



NBIMC

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Enterprise Risk Management Framework

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I. Overview

Risk is an inherent part of investing and therefore risk management is a very important component of our business and in reaching our primary goal to

“...assist the plan sponsor in meeting the pension promise to its members.”

In order to meet this pension promise NBIMC has based its investment policies on the following two objectives:

- i. Maximize investment returns, and
- ii. Protect accumulated assets

The NBIMC Board of Directors, as outlined in section 2.6 of their Terms of Reference, is responsible for understanding the principal risk 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 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 within the various NBIMC business teams. The 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 NBIMC’s philosophy and management of risk by identifying:

- the types of risks faced by the corporation in its normal business operations and,
- what 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.

An overall risk review is provided through the President's Report at each quarterly Board Meeting, and a more detailed review of this Risk Framework and related issues is conducted annually by the Audit Committee and subsequently the Board.

The corporation believes that this system will significantly contribute to providing the highest long-term risk adjusted returns possible to meet the actuarial requirements of our funds under management.

II. Risk Management Philosophy

NBIMC bases the core of its investment decision making processes on the following Investment Beliefs:

- i. NBIMC is a relatively low risk investment manager when compared to its peers.
- ii. Real Return Bonds, because of their long-term inflation-linked characteristics, are considered to be an excellent match for our 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. NBIMC believes that market inefficiencies present opportunities to add value through active management.

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

In general, NBIMC faces three major categories of risk related to its business activities; Strategic Risk, Investment Risk, and Operational Risk. Risk management is a primary responsibility of the Board of Directors and is guided by a specific Board approved Risk Management Policy. Oversight of specific risks may be delegated to one of the Board Committees as outlined in their Committee Terms of Reference.

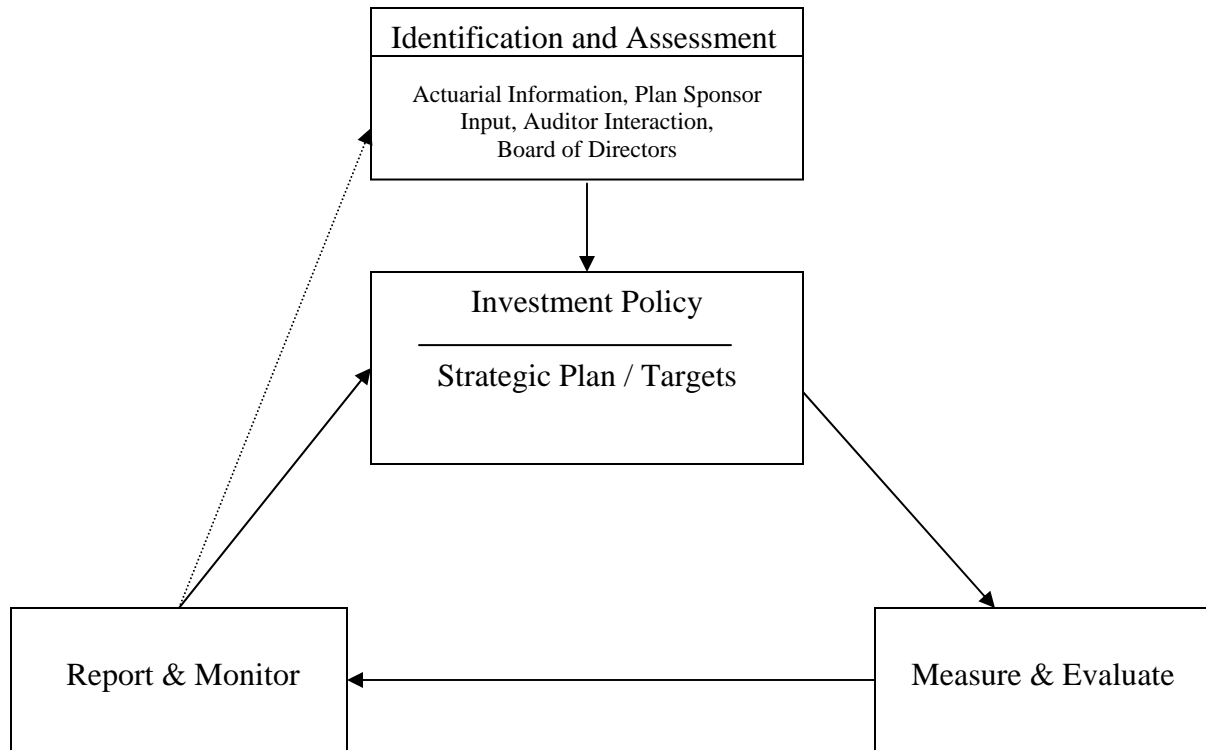
Board of Directors Risk Management Process

NBIMC's risk management process provides a general framework through which the corporation carries out its risk management activities, and is intended to:

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

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.



Risk management at NBIMC is based on several principles and assumptions designed to ensure that the Corporation takes a “proactive and systematic” approach to managing risk. Specifically, the Corporation believes through its Risk Management Policy that:

- i. Risk management is an input into, rather than a substitute for, the business planning process.
- ii. Establishing a risk 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 of the corporation. 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 the risk priorities.

- iv. Risk should be defined broadly enough to encompass all major aspects of the Corporation, including such areas as Investments, Administration, 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 the Corporation's capacity to address them. Resources must therefore be focused on those risks that are deemed to be the most critical.

NBIMC manages 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. 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.

IV. Types of Risk

NBIMC has identified three main categories of risk related to its 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 outlines a more detailed description of each risk category and specific risk element that is reviewed by the corporation. A summary of this information is provided in a table contained in Appendix B.

Category A: Strategic Risk

Strategic risk is the risk of not achieving the Objects and Purposes of the Corporation (or 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 in the Corporation. Good governance processes that outline key responsibility and accountability areas is 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 have set out a series of Board Policies that must be followed, of which first and foremost are the Investment Policies for each fund under management. The Board and each Board Committee also have Terms of Reference that outline their respective responsibilities.

NBIMC management has developed an extensive Administration Manual and Investment Procedures Manual 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 Board Committees, meets at least quarterly. The Corporation is also scheduled to appear annually before the Crown Corporation's Committee of the Legislature.

Business strategy risk

The risk of not developing, executing, or monitoring the business activities of the corporation 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

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 interest 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 setting out administrative and procedural guidelines.

Measures

Directors and employees annually acknowledge understanding and compliance with the Code of Ethics and Business Conduct. Management assembles a corporate Administration Manual and an Investment Risk Management Committee meet on an ad-hoc basis to consider changes to an Investment Procedure Manual.

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

Business environment risk

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

The Corporation 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

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

Measures

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

The Board, through its Audit Committee, annually appoints both an External and Internal audit firm to review and advise on various corporate activities.

External communication risk

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 for the Corporation that include the provision of an annual budget, and submission of an annual report including an auditor's report.

The corporation has undertaken to provide a number of other communication activities that have been outlined in further detail in Appendix B.

Category B: Investment Risk

The risk that investments are not made in accordance with NBIMC's mission and do not achieve the long-term return on investments as required by the Plan Sponsor for the Funds under management.

Responsibility

The Board of Directors is responsible for the Investment Policy of the Funds under management. This 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 program that operates within the Board approved guidelines. This program is outlined in an Investment Procedures Manual. An Investment Risk Management Committee, made up of representatives from both the investment and administration teams, review any changes to investment strategies before they are included in the 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 of the Fund that would be expected at a 95 percent confidence level over a one year time period. The report is distributed weekly to the Board Chair and to members of 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 weekly to the Board Chair and to members of 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

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 can not 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 also mitigated through the actions of a Trade Management Oversight Committee which is composed of senior NBIMC investment staff.

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 in the corporation from reliance on specialized internal processes.

NBIMC has subdivided operational risk as follows:

Legal, regulatory, and policy compliance risk

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 compliance.

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 Corporation's financial reporting process.

Senior management is responsible for the accurate preparation and completeness of the financial reporting prepared by the Corporation.

Measures

The Board of Directors engage two independent accounting firms to act as external and internal auditors of NBIMC's financial reporting and activities.

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

Management in conjunction with the Investment Finance and Corporate Services team also monitor and report on NBIMC's compliance with both Investment Policy and Investment Procedures Manual guidelines on a weekly basis.

Operational risk

The risk of either direct or indirect loss resulting from inadequate or failed internal operational processes.

Responsibility

Management is responsible to ensure operational efficiency.

Measures

The corporation has developed both a comprehensive Administration Manual and a Business Continuity Plan in order to standardize operational processes and to enable an efficient continuity 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.

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 for the corporation also performs ad-hoc audit work in this area.

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.

Measures

As noted above, the corporation has developed both a comprehensive Administration Manual and a Business Continuity Plan. Management utilizes an Information Technology Risk Management Committee to help oversee and develop related initiatives throughout the corporation.

Human Resources Risk

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

Responsibility

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

Senior Management is responsible for effective human resource activities with the help of a Human Resources Coordinator position. 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 this regard. The Committee also annually reviews and advises on Management's annual succession plan for key staff positions.

Management maintains all human resource policies and procedures in the corporation's Administration Manual.

V. Conclusion

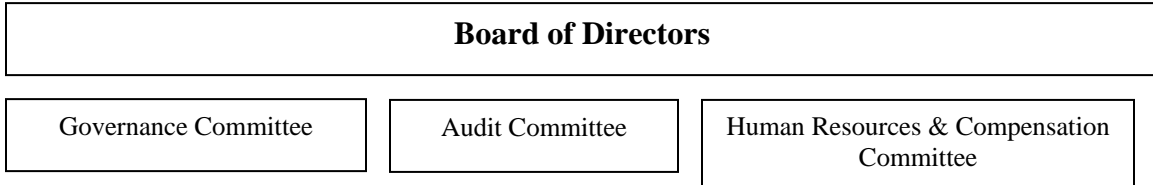
This document presented a summary of NBIMC's philosophy on the management of risk, discussed the risks that the Corporation is exposed to in the normal course of operations, and provided a brief overview of the investment risk management procedures that are currently employed by the corporation to aid 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.

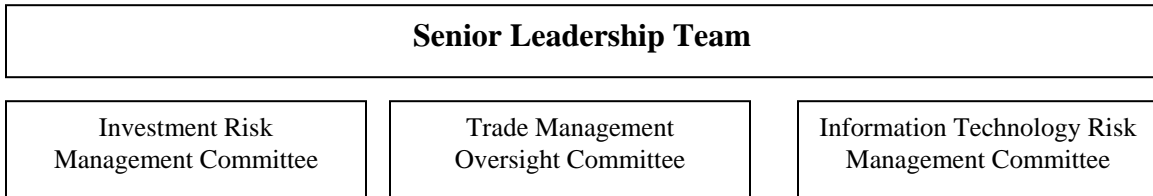
Risk management is, as mentioned, a circular process. The undertaking of risk management procedures often leads to the identification of previously unidentified sources of risk. For this reason, this document is expected to be a living document, and will be continually updated as NBIMC updates its risk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

Appendix A: Risk Governance Structure

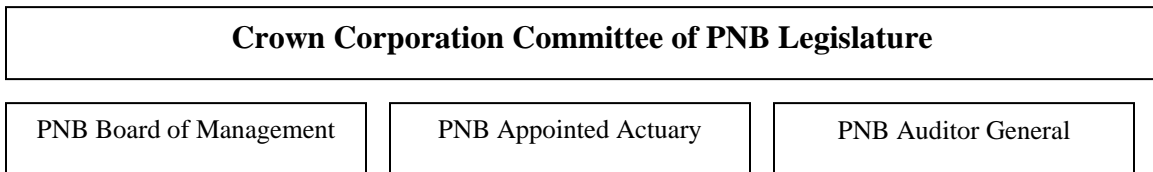
Board of Directors and its Committees



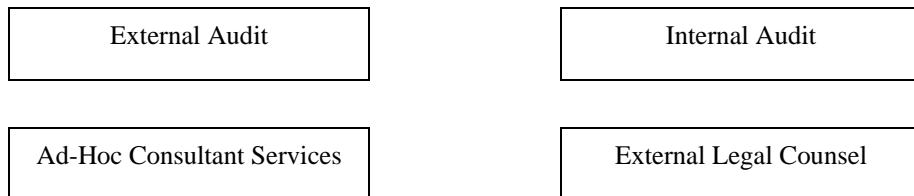
Management and its Committees



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 *		Strategic Plan - 5 year cycle, Annual Business Planning Process, Regular Board Meetings
Fiduciary		Administration Manual, Procedures Manual, Code of Ethics (Annual Acknowledgement)
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 Approves Ad-Hoc Press Releases Annual Report, PSSA Consultation Committee Involvement, 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), Investment Policies (Board Approved), Investment Risk Management Committee, Weekly Relative & Nominal Risk Reports (CaR, PAM CaR), Monthly Counterparty Credit Exposure Report , Key Vendor Selection Policy (Board Approved), Trade Management Oversight Committee (TMOC)
OPERATIONAL		
Legal, Regulatory, and Policy Compliance *		Regular Board Meetings - President Report, Quarterly Board Audit Committee, Weekly Internal Compliance Reports (Independent Team), Annual External Audit, Internal Audit Projects (external co.)
Operational		Administration Manual, Business Resumption Plan (external consultant)
Technology *		IT Risk Management Committee, Business Continuity Plan (external consultant)
Human Resources *		Board Human Resources & Compensation Committee, Annual Succession Plan, Administration Manual, Compensation Philosophy, Peer Institutional Manager Compensation Survey participation and external consultant reviews.
