Policy Sponsor: CFO

Summary: This Policy sets out a general framework for measuring and managing investment risk across the enterprise. The Investment Entities are responsible for managing their investment risks and ensuring that returns are commensurate with the amount of risk taken. **This policy must be approved by the OAC Board.**

Contents

1. INTRODUCTION

The OMERS *Enterprise Risk Management (ERM) Framework* sets out a general framework of roles and responsibilities for the management of key risks across the enterprise: investment; financial; operational; strategic; and legal and compliance. The *ERM Policy* sets out the roles and responsibilities of the OAC Board and the Senior Executive Team ("SET") for measuring and managing key risks across the enterprise.

The Plan's ability to meet the pension funding obligations is driven in large part by the ability to deliver sufficient investment returns to meet the pension promise with acceptable investment risk over the long term. This Policy establishes a framework and provides guidance for managing OMERS investment risks (as defined in Section 3 below).

2. INVESTMENT RISK MANAGEMENT PHILOSOPHY

The future values of OMERS investment assets and liabilities are not known with certainty and change over time. Investment risk reflects the possibility that the value of the Plan's investments will deviate from plan as a result of changes in market conditions, whether those changes are caused by factors specific to individual investments, classes of investments or factors affecting all investments traded in the market.

The assumption of investment risk is necessary to meet the Plan's pension obligations at a reasonable cost. Further, the Plan's pension obligations are not known with certainty. As a result, the value of the Plan's assets could differ from the value of the Plan's pension obligations.

3. INVESTMENT RISK PRINCIPLES

For the purposes of this Policy, investment risk includes market risk, credit risk and liquidity risk.

- Market risk is the risk that the value of an investment will fluctuate as a result of changes in market conditions, whether those changes are caused by factors specific to the individual investment, classes of investments or factors affecting all investments traded in the market (eg. interest rate risk, equity risk, foreign exchange risk, etc.).
- Credit risk is the risk of loss arising from the failure of a counterparty, partner or government to fully honour its financial obligations.

- Liquidity risk describes the ability to meet financial liabilities in a timely and cost-effective manner and represents the Plan's ability to:
  - liquidate existing positions when required (asset liquidity)
  - meet financial obligations of the Plan as they come due (fund liquidity)

Strategic risk as it relates to investment decisions is included within the context of this Policy.

- Strategic risk is the risk of loss arising from a strategy that is ineffective or inappropriate and affects the ability of the Plan to meet its short and long-term objectives (e.g. concentration risk and funding risk).

4. INVESTMENT RISK MANAGEMENT FRAMEWORK

OAC's investment risk management framework is established through this Policy and is expected to evolve over time to reflect enhancements in the measurement of investment risk for the Investment Entities and the Plan. The investment risk management framework, identified by the following four steps, allows OAC to effectively manage its investment risk:

- Identify – investment risk inherent in assets must be identified both in absolute terms and to the objectives and strategies of each portfolio (i.e. what objective yardstick is the investment to be measured against).
- Measure/Assess – investment risk must be consistently and objectively measured or assessed.
- Manage – investment risk must be managed on an ongoing basis and returns should be commensurate with the risks taken.
- Report and Monitor – investment risk must be reported and monitored on a regular basis.

Sections 5 to 9 expand on the five steps identified in the Investment Risk Management Framework.

5. INVESTMENT RISK IDENTIFICATION

Investment risk must be identified relative to the objectives and strategies of each portfolio.

<u>Public Markets</u>

Investment risk in public market assets is identified through fundamental analysis at the time of the initial investment and on an ongoing basis as part of the asset management and risk measurement process.

<u>Non-Public Markets</u>

Investment risk in non-public market assets is identified through an in-depth assessment during the due diligence/underwriting process and on an ongoing basis as part of the asset management process.

6. INVESTMENT RISK MEASUREMENT/ASSESSMENT

Risk measurement is an integral part of the investment risk management framework. Investment Risks are measured (quantitatively) and/or assessed (qualitatively) using an appropriate and consistent methodology established by each Investment Entity and overseen by the Risk Management function. The methods and factors used in the measurement or assessment of investment risk are reviewed on an ongoing basis. The Investment Entities are responsible for putting in place procedures for measuring (or assessing) and evaluating their investment risk.

Public Markets

Investment risk in public market assets is measured on a regular basis through fundamental, credit and scenario analyses of portfolio investments and the analysis of financial and economic conditions. In addition, risk-based metrics (e.g. volatility, value-at-risk, duration, etc.) and other variables are measured on a regular basis using internally and externally developed risk analytical tools.

Non-Public Markets

Investment risk in non-public markets is assessed by financial and economic analysis by each Investment Entity. The assessment is performed during the initial due diligence and reviewed regularly as part of the ongoing asset management process. The assessment includes an analysis of, for example, factors such as industry dynamics and trends, geographic and industry diversification, historical performance of partners and co-investors and expected cash flows, as applicable.

7. INVESTMENT RISK MANAGEMENT

The objective of investment risk management is to help minimize unanticipated losses, to balance risk against reward and to enhance the ability of the Plan to meet their respective obligations.

The Investment Entities are responsible for managing their investment risk and for ensuring that returns are commensurate with the risks taken.

OAC utilizes a number of tools to manage its investment risk and achieve its desired level of risk at the enterprise, public market and non-public market levels.

Plan

Enterprise-wide investment risk management tools include:

1. Enterprise-Wide Policies. Enterprise-wide policies include the *ERM Policy*, the *Statement of Investment Beliefs*, the *Statement of Investment Authorities* (and related Sub-Delegations), the *Statements of Investment Policies and Procedures*, the *Debt Policy*, the *Currency Hedging Policy* and this Policy. Enterprise-wide policies are reviewed and monitored with regular reporting to management and the OAC Board as appropriate.
2. Investment Performance Evaluation. Investment performance is evaluated against measurable investment objectives adhering to the operating plan approved by the OAC Board.
3. Asset Liability Analysis. This asset liability process sets a long-term strategic asset mix that is expected to generate a rate of return necessary to meet the Plan's benefit obligations. An asset liability analysis monitors and assesses the long-term strategic asset mix on a periodic basis and takes into account multiple factors such as the liability, economic and investment environment and incorporates stress and scenario testing of inputs and assumptions.
4. Actuarial Valuations and Projections. Plan actuarial valuations are used to determine the funded status of the Plan and are completed annually. Similarly, actuarial projections are completed annually to determine the sensitivity of the funded status of the Plan to various economic assumptions. Such actuarial reports identify the pension obligations which must be funded by a combination of existing plan assets, contributions and investment returns.
5. The OCM Economic Outlook. OCM prepares periodic economic outlooks which are presented to TAC and the OAC Board and can be used, as appropriate, by the Investment Entities in the formulation of their investment strategies.
6. The Quarterly Investment Risk Report. The OMERS Quarterly Investment Risk Report, produced by the Risk Management Group and approved by TAC, provides OAC management and the OAC Board with a consolidated view of the key investment risks (market, credit and key strategic risks that impact investment decisions), plan liquidity and exposures facing the Plan.

Public Markets

Investment risk in public market assets is managed through the following tools:

1. OCM Policies and Investment Guidelines. Policies and investment guidelines relating to investing in public markets set out Investment Risk management guidelines such as counterparty exposures, credit concentration limits, trading limits, approved credit issuers, the use of derivatives and risk limits for the Alpha programs. Policies are monitored daily with regular reporting to OCM management.
2. Risk Measurement. Volatility-based and other measures of risk are used on an ongoing basis and regularly reported to OCM and OAC management.
3. Diversification. Public market investments are diversified by asset class, country, industry, sector, asset holding periods, currencies, securities and strategies, as appropriate in order to manage the variability of returns.
4. Asset Management Process. Fundamental, credit, scenario and other analyses of investments are reviewed regularly. These reviews are done as part of the ongoing management of an investment and also include periodic meetings with the management of investee companies and periodic updates to OCM management.

Non-Public Markets

Investment risk in non-publicly traded assets is managed through the following tools:

1. Enterprise Policies. Investment Entity policies, such as their *debt policies* which set out the degree to which non-publicly traded investments are levered, and the *Enterprise Valuation of Private Investments Policy* which sets out the valuation guidelines and principles for non-publicly traded investments, are reviewed and approved annually.
2. Due Diligence/Underwriting Process. Investment risk assessments are reviewed as part of the due diligence process when evaluating potential new investments.
3. Diversification. Non-publicly traded investments are diversified by asset class, country, industry, sector, asset holding periods, currencies and securities, as appropriate in order to manage the variability of returns.
4. Asset Management Process. Once the Investment Entities have completed the investment, investment risks are assessed quarterly or on an as needed basis depending on the economic/business environment. Information included in these assessments is based on information obtained by the Investment Entity from its periodic update calls, Board and co-investor meetings, as applicable and annual valuations, as the case may be. A summary of key investment risks is incorporated into the Quarterly Investment Risk Report.

8. RISK REPORTING AND MONITORING

IOA prepares and distributes:

- daily performance reports. Return calculations follow the standards and guidelines set out by the CFA Institute;
- monthly and quarterly risk reports, as required, with respect to limits for counterparty exposures, credit concentration limits, trading limits and approved credit issuers. Performance reports are prepared and distributed to management on a daily basis; and
- in collaboration with the Risk Management Group and the Investment Entities, quarterly risk reports for the SET and the OAC Board with respect to Plan exposures and compliance with policies.

Where applicable, investment risk that is outside the approved range or limit must be reported as appropriate, with a rationale for the exception and a plan for bringing the investment back on-side or a recommendation to maintain the position in accordance with the applicable investment policy.

9. REVIEW OF IMPLEMENTATION OF INVESTMENT RISK MANAGEMENT FRAMEWORK

OAC and the Investment Entities must review the effectiveness of their implementation of the Investment Risk Management Framework regularly and implement changes, where appropriate. The effectiveness of the Investment Risk Management Framework is also integrated with the ERM program.

10. ROLES AND RESPONSIBILITIES

All employees with investment related functions are responsible for managing investment risk as appropriate. The key stakeholders responsible for implementing this policy include the CFO, the three CIOs, and the SVP, Risk.

The Investment Entities identify, measure, manage and monitor their investment risks within prudent ranges commensurate with their investment objectives. The results of their investment risk management process are reviewed regularly and recommended changes, where appropriate, are implemented.

IOA produces and disseminates performance reports, ensures data integrity, monitors against limits and escalates any breaches to management.

The Risk Management Group, in collaboration with the Investment Entities, develops, reviews and recommends enterprise policies, risk measurement methods, the long-term strategic asset mix targets and ranges, currency hedging requirements and restrictions on the use of debt. The Risk Management Group regularly updates management of the Investment Entities of the development of investment risk management methods or procedures.

Risk Management Group members participate in the research and development of investment risk methods (i.e. measurement) and the analysis of investment risk across OAC and the Investment Entities. The Risk Management Group also ensures their respective management is kept informed of the development of investment risk management methods or procedures.

The CFO ensures an appropriate and prudent level of investment risk is maintained.

The OAC Board approves this Policy on a biennial basis.

HISTORY

Effective Date:	September 1, 2015
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