulette Wheels." *Australian Accounting Review* 16 (40): 22–31.

———. 2009. "The Puzzle of Financial Reporting and Corporate Short-Termism: A Universal Ownership Perspective." *Australian Accounting Review* 19 (4): 295–302.

Drew, M., and J. Stanford. 2003. "Returns from Investing in Australian Equity Superannuation Funds, 1991 to 1999." *Service Industries Journal* 23 (3): 74–84.

Drew, M., and A. Walk. 2015. "Just How Safe Are 'Safe Withdrawal Rates' in Retirement?" *Financial Planning Research Journal* 1 (1): 22–32.

———. 2016. "Governance: The Sine Qua Non of Retirement Security." *Journal of Retirement* 4 (1): 19–28.

Drew, M., A. Walk, and J. West. 2015. "Conditional Allocations to Real Estate: An Antidote to Sequencing Risk in Defined Contribution Retirement Plans." *Journal of Portfolio Management* 41 (6): 82–95.

———. 2015. *The Role of Asset Allocation in Navigating the Retirement Risk Zone*. Finsia (Financial Services Institute of Australasia) White Paper (April). http://finsia.com/docs/default-source/industry-reports-retirement-risk-zone/the-role-of-asset-allocation-in-navigating-the-retirement-risk-zone.pdf?sfvrsn=4\.

Drew, M., P. Stoltz, A. Walk, and J. West. 2014. "Retirement Adequacy through Higher Contributions: Is This the Only Way?" *Journal of Retirement* 1 (4): 57–74.

Earley, P. Christopher, and Elaine Mosakowski. 2000. "Creating Hybrid Team Cultures: An Empirical Test of Transnational Team Functioning." *Academy of Management Journal* 43 (1): 26–49.

Elder, Daniel. 2016. "Dealing with Market Volatility." *News Hub* (July). Qsuper. https://qsuper.qld.gov.au/News-Hub/Articles/2016/09/02/10/25/Dealing-with-Market-Volatility.

Ellis, C. 2011. "The Winners' Game." *Financial Analysts Journal* 67 (4): 11–17.

———. 2013. *Winning the Loser's Game: Timeless Strategies for Successful Investing*, 6th ed. New York: McGraw-Hill.

———. 2016. *The Index Revolution: Why Investors Should Join It Now*. New York: Wiley.

Ellis, C., A. Eschtruth, and A. Munnell. 2014. *Falling Short: The Coming Retirement Crisis and What to Do about It*. Oxford, UK: Oxford University Press.

"An Emerging Challenge." 2010. Schumpeter Blog. *Economist* (15 April). www.economist.com/node/15906206.

Eriksen, K., and O. Kvaløy. 2010. "Myopic Investment Management." *Review of Finance* 14 (3): 521–542.

Fama, E. 1965. "The Behavior of Stock-Market Prices." *Journal of Business* 38 (1): 34–105.

Feng, G., S. Giglio, and D. Xiu. 2017. *Taming the Factor Zoo*. Chicago Booth Research Paper No. 17-04 (August). https://ssrn.com/abstract=2934020.

fi360. 2016. *Prudent Practices for Investment Stewards*. Pittsburgh, PA: fi360.

FCA. 2017. *Asset Management Market Study*: Final Report. Financial Conduct Authority (June). www.fca.org.uk/publication/market-studies/ms15-2-3.pdf.

Finkenzeller, K., T. Dechant, and W. Schafers. 2010. "Infrastructure: A New Dimension of Real Estate? An Asset Allocation Analysis." *Journal of Property Investment & Finance* 28 (4): 263–274.

Fischhoff, B. 1975. "Hindsight Is Not Equal to Foresight: The Effect of Outcome Knowledge on Judgment under Uncertainty." *Journal of Experimental Psychology. Human Perception and Performance* 1 (3): 288–299.

Frankfurter, G., and H. Phillips. 1994. "A Brief History of MPT: From a Normative Model to Event Studies." *Journal of Investing* 3 (4): 18–23.

Fraser-Sampson, G. 2010. *Private Equity as an Asset Class*, 2nd ed. New York: Wiley.

Gallo, A. 2012. "Why Aren't You Delegating?" *Harvard Business Review* 26 (July). https://hbr.org/2012/07/why-arent-you-delegating.

Guardians of the New Zealand Super Fund. 2017. *Delegations*. Delegations Policy, version 13A (7 December). www.nzsuperfund.co.nz/nz-super-fund-explained-purpose-and-mandate/delegations.

Gigerenzer, G. 2008. "Why Heuristics Work." *Perspectives on Psychological Science* 3 (1): 20–29.

Grabosky, P., and G. Duffield. 2001. *Red Flags of Fraud*. Trends and Issues in Crime and Criminal Justice, Australian Institute of Criminology no. 200 (March). http://aic.gov.au/media_library/publications/tandi_pdf/tandi200.pdf.

Graham, B., and D. Dodd. 1934. *Security Analysis: The Classic 1934 Edition*. New York, NY: McGraw-Hill Trade, 1996.

Granger, C. 2005. "The Present and Future of Empirical Finance." *Financial Analysts Journal* 61 (4): 15–18.

Greer, R. 1997. "What Is an Asset Class, Anyway?" *Journal of Portfolio Management* 23 (2): 86–91.

Gregoriou, G., and F. Lhabitant. 2009. "Madoff: A Flock of Red Flags." *Journal of Wealth Management* 12 (1): 89–97.

Gruber, M. 1996. "Another Puzzle: The Growth in Activity Managed Mutual Funds." *Journal of Finance* 51 (3): 783–810.

Gupta, P. 2016. "Multi-Asset Investing in Asia Pacific: A Practitioner's Framework." CFA Conference Proceedings Quarterly 33 (2): 1–9.

Hanna, S., and P. Chen. 1997. "Subjective and Objective Risk Tolerance: Implications for Optimal Portfolios." *Financial Counseling and Planning* 8 (2): 17–26.

Hanna, S., and S. Lindamood. 2009. *Risk Tolerance: Cause or Effect?* Academy of Financial Services Conference Paper (January). www.researchgate.net/publication/279964280_Risk_Tolerance_Cause_or_Effect.

Harbron, G., D. Roberts, and J. Rowley. 2017. *The Case for Low-Cost Index-Fund Investing*. Vanguard Group (April). https://personal.vanguard.com/pdf/ISGIDX.pdf.

Harris, R., T. Jenkinson, and S. Kaplan. 2014. "Private Equity Performance: What Do We Know?" *Journal of Finance* 69 (5): 1851–1882.

Harvey, C., Liu, Y. and Zhu, H. 2016. "… and the Cross-Section of Expected Returns." *Review of Financial Studies* 29 (1): 5–68.

Hendricks, D., J. Patel, and R. Zeckhauser. 1993. "Hot Hands in Mutual Funds: Short-Run Persistence of Relative Performance, 1974–1988." *Journal of Finance* 48 (1): 93–130.

Hoyle, S. 2017. "CalPERS Says Consultants Could Do Better." Top1000funds.com (25 August). www.top1000funds.com/analysis/2017/08/25/calpers-says-consultants-could-do-better/.

Hsu, J., and V. Kalesnik. 2014. "Finding Smart Beta in the Factor Zoo." Research Affiliates Fundamentals (July). www.researchaffiliates.com/content/dam/ra/documents/Finding%20Smart%20Beta%20in%20the%20Factor%20Zoo_pdf.pdf.

Hudson-Wilson, S., J. Gordon, F. Fabozzi, M. Anson, and S. Giliberto. 2005. "Why Real Estate?" *Journal of Portfolio Management* 31 (5): 12–21.

Ibbotson, R., and P. Kaplan. 2000. "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?" *Financial Analysts Journal* 56 (1): 26–33.

"Indecent Exposure: Markets Reveals the Good, the Bad and the Ugly." 2007. Staff Reporter, Market View, *Economist* (5 August). www.economist.com/node/9609521.

Institute of Internal Auditors. 2012. *International Standards for the Professional Practice of Internal Auditing*. IIA Standard (October). https://na.theiia.org/standards-guidance/Public%20Documents/IPPF%202013%20English.pdf.

———. 2013. *The Three Lines of Defense in Effective Risk Management and Control*. IIA position paper (January). www.iia.org.au/sf_docs/default-source/member-services/thethreelinesofdefenseineffectiveriskmanagementandcontrol_Position_Paper_Jan_2013.pdf?sfvrsn=0.

Jensen, M., and W. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3 (4): 305–360. www.sfu.ca/~wainwrig/Econ400/jensen-meckling.pdf.

Jickling, M. 2009. *Barriers to Corporate Fraud*. New York: Nova Science.

Jorion, P. 2007. *Value at Risk: The New Benchmark for Managing Financial Risk*. New York: McGraw-Hill.

Kaplan, R., and D. Norton. 1992. "The Balanced Scorecard—Measures That Drive Performance." *Harvard Business Review* 70 (1): 71–79.

Kaplan, P., and L. Siegel. 1994. "Portfolio Theory Is Alive and Well." *Journal of Investing* 3 (3): 18–23.

Kay, J. 2016. *Other People's Money: The Real Business of Finance*. New York: Public Affairs.

Kentouris, C. 2017. *SEC's Liquidity Rule: How to Bucket Your Assets*. FinOps Report (16 August). https://finops.co/investments/secs-liquidity-rule-how-to-bucket-your-assets/.

Kraft, A., Vashishtha, R. and Venkatachalam, M. 2018. "Frequent Financial Reporting and Managerial Myopia." *Accounting Review* 93 (2): 249–275.

Leahy, S., and A. Drake. 2017. *FCA Challenges Status Quo for Asset Managers and Investment Consultants*. PWC Practice Note (June). www.pwc.co.uk/pensions/fca-status-quo-asset-managers-and-investment-consultants.html.

Lefevre, E. 1923. *Reminiscences of a Stock Operator*. New York: G.H. Doran.

Lhabitant, F. 2004. *Hedge Funds: Quantitative Insights*. Hoboken, NJ: Wiley.

———. 2017. *Portfolio Diversification*. London, UK: ISTE Press–Elsevier.

Lin, J. 2017. "Cutting Jobs, Street Repairs, Library Books to Keep Up with Pension Costs." *Los Angeles Times* (6 February). www.latimes.com/projects/la-le-me-richmond-pensions/.

Lo, A. 2008. "Efficient Markets Hypothesis." In *The New Palgrave Dictionary of Economics*, 2nd ed., ed. S. Durlauf and L. Blume, 1–17. London: Palgrave Macmillan.

Loewenstein, G., and R. Thaler. 1989. "Anomalies: Intertemporal Choice." *Journal of Economic Perspectives* 3 (4): 181–193.

Logue, D., and J. Rader. 1998. *Managing Pension Plans: A Comprehensive Guide to Improving Plan Performance*. Boston, MA: Harvard Business School Press.

Lusardi, A., and O. Mitchell. 2014. "The Economic Importance of Financial Literacy: Theory and Evidence." *Journal of Economic Literature* 52 (1): 5–44.

Lydenberg, S. 2011. *Investment Beliefs Statements*. IRI Working Paper, (30 January). http://iri.hks.harvard.edu/files/iri/files/iri_investment_beliefs_statements.pdf.

Malkiel, B. 1995. "Returns from Investing in Equity Mutual Funds 1971 to 1991." *Journal of Finance* 50 (2): 549–572.

———. 2012. "The Efficient-Market Hypothesis and the Financial Crisis." In *Rethinking the Financial Crisis*, ed. A. Blinder, A. Lo, and R. Solow, 75–98. New York: Russell Sage Foundation.

Malkiel, B., and C. Ellis. 2013. *The Elements of Investing: Easy Lessons for Every Investor*. New York: Wiley.

Mandelbrot, B. 1963. "The Variation of Certain Speculative Prices." *Journal of Business* 36 (4): 394–419.

———. 1967. "The Variation of Some Other Speculative Prices." *Journal of Business* 40 (4): 393–413.

Markowitz, H. 1952. "Portfolio Selection." *Journal of Finance* 7 (1): 77–91.

———. 1959. *Portfolio Selection: Efficient Diversification of Investment*. New York, NY: Wiley.

McCahery, J., Z. Sautner, and L. Starks. 2016. "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors." *Journal of Finance* 71 (6): 2905–2932.

McKenzie, C., M. Liersch, and S. Finkelstein. 2006. "Recommendations Implicit in Policy Defaults." *Psychological Science* 17 (5): 414–420.

McMenamin, S. 2015. Guidance for Investment Committees Is Overdue. Pensions & Investments (5 March). www.pionline.com/article/20150305/ONLINE/150309968/guidance-for-investment-committees-is-overdue.

Merton, R. 1973. "An Intertemporal Capital Asset Pricing Model." *Econometrica* 41 (5): 867–887.

———. 1997. *Applications of Option-Pricing Theory: Twenty-Five Years Later.* Nobel Lecture (9 December). http://nobelprize.org/nobel_prizes/economics/laureates/1997/merton-lecture.pdf.

———. 2007. "The Future of Retirement Planning." In *The Future of Life-Cycle Saving and Investing*, ed. Z. Bodie, D. McLeavey, and L. Siegel, 5–14. Charlottesville, VA: Research Foundation of the CFA Institute.

Milevsky, M. 2009. *Are You a Stock or a Bond? Create Your Own Pension Plan for a Secure Financial Future*. Upper Saddle River, NJ: FT Press.

———. 2010. *Your Money Milestones*. Upper Saddle River, NJ: FT Press.

———. 2012. *The 7 Most Important Equations for Your Retirement*. Mississauga, ON: Wiley Canada.

Milevsky, M., and A. Macqueen. 2010. *Pensionize Your Nest Egg*. Mississauga, ON: Wiley Canada.

Milevsky, M., and K. Song. 2010. "Do Markets Like Frozen Defined Benefit Pensions? An Event Study." *Journal of Risk and Insurance* 77 (4): 893–909.

Mitchell, O., and A. Lusardi, eds. 2011. *Financial Literacy: Implications for Retirement Security and the Financial Marketplace*. Oxford, UK: Oxford University Press.

Mitchell, O., and J. Turner. 2010. "Human Capital Risk and Pension Outcomes." In *Evaluating the Financial Performance of Pension Funds*, ed. R. Hinz, P. Antolín, R. Heinz, and J. Yermo, 119–151. Washington, DC: World Bank.

Mitchell, O., R. Maurer, and B. Hammond, eds. 2014. *Recreating Sustainable Retirement: Resilience, Solvency, and Tail Risk*. Oxford, UK: Oxford University Press.

Mongars, P., and C. Marchal-Dombrat. 2006. "Commodities: An Asset Class in Their Own Right?" *Financial Stability Review* (9): 31–38.

Mooney, A. “Growing Number of Pension Funds Divest from Fossil Fuels.” 2017. *Financial Times* (28 April). www.ft.com/content/fe88b788-29ad-11e7-9ec8-168383da43b7.

MSCI. 2015. *MSCI Diversified Multiple Factor Indexes Methodology*. MSCI Index Methodology (September). www.msci.com/eqb/methodology/meth_docs/MSCI_Diversified_Multiple_Factor_Indexes_Methodology_September_2015.pdf.

Munnell, A., and S. Sass. 2008. *Working Longer: The Answer to the Retirement Income Crisis*. Washington, DC: Brookings Institution.

Munro, J., and M. Pagnozzi. 2017. *The Compliance Investment: Realising the Value of Compliance through Greater Effectiveness, Efficiency, and Sustainability*. KPMG Insights (March). https://home.kpmg.com/au/en/home/insights/2017/03/compliance-investment.html.

Natixis Global Asset Management. 2017. 2017 Global Retirement Index. (July). https://ngam.natixis.com/us/resources/2017-global-retirement-index.

Neal, D., and G. Warren. 2015. “Long-Term Investing as an Agency Problem.” CIFR Paper No. 063/2015 (July). www.ifswf.org/sites/default/files/Publications/Long-Term_Investing_as_an_Agency_Problem.pdf.

Newell, G., A. De Francesco, and H. W. Peng. 2011. “The Performance of Unlisted Infrastructure in Portfolios.” *Journal of Property Research* 28 (1): 59–74.

Newell, R. 2017. *Is Listed Infra Really Worth It?* Fund Selector Asia (22 August). www.fundselectorasia.com/news/1037625/listed-infra-worth.

Oberhofer, G. 2001. Hedge Funds: A New Asset Class or Just a Change in Perspective? *Alternative Investment Management Association Newsletter* (December). www.aima.org/uploads/2001/Dec/frankrussell.pdf.

OECD. 2009. “OECD Guidelines for Pension Fund Governance.” Organisation for Economic Co-operation and Development (5 June). www.oecd.org/finance/private-pensions/34799965.pdf.

———. 2014. *Risk Management and Corporate Governance, Corporate Governance*. Paris: OECD Publishing.

Paul, S., and D. Kurtz. 2013. *Managing Conflicts of Interest*. Washington, DC: BoardSource.

Pfeffer, J., R. Cialdini, B. Hanna, and K. Knopoff. 1998. “Faith in Supervision and the Self-Enhancement Bias: Two Psychological Reasons Why Managers Don’t Empower Workers.” *Basic and Applied Social Psychology* 20 (4): 313–321.

Pompian, M. 2017. *Risk Profiling through a Behavioral Finance Lens*. Charlottesville, VA: CFA Institute Research Foundation.

Qantas Airways Limited. 2017. Route Maps: Domestic Australia and New Zealand (21 September). www.qantas.com/travel/airlines/route-maps/global/en.

Rachev, S., S. Stoyanov, and F. Fabozzi. 2008. *Advanced Stochastic Models, Risk Assessment, and Portfolio Optimization*. Hoboken, NJ: Wiley.

Rahaim, C. 2005. *The Fiduciary: An In-depth Guide to Fiduciary Duties—From Studebaker to Enron*. New York: iUniverse.

Rengifo, E., R. Trendafilov, and E. Trifan. 2014. “Behavioral Portfolio Theory and Investment Management.” In *Investor Behavior: The Psychology of Financial Planning and Investing*, ed. H. Baker and V. Ricciardi, 421–438. Hoboken, NJ: Wiley.

Rice, M., R. DiMeo, and M. Porter. 2012. *Nonprofit Asset Management: Effective Investment Strategies and Oversight*. New York: Wiley.

Richey, G. 2016. “Sin Is In: An Alternative to Socially Responsible Investing?” *Journal of Investing* 25 (2): 136–143.

Rittenberg, L., and F. Martens. 2012. Enterprise Risk Management—Understanding and Communicating Risk Appetite. Committee of Sponsoring Organizations of the Treadway Commission, Thought Leadership in ERM (January). www.coso.org/Documents/ERM-Understanding-and-Communicating-Risk-Appetite.pdf.

Rothballer, C., and C. Kaserer. 2011. “The Risk Profile of Infrastructure Investments: Challenging Conventional Wisdom.” *Journal of Structured Finance* 18 (2): 95–109.

Salazar, Y., R. Bianchi, M. Drew, and S. Trück. 2017. “The Diversification Delta: A Different Perspective.” *Journal of Portfolio Management* 43 (4): 112–124.

Samuelson, P. 1965. “Proof That Properly Anticipated Prices Fluctuate Randomly.” *Industrial Management Review* 6 (2): 41–49.

Santoli, M. 2017. *Get Ready for Dramatically Lower Stock Market Returns over the Next Decade*. CBNC.com (7 May). www.cnbc.com/2017/05/07/get-ready-for-dramatically-lower-stock-market-returns-over-the-next-decade.html.

Scharfman, J. 2015. *Hedge Fund Governance: Evaluating Oversight, Independence, and Conflicts*. San Diego, CA: Elsevier.

Schaus, S. 2010. *Designing Successful Target-Date Strategies for Defined Contribution Plans*. Hoboken, NJ: Wiley.

Schaus, S., and Y. Gao. 2017. *Successful Defined Contribution Investment Design*. Hoboken, NJ: Wiley.

Scott, B., J. Balsamo, K. McShane, and C. Tasopoulos. 2017. *The Global Case for Strategic Asset Allocation and an Examination of Home Bias*. Vanguard Group (February). https://personal.vanguard.com/pdf/ISGGAA.pdf.

Sexauer, S., and L. Siegel. 2017. "Floods and Deserts: Why the Dream of a Secure Pension for Everyone Is Still Unattained." *Journal of Retirement* 4 (4): 12–24.

Sharpe, W. 1966. "Mutual Fund Performance." *Journal of Business* 39 (S1): 119–138.

Siegel, L. 2015. "After 70 Years of Fruitful Research, Why Is There Still a Retirement Crisis?" *Financial Analysts Journal* 71 (1): 6–15.

Siegel, L., and S. Sexauer. 2017. "Five Mysteries Surrounding Low and Negative Interest Rates." *Journal of Portfolio Management* 43 (3): 77–86.

Smith, A. (1759) 2016. *The Theory of Moral Sentiments*. Create Space Independent Publishing Platform. London: A. Millar.

———. (1776) 1937. *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: The Modern Library.

Smith, M. 2016. "What's Eating Asset Consultants?" *FINSIA InFinance* (2 June). http://finsia.com/insights/news/news-article/2016/06/02/what-s-eating-asset-consultants.

Sortino, F. 2010. *The Sortino Framework for Constructing Portfolios: Focusing on Desired Target Return to Optimize Upside Potential Relative to Downside Risk*. Amsterdam: Elsevier.

Sortino, F., and L. Price. 1994. "Performance Measurement in a Downside Risk Framework." *Journal of Investing* 3 (3): 59–64.

Southwell, P. 2017. "Listed Infrastructure's Real Role—And It's Not Fake." *Financial Times* (31 July). www.ft.com/content/4bb41710-72eb-11e7-93ff-99f383b09ff9.

Spaulding, D. 1997. *Measuring Investment Performance: Calculating and Evaluating Investment Risk and Return*. New York: McGraw-Hill.

———. 2003. *Investment Performance Attribution: A Guide to What It Is, How to Calculate It, and How to Use It*. New York: McGraw-Hill.

State Street Global Services. 2014. *The Future of Investment Compliance for Asset Owners: The Next Great Transformation*. Global Services, State Street Corporation (December). www.statestreet.com/content/dam/statestreet/documents/Articles/TheFutureofInvComplianceforAO.pdf.

Statman, M. 2001. "How Important Is Asset Allocation?" *Journal of Asset Management* 2 (2): 128–135.

Stein, J. 1989. "Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior." *Quarterly Journal of Economics* 104 (4): 655–669.

Strangeland, D., and H. Turtle. 1999. "Time Diversification: Fact or Fallacy." *Journal of Financial Education* 25 (2): 1–13.

Sunit, S. 2014. *The Principal–Agent Problem in Finance*. Charlottesville, VA: CFA Institute Research Foundation. www.cfapubs.org/doi/pdf/10.2470/rflr.v9.n1.1.

Taleb, N. 2004. *Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets*, 2nd ed. New York: Thomson Texere.

———. 2007. *The Black Swan*. London, UK: Penguin Books.

Tan Bhala, K., R. Yeh, and W. Bhala. 2016. *International Investment Management: Theory, Ethics and Practice*. London, UK: Routledge.

Telser, L. 1955. "Safety First and Hedging." *Review of Economic Studies* 23 (1): 1–16.

Thaler, R. 1980. "Toward a Positive Theory of Consumer Choice." *Journal of Economic Behavior & Organization* 1 (1): 39–60.

Tilles, S. 1963. "How to Evaluate Corporate Strategy." *Harvard Business Review* 41 (4): 111–121.

Tipple, B. 2010. "Avoiding the Pitfalls: Best Practices in Manager Research and Due Diligence." *CFA Institute Conference Proceedings Quarterly* 27 (2): 46–51.

Urwin, R., S. Breban, T. Hodgson, and A. Hunt. 2001. "Risk Budgeting in Pension Investment." *British Actuarial Journal* 7 (3): 319–347.

USA Mutuals. 2017. *The Vice Fund: Fund Update* (June). www.usamutuals.com/pdf/fsb0.nschmidt.xf00.195964.vf_fact_sheet.pdf.

Van de Venter, G., D. Michayluk, and G. Davey. 2012. "A Longitudinal Study of Financial Risk Tolerance." *Journal of Economic Psychology* 33 (4): 794–800.

Vermorken, M., F. Medda, and F. Schröder. 2012. "The Diversification Delta: A Higher-Moment Measure for Portfolio Diversification." *Journal of Portfolio Management* 39 (1): 67–74.

Vernon, S. 2012. *Money for Life*. Oxnard, CA: Rest-of-Life Communications.

von Moltke, Helmuth, the Elder. (1871) 1971. *Strategy Its Theory and Application*. Westport, CT: Greenwood.

Walsh, M. 2016. *Dallas Stares Down a Texas-Size Threat of Bankruptcy*. Dealbook, *New York Times* (30 November). www.nytimes.com/2016/11/21/business/dealbook/dallas-pension-debt-threat-of-bankruptcy.html?mcubz=1.

Waring, M. Barton. 2011. *Pension Finance: Putting the Risks and Costs of the Defined Benefit Plan Back under Your Control*. Hoboken, NJ: John Wiley & Sons.

Waring, B., and L. Siegel. 2005. "Debunking Some Myths of Active Management." *Journal of Investing* 14 (2): 20–28.

Watson, A. 1991. *Legal Origins and Legal Change*. London: Hambledon Press.

Watson Wyatt. 2004. *Remapping*. Reigate, UK: Watson Wyatt.

———. 2006. *Changing Lanes*. Reigate, UK: Watson Wyatt.

Wermers, R. 2000. "Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs, and Expenses." *Journal of Finance* 55 (4): 1655–1695.

White, Amanda. 2017. "Björn Kvarnskog: Taking Stock at the Future Fund." *Investment Magazine* (26 September). https://investmentmagazine.com.au/2017/09/bjorn-kvarnskog-taking-stock-at-the-future-fund/.

Wilkinson, L. 2017) *Defined Benefits: Valuing and Managing Liabilities*. PPI Briefing Note Number 93 (March). www.uk.mercer.com/content/dam/mercer/attachments/europe/uk/uk-2017-defined-benefits-valuing-and-managing-liabilities.pdf.

Williams, K., and S. Cornelius. 2016. "The Asset Owners' Conundrum: Insourcing of Asset Management." *Performance Magazine* (September). https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/financial-services/performancemagazine/articles/lu_asset-owner-conundrum-092016.pdf.

Williams, R. 2017. "Make or Buy: What's Really Transforming the Superannuation Value Chain." Parametric Portfolio Associates Working Paper (February). www.ioandc.com/wp-content/uploads/2017/02/6-Insource-outsource-paper.pdf.

Willis Towers Watson. 2017a. *Global Pension Assets Study 2017* (30 January). www.willistowerswatson.com/en/insights/2017/01/global-pensions-asset-study-2017.

———. 2017b. *The World's 300 Largest Pension Funds—Year Ended 2016* (4 September). www.willistowerswatson.com/en-TH/insights/2017/09/The-worlds-300-largest-pension-funds-year-ended-2016.

Wojcik, D., E. Knight, and V. Pazitka. 2018. "What Turns Cities into International Financial Centres? Analysis of Cross-Border Investment Banking 2000–2014." *Journal of Economic Geography* 18 (1): 1–33.

Wojcik, D., D. MacDonald-Korth, and S. Zhao. 2016. "The Political-Economic Geography of Foreign Exchange Trading." *Journal of Economic Geography* 17 (2): 267–286.

Woods, C., and R. Urwin. 2010. "Putting Sustainable Investing into Practice: A Governance Framework for Pension Funds." *Journal of Business Ethics* 92 (S1): 1–19.

World Bank. 2008. "The World Bank Pension Conceptual Framework." World Bank Pension Reform Primer (September). http://siteresources.worldbank.org/INTPENSIONS/Resources/395443-1121194657824/PRPNoteConcept_Sept2008.pdf.

World Economic Forum. 2017. We'll Live to 100—How Can We Afford It? (May). www3.weforum.org/docs/WEF_White_Paper_We_Will_Live_to_100.pdf.

Xiong, J., and T. Idzorek. 2011. "The Impact of Skewness and Fat Tails on the Asset Allocation Decision." *Financial Analysts Journal* 67 (2): 23–35.

Yao, R., S. Hanna, and S. Lindamood. 2004. "Changes in Financial Risk Tolerance, 1983–2001." *Financial Services Review* 13 (4): 249–266.

Young, S. 2007. "Fiduciary Duties as a Helpful Guide to Ethical Decision-Making in Business." *Journal of Business Ethics* 74 (1): 1–15.

Named Endowments

The CFA Institute Research Foundation acknowledges with sincere gratitude the generous contributions of the Named Endowment participants listed below.

Gifts of at least US$100,000 qualify donors for membership in the Named Endowment category, which recognizes in perpetuity the commitment toward unbiased, practitioner-oriented, relevant research that these firms and individuals have expressed through their generous support of the CFA Institute Research Foundation.

Ameritech
Anonymous
Robert D. Arnott
Theodore R. Aronson, CFA
Asahi Mutual Life Insurance Company
Batterymarch Financial Management
Boston Company
Boston Partners Asset Management, L.P.
Gary P. Brinson, CFA
Brinson Partners, Inc.
Capital Group International, Inc.
Concord Capital Management
Dai-Ichi Life Insurance Company
Daiwa Securities
Mr. and Mrs. Jeffrey Diermeier
Gifford Fong Associates
Investment Counsel Association of America, Inc.
Jacobs Levy Equity Management
John A. Gunn, CFA
John B. Neff, CFA
Jon L. Hagler Foundation
Long-Term Credit Bank of Japan, Ltd.
Lynch, Jones & Ryan, LLC
Meiji Mutual Life Insurance Company
Miller Anderson & Sherrerd, LLP
Nikko Securities Co., Ltd.
Nippon Life Insurance Company of Japan
Nomura Securities Co., Ltd.
Payden & Rygel
Provident National Bank
Frank K. Reilly, CFA
Salomon Brothers
Sassoon Holdings Pte. Ltd.
Scudder Stevens & Clark
Security Analysts Association of Japan
Shaw Data Securities, Inc.
Sit Investment Associates, Inc.
Standish, Ayer & Wood, Inc.
State Farm Insurance Company
Sumitomo Life America, Inc.
T. Rowe Price Associates, Inc.
Templeton Investment Counsel Inc.
Frank Trainer, CFA
Travelers Insurance Co.
USF&G Companies
Yamaichi Securities Co., Ltd.

Senior Research Fellows

Financial Services Analyst Association

For more on upcoming Research Foundation publications and webcasts, please visit www.cfainstitute.org/learning/foundation.

AC2024-0459
Attachment 3

CFA Institute
Research
Foundation

Available online at www.cfainstitute.org

ISBN 978-1-944960-69-8

9 781944 960698 >

Investment Governance Review

2024 June 13

Recommendation

That Audit Committee receive the Investment Governance Report and supporting documents for the corporate record.

Objective

At the request of Audit Committee to have a Governance Review performed, Mercer was engaged in 2023 to conduct an extensive and in-depth review of the terms of reference and related governance structures and control processes currently in place for the Investment Advisory Committee (IAC).

Investment Governance

Investment governance refers to the framework, processes, and practices that guide decision-making and oversight related to investment activities; it consists of:

1. Clear Objectives
2. Strategic Asset Allocation
3. Risk Management
4. Policy Framework
5. Due Diligence
6. Transparency and Disclosure
7. Oversight and Accountability
8. Performance Evaluation
9. Continuous Improvement

Scope of Review

Mercer's process included four distinct phases:

- **Preliminary and initial discussion**
  - Meetings with the City Investment Team to determine the scope
- **Document review**
  - Review of policy documents, IAC meeting minutes, and other items presented by The City.
- **Interviews**
  - Mercer conducted individual interviews with 6 members of the IAC to collect information and understand perspectives regarding the governance of the investment assets
- **Final Report**
  - Mercer produced a final report to outline their findings and observations, key guiding principles for governance, as well as recommendations for prospective investment governance

Key Observations

Observations from the report include:

- "…. the City has already exceeded best practices in governance through recognizing that processes and procedures must evolve over time, and that modifying, where necessary, existing processes to better suit current circumstances is essential in maintaining good and effective governance practices."
- "…the current governance structure adopted in relation to Asset investment is efficient and operating with optimal consideration of timely and germane information examined by experts in the field of institution investing…"
- "The City investment policy documents are comprehensive and reflective of industry best practice."
- "IAC composition is diverse, reflecting a spectrum of finance and investment knowledge both within the City organization and externally."

Additional Recommendations

Additional recommendations that, in Mercer's view, would enhance existing governance:

- Expansion of IAC membership to include a third external member
- Develop a pool of potential candidates for external IAC appointments to ensure continuity and ease of succession transitions without interruption to overall IAC activities
- Expand the breadth of topics covered during IAC on-boarding
- Make continuing education opportunities available to IAC members
- Establish a consistent and documented definition of the Prudent Investor Rule[1]
- Update certain investment governance documents for purposes of clarity related to roles, responsibilities and expectations

[1] The terms "Prudent Investor Rule" and "Prudent Person Rule" are both used in this Report due to their respective incorporation into relevant City investment governance documents and applicable legislation. They are equivalent terms used interchangeably, reflective of the same concept and applicable standard of care.

Actions

1. Administration review the report and developed a discussion and points to action with timelines.
2. Presented discussion and action items to IAC on April 29^{th}.
3. Incorporating changes into policy and process documents by Q4 2024.
4. Seek final approval for implementation from IAC by Q4 2024.
5. Documents will progress through approval and sign off processes.

Conclusions

1. The City of Calgary overall has a sound governance framework.
2. Editorial improvements can be made to governance documents to improve clarity of roles and responsibilities as well as remove duplication.
3. Changes to IAC onboarding process to be made and provide ongoing educational opportunities
4. Develop a clear definition of the “Prudent Investor Rule” and incorporate within relevant policies.

Recommendation

That Audit Committee receive the Investment Governance Report and supporting documents for the corporate record.

Questions?

External Auditor 2023 Management Letter

PURPOSE

The purpose of this report is to provide the Audit Committee with the annual Management Letter from Deloitte LLP, The City's External Auditor, relating to the audit of The City's 2023 consolidated financial statements.

PREVIOUS COUNCIL DIRECTION

Audit Committee Bylaw 33M2020 provides the authority for Audit Committee to review the External Auditor's Management Letters and request updates. The most recent Management Letter update from the External Auditor was on the status of their recommendations contained in their 2022 Management Letter (AC2024-0082) at the 2024 January 18th Audit Committee meeting.

RECOMMENDATIONS:

That the Audit Committee:

1. Requests the External Auditor provide an update regarding the implementation status of the recommendation contained in the 2023 Management Letter (Attachment) at the 2025 January Audit Committee meeting; and

2. Recommends that Council receives this Report and Attachment for the Corporate Record.

HIGHLIGHTS

The External Auditor's 2023 Year-End Report was presented at the 2024 April 18 Audit Committee Meeting (AC2024-0479) and was received for the Corporate Record by Council at their 2024 April 30 Regular Meeting.

The annual Management Letter to The City's Administration reflects the observations the External Auditor had during the 2023 Audit. Deloitte have not identified any new items that would be of interest to Administration. However, they have included an update with respect to observations raised during the fiscal 2020 audit, based on procedures they performed during the 2023 audit. This observation relates to the automation of the consolidation process and Deloitte provided the status as in progress.

This report provides Calgarians with assurance that recommendations made by the external auditor are followed up and implemented. It also offers transparency on Administration's efforts to mitigate any potential risk to The City.

Audit Committee should ensure that the recommendations made by the External Auditor are implemented after an appropriate interval of time, by directing that the External Auditor prepare a follow-up report for the Audit Committee's 2025 January meeting.

External Auditor 2023 Management Letter

ATTACHMENT

Deloitte LLP 2023 Letter of Recommendations (Management Letter)

Department Circulation

Councillor E. Spencer	Chair of Audit Committee	Approve

Author: C. Smillie, Executive Advisor to Audit Committee

Deloitte.

Deloitte LLP Suite 700, 850-
2nd Street SW Calgary AB
T2P 0R8
Canada

Tel: 403-267-1700
Fax: 403-264-2871
www.deloitte.ca

June 13, 2024

Private and confidential

Carla Male, Chief Financial Officer and
General Manager, Corporate Planning & Financial Services
The City of Calgary
800 MacLeod Trail SE
Calgary AB T2P 2M5

Dear Ms. Male:

We have recently completed our audit of the consolidated financial statements of The City of Calgary ("The City") for the year ended December 31, 2023.

We examined the accounting procedures and systems of internal control employed by The City to the extent we considered necessary to make an evaluation of such systems and procedures in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). The objective of a financial statement audit conducted in accordance with Canadian GAAS is to express an opinion on the fairness of the presentation, in all material respects, of The City's financial statements for the year ending December 31, 2023 in accordance with Canadian public sector accounting standards ("PSAS").

Under these standards, the fundamental purpose of the evaluation is to assess audit risks to assist in determining the nature, extent and timing of our audit tests and to establish the degree of reliance that we could place on selected controls; it was not to determine whether internal controls were adequate for Administration's purposes or to provide assurance on the design or operational effectiveness of internal control over financial reporting.

While our examination would not disclose all weaknesses in the system of internal control, as these examinations are based on selective tests of the accounting records and related data, we are required to communicate significant deficiencies to those charged in governance. A significant deficiency is defined in the Canadian Auditing Standards Section 265 as a deficiency or combination of deficiencies in internal control that, in the auditor's professional judgement, is of sufficient importance to merit the attention of those charged with governance.

We have not identified any new items that would be of interest to Administration resulting from the 2023 audit. We have included in this letter an update to observations we identified during the prior years' audits, based on procedures performed during the 2023 audit.

The following summarizes the status of the management letter points:

Title of Observation	Year Identified	Appendix	Status
Automation of the consolidation process	2020	A	In progress

This communication is prepared solely for the information and use of, as applicable, Administration, the Audit Committee, members of Council and others within The City. Further, this communication is not intended to be and should not be used by anyone other than these specified parties or summarized, quoted from or otherwise referenced in another "document" or "public oral statement". We accept no responsibility to a third party who uses this communication.

We wish to express our appreciation for the courtesies and cooperation extended to your representatives during the course of our work. We would be pleased to discuss and/or clarify the matters included herein with you further should you wish to do so.

Yours truly,

Deloitte LLP

Chartered Professional Accountants

cc: The Audit Committee of The City of Calgary

Appendix A – Update to December 31, 2020 observations

Automation of the consolidation process (update to December 31, 2020 year-end observations applicable to 2023)

Year Identified - 2020

Observation

As noted in a previous recommendation letter for the 2015 year-end audit, The City's consolidation process continues to be a manual exercise. The consolidated financial statements include figures from All Funds Statements ("AFS") and consolidation and elimination entries relating to four funds (operating, capital, tangible capital asset and reserve funds) and the related authorities.

Over the last number of years, the transactions between The City and the related authorities have become increasingly more complex, resulting in additional consolidation and elimination entries. The complexity of transactions will continue to increase in the coming years with the implementation of new accounting standards by The City and the related authorities.

Administration uses excel spreadsheets to prepare The City's consolidated financial statements, which include the AFS's from the related authorities and approximately one hundred elimination and consolidation entries, resulting in a complex consolidation exercise. The use of spreadsheets for a complex consolidation is not a best practice as the use of spreadsheets inherently increases the risk of errors relating to incorrect formulas, calculations or simple human error (unintentional deletion or incorrect data entry) and data integrity issues that may go undetected by the preparer or reviewer. Further, reflecting changes from updates to the AFS reports prepared by the related authorities is a manual process that is prone to potential errors and integrity issues.

Additionally, The City undergoes internal reorganizations from time to time. These internal reorganizations may require changes to the disclosures in the consolidated financial statements, including comparative information. To the extent that the consolidation can become more automated, there is a likelihood that generation of supplementary notes and schedules such as segmented disclosures could be done on a timelier basis while freeing up resourcing for Administration to focus on tasks that require manual involvement.

Recommendation

We recommend that Administration implement an automated process relating to the preparation of the consolidated financial statements. For example, a dedicated consolidation information technology software should be utilized (i.e. SAP, Hyperion, PeopleSoft) to minimize errors, integrity issues, generate useful reports and to increase efficiency and timeliness of the financial reporting process.

Administration response

Administration agrees with this recommendation. Currently, there are appropriate internal controls in place to prepare an accurate and complete consolidation; however, Corporate Financial Reporting ("CFR") will review the current consolidation process in 2021 for additional improvements and consider the available options for the implementation of an automated process for the future. CFR recognizes that given the nature and size of The City, including its related authorities, an automated process for the consolidation would result in the generation of useful reports, increased efficiencies and timeliness of the financial reporting process and reduce the risk profile of the current manual process. Implementation of a consolidation system is a multi-million dollar commitment by The City and would require capital prioritization in competition with many other high-priority initiatives with benefits primarily qualitative in nature. CFR will prepare a business case by the end of fiscal 2021 and engage with internal IT resources for scope and cost considerations. Dependent on these findings, CFR may submit an application for funding in the next four-year budget cycle.

Administration's update - January 2023 (based on 2022 interim audit procedures)

Administration continues to agree with this recommendation. The business case has been approved internally and was included for funding considerations as part of the 2023-2026 Service Plans and Budgets with approval by Council on November 25, 2022. Implementation of a consolidation system is a multi-year commitment by The City and will require prioritization in competition with many other high-priority initiatives with benefits primarily qualitative in nature. Finance will review priorities for the next four-year cycle and will engage with internal IT resources for prioritization of the business case and further scope, cost and implementation timing considerations.

Auditor's update - January 2023 (based on 2022 interim audit procedures)

We will continue to obtain updates from Administration on the progression of the business case for an automated consolidation process. During our year-end fieldwork, we will perform our planned audit procedures on the consolidation and will report any deficiencies or further recommendations to Administration and Audit Committee upon the completion of the 2022 year-end audit.

Auditor's update June 2023 (based on 2022 year-end audit procedures)

We continue to recommend that Administration implement an automated process relating to the preparation of the consolidated financial statements to minimize the risk of errors, integrity issues, generate useful reports and to increase efficiency and timeliness of the financial reporting process.

Administration's update June 2023 (based on 2022 year-end audit procedures)

Administration continues to agree with this recommendation. The business case has been approved for funding with scoping beginning in 2024 as part of the 2023-2026 Service Plans and Budgets that was approved by Council on November 25, 2022. Implementation of a consolidation system is a multi-year commitment by The City and will require prioritization in competition with many other high-priority initiatives with benefits primarily qualitative in nature. Finance will review priorities for the next four-year cycle and will engage with internal IT resources for prioritization of the business case and further scope, cost, and implementation timing considerations.

Administration's update - January 2024 (based on 2023 interim audit procedures)

Administration continues to agree with this recommendation. The business case was approved in November 2022 as part of the 2023-2026 Service Plans and Budgets with funding commencing in 2024. Finance has committed to review the business case in the second half of 2024 to initiate preparation work on the consolidation project. Implementation of a consolidation system is a multi-year commitment by The City and will require prioritization in competition with many other high-priority initiatives with benefits primarily qualitative in nature.

Auditor’s update – January 2024 (based on 2023 interim audit procedures)

We will continue to monitor Administration’s activities and progress as they work through the steps to automate the consolidation process.

Auditor’s update – June 2024 (based on 2023 year-end audit procedures)

We continue to monitor Administration’s activities and progress as they work through the steps to automate the consolidation process.

Administration’s update - June 2024 (based on 2023 year-end audit procedures)

Administration continues to agree with this recommendation. As part of Finance’s commitment to review the approved business case in the second half of 2024 to initiate the preparation of work on the consolidation project, recruitment is underway for a subject matter expert resource to join the Finance team to support and deliver this project. While the benefits of a consolidation project are primarily qualitative in nature, The City’s commitment to this multi-year project continues to deliver on Council’s focus area of modernizing government.

Calgary Municipal Land Corporation Report to Audit Committee
2024 June 13

ISC: UNRESTRICTED
AC2024-0436

Calgary Municipal Land Corporation 2023 Annual Report

PURPOSE

This report is in response to the Audit Committee's request for an annual report on Calgary Municipal Land Corporation's board governance, financial and performance reporting, environmental, social and governance practices, risk management, and talent and culture insights from 2023.

PREVIOUS COUNCIL DIRECTION

The Audit Committee 2024 Work Plan includes a presentation from several civic partners on their 2023 annual report and Calgary Municipal Land Corporation was one of the partners selected to present this year.

The Audit Committee Bylaw 33M2020 provides that Audit Committee oversees its governance responsibility with audit committees of The City's major autonomous civic entities, as determined by the Audit Committee.

RECOMMENDATION(S):

That Audit Committee receive this report and presentation for the Corporate Record.

HIGHLIGHTS

The following is the outline of the information the Audit Committee have asked the Calgary Municipal Land Corporation to provide:

FINANCIAL AND PERFORMANCE REPORTING

Key Strategic Initiatives

In 2019, we identified four strategic priorities to focus our city-building efforts from 2020 to 2024 – the areas in which we believe we can have the greatest impact.

- Maximizing impact
- Relationship management
- Community-building innovation
- Excellence in project execution

At the end of 2023, we assessed our progress on each strategic pillar and set our sights on specific goals for the coming year.

Maximizing Impact

- Increased interest, investment, and development in the community
    - Signed LOIs with two interested developer partners for three East Village parcels
- Increased our impact by improving resource use and allocation, and sustaining project momentum

  - Advanced CMLC's strategic plan for the next planning cycle (2025-2029)
  - Developed new integrated leadership team model to support internal leadership development
- Improved CMLC team capacity and capabilities to align with project lifecycles
  - Conducted developer and project partner 'differentiator survey' to assess CMLC's processes and procedures
  - Onboarded two new Board members and realigned Board committee membership with member expertise
- Grew employee engagement and accelerated new employee training
  - Initiated new mentorship program to grow engagement and skill development among CMLC staff
  - Conducted third annual staff engagement survey, with overall engagement remaining strong at 87 percent in 2023
  - Completed rollout of core competency model
  - Advanced annual work plans within IDEAS framework, focusing on leadership, learning, growth and practices

Relationship Management

- Forged new partnerships and maintained existing ones
  - Signed LOIs with new developer partner in East Village
  - Initiated new project governance structure and consultant team for Olympic Plaza Transformation
  - Signed development agreement with Attainable Homes for David D. Oughton project
- Fulfilled partner expectations with respect to project goals and continued to advance projects through supporting systems and processes
  - Led robust multi-partner district construction coordination program and delivered strategic communications plans in advance of major construction projects
  - Hosted 13 media events, garnering $11 million in earned media value equivalence and achieving total reach of one billion
- Increased learning and collaboration through greater engagement with key City of Calgary departments
  - Worked with The City of Calgary and community partners as member of Downtown Safety Leadership Table
  - Provided Calgary City Council with quarterly updates on major CMLC-led projects
  - Collaborated with project and district partners and supported successful delivery of C+E projects through clear communications and construction coordination
  - Supported The City of Calgary's downtown revitalization strategy (Greater Downtown Plan) through marketing and brand development

Community Building Innovation

- Increased partnerships in community-building, contributing to long-term self-sustaining community programming targets
  - Delivered a range of programs with 683 program days, total visitation in East Village of over 93,000 and collaborations with 65 partners

- Supported district construction coordination awareness through joint programming with Calgary Stampede, CSEC and the Green Line LRT team
- Hosted two Placemakers Speaker Series events focused on downtown revitalization and sustainability in public spaces
- Worked with The City to implement a second HELP team in East Village to support the existing team and elevate community support

- Tested new approaches in our project portfolio
    - Designed and launched Pixel Park—a new programming space in The C+E that includes Calgary’s first downtown supercharger location with Tesla Motors Canada
    - Conducted accessibility audit of CMLC’s digital platforms and launched new CMLC website
    - Hosted second BioBlitz on St. Patrick’s Island to assess biodiversity 10 years post revitalization
    - Announced major public art installation for the BMO Centre expansion project
    - Led transition from temporary to permanent platform at Victoria Park/Stampede LRT station and managed communications during associated partial closure of Red Line
    - Implemented new lighting program on Dermot Baldwin Way to increase visibility, vibrancy and safety
- Increased private investment
    - Broke ground on mixed-use condo project, EV606, with Alston Properties
    - BOSA Development launched sales for phase two of Arris (337 units)—East Village’s first new condo project in 5+ years
    - Welcomed new major retailer, Shoppers Drug Mart (opened December 2023)

Excellence in Project Execution

- Fulfilled project mandates, meeting or exceeding project goals
    - Completed design and construction of Pixel Park
    - Initiated construction of Stampede Trail
    - Managed selection and procurement of design team for Olympic Plaza Transformation and secured $40 million from The City of Calgary for project design and initial project stages
    - Advanced BMO Centre building to fully weather-tight and energized
    - Transitioned commuters to new permanent platform on Victoria Park/Stampede Station rebuild project (December 2023)

Initiatives Within the Rivers District

CMLC aims to deliver a public infrastructure and placemaking program to attract private investment, stimulate CRL generation, and create a sustainable tax base for the City of Calgary as our shareholder through the following:

- East Village Infrastructure Upgrades & Maintenance
- Land Strategy and Activations

East Victoria Master Plan

- Victoria Park Infrastructure Upgrades

Calgary Municipal Land Corporation 2023 Annual Report

- East Victoria Park Land Strategy
- 17th Avenue SE Extension + Stampede Trail LRT Rebuild
- District Wide Infrastructure
- Project Management
- Corporate Programming

Initiatives Outside the Rivers District
CMLC aims to create value (ROI) for CMLC and the City of Calgary as our shareholder by strategically selecting real estate development opportunities that not only support the organization's vision and mandate but also best utilize our core competencies.
We will seek the most effective way of delivering on the David D. Oughton project through collaboration with the private industry.

Financial Highlights

- Positive impact within the Rivers District through investment in Community
  - Completed Projects: Pixel Park and 5th Avenue Flyover Lighting
  - Ongoing Projects: BMO Centre expansion, Arts Commons Transformation, Olympic Plaza Transformation, 17th Avenue SE Extension and LRT Station Rebuild, Stampede Trail, East Village Maintenance
- Continued maintenance of completed Infrastructure assets saving the City on additional maintenance costs
- Clean auditor's opinion on financial statements
- Financial statements of CMLC are consolidated into the City financial statements

ENVIRONMENTAL, SOCIAL & GOVERNANCE PRACTICES

In 2021, CMLC embarked on creating a Climate Change Framework and Action Plan (FAP), by conducting a baseline analysis in 2021 of CMLC projects and operations to understand how we are addressing climate change. The FAP was approved by CMLC's Board of Directors in December of 2022.

Following this, CMLC researched framework strategies, actions and best practices completed by other jurisdictions and similar companies, compiling and cataloging these frameworks and actions in accordance with CMLC's baseline categories, IDEAS Focus Areas and government regulations.

In July of 2022, the City of Calgary's Council approved the Calgary Climate Strategy - Pathways to 2050 document, a strategic framework that will guide the City in its efforts to reach net zero by the year 2050. The City of Calgary's Mitigation Plan Themes were used to guide CMLC's Action Plan themes to ensure alignment with CMLC's Shareholder's (City of Calgary) strategic direction. The FAP Action Plan Themes are defined as critical areas of opportunity to reduce/minimize GHG emissions and responsibly grow knowledge of climate change and innovation in sustainable development.
CMLC's GHG emissions targets established in CMLC's Climate Change and Environmental Sustainability Framework and Action Plan align with the City's 2030 and 2050 emissions targets from the City's Calgary Climate Strategy.

Calgary Municipal Land Corporation 2023 Annual Report

Sustainability & Accessibility

CMLC's IDEAS (Inclusion, Diversity, Accessibility and Sustainability) Strategy identifies four areas that encompass the range of learnings and opportunities that CMLC is committed to enhancing. The 4 focus areas are defined as:
Leadership - Leading, mobilizing, and inspiring efforts tied to reducing our climate change impacts and responding to challenges
Learning - Establishing and supporting a learning orientation at CMLC, growing our knowledge and understanding of climate change
Growth - Promote best-in class performance related to environmental sustainability to promote early adoption and innovation
Practices - Integrate climate change and sustainability into CMLC's procurement process. Build and strengthen industry relationships that align with CMLC's environmental goals

BOARD GOVERNANCE

CMLC's Board of Directors continues to provide strong, committed leadership to the company, and a subcommittee of the Board provides specific governance leadership. To further assist with governance, additional subcommittees focus on Compensation & Human Resources, Audit & Finance, and Environment, Health & Safety.

CMLC has staggered terms of appointment for the Board of Directors to ensure that there is continuity of Board of Directors and an appropriate balance of experience and fresh eyes. The Board's Governance Committee has developed criteria, including a skills matrix, for future Board candidates to ensure that we attract qualified and committed Calgarians. This recruitment process has produced a high-functioning Board, which is diverse and open to a wide variety of perspectives.

At an operational level, CMLC's management continues to update corporate policies and our employee and Board of Directors' manuals as necessary. CMLC will continue to operate in a transparent, timely, efficient manner and in the best interests of our shareholder, the City of Calgary.

The Board Terms of Reference are reviewed annually. There were no significant changes to the Committee Charter or Terms of Reference in 2023. Board composition is also reviewed on an annual basis to ensure adequate oversight is provided to CMLC.
Audit Committee Composition

Shannon Doram
Audit & Finance Committee Chair
Corporate Governance Committee Member

Shannon Doram joined the CMLC Board of Directors in 2019 and now serves as the Finance & Audit Committee Chair. Shannon has dedicated her career to community service, leadership, and social change. Her mission is simply to be a catalyst for health and happiness.

Calgary Municipal Land Corporation 2023 Annual Report

By day Shannon is the CEO of YMCA Calgary, providing leadership to the Association and its Impact work. By night she is a coach, an athlete, and a tireless advocate for community health. Shannon is also a proud member of the Government of Alberta's non-profit Red Tape Reduction Committee.

Shannon is a leader who strives to inspire the best in those around her and sets high expectations to challenge conventional ways of working. She values relationships with community partners, spending time to understand common challenges and goals, and establishing alignment to amplify impact. A Kinesiology graduate from the University of Calgary and a proud alumnus of the University of Alberta's School of Public Health, Shannon has centered her career around building healthy communities.
Over the past six years, Shannon's team has led YMCA Calgary's doubling in size as part of a valued partnership with the City of Calgary. Together, they've opened two of the largest YMCAs in the World, extending the reach of the YMCA to more than 4 million Calgarians annually, across 10 YMCA locations and 40 community sites. YMCA Calgary now operates almost 800,000 sq ft in assets with the leadership of 2500 staff and volunteers. The organization navigated two difficult years of significant impacts from the COVID-19 pandemic under Shannon's leadership, and continues to be a strong, healthy partner in the community.
In addition to her responsibilities locally, Shannon recently led a national innovation team on behalf of YMCAs in Canada, working to expand YMCA services across the country. She also hosted 130 North American CEOs and Board chairs for a multi-day learning experience and provides leadership to the YMCA's international partnerships in Bogota and Ukraine.

Kent Brown CPA, CA
Audit & Finance Committee Member
HR & Compensation Committee Member

Kent Brown joined the CMLC Board in 2021. Born and raised in Calgary, Kent is a Canadian entrepreneur who has focused on the climate tech sector for the past 20 years.
Founder and CEO of BluEarth Renewables, Kent and his team built a successful $1.2 billion renewable energy platform before it sold in 2015. He is the also the former CEO of Canadian Hydro Developers which was the largest Canadian renewable energy company when it sold in 2009.

With a passion for advising on climate technology and the impacts of climate change, Kent is an active mentor at the Creative Destruction Lab and was appointed by the Government of Alberta's Climate Change Advisory Panel in 2015 to co-lead and co-facilitate Electricity Stakeholder Technical Engagement sessions which lead to the Climate Leadership Plan. He also co-created The Catherine Bell & Kent Brown Awakened Company Award at the Smith School of Business at Queen's University.

Other affiliations: VEERUM (Board Chair), Canary Biofuels (Board Chair)

Rod Graham
Audit & Finance Committee Member
Environment, Health & Safety Committee Chair

Calgary Municipal Land Corporation 2023 Annual Report

Rod Graham joined the CMLC Board of Directors in 2019. As a Senior Corporate Executive with extensive experience in sectors including financial/investment, modular construction, manufacturing, automotive and resource services. As Chief Executive Officer and President of First Industries Corporation and First Truck Centre, Rod has full responsibility for executing the strategic direction and ongoing operations of both companies.

As the former CEO of Horizon North, Rod is proud that the company became part of the solution to improve the level of accessibility and inclusiveness in the construction sector.

Rod has also been on a number of other public, private and not-for-profit boards, including the Business Council of Canada, the Dean's Advisory Council at Thompson Rivers University, the Young Presidents Organization. Rod was also previously on the Board of Directors for First Industries Corporation.

Rod holds an MBA from the University of Western Ontario, a Chartered Financial Analyst (CFA) designation from the CFA Institute and an Honors Bachelor of Business Administration from Wilfred Laurier University. He is also a graduate of the Institute of Corporate Directors (ICD) program.

ENTERPRISE RISK MANAGEMENT

CMLC's Enterprise Risk Management (ERM) program gives the organization a systematic approach to managing risk. The ERM program is embedded in CMLC's business activities to support effective project management and gives the Board, the Executive Leadership Team and the rest of the organization useful risk information to support strategic decision-making. The ERM program gives us a clearly defined risk governance structure with roles and responsibilities and alignment between strategic objectives and organizational risks. CMLC conducts bi-annual reviews of the ERM program.

Principal Financial risks faced by CMLC include:

- Inflation Escalation: impacts debt servicing, project delivery and prevents new projects from commencing.
- Mid to Long-term Funding: Risk of lower than expected CRL revenue and the availability of capital in the 5-10 year time frame ahead

Principal Operational risks faced by CMLC include:

- Project Control: lack of influence over interdependencies can create suboptimal outcomes and reputational risk
- Safety: balancing community safety with the needs of the vulnerable population whilst also mitigating the risk of losing private investment and public perception

The CMLC Enterprise Risk Management Function (ERMF) comprises the President and CEO, CFO / VP of Corporate Services, VP of Communications and Strategic Partnerships, Senior Director of Development and VP of Building and Infrastructure. The ERMF oversees the implementation and ongoing execution of risk management processes within their areas of responsibility, and report on CMLC consolidated enterprise-wide risks and risk management status to the Board on at least an annual basis.

CMLC's principal risks are documented in an ERM risk register. The risk register captures the risk event, risk cause, current mitigations and a risk assessment based on likelihood of occurrence and impact to CMLC. Where additional risk mitigation activities are identified, these are captured and assigned a risk owner.

CMLC reports principal risks to the Board Audit Committee on a semi-annual basis. Reporting includes principal risks; risk causes and impact to CMLC should they occur. Board reporting includes a heat map that illustrates how the likelihood of occurrence and impact of principal risks changes year over year.

- Information technology risk is mitigated by outsourcing IT to a consultant with an experienced team.
- Cybersecurity & financial risk is mitigated through certificates on Executive Leadership Team signatures and spending authorization processes. Cybersecurity insurance in place to transfer risk to a third party.
- The Board Audit Committee evaluates highest priority risks on a bi-annual basis.
- Safety risk is assessed through an independent third-party site audit on all CMLC developer sites to ensure they are complying with the Health and Safety standards.
- Project risk is monitored internally through regular variance (financial) analysis. Project risk is mitigated through Force Majeure contract clauses to hold the developer accountable for project delays.

TALENT AND CULTURE

In 2023, CMLC had no significant changes to our executive leadership.

Diversity, Equity & Inclusion

CMLC has established a Diversity, Equity, and Inclusion working group which focuses on five priority areas:

- Commitment to Education
- Workplace Fosters Diversity, Equity, and Inclusion
- Connecting with Underserved Communities
- Recruitment & Procurement
- Championing Talent

The DE&I Committee shares DE&I material on a regular basis through presentations, staff events, and reference guides. All employees are encouraged to share DE&I related information on our shared staff chat and every staff meeting includes a DE&I moment. CMLC's Marketing and Communication team promotes DE&I initiatives through content, programming and events. All DE&I material is stored on CMLC's intranet site for employees to easily access.

The priority areas align with CMLC's business plan and touch on every area within the organization. Each priority area has a designated lead and is tasked to deliver on action items

Calgary Municipal Land Corporation Report to Audit Committee 2024 June 13

ISC: UNRESTRICTED AC2024-0436

Calgary Municipal Land Corporation 2023 Annual Report

within their action plans. Action plans are created and revised each year with the review and approval of the Executive Leadership Team. DE&I action plans and results are regularly reported to the Board of Directors.

CMLC's ethics and compliance of corporate policies are reported to the board on a quarterly basis.

DE&I initiatives are woven throughout the recruitment process for potential employees and board members. CMLC's job descriptions include our DE&I mission and are regularly audited to ensure inclusive language. Job postings are posted on various platforms to ensure a diverse candidate pool. When utilizing staffing agencies, CMLC confirms alignment of DE&I goals with the agency.

Employees and board members are required to sign off on the updated handbook and policies on an annual basis. CMLC's ethics and compliance of corporate policies are reported to the board on a quarterly basis.

Employees have access to our CFO & VP, Corporate Services and Human Resources Manager for any concerns. CMLC has a Whistleblower policy to ensure employees feel safe should they need to report any unethical occurrences. Further action may be taken at the discretion of HR and is dependent on nature of the situation. CMLC also offers employees access to the Employee Assistance Program and Sunlife Benefits, which offer third-party counselling to further support mental and physical health. Employees have the ability to expense counselling sessions through their Health Spending Account.

CMLC offers employees an attractive total rewards package aligned to industry peers which include competitive salary, a robust benefits package, educational assistance, coverage of annual membership fees, maternity leave top-up, health benefit spending account, minimum 15 vacation days, 6 personal days. CMLC participates in benchmarking initiatives and compensation surveys on an annual basis to remain competitive within the industry.

CMLC conducts an annual Employee Engagement survey measuring employee engagement and morale. Based on the results of the survey, further action is implemented. Results of the survey are communicated to the Board and employees. CMLC also has an active Social Committee which creates numerous opportunities for connection amongst staff.

Attachments to this report have been provided by Calgary Municipal Land Corporation to address Audit Committee's request.

ATTACHMENT(S)

1. ATT 1 - CMLC - AC2024 - Control Environment Assessment
2. ATT 2 - CMLC - AC2024 Management Representation Letter
3. ATT 3 - CMLC - AC 2024 - Finance & Audit Committee Mandate
4. ATT 4 - CMLC - AC 2024 - Finance & Audit Committee 2024 Workplan
5. ATT 5 - CMLC - AC 2024 - CMLC Risk Register

Calgary Municipal Land Corporation Report to Audit Committee
2024 June 13

ISC: UNRESTRICTED
AC2024-0436

Calgary Municipal Land Corporation 2023 Annual Report

6. ATT 6 - CMLC - AC2024 - YE Report 2023
7. ATT 7 - CMLC - AC2024 - Financial Statements 2023

Author: Kondwani Bwanali, CFO and VP Corporate Services, Calgary Municipal Land Corporation

CMLC

CALGARY MUNICIPAL LAND CORPORATION – CONTROL ENVIRONMENT ASSESSMENT
June 2024

COMPONENTS OF INTERNAL CONTROL		DESCRIPTION (EXAMPLES)	CURRENT ASSESSMENT	FURTHER ACTIONS PLANNED
1	CONTROL ENVIRONMENT	The overall control environment at CMLC is critical in ensuring that the Internal Controls Over Financial Reporting (ICFR) operates efficiently and effectively.	CMLC has a strong control environment. CMLC's governance structure is set by Council through a Unanimous Shareholder Agreement and includes a Board of Directors which in turn has appointed an Audit and Finance Committee. As part of its terms of reference, CMLC's Audit and Finance Committee oversees the integrity of CMLC's financial statements and the system of disclosure and internal controls. The President & CEO and CFO / VP, Corporate Services meet and provide representations to the External Auditor describing how their responsibilities are discharged.	Ongoing review and active application of control policies and procedures and documentation. Keeping current on new accountability requirements and industry standards to ensure control policies and procedures remain appropriate.
		City Council sets the overall tone for internal controls for all business units. The CMLC Board and management contribute to this tone through its operating practices, integrity, and adherence to core values.	There is a culture and operating practices at CMLC that deliberately and emphatically produce an environment of strong financial control. CMLC has a conservative and careful approach to financial management. CMLC follows industry best practices for the acquisition of goods and services required to fulfill its mandates. CMLC has a code of conduct in place for its staff, and for its Board members.	CMLC will continue to stress the importance of a strong control environment by remaining aware of City initiatives in this regard.

CALGARY MUNICIPAL LAND CORPORATION – CONTROL ENVIRONMENT ASSESSMENT
June 2024

COMPONENTS OF INTERNAL CONTROL		DESCRIPTION (EXAMPLES)	CURRENT ASSESSMENT	FURTHER ACTIONS PLANNED
2	RISK ASSESSMENT	An overall risk assessment should help determine the highest risk areas at CMLC that could impair the achievement of objectives.	• The Audit and Finance Committee reviews Risk Management on a regular basis. The last update was completed in 2023.	• The Audit and Finance Committee update the overall risk assessment for CMLC on an annual basis in addition to a mid year review.
3	CONTROL ACTIVITIES	Control activities include policies, procedures, documented approvals, reconciliations, verifications, reviews, physical security, segregation of duties, and so on.	• Controls are monitored and updated on a regular basis as the dynamics of the organization changes. The Audit and Finance Committee is informed of the changes at Board committee meetings by management. All the process and control procedures are posted on the CMLC intranet site for staff to review. • These controls include: clear delegation of signing authority which requires dual signatures on all purchases according to specified limits. Dual signatures are also required on all cheques. • In addition, the CICA Handbook requires external auditors to be more proactive in assessing control activities and the risk of fraud. This provides more independent feedback on CMLC's existing controls.	• Management reviews and updates policies and control procedures on an on-going basis. The Audit and Finance Committee reviews the policies and control procedures for CMLC on an annual.
4	INFORMATION AND COMMUNICATION	There should be a continuous flow of financial reporting and information throughout CMLC to support the strong control environment.	• Monthly financial reports are used as a foundation for control activity. • Cash flows are monitored on a weekly basis. • Relevant information is disseminated through staff, management, and Board meetings.	• CMLC continues to meet with City of Calgary Finance representatives (Treasury) on a quarterly basis. • CMLC also meets with Council twice a year and provides a financial update during those meetings. • Staff will be apprised as new or revised policies, procedures, and controls are developed.

CALGARY MUNICIPAL LAND CORPORATION – CONTROL ENVIRONMENT ASSESSMENT
June 2024

COMPONENTS OF INTERNAL CONTROL		DESCRIPTION (EXAMPLES)	CURRENT ASSESSMENT	FURTHER ACTIONS PLANNED
5	MONITORING	Ongoing monitoring occurs in the normal course of operations and includes regular management and supervisory activities and other actions by personnel as part of the assessment of internal controls.	• The Business Plan and Budget is monitored to ensure objectives are achieved. • CMLC reviews its financial policies on a regular basis to ensure compliance. • Financial reconciliations are performed on a monthly basis to ensure accuracy and completeness of accounts payable. • Monthly financial statements are prepared for review by management. • Quarterly financial statements are prepared for review by management and Audit and Finance Committee. • Infrastructure project budgets are reviewed on a monthly basis and any variances are immediately followed up. • Change orders are required for all changes to contracts.	• Continued monitoring and enforcing compliance with policies and procedures. The Board and Management emphasize a control conscious environment that supports the business processes.
6	INFORMATION TECHNOLOGY – DISASTER RECOVERY	CMLC's business needs require business continuity and high availability. In order to accomplish this, disaster recovery infrastructure and methods have been implemented.	• Real time data replication (5-minute delay maximum) to an off-site datacenter. This system is tested with management oversight annually. • The Disaster Recovery Point Objective (maximum amount of potential data loss due to a disaster situation) is less than 10 minutes. • The Recovery Time Objective (time from disaster status until data and services are operating on the off-site datacenter servers) is under 4 hours. • A disaster recovery plan is available to all staff on the shared office network drive, and is reviewed annually. • Internal IT audits of the Disaster Recovery infrastructure are done periodically to ensure all hardware and methods are up to date and functioning properly. • Co-located Exchange/Email servers provide redundancy and high availability. In the case of a disaster situation, email roles are taken over by the standby server in the off-site datacenter.	• Continued monitoring and annual testing of the systems to ensure business continuity by Management. Audit and Finance Committee updated on IT activities on a quarterly basis.

CALGARY MUNICIPAL LAND CORPORATION – CONTROL ENVIRONMENT ASSESSMENT
June 2024

	OTHER INFORMATION TECHNOLOGY SECURITY MEASURES	We have implemented procedures to protect CMLC from cyber attacks.	• Office365 Multi-Factor Authentication (MFA) - Account logins utilize random-generated security codes as additional layer of authentication – can eliminate up to 95% or more of account compromises. • Exchange upgrade - Exchange Online - Microsoft is pushing for customers to get off of on premises Exchange servers and move to the cloud. Exchange Online is better protected against attacks like the recent HAFNIUM attack. Includes user mailboxes under MFA protection for logins. Evolution of disaster recovery and business continuity for Exchange. • Bitlocker on CMLC laptops - Encryption of laptop hard drives – if a laptop is stolen, it's data can be protected if the thief were to remove the hard drive to extract data. • Immutable backups - Specialty disk storage that can only be read, but not altered. New standard in protection against would-be ransomware attackers – protects backups from being encrypted or deleted. • Cloud backups - Move away from tape backups, offsite backups to the 'cloud', housed securely at Ci2 datacenters. Offsite, but local (YYC), for quick restores in case of emergencies. • Hardware - Industry leading Unified Threat Management from Fortinet inspects every piece of internet traffic and detects malicious code, traffic to/from botnets, compromised websites, spam, proxies, etc. • Enterprise level monitoring and Anti-Virus - N-Able enterprise monitoring and antivirus provides desktop, laptop, and server protection and alerts the IT team in the case of any detection. N-Able also tracks IT assets, and provides remote access and alerting on other issues. • Secure file systems - NTFS security and share permissions lock down unauthorized access to network files. Best practices are implemented to prevent rogue accounts to gain access through security loop holes. • Secure WiFi - Guest and Corporate WiFi is separated. Only approved corporate devices are	• Continued monitoring and monthly meetings between Management and IT consultants to ensure standards are being met.

			connected to the internal WiFi and the password is never given out. • Secure passwords • Security Orders - In response to emerging threats, security orders are implemented and executed at the highest priority. • 3-2-1 Backup Standard for Data - In the case of a successful cybercrime breach, the highest industry standard for data backup has been implemented and is audited regularly. • Education - Staff are educated through IT Bulletins and in person training what to look for and how to respond to unfamiliar requests and system behavior. Requests are escalated immediately with the security team.	

Instructions for
2023 Management Representation Letter (MRL)

For the most part, the 2023 year-end the MRL should be handled in the same manner as for 2022.

1. Operational management is required to provide a sign-off. Where the Corporate Financial Reporting Checklist requires the same representation as the MRL, the year-end checklist reference number has been provided in the MRL (see I to XXIV).
2. No other changes should be made to the wording in the MRL. However, **Related Authorities ("RAs")** should strike out the selected areas of the letter that are not applicable to their RA. An area is not applicable if your RA does not have an ending balance or any transactions during the year that fall in this category. The only areas that may be stroked out and marked as non-applicable ("NA") are as follows:

IV	**Marketable Securities** – If Treasury does all the transactions for your investments or your related authority does not have any investment balance or investment transactions during the year.
VI	**Inventory** - Will not be applicable for related authority that do not report any inventory as at December 31, 2023.
VII – 5	**Capital Leases** - Will only be applicable for related authority with capital leases at year-end or capital lease transactions during the year.
XV	**Liability for Contaminated Sites** – Will only be applicable to related authorities that have contaminated sites.
XVI	**P3 Agreements** – Will only be applicable for related authority that have entered into P3 agreements.
XX	**Employee Future Obligations** – Will only be applicable for related authority that report employee future obligations.
XXVI	**Asset Retirement Obligations** – Will only be applicable if an asset retirement obligation associated with a TCA has been identified.

If you feel that other sections of your MRL are N/A, please contact your Financial Reporting Contact before marking them as such.

Stroke out the non-applicable sections in the following manner.

EXAMPLE
IV Marketable Securities
1. ~~All marketable securities which are owned by The City of Calgary and accounted for in the RA are recorded in the accounts~~. **N/A**
2. ~~The City has satisfactory title to all marketable securities recorded in the accounts of the RA and these securities are free from hypothecation~~. **N/A**
3. ~~Appropriate loss provisions have been provided in the accounts when the marketable securities have declined by a significant amount below their previous carrying value~~. **N/A**
4. ~~Investments made during the year and held as at December 31, 2023 have been made in accordance with Section 250 of the Municipal Government Act~~. **N/A**

**Management Representation Letter
Of**

**______________________
(Related Authority of The City of Calgary)**

Timing

Representation letters signed off by finance personnel must be included in the year-end files. If the operational sign-offs are delayed then the year-end file should still be submitted by the specific deadlines, with the appropriate accounting sign offs. A copy of the letter, with the operational sign off, should be submitted ASAP and no later than February 23, 2024.

Please contact your Financial Reporting Contact if you have any questions.

Management Representation Letter
Of

____
(Related Authority of The City of Calgary)

February 23, 2024

To: Chief Administrative Officer, Chief Financial Officer and City Treasurer or delegate for The City of Calgary

As members of management of the above related authority ("RA") of The City of Calgary ("The City"), we recognize that you are responsible for the preparation of the Consolidated Financial Statements of The City as of December 31, 2023 and for the year then ended in accordance with the recommendations and guidance provided by the Public Sector Accounting Standards ("PSAS"). Further, we recognize that obtaining this letter is a significant procedure in enabling you to carry out the abovementioned responsibility.

Representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of monetary value, if they involve an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

Accordingly, we make the following representations about the above RA, which are true to the best of our knowledge:

I. Financial Statements and Financial Records

1. As members of management of the above RA of The City, we are responsible for the preparation and maintenance of the accounting records and financial statements of the RA in accordance with the policies of The City including those outlined in the notes to The City's 2023 Consolidated Financial Statements contained in the 2023 Annual Financial Report, and the recommendations and guidance provided by PSAS, including the adoption of new policies regarding Tangible Capital Assets ("TCA").

2. We have provided you with:

   a. Access to all of the RA's information, of which we are aware that is relevant to the preparation of the Financial Statements, such as records, documentation and other matters. All financial statements and other financial information provided to you accurately reflect the activities and expenses of the RA and do not reflect any activities or expenses of any other person or entity;

   b. All relevant information of the RA, as well as additional information that you have requested from us for the purpose of the audit; and

   c. Unrestricted access to persons within the RA from whom you determined it necessary to obtain audit evidence.

3. The significant accounting policies adopted in the preparation of financial statements of the RA are consistent with those adopted by The City.

4. There were no material transactions during the year that have not been properly reflected in the accounts and financial statements of the RA.

5. As members of management of the above RA, we believe that the RA has a system of internal controls adequate to permit the preparation of accurate financial information and financial statements in accordance with the recommendations and guidance provided by PSAS and The City's policies as set out in the notes to the Consolidated Financial Statements in the 2023 Annual Financial Report. We have disclosed any significant change in the RA's internal controls over financial reporting that occurred during the year that has materially affected, or is reasonably likely to materially affect, the RA's internal control over financial reporting.

6. We have determined that the Financial Statements of the above RA are complete as of the date of this letter as this is the date when there are no changes to the Financial Statements (including disclosures) planned or expected. All final adjusting journal entries have been reflected in the Financial Statements and the Financial Statements have been approved in accordance with our process to finalize financial statements. The Financial Statements of the RA present fairly, in all material respects, the financial position of the RA as at December 31, 2023, and the results of operations and cash flows for the year then ended in accordance with PSAS.

7. As members of management of the above RA, regardless of the dollar amounts involved, we have reported to you all communications from regulatory agencies concerning non-compliance with, or potential deficiencies in, financial reporting requirements. We are unaware of any known or probable instances of non-compliance with the requirements of regulatory or governmental authorities, including their financial reporting requirements.

8. The RA has satisfactory title to and control over all assets, and there are no liens or encumbrances on such assets. We have disclosed in the Financial Statements all assets that have been pledged as collateral. **[Please identify any assets that have been pledged as collateral]**

II. Fraud and Error

We recognize that, as members of the management of the RA:

1. We are responsible for the implementation and operation of internal controls that are designed to prevent and detect fraud and error, as defined in CPA Canada Handbook, Canadian Auditing Standards ("CAS") Section 240 (paragraph 2, 3 and 4), and as articulated in Attachment 1. These internal controls are present and continue to operate effectively, we continue to create a culture of honesty and ethical behavior which can be reinforced by an active oversight by those charged with governance. This is demonstrated through The City's Code of Conduct Training that is part of onboarding new employees and regularly requires existing employees to review and complete. Based on our assessment, we believe the risk that the Financial Statements may be materially misstated as a result of fraud to be acceptably low.

Management Representation Letter
Of

____
(Related Authority of The City of Calgary)

2. We have reported positively to the Chief Security Officer, regardless of incidents or alleged frauds occurring or not, all significant facts relating to any actual, alleged or suspected frauds known to management of the RA that may have affected the RA or any irregularities or shortages outside of the normal course of operations. The incidents include those perpetuated against the RA from outside parties and were not necessarily committed by employees.

III. Non-compliance

1. We are not aware of any violations or possible violations of laws or regulations or illegal or possibly illegal acts within the RA, as defined in CPA Canada CAS section 250 (Paragraph 11), and as articulated in Attachment 2.
2. We have communicated to you all deficiencies in internal control of which we are aware. We have disclosed to you any change in the RA's internal control over financial reporting that occurred during the current year that has materially affected, or is reasonably likely to materially affect, the RA's internal control over financial reporting.
3. We have disclosed to you all communications from regulatory agencies concerning non-compliance with or potential deficiencies in the RA's financial reporting requirements.

IV. Accounts Receivable recorded within the RA's financial statements

1. Accounts receivable of the RA are correctly described in the accounts and represent valid claims as at the year-end, against the debtors indicated.
2. All goods shipped or services rendered prior to the year-end have been recorded as revenue of that year and no amount has been included in revenue and accounts receivable for goods shipped on consignment, on approval, or subject to repurchase agreements, or for services not yet rendered.
3. The accounts receivables are free from hypothecation (pledged as collateral) or assignment.
4. Adequate allowance has been made for any losses from uncollectible accounts, costs or expenses which may be incurred with respect to sales made or services rendered prior to the year-end, including allowance for quantity discounts, expense under service or repair contracts, etc. We believe the allowances are adequate to absorb currently estimated bad debts in the account balances.
5. No abnormal returns have been received or adjustments made since the year-end or are expected in respect of goods shipped or services rendered (including property and business taxes) prior to the year-end.
6. We are not aware of any commitments or concessions to a customer regarding pricing or payment terms outside of the terms documented in the files which are used for accounting purposes.

Management Representation Letter
Of

____
(Related Authority of The City of Calgary)

V. ~~Inventories of Materials and Supplies and~~ Inventories of Land Recorded in the RA

1. The RA has satisfactory title to any inventories recorded in the accounts and these inventories are free from all liens and encumbrances.

2. ~~Materials and supplies inventories held and managed by the RA were correctly and properly taken by competent employees under the supervision of management as at the year-end, or at some point during the year, and the quantities were determined by actual count, weight or measurement.~~

3. ~~Materials and supplies inventories (excluding land inventory) held and managed by the RA are valued at the lower of cost and replacement.~~

4. In arriving at inventory values, provision has been made to reduce inventories to estimated net realizable value when that amount is lower than cost. Full allowance was made for slow-moving, excess, unsaleable, depreciated or obsolete items included in inventories cost.

5. Inventories do not include:

   a. Items not paid for and for which no liability has been recorded in the accounts at the year-end;

   b. Goods on consignment from others; or

   c. Goods invoiced to customers or others.

VI. Tangible Capital Assets (Other than Inventories) and Assets Under Capital Leases Recorded in the RA

1. Tangible capital assets have been recorded properly and consistently according to the standards in Section PS3150 - *Tangible Capital Assets.*

2. ~~Contributed tangible capital assets have been appropriately recorded at fair value, unless fair value is not reasonably determinable, and in such case, have been recorded at an appropriate nominal value. All contributed tangible capital assets have been appropriately disclosed.~~

3. We have assessed the useful lives of tangible capital assets and have determined all tangible capital assets contribute to the RA's ability to provide goods and services and therefore do not require a write down. If applicable, we have identified that there are various tangible capital assets which no longer contribute to the RA's ability to provide goods and services or have future economic benefits that are below the net book value of the tangible capital asset, and have therefore written down this asset to its residual amount and expensed the charge in the statement of operations.

4. The RA has satisfactory title to the physical assets and capital leases recorded in the accounts and they are free from hypothecation, liens and encumbrances except as disclosed in notes to The City's Consolidated Financial Statements.

5. All ~~charges to TCA accounts and~~ additions during the year represent actual TCA compliant additions and no expenditures of a capital nature have been charged to expense during the year.

6. All charges to capital lease accounts and additions during the year represent actual TCA compliant additions and no expenditures that exceed TCA thresholds have been charged to expense during the year.

7. All TCAs donated during the year have been properly accounted for in the accounts.

8. All physical assets sold, dismantled or otherwise disposed of during the year have been properly accounted for in the accounts.

~~9. All assets under capital lease sold, dismantled or otherwise disposed of and capital lease terminations during the year have been properly accounted for in the accounts.~~

10. Within the RA, TCA ownership partnered assets during the year have been properly accounted for in the accounts. ~~During the course of year-end procedures, we identified certain balances relating to tangible capital assets that were incorrectly recorded in prior years. We have performed procedures to assess the impact of these misstatements and they have been accurately recorded during the year~~.

~~11. During the course of the year we identified certain balances relating to tangible capital assets that were recorded as a change in estimate. The change in estimate has been properly reflected in the Financial Statements in accordance with PS 2120.28 – *Accounting Changes*.~~

12. Where TCA policies differ between the RA and The City, the RA has prepared TCA information in accordance with The City's Policy (FA-054) (Attachment 4 and 5) for the purposes of The City's consolidated financial statements.

VII. Liabilities Recorded in the RA

1. All liabilities incurred by the RA at the year-end have been recorded in the accounts of the RA or disclosed to you if not recorded (including such applicable items as product purchases, salaries, wages and commissions, royalties, guarantees, employee benefits (including pension costs), asset retirement obligations, environmental liabilities and obligations, warranties, professional services, taxes, etc., and long-term debt and lease obligations).

2. At the year-end there were no unreported contingent liabilities relating to the RA (a contingent liability is an obligation that may arise depending on the resolution of a contingency, e.g., matters in dispute, significant tax reassessments expected but not yet received, discounted receivables or drafts, accommodation endorsements and guarantees, product or contract warranties, etc.) and all claims which are outstanding and possible claims have been disclosed to you, whether or not such claims have been discussed with the RA's legal department or external legal counsel.

3. At the year-end, the RA had no unusual commitments or contractual obligations of any sort which were not in the ordinary course of business and which might have an adverse effect upon

the RA or The City (e.g., contracts or purchase agreements above market price; repurchase or other agreements not in the ordinary course of business; material commitments for the purchase of physical assets; significant foreign exchange commitments; open balances on letters of credit; purchase commitments for inventory quantities in excess of normal requirements or at prices in excess of the prevailing market prices; losses from fulfillment of, or inability to fulfill, sales commitments, etc.).

4. We are unaware of any unreported known or probable instances of non-compliance with the requirements of regulatory or governmental authorities, including their financial reporting requirements, and there have been no internal investigations or communications from regulatory agencies or government representatives concerning investigations or allegations of non-compliance.

5. We are unaware of any violations or possible violations of laws or regulations the effects of which should be considered for disclosure in the Consolidated Financial Statements or as the basis of recording a contingent loss.

6. We have considered the effect of environmental matters on the RA and have disclosed all liabilities, provisions or contingencies arising from environmental matters. All liabilities, provisions, contingencies and commitments arising from environmental matters, and the effect of environmental matters on the carrying values of the relevant assets are recognized, measured and disclosed, as appropriate, in the Financial Statements.

~~7. As applicable, we have disclosed to you all solid waste landfill sites that we own and operate. We have recorded a liability which represents our best estimate of the future costs required for closure and post-closure care related to these sites.~~

~~8. As applicable, we have disclosed to you all land owned, vested, or leased that is known to be, or is suspected of being, contaminated as defined by PS 3260. We have recorded a liability which represents our best estimate of the future costs related to the contamination of these sites.~~

VIII. Revenues Recorded in the RA

1. We have fully disclosed to you all sales terms, including all rights of return or price adjustments and all warranty provisions. All documentation related to sales transactions is contained in files which are used for accounting purposes. We also confirm that:

   a. We are not aware of any “side agreements” with any companies that are inconsistent with the applicable sales agreement, the customer’s purchase order, sales invoice, or any other documentation contained in the files which are used for accounting purposes. For the purposes of this letter, a “side agreement” is any agreement, understanding, promise, or commitment whether written or oral by the RA with a customer from whom revenue has been recognized that is not contained in the written purchase order from the customer and sales invoice of the RA generated by the Finance department. The definition of a side agreement is not limited by any particular subject matter. For purposes of example only, any agreement not contained in the written purchase order from the customer or sales order and sales invoice of the RA that relates to return rights, acceptance rights, future pricing, payment terms, free consulting, free maintenance or exchange rights would be a side agreement.

b. We are not aware of any commitments or concessions to a customer regarding pricing or payment terms outside of the terms documented in the files which are used for accounting purposes.

2. We have appropriately recorded ~~tax assets and~~ revenues when they meet the definition of an asset in accordance with Section PS 1000 - *Financial Statement Concepts*, when they are authorized and when the taxable event occurs. These amounts have been appropriately measured in accordance with Section PS 3510 - *Tax Revenue*, and have not been grossed up for any amount of tax concessions.

3. Revenues ~~and deferred revenues~~ are recorded accurately. Specifically:

   ~~a.~~ Revenues are not overstated ~~and deferred revenues are not understated. These inaccuracies result if financial statements record externally restricted transfers/contributions as revenue before the transferor's/contributor's stipulations are met; and~~

   b. Revenues are not understated ~~and deferred revenues are not overstated. These inaccuracies result if financial statements record externally restricted transfers/contributions as deferred revenue, not as revenue, after the transferor's/contributor's stipulations are met.~~

IX. Related Party Transactions Recorded in the RA

The RA has not entered into transactions other than those in the normal course of operations, with members of Council, senior officials, members of their immediate families or enterprises in which such parties have significant interest. (Some examples of these transactions not in the normal course of RA operations are sales, purchases, loans, transfers, leasing arrangements and guarantees).

X. General

1. The RA has complied with all aspects of contractual agreements that would have a material effect on the Financial Statements of the RA or The City in the event of non-compliance including all covenants, conditions or other requirements of all outstanding debt.

2. Our present plans and intentions are appropriately reflected by the carrying value and classification of the RA's assets and liabilities.

3. In preparing the Financial Statements in accordance with PSAS, we use estimates. The RA has appropriately disclosed in the Financial Statements the nature of measurement uncertainties that are material, including all estimates where it is reasonably possible that the estimate will change in the near term and the effect of the change could be material to the Financial Statements.

Management Representation Letter
Of

____

(Related Authority of The City of Calgary)

There are no changes in our method of determining significant estimates in the current year.

4. The measurement methods, including the related assumptions and models, used in determining the estimates, including fair value, were appropriate, reasonable and consistently applied in accordance with PSAS and appropriately reflect Administration's intent and ability to carry out specific courses of action on behalf of the entity. No events have occurred subsequent to December 31, 2023 that require adjustment to the estimates and disclosures included in the RA's financial statements.

5. We have no knowledge of concerns or allegations of potential errors in the selection of accounting policies or the recording of transactions affecting the RA or The City that have been communicated to it by employees, former employees, regulators, or others, whether written or oral.

6. We have reviewed and approved the year-end adjusting entries of the RA, including all related supporting schedules, and the Financial Statements and acknowledge our responsibility for their accuracy. While discharging our responsibility we may have requested your assistance or input in certain areas such as:

   a. Recording of transactions for which we have determined or approved the appropriate account classification; and

   b. Preparing financial statements.

   We acknowledge our responsibility for the above listed items and confirm that we have authorized, reviewed and approved all of the above items.

7. The following have been properly recorded and, when appropriate, adequately disclosed and presented in the Financial Statements of the RA:

   ~~a. Losses arising from sale and purchase commitments;~~

   ~~b. Agreements to buy back assets previously sold;~~

   ~~c. Provisions for future removal and site restoration costs;~~

   ~~d. Financial instruments with significant individual or group concentration of credit risk, and related maximum credit risk exposure;~~

   ~~e. Arrangements with financial institutions involving compensating balances or other arrangements involving restriction on cash balances and line-of-credit or similar arrangements;~~

   ~~f. All impaired loans receivable; and~~

   ~~g. Loans that have been restructured to provide a reduction or deferral of interest or principal payments because of borrower financial difficulties.~~

Management Representation Letter
Of

____
(Related Authority of The City of Calgary)

XI. Events Subsequent to the Year-End Recorded in the RA

No events have occurred as of the date of this letter which are of such significance as to require adjustment to or disclosure in the Financial Statements of the RA or The City.

XII. Government transfers Recorded in the RA

1. We have disclosed to you all correspondence relating to government transfers that the RA has had with the funding body.
2. We have assessed the eligibility criteria and determined that the RA is an eligible recipient for the government transfers received.
3. We have assessed the stipulations attached with the funding and have recognized the revenue in accordance with meeting the stipulations required.
4. All government transfers that have been recorded as capital deposits give rise to an obligation that meets the definition of a liability. Those liabilities have been properly recorded and presented in the Financial Statements.
5. All authorized transfers that have been expensed have been transferred to recipients whom have met the eligibility criteria.

XIII. Accumulated Surplus Recorded in the RA

1. Applicable reserves and surplus accounts are correctly recorded and all transactions comply with the purposes approved according to relevant legislation and City Council authorizations.

XIV. Investments Recorded in the RA

1. The RA does not hold any investments in Master Asset Vehicle notes (which replaced third party non-bank asset-backed commercial paper).
2. The RA has satisfactory title to all marketable securities recorded in the accounts and these securities are free from hypothecation.
3. All investments have been appropriately classified as either temporary investments or portfolio investments (at fair value).
4. The RA has used the appropriate valuation allowances to reflect the temporary investments at their net recoverable amount or other appropriate value.
5. The RA believes that it has properly identified all derivative financial instruments and hedging relationships, if any.
6. Investments made during the year and held at the balance sheet date have been made in accordance with Section 250 of the Municipal Government Act.

Management Representation Letter
Of

____
(Related Authority of The City of Calgary)

7. With regard to the fair value measurements and disclosures of certain assets and liabilities, such as investments, we believe that:

   a. The completeness and adequacy of the disclosures related to fair values are in accordance with PSAS;

   b. No events have occurred subsequent to December 31, 2023 that require adjustment to the fair value measurements and disclosures included in the Financial Statements; and

   c. They appropriately reflect Administration's intent and ability to carry out specific courses of action on behalf of the RA when relevant to the use of fair value measurements or disclosures.

~~XV. Liability for Contaminated Sites~~

1. ~~The RA has adopted Chartered Professional Accountants ("CPA") Canada Public Sector Accounting Handbook Section 3260 – *Liability for Contaminated Sites* ("PS 3260"), effective for fiscal years beginning on or after April 1, 2014.~~

2. ~~We have evaluated all of our contaminated sites that we have direct responsibility for or accept responsibility for. Based on our evaluation, we have identified two sites as contaminated sites. We have recorded a liability because the contamination of the site exceeds the environmental standard. The RA is responsible or has accepted responsibility for the remediation and we believe it is expected that remediation will be required. We believe that the estimate of the liability is reasonable and is our best estimate of the amount required to remediate the sites.~~

3. ~~We have identified several other sites that exceed the environmental standard for which the RA is not responsible for remediation or it is unclear if the remediation is the responsibility of the RA. One of the sites relates to the known contamination of the West Village site. We do not accept responsibility for the remediation of these sites (or, it is unclear who has responsibility for the remediation of these sites) and as such we have not recorded a liability with respect to remediation.~~

   ~~Furthermore, The City of Calgary has signed a release agreement effective November 15, 1997 (the "Effective Date") between Her Majesty the Queen in Right of the Province of Alberta and The City of Calgary which indicates the following in paragraph 2.01 of this agreement:~~

   ~~*"The Province acknowledges and agrees that the Contamination existing as of the Effective Date was not caused or contributed to by The City. The Province agrees that from and after the Effective Date it shall not initiate any Recovery Action against The City, its Council, officers, agents employees, contractors, persons in lawful use and occupation of the Lands, or those for whom they are in law responsible for, save and except with respect to any act or omission whether inadvertent, willful, or negligent by The City, its Council, officers, agents, employees, contractors, persons in lawful use and occupation of the Lands or those form whom they are in law responsible for, which in the opinion of the Province has an adverse effect on the Contamination. Subject to any such act or omission whether inadvertent, willful or negligent, the Province releases and forever discharges The City from all Recovery Actions."*~~

4. ~~The RA's risk assessment process for the identification of potential contaminated sites identified a number of higher potential risk sites. In respect to PS 3260, of these sites, [___] higher risk sites have been identified. The RA confirms that the liability recorded in the Financial Statements is adequate and not materially misstated.~~

~~XVI. P3 Agreements~~

~~The City entered into a P3 agreement, signed on June 25, 2015, to design, build and maintain a composting facility. As at the December 31, 2023 year-end, $ ______M has been recorded as tangible capital asset (TCA). Costs have been funded using $ _______M of long-term debt and the remaining $ ______M using The City's capital grants and reserves. Since reaching substantial completion on July 17, 2019, The City has paid $ ______M costs related to the operations, maintenance, and rehabilitation phase of the agreement. As at December 31, 2023, The City asserts that the asset and liabilities associated with this agreement are not materially misstated.~~

~~The City entered into an additional P3 agreement, signed on September 13, 2016, to design, build, finance and maintain the Stoney Transit Facility. As at the December 31, 2023 year-end, $_____M has been recorded as work in progress (TCA) and accounts payable. The City completed a full analysis in relation to this agreement inclusive of all accounting implications during the year. As at December 31, 2023, The City asserts that the asset and payable relating to this agreement are not materially misstated.~~

XVII. Assets, Contingent Assets, and Contractual Rights

1. The RA adopted Chartered Professional Accountants ("CPA") Canada Public Sector Accounting Handbook Section 3210 – *Assets* ("PS 3210"); Section 3320 – *Contingent Assets* ("PS 3320"); and Section 3380 – *Contractual Rights* ("PS 3380") effective for fiscal years beginning on or after April 1, 2017.

2. We have recognized all assets, which do not fall within the scope of other standards, only when the requirements in CPA Canada Public Sector Accounting Handbook Section PS 3210, Assets ("Section PS 3210") have been met. For those assets which do not meet the recognition criteria in Section PS 3210, we have appropriately disclosed details of such unrecognized assets in accordance with Section PS 3210.

3. We have identified all contingent assets in accordance with CPA Canada Public Sector Accounting Handbook Section PS 3320, Contingent Assets and, when the occurrence of the confirming future event is considered likely, appropriately disclosed these items in the financial statements.

   ~~[If there were no contingent assets identified, please indicate that this is not applicable to your RA by crossing off the following paragraph]~~

AUDIT COMMITTEE

SUMMARY OF RESPONSIBILITIES

Review and endorse financial statements, annual and interim reports, AIFs, management's discussion & analyses, and other public financial documents.

Review policies and procedures around CMLC's disclosure of financial information.

Review the external auditors' advice in respect of CMLC's accounting systems and policies.

Review reports to the Board on the financing plans of CMLC.

Oversee the work of external auditors who prepare or issue an audit report or work.

Review compliance with requirements around statutory deductions and remittances.

Review policies that delegate financial authorities from the board to management.

Annually review the work plan and workload for the director of finance, corporate services.

Engage and compensate independent counsel and other advisors.

Handle all manner of procedures, processes and accounting related to finances, financial process and documents, audits and auditors.

---

1 Pursuant to Section 5 of Replacement Bylaw No .1 of CMLC (the "Corporation") a committee of the directors to be known as the Audit Committee (hereinafter referred to as the "Committee") is hereby established .

2 a The Committee shall be comprised of a minimum of three independent non-management directors, none of whom shall have any interest in, or business or other relationship with the Corporation that may, or may reasonably be perceived to, interfere with the exercise of their independence form management and the Corporation .

b If not an appointed member of the Committee, the Chair of the Board may attend Committee meetings at his discretion but shall not be entitled to vote except as required by Section 7(b) .

3 The members of the Committee shall be financially literate or become financially literate within a reasonable period of time after being appointed . Further, at least one member of the Committee shall have accounting or related financial management expertise .For purposes hereof, "financially literate" shall mean the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that can reasonably be expected to be raised by the Corporations' financial statements .

4 The members of the Committee shall be appointed or reappointed at the meeting of the Board of Directors (the "Board') immediately following each Annual General Meeting of the Shareholder of the Corporation .Each member of the Committee shall continue to be a member thereof until his/her successor is appointed, unless he/she shall resign or be removed by the Board or he/she shall cease to be a director of the Corporation .Where a vacancy occurs at any time in the membership of the Committee, it shall be filled by the Board .

5 The board shall appoint a Chair of the Committee . If the Chair of the Committee cannot be present at any meeting of the Committee, the Chair shall, in advance of the meeting, designate another member of the committee, as Chair .Failing which, the chair of the Committee shall be chosen by the Committee from among the members present .At all meetings of the Committee, every question shall be decided by a majority of the votes cast on the question .In the case of an equality of votes, the motion shall be lost and the person acting as chair of the meeting shall not be entitled to a second or casting vote .

6 The Committee has the authority to investigate any activity of the Corporation .All employees are to cooperate as requested by the committee . All information received by the Committee in connection with any investigation will be made available for examination by a director of the Corporation upon request to the Chair of the Committee .

7 The time and place of meetings of the Committee and the procedure at such meetings shall be determined from time to time by the members thereof provide that:

a A quorum for meetings shall be two members, present in person or by telephone or other telecommunication device that permit all persons participating in the meeting to speak and hear each other

b In circumstances where a quorum cannot be constituted as in 7(a), the Chair of the Board may be considered in establishing quorum and shall be entitled to vote for the duration of the meeting

c The Committee shall meet quarterly

d Notice of the time and place of every meeting shall be given in writing or email communication to each member of the Committee, at least 7 calendar days prior to the time fixed for such meeting, provided, however, that a member may in any manner waive a notice of meeting; and attendance of a member at a meeting is a waiver of notice of the meeting, except where a member attends a meeting
for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called .The external auditors are entitled to attend Committee meetings at the expense of the Corporation, if requested by the Chair .A meeting of the committee may be called by the Chair or CEO of the Corporation, by a member of the Committee or the external auditors . Notwithstanding the provision of this paragraph, the Committee shall at all times have the right to determine who shall and shall not be present at any part of the meeting of the Committee .

8 The Committee shall:

a In connection with its advisory functions:

i Review and upon satisfaction recommend to the Board for approval all annual, interim and other financial statements of the Corporation, all annual and interim reports and annual information forms, management discussion and analysis and other public financial documents, if deemed required

ii Review and be satisfied with the policy and procedures in place for the review of the Corporation’s disclosure of financial information extracted or derived from the Corporation’s financial statements

iii Review the external auditors’ advice in respect of the Corporation’s accounting systems and policies and representation letters given to the external auditors by management

iv Review with Management and report to the Board, on an annual basis, on the financing plans of the Corporation

v At the conclusion of a Committee meeting, meet in camera with the external auditors, if present, and report to the Board on such meeting

vi Review recommendations of the officers of the Corporation as to the appointment or reappointment of external auditors as well as qualifications in the case of new auditors and make recommendations to the Board with respect to the nomination and remuneration of external auditors to be appointed at each Annual General Meeting of the Shareholder

vii If a change in external auditors is proposed, the Committee will review the reasons for the proposed change as well as obtain a response from the incumbent auditor

viii Oversee the work of the external auditors engaged for the purpose of preparing or issuing an audit report or related work

ix Review periodically, the nature and extent of compliance with requirements regarding statutory deductions and remittances, including deductions and remittances under the Income Tax Act (Canada), the Excise Tax Act (Canada), the Canada Pension Plan Act, the Employment Insurance Act (Canada), the Alberta corporate Tax Act and the Health Insurance Premiums Act .(Alberta) and the nature and extent of non-compliance together with the reasons therefor, and the plan and timetable to correct deficiencies and report to the Board on the status of such matters

x Review any policy that delegates financial authorities from the Board of Directors to Management including, but not limited to, the Delegation of Authority Limits .

xi Review with officers of the Corporation, on an annual basis, and recommend to the Board, for approval, changes as considered advisable on the following:

a the risks inherent to the Corporation’s businesses, facilities and strategic direction

b the overall financing of risk (including insurance coverage)

c the risk retention philosophy and the resulting uninsured exposure of the Corporation

d loss prevention policies, risk management programs, standards and accountabilities of the Corporation in the context of competitive and operational consideration .

b In connection with the exercise of it powers:

i Review material related party transactions

ii Engage and compensate independent counsel and other advisors that the Committee determines are necessary to carry out its duties

iii Communicate directly with the external auditor as the Committee considers necessary to carry out its duties

iv Communicate the Committee's expectations regarding the external auditor's performance and evaluate the auditor's past performance

v Review the audit plan of the external auditor of the Corporation and enquire as to the extent the planned audit scope can be relied upon to detect weaknesses in internal control or fraud or other illegal acts .Review significant recommendations made by the auditors for the strengthening of internal controls

vi Review as required the adequacy and effectiveness of internal controls over the accounting and financial reporting systems within the Corporation including management's response to the internal control recommendations of the external auditor

vii Review any changes in accounting policies and the financial impact thereof and review any major areas of management judgement and estimates that have a significant effect upon the financial statements

viii Review semi-annually with management, the external auditor and if necessary with legal counsel, any litigation, claim or other contingency, including tax assessments, that could have a material effect upon the financial position or operating results of the Corporation, and the manner in which these matters have been disclosed in the financial statements

ix Review annually with management material covenants in credit and loan agreements

x Review the disclosure provided by the Chief Executive Officer and Vice President, Finance & Corporate Services in connection with:

a the annual certification obligations pursuant to applicable laws, if any

b significant deficiencies and material weaknesses in the design or operation of internal controls that could adversely affect the corporation's ability to disclose information required to be disclosed by it under applicable securities laws within the time periods required; and

c any fraud, whether or not material, that involves management or other employees with a significant role in the Corporation's internal controls

xi Monitor the independence of the external auditor through written disclosures and meetings with the auditor and by reviewing the independent auditor's account of the total fees derived from the audit client for management advisory services, during the past year and a description of such services

xii Directly or by delegation to the Audit Committee Chair and Director, Finance & Corporate Services, acting together, pre-approve non-audit related services provided by the external auditors and the fees related thereto and assess the impact of such non-audit related services on the independence of the external auditors

xiii Review the basis and amount of the external auditors' fees in light of the number and nature of reports issued by the auditors, the quality of the internal controls, the size, complexity and financial condition of the Corporation and the extent of internal audit and other support provided by the Corporation to the external auditors

xiv Annually review consulting engagements from accounting and audit firms to ensure that their use is effective and efficient and to confirm that external audit firms were not contracted for audit services

c Report to the Board after each Committee meeting, required during the year and, upon request, at the end of each fiscal year, table report to the Board with respect to its activities during the preceding year with such recommendations as are deemed desirable in the circumstances

d Formally assess its effectiveness annually .

9 In instances where members of the Committee believe that in order to properly discharge their fiduciary obligations to the Corporation it is necessary to obtain the advice of external experts, the Chair shall, at the request of the Committee, engage the necessary experts .The Board shall be kept appraised of both the selection of the experts and the expert's findings through the Committee's regular reports to the Board .

10 The Committee shall meet in camera for a part of each meeting of the Committee .

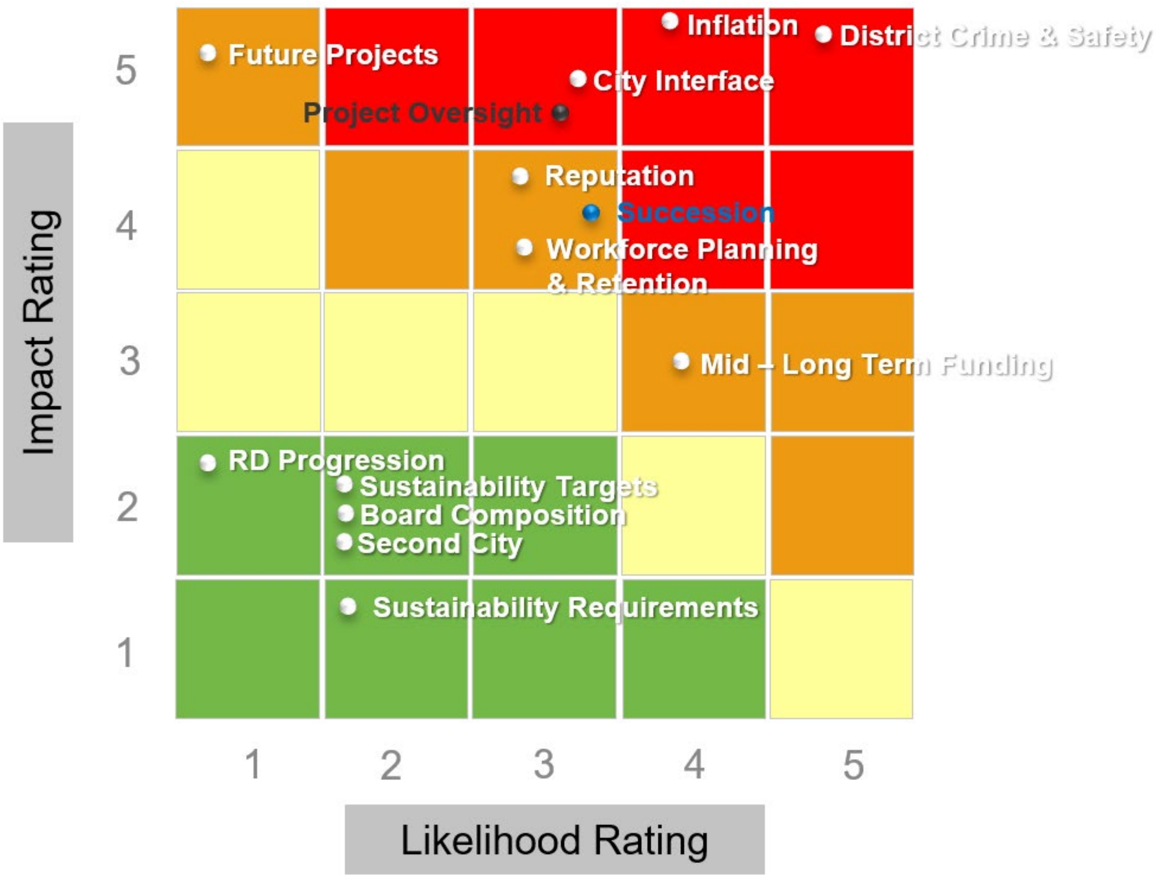
Adopted Dec. 2021 - Revised Dec. 2022 - Approved Dec. 2023, no changes

FINANCE & AUDIT COMMITTEE 2024 WORKPLAN

IN RESPECT OF	AS REQUIRED	April 17, 2024	May 30, 2024	Sept 17, 2024	Dec 3, 2024
COMPOSITION, PROCEDURES AND ORGANIZATION					
The Committee shall meet regularly and as often as necessary to perform their duties	X				
The Committee will meet in-camera, without Management, after any Committee meeting		X	X	X	X
COMPLIANCE, POLICIES and CONTROLS					
Quarterly compliance certificate; review of certification and regulatory requirements		X	X	X	X
Compliance reporting			X	X	X
Review of corporate processes and policy guidelines, including policies delegating financial authorities from the Board to Management	X				
Review and Report to the Board on the sufficiency of resources available for carrying out the actions recommended	X				
Annual Assessment of internal control environment of CMLC		X			
ENTERPRISE RISK MANAGEMENT					
Annual risk assessment and report; semi-annual check-in			X		X
Annual insurance review				X	
Semi-annual litigation and claim review			X		X
AUDIT AND FINANCIAL MANAGEMENT					
Review and approve quarterly interim financial statements			X	X	X
Review and approve audited year-end financial statements		X			
Appoint / re-appoint Auditors		X			
Review results of annual audit with external auditor		X			
Review external auditors' advice in respect to CMLC's accounting system & policies & representation letters		X			
Evaluate performance of external auditor		X			
Review of corporate processes and policy guidelines				X	
Review and identify areas requiring special attention during annual audit				X	
Review and approve external auditor audit scope and audit plan, and issue engagement letter					X
Review and recommend for approval to the Board the annual Business Plan (including financial plan)					X
MANDATE AND WORK PLAN					
Review Committee Mandates, roles and responsibilities and recommend to the Board					X
Review of Committee Chair Position Description and recommend to the Board					X
Review Annual Work Plan					X

Calgary's go-to
city-building placemakers

Calgary Municipal Land Corporation Enterprise Risk Management Heat Map



Note:

1. Risks marked in BLACK have increased since the last assessment.
2. The risks marked in WHITE have remained in their positions as last year.
3. Risks in BLUE have decreased since last year

Risk Identification				Risk Assessment			Progress Tracking
ID	**RISK EVENT**	**RISK DEFINITION**	**RISK OWNER**	**RISK MITIGATIONS**	**RISK RATING**	**VELOCITY**	**UPDATES**
1	**Strategic Risk:** ***The risk of not meeting the City of Calgary's objectives for urban densification and community renewal, infrastructure investment and placemaking.***						
1A	**Inflation**	CMLC's ability to manage long term inflationary pressures that impact debt servicing, project delivery or prevent projects from commencing. Also has a flow on cost of living impact on staff remuneration	KB & KC	We continue have discussions with our banking partners and City Finance to look at how to best mitigate this risk. We continue to review policy on swaps and financial risk management and such financial instruments are being considered as part of future tools. We have begun borrowing directly from the City, rather than through ACFA, securing lower interest rates and more flexible borrowing/repayment terms**.** Within projects, reserves and escalation procedures are being reviewed and adjusted to better manage supply chain and cost pressure. Processes and tools not historically used to mitigate market inflation, such as off-site storage agreements, specification changes and early sequential tendering, are being implemented where appropriate to reduce exposure. These processes are becoming the new "normal" in project planning but are not sufficient to mitigate the risk of uncertainty in the market. The risk of inflation/escalation has shifted from primarily being associated with material costs and supply chain cost impacts, to increased skilled labour costs due to shortage of workers and project competition. As inflation (construction escalation) reserves within project budgets are required to be higher in value in order to mitigate risk, in some instances it would push the project to be non-viable - alternate funding sources are required to extent of escalation allowance required.	Critical	**STEADY**	**Monthly**
1B	**City Interface**	Autonomy and advocacy are essential for the success of CMLC and its mandate	KT & ELT	Redefined governance structures and development agreements on multi-partner projects. Continued engagement and collaboration with Council to advocate for CMLC and underscore CMLC's mandate.	Critical	**STEADY**	**Monthly**
1C	**Future Projects**	Will CMLC remain relevant as major Rivers District projects are completed in 2024 and with limited land ownership and how will CMLC prepare for future growth outside of the	KT & ELT	Strategic planning sessions with the Board to look at opportunities beyond the current strategic plan and to support development of the 2025-29 strategic plan. CMLC has developed planning principles to guide development of the plan and to guide assessment of future land opportunities outside of Rivers District. We have started engagement with the City Adminstration on future (Transit Oriented Development) TOD opportunitues that would align with with CMLC's talent base.	***Medium***	**FALLING**	**Quarterly**

Risk Identification				Risk Assessment			Progress Tracking
ID	RISK EVENT	RISK DEFINITION	RISK OWNER	RISK MITIGATIONS	RISK RATING	VELOCITY	UPDATES
2	**Environment, Health and Safety Risk:** ***Events arising from inadequate safeguards to maintain public safety, the natural environment and / or CMLC's human capital well-being.***						
2A	**District Crime & Safety**	How do we manage community safety and others needing facilities e.g. the un-housed, whilst also mitigating the risk of losing critical private investment and public perception. How do we clearly establish clear parameters of involvement?	CL	Environmental, Health & Safety Committee meets quarterly to assess and improve our standards. Independent third-party site audit on all our developer sites to ensure they are complying with the Health and Safety standards. Constant monitoring of sites by our Building & Infrastructure team. Increased coordination between social service partners and third-party security providers. Working with City, CPS and the HELP Team to support increased patrols, outreach and support to address social disorder. Quarterly Safety & Vitality committee (stewarded by CMLC) to proactively address safety issues. We increased our daily security patrols through 3rd party service and implemented web-based incident tracking and reporting system to streamline workflow and response times. Communication strategies to provide safety related community messaging. Investment and partnership with Calgary Police Service to bring multi-agency safety hub to East Village. Proactive advocacy with Provincial Government.	Critical	GROWING	Monthly

Risk Identification				Risk Assessment			Progress Tracking
ID	**RISK EVENT**	**RISK DEFINITION**	**RISK OWNER**	**RISK MITIGATIONS**	**RISK RATING**	**VELOCITY**	**UPDATES**
3	**Operational Risk:** ***Risks pertaining to the delivery of services. These could include risks involving human resources, controls and processes.***						
3A	**Project Oversight**	A lack of required influence over interdependencies and direction and quality of developments can create suboptimal outcomes and create reputational risk.	KC	Continue to be innovative, produce tangible quality results, and complete projects on budget, on time and on quality. Strengthen development agreements (DMA) language to demonstrate and enable stronger position of influence for CMLC eg. the Olympic Plaza Transformation and 6th Street Underpass. Additional due diligence related to costing, refraining from entering into early agreements before full impacts are assesed ("good faith"), developing temporary agreements to address intitial concerns before larger agreeements, leverage City OSC members to advocate to a greater extent. Leverage lessons learned on projects with complex stakeholder structures (ex. 17th Ave SX/EX), to ensure governance supports the appropriate level of project control to reduce risk to CMLC - reputational and financial. Expand procurement practices and create contract conditions that support CMLCs ability to successfully deliver projects. Communicate to a greater extent at project outset, the roles, responsibilities, and accountabilities of project partners.	Critical	**STEADY**	**Quarterly**
3B	**Sustainability Targets**	Determing the pace and scale of implementation required to achieve the City's requirements defined in the Calgary Climate Strategy a goal of net zero	KC & JW	Presently a Framework proposed by the City with outcomes to achieve by 2030 and 2050. Risk lies in adding non-regulatory requirements to a project and the impact to a projects budget and delivery, both for internal and external project management.	***Low***	**STEADY**	**Quarterly**
3C	**Applicability of Sustainability and Climate Resilience requirements**	The risk that sustainability requirements and climate resilience targets are not coordinated and/or do not apply and/or do not align and exceed current code.	KC & JW	Multiple layers of government are reacting to and creating policy around the climate change crisis. The Board approved CMLC's sustainability framework. We collaborate with the City of Calgary Climate & Environment group to ensure timely implementation of project specific sustainability and climate resilience initiatives. Pro-actively engaging with industry to understand best practices and innovative strategies in preparation for Council directed City of Calgary updates to agreements with civic partners and subsidiaries to support and ensure alignment with Calgary's emissions reductions targets.	***Low***	**STEADY**	**Quarterly**
4	**Reputation Risk: A situation, occurrence, business practice or event that has the potential to materially influence the public and / or external stakeholders perceived trust or confidence in CMLC.**						
4A	**Reputation**	Negative sentiment of CMLC brought about by external factors or actions of our partners.	CL	Annual strategic communications plan to build CMLC profile and reinforce CMLC work/community progress. Dedicated communications leadership on each CMLC -led projects to manage public awareness and perception. Proactive media planning and monitoring.	***Medium***	**GROWING**	**Monthly**

Risk Identification				Risk Assessment			Progress Tracking
ID	**RISK EVENT**	**RISK DEFINITION**	**RISK OWNER**	**RISK MITIGATIONS**	**RISK RATING**	**VELOCITY**	**UPDATES**
5	**Human Resource Risk:** ***Inability to attract, retain or properly train qualified individuals.***						
5A	**Succession**	There is a need to ensure that each role at CMLC has a suitable and ready candidate to step in and deliver continuity.	KB	Increased professional development oportunities for CMLC staff including leadership development plans for senior/high growth staff to develop skill set and build team capacity. Interviews have been conducted with all members of ELT and draft sucession plans have been created. In the process of conducting an organizational structure review through the strategic workforce planning. Levarage existing skillsets/competencies in phased approach to projects. Conducting annual staff engagement surveys and actioning any recommendations that are suggested. CMLC is promoting its pipeline of projects to create a greater vision and aspirational workplace.	***Medium***	**STEADY**	**Monthly**
5B	**Workforce Planning & Retention**	There is a need to have a skills mix amongst the CMLC team that prepares it to deliver on future projects and roles. At the same time, there is a retention risk to CMLC whereby staff may be attracted to pursue attractive external opportunities.	KT AND KB	Executive management has taken a proactive approach and completed a workforce planning document allocating existing staff to projects from 2023 onward ensuring we have appropriate coverage. Strategic Workforce Planning for 2025- onward kicked off in April. CMLC has engaged consultant Korn Ferry. Further assessment of an existing skills matrix is ongoing through the workforce planning work. Utilizing the results of the annual engagement survey will identify areas of improvement and acting on those items will help with retention. Further, ensuring we offer competative total compensation and benefits will attract and retain talented staff. CMLC continues to offer employees extensive resources to promote an engaging work environment that encourages growth and learning. Leading to success in both attracting and retaining talent.Leaders and employees discuss growth and learning opportunities through regular 1:1's and through our Performance & Development program.	***Medium***	**STEADY**	**Quarterly**
5C	**Board Composition**	The need for diversity in representation and skill sets	KT	Conducting an annual Board skills matrix to identify any skills and competency gaps that need to be filled. When recruiting, ensuring that we are inclusive in our search and include appropriate language that encourages diversity in our postings. Highlighting on our corporate website our commitment to diversity. Apply learnings and framework from DE&I into Board recruitment process.Conducting an annual Board skills matrix to identify any skills and competency gaps that need to be filled. When recruiting, ensuring that we are inclusive in our search and include appropriate language that encourages diversity in our postings. Highlighting on our corporate website our commitment to diversity. Apply learnings and framework from DE&I into Board recruitment process.	***Low***	**STEADY**	**Quarterly**

Risk Identification				Risk Assessment			Progress Tracking
ID	**RISK EVENT**	**RISK DEFINITION**	**RISK OWNER**	**RISK MITIGATIONS**	**RISK RATING**	**VELOCITY**	**UPDATES**
6	**Financial Risk:** ***Risks associated with operating and capital funds and budgets.***						
6A	**Mid to Long-term Funding**	The cost and availability of capital in the 5 to 10-year time frame ahead	KB	Continuous monitoring of our revenue streams. Annual reforecasting of CRL and the assumptions that are associated with its generation including economic conditions and population growth. Investigating avenues to increase other revenue streams like land sales, parking, and rental revenue. Engaging with the developers and financial institutions to understand their capital deployment plans and how we can help them. Given the effect of risk 1A this risk has grown in significance and will be monitored and reported on quarterly.	***Medium***	**STEADY**	**Quarterly**
7	**Emerging Risk:** ***Inability to identify and respond to emerging trends which may be highly unlikely but with high impacts, or whose likelihood could grow very rapidly.***						
7A	**2nd City**	A trend and change in work practices that sees young people moving away from city cores	CL	Development of multi-year Recovery and Resiliency program to identify and plan for shifts in trends impacting mixed-use development. Annual place brand strategy development + marketing programs to position inner-city community living. Active soliticiation of developer partners whose interest align with EV master plan. Quarterly monitoring of condo and rental market to idenitfy trends in sales/leasing. It is accpeted that with recent data, this risk is trending down but remain relevant. Bi-annual community resident surveys to assess community satisfaction, perception and needs to guide CMLCs community strategies.	***Low***	**STEADY**	**Quarterly**
7B	**Rivers District Progression Development**	Slower development than anticipated resulting in a negative perception of master plan progress	CL	Ongoing communications to highlight development progress, construction starts and land sales. Developer solictation and marketing of available land opportunities. Outreach to developer audiences in Calgary, Vancouver and Toronto underway. Ongoing updates to commuinty retailers (monthly) and community residents (semi-annual) to keep apprised of development progress.	***Low***	**STEADY**	**Quarterly**

Deloitte.

Calgary Municipal Land Corporation

Report to the Audit Committee on the 2023 audit

April 17, 2024

Deloitte.

Deloitte LLP
700, 850 2 Street SW
Calgary, AB T2P 0R8
Canada

Tel: 403-267-1700
Fax: 403-213-5791
www.deloitte.ca

April 10, 2024

The Audit Committee of Calgary Municipal Land Corporation

Report on audited annual financial statements

Dear Audit Committee members:

We are pleased to submit this report on the status of our audit of Calgary Municipal Land Corporation ("CMLC") for the 2023 fiscal year. This report summarizes the scope of our audit, our findings to date and reviews certain other matters that we believe to be of interest to you. We are continuing to work with management to complete the outstanding matters summarized on page 1 of this report.

As agreed in our master services agreement ("MSA") dated November 28, 2018, and any previous confirmation letters issued pursuant to the MSA and all as may be updated or amended from time to time, we have performed an audit of the financial statements of Calgary Municipal Land Corporation as of and for the year ended December 31, 2023 in accordance with Canadian generally accepted auditing standards ("Canadian GAAS") and expect to issue our audit report thereon dated April 19, 2024.

Our audit has been conducted in accordance with the audit plan that was presented to the Audit Committee at the meeting on November 28, 2023.

This report is intended solely for the information and use of the Audit Committee, management and others within CMLC and is not intended to be, and should not be, used by anyone other than these specified parties.

We, at Deloitte, work as one team to provide you with relevant business insights to assist you improving your current practices.

We look forward to discussing this report summarizing the outcome of our audit with you and answering any questions you may have.

Yours truly,

Deloitte LLP

Chartered Professional Accountants

Table of contents

Executive summary

Audit scope and terms of engagement

We have been asked to perform an audit of CMLC's financial statements (the "financial statements") in accordance with Canadian public sector accounting standards ("PSAS") as at and for the year ended December 31, 2023. Our audit was conducted in accordance with Canadian generally accepted auditing standards ("Canadian GAAS").

The terms and conditions of our engagement are described in the MSA. We have developed appropriate safeguards and procedures to eliminate threats to our independence or to reduce them to an acceptable level.

Significant risks

	Significant risks	Status
1	Management override of controls	Continued from prior year
2	Asset retirement obligations	New from prior year

Continued from prior year

New from prior year

Materiality

$16.7M Materiality

$835K Clearly trivial threshold

Materiality levels are determined on the basis of total assets. Our materiality for the year ended December 31, 2023 was $16,700,000 (2022, $13,900,000).

Outstanding Matters

Receipt of signed management representation letter	**Receipt** of subsequent events update
Completion of minor documentation items	**Receipt** of legal letters

Audit fees

Audit fees	2023	2022
Financial statement audit	$82,950	$77,520
Procedures with respect to Adoption of Section 3280, *Asset Retirement Obligations*	$4,900	-
Procedures applied to the Arts Common accounting entries and agreements	-	$2,500
Procedures applied to the Event Centre accounting entries and terminated agreement	-	-
Total fees	**$87,850**	**$80,020**

Going concern

Management has completed its assessment of the ability of CMLC to continue as a going concern and in making its assessment did not identify any material uncertainties related to events or conditions that may cast significant doubt upon CMLC's ability to continue as a going concern. We believe this disclosure is adequate.

Results

No restrictions have been placed on the scope of our audit. We intend to issue an unmodified audit report on the financial statements of CMLC for the year ended December 31, 2023 once the outstanding items referred to above are completed satisfactorily and the financial statements are approved by the Board of Directors. Refer to Appendix 2 for Draft auditor's report.

Significant audit risks and areas of focus

The significant audit risks identified as part of our risk assessment, together with our planned responses and conclusions, are described below.

Significant risk dashboard

Legend

Significant level of management judgment involved

Minimal/No management judgement involved

D+I: Planned testing of the design and implementation of key controls

Significant risks

Management override of controls

Fraud risk	Control testing planned	Level of management judgement	Specialist, expert or innovation involvement
Yes	D+I		Excel Analytics were used to perform journal entry testing.

Analysis of risk	Audit response and results
• Under Canadian Auditing Standards, it is the responsibility of management, with the oversight of those charged with governance, to place a strong emphasis on fraud prevention and detection. Oversight by those charged with governance includes considering the potential for override of controls or other inappropriate influence over the financial reporting process. • Management override of controls is present in all entities. It is a risk of material misstatement resulting from fraud and therefore is considered as a significant risk.	• We discussed fraud with management. • We asked the Audit Committee for their views about the risk of fraud, whether they know of any actual or suspected fraud affecting CMLC and their role in the oversight of management's antifraud programs. • We tested a sample of journal entries made throughout the period, and adjustments made at the end of the reporting period. • We evaluated the business rationale for any significant transactions. • We determined whether the judgements and decisions related to management estimates indicate a possible bias, which included performing retrospective analysis of significant accounting estimates. • We obtained sufficient audit evidence to conclude that there were no material misstatements.

Adoption of new accounting standards – PS 3280 Asset Retirement Obligations

Fraud Risk	Control testing planned	Level of management judgement	Specialist, expert or innovation involvement
No	D+I		NA

Analysis of risk

- PS 3280 – Asset retirement obligations ("PS 3280") is required to be adopted for the year ended December 31, 2023 by CMLC. The standard establishes how to account for and report a liability for asset retirement obligations.
- Completeness of the liability recorded for asset retirement obligations, and the accuracy of the calculations and models used to calculate the liability, if applicable
- Completeness and accuracy of the disclosures required under PS 3280.
- Application of the standard is not consistent with PSAS guidance.

Audit response and results

- We reviewed the methodology and assumptions utilized by management and assessed compliance with PS 3280.
- We performed substantive testing over the completeness of assets scoped in for the adoption of the standard.
- We evaluated the design and implementation of relevant controls around the adoption of the standard.
- We evaluated the financial statement disclosures for compliance with PS 3280.
- The asset retirement cost calculated by management was not material to the financial statements, as such management has not recorded the obligation in the year-end financial statements. We concur with management.
- We obtained sufficient audit evidence to conclude that there were no material misstatements.

Areas of focus

Recording, presentation and valuation of inventory

Analysis

- Land inventory may not be appropriately recorded or valued.
- The economic impact may have decreased the market value of the land inventory to be below the cost. If the market value is below cost, a write-down would be required.

Audit response and results

- We tested a sample of transactions of purchase agreements and supporting documentation to verify that land inventory was recorded at the appropriate amount.
- We also tested a sample of land inventory parcels for impairment, ensuring that the book value did not exceed the market value.
- In addition, we reviewed the disposition / transfer of land inventory, if applicable, to ensure that it has been appropriately accounted for in light of PSAS guidance.
- We obtained sufficient audit evidence to conclude that there were no material misstatements.

Transfer of infrastructure development assets to tangible capital assets

Analysis	Audit response and results
• Infrastructure development assets are projects currently under construction that will result in an asset being constructed at the final acceptance certificate ("FAC") phase of construction. • There is a risk that infrastructure development assets are complete and have been issued at the FAC but have not been transferred to tangible capital assets and commenced amortization.	• We obtained and reviewed the list of infrastructure development assets that includes the estimated FAC date. • We tested a sample of infrastructure development assets, obtaining the FAC (if already issued) as well as meeting with various individuals in operations to determine the status of the infrastructure development assets, to verify if the asset is complete. For a sample of infrastructure development assets that have been completed, we reviewed the transfer of the assets to tangible capital assets and recalculated the amortization. • We obtained sufficient audit evidence to conclude that there were no material misstatements.

Significant accounting policies, judgements and estimates

The accounting policies in the notes to the financial statements are those that are most important and representative of CMLC's financial condition and financial performance.

In the course of our audit of the financial statements, we considered the qualitative aspects of the financial reporting process, including items that have a significant impact on the relevance, reliability, comparability and understandability of the information included in the financial statements.

In our judgment, the significant accounting practices and policies, selected and applied by management are, in all material respects, acceptable under PSAS and are appropriate to the particular circumstances of CMLC.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's current judgements. These judgements are normally based on knowledge and experience about past and current events, assumptions about future events and interpretations of the financial reporting standards.

During the year ended December 31, 2023, management advised us that there were no significant changes in accounting estimates or in judgements relating to the application of the accounting policies.

Appendix 1 – Communication requirements and other reportable matters

The table below summarizes our communication requirements under Canadian GAAS and other communications that we believe would help us achieve an effective audit.

Required communication	Refer to this report or document described below
Audit Service Plan	
1. Our responsibilities under Canadian GAAS, including forming and expressing an opinion on the financial statements	Master services agreement dated November 28, 2018
2. An overview of the overall audit strategy, addressing: a. Timing of the audit b. Significant risks, including fraud risks c. Nature and extent of specialized skill or knowledge needed to perform the planned audit procedures related to significant risk	Audit plan communicated on November 28, 2023.
3. Significant transactions outside of the normal course of business, including related party transactions	Related party transactions are disclosed in Note 14 to the financial statements.
Enquiries of those charged with governance	
4. How those charged with governance exercise oversight over management's process for identifying and responding to the risk of fraud and the internal control that management has established to mitigate these risks	Significant audit risks and areas of focus section of this report.
5. Any known suspected or alleged fraud affecting CMLC	We are not aware of any actual or suspected fraudulent events.
6. Whether CMLC is in compliance with laws and regulations	Our limited procedures did not identify any areas of material noncompliance with laws and regulations by CMLC.
Year End Communication	
7. Fraud or possible fraud identified through the audit process	We are not aware of any fraudulent events.
8. Significant accounting policies, practices, unusual transactions, and our related conclusions	Significant accounting policies, judgements and estimates section of this report.

Required communication	Refer to this report or document described below
9. Alternative treatments for accounting policies and practices that have been discussed with management during the current audit period	Significant accounting policies, judgements and estimates section of this report.
10. Matters related to going concern	Executive summary section of this report.
11. Consultation with other accountants	Management has informed us that CMLC has not consulted with other accountants about auditing or accounting matters.
12. Management judgements and accounting estimates	Significant accounting policies, judgements and estimates section of this report.
13. Significant difficulties, if any, encountered during the audit	During the course of our audit, we did not encounter any significant difficulties in dealing with management related to the performance of the audit.
14. Material written communications between management and us, including management representation letters	Draft management representation letter.
15. Circumstances that affect the form and the content of the auditor's report	Draft auditor's report.
16. Other matters that are significant to the oversight of the financial reporting process	No other matters to report.
17. Modifications to our opinion	Executive summary section of this report.
18. Other significant matters discussed with management	Significant audit risks and areas of focus section of this report.
19. Matters involving noncompliance with laws and regulations that came to our attention, unless prohibited by law or regulation, including illegal or possibly illegal acts that come to our attention.	We are not aware of any matters involving noncompliance with laws and regulations or illegal acts.
20. Litigation	No litigation matters to report.
21. Significant deficiencies in internal control, if any, identified by us in the conduct of the audit of the financial statements	No deficiencies to report.
22. Uncorrected misstatements and disclosure items	In accordance with Canadian GAAS, we request that all misstatements be corrected. No uncorrected misstatements and uncorrected disclosure to report.
23. Changes to the audit plan	The audit was conducted in accordance with our audit plan, which was communicated to the Audit Committee on November 28, 2023. We confirm that there have been no amendments to the audit scope and approach communicated in the audit plan.

Required communication	Refer to this report or document described below
24. Concerns regarding management competence and integrity	We do not have any concerns regarding management's competency and integrity.
25. Disagreements with management	During the current audit, we did not have any disagreements with management.
26. Post-balance sheet events	At the date of finalizing this report, we are not aware of any significant post-balance sheet events.
27. Limitations when sending confirmations	Not applicable.
28. Other significant matters arising from the audit	No other significant matters to report.

Appendix 2 – Draft version of our auditor's report

Our report on the financial statements is expected to be in the following form. However, the final form may need to be adjusted to reflect the final results of our audit.

Independent Auditor's Report

To the Shareholder of
Calgary Municipal Land Corporation

Opinion

We have audited the financial statements of Calgary Municipal Land Corporation ("CMLC") which comprise the statement of financial position as at December 31, 2023 and the statements of operations and accumulated surplus, changes in net financial assets (liabilities) and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of CMLC as at December 31, 2023 and the results of its operations, changes in its net financial assets (liabilities), and its cash flows for the year then ended in accordance with Canadian public sector accounting standards ("PSAS").

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of CMLC in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with PSAS and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing CMLC's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate CMLC or to cease operations or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing CMLC's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of CMLC's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on CMLC's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause CMLC to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Chartered Professional Accountants
April 19, 2024

Appendix 3 – Draft independence

April 19, 2024

The Audit Committee of
Calgary Municipal Land Corporation

Dear Audit Committee members:

We have been engaged to audit the financial statements of Calgary Municipal Land Corporation ("CMLC") for the year ended December 31, 2023.

You have requested that we communicate in writing with you regarding our compliance with relevant ethical requirements regarding independence as well as all relationships and other matters between CMLC, our Firm and network firms that, in our professional judgment, may reasonably be thought to bear on our independence. You have also requested us to communicate the related safeguards that have been applied to eliminate identified threats to independence or reduce them to an acceptable level.

In determining which relationships to report, we have considered relevant rules and related interpretations prescribed by the appropriate provincial regulator/ordre and applicable legislation, covering such matters as:

a) Holding a financial interest, either directly or indirectly, in a client.
b) Holding a position, either directly or indirectly, that gives the right or responsibility to exert significant influence over the financial or accounting policies of a client.
c) Personal or business relationships of immediate family, close relatives, partners or retired partners, either directly or indirectly, with a client.
d) Economic dependence on a client.
e) Provision of services in addition to the audit engagement.

We confirm to you that the engagement team and others in the firm as appropriate, the firm and, when applicable, network firms have complied with relevant ethical requirements regarding independence.

We have prepared the following comments to facilitate our discussion with you regarding independence matters arising since April 21, 2023, the date of our last letter.

We are not aware of any relationships between the Member Firms of Deloitte Touche Tohmatsu Limited and their respective affiliates (collectively, the "Deloitte Entities") and CMLC and its affiliates, or persons in financial reporting oversight roles at CMLC and its affiliates, that, in our professional judgment, may reasonably be thought to bear on independence, that have occurred from April 22, 2023 to April 19, 2024.

The total fees charged (including 7% administrative charge) to CMLC for audit services were $93,999 (2022, $85,624) and for non-audit services relating to to the Arts Commons Process Advisory engagement were $26,750 (2022 - $nil).

We hereby confirm that we are independent with respect to CMLC in accordance with the Rules of Professional Conduct of the applicable Chartered Professional Accountants of Alberta as of April 19, 2024.

This letter is intended solely for the information and use of the Audit Committee, the Board of Directors, management and others within CMLC and is not intended to be and should not be used for any other purposes.

Yours truly,

Chartered Professional Accountants

Appendix 4 – Draft management representation letter

[CMLC letterhead]

April 19, 2024

Deloitte LLP
700, 850 - 2 Street SW
Calgary, AB T2P 0R8

Dear Sirs and Mesdames:

Subject: Financial statements of Calgary Municipal Land Corporation as at and for the year ended December 31, 2023

This representation letter is provided in connection with the audit by Deloitte LLP ("Deloitte" or "you") of the financial statements of Calgary Municipal Land Corporation ("CMLC" or "we" or "us") as of and for the year ended December 31, 2023, the notes to the financial statements and a summary of significant accounting policies (the "Financial Statements") for the purpose of expressing an opinion as to whether the Financial Statements present fairly, in all material respects, the financial position, results of operations, and cash flows of CMLC in accordance with Public Sector Accounting Standards ("PSAS").

Certain representations in this letter are described as being limited to matters that are material. Items are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

We confirm that, to the best of our knowledge and belief, having made such inquiries as we considered necessary for the purpose of appropriately informing ourselves:

Financial statements

1. We have fulfilled our responsibilities as set out in the terms of the engagement letter between CMLC and Deloitte dated November 28, 2018 and the confirmation of changes letters November 28, 2023 for the preparation of the Financial Statements in accordance with PSAS. In particular, the Financial Statements are fairly presented, in all material respects, and present the financial position of CMLC as at December 31, 2023 and the results of its operations and cash flows for the year then ended in accordance with PSAS.
2. Significant assumptions used in making estimates, including those measured at fair value, are reasonable.

In preparing the Financial Statements in accordance with PSAS, management makes judgments and assumptions about the future and uses estimates. The completeness and appropriateness of the disclosures related to estimates are in accordance with PSAS. CMLC has appropriately disclosed in the Financial Statements the nature of measurement uncertainties that are material, including all estimates where it is reasonably possible that the estimate will change in the near term and the effect of the change could be material to the Financial Statements.

The measurement methods, including the related assumptions and models, used in determining the estimates, including fair value, were appropriate, reasonable and consistently applied in accordance with PSAS and appropriately reflect management's intent and ability to carry out specific courses of action on behalf of the entity. No events have occurred subsequent to December 31, 2023 that require adjustment to the estimates and disclosures included in the Financial Statements.

There are no changes in management's method of determining significant estimates in the current year.

3. We have determined that the Financial Statements are complete as of the date of this letter as this is the date when there are no changes to the Financial Statements (including disclosures) planned or expected. The Financial Statements have been approved in accordance with our process to finalize financial statements.
4. We have completed our review of events after December 31, 2023, and up to the date of this letter. All events subsequent to the date of the Financial Statements and for which PSAS requires adjustment or disclosure have been adjusted or disclosed. Accounting estimates and disclosures included in the Financial Statements that are impacted by subsequent events have been appropriately adjusted.
5. The Financial Statements are free of material errors and omissions.

Internal controls

6. We acknowledge our responsibility for the design, implementation and maintenance of internal control to prevent and detect fraud and error.
7. We have disclosed to you all known deficiencies in the design or operation of internal control over financial reporting identified as part of our evaluation, including separately disclosing to you all such deficiencies that we believe to be significant deficiencies in internal control over financial reporting.

Information provided

8. We have provided you with:
   a. Access to all information of which we are aware that is relevant to the preparation of the Financial Statements, such as records, documentation and other matters;
   b. All relevant information as well as additional information that you have requested from us for the purpose of the audit;
   c. Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence; and,
   d. All minutes of the meetings of directors and committees of directors, or summaries of actions of recent meetings for which minutes have not yet been prepared. All significant board and committee actions are included in the summaries.

9. We have disclosed to you the results of our assessment of the risk that the Financial Statements may be materially misstated as a result of fraud.
10. We have no knowledge of any information in relation to fraud or suspected fraud that we are aware of and that affects the entity and involves:
    a. Management;
    b. Employees who have significant roles in internal control; or
    c. Others where the fraud could have a material effect on the Financial Statements.
11. We have no knowledge of any information in relation to allegations of actual, suspected or alleged fraud, or illegal or suspected illegal acts affecting CMLC.
12. There have been no communications with regulatory agencies concerning actual or potential noncompliance with or deficiencies in financial reporting practices. There are also no known or possible instances of non-compliance with the requirements of regulatory or governmental authorities.
13. We have disclosed to you the identities of the entity's related parties and all the related party relationships and transactions of which we are aware, including guarantees, non-monetary transactions and transactions for no consideration and participation in a defined benefit plan that shares risks between group entities.

Independence matters

For purposes of the following paragraphs, "Deloitte" shall mean Deloitte LLP and Deloitte Touché Tohmatsu Limited, including related member firms and affiliates.

14. Prior to CMLC having any substantive employment conversations with a former or current Deloitte engagement team member, CMLC has held discussions with Deloitte and obtained approval from the Audit Committee.
15. We have ensured that all non-audit services provided to CMLC have been pre-approved by the Audit Committee. Further, we have adhered to all regulatory requirements regarding the provision of non-audit services by Deloitte to CMLC in accordance with applicable laws, regulations and rules that apply to CMLC, including the Audit Committee approval requirements.
16. We have ensured that all services performed by Deloitte with respect to this engagement have been pre-approved by the Audit Committee in accordance with its established approval policies and procedures.

Other matters

17. We have disclosed to you all the documents that we expect to issue that may comprise other information, in the context of CAS 720, The Auditor's Responsibilities Relating to Other Information in Documents Containing Audited Financial Statements.

    Except where otherwise stated below, immaterial matters less than $835,000 collectively are not considered to be exceptions that require disclosure for the purpose of the following representations. This amount is not necessarily indicative of amounts that would require adjustment to or disclosure in the Financial Statements.

18. CMLC has identified all related parties in accordance with Section PS 2200, *Related Party Disclosures* ("PS 2200"). Management has made the appropriate disclosures with respect to its related party transactions in accordance with PS 2200.
19. There are no instances of identified or suspected noncompliance with laws and regulations.
20. We have disclosed to you all known, actual or possible litigation and claims, whether or not they have been discussed with our lawyers, whose effects should be considered when preparing the Financial Statements. As appropriate, these items have been disclosed and accounted for in the Financial Statements in accordance with PSAS.
21. All events subsequent to the date of the Financial Statements and for which PSAS requires adjustment or disclosure have been adjusted or disclosed. Accounting estimates and disclosures included in the Financial Statements that are impacted by subsequent events have been appropriately adjusted.
22. We have disclosed to you all liabilities, provisions, contingent liabilities and contingent assets, including those associated with guarantees, whether written or oral, and they are appropriately reflected in the Financial Statements.
23. We have disclosed to you, and CMLC has complied with all aspects of contractual agreements that could have a material effect on the Financial Statements in the event of non-compliance, including all covenants, conditions or other requirements of all outstanding debt.
24. CMLC has satisfactory title to and control over all assets, and there are no liens or encumbrances on such assets. We have disclosed to you and in the Financial Statements all assets that have been pledged as collateral.

Accounting policy

25. The accounting polices selected and the application of those policies are appropriate.
26. CMLC's accounting policies and their method of application have been applied on a basis consistent with that of the audited Financial Statements as of and for the year ended December 31, 2022.

Fair value

27. With regard to the fair value measurements and disclosures of certain assets and liabilities, we believe that:
    a. The completeness and adequacy of the disclosures related to fair values are in accordance with PSAS;
    b. No events have occurred subsequent to December 31, 2023 that require adjustment to the fair value measurements and disclosures included in the Financial Statements; and
    c. They appropriately reflect management's intent and ability to carry out specific courses of action on behalf of CMLC when relevant to the use of fair value measurements or disclosures.

Management's responsibilities

28. All transactions and events have been carried out in accordance with law, regulation or other authority.

Loans receivables

29. CMLC is responsible for determining the appropriate carrying amount of accounts receivable, as well as estimates used to determine such amounts. Management believes that the carrying amounts recorded and disclosed are appropriate.

30. We have identified to you all forgivable loans and loans with concessionary terms and have appropriately reflected these instruments in the financial statements.

Government transfers

31. We have disclosed to you all correspondence relating to government transfers that CMLC has had with the funding body.
32. We have assessed the eligibility criteria and determined that CMLC is an eligible recipient for the government transfers received.
33. We have assessed the stipulations attached with the funding and have recognized the revenue in accordance with meeting the stipulations required.
34. All government transfers that have been recorded as deferred revenue give rise to an obligation that meets the definition of a liability. Those liabilities have been properly recorded and presented in the Financial Statements.

Tangible capital assets

35. Tangible capital assets have been recorded properly and consistently according to the standards in CPA Canada Public Sector Accounting Handbook Section PS 3150, *Tangible Capital Assets.*
36. Contributed tangible capital assets have been appropriately recorded at fair value, unless fair value is not reasonably determinable, and in such case, have been recorded at an appropriate nominal value. All contributed tangible capital assets have been appropriately disclosed.
37. We have assessed the useful lives of tangible capital assets and have determined all tangible capital assets contribute to CMLC's ability to provide goods and services and therefore do not require a write down.

Adjusting journal entries

38. We have reviewed the year-end adjusting entries and acknowledge our responsibility for their accuracy.

Liability for Contaminated Sites

39. CMLC was required to adopt Section PS 3260, *Liability for Contaminated Sites* effective for fiscal 2015 for the purposes of the PSAS. Management has determined the impact of this standard on the year-end financial statements, and based on management's assessment, there is no impact on the adjustments for the December 31, 2023 PSAS Financial Statements of this standard.

Communicating a threshold amount

40. We understand that the threshold used for accumulating misstatements identified during the year was $835,000 for purposes of Appendix A. Misstatements below this amount have been considered clearly trivial.

Land inventory

41. CMLC is responsible for determining the appropriate carrying amount of inventories held for resale. All inventories are the property of CMLC and do not include any items consigned to it, any items billed to customers or any items for which the liability has not been recorded.

42. Management asserts that certain properties are designated as Heritage properties by The City of Calgary and the value will be recovered through long-term tenant agreements with or direct sales to third parties. For those parcels not sold to third parties, the land inventory will be transferred to The City of Calgary at cost at the end of 2047; therefore, management believes that no impairment of land inventory exists at December 31, 2023. Management has performed an evaluation of land inventory at December 31, 2023 and all impairment losses and impairment recoveries (reversals of previously recorded impairment losses) have been appropriately recorded in accordance with the accounting guidance.
43. Management have declared the true intent for items classified as land inventory and have appropriately classified items as land inventory versus tangible capital assets.
44. We have evaluated all of our tangible capital assets that we have direct responsibility for or accept responsibility for, and have not identified any sites in which contamination exceeds an environmental standard.
45. We have reviewed all outstanding construction invoices at year-end, and have determined that year-end accrual regarding construction invoices is complete.

Infrastructure development assets – long term plans

46. All costs incurred to date relating to East Village, RiverWalk, 4th Street Underpass, St. Patrick's Island, West Village, Environmental, East Victoria Park, Arts Commons Transformation, David D. Oughton, 6th Street Underpass, Victoria Park Transit Centres and Olympic Plaza Transformation sites are appropriately capitalized as infrastructure development assets in the year-end financial statements, as based on CMLC's 2023 Business Plan, these sites are part of the long term development plan of CMLC.
47. We have disclosed to you all Infrastructure development assets that received Final Acceptance Certificates during the year.

Contingent assets

48. CMLC has identified all contingent assets in accordance with Section PS 3320, *Contingent Assets* when the occurrence of the confirming future event is considered likely. No items have come to the attention of CMLC that require disclosure.

Contractual rights

49. CMLC has identified and disclosed all contractual rights, as discussed in Note 19 of the financial statements that will result in both an asset and revenue in the future, once the terms of the contract or agreement are met, in accordance with Section PS 3380, *Contractual Rights*.

Inter-entity transactions

50. CMLC has recognized all transactions involving the transfer of assets or liabilities between public sector entities in accordance with Section PS 3420, Inter-entity Transactions ("PS 3420").
51. CMLC has recorded all inter-entity transactions properly at exchange or carrying amount in accordance with the criteria in PS 3420.14-.22.
52. CMLC has disclosed all inter-entity transactions in the notes to the Financial Statements whether or not such transactions are recognized in the financial statements, in accordance with PS 2200, as shown in Note 14 of the financial statements.

Assets

53. CMLC has recognized all assets, which do not fall within the scope of other standards, only when the requirements in Section PS 3210, Assets ("PS 3210") have been met. For those assets which do not meet the recognition criteria in PS 3210, CMLC has appropriately disclosed details of such unrecognized assets in accordance with PS 3210. There was no impact on CMLC's financial statements upon adoption of PS 3210.

Restructuring transactions

54. CMLC has identified all restructuring transactions, as defined in Section PS 3430, *Restructuring Transactions*.

Adoption of new accounting standards

55. CMLC has adopted CPA Canada Public Sector Accounting Handbook PS 3280 Asset Retirement Obligations, as of January 1, 2023 as discussed in Note 2 of the Financial Statements. CMLC has assessed the impact of the adoption ofthis standard and determined that due to the asset retirement obligation being not material to the financial statements, management has not adjusted the year-end financial statements.
56. We have identified and disclosed to you all liabilities CMLC has a legal obligation to incur retirement costs in relation to a tangible capital asset.
57. With respect to the CMLC's tangible capital assets, we have determined the best estimate of the amount required to retire a tangible capital asset (or component thereof) at the financial statement date based on the information available at that date.
58. We have disclosed any uncertainties affecting the measurement of a liability for an asset retirement obligation in accordance with Section PS 2130, Measurement Uncertainty.

Yours truly,

Calgary Municipal Land Corporation

Kate Thompson
President and CEO

Kondwani Bwanali
CFO and Vice President, Corporate Services

Appendix A
Calgary Municipal Land Corporation
Summary of uncorrected financial statement misstatements
Year ended December 31, 2023

No uncorrected misstatements or disclosure deficiencies identified.

Financial statements of
Calgary Municipal Land Corporation

for the year ended December 31, 2023

Deloitte.

Deloitte LLP
Suite 700 850
2nd Street SW
Calgary AB T2P 0R8
Canada

Tel: 403-267-1700
Fax: 403-213-5791
www.deloitte.ca

Independent Auditor's Report

To the Shareholder of
Calgary Municipal Land Corporation

Opinion

We have audited the financial statements of Calgary Municipal Land Corporation ("CMLC") which comprise the statement of financial position as at December 31, 2023 and the statements of operations and accumulated surplus, changes in net financial assets (liabilities) and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of CMLC as at December 31, 2023 and the results of its operations, changes in its net financial assets (liabilities), and its cash flows for the year then ended in accordance with Canadian public sector accounting standards ("PSAS").

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of CMLC in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with PSAS and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing CMLC's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate CMLC or to cease operations or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing CMLC's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of CMLC's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on CMLC's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause CMLC to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Deloitte LLP

Chartered Professional Accountants
April 19, 2024

CALGARY MUNICIPAL LAND CORPORATION
Statement of Financial Position
As at December 31, 2023

	2023 $	2022 $
FINANCIAL ASSETS		
Restricted Cash (Note 3)	37,465,957	54,107,042
Accounts receivable (Note 13 and Note 14a)	23,176,894	20,416,469
Long-term CRL receivable (Note 13)	297,775,154	191,104,953
Mortgage receivable (Note 5)	2,357,006	2,357,006
Infrastructure development assets (Note 7)	238,748,952	188,579,033
Land inventory (Note 8)	96,876,698	97,977,627
	696,400,661	554,542,130
FINANCIAL LIABILITIES		
Bank indebtedness (Note 10)	34,060,981	29,798,409
Accounts payable and accrued liabilities (Note 4 and Note 14a)	23,795,199	38,000,168
Holdbacks payable	34,667,730	22,649,472
Interest payable (Note 14a)	4,055,817	3,172,993
Developer deposits (Note 6)	350,658	512,653
Long term debt (Note 11)	608,369,623	475,705,407
Share capital (Note 12)	1	1
	705,300,009	569,839,103
NET FINANCIAL LIABILITIES	(8,899,348)	(15,296,973)
NON-FINANCIAL ASSETS		
Prepaid expenses	217,603	205,014
Tangible capital assets (Note 9)	138,397,740	142,470,695
	138,615,343	142,675,709
ACCUMULATED SURPLUS	129,715,995	127,378,736

ISC: Unrestricted

CALGARY MUNICIPAL LAND CORPORATION
Statement of Operations and Accumulated Surplus
For the year ended December 31, 2023

	Annual Budget (Note 17) $	2023 Actual $	2022 Actual $
REVENUES			
Community revitalization levy	39,500,000	34,440,961	30,719,320
Community revitalization levy - BMO Centre expansion	129,600,000	106,670,202	99,239,761
Land sales	8,440,000	6,100,000	1,325,000
Project management fees	2,300,000	2,303,808	2,303,808
Rental	1,300,000	1,412,076	1,338,549
Miscellaneous	90,000	111,208	139,226
	181,230,000	151,038,255	135,065,664
EXPENSES			
Salaries and employee benefits	6,400,000	6,335,478	5,536,837
Cost of sales - land inventory	4,450,000	3,660,526	1,324,355
Land impairment (Note 8)	-	381,199	7,538
WIP write-off (Note 7)	-	919,994	-
General administration	4,450,000	4,249,905	3,933,968
Infrastructure repairs and maintenance	2,000,000	1,647,859	1,811,258
Amortization expense (Note 9)	7,000,000	6,114,712	4,916,651
Interest - loans and debentures	8,400,000	8,602,940	10,477,840
Loan administration fees	650,000	654,430	574,950
Financing charges	7,000,000	9,153,601	1,419,976
	40,350,000	41,720,644	30,003,373
EXCESS OF REVENUES OVER EXPENSES BEFORE DONATIONS & CONTRIBUTIONS	140,880,000	109,317,611	105,062,291
Donations & Contributions (Note 1 and 11b)	132,000,000	106,980,352	104,140,257
EXCESS OF REVENUES OVER EXPENSES	8,880,000	2,337,259	922,034
ACCUMULATED SURPLUS, BEGINNING OF YEAR		127,378,736	126,456,702
ACCUMULATED SURPLUS, END OF PERIOD		129,715,995	127,378,736

CALGARY MUNICIPAL LAND CORPORATION
Statement of Cash Flows
For the year ended December 31, 2023

	2023 $	2022 $
NET INFLOW OF CASH:		
Operating activities		
Excess of revenues over expenses	2,337,259	922,034
Items not affecting cash:		
Amortization expense (Note 9)	6,114,712	4,916,651
Transfer of assets from infrastructure development assets to tangible capital assets (Note 9)	(1,734,877)	(45,604,270)
	6,717,094	(39,765,585)
Change in non-cash working capital		
Accounts receivable (Note 13)	(2,760,425)	(4,788,010)
Long-term CRL receivable (Note 13)	(106,670,201)	(99,239,761)
Infrastructure development assets (Note 7)	(50,169,919)	1,807,954
Land inventory	1,100,929	42,775
Accounts payable and accrued liabilities (Note 4)	(14,204,969)	17,730,821
Holdbacks payable	12,018,258	15,589,678
Interest payable	882,824	622,761
Prepaid expenses	(12,589)	(8,741)
Developer deposits (Note 6)	(161,995)	301,353
	(153,260,993)	(107,706,755)
Capital activity		
Acquisition of tangible capital assets (Note 9)	(306,880)	(538,655)
Financing activites		
Change in bank indebtedness (Note 10)	4,262,572	(1,566,052)
Infrastructure debentures (Note 11)	46,500,000	44,500,000
Repayment of debenture principal (Note 11)	(16,021,322)	(16,852,985)
Fort Calgary advance	(1,019)	-
CHC EV Place advance	-	(128,752)
City of Calgary ACT advance (Note 11)	-	9,000,000
City of Calgary ACT Modernization advance (Note 11)	1,800,000	-
BMO City of Calgary loan (Note 11)	94,325,386	107,744,344
CPA 9th Ave Parkade loan (Note 11)	-	(263,775)
City of Calgary ACT loan (Note 11)	5,947,788	5,764,407
City of Calgary ACT Shift loan (Note 11)	113,383	-
	136,926,788	148,197,187
(DECREASE)/INCREASE IN CASH	(16,641,085)	39,951,777
CASH, BEGINNING OF YEAR	54,107,042	14,155,265
CASH, END OF YEAR	37,465,957	54,107,042

CALGARY MUNICIPAL LAND CORPORATION
Statement of Changes in Net Financial Assets (Liabilities)
For the year ended December 31, 2023

	Budget (Note 17) $	2023 Actual $	2022 Actual $
EXCESS OF REVENUES OVER EXPENSES	8,880,000	2,337,259	922,034
Amortization expense (Note 9)	-	6,114,712	4,916,651
Transfer of assets from infrastructure development assets to tangible capital assets (Note 9)	-	(1,734,877)	(45,604,270)
Acquisition of tangible capital assets (Note 9)	-	(306,880)	(538,655)
Use of prepaid expenses	-	(12,589)	(8,741)
INCREASE (DECREASE) IN NET FINANCIAL ASSETS	8,880,000	6,397,625	(40,312,981)
NET FINANCIAL (LIABILITIES) ASSETS, BEGINNING OF YEAR	(15,296,973)	(15,296,973)	25,016,008
NET FINANCIAL LIABILITIES, END OF YEAR	(6,416,973)	(8,899,348)	(15,296,973)

Calgary Municipal Land Corporation
Notes to the financial statements
For the year ended December 31, 2023

1. Description of business

Calgary Municipal Land Corporation ("CMLC" or "the Corporation"), a wholly owned subsidiary of The City of Calgary ("The City"), was incorporated on February 22, 2007. On July 5, 2007, pursuant to the Alberta Municipal Government Act and the Control of Corporation Regulation (AR 284/2003), the Provincial Minister of Municipal Affairs approved, via Ministerial Order L: 162/07, The City as the sole shareholder pursuant to Section 250(2) (e) of the Municipal Government Act. As a wholly owned subsidiary of The City, CMLC is not subject to income tax.

The Corporation was formed to implement public infrastructure improvements as a catalyst for private and public sector real estate development.

2. Significant accounting policies

Basis of presentation

The financial statements are prepared in accordance with Public Sector Accounting Standards ("PSAS") for local government organizations as established by the Public Sector Accounting Board of Chartered Professional Accountants of Canada.

Basis of accounting

The financial statements are prepared using the accrual basis of accounting, which records revenue as it is earned and measurable. Expenses are recognized as they are incurred and measurable based on receipt of goods or services and/or the legal obligation to pay.

Adoption of new accounting standards

CMLC was required to adopt PS3280 – Asset Retirement Obligations ("ARO") effective January 1, 2023. This standard provides guidance over the reporting of legal obligations associated with the retirement of capital assets.

Based on the management's assessment, the adoption of this standard did not have an impact on CMLC's financial statements.

Cash

Cash consists of cash in the bank.

Land inventory

Land inventory is carried at the lower of cost and net realizable value. The net realizable value is the market value of land less any selling costs. CMLC capitalizes all costs associated with land held for resale, including property taxes, maintenance charges and environmental costs.

Infrastructure development assets

Infrastructure development assets are projects currently under construction that will result in an asset that will be turned over to The City at the final acceptance certificate phase of construction. Infrastructure development assets are recorded at cost. CMLC capitalizes direct construction costs, development costs and environmental costs to the project under development, which will be recovered from The City through the Community Revitalization Levy ("CRL") collected by The City on behalf of CMLC. Assets will be transferred to tangible capital assets and amortized when they have received final acceptance certificates and have not yet been transferred to The City.

2. Significant accounting policies (continued)

BMO Centre expansion

On December 14, 2018, CMLC entered into an agreement with The City and Calgary Exhibition and Stampede Limited ("CESL") to expand BMO Centre, which is owned and operated by CESL. The City and the Government of Alberta, through CMLC, committed to fund two-thirds of the eligible costs of $333,333,334 via The City's Major Capital Projects Reserve. CMLC will repay The City through the Rivers District CRL starting in 2028 through 2047. The remaining one-third is funded by CESL. As project costs are incurred, the full cost is recorded as project work-in-progress ("WIP").

The WIP balance is subsequently offset by the one-third portion funded by CESL and the two-thirds portion funded by The City as a donation to CESL. CMLC simultaneously records the long-term CRL receivable and CRL revenue as this amount is earned as construction occurs, resulting in a nil impact on the statement of operations and accumulated surplus. Please see Note 11 for additional details on project funding.

Non-financial assets

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the normal course of operations. The change in non-financial assets during the year, together with the excess of revenues over expenses, represents the change in net financial assets for the year.

Accumulated surplus or deficit

Accumulated surplus represents CMLC's net economic resources. It is an amount by which all assets (financial and non-financial) exceed liabilities. An accumulated surplus indicates that CMLC has net resources (financial and physical) that it can use to provide future services. An accumulated deficit means that liabilities are greater than assets.

Tangible capital assets

Tangible capital assets are stated at cost less accumulated amortization. Amortization is provided using methods and rates intended to amortize the cost of assets over their estimated useful lives. The amortization rates are as follows:

Computer infrastructure	straight-line method over 3 years
Computer software	straight-line method over 3 years
Office furniture and equipment	straight-line method over 5 years
Leasehold improvements	straight-line method over 5 years
Building improvements	straight-line method over 10 years
East Village Infrastructure	straight-line method over 25 years
Elbow River Traverse	straight-line method over 50 years
St Patrick's Bridge	straight-line method over 50 years
4th Street Underpass	straight-line method over 50 years

Amortization commences in the first full month of ownership. When Infrastructure Development Assets receive their final acceptance certificates, the asset is moved from work in progress to tangible capital assets.

Tangible capital assets are recorded at cost and tested for impairment whenever a change in events or circumstances indicates that the carrying value may not be recoverable. Any resulting impairment loss is recognized in the period it is determined.

2. Significant accounting policies (continued)

Revenue recognition

CRL, interest, rental and project management fee revenues are recognized when persuasive evidence of an arrangement exists, the amounts are earned and measurable, and collection is reasonably assured.

Land sale revenues are recognized upon title of the property passing to the purchaser and receipt of at least 15% of the total proceeds and when collection is reasonably assured.

Rental revenue includes amounts earned from tenants. CMLC recognizes rental revenue and donation expense for operating leases that are rent-free to tenants.

Miscellaneous revenue includes property management revenue. Property management revenues are recognized when service is completed. Miscellaneous revenue also includes revenue that does not fall into the other revenue categories.

Site servicing

Site servicing costs relating to land parcels that have been sold are expensed as incurred.

Remediation

Remediation costs relating to land inventory are capitalized until the land inventory is sold. Remediation costs relating to land parcels that have been sold are expensed as incurred.

Use of estimates

The preparation of financial statements, in conformity with PSAS, requires management to make estimates and assumptions that affect the reported amount of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period.

Such estimates include the net realizable value of land inventory, estimated useful lives and potential impairment of tangible capital assets, and accrued liabilities.

Actual results could differ from these estimates. These estimates and assumptions are reviewed quarterly and, as adjustments become necessary, they are reported in the statement of operations and accumulated surplus in the period in which they become known.

Future accounting pronouncements

CMLC is currently assessing the impact of the following new accounting standards effective for future periods.

(a) *Revenue (effective January 1, 2024)*

This section provides guidance on the recognition of revenue that distinguishes between revenue that arises from transactions that include performance obligations and for transactions that do not have performance obligations.

(b) *Purchased Intangibles (effective January 1, 2024)*

Purchased Intangibles (Public Sector Guideline-8) provides guidance on the recognition and reporting of purchased intangibles acquired through arm's length exchange transactions.

3. Cash

	2023	2022
	$	$
Restricted cash	37,465,957	54,107,042
	37,465,957	54,107,042

Pursuant to the development management agreements with CESL and The City, respectively, restricted cash consists of $28,549,725 as at December 31, 2023 (December 31, 2022 - $44,453,087) and $8,916,232 as at December 31, 2023 (December 31, 2022 – $9,653,955). These funds are restricted to the BMO Centre expansion and Arts Commons Transformation project related expenses and are held separately from CMLC cash balances.

4. Accounts payable and accrued liabilities

	2023	2022
	$	$
Accounts payable	14,551,919	29,789,450
Vacation pay accrual	129,710	129,701
Accrued liabilities	9,113,570	8,081,017
	23,795,199	38,000,168

5. Mortgage receivable

	2023	2022
	$	$
Mortgage receivable	2,357,006	2,357,006
	2,357,006	2,357,006

The mortgage receivable balance consists of $2,357,006 as at December 31, 2023 (December 31, 2022 - $2,357,006) due from Copez Properties Ltd. ("Copez") relating to the sale of the Firefighters land parcel. Pursuant to an agreement with Copez, the mortgage bears no interest and will be paid by delivering the mortgage on the closing date which is 30 days after the date of waiver, or the satisfaction of the road closure condition. The term commences on the closing date and expires on the maturity date, which is 30 days following the earlier of the expiration of the current term of the Hostel Lease (March 31, 2025) or the termination of the Hostel lease. The land is currently occupied by The Calgary Hostel who holds a lease with Copez until March 31, 2025.

Calgary Municipal Land Corporation
Notes to the financial statements
For the year ended December 31, 2023

6. Developer deposits

	2023	2022
	$	$
Developer deposits	**350,658**	512,653
	350,658	512,653

7. Infrastructure development assets

	2023	2022
	$	$
East Village	**31,095,090**	32,172,509
RiverWalk	**24,481,988**	24,481,088
4th Street Underpass	**3,892,941**	3,892,941
St. Patrick's Island	**21,251,326**	21,242,236
West Village	**2,977,494**	2,977,494
Environmental	**5,932,073**	5,932,073
East Victoria Park	**131,024,208**	86,309,374
Arts Commons Transformation	**15,488,047**	8,902,841
David D. Oughton	**1,730,909**	1,656,048
Olympic Plaza Transformation	**668,013**	92,435
6th Street Underpass	**130,228**	—
5th Street Underpass	**—**	919,994
Victoria Park Transit Centre	**58,695**	—
Fort Calgary	**17,940**	—
	238,748,952	188,579,033

With the change in the project location to the 6th Street Underpass, costs totaling $919,994 for the 5th Street Underpass have been moved to WIP write-off expense as of December 31st, 2023.

8. Land inventory

	2023	2022
	$	$
Balance, beginning of year	**97,977,627**	98,020,402
Additions	**2,836,504**	6,620,439
Dispositions and impairment	**(3,937,433)**	(6,663,214)
Balance, end of year	**96,876,698**	97,977,627

In 2020, CMLC recognized land impairments totaling $6,756,286. Of that impairment, previously recognized impairment losses of $4,763,941 were recovered at December 31, 2022 due to increased market values. Impairment losses recognized as an expense during the year ended December 31, 2023 were $381,199 (December 31, 2022 - $7,538) which is net of impairment loss and recovery.

Calgary Municipal Land Corporation
Notes to the financial statements
For the year ended December 31, 2023

9. Tangible capital assets

	General Tangible Capital Assets						Infrastructure Development Assets Transferred Into Tangible Capital Assets					December 31, 2023 Total	December 31, 2022 Total
	Building Improvements	Office Furniture & Equipment	Computer Infrastructure	Leasehold Improvements	Computer Software	Sub Total	East Village Infrastructure	Elbow River Traverse	St Patrick's Bridge	4th Street Underpass	Sub Total	$	$
Estimated Useful Life	10years	5years	3years	5years	3years		25years	50years	50years	50years			
	$	$	$	$	$	$	$	$	$	$	$		
Historical Cost													
Beginning of year	8,009,744	488,545	700,211	3,254,346	458,662	12,911,508	95,282,087	3,298,392	30,137,845	23,414,985	152,133,309	165,044,817	118,901,892
Additions	-	41,815	102,770	155,069	7,226	306,880	1,734,877	-	-	-	1,734,877	2,041,757	46,142,925
	8,009,744	530,360	802,981	3,409,415	465,888	13,218,388	97,016,964	3,298,392	30,137,845	23,414,985	153,868,186	167,086,574	165,044,817
Accumulated Amortization													
Beginning of year	6,068,782	423,177	582,892	2,692,581	426,905	10,194,337	7,821,643	395,807	3,616,065	546,270	12,379,785	22,574,122	17,657,471
Amortization Expense	776,384	33,785	92,611	226,435	25,583	1,154,798	3,822,889	65,968	602,757	468,300	4,959,914	6,114,712	4,916,651
	6,845,166	456,962	675,503	2,919,016	452,488	11,349,135	11,644,532	461,775	4,218,822	1,014,570	17,339,699	28,688,834	22,574,122
Net Book Value at December 31, 2023	1,164,578	73,398	127,478	490,399	13,400	1,869,253	85,372,432	2,836,617	25,919,023	22,400,415	136,528,487	138,397,740	
Net Book Value at December 31, 2022	1,940,962	65,368	117,319	561,765	31,757	2,717,171	87,460,444	2,902,586	26,521,780	22,868,715	139,753,524		142,470,695

Calgary Municipal Land Corporation
Notes to the financial statements
For the year ended December 31, 2023

10. Bank indebtedness

As at December 31, 2023, the Corporation had issued cheques in excess of deposits on hand of $769,249 (December 31, 2022 - $102,987).

The Corporation has an approved operating facility with a maximum amount of $45,000,000 as at December 31, 2023 (December 31, 2022 - $45,000,000), which bears interest, payable monthly, at ATB Financials' prime interest rate. The prime rate at December 31, 2023 was 7.2%. This facility is secured by a general security agreement pledging all assets and obligations of the Corporation. As at December 31, 2023, the operating facility had a balance owing of $33,291,732 (December 31, 2022 - $29,695,422).

The total bank indebtedness as at December 31, 2023 was $34,060,981 (December 31, 2022 - $29,798,409).

11. Long-term debt

	2023	2022
	$	$
ACFA Debentures	261,473,412	231,214,589
Calgary Parking Authority advance for the 9th Avenue Parkade (a)	199,344	199,344
Fort Calgary advance	—	1,019
BMO Centre expansion City of Calgary loan (b)	300,344,615	206,019,229
ACT Expansion City of Calgary advance (c)	10,000,000	10,000,000
ACT Modernization City of Calgary advance (c)	1,800,000	—
ACT City of Calgary loan (c)	14,286,074	8,338,286
ACT Shift City of Calgary loan (c)	113,383	—
	588,216,828	455,772,467
Add: ACFA Debentures current portion	20,152,795	19,932,940
	608,369,623	475,705,407

As of December 31, 2023, the Corporation issued $46.5 million (December 31, 2022 - $44.5 million) in debentures. Total debentures outstanding including current portion at December 31, 2023 were $281,626,207 (December 31, 2022 - $251,147,529).

Calgary Municipal Land Corporation
Notes to the financial statements
For the year ended December 31, 2023

11. Long-term debt (continued)

Debenture details are as follows:

Debenture no.	Interest rate %	Maturity date	December 31, 2023 $	December 31, 2022 $
D20080016	4.736	15/09/2028	6,140,688	7,205,592
D20090005	5.222	16/03/2029	4,903,214	5,654,754
D20090012	5.125	15/06/2029	6,593,993	7,511,177
D20090019	4.880	15/09/2029	5,253,327	5,990,424
D20100003	4.390	15/03/2025	1,202,908	1,962,402
D20110006	3.569	15/06/2026	3,423,405	4,486,151
D20110010	3.013	15/09/2026	2,373,923	3,119,068
D20120002	2.769	15/03/2027	2,171,864	2,754,959
D20120008	2.599	17/09/2027	3,055,840	3,771,741
D20130003	2.229	15/03/2023	—	388,069
D20140015	2.314	15/12/2024	990,312	1,631,786
D20150008	1.835	15/09/2025	1,074,366	1,597,009
D20170002	2.277	15/03/2027	1,504,083	1,912,379
D20170008	2.671	15/09/2027	3,672,596	4,531,451
D20170010	2.532	15/12/2027	3,368,586	4,066,761
D20180009	2.685	15/06/2026	2,801,429	3,686,523
D20180010	2.870	17/09/2026	1,607,765	2,113,861
D20190027	2.420	15/09/2044	8,775,184	9,092,523
D20190035	2.772	15/12/2039	6,500,000	6,500,000
D20200009	2.049	15/03/2040	6,000,000	6,000,000
D20200014	2.448	15/06/2040	7,000,000	7,000,000
D20200027	2.120	15/09/2040	8,500,000	8,500,000
D20200036	2.084	31/12/2040	73,712,724	77,170,899
D20200037	2.315	31/12/2040	7,500,000	7,500,000
D20210009	2.843	15/03/2041	6,000,000	6,000,000
D20210015	2.735	15/06/2041	3,500,000	3,500,000
D20210020	2.530	15/09/2041	5,500,000	5,500,000
D20210025	3.290	15/12/2041	7,500,000	7,500,000
D20220005	3.790	15/03/2042	6,500,000	6,500,000
D20220010	5.090	15/06/2042	15,000,000	15,000,000
D20220014	5.070	15/09/2042	13,000,000	13,000,000
D20220020	4.870	15/12/2042	10,000,000	10,000,000
D20230005	5.350	15/03/2043	11,000,000	—
D20230010	5.210	15/06/2043	12,000,000	—
D20230015	5.450	15/09/2043	20,000,000	—
D20230021	5.030	15/12/2043	3,500,000	—
			281,626,207	251,147,529

11. Long-term debt (continued)

a) CMLC and The City signed a Credit Agreement on November 2, 2018 to fund the construction of the 9th Avenue Parkade on behalf of Calgary Parking Authority. The Credit Agreement was for a maximum loan amount of $57,000,000, which was interest free, secured by a mortgage on title. As of project completion and transfer of title to the City of Calgary on December 21, 2021, the loan was repaid in full. The City's contribution of $5,000,000 to the 9th Avenue Parkade project budget was received on behalf of Calgary Parking Authority as an advance to CMLC to fund working capital for the 9th Avenue Parkade project. On March 2, 2022, 50% of the remaining advance of $463,119 was returned to the City per the funding agreement, the other 50% is to be kept by CMLC. CMLC's remaining 50% portion of the advance will be used to fund additional items for the Parkade as identified. As of December 31, 2023, CMLC's remaining balance of the 50% advance is $199,345.

b) CMLC and CESL entered into a Development Management and Funding Agreement on December 14, 2018 to commence and complete the development of the BMO Centre expansion ("BMO expansion"). The anticipated project cost is $500,000,000. CMLC's role is to manage and administer the construction and completion of the project. The City and the Government of Alberta have agreed to allocate up to $333,333,334 (two-thirds of project costs) of future CRL Revenue towards the eligible project costs (approximately $166,666,667 each) and CESL will provide $166,666,666 (one-third of project costs) representing the Government of Canada Grant. As per the credit agreement between CMLC and The City, CMLC will pay a fixed rate of 2.7% per annum until June 1, 2026, after which the rate will be renegotiated. The value of the loan will be repaid in full by December 31, 2047.

   As of December 31, 2023, The City and the Government of Alberta have funded $300,344,615 to the BMO expansion. During the year, CMLC transferred $106,670,201 from the BMO expansion asset WIP account to donation expense. CMLC also recognized $106,670,201 CRL Receivables from The City of Calgary and CRL Revenue. Please refer to Note 13.

c) CMLC, The City, and Arts Commons entered into a Development Management and Funding Agreement on September 30, 2020 to commence and complete the ACT Expansion of the Arts Commons Transformation ("ACT") project. Council approved a total of $25,000,000 toward the design and construction of the ACT Expansion. On December 13, 2022 a revised DMA was signed extending the initial agreement to completion of the development of the ACT Expansion, increasing the project budget to $240,000,000; $135,000,000 to be funded through the CRL and $105,000,000 to be funded by The City. As of December 31, 2023, the City has transferred a total working capital balance of $10,000,000 for the ACT Expansion. On December 21, 2023 The City also issued an advance of $1,800,000 toward ACT Modernization. As at December 31, 2023, The City has funded $14,399,457 (December 31, 2022 - $8,338,286).

d) Long-term debt is repayable as follows:

	$
2024	20,352,140
2025	15,662,339
2026	14,090,222
2027	11,475,287
2028 & thereafter	546,789,635
	608,369,623

All long-term debt will be repaid in full by December 31, 2047.

12. Share capital

Authorized, unlimited number

Common shares

CMLC has one common share issued and outstanding for $1 with The City.

13. Accounts receivable

	2023	2022
	$	$
The City of Calgary	**13,553,458**	8,603,122
Canada Revenue Agency	**2,182,876**	999,424
The Ciy of Calgary (formerly Calgary Parking Authority)	**143,011**	168,340
Calgary Police Service	**527**	6,864
Calgary Exhibition & Stampede Limited	**7,074,184**	10,451,404
Long-term CRL receivable (Note 2 & Note 11)	**297,775,154**	191,104,953
Other receivables	**222,838**	187,315
	320,952,048	211,521,422

14. Transactions with The City and City entities

The arm's length transactions have been recorded at the exchange amount, which represents the amount of consideration established and agreed to by the related parties. Non-arm's length transactions have been recorded at the carrying amount.

a) *Transactions with The City and City entities*

Total purchases from The City and City entities were as follows:

	2023	2022
	$	$
The City of Calgary	**1,911,299**	7,978,170
ENMAX Corporation	**235,098**	664,889
Calgary Economic Development	**10,000**	10,000
Calgary Arts Development Association	**5,000**	5,000
Calgary Police Service	**—**	5,047
Calgary Film Centre	**—**	5,000
	2,161,397	8,668,106

Purchases from ENMAX Corporation ("ENMAX") are for infrastructure and energy related goods and services. Purchases from The City are for infrastructure upgrade work, application fees and payment of property taxes to The City.

For the year ended December 31, 2023, principal in the amount of $16,021,322 (December 31, 2022 - $16,181,412), interest in the amount of $7,720,116 (December 31, 2022 - $6,022,447), and administrative fees of $654,430 (December 31, 2022 - $574,950) relating to ACFA debentures were paid to The City.

Calgary Municipal Land Corporation
Notes to the financial statements
For the year ended December 31, 2023

14. Transactions with The City and City entities (continued)

a) Transactions with The City and City entities (continued)

Accounts payable and accrued liabilities with The City and City entities were as follows:

	2023	2022
	$	$
The City of Calgary	2,484,437	3,093,800
ENMAX Corporation	21,725	619,544
Calgary Arts Development Association	—	5,000
	2,506,162	3,718,344

Amounts payable to ENMAX are for infrastructure and energy related goods and services. In addition to the above, the amounts payable to The City as at December 31, 2023 also include interest of $4,055,817 (December 31, 2022 - $3,172,993) infrastructure upgrade work, application fees and property taxes.

Revenues from The City and City entities was as follows:

	2023	2022
	$	$
Community Revitalization Levy	34,440,961	30,719,320
The City of Calgary	859,712	857,966
The City of Calgary (formerly Calgary Parking Authority)	622,110	562,383
	35,922,783	32,139,669

Revenues from The City of Calgary (formerly Calgary Parking Authority) are profits from CMLC land that are managed by The City of Calgary (formerly Calgary Parking Authority) as parking lots. Revenues relating to The City are for project management fees for the ACT project as well as revenue for the East Village Safety Hub.

Receivables from The City and City entities were as follows:

	2023	2022
	$	$
The City of Calgary	13,553,458	8,603,122
The City of Calgary (formerly Calgary Parking Authority)	143,011	168,339
Calgary Police Service	527	6,864
	13,696,996	8,778,325

Receivables from The City are related to the expected fourth quarter revenue of 2023 CRL, project related expenses for ACT project and other miscellaneous chargebacks for work done for The City on behalf of CMLC.

14. Transactions with The City and City entities (continued)

b) Transactions with related parties other than The City and City entities

As of December 31, 2023, there were no significant transactions and no non-arm's length transactions between CMLC and key management personnel, their close family members, and other entities that they or their close family members have influence over the decision-making process.

15. Letters of credit

In the normal course of operations, letters of credit are issued to The City to facilitate the issuance of development permits necessary to undertake infrastructure work. As at December 31, 2023 the Corporation issued letters of credit in the amount of $1,288,130 (December 31, 2022 – $1,320,500) which is secured under a general security agreement with ATB Financial.

16. Financial instruments

The fair values of cash, accounts receivable, mortgages receivable, accounts payable and accrued liabilities, holdbacks payable and interest payable approximate their carrying values due to their short-term maturity. The estimated fair value of the debentures as at December 31, 2023, is $166,683,854 (December 31, 2022 - $162,733,227). The estimated fair value of the mortgage receivable is $2,526,710 (December 31, 2022 – $2,509,032). The estimated fair value is based on current lending rates with similar maturities obtainable from ACFA.

Credit risk

The Corporation's credit risk is primarily attributable to its accounts receivables. The Corporation's credit risk is limited as 63% (December 31, 2022 – 44%) of the Corporation's accounts receivable balance at December 31, 2023 is due from The City, with the remaining balance comprising GST, rent, advance agreements and chargebacks.

Interest rate risk

Interest rate risk reflects the sensitivity of CMLC's financial results and condition to movements in interest rates. Interest rate risk is limited as 43% (December 31, 2022 – 49%) of the Corporation's long term debt balance at December 31, 2023 is held with The City, through ACFA with rates that are locked in for longer terms. Interest rate risk for mortgages is managed through the staggering of mortgage renewals.

Liquidity risk

Liquidity risk is the risk that the Corporation will be unable to meet its contractual cash outflow obligations as they come due. CMLC mitigates this risk by monitoring cash activities and expected cash outflows through extensive budgeting and maintaining availability of cash through cash on hand and available credit.

17. 2023 budget

The budget amounts presented throughout these financial statements are based on the operating and capital budgets approved by the CMLC Board of Directors and The City of Calgary Council in November 2022.

18. Contractual obligations and commitments

Contractual obligations represent a legal obligation of CMLC to others and will become liabilities in the future when the terms of the contract are met. Estimated payment requirements for each of the next five years and thereafter are as follows:

	Obligations Under Capital Projects
	$
2024	137,587,356
2025	808,079
2026	-
2027	-
2028 & thereafter	135,000,000
	273,395,435

Major commitments included in the above figures are commitments for the development management and funding of the BMO expansion, 17th Avenue SE Extension and Victoria Park/Stampede Station rebuild and the ACT project.

Capital commitments of $140,730,919 are not reflected in the financial statements. This amount represents uncompleted portions of contracts, as at December 31, 2023 (December 31, 2022 - $266,812,048), on major projects and estimated obligations under other various agreements.

19. Contractual rights

Contractual rights are rights of CMLC to economic resources arising from contracts or agreements that will result in both assets and revenues in the future when the terms of those contracts or agreements are met. Estimated amounts that will be received or receivable for each of the next five years and thereafter are as follows:

	Rights Under Operating Leases and Contracts	Rights Under Project Management	Rights under Future CRL Revenue	Total
	$	$	$	$
2024	406,052	1,609,902	130,482,214	132,498,168
2025	185,876	780,000	35,062,212	36,028,088
2026	32,300	561,000	36,518,928	37,112,228
2027	34,000	-	37,353,500	37,387,500
2028 & thereafter	156,400	-	1,576,574,604	1,576,731,004
	814,628	2,950,902	1,815,991,458	1,819,756,988

City Auditor's Report to
Audit Committee
2024 June 13

ISC: UNRESTRICTED
AC2024-0707

Utilities Delivery's Utilization of the Program and Project Management System (P2M) Audit

PURPOSE

The purpose of this report is to communicate the outcome of the Utilities Delivery's Utilization of the Program and Project Management System (P2M) Audit, including Administration's response and corrective actions.

PREVIOUS COUNCIL DIRECTION

Bylaw 30M2004 (as amended) established the position of City Auditor and the powers, duties, and functions of the position. In accordance with Bylaw 30M2004 (as amended), the City Auditor reports the outcome of all audits to the Audit Committee (including Administration's response and corrective actions to be taken in regard to specific recommendations). The City Auditor is accountable to Council and subject to the oversight of Audit Committee under Bylaw 33M2020.

RECOMMENDATIONS

That the Audit Committee:

1. Receive this report for the Corporate Record; and
2. Recommend that Council receive this report for the Corporate Record.

HIGHLIGHTS

- What does this mean to Calgarians? The City Auditor's Office provides independent and objective audit assurance services to add value to The City of Calgary and enhance public trust.

- Why does it matter? P2M is a corporate wide standardized IT system solution. The scope of the P2M implementation included all capital City of Calgary (City) Programs, Projects, and Annual Investment Programs. In November 2023, there were 1,617 Projects and Programs listed in P2M from multiple business units such as Parks, Open Spaces, and Utilities Delivery. Within the Infrastructure Services Department, the Utilities Delivery business unit had 330 projects and programs in P2M. Effective utilization of P2M supports consistent, transparent, and timely oversight of projects and programs both across The City and in individual business units.

RISK

Recommendations in this audit report support Administration in their on-going mitigation activities related to the Service Delivery Principal Corporate Risk.

ATTACHMENTS

1. Utilities Delivery's Utilization of the Program and Project Management System (P2M) Audit – AC2024-0707 ATT

DEPARTMENT CIRCULATION

Name	Title, Department or Business Unit	Approve/Consult/Inform
Liz Ormsby	City Auditor	Approve
David Duckworth	Chief Administrative Officer	Inform
Stuart Dalgleish	Chief Operating Officer	Inform
Carla Male	Chief Financial Officer	Inform
Graham Duckworth	Director, Utilities Delivery	Inform
Anne Cataford	Manager of Linear Infrastructure Delivery, Utilities Delivery	Inform
Kara Wolfe	Manager Engineering & Project Support, Business & Engineering Services	Inform
Deli Krizbai	Leader Project Controls, Business & Engineering Services	Inform
Darren Finney	Leader Wastewater Stormwater Network, Utilities Delivery	Inform

Author: Leandro Andrade, Senior Auditor, City Auditor's Office

Calgary

City Auditor's Office

Utilities Delivery's Utilization of the Program and Project Management System (P2M) Audit

June 4, 2024

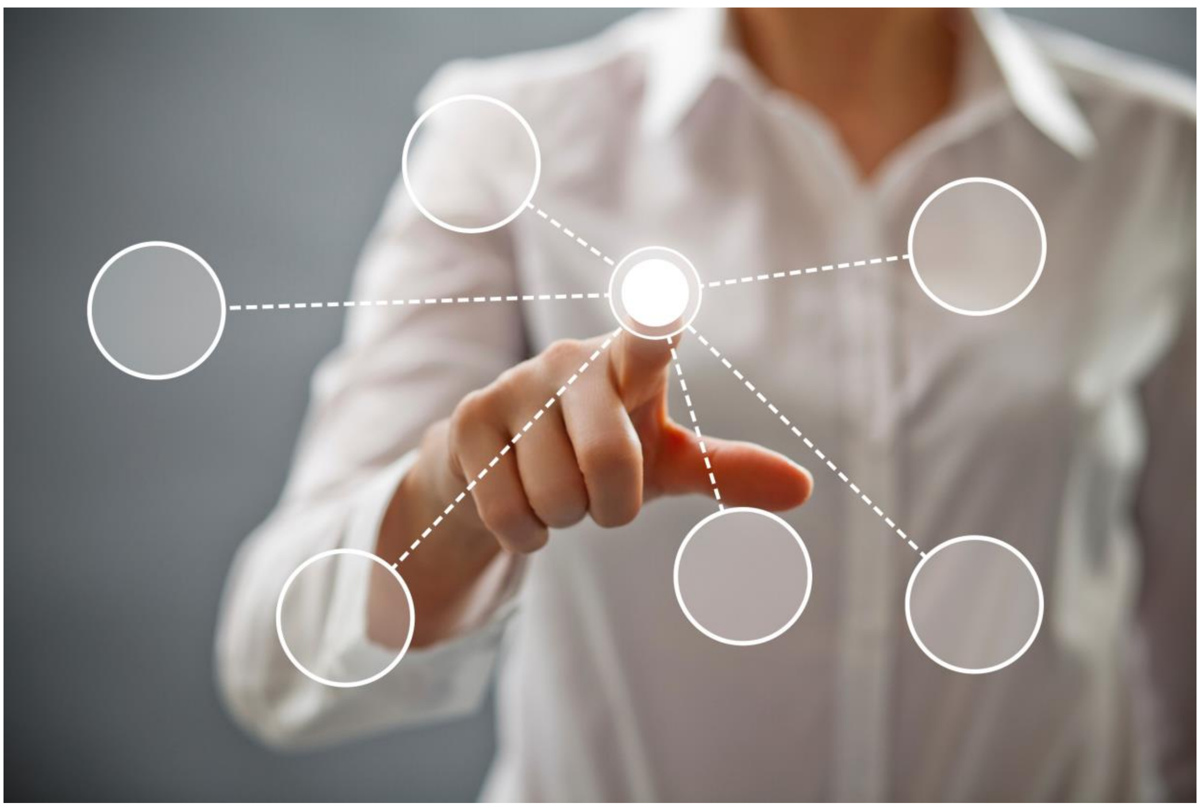


Table of Contents

Audit Objective

The objective of this audit was to assess the effectiveness of Utilities Delivery's (UD) utilization of the Program and Project Management System (P2M) to manage and report on projects. The objective was achieved by reviewing the design and operating effectiveness of key processes and controls in the pre-implementation, implementation, and sustainment phases.

Why it Matters

P2M is a corporate wide standardized IT system solution. The scope of the P2M implementation included all capital City of Calgary (City) Programs, Projects, and Annual Investment Programs. In November 2023, there were 1,617 Projects and Programs listed in P2M from multiple business units such as Parks, Open Spaces, UD, Facility Management, and Water Services.

Within the Infrastructure Services Department, the UD business unit had 330 projects and programs in P2M. Effective utilization of P2M supports consistent, transparent, and timely oversight of projects and programs both across The City and in individual business units.

What We Concluded

UD's utilization of P2M to manage and report on projects was partially effective. The implementation of P2M is relatively recent, and both UD and Business & Engineering Services (BES) are continuing to take steps to support on-going sustainment. Our recommendations are intended to support UD and BES on this journey by ensuring UD users are consistently using P2M to manage and report on their projects and BES continue to effectively support P2M.

The pre-implementation phase of P2M was effective. We identified 89% (55) of UD users attended P2M training sessions and concluded that the structure of P2M was aligned with the City’s Corporate Project Management Framework (CPMF), which supports consistent P2M use. We identified control improvements to ensure all P2M users complete all relevant training before being granted access.

The implementation phase in UD was partially effective. We confirmed all open UD projects in the Linear Infrastructure Delivery division were included in P2M and based on a survey of Project Managers (PM), 83% indicated implementation was complete. However, we identified opportunities for UD and BES to improve P2M utilization by developing guidance and providing training for PM on where to store project documentation, reinforcing monthly reporting responsibilities and monitoring financial data integration to ensure timely correction of errors.

Sustainment completed to date has been effective with operational and technical support available through multiple channels to assist P2M users and support continuous improvement.

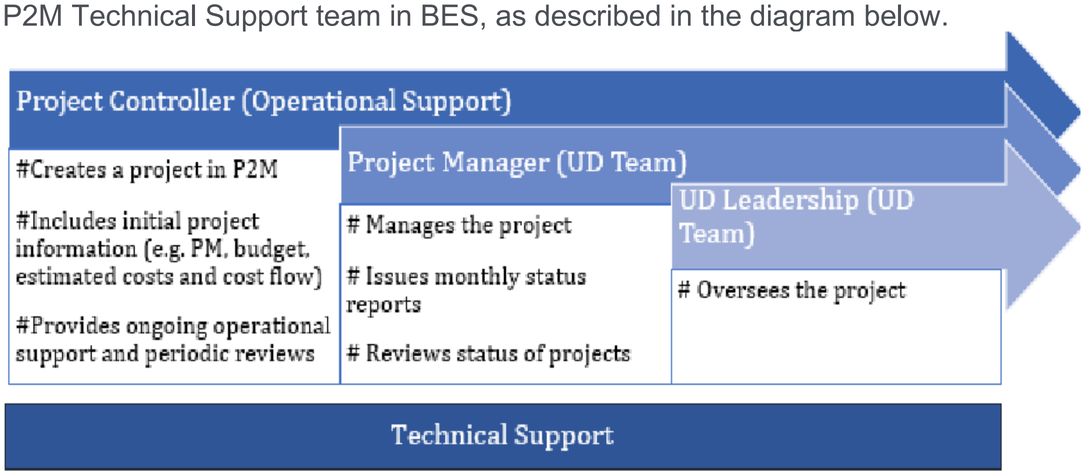
We raised six recommendations to improve the effectiveness of project management and reporting in P2M. UD and BES have agreed with our recommendations with plans to implement by December 31, 2024.

Background

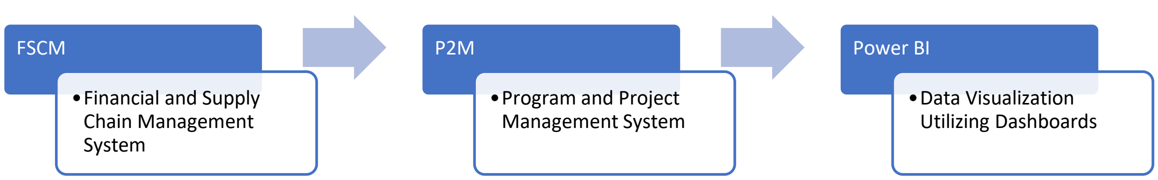
P2M is a corporate wide standardized IT system solution to provide consistent, transparent, and timely oversight of programs, projects and infrastructure portfolio management, aligned to the CPMF. P2M was designed to provide a One City approach for planning, execution, monitoring, control, and financial transparency related to capital projects executed by The City.

The Project Implementation Team in BES, within the Infrastructure Services department, was responsible for implementing P2M in UD. During pre-implementation, BES provided training to UD staff and supported UD's implementation starting in March of 2023 when UD projects moved from PRT (former project management system) to P2M. UD had 330 projects and programs documented in P2M by November 11, 2023.

Project Management in P2M
The three main project management roles that utilize P2M, PM, Project Controller and UD Leadership (Director, Managers and Leaders), are all supported by the P2M Technical Support team in BES, as described in the diagram below.



Information from The City's Financial and Supply Chain Management (FSCM) system is uploaded daily to P2M, which keeps project costs up to date. Project reporting utilizes data visualization in Power BI. The Power BI Dashboard Report updates automatically to show the latest data when cost flows in P2M are updated and approved by the PM or Project Controller. The diagram below summarizes the flow of data between the three solutions.



Scope & Approach

The scope of this audit included activities from pre-implementation prior to P2M being used by UD PM in March of 2023, through to sustainment up to October 31, 2023. The audit focused on UD's Linear Infrastructure Delivery's division and focused on projects in Wastewater & Stormwater.

We assessed the design and operating effectiveness of processes and controls by:

- Interviewing UD and BES staff to gain further understanding of processes and controls;
- Reviewing user training records;
- Surveying a sample of 6 PM out of a total of 13 to support assessment of effective utilization of P2M and Project Implementation Team support;
- Reviewing implementation and support provided by the Project Implementation Team and feedback mechanisms, including Lessons Learned and surveys;
- Reviewing a sample of projects and project reports to assess the utilization of P2M to manage and report on projects;
- Reviewing project status and cost monitoring; and
- Reviewing the FSCM and P2M interface, including logs and issue resolution, if applicable.

Results

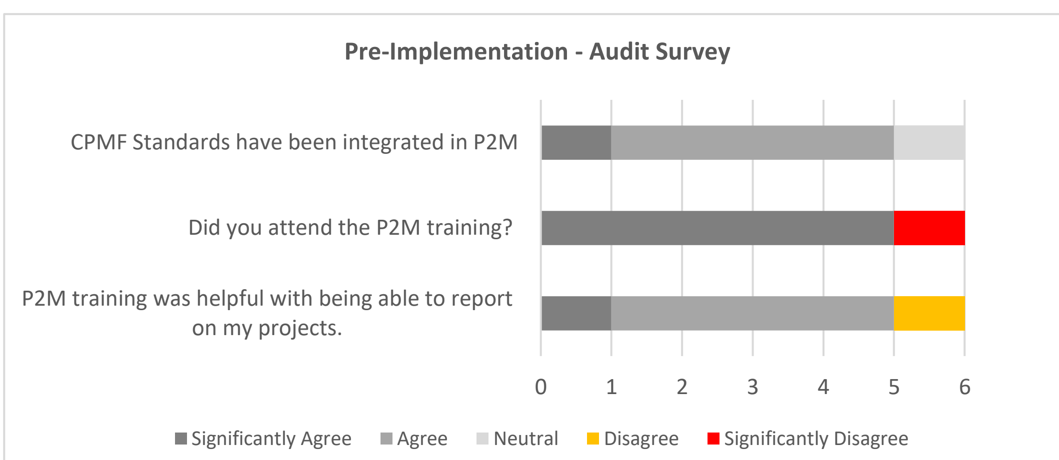
We reviewed three phases of the P2M project: **Pre-implementation**, **Implementation**, and **Sustainment.** The audit work we performed for each phase is outlined below including the results of our survey of six PM.

Pre-implementation

P2M pre-implementation was effective based on our review of processes and controls to ensure users were trained and P2M aligned to CPMF.

We assessed training records and noted 89% (55) of P2M users in UD attended the training, which was designed to demonstrate in general terms how P2M works. However, control improvements are needed to ensure all users complete training since 11% of users had not completed the training before getting access (Recommendations 5 & 6).

Outlined below are the Audit Survey Results indicating agreement CPMF was integrated in P2M, and the training was helpful to report on projects (83%). In addition, one PM did not attend the training.



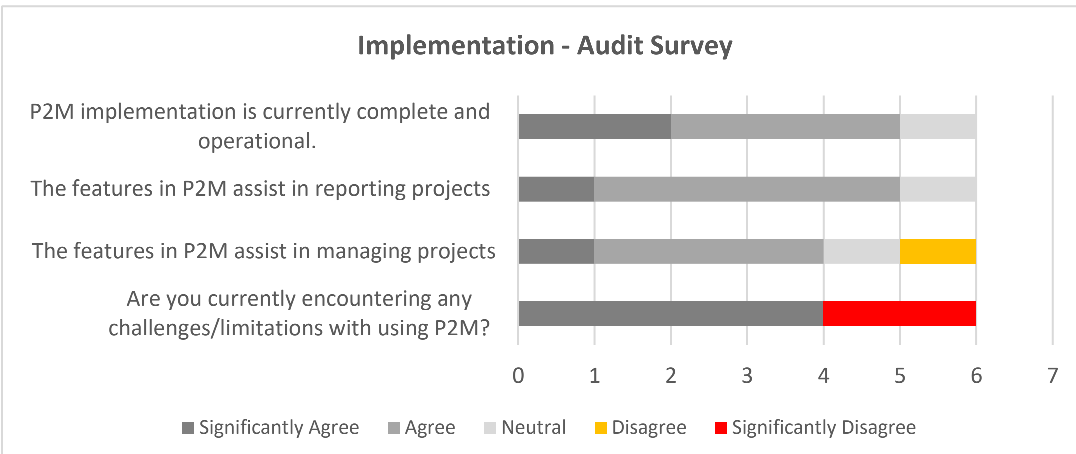
Implementation

Although P2M has been fully implemented in the Linear Infrastructure Delivery division, improvements are required to ensure consistent utilization to manage and report on projects and effective integration of financial data as detailed below.

Utilization

We confirmed all UD projects in the Linear Infrastructure Delivery division were included in P2M by cross checking to the list of approved projects on the Capital Budget Dashboard. Since we noted there were projects in the Process Infrastructure Delivery division that had not transitioned to P2M, we recommended UD review projects managed in PRT and develop an action plan to reduce the risk of inaccurate reporting due to the use of multiple systems (Recommendation 3).

The majority of PM surveyed agreed P2M implementation was complete and operational (83%) and the features in P2M assisted in reporting (83%) and managing (67%) projects. However, 67% of PM were experiencing challenges, due to occasional issues, system complexity, and concerns including risk management.



Project Controllers created projects in P2M and met monthly with PM to discuss and update project status. We determined there was an effective process to balance the number of projects between the Project Controllers. We also verified, for a sample of ten projects, that Project Controllers included expected financial information (budget, cost flow, commitments, and estimated costs) in P2M and held a monthly meeting with PM in November. One PM surveyed who encountered occasional challenges with P2M indicated the Project Controllers were able to resolve concerns.

We selected ten projects to assess P2M utilization and noted inconsistent project documentation in P2M for 60% (e.g. Risk, Issue and Change Logs, Interested Parties, and Project Objectives). We recommended updated guidance and training on documentation storage and P2M capabilities to support effective P2M utilization (Recommendation 1).

Reporting

PM publish a monthly status report in P2M to inform UD leadership on project status, including budget, schedule and performance. We reviewed 20 status reports from October and November for the projects sampled and noted inconsistencies in three reports with P2M schedule information, and two missing reports. We recommended reinforcing PM reporting responsibilities to improve accuracy and timeliness and support decision making when projects are off track (Recommendation 2).

In June 2023, the Project Implementation Team began developing a Power BI Dashboard Report, which was implemented before year-end. The process to develop the Dashboard Report was effective and followed good practices such as requirement assessment, consultation, user acceptance testing, and approvals to move to production. UD Leadership provided positive feedback on the usefulness of the Dashboard Report to monitor projects.

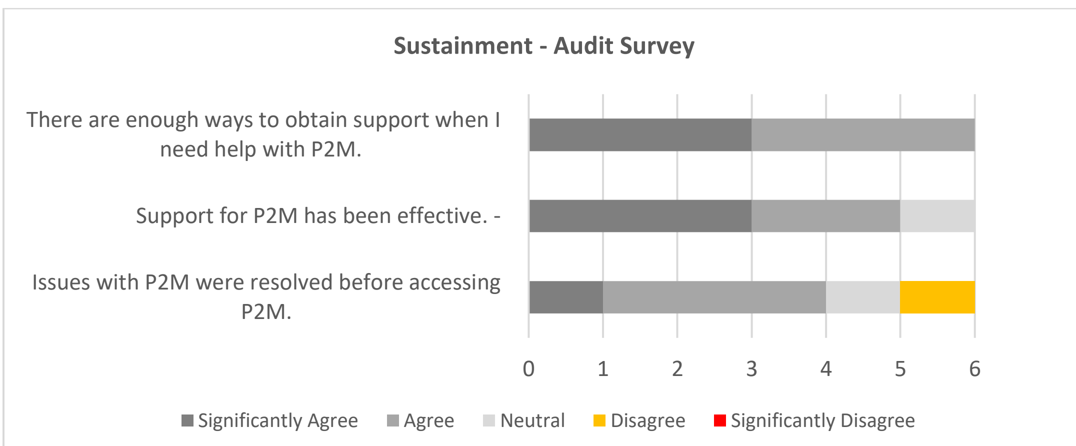
Integration

Lastly, we assessed the integration of data from FSCM to P2M. We reviewed a sample of five daily integration logs with errors and noted the error emails were not monitored consistently. We recommended clarifying roles and responsibilities between IT and P2M Technical Support to ensure timely monitoring and resolution of integration errors to support the accuracy and completeness of P2M data (Recommendation 4).

Sustainment

During the audit we assessed the processes in place to sustain P2M users and determined they were effective.

BES provided multiple channels to P2M users to obtain operational and technical support, such as monthly meetings with Project Controllers, a dedicated email, and daily support sessions from initial implementation through to sustainment. Audit survey results indicated 100% agreement there were enough ways to obtain support and 83% agreement support was effective.



P2M Technical support conducted a survey in the fall of 2023 to support continuous improvement. As noted under the Implementation Phase above, 67% of PM were having challenges and issues using P2M. BES is well positioned to support P2M users as they continue to utilize and refine P2M to manage and report on projects. We shared an opportunity with BES to utilize an existing City ticket system to record and track P2M issues to support continuous improvement by identifying and addressing recurring issues.

Observations & Recommendations

#1: Inconsistent P2M Use	
OBSERVATION	**RECOMMENDATION**
PM should use P2M consistently to manage projects. However, six of ten projects in our audit sample were inconsistently populated with project documentation. For example, six projects had no Interested Parties or Project Objectives in P2M, and logs such as Risk Logs, Issues Logs, and Change Logs were not fully populated in P2M. Three of ten PM were exclusively using Enterprise Connect (Content Server) to store project files. We also noted that three PM interviewed were not aware of some P2M capabilities, such as saving files in SharePoint and adding links to files stored in Enterprise Connect. P2M Operational Support indicated project documentation should be stored in Enterprise Connect. However, we did not identify robust guidance on Enterprise Connect included in P2M training. Although UD created a P2M handbook, PM indicated they were not aware of guidance on project documentation storage, which increases the risk of inconsistent project documentation and difficulties finding documentation when moving projects from one PM to another and impacts the efficiency and effectiveness of project management. Summary survey results indicated four out of six (67%) PM are encountering challenges/limitations using P2M because they are not familiarized with P2M.	1. UD review and update guidance and provide training for PM on where to store project documentation (e.g. P2M, SharePoint or Enterprise Connect), including how the information stored in other tools will be linked in P2M. **MANAGEMENT RESPONSE** Agreed **ACTION PLAN** A P2M handbook was created providing additional guidance for PM on how to use P2M including identifying the storage location for files and was previously shared with staff. The handbook will be reviewed to see if any updates are required and will be recirculated to PM. Refresher training will also be arranged for UD staff to ensure a consistent approach to data entry. **LEAD** UD – Manager Linear Infrastructure Delivery **SUPPORTED BY** BES – Manager Engineering and Project Support **COMMITMENT DATE** 2024 June 30

#2: Status Report Inconsistencies	
OBSERVATION	**RECOMMENDATION**
UD PM must publish a monthly status report in P2M on the 25th day of the month to keep UD leadership (Leaders and Managers) informed on project status, including budget, schedule, and performance. The PM selects the status color (Red- At Risk, Yellow-Concern and Green- On Track) from a drop-down and add comments in Status Manager in P2M. We reviewed the October and November monthly status reports for our sample of projects and noted inconsistencies between P2M schedule information and three reports as outlined below: • The P2M schedule information did not match the monthly status report since the PM did not update the P2M schedule information. However, the monthly report was accurate. • The schedule was on track in P2M. However, the status in the monthly report was Yellow since the PM was anticipating delays. We also noted the PM did not flag the relevant schedule lines (Column “include in report”), which caused divergences between the status report and schedule since not all scheduled tasks were included. • There were delays in the schedule in P2M that were not captured in the monthly status report since the PM did not refresh the report. Two projects had no status report for November 2023: • One report was published late. However, the report accurately reflected P2M information. • One report was not published in October since the project was coming to an end and there were no changes. The November status report was published after the deadline. Monthly status reports should be accurate to support timely leadership decisions on actions required where projects are not on track. Although manually generated status reports increase the risk of reporting inaccurate or inconsistent information, BES advised status reports will not be automated to support reporting flexibility.	2. UD reinforce monthly status report responsibilities, including reporting deadlines, keeping information up to date in P2M, selecting the correct status, and refreshing monthly reports. **MANAGEMENT RESPONSE** Agreed **ACTION PLAN** UD will discuss P2M responsibilities at regular team meetings and arrange for refresher training. Staff will be reminded of the daily P2M drop-in help sessions that are offered by BES. In addition, BES will complete quarterly quality checks to ensure consistent and regular reporting is completed. **LEAD** UD – Manager Linear Infrastructure Delivery **SUPPORTED BY** BES – Manager Engineering and Project Support **COMMITMENT DATE** 2024 June 30

#3: Projects Managed in PRT	
OBSERVATION	**RECOMMENDATION**
Not all UD projects have transitioned to P2M. All UD projects with a completion date longer than six months after P2M implementation were to transition from PRT to P2M. One of six PM surveyed confirmed they were not using P2M to manage 100% of their projects because P2M was cumbersome, and they believed there were areas where efforts were being duplicated. Furthermore, we were advised that Capital Investment Planning needs to obtain information from PRT to consolidate forecast information since there are PM from the Process Infrastructure Delivery division in UD who are still using PRT to manage their projects. Utilizing multiple sources of project information (i.e. P2M and PRT) increases the risk of inaccurate project reporting.	3. UD review projects managed in PRT, identify the reason they are not using P2M, and develop an action plan to fully transition to P2M. **MANAGEMENT RESPONSE** Agreed **ACTION PLAN** PRT is still used to reference historical information on projects delivered by UD. UD will review project data and ensure that all projects are using P2M. In addition, UD will work with Capital Investment Planning to ensure a consistent approach is applied for all projects. **LEAD** UD – Manager Linear Infrastructure Delivery **SUPPORTED BY** BES Manager Engineering and Project Support, CIP – Leader Infrastructure Investment Planning **COMMITMENT DATE** 2024 September 30

<table>
<tr><th colspan="2">#4: Monitoring Data Integration – FSCM to P2M</th></tr>
<tr><th>OBSERVATION</th><th>RECOMMENDATION</th></tr>
<tr><td>The final stage of the interfaces between FSCM and P2M are not monitored in a timely fashion to support complete and accurate financial information transferring into P2M. If there is an error in the data integration, the record with the error would not be transferred to P2M meaning P2M data would be incomplete. Emails of the pass or failed integrations would be sent to members of the IT- PMIS (Project Management Information Systems) team.

We obtained the population of the daily integrations from August 1 to November 20, 2023, and the error emails as part of our sample testing of five days of integration errors. We confirmed the IT- PMIS team was not monitoring the integration error emails on a regular basis.

The errors identified in our sample related to the OnePlan module rather than Cost Manager. While UD only uses Cost Manager, unresolved OnePlan errors may impact other City business units. We noted P2M Technical Support may be in the best position to resolve issues related to OnePlan if there is missing information.

Clarifying and communicating the roles and responsibilities between IT and P2M Technical Support will ensure the timely monitoring and resolution of integration errors and the accuracy and completeness of P2M data. There is also an opportunity to improve integration monitoring by incorporating a dashboard to easily identify and resolve failed integrations.</td><td>4. P2M Technical Support clarify and communicate the roles and responsibilities between IT and P2M Technical Support to ensure timely monitoring and resolution of integration errors and consider the opportunity to improve monitoring of the data integration by incorporating a dashboard.

MANAGEMENT RESPONSE
Agreed

ACTION PLAN
BES and IT will clarify roles and responsibilities and will share the results with team members.
In addition, BES P2M Support and IT PMIS agree that an integration outcome dashboard would simplify integration status monitoring and facilitate issue identification. BES P2M Support and IT PMIS will work collaboratively to create the dashboard and monitor the integrations performance daily. Dashboard planning and preparation work to start in Q2, with planned deployment to production in Q4.

LEAD
BES – Manager Engineering and Project Support

SUPPORTED BY
IT – Leader IT and vendor (OnePlan Solutions)

COMMITMENT DATE
2024 December 31</td></tr>
</table>

<table>
<tr><th colspan="2">#5: P2M User Access</th></tr>
<tr><th>OBSERVATION</th><th>RECOMMENDATION</th></tr>
<tr><td>In order to have access rights to manage projects in P2M, all users must attend P2M training divided into two portions, the first one online, and the second one homework.

We compared a list of users that had access to P2M to a list of users that had completed P2M training and identified seven users in UD that had PM access in P2M that had not completed the P2M training. Of the seven, six had completed the first portion of the online training but not the homework portion and were granted access to support completion of their day to day work. The remaining user’s access was upgraded to PM access from “Read Only” Director access as they are a PM. However, they did not complete either portion of the training.

User access controls require improvement to ensure training is completed prior to granting access to P2M. In addition, there is no user access review for P2M. The Program Management System Manager confirmed that P2M Technical Support and IT are working on a process to review user access in P2M.</td><td>5. P2M Technical Support strengthen controls to ensure training is completed before granting user access.

MANAGEMENT RESPONSE
Agreed

ACTION PLAN
A new Ticket system is being created with two requirements: all new users (without any exception) will have to complete the training before accessing the production environment and must also confirm they have access to the financial system (FSCM). Included in the current P2M Work Plan.

LEAD
BES – Manager Engineering and Project Support

SUPPORTED BY
IT – Leader IT

COMMITMENT DATE
2024 May 31</td></tr>
</table>

	6. P2M Technical Support periodically conduct a documented user access review to identify P2M users who have not completed the required training and take appropriate action. **MANAGEMENT RESPONSE** Agreed **ACTION PLAN** On a monthly basis the P2M Technical Support team will work with IT PMIS to review the user base and ensure all users have the training completed. The access to the production environment is only provided to users that complete the training in LMS and send the certification of completion on the email requesting access. **LEAD** BES – Manager Engineering and Project Support **SUPPORTED BY** IT – Leader IT **COMMITMENT DATE** 2024 September 30

Acknowledgements

The City Auditor’s Office conducts projects, including this audit, in conformance with the International Standards for the Professional Practice of Internal Auditing.

The City Auditor’s Office would like to thank the staff from UD, BES and IT for their cooperation and support during this audit.

Audit Resource Management Report to **ISC: UNRESTRICTED**
Audit Committee **AC2024-0182**
2024 June 13

Proposed Amendments to Audit Committee Bylaw 33M2020 and City Auditor Bylaw 30M2004

PURPOSE

This report provides Audit Committee with recommendations from the Bylaw Review Working Group (BRWG) for proposed amendments to Audit Committee Bylaw 33M2020 (as amended) and City Auditor Bylaw 30M2004 (as amended) (Attachments 1 and 5). Following approval of these proposed amendments Audit Committee will recommend that Council give three readings to amending bylaws.

PREVIOUS COUNCIL DIRECTION

Bylaw 33M2020 (as amended) requires the Audit Committee to review their terms of reference and mandate every three years for compliance with Schedule 'A', Section 1(g) of Bylaw 33M2020.

Bylaw 30M2004 (as amended), requires the City Auditor to review the bylaw every three years in conjunction with the Audit Committee's review of their bylaw and present proposed changes to the Audit Committee and Council for approval, per Section 11.1 of Bylaw 30M2004 (as amended).

ADMINISTRATION RECOMMENDATION:

That Audit Committee:

1. Approve the Bylaw Review Working Group's proposed amendments to Bylaw 33M2020 (as amended) contained in Attachment 1;

2. Approve the Bylaw Review Working Group's proposed amendments to Bylaw 30M2004 (as amended) contained in Attachment 5;

3. Recommend that Council give three readings to the proposed bylaw to amend the Audit Committee Bylaw 33M2020 (as amended);

4. Recommend that Council give three readings to the proposed bylaw to amend the City Auditor's Bylaw 30M2004 (as amended); and

5. Thank the Bylaw Review Working Group members for their contributions.

HIGHLIGHTS

The Audit Committee Bylaw 33M2020 (as amended) came into force on 2020 October 26 at the Organizational Meeting of Council.

The City Auditor's Bylaw 30M2004 (as amended) was last amended in 2020 September 21 in conjunction with approval of Audit Committee's new Bylaw 33M2020.

The recommendation for Council to give three readings to amending bylaws completes the bylaw review process directed to be performed by the BRWG at the 2023 March 08 Audit Committee Meeting (AC2023-0236).

Author: **C. Smillie, EA to Audit Committee**

Audit Resource Management Report to Audit Committee 2024 June 13

ISC: UNRESTRICTED AC2024-0182

Proposed Amendments to Audit Committee Bylaw 33M2020 and City Auditor Bylaw 30M2004

DISCUSSION

A BRWG was established to complete a review of both Audit Committee Bylaw 33M2020 (as amended) and City Auditor Bylaw 30M2004 (as amended) to determine if amendments are required. The review of both bylaws is complete, and amendments have been proposed.

The BRWG membership was comprised of Public Member M. Lambert, Councillor T. Wong, and Councillor R. Pootmans, supported by the City Auditor, the Executive Assistant to Audit Committee and the Law Department. Following Council's Organizational Meeting on 2023 October 24th Councillor Spencer, Chair and Councillor Pootmans, Vice-Chair performed the final review of proposed amendments.

Audit Committee Bylaw 33M2020 (As Amended)

The proposed amendments to Bylaw 33M2020 (as amended) can be categorized as follows:

- Housekeeping amendments;
- Amendments to clarify current practice; and
- Amendments to support Audit Committee's mandate, role, and authority.

For detail on the proposed amendments see the spreadsheet that outlines the current wording in Bylaw 33M2020 (as amended), the proposed amendment, and the rationale for making the amendment (Attachment 2)

Attachment 3 is a red-lined version of the original Bylaw 33M2020 which may be helpful by providing a draft consolidated version incorporating the proposed amendments.

City Auditor Bylaw 30M2004 (As Amended)

The proposed amendments to Bylaw 30M2004 (as amended) can be categorized as follows:

- Housekeeping amendments;
- Amendments to clarify current practice;
- Amendments to support City Auditor's mandate, scope of work, and reporting lines; and
- Amendments to support ongoing conformity to Institute of Internal Auditor's Global Internal Audit Standards.

For detail on the proposed amendments see the spreadsheet that outlines the current wording in Bylaw 30M2004 (as amended), the proposed amendment, and the rationale for making the amendment (Attachment 6).

Attachment 7 is a red-lined version of Bylaw 30M2004 (as amended) which may be helpful by providing a draft consolidated version incorporating the proposed amendments.

Audit Resource Management Report to Audit Committee
2024 June 13

ISC: UNRESTRICTED
AC2024-0182

Proposed Amendments to Audit Committee Bylaw 33M2020 and City Auditor Bylaw 30M2004

EXTERNAL ENGAGEMENT AND COMMUNICATION

☐ Public engagement was undertaken

☐ Public/interested parties were informed

☒ Dialogue with interested parties was undertaken

☐ Public communication or engagement was not required

In reviewing both bylaws, the Bylaw Review Working Group engaged with Audit Committee, the City Auditor, City Clerk's Office, the Law Department, External Auditor and Administration.

ATTACHMENTS

1. Proposed Wording for Amendments to Bylaw 33M2020 Text for Discussion
2. Spreadsheet – Proposed Bylaw 33M2020 Amendments
3. Red-line Markups on Proposed Amendments to Audit Committee Bylaw 33M2020
4. Bylaw 33M2020, Audit Committee Bylaw (Current Version)
5. Proposed Wording for Amendments to Bylaw 30M2004 Text for Discussion
6. Spreadsheet – Proposed Bylaw 30M2004 Amendments
7. Red-line Markups on Proposed Amendments to Bylaw 30M2004
8. Bylaw 30M2004, City Auditor's Bylaw (Current Version)

Department Circulation

Councillor E. Spencer	Audit Committee Chair	Approve
Liz Ormsby	City Auditor	Consult

Proposed Wording for a Bylaw to Amend Bylaw 33M2020, the Audit Committee Bylaw

1. Bylaw 33M2020, the Audit Committee Bylaw, as amended, is hereby further amended.

2. In section 2, the following is added after subsection 2(1)(d) as subsection 2(1)(d.1):

   "(d.1) "*Civic Partner*" means a Strategy Delivery Partner or a Program and Service Delivery Partner as those terms are described in the Investing in Partnerships Policy (CP2017-01), Schedule 3 – Partnership Categories;".

3. In section 4:

   (a) in subsection 4(1)(a)(iv) the word "and" is deleted;

   and

   (b) after subsection 4(1)(a)(iv) the following is added as subsection 4(1)(a)(iv.1):

   "(iv.1) *Administration's* establishment of processes to manage critical City of Calgary assets, including but not limited to, infrastructure assets, investments, and information assets; and".

4. In section 5:

   (a) in subsection 5(a), after the word "Chair" the words "or Vice-Chair" are added;

   (b) in subsection 5(d), the words "and civic entities" are deleted;

   (c) in subsection 5(f)(i), the number "$50,000" is deleted and replaced with "$75,000";

   (d) in subsection 5(f)(ii), after the word "exceed" the words "60% of" are added;

   (e) in subsection 5(g), before the word "recommend" the words "recruit and" are added; and

   (f) in subsection 5(l), the words "personal expense reports" are deleted and replaced with "expenses and time approvals".

5. In section 6:

   (a) In subsection 6(1)(b), the words "and are not employed by *The City*" are deleted and replaced with 'and have not been employed for at least 2 years by *The City* in any role";

   and

   (b) subsection 6(3) is deleted and replaced with the following:

"(3) Public members must be financial experts possessing a set of skills, experience and knowledge of financial matters, risk management or tangible capital assets, that support informed and effective decisions.".

6. in section 7:

(a) subsection 7(1) is deleted and replaced with the following:

"7. (1) Members of Council are appointed for two-year terms expiring on the date of the Organizational Meeting in the year of the expiry of the member's term.";

(b) subsection 7(2) is deleted;

and

(c) in subsection 7(6), after the word "resignation" the words ", leave of absence" are added.

7. In subsection 10(1), after the words "public member" the words "and must include either the Chair or Vice-Chair" are added.

8. In subsection 11(1), after the word "*Council*" the word "annually" is added.

9. In subsection 14(2), after the word "documentation" the word ", legislative" is added.

10. In **SCHEDULE "A"**, under **1. REGARDING THE PURPOSE AND ROLE OF AUDIT COMMITTEE**:

(a) in subsection (b), before the word "assesses" the word "annually" is added;

(b) the following is added after subsection (b) as subsection (b.1):

"(b.1) through the Chair, annually assesses the performance of the *City Auditor* and forwards the performance assessment to *Council* for information;";

(c) subsection (d) is deleted and replaced with the following:

"(d) may invite *Civic Partners* to provide a report and presentation on their governance, financial insights, risk management practices and other matters as determined by the Audit Committee and recommend to Council any actions within *City* authority that are deemed appropriate;"

and

(d) in subsection (f) the words "*The City's* annual budget process" are deleted and replaced with "*The City's* budget process".

11. In **SCHEDULE "A"**, under **4. REGARDING INTERNAL CONTROL AND RISK**, subsections (a) to(c) are deleted and replaced with the following:

"(a) gains and maintains assurance that *Administration* has established processes to identify, analyze, and mitigate risk, and has established associated internal controls;

(b) reviews reports from *Administration* concerning *The City's* internal control systems, including technology, security, climate, and financial controls;

(c) gains and maintains assurance that the *City Auditor* has established processes to support the operation of Council Policy CP2022-06, Whistle-Blower Policy; and

(d) reviews the adequacy and effectiveness of the Code of Conduct Program.".

12. In **SCHEDULE "B"**, under **1. REGARDING THE EXTERNAL AUDITOR**, subsections (a) and (b) are deleted and replaced with the following:

"(a) prior to the commencement of the annual external financial audit, reviews the audit plan and estimated audit fees with the *External Auditor* and discusses the timing and extent of audit procedures, materiality, significant audit risk and areas of audit focus and overall audit strategy. The *External Auditor's* preliminary base audit fee estimates based on information available at the time of the *External Auditor's* audit plan mailout and subject to change based on the full scoping of and progression of work on the audits for *The City's* government business enterprise, related authorities and the ancillary audits are to be included in *The City's* audit plan for information purposes only. The audit plan is forwarded to *Council* for information;

(b) in conjunction with *Administration's* presentation of the annual financial statements, receives and reviews the *External Auditor's* year end results report. This report is forwarded to Council for information.".

13. In **SCHEDULE "C"**, under **1. REGARDING THE CITY AUDITOR**:

(a) in subsection (b), after the words "overall audit strategy" the words "and makes a recommendation to *Council* on the *City Auditor's* Office budget" are added.

and

(b) in subsection 1(d), the words "assesses annually" are deleted and replaced with "through the Chair, annually assesses".

14. This Bylaw comes into force on the day it is passed.

AUDIT COMMITTEE BYLAW 33M2020
PROPOSED AMENDMENTS AND RATIONALE

Page, Schedule & Section of Bylaw 33M2020	Current State of Bylaw	Proposed Amendments	Comments / Rationale
Page 1 Section 2 Definitions	Silent	Add the following definition to Section 2 as a new sub-section 2(1)(d.1) as follows: ***“Civic Partner” means a Strategy Delivery Partner or a Program and Service Delivery Partner as those terms are described in the Investing in Partnerships Policy (CP2017-01), Schedule 3 – Partnership Categories;“.***	Housekeeping amendment This amendment aligns with the Major Partners Division definition of “Civic Partner” per Policy CP2017-01, Investing in Partnership Policy, Schedule 3, Partnership Categories Per Policy CP2017-01, the definition of “Partner” is an independent organization that agrees to collaborate with The City to deliver positive results for Calgarians.
Page 2 Section 4(1)(a) Mandate	4. (1) The mandate of Audit Committee is to: (a) assist *Council* in fulfilling its oversight and stewardship responsibilities by gaining and maintaining reasonable assurance in relation to: Sub-sections (i) through (v)	Add a new Section 4(1)(a)(vi.1) as follows: 4. (1) The mandate of Audit Committee is to: (a) assist *Council* in fulfilling its oversight and stewardship responsibilities by gaining and maintaining reasonable assurance in relation to: **(vi.1) Administration’s establishment of processes to manage critical City of Calgary assets, including but not limited to, infrastructure assets, investments, and information assets.**	Audit Committee’s mandate, role and authority Provides clarity on Audit Committee’s role with respect to City of Calgary assets and investments.

Page 2 Section 5(a) <u>Authority of Audit Committee</u>	5. The Audit Committee is authorized to: (a) assign the setting of Audit Committee meeting agendas to the Chair;	Amend Section 5(a) as follows: 5. The Audit Committee is authorized to: (a) Assign the setting of Audit Committee meeting agendas to the Chair **or Vice-Chair**;	<u>Clarifying current practice</u> Add the words "**or Vice-Chair**" In practice both the Chair and Vice-Chair often work together to set the Audit Agendas.
Page 3 Section 5(d) <u>Authority of Audit Committee</u>	5. The Audit Committee is authorized to: (d) receive reports from Administration and civic entities in support of fulfilling the Audit Committee work plan and to recommend to Council any actions deemed appropriate;	Amend Section 5(d) as follows: 5. The Audit Committee is authorized to: (d) receive reports from Administration in support of fulfilling the Audit Committee work plan and to recommend to Council any actions deemed appropriate;	<u>Audit Committee's mandate, role and authority</u> Delete the words "and civic entities". For Audit Committee's role with respect to civic partners see the amendment to Schedule A Section 1(d), <u>Regarding the Purpose and Role of Audit Committee</u>
Page 3 Section 5(f)(i) <u>Authority of Audit Committee</u>	5. The Audit Committee is authorized to: (f) pre-approve all audit and non-audit services performed by the External Auditor and further provide that: (i) the Chair can pre-approve additional audit or non-audit services, performed by the External Auditor up to $50,000 total annually and must report those approvals to the Audit Committee; and	Amend Section 5(f)(i) as follows: 5. The Audit Committee is authorized to: (f) pre-approve all audit and non-audit services performed by the External Auditor and further provide that: (i) the Chair can pre-approve additional audit or non-audit services, performed by the External Auditor up to **$75,000** total annually and must report those approvals to the Audit Committee; and	<u>Audit Committee's mandate, role and authority</u> Amend "$50,000" to **"$75,000**" Prevents delays in the approval of additional audit or non-audit services should there be no immediate Audit Committee meeting scheduled. Revising the total approval limit permitted by the Chair annually to $75,000 takes increased market values for external audit services into consideration.

Source: Corrie Smillie, EA to Audit Committee

Page 3 Section 5(f)(ii) <u>Authority of Audit Committee</u>	5. The Audit Committee is authorized to: (f) pre-approve all audit and non-audit services performed by the External Auditor and further provide that: (ii) on an annual basis, total fees for non-audit services performed by the External auditor shall not exceed the total audit fees approved for The City of Calgary consolidated audit, including all subsidiary and related entity audits;	Amend Section 5(f)(ii) as follows: 5. The Audit Committee is authorized to: (f) pre-approve all audit and non-audit services performed by the External Auditor and further provide that: (ii) on an annual basis, total fees for non-audit services performed by the External auditor shall not exceed **60% of** the total audit fees approved for The City of Calgary consolidated audit, including all subsidiary and related entity audits;	<u>Audit Committee's mandate, role and authority</u> This proposed amendment to the limit on non-audit services permitted to be provided by the external auditor is to support their independence by reducing the non-audit services permitted to be provided. Reduction to 60% generally would not affect their ability to bid on or perform additional non-audit work.
Page 3 Section 5(g) <u>Authority of Audit Committee</u>	5. The Audit Committee is authorized to: (g) recommend the appointment of the City Auditor to Council for approval;	Amend Section 5(g) as follows: 5. The Audit Committee is authorized to: (g) **recruit and** recommend the appointment of the City Auditor to Council for approval;	<u>Clarifying current practice</u> Add the words "**recruit and**" This clarifies that Audit Committee oversees the recruitment of the City Auditor as well as making a recommendation for appointment to Council.
Page 3 Section 5(l) <u>Authority of Audit Committee</u>	5. The Audit Committee is authorized to: (l) approve the *City Auditor's* and Executive Advisor's personal expense reports, or other expenditures as required, through the Chair;	Amend Section 5(l) as follows: 5. The Audit Committee is authorized to: (l) approve the *City Auditor's* and Executive Advisor's **expenses and time approvals**, or other expenditures as required, through the Chair;	<u>Clarifying current practice</u> Adding the words "**expenses and time approvals**" In practice the Chair approves expenses and time approvals for both the City Auditor and the Executive Advisor, and this clarifies that process.

Page 3 Section 6(1)(b) <u>Composition</u>	6. (1) The Audit Committee is composed of the following: (a) Four members of Council; and (b) Three public members that reside in Alberta and are not employed by The City. To be appointed at the Organizational Meeting.	Amend Section 6(1)(b) as follows: 6. (1) The Audit Committee is composed of the following: a) Four members of Council; and B) three public members that reside in Alberta and **have not been employed for at least two years by The City in any role.** To be appointed at the Organizational Meeting.	<u>Audit Committee's mandate, role and authority</u> This amendment is to maintain the independence of the Audit Committee by ensuring that public members are not employees of The City.
Page 4 Section 6(3) <u>Composition</u>	6. (3) Public members must be financially literate possessing a set of skills, experience and knowledge of financial matters that support informed and effective decisions.	Amend Section 6(3) as follows: 6. (3) Public members must be **financial experts** possessing a set of skills, experience and knowledge of financial matters, **risk management or tangible capital assets** that support informed and effective decisions.	<u>Audit Committee's mandate, role and authority</u> When recruiting public members to Audit Committee to emphasis the high level of financial expertise being sought and to include expertise with risk management or tangible capital assets.

Page 4 Section 7(1)(a) & (b) & 7(2) <u>Terms of Appointment</u>	7. (1) Members of Council are appointed: a) For a one-year term commencing on the date of the 2020 Organizational Meeting; and b) For two-year terms commencing on the date of the 2021 Organizational meeting 7. (2) Council member appointments expire on the date of the Organizational Meeting in the year of the expiry of the member's term	Delete Sections 7(1)(a) and (b) and 7(2) and replace with: 7. (1) Members of Council are appointed **for two-year terms expiring on the date of the Organizational Meeting in the year of the expiry of the member's term.**	<u>Housekeeping amendment</u> This tightens up the wording by deleting Sections of the bylaw no longer required.
Page 4 Section 7(6) <u>Terms of Appointment</u>	7. (6) Vacancies on the Audit Committee caused by retirement, resignation or incapacitation of a member may be filled by resolution of *Council* for the balance of that member's term. The Audit Committee may continue to operate and conduct business until vacancies are filled provided that the quorum requirement is met.	Amend Section 7(6) as follows: 7. (6) Vacancies on the Audit Committee caused by retirement, resignation, **leave of absence** or incapacitation of a member may be filled by resolution of council at any time. The audit committee may continue to operate and conduct business until vacancies are filled provided that the quorum requirement is met .	<u>Housekeeping amendment</u> Wording to include leaves of absence as contained in Council Policy CP2016-03, Governance and Appointments of Boards, Commissions and Committees, Section 5.19, Leave of Absence. Current wording does not address vacancies caused by an eligible Leave of Absence (bereavement, family responsibilities, maternity, parental, caregiver, or medical leave).
Page 5 Section 10(1) <u>Quorum</u>	10. (1) The quorum of Audit Committee is four members, including a minimum of one public member.	Amend Section 10(1) as follows: 10. (1) The quorum of Audit Committee is four members, including a minimum of one public member **and must include either the Chair or Vice-Chair.**	<u>Audit Committee's mandate, role and authority</u> As the agenda is set by the Chair and Vice-Chair, it seems reasonable, if not effective, to ensure that quorum includes either the Chair or Vice-Chair.

Page 5 Section 11(1) <u>Appointment of Chair and Vice-Chair</u>	11. (1) The Chair and Vice-Chair are appointed by Council at the Organizational Meeting.	Amend Section 11(1) as follows: 11. (1) The Chair and Vice-Chair are appointed by Council **annually** at the Organizational Meeting.	<u>Clarifying current practice</u> In practice the Chair and Vice-Chair have been appointed for one-year terms, however the addition of the word "**annually**" avoids any confusion since Councillors are appointed to Audit Committee as members for two-year terms.
Page 6 Section 14(2) <u>Executive Advisor</u>	14. (2) The Executive Advisor will provide reporting, research, planning, documentation, and meeting logistical support to the Audit Committee.	Amend Section 14(2) as follows: 14. (2) The Executive Advisor will provide reporting, research, planning, documentation, **legislative** and meeting logistical support to the Audit Committee.	<u>Clarifying current practice</u> Legislative support is an important service that is provided to the Audit Committee.
Page 7 Schedule A Section 1(b) <u>Regarding the Purpose and Role of Audit Committee</u>	1. The Audit Committee: (b) assesses the performance of the External Auditor and City Auditor and forwards the performance assessments to Council for information.	Amend Schedule A, Section 1(b) and add new Section 1(b.1) as follows: 1. The Audit Committee: (b) **annually** assesses the performance of the External Auditor and forwards the performance assessments to Council for information; **and** (b.1) **through the Audit Committee Chair, annually assesses the performance of the City Auditor and forwards the performance assessment to Council for information.**	<u>Clarifying current practice</u> Broken into two separate statements to provide clarity on who is performing the assessment (Audit Committee or the Audit Committee Chair). The City Auditor is an employee of Council whereas the External Auditor is an external supplier; therefore, there are two different types of oversight and performance evaluation.

Source: Corrie Smillie, EA to Audit Committee

Page 7 Schedule A Section 1(d) <u>Regarding the Purpose and Role of Audit Committee</u>	1. The Audit Committee: (d) oversees its governance responsibility with audit committees of *The City's* major autonomous civic entities, as determined by the Audit Committee;	Delete Schedule A, Section 1(d) and replace with the following: 1. The Audit Committee: **(d) may invite *Civic Partners* to provide a report and presentation on their governance, financial insights, risk management practices and other matters as determined by the Audit Committee and recommend to Council any actions within *City* authority that are deemed appropriate;"**	<u>Audit Committee's mandate, role and authority</u> Provides clarity on Audit Committee's role with the civic partners. There should be a continuity of governance between Council and its civic partners.
Page 7 Schedule A Section 1(f) <u>Regarding the Purpose and Role of Audit Committee</u>	1. The Audit Committee: (f) Develops an annual budget for the Audit Committee and recommends it to Council for approval, as part of the City's annual budget process.	Amend Schedule A, Section 1(f) as follows: 1. The Audit Committee: (f) Develops an annual budget for the Audit Committee and recommends it to Council for approval, as part of The City's budget process.	<u>Clarifying current practice</u> While it is annual, the process is different as there are 4-year business plans and budgets and an annual budget adjustment process.

Page 8 Schedule A Section 4(a), (b) & (c) Regarding Internal Control and Risk	4. The Audit Committee: (a) Oversees the integrity of The City's internal controls; (b) Oversees The City's process of risk identification, analysis, and management procedures to mitigate risk; and (c) Oversees, through the City Auditor's Office, the operation of Council Policy CC025, Whistle-blower Policy.	Delete Schedule A, Section 4(a), (b) & (c) and replace with the following: 4. The Audit Committee: **(a) gains and maintains assurance that Administration has established processes to identify, analyze, and mitigate risk, and has established associated internal controls;** **(b) reviews reports from Administration concerning The City's internal control systems, including technology, security, climate, and financial controls;** **(c) gains and maintains assurance that the City Auditor has established processes to support the operation of Council Policy CP2022-06, Whistle-Blower Policy; and** **(d) reviews the adequacy and effectiveness of the Code of Conduct Program.**	Audit Committee's mandate, role and authority To capture more precisely Audit Committee's role regarding risk and internal control. City Auditors Office performed an audit on the Code of Conduct (AC2023-0537). Recommendations included oversight of the Code of Conduct program by Audit Committee, as well as the provision of a report by Administration rather than a briefing to Audit Committee. Housekeeping amendment To update the Policy number for the Whistle-Blower Policy.

Page 9 Schedule B Section 1(a) <u>Regarding the External Auditor</u>	1. The Audit Committee: (a) prior to the commencement of the annual external financial audit, reviews the audit plan and estimated audit fees with the *External Auditor* and discusses the timing and extent of audit procedures, materiality, significant audit risks and areas of audit focus and overall audit strategy. The audit plan is forwarded to *Council* for information; (b) in conjunction with Administration's presentation of the annual financial statements, receives and reviews the External Auditor's year end audit results report. This report is to be forwarded to Council for information;	Amend Schedule B, Section 1(a) as follows: 1. The Audit Committee: (a) prior to the commencement of the annual external financial audit, reviews the audit plan and estimated audit fees with the *External Auditor* and discusses the timing and extent of audit procedures, materiality, significant audit risks and areas of audit focus and overall audit strategy. **The *External Auditor's* preliminary base audit fee estimates based on information available at the time of the *External Auditor's* audit plan mailout and subject to change based on the full scoping of and progression of work on the audits for *The City's* government business enterprise, related authorities and the ancillary audits are to be included in *The City's* audit plan for information purposes only.** The audit plan is forwarded to *Council* for information**;**	<u>Clarifying current practice</u> The amendment to Section 1(a) formalizes a process that has been in place for many years giving the Audit Committee transparency on the estimated total audit fees for all year-end audits the external auditor is contracted to perform for The City.

Page 10 Schedule C Section 1(b) <u>Regarding the City Auditor</u>	1. The Audit Committee: (b) reviews the City Auditor's Office audit plan and budget with the City Auditor and discusses the scheduling, resourcing, risk areas, coverage and overall audit strategy;	Amend Schedule C, Section 1(b) as follows: 1. The Audit Committee: (b) reviews the City Auditor's Office audit plan and budget with the City Auditor and discusses the scheduling, resourcing, risk areas, coverage, and overall audit strategy; **and makes a recommendation to Council on the City Auditor's Office budget.**	<u>Clarifying current practice</u> Clarification that the Audit Committee recommends to Council approval of the City Auditor's budget.
Page 10 Schedule C Section 1(d) <u>Regarding the City Auditor</u>	1. The Audit Committee: (d) assesses annually, the performance of the *City Auditor*, by way of a formal review process through the Audit Committee Chair and forwards this performance assessment to *Council* for information;	Amend Schedule C, Section 1(d) as follows: 1. The Audit Committee: (d) **through the Audit Committee Chair**, **annually assesses** the performance of the *City Auditor*, by way of a formal review process and forwards this performance assessment to *Council* for information;	<u>Housekeeping amendment</u> To provide consistency with Schedule A, New Section 1(b.1) <u>Regarding the Purpose and Role of Audit Committee</u> (b.1) **through the Audit Committee Chair, annually assesses the performance of the City Auditor and forwards the performance assessment to Council for information.**

Redline Markups on Proposed Amendments to Audit Committee Bylaw 33M2020

SHORT TITLE

1. This Bylaw may be cited as the "Audit Committee Bylaw".

DEFINITIONS

2. (1) In this Bylaw,

(a) "*Administration*" means the administration of *The City*;

(b) "*Chief Financial Officer*" means the member of *Administration* holding the position of Chief Financial Officer;

(c) "*City Auditor*" means the individual appointed by *Council* to the designated officer position of City Auditor pursuant to Bylaw 30M2004;

(d) "*City Manager*" means the individual appointed by *Council* as its chief administrative officer pursuant to Bylaw 8M2001;

(d).1 *Civic Partner*" means a Strategy Delivery Partner or a Program and Service Delivery Partner as those terms are described in the Investing in Partnerships Policy (CP2017-01), Schedule 3 – Partnership Categories;

(e) "*Council*" means the municipal council of *The City*;

(f) "*External Auditor*" means the person or firm appointed by *Council* to be *The City's* external auditor;

(g) "*Organizational Meeting*" means the annual organization meeting of Council pursuant to section 192(1) of the *Municipal Government Act*, R.S.A. 2000, c. M-26;

(h) "*The City*" means the municipal corporation of The City of Calgary.

(2) All schedules attached to this Bylaw form part of the Bylaw.

(3) Where this Bylaw refers to any statute, regulation or bylaw, the reference is to the statute, regulation or bylaw as amended, whether amended before or after the commencement of this Bylaw, and includes reference to any statute, regulation or bylaw that may be substituted in its place.

CONTINUATION OF AUDIT COMMITTEE

3. The Audit Committee established by resolution of *Council* on 1979 November 19 is hereby continued.

MANDATE OF AUDIT COMMITEE

4. (1) The mandate of the Audit Committee is to:

(a) assist *Council* in fulfilling its oversight and stewardship responsibilities by gaining and maintaining reasonable assurance in relation to:

(i) the integrity of *The City's* annual financial statements;

(ii) effective governance, risk management and compliance, including the evaluation of the performance of control systems and processes;

(iii) the qualifications, independence, and effectiveness of the *External Auditor* and the *City Auditor*;

(iv) the utilization of a confidential and independent Whistle-blower Program; ~~and~~

(iv.1) *Administration's* establishment of processes to manage critical City of Calgary assets, including but not limited to, infrastructure assets, investments, and information assets; and".

(v) additional matters described herein or as may be assigned to the Audit Committee by *Council*.

(b) support *Council's* effective decision-making by being involved in a broader governance role through oversight and responsibilities as indicated in Schedules "A", "B" and "C" of this Bylaw.

(2) The Audit Committee reports to *Council*.

AUTHORITY OF AUDIT COMMITTEE

5. The Audit Committee is authorized to:

(a) assign the setting of Audit Committee meeting agendas to the Chair **or Vice-Chair;**

(b) institute special audits, program reviews, and special studies, including the standing authority to retain expertise through external consultants;

(c) request reports from the *City Manager* regarding:

(i) matters that have a material or significant financial impact to *The City*; and

(ii) *The City's* Integrated Risk Management and corporate risks, at least twice a year;

(d) receive reports from *Administration* ~~and civic entities~~ in support of fulfilling the Audit Committee work plan and to recommend to *Council* any actions deemed appropriate;

(e) recommend the appointment of the *External Auditor* to *Council* for approval;

(f) pre-approve all audit and non-audit services performed by the *External Auditor* and further provide that:

(i) the Chair can pre-approve additional audit or non-audit services, performed by the *External Auditor*, up to **$75,000** ~~$50,000~~ total annually and must report those approvals to the Audit Committee; and

(ii) on an annual basis, total fees for non-audit services performed by the *External Auditor* shall not exceed **60% of** the total audit fees approved for The City of Calgary consolidated audit, including all subsidiary and related entity audits;

(g) **recruit and** recommend the appointment of the *City Auditor* to *Council* for approval;

(h) approve the *City Auditor's* Office audit plan and forwards to *Council* for information; the Audit Committee or *Council* may not remove items from the *City Auditor's* audit plan but may direct items be added to the plan;

(i) recommend *Council* approval of the *City Auditor's* Office budget, annually or as required by *Council* budget guidelines;

(j) appoint an individual to the position of Executive Advisor to provide support to the Audit Committee;

(k) approve any changes to the Executive Advisor's position description;

(l) approve the *City Auditor's* and Executive Advisor's ~~personal expense reports~~**, expenses or time approvals** or other expenditures as required, through the Chair;

(m) establish sub-committees as required.

COMPOSITION

6. (1) The Audit Committee is composed of the following:

(a) four members of *Council;* and

(b) three public members that reside in Alberta ~~and are not employed by *The City*~~ ***and have not been employed for at least 2 years by The City in any role;***

to be appointed at the *Organizational Meeting*.

(2) The Mayor is an ex-officio member of the Audit Committee.

(3) Public members must be ~~financially literate~~ **financial experts** possessing a set of skills, experience and knowledge of financial matters, **risk management or tangible capital assets,** that support informed and effective decisions.

(4) The Audit Committee identifies preferred skills for new public members, pursuant to *Council* policy CP2016-03.

TERMS OF APPOINTMENT

7. (1) Members of *Council* are appointed **for two-year terms expiring on the date of the Organizational Meeting in the year of the expiry of the member's term.**

~~(a) for a one-year term commencing on the date of the 2020 *Organizational Meeting*; and~~

~~(b) for two-year terms, commencing on the date of the 2021 *Organizational Meeting*.~~

(2) ~~Council *member* appointments expire on the date of the *Organizational Meeting* in the year of the expiry of the member's term.~~

(3) Public members are appointed for two-year terms commencing on the date of the *Organizational Meeting* and expiring on the date of the *Organizational Meeting* in the year of the expiry of the member's term.

(4) Public members may serve a maximum of six consecutive years.

(5) Despite subsection (3), a public member may serve until his or her successor is appointed. The service of a public member beyond the appointed term shall not count toward the limit on the length of service as set out in subsection (4) if the additional service is one year or less.

(6) Vacancies on the Audit Committee caused by retirement, resignation, **leave of absence**, or incapacitation of a member may be filled by resolution of *Council* for the balance of that member's term. The Audit Committee may continue to operate and conduct business until vacancies are filled provided that the quorum requirement is met.

(7) When an appointment is made to fill a public member vacancy pursuant to subsection (6):

(a) if the balance of the term to be served is one year or less, that service shall not count toward the limit on the length of service set out in subsection (4); and

(b) if the balance of the term to be served is more than one year, that service shall count toward the limit on the length of service set out in subsection (4).

(8) Despite subsection (4), a public member may serve more than six consecutive years if authorized by a two-thirds vote of *Council*.

(9) The term of a public member who was appointed prior to the coming into force of this Bylaw continues until it expires in accordance with *Council's* resolution appointing that member.

CONTINUING EDUCATION

8. (1) The Chair may authorize members of the Audit Committee to have the opportunity to obtain education, either from *The City, the City Auditor, the External Auditor* or through outside programs, to address identified gaps in knowledge, to further support the mandate of the Audit Committee.

(2) Funding to support appropriate education for Audit Committee members may be included in the Audit Committee's budget.

MEETINGS AND ATTENDANCE

9. (1) The Audit Committee must meet not less than six times per year.

(2) Only members of the Audit Committee are entitled to vote.

(3) The following individuals, or their designates, must attend all Audit Committee meetings:

(a) the *Chief Financial Officer*;

(b) the *City Auditor*;

(c) the *External Auditor*; and

(d) the Executive Advisor

QUORUM

10. (1) The quorum of the Audit Committee is four members, including a minimum of one public member **and must include either the Chair or Vice-Chair**.

(2) A member participating remotely is deemed to be present at the meeting and counts towards the quorum.

APPOINTMENT OF CHAIR AND VICE-CHAIR

11. (1) The Chair and Vice-Chair are appointed by *Council* **annually** at the *Organizational Meeting*.

(2) The Chair and Vice-Chair must be members of *Council*.

EXTERNAL AUDITOR

12. The functions of the *External Auditor* are more fully set out in Schedule “B”.

CITY AUDITOR

13. The functions of the *City Auditor* are more fully set out in Schedule “C”.

EXECUTIVE ADVISOR

14. (1) The Executive Advisor reports to the Audit Committee through the Chair.

(2) The Executive Advisor will provide reporting, research, planning, documentation, **legislative** and meeting logistical support to the Audit Committee.

REPEAL COMING INTO FORCE

15. Bylaw 48M2012 is hereby repealed.

COMING INTO FORCE

16. This Bylaw comes into force on 26 October 2020.

SCHEDULE "A"

1. REGARDING THE PURPOSE AND ROLE OF AUDIT COMMITTEE

The Audit Committee:

(a) oversees, reviews and assesses the relationships between the *Administration*, the *City Auditor* and *External Auditor*;

(b) **annually** assesses the performance of the *External Auditor* and the *City Auditor* and forwards the performance assessments to *Council* for information;

(b.1) through the Chair, annually assesses the performance of the City Auditor and forwards the performance assessment to Council for information;

(c) assesses the performance of the Executive Advisor through the Audit Committee Chair;

(d) ~~**oversees its governance responsibility with audit committees of *The City's* major autonomous civic entities, as determined by the Audit Committee**~~**; may invite the Civic Partners to provide a report and presentation on their governance, financial insights, risk management practices and other matters as determined by the Audit Committee and recommend to Council any actions within City authority that are deemed appropriate;**

(e) develops a detailed annual work plan which is forwarded to *Council* for information;

(f) develops an annual budget for the Audit Committee and recommends it to *Council* for approval, as part of *The City's* ~~annual~~ budget process;

(g) must review its terms of reference and mandate as set out in this Bylaw and as they may impact the City Auditor Bylaw 30M2004, at least every three years and recommend any changes to *Council;* and

(h) must perform an annual self-assessment on the performance of the Audit Committee.

2. REGARDING THE CITY'S FINANCIAL DISCLOSURE AND ACCOUNTING PRACTICES

The Audit Committee:

(a) reviews and oversees the integrity of the annual financial statements and recommends their approval to *Council*;

(b) reviews and discusses *The City's* compliance with financial reporting, policies and procedures with *Administration* and the *External Auditor*;

(c) engages *Administration* and the *External Auditor* in candid discussions regarding issues that may alter judgment or affect the quality of the reporting process and search for insight into the results;

(d) in consultation with the *Chief Financial Officer* and *External Auditor*, review and discuss significant new accounting standards and financial reporting developments to understand any material impact on financial results. A detailed analysis, prepared by *Administration*, on the implications of any changes, as well as the progress made in the adoption of new accounting standards, may be requested; and

(e) maintains open lines of communication with the *External Auditor* and *Administration*.

3. REGARDING SPECIAL AUDITS, PROGRAM REVIEWS OR SPECIAL STUDIES

The Audit Committee:

(a) oversees and approves special audits, program reviews or special studies be conducted either by the Audit Committee or by the *City Auditor's* Office. If required, budget funds will be provided by the Audit Committee to the *City Auditor's* Office; and

(b) reviews the results of special audits, program reviews or special studies, together with responses, and forwards to *Council* for information.

4. REGARDING INTERNAL CONTROL AND RISK

The Audit Committee:

(a) ~~**oversees the integrity of *The City's* internal controls**~~**; gains and maintains assurance that *Administration* has established processes to identify, analyze, and mitigate risk, and has established associated internal controls;**

(b) ~~**oversees *The City's* process of risk identification, analysis and management procedures to mitigate risk; and**~~ **reviews reports from *Administration* concerning *The City's* internal control systems, including technology, security, climate, and financial controls;**

(c) ~~**oversees, through the *City Auditor's* Office, the operation of *Council* Policy CC025, Whistle-Blower Policy**~~**. gains and maintains assurance that the *City Auditor* has established processes to support the operation of Council Policy CP2022-06, Whistle-Blower Policy; and**

(d) reviews the adequacy and effectiveness of the Code of Conduct Program.

SCHEDULE "B"

1. REGARDING THE EXTERNAL AUDITOR

The Audit Committee:

(a) prior to the commencement of the annual external financial audit, reviews the audit plan and estimated audit fees with the *External Auditor* and discusses the timing and extent of audit procedures, materiality, significant audit risks and areas of audit focus and overall audit strategy. **The *External Auditor's* preliminary base audit fee estimates based on information available at the time of the *External Auditor's* audit plan mailout and subject to change based on the full scoping of and progression of work on the audits for *The City's* government business enterprise, related authorities and the ancillary audits are to be included in *The City's* audit plan for information purposes only.** The audit plan is forwarded to Council for information;

(b) in conjunction with *Administration's* presentation of the annual financial statements, receives and reviews the *External Auditor's* year end audit results report. This report is to be forwarded to *Council* for information;

(c) requires the *External Auditor* to express an opinion on *The City's* financial statements, in accordance with professional standards;

(d) receives and reviews the *External Auditor's* management letter(s), and reviews *Administration* responses, and forwards, either in full or in summary, to *Council* for information. Through query, confirm that any recommendations made by the *External Auditor* are addressed by *Administration* in a timely manner;

(e) must *meet* with the *External Auditor*, in the absence of *Administration*, at least quarterly;

(f) annually *assesses* the performance of the *External Auditor*, following the presentation of the *External Auditor's* current management letter and forwards this assessment to *Council* for information;

(g) must meet at least annually with *Administration*, in the absence of the *External Auditor*, at the time of the *External Auditor* performance assessment; and

(h) receives and reviews the *External Auditor's* annual independence letter. Through query, confirm the process by which the *External Auditor* maintains their independence and objectivity.

2. Unless otherwise determined by *Council* the *External Auditor* contract is awarded on a five-year basis, subject to satisfactory annual assessments. The contract may be extended annually beyond five years, based on Audit Committee's recommendation for *Council's* approval.

SCHEDULE "C"

1. REGARDING THE CITY AUDITOR

The Audit Committee:

(a) in accordance with Bylaw 30M2004, oversees and ensures the authority, accountability, independence and objectivity of the *City Auditor* on behalf of *Council*;

(b) reviews the City Auditor's Office audit plan and budget with the *City Auditor* and discusses the scheduling, resourcing, risk areas, coverage and overall audit strategy **and makes a recommendation to Council on the City Auditor's Office budget;**

(c) ensures that *City Auditor's* Office undergoes an independent assessment review and confirms professional standards at least every five years;

(d) ~~assesses annually~~**, through the Chair, annually assesses** the performance of the *City Auditor*, by way of a formal review process through the Audit Committee Chair and forwards this performance assessment to *Council* for information;

(e) reviews and forwards to *Council* for information, the *City Auditor's* Office quarterly and annual status reports which includes activity of the Whistle-blower Program;

(f) receives directly from the *City Auditor* any individual audit report, including as applicable, *Administration's* response and corrective action to be taken to specific audit recommendations, and forwards these to *Council* for information;

(g) receives directly from the *City Auditor*, at least annually, a report providing the status of *Administration* action on the recommendations contained in previous audit reports; this report will be forwarded to *Council* for information; and

(h) ensures that the Audit Committee work plan includes regular closed meeting discussions between Audit Committee and the *City Auditor* no less than quarterly.

BYLAW NUMBER 33M2020

BEING A BYLAW OF THE CITY OF CALGARY TO CONTINUE THE AUDIT COMMITTEE

* *

WHEREAS Council has approved AC2020-0753 and considers it desirable to enact a bylaw continuing the Audit Committee for The City of Calgary;

NOW, THEREFORE, THE COUNCIL OF THE CITY OF CALGARY ENACTS AS FOLLOWS:

SHORT TITLE

1. This Bylaw may be cited as the "Audit Committee Bylaw".

DEFINITIONS

2. (1) In this Bylaw,

(a) "*Administration*" means the administration of *The City*;

(b) "*Chief Financial Officer*" means the member of *Administration* holding the position of Chief Financial Officer;

(c) "*City Auditor*" means the individual appointed by *Council* to the designated officer position of City Auditor pursuant to Bylaw 30M2004;

(d) "*City Manager*" means the individual appointed by *Council* as its chief administrative officer pursuant to Bylaw 8M2001;

(e) "*Council*" means the municipal council of *The City*;

(f) "*External Auditor*" means the person or firm appointed by *Council* to be *The City's* external auditor;

(g) "*Organizational Meeting*" means the annual organization meeting of Council pursuant to section 192(1) of the *Municipal Government Act*, R.S.A. 2000, c. M-26;

(h) "*The City*" means the municipal corporation of The City of Calgary.

(2) All schedules attached to this Bylaw form part of the Bylaw.

(3) Where this Bylaw refers to any statute, regulation or bylaw, the reference is to the statute, regulation or bylaw as amended, whether amended before or after the commencement of this Bylaw, and includes reference to any statute, regulation or bylaw that may be substituted in its place.

CONTINUATION OF AUDIT COMMITTEE

3. The Audit Committee established by resolution of *Council* on 1979 November 19 is hereby continued.

MANDATE OF AUDIT COMMITEE

4. (1) The mandate of the Audit Committee is to:

(a) assist *Council* in fulfilling its oversight and stewardship responsibilities by gaining and maintaining reasonable assurance in relation to:

(i) the integrity of *The City's* annual financial statements;

(ii) effective governance, risk management and compliance, including the evaluation of the performance of control systems and processes;

(iii) the qualifications, independence, and effectiveness of the *External Auditor* and the *City Auditor*;

(iv) the utilization of a confidential and independent Whistle-blower Program; and

(v) additional matters described herein or as may be assigned to the Audit Committee by *Council*.

(b) support *Council's* effective decision-making by being involved in a broader governance role through oversight and responsibilities as indicated in Schedules "A", "B" and "C" of this Bylaw.

(2) The Audit Committee reports to *Council*.

AUTHORITY OF AUDIT COMMITTEE

5. The Audit Committee is authorized to:

(a) assign the setting of Audit Committee meeting agendas to the Chair;

(b) institute special audits, program reviews, and special studies, including the standing authority to retain expertise through external consultants;

(c) request reports from the *City Manager* and *Chief Financial Officer* regarding:

(i) matters that have a material or significant financial impact to *The City*; and

(ii) *The City's* Integrated Risk Management and corporate risks, at least twice a year;

(d) receive reports from *Administration* and civic entities in support of fulfilling the Audit Committee work plan and to recommend to *Council* any actions deemed appropriate;

(e) recommend the appointment of the *External Auditor* to *Council* for approval;

(f) pre-approve all audit and non-audit services performed by the *External Auditor* and further provide that:

(i) the Chair can pre-approve additional audit or non-audit services, performed by the *External Auditor*, up to $50,000 total annually and must report those approvals to the Audit Committee; and

(ii) on an annual basis, total fees for non-audit services performed by the *External Auditor* shall not exceed the total audit fees approved for The City of Calgary consolidated audit, including all subsidiary and related entity audits;

(g) recommend the appointment of the *City Auditor* to *Council* for approval;

(h) approve the *City Auditor's* Office audit plan and forwards to *Council* for information; the Audit Committee or *Council* may not remove items from the *City Auditor's* audit plan but may direct items be added to the plan;

(i) recommend *Council* approval of the *City Auditor's* Office budget, annually or as required by *Council* budget guidelines;

(j) appoint an individual to the position of Executive Advisor to provide support to the Audit Committee;

(k) approve any changes to the Executive Advisor's position description;

(l) approve the *City Auditor's* and Executive Advisor's personal expense reports, or other expenditures as required, through the Chair;

(m) establish sub-committees as required.

COMPOSITION

6. (1) The Audit Committee is composed of the following:

(a) four members of *Council;* and

(b) three public members that reside in Alberta and are not employed by *The City*

to be appointed at the *Organizational Meeting*.

(2) The Mayor is an ex-officio member of the Audit Committee.

(3) Public members must be financially literate possessing a set of skills, experience and knowledge of financial matters that support informed and effective decisions.

(4) The Audit Committee identifies preferred skills for new public members, pursuant to *Council* policy CP2016-03.

TERMS OF APPOINTMENT

7. (1) Members of *Council* are appointed:

(a) for a one-year term commencing on the date of the 2020 *Organizational Meeting;* and

(b) for two-year terms commencing on the date of the 2021 *Organizational Meeting*.

(2) Council *member* appointments expire on the date of the *Organizational Meeting* in the year of the expiry of the member's term.

(3) Public members are appointed for two-year terms commencing on the date of the *Organizational Meeting* and expiring on the date of the *Organizational Meeting* in the year of the expiry of the member's term.

(4) Public members may serve a maximum of six consecutive years.

(5) Despite subsection (3), a public member may serve until his or her successor is appointed. The service of a public member beyond the appointed term shall not count toward the limit on the length of service as set out in subsection (4) if the additional service is one year or less.

(6) Vacancies on the Audit Committee caused by retirement, resignation or incapacitation of a member may be filled by resolution of *Council* for the balance of that member's term. The Audit Committee may continue to operate and conduct business until vacancies are filled provided that the quorum requirement is met.

(7) When an appointment is made to fill a public member vacancy pursuant to subsection (6):

(a) if the balance of the term to be served is one year or less, that service shall not count toward the limit on the length of service set out in subsection (4); and

(b) if the balance of the term to be served is more than one year, that service shall count toward the limit on the length of service set out in subsection (4).

(8) Despite subsection (4), a public member may serve more than six consecutive years if authorized by a two-thirds vote of *Council*.

(9) The term of a public member who was appointed prior to the coming into force of this Bylaw continues until it expires in accordance with *Council's* resolution appointing that member.

CONTINUING EDUCATION

8. (1) The Chair may authorize members of the Audit Committee to have the opportunity to obtain education, either from *The City, the City Auditor, the External Auditor* or through outside programs, to address identified gaps in knowledge, to further support the mandate of the Audit Committee.

(2) Funding to support appropriate education for Audit Committee members may be included in the Audit Committee's budget.

MEETINGS AND ATTENDANCE

9. (1) The Audit Committee must meet not less than six times per year.

(2) Only members of the Audit Committee are entitled to vote.

(3) The following individuals, or their designates, must attend all Audit Committee meetings:

(a) the *Chief Financial Officer*;

(b) the *City Auditor*;

(c) the *External Auditor*; and

(d) the Executive Advisor

QUORUM

10. (1) The quorum of the Audit Committee is four members, including a minimum of one public member.

(2) A member participating remotely is deemed to be present at the meeting and counts towards the quorum.

APPOINTMENT OF CHAIR AND VICE-CHAIR

11. (1) The Chair and Vice-Chair are appointed by *Council* at the *Organizational Meeting*.

(2) The Chair and Vice-Chair must be members of *Council*.

EXTERNAL AUDITOR

12. The functions of the *External Auditor* are more fully set out in Schedule "B".

CITY AUDITOR

13. The functions of the *City Auditor* are more fully set out in Schedule "C".

EXECUTIVE ADVISOR

14. (1) The Executive Advisor reports to the Audit Committee through the Chair.

    (2) The Executive Advisor will provide reporting, research, planning, documentation and meeting logistical support to the Audit Committee.

REPEAL COMING INTO FORCE

15. Bylaw 48M2012 is hereby repealed.

COMING INTO FORCE

16. This Bylaw comes into force on 26 October 2020.

READ A FIRST TIME ON SEPTEMBER 15, 2020

READ A SECOND TIME, AS AMENDED, ON SEPTEMBER 15, 2020

READ A THIRD TIME, AS AMENDED, ON SEPTEMBER 15, 2020

MAYOR
SIGNED ON SEPTEMBER 21, 2020

ACTING CITY CLERK
SIGNED ON SEPTEMBER 21, 2020

BYLAW NUMBER 33M2020

SCHEDULE "A"

1. REGARDING THE PURPOSE AND ROLE OF AUDIT COMMITTEE

The Audit Committee:

(a) oversees, reviews and assesses the relationships between the *Administration*, the *City Auditor* and *External Auditor*;

(b) assesses the performance of the *External Auditor* and the *City Auditor* and forwards the performance assessments to *Council* for information;

(c) assesses the performance of the Executive Advisor through the Audit Committee Chair;

(d) oversees its governance responsibility with audit committees of *The City's* major autonomous civic entities, as determined by the Audit Committee;

(e) develops a detailed annual work plan which is forwarded to *Council* for information;

(f) develops an annual budget for the Audit Committee and recommends it to *Council* for approval, as part of *The City's* annual budget process;

(g) must review its terms of reference and mandate as set out in this Bylaw and as they may impact the City Auditor Bylaw 30M2004, at least every three years and recommend any changes to *Council;* and

(h) must perform an annual self-assessment on the performance of the Audit Committee.

2. REGARDING THE CITY'S FINANCIAL DISCLOSURE AND ACCOUNTING PRACTICES

The Audit Committee:

(a) reviews and oversees the integrity of the annual financial statements and recommends their approval to *Council*;

(b) reviews and discusses *The City's* compliance with financial reporting, policies and procedures with *Administration* and the *External Auditor*;

(c) engages *Administration* and the *External Auditor* in candid discussions regarding issues that may alter judgment or affect the quality of the reporting process and search for insight into the results;

(d) in consultation with the *Chief Financial Officer* and *External Auditor*, review and discuss significant new accounting standards and financial reporting developments to understand any material impact on financial results. A detailed analysis, prepared by *Administration*, on the implications of any changes, as well as the progress made in the adoption of new accounting standards, may be requested; and

(e) maintains open lines of communication with the *External Auditor* and *Administration*.

(f) must meet with the *Chief Financial Officer*, in the absence of the *External Auditor*, at least quarterly.

3. REGARDING SPECIAL AUDITS, PROGRAM REVIEWS OR SPECIAL STUDIES

The Audit Committee:

(a) oversees and approves special audits, program reviews or special studies be conducted either by the Audit Committee or by the *City Auditor's* Office. If required, budget funds will be provided by the Audit Committee to the *City Auditor's* Office; and

(b) reviews the results of special audits, program reviews or special studies, together with responses, and forwards to *Council* for information.

4. REGARDING INTERNAL CONTROL AND RISK

The Audit Committee:

(a) oversees the integrity of *The City's* internal controls;

(b) oversees *The City's* process of risk identification, analysis and management procedures to mitigate risk; and

(c) oversees, through the *City Auditor's* Office, the operation of *Council* Policy CC025, Whistle-Blower Policy.

BYLAW NUMBER 33M2020

SCHEDULE "B"

1. REGARDING THE EXTERNAL AUDITOR

The Audit Committee:

(a) prior to the commencement of the annual external financial audit, reviews the audit plan and estimated audit fees with the *External Auditor* and discusses the timing and extent of audit procedures, materiality, significant audit risks and areas of audit focus and overall audit strategy. The audit plan is forwarded to *Council* for information;

(b) in conjunction with *Administration's* presentation of the annual financial statements, receives and reviews the *External Auditor's* year end audit results report. This report is to be forwarded to *Council* for information;

(c) requires the *External Auditor* to express an opinion on *The City's* financial statements, in accordance with professional standards;

(d) receives and reviews the *External Auditor's* management letter(s), and reviews *Administration* responses, and forwards, either in full or in summary, to *Council* for information. Through query, confirm that any recommendations made by the *External Auditor* are addressed by *Administration* in a timely manner;

(e) must *meet* with the *External Auditor*, in the absence of *Administration*, at least quarterly;

(f) annually *assesses* the performance of the *External Auditor*, following the presentation of the *External Auditor's* current management letter and forwards this assessment to *Council* for information;

(g) must meet at least annually with *Administration*, in the absence of the *External Auditor*, at the time of the *External Auditor* performance assessment; and

(h) receives and reviews the *External Auditor's* annual independence letter. Through query, confirm the process by which the *External Auditor* maintains their independence and objectivity.

2. Unless otherwise determined by *Council* the *External Auditor* contract is awarded on a five-year basis, subject to satisfactory annual assessments. The contract may be extended annually beyond five years, based on Audit Committee's recommendation for *Council's* approval.

BYLAW NUMBER 33M2020

SCHEDULE "C"

1. REGARDING THE CITY AUDITOR

The Audit Committee:

(a) in accordance with Bylaw 30M2004, oversees and ensures the authority, accountability, independence and objectivity of the *City Auditor* on behalf of *Council*;

(b) reviews the City Auditor's Office audit plan and budget with the *City Auditor* and discusses the scheduling, resourcing, risk areas, coverage and overall audit strategy;

(c) ensures that *City Auditor's* Office undergoes an independent assessment review and confirms professional standards at least every five years;

(d) assesses annually, the performance of the *City Auditor*, by way of a formal review process through the Audit Committee Chair and forwards this performance assessment to *Council* for information;

(e) reviews and forwards to *Council* for information, the *City Auditor's* Office quarterly and annual status reports which includes activity of the Whistle-blower Program;

(f) receives directly from the *City Auditor* any individual audit report, including as applicable, *Administration's* response and corrective action to be taken to specific audit recommendations, and forwards these to *Council* for information;

(g) receives directly from the *City Auditor*, at least annually, a report providing the status of *Administration* action on the recommendations contained in previous audit reports; this report will be forwarded to *Council* for information; and

(h) ensures that the Audit Committee work plan includes regular closed meeting discussions between Audit Committee and the *City Auditor* no less than quarterly.

Proposed Wording for a Bylaw to Amend Bylaw 30M2004, the City Auditor Bylaw

1. Bylaw 30M2004, the City Auditor Bylaw, as amended, is hereby further amended.

2. Section 5 is deleted and replaced with the following:

   "5. The City Auditor is accountable to Council and reports to Council through Audit Committee. Supervision of the City Auditor is provided by the Chair of Audit Committee. The Chair of Audit Committee facilitates two-way communication of information on emerging risks, controls and governance between the City Auditor and Council members.".

3. Section 7 is deleted and replaced with the following:

   "7. (1) The City Auditor's primary mandate is to audit any area of City operations reporting to the Chief Administrative Officer.

   (2) The City Auditor may also conduct audits of any entity that receives any type of benefit from The City, whether financial, assets, or in-kind, if there is the legal authority to conduct an audit, and if there are no other providers of assurance."

4. In **SCHEDULE "A"**:

   (a) section 1 is deleted and replaced with the following:

   "**1. MANDATE**

   The City Auditor will:

   (a) assist Council, through the Audit Committee, in its oversight of the Chief Administrative Officer's administration and accountability for stewardship over public funds and achievement of value for money in City operations; and

   (b) provide independent and objective assurance, advisory and investigative services to add value to The City of Calgary and enhance public trust.

   For clarity, the City Auditor does not have a mandate to audit Council decisions.".

   (b) subsection 2(a) is deleted and replaced with the following:

   "(a) conduct all audit and advisory services through adherence to The Institute of Internal Auditors' Global Internal Audit Standards;";

(c) in subsection 2(e), the "." is deleted and replaced with "; and";

(d) the following is added after subsection 2(3) as subsection 2(f):

"(f) conform to relevant laws and regulations that are applicable to The City of Calgary."

(e) in subsection 3(b), the "." is deleted and replaced with "; and";

(f) the following is added after subsection 3(b) as subsection 3(c):

"(c) deliver data analytics assurance projects, which will assess risk and controls through the use of data analytics to complement, support and extend activities in 3(a). Projects may include continuous auditing (ongoing assessment of risk, controls and policy compliance against rules and risk thresholds) along with other data driven exposures of specific risks. Data analytics priorities will be presented to Audit Committee on an annual basis.".

(d) in subsection 5(c), "Council Whistle-blower Policy CC026" is deleted and replaced with "the Whistle-blower Policy (Council Policy CP2022-06)";

and

(e) in subsection 6(c):

(i) the period is deleted from the end of the sentence and replaced with "and;"

and

(ii) the following is added after subsection 6(c) as subsection 6(d):

"(d) be responsible for the development, implementation, and maintenance of a quality assurance program, and report on the results of the program to Audit Committee.".

12. This Bylaw comes into force on the day it is passed.

CITY AUDITOR BYLAW 30M2004 PROPOSED AMENDMENTS AND RATIONALE			
Page #, Schedule and Section	**Current State of Bylaw**	**Proposed Amendments (Bolded)**	**Comments / Rationale**
Page 1 Section 5	5. The City Auditor shall be subject to the supervision of and accountable to Council and report to Council through Audit Committee.	Delete Section 5 and replace with following: **5. The City Auditor is accountable to Council and reports to Council through Audit Committee. Supervision of the City Auditor is provided by the Chair of Audit Committee. The Chair of Audit Committee facilitates two-way communication of information on emerging risks, controls and governance between the City Auditor and Council members.**	Reporting lines Proposed amendment provides greater clarity regarding reporting lines.
Page 1 Section 7	7. The City Auditor's mandate is to audit: (a) any area of City operations reporting to the City Manager; (b) any entity that receives any type of benefit from The City, whether financial, assets or in-kind, or (c) any entity that The City owns, in whole or in part; where The City has the legal authority to conduct an audit.	Delete Section 7(a), (b), (c) and replace with following: **7. (1) The City Auditor's primary mandate is to audit any area of City operations reporting to the Chief Administrative Officer.** **(2) The City Auditor may also conduct audits of any entity that receives any type of benefit from The City, whether financial, assets, or in-kind, if there is the legal authority to conduct an audit, and if there are no other providers of assurance.**	Mandate and scope of work Proposed amendment provides greater clarity regarding the City Auditor's mandate and scope of work. This is the main focus of the City Auditor's mandate.

Page 4 Schedule 'A' Section 1 <u>Mandate</u>	The City Auditor will: (a) assist Council, through the Audit Committee, in its oversight of the Chief Administrative Officer's administration and accountability for stewardship over public funds and achievement of value for money in City operations; and (b) provide independent and objective assurance, advisory and investigative services to add value to The City of Calgary and enhance public trust.	Delete Section 1 and replace with following: **The City Auditor will:** **(a) assist Council, through the Audit Committee, in its oversight of the Chief Administrative Officer's administration and accountability for stewardship over public funds and achievement of value for money in City operations; and** **(b) provide independent and objective assurance, advisory and investigative services to add value to The City of Calgary and enhance public trust.** **For clarity, the City Auditor does not have a mandate to audit Council decisions.**	<u>Mandate</u> Proposed amendment provides greater clarity regarding the City Auditor's mandate and scope of work.
Page 4 Schedule 'A' Section 2(a) <u>Professionalism and Independence</u>	The City Auditor and any staff reporting to the City Auditor will: (a) conduct all audit and advisory services through adherence to The Institute of Internal Auditors' mandatory guidance including the Core Principles for the Professional Practice of Internal Auditing, the Definition of Internal Auditing, the Code of Ethics, and the International Standards for the Processional Practice of Internal Auditing (Standards);	Delete Section 2(a) and replace with following: The City Auditor and any staff reporting to the City Auditor will: **(a) conduct all audit and advisory services through adherence to The Institute of Internal Auditors' Global Internal Audit Standards.**	<u>Conform to IIA Global Internal Audit. Standards</u> Proposed amendment reflects updates made to the Institute of Internal Auditors' professional standards, to which the City Auditor's Office conforms.

Page 4 Schedule 'A' Section 2(f) <u>Professionalism and Independence</u>	The City Auditor and any staff reporting to the City Auditor will: (a) conduct all audit and advisory services through adherence to The Institute of Internal Auditors' mandatory guidance including the Core Principles for the Professional Practice of Internal Auditing, the Definition of Internal Auditing, the Code of Ethics, and the International Standards for the Processional Practice of Internal Auditing (Standards); (b) conduct all investigative services through adherence to Association of Certified Fraud Examiner's Code of Professional Standards. These standards of professional conduct will be adhered to as they pertain to integrity and objectivity, professional compliance, due professional care, communication and confidentiality; (c) remain free from interference by any element in the organization in the conduct of assurance, advisory and investigative services to permit maintenance of a necessary independent and objective mental attitude; (d) have no direct operational responsibility or authority over any of the activities audited. Accordingly, they will not implement internal controls, develop procedures, install systems, prepare records, or engage in any other activity that may impair their judgement; and (e) exhibit the highest level of professional objectivity in gathering, evaluating, and communicating results. They will make a balanced assessment of all the relevant circumstances and not be unduly influenced by their own interests or by others in forming judgements.	Add a new Section 2(f) as follows: **(f) conform to relevant laws and regulations that are applicable to The City of Calgary.**	<u>Conform to IIA Global Internal Audit. Standards</u> Proposed amendment reflects updates made to the Institute of Internal Auditors' professional standards, to which the City Auditor's Office has an explicit requirement to conform.

Page 5 Schedule 'A' Section 3 <u>Assurance Services</u>	The City Auditor will: (a) utilize a risk-based approach, and communicate audit assurance activities to Audit Committee for approval through the development of an annual audit plan, which, without limiting the scope of the foregoing, includes: (i) <u>Compliance Audits</u> Review the systems established to ensure compliance with policies, plans, procedures, ethical and business norms, as well as laws, regulations, and contracts which can have a significant impact on operations and reports and determining whether the organization is in compliance. (ii) <u>IT Audits</u> Review and evaluation of automated information processing systems, related non-automated processes and the interfaces among them to ensure business risks are minimized appropriately. (iii) <u>Operational Audits</u> Utilizing a risk-based approach, review operations, services, processes and/or systems to determine whether they are effective and implemented as planned to achieve their objectives. This type of audit may include assessing the efficiency with which resources are utilized.	Add a new Section 3(c) as follows: **(c) deliver data analytics assurance projects, which will assess risk and controls through the use of data analytics to complement, support and extend activities in 3(a). Projects may include continuous auditing (ongoing assessment of risk, controls and policy compliance against rules and risk thresholds) along with other data driven exposures of specific risks. Data analytics priorities will be presented to Audit Committee on an annual basis.**	<u>Clarifying current practice</u> Proposed amendment articulates the practice of the City Auditor's Office to conduct data analytics projects to compliment and extend the assurance provided through audits. This amendment solidifies current practice.

	(iv) <u>Follow-up Audits</u> Review the effectiveness of the corrective action implemented in response to previous audit recommendations to ensure the underlying risk was mitigated as intended to support achievement of the objective. This type of audit is generally limited in scope, however, may identify efficiency opportunities resulting from operational changes and/or redundant control structures. (b) determine the appropriate methodologies, project scope, including utilization of data analytics to discharge the above, as well as considering the involvement and work performed by other assurance groups.		
Page 6 Schedule 'A' Section 5(c) <u>Investigative Services</u>	The City Auditor will: (a) ensure sufficient professional staffing and technology are employed to support the Whistle-blower Program including intake, assessment, investigation, reporting and corrective action recommendation processes; (b) ensure all activities of the Whistle-blower Program are confidential and shared only on a need-to-know basis or as necessary to conclude on the investigation and/or recommended corrective action; and (c) establish processes in compliance with Council Whistle-blower Policy CC026.	Amend Section 5(c) as follows: **(c)** establish processes in compliance with **Whistle-blower Policy (Council Policy CP2022-06).**	<u>Housekeeping amendment</u> Proposed amendment required to reflect the updated numbering of the Whistle-blower Council Policy.

Page 6 Schedule 'A' Section 6(d) Activity Report	The City Auditor will: (a) provide a quarterly report to Audit Committee that includes trending and achievement of City Auditor's performance measures as established to reflect effective delivery of the City Auditor's mandate, status of Administration action on the current recommended action plan commitments agreed upon in previous audit reports, and status of deliverables against the approved annual audit plan; (b) amend the annual audit plan as needed if the risk profile, on which the annual audit plan is based, significantly changes during any given year, by presenting proposed change to Audit Committee for approval; (c) provide an annual report to Audit Committee that provides a retrospective summary of highlights and achievements of the year, reflecting the assurance, advisory and investigation services provided.	Add a new Section 6(d) as follows: **(d) be responsible for the development, implementation, and maintenance of a quality assurance program, and report on the results of the program to Audit Committee.**	Conform to IIA Global Internal Audit. Standards Proposed amendment reflects updates made to the Institute of Internal Auditors' professional standards, to which the City Auditor's Office conforms.

OFFICE CONSOLIDATION

RED-LINE MARKUPS OF PROPOSED AMENDMENTS TO BYLAW 30M2004

**BEING A BYLAW OF THE CITY OF CALGARY
TO ESTABLISH
THE POSITION OF CITY AUDITOR**
*** ***

(Amended by 42M2004, 4M2014, 26M2016, 34M2020)

WHEREAS S. 210 of the *Municipal Government* Act ("the Act") allows Council to pass a bylaw establishing a designated officer position to carry out specified powers, duties and functions;

DELETED BY 34M2020, 2020 SEPTEMBER 21.

AND WHEREAS Council wishes to establish a position of City Auditor;

(4M2014, 2014 January 27)

NOW, THEREFORE, THE COUNCIL OF THE CITY OF CALGARY ENACTS AS FOLLOWS:

1. The designated officer position of City Auditor is hereby created, with the powers, duties and functions as specified in this Bylaw or any other bylaw making reference to the City Auditor.

2. Council may, by resolution, appoint a person for a term not exceeding five (5) years, to hold the position of City Auditor and specify the terms and conditions of such appointment.

3. The person appointed to the position of City Auditor is eligible for reappointment.

(34M2020, 2020 September 21)

4. The appointment of a person to the position of City Auditor may be made, suspended or revoked only if the majority of the whole Council vote to do so.

5. The City Auditor **is accountable to Council and reports to Council through Audit Committee. Supervision of the City Auditor is provided by the Chair of Audit Committee. The Chair of Audit Committee facilitates two-way communication of information on emerging risks, controls and governance between the City Auditor and Council members**.

6. DELETED BY 4M2014, 2014 JANUARY 27.

(42M2004, 2004 June 21)

7 (1) **The City Auditor's primary mandate is to audit any area of City operations reporting to the Chief Administrative Officer.**

7 (2) The City Auditor may also conduct audits of any entity that receives any type of benefit from The City, whether financial, assets, or in-kind, or any entity that The

City owns in part or in full, if there is the legal authority to conduct an audit, and if there are no other providers of assurance.

7.1 The City Auditor shall be provided with unrestricted access to all municipal personnel, records, property, policies, procedures, processes, systems and data necessary to support the work conducted by the City Auditor in delivery of assurance, advisory and investigative services.

(34M2020, 2020 September 21)

7.2 The City Auditor shall report the outcome of all audits to the Audit Committee (including Administration's response and corrective actions to be taken in regard to specific recommendations).

(34M2020, 2020 September 21)

7.3 The responsibilities of the City Auditor are more fully set out in Schedule "A".

(34M2020, 2020 September 21)

8. DELETED BY 4M2014, 2014 JANUARY 27.

9. The City Auditor shall have sole administrative authority and control over staff reporting to that position, including the establishment of management and salary structures and administrative policies. The hiring, evaluation, discipline and dismissal of staff is subject to any existing legislation, contracts or corporate employment guidelines.

(34M2020, 2020 September 21)

9.1 The City Auditor, through the Chief Administrative Officer, shall be provided enabling support services as required including:

(a) corporate security;

(b) facility management;

(c) financial support;

(d) human resource support;

(e) IT solutions and support;

(f) legal counsel and advisory;

(g) organizational health, safety and wellness;

(h) procurement and warehousing; and

(i) strategic marketing and communications.

(34M2020, 2020 September 21)

10. The City Auditor may retain consultants and make other expenditures as supported by the City Auditor's budget approved by Council.

(34M2020, 2020 September 21)

11. The City Auditor may further delegate powers, duties and functions to any person reporting directly or indirectly, to the City Auditor.

11.1 The City Auditor will review this Bylaw 30M2004 every three years (or more frequently if required), in conjunction with the Audit Committee's review of the Audit Committee Bylaw, and present any proposed changes to the Audit Committee and Council for approval.

(34M2020, 2020 September 21)

12. This Bylaw comes into force on the day it is passed.

READ A FIRST TIME THIS 17th DAY OF MAY, 2004.

READ A SECOND TIME THIS 17th DAY OF MAY, 2004.

READ A THIRD TIME THIS 17th DAY OF MAY, 2004.

(Sgd.) D. Bronconnier
MAYOR

(Sgd.) D. Garner
CITY CLERK

SCHEDULE "A"

CITY AUDITOR'S OFFICE STRUCTURES AND POLICIES

The City Auditor will ensure management structures and administration policies are sufficient to support:

1. MANDATE

The City Auditor will:

(a) assist Council, through the Audit Committee, in its oversight of the Chief Administrative Officer's administration and accountability for stewardship over public funds and achievement of value for money in City operations; and

(b) provide independent and objective assurance, advisory and investigative services to add value to The City of Calgary and enhance public trust.

For clarity, the City Auditor does not have a mandate to audit Council decisions.

2. PROFESSIONALISM AND INDEPENDENCE

The City Auditor and any staff reporting to the City Auditor will:

(a) conduct all audit and advisory services through adherence to The Institute of Internal Auditors' **Global Internal Audit Standards.** ~~mandatory guidance including the~~

(b) conduct all investigative services through adherence to Association of Certified Fraud Examiner's Code of Professional Standards. These standards of professional conduct will be adhered to as they pertain to integrity and objectivity, professional compliance, due professional care, communication and confidentiality;

(c) remain free from interference by any element in the organization in the conduct of assurance, advisory and investigative services to permit maintenance of a necessary independent and objective mental attitude;

(d) have no direct operational responsibility or authority over any of the activities audited. Accordingly, they will not implement internal controls, develop procedures, install systems, prepare records, or engage in any other activity that may impair their judgement; ~~and~~

(e) exhibit the highest level of professional objectivity in gathering, evaluating, and communicating results. They will make a balanced assessment of all the relevant circumstances and not be unduly influenced by their own interests or by others in forming judgements; and.

(f) **conform to relevant laws and regulations that are applicable to The City of**

Calgary.

. ASSURANCE SERVICES

The City Auditor will:

(a) utilize a risk-based approach, and communicate audit assurance activities to Audit Committee for approval through the development of an annual audit plan, which, without limiting the scope of the foregoing, includes:

(i) Compliance Audits

Review the systems established to ensure compliance with policies, plans, procedures, ethical and business norms, as well as laws, regulations, and contracts which can have a significant impact on operations and reports and determining whether the organization is in compliance.

(ii) IT Audits

Review and evaluation of automated information processing systems, related non-automated processes and the interfaces among them to ensure business risks are minimized appropriately.

(iii) Operational Audits

Utilizing a risk-based approach, review operations, services, processes and/or systems to determine whether they are effective and implemented as planned to achieve their objectives. This type of audit may include assessing the efficiency with which resources are utilized.

(iv) Follow-up Audits

Review the effectiveness of the corrective action implemented in response to previous audit recommendations to ensure the underlying risk was mitigated as intended to support achievement of the objective. This type of audit is generally limited in scope, however, may identify efficiency opportunities resulting from operational changes and/or redundant control structures.

(b) determine the appropriate methodologies, project scope, including utilization of data analytics to discharge the above, as well as considering the involvement and work performed by other assurance groups; **and**

(c) **deliver data analytics assurance projects, which will assess risk and controls through the use of data analytics to complement, support and extend activities in 3(a). Projects may include continuous auditing (ongoing assessment of risk, controls and policy compliance against rules and risk thresholds) along with other data driven exposures of specific risks. Data analytics priorities will be presented to Audit Committee on an annual basis.**

4. ADVISORY SERVICES

The City Auditor will:

(a) provide advisory services on an issue or project specific basis as requested by Administration which may include financial advisory, risk management, information technology systems security and control, data analytics and general management advisory services;

(b) ensure requests received from Administration will be resourced based on a risk assessment basis similar to the determination on audit assurance work;

(c) provide an independent view and insight on current, new or emerging risks and opportunities facing The City based on City Auditor's knowledge of best practice on risks, controls and governance frameworks;

(d) ensure advisory services work must not impede the City Auditor's ability to conduct objective audits at a future date;

(e) determine whether capacity exists to complete advisory requests against the priorities set on the approved audit plan; and

(f) determine the appropriate methodologies, project scope, including utilization of data analytics to discharge the above.

5. INVESTIGATIVE SERVICES

The City Auditor will:

(a) ensure sufficient professional staffing and technology are employed to support the Whistle-blower Program including intake, assessment, investigation, reporting and corrective action recommendation processes;

(b) ensure all activities of the Whistle-blower Program are confidential and shared only on a need-to-know basis or as necessary to conclude on the investigation and/or recommended corrective action; and

(c) establish processes in compliance with Whistle-blower Policy **(Council Policy CP2022-06)**.

6. ACTIVITY REPORT

The City Auditor will:

(a) provide a quarterly report to Audit Committee that includes trending and achievement of City Auditor's performance measures as established to reflect effective delivery of the City Auditor's mandate, status of Administration action on the current recommended action plan commitments agreed upon in previous audit reports, and status of deliverables against the approved annual audit plan;

(b) amend the annual audit plan as needed if the risk profile, on which the annual audit plan is based, significantly changes during any given year, by presenting proposed change to Audit Committee for approval;

(c) provide an annual report to Audit Committee that provides a retrospective summary of highlights and achievements of the year, reflecting the assurance, advisory and investigation services provided**; and**

(34M2020, 2020 September 21)

(d) **be responsible for the development, implementation, and maintenance of a quality assurance program, and report on the results of the program to Audit Committee**.

ISC: Unrestricted

OFFICE CONSOLIDATION

BYLAW NUMBER 30M2004

BEING A BYLAW OF THE CITY OF CALGARY TO ESTABLISH THE POSITION OF CITY AUDITOR

* *

(Amended by 42M2004, 4M2014, 26M2016, 34M2020)

WHEREAS S. 210 of the *Municipal Government* Act ("the Act") allows Council to pass a bylaw establishing a designated officer position to carry out specified powers, duties and functions;

DELETED BY 34M2020, 2020 SEPTEMBER 21.

AND WHEREAS Council wishes to establish a position of City Auditor;
(4M2014, 2014 January 27)

NOW, THEREFORE, THE COUNCIL OF THE CITY OF CALGARY ENACTS AS FOLLOWS:

1. The designated officer position of City Auditor is hereby created, with the powers, duties and functions as specified in this Bylaw or any other bylaw making reference to the City Auditor.

2. Council may, by resolution, appoint a person for a term not exceeding five (5) years, to hold the position of City Auditor and specify the terms and conditions of such appointment.

3. The person appointed to the position of City Auditor is eligible for reappointment.
(34M2020, 2020 September 21)

4. The appointment of a person to the position of City Auditor may be made, suspended or revoked only if the majority of the whole Council vote to do so.

5. The City Auditor shall be subject to the supervision of and accountable to Council and report to Council through Audit Committee.

6. DELETED BY 4M2014, 2014 JANUARY 27.
(42M2004, 2004 June 21)

7. The City Auditor's mandate is to audit:

   (a) any area of City operations reporting to the City Manager;

   (b) any entity that receives any type of benefit from The City, whether financial, assets or in-kind, or

   (c) any entity that The City owns, in whole or in part;

where The City has the legal authority to conduct an audit.

7.1 The City Auditor shall be provided with unrestricted access to all municipal personnel, records, property, policies, procedures, processes, systems and data necessary to support the work conducted by the City Auditor in delivery of assurance, advisory and investigative services.

(34M2020, 2020 September 21)

7.2 The City Auditor shall report the outcome of all audits to the Audit Committee (including Administration's response and corrective actions to be taken in regard to specific recommendations).

(34M2020, 2020 September 21)

7.3 The responsibilities of the City Auditor are more fully set out in Schedule "A".

(34M2020, 2020 September 21)

8. DELETED BY 4M2014, 2014 JANUARY 27.

9. The City Auditor shall have sole administrative authority and control over staff reporting to that position, including the establishment of management and salary structures and administrative policies. The hiring, evaluation, discipline and dismissal of staff is subject to any existing legislation, contracts or corporate employment guidelines.

(34M2020, 2020 September 21)

9.1 The City Auditor, through the City Manager, shall be provided enabling support services as required including:

(a) corporate security;

(b) facility management;

(c) financial support;

(d) human resource support;

(e) IT solutions and support;

(f) legal counsel and advisory;

(g) organizational health, safety and wellness;

(h) procurement and warehousing; and

(i) strategic marketing and communications.

(34M2020, 2020 September 21)

10. The City Auditor may retain consultants and make other expenditures as supported by the City Auditor's budget approved by Council.

(34M2020, 2020 September 21)

11. The City Auditor may further delegate powers, duties and functions to any person reporting directly or indirectly, to the City Auditor.

11.1 The City Auditor will review this Bylaw 30M2004 every three years (or more frequently if required), in conjunction with the Audit Committee's review of the Audit Committee Bylaw, and present any proposed changes to the Audit Committee and Council for approval.

(34M2020, 2020 September 21)

12. This Bylaw comes into force on the day it is passed.

READ A FIRST TIME THIS 17th DAY OF MAY, 2004.

READ A SECOND TIME THIS 17th DAY OF MAY, 2004.

READ A THIRD TIME THIS 17th DAY OF MAY, 2004.

(Sgd.) D. Bronconnier
MAYOR

(Sgd.) D. Garner
CITY CLERK

SCHEDULE "A"

CITY AUDITOR'S OFFICE STRUCTURES AND POLICIES

The City Auditor will ensure management structures and administration policies are sufficient to support:

1. MANDATE

The City Auditor will:

(a) assist Council, through the Audit Committee, in its oversight of the City Manager's administration and accountability for stewardship over public funds and achievement of value for money in City operations; and

(b) provide independent and objective assurance, advisory and investigative services to add value to The City of Calgary and enhance public trust.

2. PROFESSIONALISM AND INDEPENDENCE

The City Auditor and any staff reporting to the City Auditor will:

(a) conduct all audit and advisory services through adherence to The Institute of Internal Auditors' mandatory guidance including the Core Principles for the Professional Practice of Internal Auditing, the Definition of Internal Auditing, the Code of Ethics, and the International Standards for the Processional Practice of Internal Auditing (Standards);

(b) conduct all investigative services through adherence to Association of Certified Fraud Examiner's Code of Professional Standards. These standards of professional conduct will be adhered to as they pertain to integrity and objectivity, professional compliance, due professional care, communication and confidentiality;

(c) remain free from interference by any element in the organization in the conduct of assurance, advisory and investigative services to permit maintenance of a necessary independent and objective mental attitude;

(d) have no direct operational responsibility or authority over any of the activities audited. Accordingly, they will not implement internal controls, develop procedures, install systems, prepare records, or engage in any other activity that may impair their judgement; and

(e) exhibit the highest level of professional objectivity in gathering, evaluating, and communicating results. They will make a balanced assessment of all the relevant circumstances and not be unduly influenced by their own interests or by others in forming judgements.

3. ASSURANCE SERVICES

The City Auditor will:

(a) utilize a risk-based approach, and communicate audit assurance activities to Audit Committee for approval through the development of an annual audit plan, which, without limiting the scope of the foregoing, includes:

(i) <u>Compliance Audits</u>

Review the systems established to ensure compliance with policies, plans, procedures, ethical and business norms, as well as laws, regulations, and contracts which can have a significant impact on operations and reports and determining whether the organization is in compliance.

(ii) <u>IT Audits</u>

Review and evaluation of automated information processing systems, related non-automated processes and the interfaces among them to ensure business risks are minimized appropriately.

(iii) <u>Operational Audits</u>

Utilizing a risk-based approach, review operations, services, processes and/or systems to determine whether they are effective and implemented as planned to achieve their objectives. This type of audit may include assessing the efficiency with which resources are utilized.

(iv) <u>Follow-up Audits</u>

Review the effectiveness of the corrective action implemented in response to previous audit recommendations to ensure the underlying risk was mitigated as intended to support achievement of the objective. This type of audit is generally limited in scope, however, may identify efficiency opportunities resulting from operational changes and/or redundant control structures.

(b) determine the appropriate methodologies, project scope, including utilization of data analytics to discharge the above, as well as considering the involvement and work performed by other assurance groups.

4. ADVISORY SERVICES

The City Auditor will:

(a) provide advisory services on an issue or project specific basis as requested by Administration which may include financial advisory, risk management, information technology systems security and control, data analytics and general management advisory services;

(b) ensure requests received from Administration will be resourced based on a risk assessment basis similar to the determination on audit assurance work;

(c) provide an independent view and insight on current, new or emerging risks and opportunities facing The City based on City Auditor's knowledge of best practice on risks, controls and governance frameworks;

(d) ensure advisory services work must not impede the City Auditor's ability to conduct objective audits at a future date;

(e) determine whether capacity exists to complete advisory requests against the priorities set on the approved audit plan; and

(f) determine the appropriate methodologies, project scope, including utilization of data analytics to discharge the above.

5. INVESTIGATIVE SERVICES

The City Auditor will:

(a) ensure sufficient professional staffing and technology are employed to support the Whistle-blower Program including intake, assessment, investigation, reporting and corrective action recommendation processes;

(b) ensure all activities of the Whistle-blower Program are confidential and shared only on a need-to-know basis or as necessary to conclude on the investigation and/or recommended corrective action; and

(c) establish processes in compliance with Council Whistle-blower Policy CC026.

6. ACTIVITY REPORT

The City Auditor will:

(a) provide a quarterly report to Audit Committee that includes trending and achievement of City Auditor's performance measures as established to reflect effective delivery of the City Auditor's mandate, status of Administration action on the current recommended action plan commitments agreed upon in previous audit reports, and status of deliverables against the approved annual audit plan;

(b) amend the annual audit plan as needed if the risk profile, on which the annual audit plan is based, significantly changes during any given year, by presenting proposed change to Audit Committee for approval; and

(c) provide an annual report to Audit Committee that provides a retrospective summary of highlights and achievements of the year, reflecting the assurance, advisory and investigation services provided.

(34M2020, 2020 September 21)

Community Services Report to **ISC: UNRESTRICTED**
Audit Committee **AC2024-0282**
2024 June 13

2023 Civic Partner Audit Report

PURPOSE

As part of the accountability measures in place for The City's Civic Partners this report presents the results of an annual financial review that evaluates The City's exposure to third party risk based on Civic Partners' 2023 audited financial statements. It also provides an overview of their governance and risk management practices.

PREVIOUS COUNCIL DIRECTION

2023 accountability reporting for Civic Partners also includes the 2023 Civic Partner Annual Report (CD2024-0274) presented in 2023 May. The previous Civic Partner Audit Report was presented in 2023 June (AC2023-0414). Full details about previous Council direction are included in Attachment 1.

RECOMMENDATIONS:

That the Audit Committee recommend that Council:

1. Receive this report for the Corporate Record; and

2. Direct that Attachments 4, 5 and 6 through 32 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the *Freedom of Information and Protection of Privacy Act* (Alberta), to be reviewed 2027 October 22.

CHIEF ADMINISTRATIVE OFFICER/GENERAL MANAGER COMMENTS

General Manager Katie Black concurs with the content of this report.

HIGHLIGHTS

- The Civic Partner Audit Report is one component of a larger accountability framework that assesses the overall financial and organizational health of Civic Partners, as set out in Council's *Investing in Partnerships Policy (CPS2017-01)*. This report, combined with the Civic Partner Annual Report (CD2024-0274), provides a snapshot of organizational and financial health, governance and risk management practices and key results of Civic Partners in 2023.
- The City invests significant operating and capital funding in Civic Partners and many manage and operate significant and valuable City-owned assets. Annually reviewing the financial health, governance and risk management practices of Civic Partners reduces The City's exposure to third party risks that exist when partnering with external organizations.
- Based on 2023 audited financial statements, the majority of Civic Partners are rated as low risk. Administration is working with the Civic Partners that are rated as elevated and high risk to ensure that mitigation strategies are in place and provide support where appropriate.

Community Services Report to Audit Committee 2024 June 13

ISC: UNRESTRICTED AC2024-0282

2023 Civic Partner Audit Report

DISCUSSION

The City partners with external organizations to provide effective programs and services in targeted areas, develop and advance strategies, and construct, manage and operate City-owned assets. The City makes its most significant investment of operating grant funding in "Civic Partners", a category of partner defined in the *Investing in Partnerships Policy* based on the level of investment.

Through partnerships, The City and Calgarians benefits from partners' knowledge and expertise and their ability to leverage The City's investment to meet the community's diverse needs. In 2023, The City's invested over $138 million in operating grants including over $7 million in one-time funding in Civic Partners. The City also invested over $17 million in capital grants for lifecycle of City-owned assets managed and operated by these Partners and $7 million for one-time capital projects (Attachment 2).

Following Council direction, Administration has annually brought forward a Civic Partner Audit Report since 2013. This report is one part of a broader accountability framework in place to mitigate risks related to partnering. The annual financial review process evaluates The City's exposure to risk related to Civic Partners, assesses Civic Partners' overall financial health and provides an opportunity to work with partners to understand how they are managing risks that impact their financial health. The review process uses a tool with clearly established criteria and ratios to evaluate operating cash on hand, working capital/cash expenses, deficit level and reserves.

Based on established criteria, each Civic Partner is assigned a rating of either low, elevated or high risk (definitions are outlined in Attachment 3). Based on 2023 audited financials the majority of Civic Partners are financially stable with 24 rated as low risk, four Civic Partners and one wholly owned subsidiary of a Civic Partner rated as elevated risk and one rated as high risk. Ratings for all Civic Partners are included in Attachment 4. Administration works with Civic Partners that are rated as elevated or high risk to identify mitigation strategies that can improve the organization's financial health and reduce The City's exposure (Attachment 5).

In addition to their accountability to The City, each Civic Partner organization is governed by a board of directors, and accountable to their patrons, customers, members, partners, funders and others. The legal structures of Civic Partner organizations includes wholly-owned subsidiaries, legislated bodies and independent organizations. Each Civic Partner's relationship with The City is guided by the Partner's legal structure and any agreements in place.

Accountability processes, combined with strong governance practices, help ensure partners are sustainable and appropriately manage risk. Attachments 6 through 32 provide detailed, self-reported information about each Civic Partners' governance structures and practices, and risk management. All Civic Partners except two submitted 2023 templates. This year, each Civic Partner attachment includes a covering summary sheet prepared by Administration with governance and risk management highlights for each Civic Partner.

2023 Highlights

While risk management practices vary among Civic Partners, common practices include regular reviews of risks by senior leaders, board committees and board of directors, the use of tools and processes to monitor and manage risk including risk matrices and heat maps. The most commonly reported risks include:

- **Financial**
  Partners reported challenges managing the escalating costs of operations including the significant impact of rising inflation. This was coupled with risks related to accessing other sources of revenue including funding from other levels of government, lower than projected sales and attendance and challenges accessing corporate sponsorships.

- **Employee Recruitment and Retention**
  Given the specialized skills and experience required to support each Partner's operation, the loss of staff has a significant impact. To mitigate this risk, Partners focused on a total rewards approach, showcasing the full benefits of their workplace including work-life balance initiatives such as flexible work and hours and opportunities for career advancement and development.

- **Reputational**
  Partners frequently reported reputational risks that were mitigated by building and maintaining strong relationships with the community, funders, and key partners; building strong alliances to advance shared work with their partners and working with community to remain relevant and meeting Calgarians' changing needs.

  Attachments 6 through 32 of this report, combined with Attachments 4 through 23 of the Civic Partner Annual Report (CD2024-0274) support accountability for the significant annual investments The City makes in Civic Partners to help deliver results for Calgarians.

EXTERNAL ENGAGEMENT AND COMMUNICATION

☐ Public engagement was undertaken

☐ Public/interested parties were informed

☒ Dialogue with interested parties was undertaken

☐ Public communication or engagement was not required

As part of the review process, Administration communicates with each Civic Partner to inform them of their rating and discuss risk mitigation as required.

IMPLICATIONS

Social

Confirming Civic Partners have strong governance and risk management practices in place helps ensure they have the capacity required to deliver on their mandates including supporting implementation of the *Enough for All 2.0* poverty reduction strategy, The City's *Sport for Life Policy* and the *Cultural Plan for Calgary*, and providing valuable recreation, sport and cultural opportunities for Calgarians. Civic Partners also foster healthy physical and social environments, enrich the social fabric of Calgary and support a high quality of life by offering a diverse range of facilities and programs for Calgarians and visitors to enjoy.

Environmental

As part of managing risks related to City-owned assets, The City provides capital grant funding that Civic Partners match with other funding sources. As part of lifecycle maintenance work,

2023 Civic Partner Audit Report

Civic Partners continue to adjust their operational practices to reduce consumption of resources and their ecological footprint. They promote conservation, environmental stewardship and community sustainability strategies including public education and awareness related to public spaces and natural resources.

Economic

Strong governance and risk management practices help ensure Civic Partners have the capacity to deliver on mandates that contribute to economic development including supporting implementation of *Uplook: An Action Plan for our Economy* and related strategies including the *Enough for All* poverty reduction strategy, *Destination Strategy*, *Eventful City Strategy*, *Winter City Strategy, Living a Creative Life* and by operating cultural attractions and offering convention centre services.

Service and Financial Implications

Existing operating funding - base

$138,656,767

Base operating grant funding in 2023 supported Civic Partners to contribute to The City's delivery of nine services: Affordable Housing, Arts & Culture, City Planning & Policy, Community Strategies, Economic Development & Tourism, Library Services, Neighbourhood Supports, Parks & Open Spaces, and Recreation Opportunities. The Civic Partner Infrastructure Investment Grant program supports the maintenance and lifecycle required to support high-functioning City-owned assets managed and operated by partners.

RISK

The City's most significant risks related to partnering are the financial and reputational risks associated with circumstances where a third-party organization operating a City-owned facility defaults or ceases operations. In these cases, responsibility for the building's capital costs to ensure building safety for a new tenant or the public, may fall on The City. Depending on the circumstances, the operating costs of the facility may also be The City's responsibility and Calgarians would be negatively impacted by a loss or decrease in programs and/or services. Administration works closely with its Civic Partners to develop and implement strategies to mitigate risks and this report is a key tool for monitoring and reporting on risk.

ATTACHMENTS

1. Background and Previous Council Direction
2. Civic Partner Grant Funding 2021-2024
3. Definition of Rating Terms
4. Civic Partner 2023 Audit Ratings (Confidential)
5. Civic Partner Risk Mitigation Strategies (Confidential)
6. Aero Space Museum Association of Calgary (The Hangar Flight Museum) (Confidential)
7. Arts Commons (Confidential)
8. Calgary Arts Development Authority Ltd. (Confidential)
9. Calgary Convention Centre Authority (Calgary TELUS Convention Centre) (Confidential)
10. Calgary Economic Development Ltd. (Confidential)

2023 Civic Partner Audit Report

11. Calgary Female Sport Development Association (Great Plains Recreation Facility) (Confidential)
12. Calgary Public Library Board (Confidential)
13. Calgary Science Centre Society (TELUS Spark) (Confidential)
14. Calgary Sport Council Society (Sport Calgary) (Confidential)
15. Calgary Zoological Society (Calgary Zoo) (Confidential)
16. Contemporary Calgary Arts Society (Confidential)
17. Federation of Calgary Communities (Confidential)
18. Fort Calgary Preservation Society (The Confluence Historic Site and Parkland) (Confidential)
19. Heritage Calgary (Confidential)
20. Heritage Park Society (Confidential)
21. Lindsay Park Sports Society (MNP Community and Sport Centre) (Confidential)
22. NE Centre of Community Society (Genesis Centre) (Confidential)
23. Opportunity Calgary Investment Fund Ltd. (Confidential)
24. Parks Foundation, Calgary (Confidential)
25. Platform Calgary (Confidential)
26. Silvera for Seniors (Confidential)
27. South Fish Creek Recreation Association (Cardel Rec South) (Confidential)
28. The Calgary Young Men's Christian Association (YMCA) (Confidential)
29. Tourism Calgary-Convention and Visitors Bureau (Confidential)
30. Vecova Centre for Disability Services and Research (Confidential)
31. VCC Initiatives Ltd. (Vibrant Communities Calgary) (Confidential)
32. Vivo for Healthier Generations Society (Confidential)
33. Administration Presentation

Department Circulation

General Manager/Director	Department	Approve/Consult/Inform
Katie Black	Community Services	Approve
Carla Male	Corporate Planning and Financial Services	Inform

Author: Partnerships business unit

Background and Previous Council Direction

Background

This report is one aspect of a broader accountability program that summarizes the results of an annual financial review of Civic Partners and their wholly owned subsidiaries to evaluate The City's exposure to risk related to Civic Partners. The review process rates partners as low risk, elevated risk, or high risk; assesses the overall financial health of Civic Partner organizations; and provides an opportunity to work with partners as needed to improve their financial health.

Previous Council Direction

The following is a summary of previous Council direction related to the Civic Partner Audit Report.

DATE	REPORT NUMBER	DIRECTION/DESCRIPTION
2023 July 04	AC2023-0414	2022 Civic Partner Audit Report That the Audit Committee recommend that Council: 1. Receive this report for the Corporate Record; and 2. Direct that Attachments 3, 4 and 6 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the Freedom of Information and Protection of Privacy Act (Alberta), to be reviewed 2026 October 22.
2022 April 21	AC2022-0387	2021 Civic Partner Audit Report That the Audit Committee recommend that Council: 1. Receive this report for the Corporate Record; and 2. Direct that Attachments 3, 5 and 6 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the Freedom of Information and Protection of Privacy Act (Alberta), to be reviewed 2026 October 22.
2021 May 20	AC2021-0557	Civic Partner Audit Report 1. Receive this report for the Corporate Record; and 2. Direct that Attachments 3, 5 and 6 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the Freedom of Information and Protection of Privacy Act, to be reviewed 2026 October 22.

DATE	REPORT NUMBER	DIRECTION/DESCRIPTION
2020 October 20	AC2020-1049	Civic Partner Audit Report 1. Receive this report for the Corporate Record; and 2. Direct that Attachments 3, 5 and 6 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the Freedom of Information and Protection of Privacy Act, to be reviewed 2026 October 22.
2019 June 17	AC2019-0472	Civic Partner Audit Report That Audit Committee recommends that Council: 1. Receive this report for information; and 2. Direct that Attachments 2, 4 and 5 remain confidential under Sections 16, 23, and 24 of the Freedom of Information and Protection of Privacy Act until 2025 April 23.
2018 May 28	AC2018-0409	Civic Partner Audit Report That Council adopt recommendations contained in AC2018-0409 as follows 1. Receive this report for information; and 2. Direct that this report and Attachments 2, 4 and 5 remain confidential under Sections 23(1) (b), 24(1)(b), and 16(1) of the Freedom of Information and Protection of Privacy Act (Alberta) until such time as six years from this date.
2018 January 29	AC2017-1149	Status of Community Associations and Social Recreation Organizations on City Owned Land Attachment 6 of the report informed Council that five organizations would be moving to the Civic Partner Audit report starting with the 2017 financial year: The Calgary Young Men's Christian Association, North East Centre of Community Society (Genesis Centre), Nose Creek Sports and Recreation Association (Vivo), South Fish Creek Recreation Association (Cardel South), and Westside Regional Recreation Centre.
2017 May 18	AC2017-0367	Civic Partner Audit Report 1.Receive the report for information; and 2. Direct that the report and all attachments remain confidential pursuant to Sections 23(1)(b), 24(1)(b), and 16(1) of the Freedom of Information and Protection of Privacy Act (Alberta) until such time as six years from this date.

2012 July 19	AC2012-0493	Status of Third Party Organizations Operating Not-for-Profit Facilities on Land Owned by The City of Calgary Audit Committee approved that recommendations contained in AC2012-0493 be approved after amendment, as follows: Receive the report for information; Direct that Attachments 2 and 3 remain confidential under Sections 23(1)(b), 24(1)(a), 24 (1)(g) and 25 (b)(c)(ii) of the Freedom of Information and Protection of Privacy Act (Alberta) until such time as six years from this date; and direct Administration to continue to report to the Audit Committee on the status of community associations and social-recreation organizations, while preparing a separate annual report to the Audit Committee on all Civic Partners (including those on City-owned land and otherwise), commencing in the third quarter of 2013 annually.
2006 January 19	AC2006-02	Status of Third Party Organizations Operating Not-for-Profit Facilities on Land Recommendations approved as follows: Direct Administration to expand the report to include all third party organizations with facilities on City-Owned land that Community Services & Protective Services liaises with, and include financial exposure as it relates to an evaluation of liabilities exceeding assets available to satisfy these liabilities.

Bylaws, Regulations, Council Policies

Investing in Partnerships Policy (CPS2017-01)

The *Investing in Partnerships Policy* (the Policy) classifies City of Calgary partners into categories that drive accountability and other requirements. Within the Civic Partners group there are two categories: Civic Partners-Strategy Delivery, and Civic Partners-Program and Service Delivery. The Policy supports a clear line of sight between The City's investment in a partnership and the results achieved; helps to support consolidation of data to inform decision-making; supports greater effectiveness through clearer accountabilities, reporting, and risk management; and creates greater efficiency and cost-savings by improving knowledge transfer and reducing duplication of administrative time and effort.

Civic Partner Operating Grant Funding 2021-2024					** Grant as % of Partner Operating Revenue
Organization Name	**2021 Actual**	**2022 Actual**	**2023 Actual**	**2024 Budget**	
Aerospace Museum Association of Calgary (The Hanger Flight Museum)	411,358	411,358	427,808	443,218	29%
Arts Commons	2,546,350	2,613,156	2,817,826	2,969,226	19%
Calgary Arts Development Authority Ltd.	14,290,000	17,490,000	18,189,600	18,844,430	96%
One time funding	-	-	1,000,000	1,000,000	
Calgary Convention Centre Authority (Calgary TELUS Convention Centre)	1,749,231	1,795,192	2,755,672	3,352,222	11%
One time funding	-	-	180,000	-	
Calgary Economic Development Ltd.	9,752,765	9,752,765	10,722,075	11,207,615	62%
One time funding	-	-	1,000,000	487,740	
Calgary Public Library Board	53,627,720	55,196,562	56,365,407	57,136,147	84%
One time funding	-	-	1,010,130	883,370	
Calgary Science Centre Society (TELUS Spark)	2,197,092	2,254,857	2,491,687	2,783,407	11%
Calgary Sport Council Society (Sport Calgary)	459,596	471,651	490,517	508,176	146%
One time funding	-	-	627,530	375,000	
Calgary Zoological Society	8,238,666	8,454,907	8,793,107	9,109,657	14%
Contemporary Calgary Arts Society	-	-	-	-	29%
One time funding	-	-	900,000	900,000	
Federation of Calgary Communities	216,428	216,428	225,000	233,000	25%
One time funding	-	-	250,000	250,000	
Fort Calgary Preservation Society (The Confluence Historic Site & Parkland)	1,138,984	1,168,871	1,215,621	1,259,381	58%
Heritage Calgary	343,000	343,000	518,540	615,410	73%
One time funding	-	-	67,340	58,890	
Heritage Park Society	3,739,787	3,869,787	4,831,357	5,511,087	19%
Lindsay Park Sports Society (MNP Community & Sport Centre)	1,389,596	1,426,016	1,483,057	1,536,447	11%
Opportunity Calgary Investment Fund Ltd.*	918,612	1,606,186	2,348,549	2,686,696	100%
Parks Foundation, Calgary	193,000	193,000	201,000	208,000	38%
One time funding	-	-	375,000	375,000	
Platform Calgary	1,448,657	1,470,256	1,529,066	1,584,116	28%
One time funding	-	-	500,000	500,000	
Silvera for Seniors	7,071,000	7,830,000	8,184,560	8,563,390	31%
Tourism Calgary Convention and Visitors Bureau	2,777,337	2,850,673	2,964,703	3,071,433	36%
Special Events Fund	2,966,000	3,966,000	3,966,000	3,966,000	
One time funding	-	300,000	1,000,000	1,000,000	
Vecova Centre for Disability Services and Research	208,528	214,053	222,615	230,629	1%
VCC Initiatives Ltd. (Vibrant Communities Calgary)	484,000	484,000	503,000	521,480	72%
One time funding	-	-	500,000	500,000	
TOTAL FUNDING	**116,167,707**	**124,378,718**	**138,656,767**	**142,671,167**	

*Operating budget is funded through interest earned on the Opportunity Calgary Investment Fund Reserve ** Percent of partner's total operating revenue received from The City of Calgary

Civic Partner Capital Grant Funding 2021-2024

Organization Name	2021 Actual	2022 Actual	2023 Actual	2024 Budget
Civic Partner Infrastructure Investment Grant Program 2021-2024				
Aero Space Museum Association of Calgary (The Hangar Flight Museum)	112,896	14,387	306,697	663,750
Arts Commons	1,288,870	1,259,000	2,474,550	2,095,470
Calgary Science Centre Society (TELUS Spark)	3,063,202	291,863	698,195	1,398,750
Calgary Zoological Society	1,919,264	550,709	1,601,640	1,664,280
Contemporary Calgary Arts Society	-	-	38,899	150,000
Fort Calgary Preservation Society (The Confluence Historic Site & Parkland)	67,290	160,094	284,566	600,000
Heritage Park Society	2,073,618	1,226,832	3,129,396	3,720,750
Lindsay Park Sports Society (MNP Community and Sport Centre)	75,248	200,121	549,271	858,750
Vecova Centre for Disability Services and Research	312,002	150,690	258,766	957,750
Silvera Lodge Lifecycle Program				
Silvera for Seniors	3,999,447	763,182	1,380,563	6,607,521
Library Lifecycle Grant				
Calgary Public Library Board	2,165,988	3,859,315	3,723,307	5,710,311
Convention Centre Lifecycle and Major Maintenance and Replacement Reserve				
Calgary Convention Centre Authority (Calgary TELUS Convention Centre)	3,210,121	2,262,819	2,752,736	6,375,674
Total lifecycle of City-owned assets managed and operated by Partners	**18,287,946**	**10,739,012**	**17,198,586**	**30,803,006**
Major Project Capital Grant				
Aero Space Museum Association of Calgary (The Hangar Flight Museum)	-	-	-	4,851,198
Aero Space Museum Association of Calgary (The Hangar Flight Museum) - CF-100 Aircraft Restoration (City-Owned)	-	52,500	33,000	60,000
Calgary Zoological Society – Canadian Wilds Project	-	-	4,250,000	-
Calgary Zoological Society - Net Zero Emissions Infrastructure Program	-	-	-	2,780,902
Contemporary Calgary Arts Society - Observatory Project	-	-	1,049,861	-
Heritage Park Society – Dock Replacement Project	211,124	2,653,203	599,248	-
Lindsay Park Sports Society (MNP Community and Sport Centre) – Roof Repair	755,152	-	-	-
Vecova Centre for Disability Services and Research - New Facility	-	-	-	1,238,000
One Time Capital Funding				
Platform Calgary - Completion of the Platform Innovation Centre	-	406,183	1,093,817	-

Civic Partner Capital Grant Funding 2021-2024

Silvera for Seniors - Completion of the Gilchrist Lodge	2,300,000	-	-	-
Total for one-time capital projects	**3,266,276**	**3,111,886**	**7,025,926**	**8,930,100**

Definitions of Rating Terms

In reviewing financial statements and the financial practices of Civic Partner organizations, Administration uses the following definition of terms:

Low risk: The organization is in a good overall financial position with sufficient working capital and healthy equity. The organization is showing no more than one unfavourable financial factor that is not considered to challenge the long term sustainability of the organization.

Elevated risk: The organization is in a position to meet its short-term financial obligations; however, there is more than one risk indicator which creates concern in terms of the organization's long-term sustainability. The risk indicators may include:

- Low cash reserves: if revenues were interrupted, the cash in place is not sufficient to sustain beyond 30 days of regular operations;
- Current operational practices may not be sustainable: a large operating deficit or cumulative deficits threaten to eliminate the organization's reserves; or
- Insufficient reporting: an organization has submitted financial statements that missed critical financial information and have received a rating of "insufficient" for three consecutive years.

High risk: There are indicators that the organization may be unable to meet its short term financial obligations, either immediately, or in the near future. If financial health further deteriorates, there is a risk that the organization may be forced to cease all or a portion of its operations. The risk indicators may include:

- Financial Issues: absence of acceptable financial policies and procedures, inadequate financial reporting, low level of liquidity, insufficient unrestricted reserves, consecutive yearly deficits and problems with cash flow and/or budgeting;
- Governance issues: not operating within current bylaws and objectives or a lack of governance practices in place; or
- Risk management issues: inadequate risk management and internal controls procedures in place and/or non-compliance with City agreement.

Other:

Insufficient: Statements are missing critical financial information, e.g. Balance Sheet, Statement of Revenues and Expenditures, or comparative data or information is presented in a way that does not allow for analysis or rating.

Not Rated: Statements have been received and a rating will be assigned once analysis is complete.

Not Received: Statements have not been submitted by the organization.

Not Required: The terms of the legal contract with the organization do not include the submission of financial statements.

Auditors: Statements are currently being audited by the group or an independent organization.

2023 Civic Partner Audit Report

AC2024-0282
June 13, 2024

Calgary

Recommendations

That the Audit Committee recommend that Council:

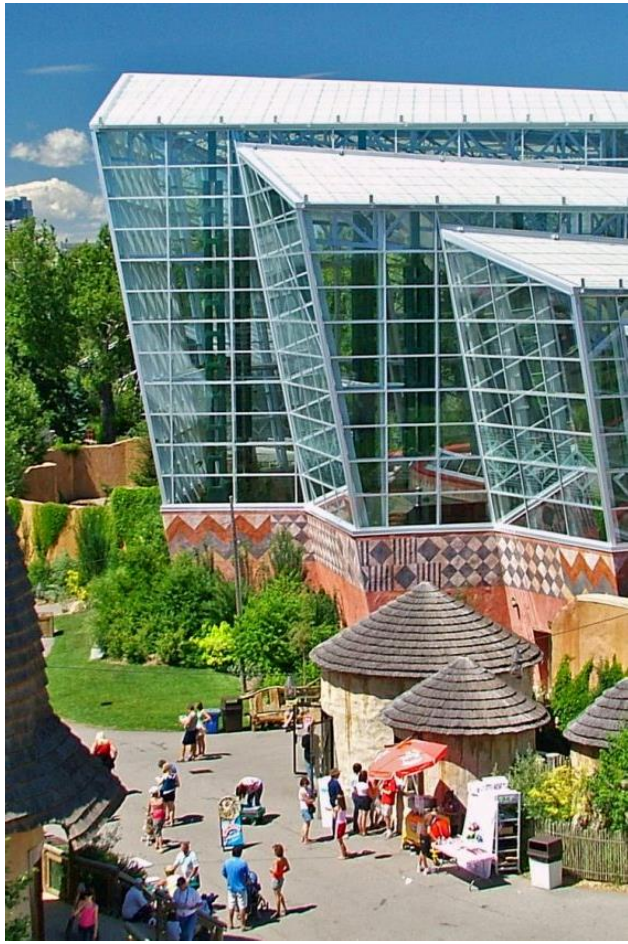
1. Receive this report for the Corporate Record; and

2. Direct that Attachments 4, 5 and 6 through 32 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the Freedom of Information and Protection of Privacy Act (Alberta), to be reviewed 2027 October 22.

Purpose of the report

- Evaluate The City's exposure to risk related to partnering
- Assess Civic Partners' financial health
- Provide overview of governance & risk management practices
- Identify mitigation plans where required
- Companion report to the 2023 Civic Partner Annual Report (CD2024-0274)

2023 Ratings



- Based on 2023 audited financials
- Established evaluation tool
- 2023 ratings:
  - 24 low risk
  - 5 elevated risk
  - 1 high risk
- Risk mitigation in place for all Civic Partners rated elevated or high risk

Governance and risk management

- Reporting tools adjusted to provide accessible & meaningful information
- Partners continue to evolve how they manage risk
- Most frequently reported risks are similar to last year:
  - Financial
  - Employee recruitment & retention
  - Reputational

Recommendations

That the Audit Committee recommend that Council:

1. Receive this report for the Corporate Record; and

2. Direct that Attachments 4, 5 and 6 through 32 remain confidential pursuant to Sections 16 (Disclosure harmful to business interests of a third party), 23 (Local public body confidences), and 24 (Advice from officials) of the Freedom of Information and Protection of Privacy Act (Alberta), to be reviewed 2027 October 22.