



NBIMC

440 rue King Street, Tour York Tower
Fredericton, NB E3B 5H8

Enterprise Risk Management Framework

Last Updated: September 13, 2011

CONTENTS

I. Overview

II. Risk Management Philosophy

III. General Risk Management Activities

Board of Directors Risk Management Process
Internal Risk Management Process

IV. Types of Risk

a. Strategic Risk

Governance
Business Strategy
Fiduciary
Business Environment
Reputational
External Communications

b. Investment Risk

Asset/liability Mismatch
Active Management
Market
Benchmark
Credit
Liquidity

c. Operational Risk

Legal, regulatory and policy compliance
Operations
Technology
Human Resources

V. Conclusions

Appendix A: Risk Governance Structure

Appendix B: Risk Management Outline

I. Overview

Risk can be defined as the potential for loss caused by an event or series of events that can adversely affect the achievement of a company's business objectives.

Our mission is "To provide innovative, cost effective, and prudent investment management services that address the investment challenges of New Brunswick based public sector funds."

To achieve this mission, our business processes, whether they are strategically-focused, investment related or operational in nature, must continually balance risk and return.

Our enterprise risk management framework has been put in place to integrate strong corporate oversight with a series of well-defined independent risk management systems and processes. Our risk management process involves the participation of the NBIMC Board, management, and external service providers. An outline of the risk governance structure is provided in Appendix A.

The following document presents our philosophy and approach to management of risk by identifying:

- the types of risks we are facing in our normal business and investment operations and,
- which parties are accountable for monitoring each risk type, while also outlining the means and timing through which we seek to measure and manage these risks.

We believe that these risk management processes will significantly contribute to maximizing the long-term investment returns within the confines of acceptable levels of risk.

II. Risk Management Philosophy

Risk management at NBIMC is based on several principles and assumptions designed to ensure that we take a “proactive and systematic” approach to managing risk. Specifically, we believe that:

- i. Risk management is an input into, rather than a substitute for, the business planning process.
- ii. Establishing a risk management framework is a necessary prerequisite to meaningful discussions on risk by NBIMC fiduciaries.
- iii. Due to its detailed understanding of the operations of the Corporation, management should play a leading role in identifying the primary risks facing NBIMC.
- iv. Risk should be defined broadly enough to encompass all major aspects of NBIMC, including such areas as Investments, Operations, Human Resources, and Technology.
- v. No risk framework can be expected to identify or address every conceivable risk. It is important, therefore, that once adopted, the risk management framework be continually refined and updated to reflect new risks once they are identified.
- vi. At any point in time, the risks that can be identified will exceed NBIMC’s capacity to address them. Resources must therefore be focused on those risks that are deemed to be the most critical.

We base the core of our investment decision making processes on the following Investment Beliefs:

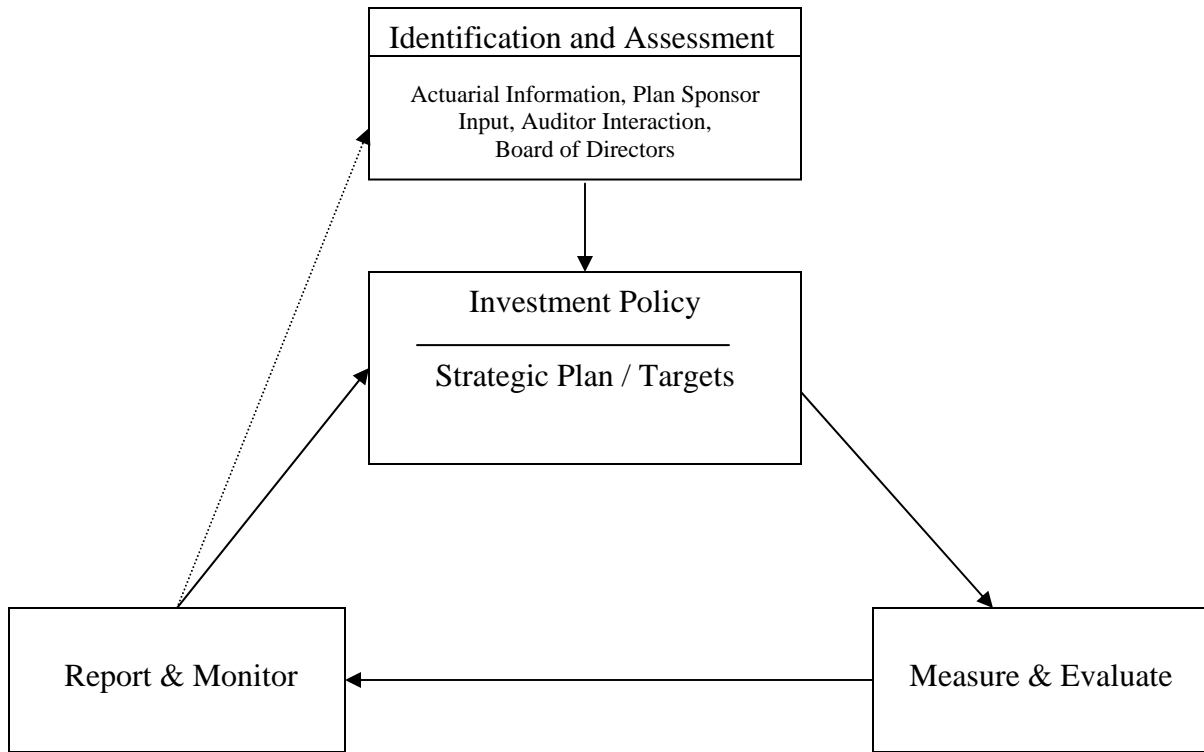
- i. We are a relatively low risk investment manager when compared to our peers.
- ii. Real Return Bonds, because of their long-term inflation-linked characteristics, are considered to be an excellent match for pension liabilities.
- iii. New asset classes are introduced incrementally in order to progressively gain experience and to minimize transition costs.
- iv. The establishment of the appropriate asset mix for each of the funds under management is heavily influenced by both the actuarial profile and funding status of each plan.

- v. We believe that market inefficiencies present opportunities to add value through active management.

Given the importance that we place on comprehensively managing risks, each of the first four core investment beliefs concern (either directly or indirectly) the management or reduction of risk.

III. General Risk Management Activities

In general, risk management is a circular process, where potential risks are identified, methods to measure and manage these risks are designed and implemented, and systems are put in place to monitor the effectiveness of the original risk management systems, thus allowing for the identification of new potential risks.



We manage risk through a number of processes: investment risk is measured and managed within various systems from both a policy perspective as well as an active management/relative return perspective, while operational risks are managed through the activities of various committees and policies.

Board of Directors Risk Management Process

The NBIMC Board of Directors, as outlined in section 2.6 of their Terms of Reference, is responsible for understanding the principal risks facing the corporation and the systems that management has put in place to mitigate and manage those risks as outlined in this document.

While each Board Committee supports the Board’s risk management oversight in areas related to their specific mandate, the Audit Committee is specifically assigned the task of assisting the Board in its oversight of risk management.

Our risk management process uses a general framework through which we carry out our risk management activities, and is intended to:

- i. Ensure that there is a proactive and systematic approach to identifying and managing the risks inherent in our operations and environment.
- ii. Ensure that there is agreement among NBIMC stakeholders (Board, senior management, staff and the pension plans' sponsor) as to the risk management priorities at any point in time.
- iii. Ensure appropriate involvement by the Board and senior management in setting the above priorities.

The role of the Board is to provide input into, and ultimately approve, the risk management priorities identified by management, and to ensure that management then develops a business plan and budget for addressing those risk priorities.

An overall risk review is conducted quarterly through review of a risk matrix report at each Board Meeting. This risk matrix report is prepared by management, with the assistance of a cross-functional Enterprise Risk Management Council, and seeks to identify emerging and changing risks as well as the risk mitigation activities implemented.

Also, a detailed review of this Enterprise Risk Management Framework and related issues is conducted annually by the Audit Committee and subsequently the Board.

Internal Risk Management Process

Management uses a number of internal committees to focus on risk management, including the Investment Risk Management Committee (IRMC), Trade Management Oversight Committee (TMOC), Information Technology Risk Management Committee (ITRMC) and the Recovery Management Team (RMT), as well as an Occupational Health & Safety Committee. Management has also created an Enterprise Risk Management Council (ERMC) that seeks to provide another forum to overview all corporate risks as laid out in this Framework, and to provide advice to the President with respect to his Board reporting activities. These staff committees are comprised of a cross-functional membership, including management and non-management positions, providing a rich opportunity for sharing perspectives and insights.

The IRMC monitors investment risk measures, considers risks associated with new investment strategies and products and proposes procedures to measure and monitor investment risk positions, subject to the approval of the Chief Investment Officer and within the parameters established by the Board.

TMOC is responsible for monitoring our trading policies and practices, including broker selection, to ensure we receive the best trade execution possible with well managed counterparty risk.

ITRMC provides guidance to the Information Technology Department about IT risks, issues and future direction. This committee also includes one volunteer senior IT executive external to NBIMC who shares alternative IT environment experiences.

The RMT is responsible for developing and implementing the Business Continuity Plan including disaster recovery. RMT meets semi-annually to discuss possible disaster scenarios and may use passive and active tests to practice response protocols. This year, a particular focus was on departmental contingency planning in anticipation of a potential flu pandemic.

Finally, the Occupational Health & Safety Committee is responsible for considering physical environment risks to the continued health and safety of our staff.

IV. Types of Risk

We have identified three main categories of risk related to our business activities. Within these sections we have also subdivided a number of specific risk areas in which we have assigned specific monitoring and control responsibilities and set out the specific measures used to achieve them.

The following chart summarizes each of the three main risk categories and the respective specific risk elements.

Strategic Risk	Investment Risk	Operational Risk
Governance	Investment	Legal, Regulatory, and Policy Compliance
Business Strategy		Operations
Fiduciary		Technology
Business Environment		Human Resources
Reputational		
External Communication		

The following section provides details on the specific functioning of the risk systems, controls and responsibilities, with an emphasis on explaining the rationale for their existence, the techniques by which they operate, and the information they provide to senior management and the Board to aid in risk management decision-making. A summary of this information is provided in the table contained in Appendix B.

Category A: Strategic Risk

Strategic risk is the risk of not achieving the Objects and Purposes of the Corporation (our mission) as outlined in the New Brunswick Investment Management Corporation Act, within the parameters provided in the legislation. It is significantly related to many of the other shorter term risks faced by the organization but manifests itself in the long-term time frame under which pension investment management activities are managed.

NBIMC subdivides Strategic Risk as follows:

Governance risk

This risk comes about through potential improper governance structures (including delegation of authority) between directors, senior management, and staff, leading to improper decision making. Good governance processes that outline key responsibilities and accountabilities are a key part of overall risk management.

Responsibility

The NBIMC Act and By-Laws outline the governance responsibilities of the Corporation as well as related reporting obligations.

The Board of Directors has set out Board Policies that must be followed, of which first and foremost are the Investment Policies for each client's funds under management. The Board and each Board Committee also have Terms of Reference that outline their respective responsibilities.

Management has developed an extensive Investment Procedures Manual, Human Resources Manual and other operational guidelines and processes that outline specific operational responsibilities and authorities. All staff members also have position descriptions that outline their specific responsibilities.

Measures

The Governance Committee of the Board of Directors oversees and coordinates the governance responsibilities of the organization.

The Board of Directors and the Board Committees meet at least quarterly. NBIMC is also typically scheduled to appear annually before the Crown Corporations' Committee of the Legislature.

Business strategy risk

Business strategy risk is the risk of not developing, executing, or monitoring the business activities in order to achieve the mission of the Corporation.

Responsibility

The Board of Directors and management participate in creating a five-year strategic plan for the organization and review it on an annual basis.

Management develops an annual business plan that is reviewed with the Board of Directors near the inception of each fiscal year. Progress against the plan is reviewed by the Board periodically throughout the year, and in measuring overall performance at year-end.

Measures

Quarterly Board Meetings and annual Strategic Plan review sessions (Board & Management)

Fiduciary risk

Fiduciary risk is the risk that fiduciary responsibilities are not fully respected or executed by NBIMC on behalf of its investment management and trustee responsibilities.

Responsibility

The Board of Directors acts in a fiduciary capacity and do not represent any specific constituency. Their focus is therefore solely on the best interests of the funds under management. The Board is responsible for approving governing Policies and also a Code of Ethics and Business Conduct that governs the ethical affairs of the corporation. Management is responsible for designing appropriate processes and systems of internal control to ensure that assets are safeguarded and controlled, resources of the corporation are managed economically and efficiently and operations are carried out effectively and conform to the regulations, by-laws and investment policies of NBIMC.

Measures

Directors and employees annually acknowledge understanding and compliance with the Code of Ethics and Business Conduct. Management regularly conducts assessments of the effectiveness of its internal controls and operational processes in conjunction with the internal audit function and an Investment Risk Management Committee meets on an ad-hoc basis to consider new investment strategies and changes to the Investment Procedures Manual.

Management has also set-out a clear segregation of duties between the investment operations activities and the accounting and performance measurement activities of NBIMC.

Business environment risk

Business environment risk is the risk that NBIMC is not continuously anticipating, monitoring, understanding, or reacting to external changes to the business environment in which NBIMC operates.

Responsibility

Management and staff are primarily responsible for keeping abreast of industry developments through media reports, legislative pronouncements, and both ongoing peer and supplier communication.

Measures

NBIMC is an active participant in a number of industry related associations such as the Pension Investment Management Association of Canada (PIAC), and the Canadian Coalition for Good Governance (CCGG). Management also actively participates in a number of global industry conferences which not only provide up-to-date information on emerging industry issues, but provide good networking opportunities with personnel from peer institutional investment organizations.

A number of employees are also members of professional associations such as the CFA Institute, CA, CGA organizations, etc.

Reputational risk

Reputational risk is the risk of damage to our reputation, image, or credibility as a prudent and effective investment manager due to internal or external factors.

Responsibility

The Board and the Province of New Brunswick (as key stakeholders) have instituted a number of oversight and audit relationships that provide third party assurance to the corporation's reputation.

Measures

The Province, as plan sponsor, appoints an Actuary to review the funding position and investment assumptions for the funds under management. The Office of the Auditor General also has reviewed the corporation's activities from time-to-time.

The Board, through its Audit Committee, annually appoints an external auditor to examine the financial position and results of operations of NBIMC. The external auditor discusses any findings related to the integrity and reliability of NBIMC's financial reporting and adequacy of internal controls.

The Board, through its Audit Committee also appoints an internal auditor to review and advise on various operational processes and risk management activities.

External communication risk

External communication risk is the risk of not effectively communicating the governance structure, strategic plan, operational activities, and performance of the corporation to stakeholders.

Responsibility

The Chairperson of the Board and the President are responsible for all official communication activities.

Measures

The NBIMC Act outlines specific communication requirements that include the provision of an annual budget, and submission of an annual report including an auditor's report.

Under the direction of the Board, Management is also responsible for the development and execution of a Communications Plan.

Category B: Investment Risk

Investment risk is the risk that investments are not made in accordance with NBIMC's mission and do not achieve the long-term return on investments, relative to acceptable risk levels, for the funds under management as required by the Plans' Actuary.

Responsibility

The Board of Directors is responsible for setting the Statement of Investment Policy of the funds under management. The Statement of Investment Policy sets out the benchmark portfolio asset weights, permitted asset weight deviations from the benchmark, performance benchmarks, permissible investments, and performance evaluation metrics.

Management is responsible for developing and managing the underlying investment strategy and programs that operate within the Board approved Policy. These programs are outlined in an Investment Procedures Manual. An Investment Risk Management Committee, made up of representatives from both the investment and finance and administration teams, review any changes to investment strategies before they are included in the Investment Procedures Manual.

There are a number of significant areas of investment related risk which are outlined in more detail in the section below:

Asset-liability mismatch (ALM)

Investments are made to support the pension obligations of each Fund. ALM risk refers to the risk that the investment portfolio held for a particular fund will be insufficient to meet the obligations set out by the specific pension obligation.

Measures

Each fund undergoes an actuarial valuation, as determined by the Plan Sponsor, at a minimum of every three years. The Board determines an appropriate asset mix that is believed to best meet the future pension obligations of each fund. Funding status estimates are monitored by the Board on a quarterly basis between valuation dates.

Management assists the Board's decision by undertaking an asset liability study which attempts to identify the most efficient mix of financial assets that will meet or exceed the Sponsor's required funding rate with the least amount of risk. Management has also developed a Policy Asset Mix Capital-at-Risk (PAM CaR) process that estimates and monitors the risk between the actual asset mix and the pension liability estimate. This calculation estimates the maximum change in value of the funding position that would be expected at a 95 percent confidence level over a one year time period. The report is distributed weekly to the members of the Senior Leadership Team and the Investment Risk Management Committee.

Active management

Active risk, also known as relative return risk, is the risk that actual investment returns do not meet the pre-specified benchmark portfolio and result in under-performance versus those that would have resulted from passive management.

Measures

The Board approved Investment Policies outline the expected return and value added objectives in excess of those achieved by a passive management approach.

Management utilizes a risk budgeting approach to active management which links the amount of active risk taken with the overall active return target. Management has also developed a Capital-at-Risk (CaR) process that estimates and monitors the risk of the active value added investment activities conducted by the investment staff. This calculation estimates the maximum change in value of the relative value added to the benchmark that would be expected at a 95 percent confidence level over a one year time period. This calculation is distributed quarterly to the Board and reviewed weekly by the members of the Senior Leadership Team and the Investment Risk Management Committee.

Market risk

Market risk is broadly defined as the risk of a change in the value at which an investment portfolio could be sold due to exposure of the portfolio to certain underlying variables. This risk is commonly considered to be the risk of an adverse change, or, the risk that the value of a portfolio will decline. NBIMC faces market risk in virtually all of its investment portfolios, although the fundamental drivers of this risk tend to be unique, depending on the composition of the portfolio.

Measures

The Board approved Investment Policies are developed in the context of providing a diversified portfolio of assets that will provide protection against a significant adverse change to any specific asset class.

Management monitors market risk through the weekly PAM CaR process mentioned earlier.

Benchmark risk

Benchmark risk is the risk that the benchmarks used to evaluate investment performance do not appropriately reflect the underlying portfolio.

Measures

The Investment Policies set out by the Board approve the appropriate benchmarks for each investment asset class. These benchmarks are typically standards set out by the institutional investment industry and correspond closely to those used by peer organizations.

Credit risk

Credit risk is defined as the risk that a specific counterparty will not meet its financial obligations as set out in a previously agreed upon contract. Credit risk arises from numerous activities including the holding of investments in a specific entity that require a scheduled repayment as well as through entering into derivatives transactions with various counterparties (banks/investment dealers). Credit risk can manifest itself through changes in the market value of a security or obligation, and is generally measured through procedures that attempt to model the probability of default and / or loss.

Measures

The Investment Policies set out by the Board provide limits in terms of permissible investments and credit quality requirements for a number of investment alternatives.

Management monitors this exposure through a monthly Counterparty Credit Exposure reporting process.

Liquidity risk

Liquidity risk is the risk that an investment position cannot be unwound or offset in the financial markets in a timely fashion without enduring significant losses. An occurrence of this type could lead to NBIMC not being able to meet payment obligations as they become due because of an inability to liquidate assets.

Measures

The Board approved Investment Policies are developed with a consideration to the near term periodic cash flow requirements of each pension fund. Credit risk mitigation also ensures that investments are made in higher quality assets that tend to be more liquid in terms of transaction availability. Liquidity risk is reviewed at least quarterly at the Enterprise Risk Management Council.

Category C: Operational Risk

Operational risk is generally considered to include all risks not arising out of investment or business strategy decisions of the firm. It concerns the risks arising from the loss of effectiveness or efficiency from reliance on specialized internal processes.

NBIMC has subdivided operational risk as follows:

Legal, regulatory, and policy compliance risk

This is the risk of loss from illegal or inappropriate business practices or activities by the Corporation or its employees.

Responsibility

The Board of Directors, or a Board Committee, is responsible for monitoring the Corporation's compliance with legal, regulatory, and policy matters.

The Governance Committee of the Board is responsible for the oversight of the NBIMC Code of Ethics and Business Conduct. The Audit Committee is responsible for the oversight of the financial reporting process. The Human Resources and Compensation Committee is responsible for oversight of compliance with workforce regulations.

Senior management is responsible for establishing and maintaining disclosure controls and procedures and internal controls over the accurate preparation and completeness of the financial reporting of NBIMC.

Measures

The Board of Directors engages two independent accounting firms to act as external and internal auditors of NBIMC's financial reporting and activities. External legal counsel is also engaged to provide advice on legal and financial regulatory matters.

Senior management reports to the Board quarterly with respect to Investment Policy Compliance. They also present quarterly financial statements and a Quarterly Regulatory Compliance Report to the Audit Committee and Board for review.

Management in conjunction with the Compliance, Risk and Performance Measurement team also monitor and report on NBIMC's compliance with both Investment Policy and Investment Procedures Manual guidelines on a weekly basis.

Operational risk

This is the risk of either direct or indirect loss resulting from inadequate or failed internal operational processes.

Responsibility

Management is responsible to ensure operational efficiency and effectiveness.

Measures

NBIMC has developed a Business Continuity Plan in order to enable an efficient crisis management and disaster recovery plan in the case of adverse events.

Management has delineated a clear segregation of duties with respect to transaction initiation, authorization, and recording activities. Banking authorities and limits are also clearly set out.

Under its Human Resources Strategic Plan, NBIMC has set out its skills requirements and professional development activities for its staff. Management has also established clear human resource practices and processes in its Human Resource Manual. Each employee position has a specific job description, and cross training is used extensively to provide back-up support. The corporation also has a mandatory vacation policy.

The Internal Auditor also performs reviews of the efficiency and effectiveness of key operational processes on a revolving basis.

Technology risk

NBIMC relies significantly on management information systems and communication technology. It is therefore exposed to the potential for material risk of direct or indirect loss resulting from inadequate or failed information technology.

Responsibility

Management is responsible to ensure technological operational efficiency and effectiveness.

Measures

A five year Information Technology Strategic Plan, reviewed annually by the Audit Committee, sets out the direction, priorities, resources and skills required for NBIMC's information systems.

Management has developed information technology policies for system access and use of technology-related hardware and software that are communicated regularly to all staff.

As noted above, NBIMC has developed a Business Continuity Plan in order to enable an efficient crisis management and disaster recovery plan in the case of adverse events. The Recovery Management Team, a cross-functional representation from all areas of the Corporation, meets semi-annually to consider potential disaster scenarios and NBIMC's resilience to them.

The Internal Auditor also performs reviews of the efficiency and effectiveness of key information technology systems and controls on a revolving basis.

Human resources risk

Human resource risk is the risk of loss resulting from inadequate or failed internal human resource performance and from business practices that are inconsistent with generally accepted human resource laws and practices.

Responsibility

The Human Resources and Compensation Committee of the Board is responsible for oversight of NBIMC's Human Resource policies.

Senior Management is responsible for effective human resource activities. This includes the development of job descriptions for each employee, training and development activities, and annual performance reviews.

Measures

The Human Resources and Compensation Committee has developed a Compensation Philosophy for the corporation. They annually review the competitive compensation landscape versus a group of peer institutional pension fund managers, and periodically retain the services of an external consultant to provide advice in connection with compensation. The Human Resources and Compensation Committee also annually reviews and advises on Management's annual succession plan for key staff positions.

Management has created a five year Human Resources Strategic Plan, reviewed and approved by the Human Resources and Compensation Committee. This plan sets out the staffing requirements, skills inventory and professional development activities for NBIMC. In addition, Management has also established clear human resource practices and processes in its Human Resource Manual and surveys staff biennially regarding employee satisfaction.

The Occupational Health & Safety Committee meets semi-monthly to review and resolve potential physical risks to the health and safety of employees.

V. Conclusion

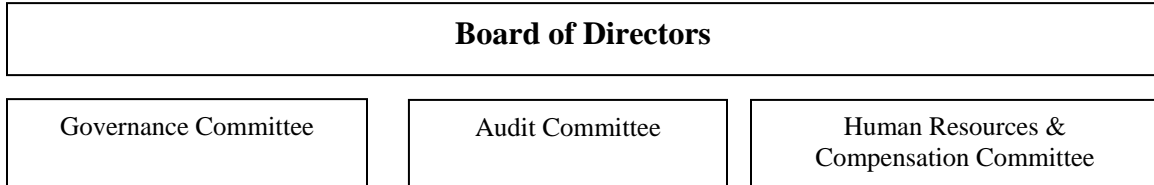
This document presented a summary of our philosophy on the management of risk, discussed the risks that we are exposed to in the normal course of operations, and provided a brief overview of the risk management procedures that are currently employed to aid in managerial decision-making.

NBIMC attempts to take an integrative point of view on the management of risk, and uses tools and processes available to it in various situations, such as quantitative tools for objective investment risks, and qualitative assessments for other risks such as operational risks.

Risk management is, as mentioned, a circular process. The undertaking of risk management procedures often leads to the identification of previously unidentified sources of risk. For this reason, this document is expected to be a living document, and will be annually updated for changes in risk management beliefs, objectives, and processes.

Appendix A: Risk Governance Structure

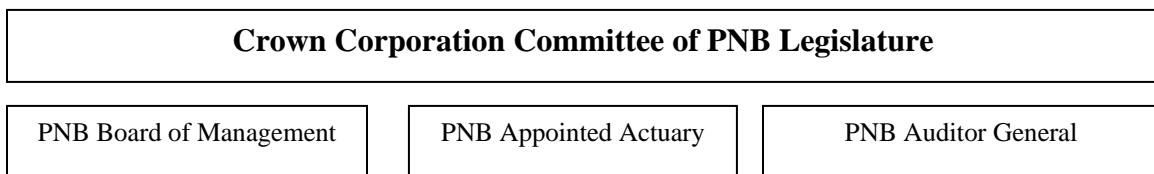
Board of Directors and its Committees



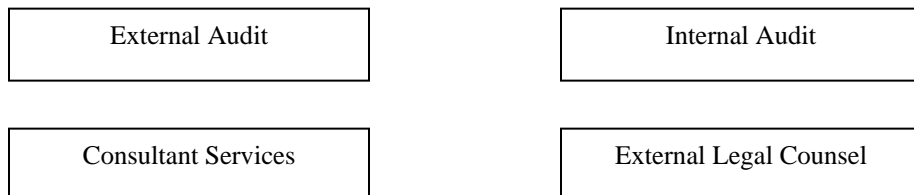
Management and its Committees



Plan Sponsor Relationships



External Service Providers



Appendix B: Risk Management Outline

<u>Core Risk</u>	<u>Detailed Risk</u>	<u>NBIMC Process and Responsibility</u>
STRATEGIC		
	Governance	NBIMC Act, By-laws, Board Policy, Management Procedures, Annual Crown Corporation Committee Appearance, Quarterly Board Governance Committee
	Business Strategy	Five Year Strategic Plan Cycle, Annual Business Planning Process, Regular Board Meetings
	Fiduciary	Procedures Manual, Code of Ethics and Business Conduct (Annual Acknowledgement), Human Resources Manual
	Business Environment	Senior Management Monitor, Industry Association Involvement
	Reputational	PNB Actuary Interaction, PNB Auditor-General Interaction, External and Internal Audit Relationships
	External Communications	Centralized with President, Audit Committee Approval of Financial Press Releases, Annual Report, NBTA Pension Committee Involvement, Annual Crown Corporations Committee Appearance, Annual PNB Board of Management Budget Discussion, Quarterly PNB Board of Management Performance Discussion
INVESTMENT		
	Investment	Asset-Liability Studies (as per receipt of Actuarial Analysis), Board-Approved Investment Policies, Investment Risk Management Committee, Weekly Relative & Nominal Risk Reports (CaR, PAM CaR), Monthly Counterparty Credit Exposure Report, Trade Management Oversight Committee
OPERATIONAL		
	Legal, Regulatory and Policy Compliance	Regular Board Meetings – Quarterly President’s Report risk matrix and Investment Policy Statement, Legal and Regulatory Compliance Reports, Quarterly Board Audit Committee, Weekly Internal Compliance Reports (Independent Team), Annual External Audit, Internal Audit Projects
	Operational	Human Resources Manual, Business Continuity Plan
	Technology	Five Year IT Strategic Plan, IT Risk Management Committee, Business Continuity Plan, IT Policies
	Human Resources	Board Human Resources & Compensation Committee, Annual Succession Plan, Human Resources Manual, Compensation Philosophy, Peer Institutional Manager Compensation Survey participation, External Compensation Consultant Reviews and biennial employee satisfaction surveys