Enterprise-Wide Risk Management

As a diversified financial services company active in banking, investment, insurance and wealth management services, we are exposed to a variety of risks that are inherent in carrying out our business activities. Having an integrated and disciplined approach to risk management is key to the success of our business. In order to achieve prudent and measured risk-taking that aligns with our business strategy, we are guided by a risk management framework that is embedded in our daily business activities and planning process. The Enterprise Risk and Portfolio Management (ER&PM) group develops our risk appetite, risk policies and limits, and provides independent review and oversight across the enterprise on risk-related issues.

"Putting our risk management principles into practice is crucial to our company’s risk culture. At BMO, all employees are accountable for their risk decisions.”

Surjit Rajpal
Executive Vice-President and Chief Risk Officer
BMO Financial Group

Strengths and Value Drivers

- Unified and strong risk culture that is embedded across the enterprise.
- Risk appetite that shapes business strategies and is integrated into our decision-making processes.
- Independent risk management practices and oversight.
- Robust risk management framework and disciplined approach that addresses risks throughout the organization.

Challenges

- Increasing volume and complexity of regulatory requirements and expectations.
- Continued volatility in global economic conditions, causing heightened marketplace uncertainty.
- Intensifying competitive pressures.

Our Priorities

- Sustain our strong risk culture across the enterprise, with continued focus on maintaining risk independence and effectiveness of our review and oversight.
- Broaden and strengthen risk capabilities, including enhancing our stress testing functions to deliver better insights to both our risk and business groups.
- Enhance our risk management infrastructure and technology platform to support increased capabilities and efficiency.
- Manage regulatory risk effectively.
- Strive to continuously improve our risk management function, ensuring consistency across the organization.

Our Path to Differentiation

- Promote excellence in risk management as a defining characteristic of BMO, both internally and externally.
- Within our independent oversight framework and the limits of our risk appetite, contribute to the enterprise’s customer focus.
- Proactively benchmark our capabilities against risk management best practices.
- Maintain a rigorous credit qualification process.
- Foster a high-performance risk culture through educational training programs and rotational opportunities.
- Provide leadership in the management of enterprise risk and emerging risk-related industry concerns.

Key Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>BM0 Peer avg. (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific provisions</td>
<td>0.31</td>
<td>0.36</td>
<td>0.52</td>
</tr>
<tr>
<td>as % of average net</td>
<td></td>
<td>0.52</td>
<td>0.40</td>
</tr>
<tr>
<td>loans and acceptances</td>
<td></td>
<td>0.61</td>
<td>0.54</td>
</tr>
<tr>
<td>Adjusted PCL</td>
<td>0.21</td>
<td>0.36</td>
<td>0.54</td>
</tr>
<tr>
<td>as % of average net</td>
<td></td>
<td>0.40</td>
<td>0.61</td>
</tr>
<tr>
<td>loans and acceptances</td>
<td></td>
<td></td>
<td>0.54</td>
</tr>
<tr>
<td>Total PCL</td>
<td>0.31</td>
<td>0.38</td>
<td>0.56</td>
</tr>
<tr>
<td>as % of average net</td>
<td></td>
<td>0.40</td>
<td>0.61</td>
</tr>
<tr>
<td>loans and acceptances</td>
<td></td>
<td>0.52</td>
<td>0.52</td>
</tr>
</tbody>
</table>

2010 based on IGAAP.
(1) Calculated based on information available and estimates used.
Adjusted results in this Enterprise-Wide Risk Management section are non-GAAP and are discussed in the Non-GAAP Measures section on page 98.

Text and tables presented in a blue-tinted font in the Enterprise-Wide Risk Management section of the MD&A form an integral part of the 2012 annual consolidated financial statements. They present required disclosures as set out by the International Accounting Standards Board in IFRS 7 Financial Instruments – Disclosures, which permits cross-referencing between the notes to the financial statements and the MD&A. See Note 1 on page 124 and Note 6 on page 134 of the financial statements.
2012 Group Objectives and Achievements

**Enhance the risk management function and ensure consistent practice across the enterprise.**
- Executed a formalized risk practice benchmarking program to assess our processes, identify best practices and implement enhancements in select high-priority risk areas.
- Expanded our risk management capabilities and frameworks in several areas, including enhancements to model risk and our stress testing program.
- Made significant progress towards achieving certification under the Operational Risk Advanced Measurement Approach (AMA).
- Focused on bringing more rigour to performance management and organizational design to increase productivity and streamline activities.

**Continue to embed our strong risk culture across the enterprise, including our acquired businesses.**
- Developed and implemented risk appetite and performance metrics at the line of business level and integrated them into our strategic planning process.
- Reinforced our risk independence and our three-lines-of-defence approach to managing risk across the enterprise.
- Enhanced our foundational risk management and operational risk programs, to increase awareness and understanding of risk.
- Utilized our rotation program to spread our risk culture across the enterprise by transferring talented risk professionals to our business groups.

**Maximize the value of our impaired loans and effectively manage problem accounts.**
- Successfully migrated and integrated the M&I loan portfolio onto our risk platform and systems.
- Reduced exposure to certain stressed real estate assets ahead of schedule.
- BMO’s legacy impaired loans were lower year over year, and levels are trending down.

**Our Approach to Risk Management**
- Understand and manage
- Protect our reputation
- Diversify. Limit tail risk
- Maintain strong capital and liquidity
- Optimize risk return

**Overview**

We are exposed to a variety of risks that are inherent in carrying out our business activities. As such, having a disciplined and integrated approach to managing risk is key to the success of our operations. Our risk management framework seeks to provide appropriate and independent risk oversight across the enterprise and is essential to building competitive advantage and stability for our enterprise. All elements of our risk management framework work together in facilitating prudent measured risk-taking and achieving an appropriate balance between risk and return.

In 2012, our primary challenges were the continuing global economic slowdown, heightened regulatory expectations and the need to achieve balance between risk-taking and rewards in the low growth economy. Our strong disciplined approach to managing risk was integral to withstanding these economic challenges and enabled us to deliver strong results, serve our customers well and maintain our solid reputation in the marketplace. We continue to build upon our robust risk management foundation and strive for continuous improvement, including benchmarking against best practices and enhancing our risk management infrastructure, processes and capabilities. We believe that the steps we have taken and the initiatives we continue to pursue position us to successfully execute our business strategy.
Our enterprise-wide risk management framework consists of our operating model and our risk governance structure, both of which are underpinned by our strong risk culture. Our robust framework provides for the management of each individual risk type: credit and counterparty, market, liquidity and funding, and operational. Other risk categories are also recognized within the framework, including insurance, legal and regulatory, business, model, strategic, reputation and environmental and social.

Our framework is anchored in the three-lines-of-defence approach to managing risk and is fundamental to our operating model. The operating groups are the first line of defence and own the risk in their operations. They are responsible for pursuing suitable business opportunities within our risk appetite. Each operating group must ensure that it is acting within its delegated risk-taking authority, as set out in our corporate risk policies and limits. Each of the groups has established effective processes and controls to ensure that they comply with and operate within these limits.

The second line of defence is provided by ER&PM along with other Corporate Support areas. These groups provide independent oversight and establish corporate risk management policies, infrastructure, processes and practices that address all significant risks across the enterprise.

The third line of defence is our Corporate Audit Group, which monitors the efficiency and effectiveness of controls across various functions within our operations, including control, risk management and governance processes that support the enterprise.

**Risk Governance**

The foundation of our enterprise-wide risk management framework is a governance structure that includes a robust committee structure and a comprehensive set of corporate policies, which are approved by the Board of Directors or its committees, as well as supporting corporate standards and operating guidelines. This enterprise-wide risk management framework is governed through a hierarchy of committees and individual responsibilities as outlined in the diagram below.

Our risk management framework is reviewed on a regular basis by the Risk Review Committee of the Board of Directors (RRC) to provide guidance for the governance of our risk-taking activities. In each of our operating groups, management monitors governance activities, controls, and management processes and procedures. Management also oversees their effective operation within our overall risk management framework. Individual governance committees establish and monitor further risk management limits, consistent with and subordinate to the board-approved limits.

**Limits and Authorities**

Our risk limits are shaped by our risk principles and risk appetite, which also help to shape our business strategies and decisions. These limits are reviewed and approved by the Board of Directors and/or management committees and include:

- Credit and Counterparty Risk – limits on country, industry, portfolio/product segments, and group and single-name exposures;
- Market Risk – limits on Market Value Exposure and stress exposures;
- Liquidity and Funding Risk – limits on minimum levels of liquid assets and maximum levels of asset pledging, as well as guidelines approved by senior management for liability diversification and credit and liquidity requirements; and
- Insurance Risk – limits on policy exposure and reinsurance arrangements.
**Board of Directors** is responsible for the stewardship of BMO and protecting the interest of BMO’s shareholders. The board, either directly or through its committees, is responsible for oversight in the following areas: strategic planning, defining risk appetite, identification and management of risk, capital management, promoting a culture of integrity, governance, internal controls, succession planning and evaluation of senior management, communication, public disclosure and corporate governance.

**Risk Review Committee of the Board of Directors (RRC)** assists the board in fulfilling its oversight responsibilities in relation to BMO’s identification and management of risk, adherence to risk management corporate policies and procedures, compliance with risk-related regulatory requirements and evaluation of the Chief Risk Officer.

**Audit and Conduct Review Committee of the Board of Directors** assists the board in fulfilling its oversight responsibilities for the integrity of BMO’s financial reporting, effectiveness of BMO’s internal controls and performance of its internal and external audit functions.

**Chief Executive Officer (CEO)** is directly accountable to the board for all of BMO’s risk-taking activities. The CEO is supported by the Risk Management Committee and its sub-committees, as well as Enterprise Risk and Portfolio Management.

**Chief Risk Officer (CRO)** reports directly to the CEO and is head of Enterprise Risk and Portfolio Management (ER&PM). The CRO is responsible for providing independent review and oversight of enterprise-wide risks and leadership on risk issues, developing and maintaining a risk management framework and fostering a strong risk culture across the enterprise.

**Enterprise Risk and Portfolio Management (ER&PM)** provides independent oversight of the credit and counterparty, operational and market risk functions. It promotes consistency of risk management practices and standards across the enterprise. ER&PM facilitates a disciplined approach to risk-taking through the execution of independent transactional approval and portfolio management, policy formulation, risk reporting, stress testing, modelling, vetting and risk education responsibilities. This approach seeks to meet enterprise objectives and to ensure that risks assumed are consistent with BMO’s risk appetite.

**Operating Groups** are responsible for managing risk within their respective areas. They exercise business judgment and seek to ensure that policies, processes and internal controls are in place and that significant risk issues are appropriately escalated to ER&PM.

The Board of Directors, based on recommendations from the RRC and the RMC, delegates the setting of risk limits to the CEO. The CEO then delegates more specific authorities to the CRO, who in turn delegates them to the Operating Group CROs. These delegated authorities allow the officers to set risk tolerances, approve geographic and industry sector exposure limits within defined parameters, and establish underwriting and inventory limits for trading and investment banking activities. They are reviewed and approved annually by the Board of Directors based on the recommendation of the RRC. The criteria whereby these authorities may be further delegated throughout the organization, as well as the requirements relating to documentation, communication and monitoring of delegated authorities, are set out in corporate policies and standards.

**Risk Culture**

At BMO, we believe that risk management is the responsibility of every employee within the organization. Our strong risk culture shapes the way we view and manage risk and is evident in the actions and behaviours of our employees and groups as they identify, interpret, discuss and make choices in the face of both opportunity and risk. Our risk culture is deeply rooted across the enterprise, including our acquired business, where we have aligned our risk culture, risk appetite and risk management frameworks, policies and practices this past year.

Our risk culture encourages engagement between ER&PM and the operating groups, contributing to enhanced risk transparency and open and effective communication. This promotes an understanding of the prevalent risks that our businesses are facing and facilitates alignment of business strategies within the limits of our risk appetite, leading to sound business decision-making. We encourage the escalation of concerns regarding potential or emerging risks to senior management so that they can be evaluated and appropriately addressed. Additionally, we support a two-way rotation system that allows employees to transfer between ER&PM and the operating groups in order to effectively embed our strong risk culture across the enterprise.

To enhance our risk management capabilities and support the ongoing strengthening of our risk culture, we continue to add learning opportunities and expand our delivery of risk training across the enterprise. Our educational programs are designed to foster a deep understanding of BMO’s capital and risk management frameworks across the enterprise, providing employees and management with the tools and awareness required to fulfill their responsibilities for independent oversight regardless of their position in the organization. The principles that support our approach to risk management provide a consistent framework for our risk curriculum. This education strategy has been developed in partnership with BMO’s Institute for Learning, our risk management professionals, external risk experts and teaching professionals. Our credit training programs provide role-specific training and practice in sound risk management as a prerequisite to the granting of appropriate discretionary limits to qualified professionals.

**Risk Principles**

Risk-taking and risk management activities across the enterprise are guided by the following principles:

- ER&PM provides independent oversight of risk-taking activities across the organization;
- management of risk is a responsibility at all levels of the organization, employing the three-lines-of-defence approach;
- ER&PM monitors our risk management framework to ensure that our risk profile is maintained within our established risk appetite and supported with adequate capital;
- all material risks to which the enterprise is exposed are identified, measured, managed, monitored and reported;
- decision-making is based on a clear understanding of risk, accompanied by robust metrics and analysis;
• business activities are developed, approved and conducted within established risk limits and should generate a level of return appropriate to their risk profile;
• Economic Capital is used to measure and aggregate risk across all risk types and business activities to facilitate the incorporation of risk into the measurement of business returns; and
• compensation programs are designed and implemented to incorporate incentives that balance short-, medium- and long-term profit generation with the achievement of sustainable, non-volatile earnings growth, in line with our risk appetite.

Risk Appetite
Our Risk Appetite Framework consists of our Risk Appetite Statement, as well as supporting key risk metrics and corporate policies and standards, including limits. Our risk appetite defines the amount of risk that BMO is willing to assume in all risk types, given our guiding principles and capital capacity, thereby supporting sound business initiatives and growth. Our risk appetite is integrated into both our strategic planning processes and our lines of business. On an annual basis, senior management recommends our Risk Appetite Statement for approval by the RMC and the RRC. Our Risk Appetite Statement is defined in both quantitative and qualitative terms and is articulated and applied consistently across the enterprise. Among other things, our risk appetite requires:
• that everything we do is guided by principles of honesty, integrity and respect, as well as high ethical standards;
• only taking risks that are transparent, understood, measured, monitored and managed;
• maintaining strong capital and liquidity and funding positions that meet or exceed regulatory requirements;
• subjecting new products and initiatives to a rigorous review and approval process to ensure all key risks and returns are understood and can be managed with appropriate controls;
• maintaining a robust recovery and resolution framework that enables an effective and efficient response in an extreme crisis;
• targeting a credit rating for BMO of AA- or better;
• limiting exposure to low-probability tail event risks that could jeopardize BMO’s credit ratings, capital position or reputation;
• maintaining a diversified and above-average quality lending portfolio;
• incorporating risk measures into our performance management system;
• maintaining enterprise-wide compliance standards, practices and controls to help prevent regulatory exposures that could adversely affect our financial soundness and reputation; and
• protecting the assets of BMO and BMO’s clients by maintaining a system of strong operational risk controls.

Risk Review and Approval
Risk review and approval processes are established based on the nature, size and complexity of the risks involved. Generally, the process involves a formal review and approval of various categories by either an individual or committee, independent of the originator. Delegated authorities and approvals by category are outlined below.

Portfolio transactions – Transactions are approved through risk assessment processes for all types of transactions, which include operating group recommendations and ER&PM approval of credit risk and transactional and position limits for market risk.

Structured transactions – New structured products and transactions with significant reputation, legal, accounting, regulatory or tax risk are reviewed by the Reputation Risk Management Committee or the Trading Products Risk Committee, as appropriate.

Investment initiatives – Documentation of risk assessments is formalized through our investment spending approval process, which is reviewed and approved by Corporate Support areas.

New products and services – Policies and procedures for the approval of new or modified products and services offered to our customers are reviewed and approved by Corporate Support areas, as well as other senior management committees, including the Operational Risk Committee and Reputation Risk Management Committee, as appropriate.

Risk Monitoring
Enterprise-level risk transparency and monitoring and the associated reporting are critical components of our framework and operating culture that help senior management, committees and the Board of Directors to effectively exercise their business management, risk management and oversight responsibilities. Internal reporting includes a synthesis of key risks and associated metrics that the organization currently faces. This reporting highlights our most significant risks, including assessments of our top and emerging risks, to provide senior management and the Board of Directors with timely, actionable and forward-looking risk reporting on the significant risks our organization faces. This reporting includes material to facilitate assessments of these risks relative to our risk appetite and the relevant limits established within our framework.

On a regular basis, reporting on risk is also provided to stakeholders, including regulators, external rating agencies and our shareholders, as well as to others in the investment community.

Risk-Based Capital Assessment
Two measures of risk-based capital are used by BMO: Economic Capital and Regulatory Capital. Both are aggregate measures of the risk that we undertake in pursuit of our financial targets. Our operating model provides for the direct management of each type of risk, as well as the management of risks on an integrated basis. Economic Capital is our integrated internal measure of the risk underlying our business activities. It represents management’s estimate of the magnitude of economic losses that could occur if adverse situations arise, and allows returns to be adjusted for risks. Economic Capital is calculated for various types of risk – credit, market (trading and non-trading), operational and business – where measures are based on a time horizon of one year. It incorporates a combination of both expected and unexpected losses to assess the extent and correlation of risk before authorizing new exposures; and Economic Capital methodologies and model inputs are reviewed and/or re-calibrated on an annual basis, as applicable. Our Economic Capital models provide a forward-looking estimate of the difference in our maximum potential loss in economic (or market) value and our expected loss, measured over a specified time interval and using a defined confidence level. Both expected and unexpected loss measures on either a transaction or portfolio basis reflect current market conditions and credit quality. As the recovery continues these measures reduce, reflecting portfolio quality improvements, offset somewhat by increases due to growth.

Stress Testing
Stress testing is a key element of our risk and capital management frameworks and informs our business planning, strategy and decision-making processes. We conduct stress testing to evaluate the potential effects of tail events on our balance sheet, earnings and liquidity and capital positions. Enterprise stress testing supports our internal capital adequacy assessment and target-setting through the analysis of macroeconomic scenarios that are uniformly executed by risk and finance groups.

During 2012, we focused on implementing a stress testing framework that enhances governance, processes and systems to coordinate, execute and integrate stress testing across legal entities, lines of business, portfolios and products. This will facilitate more effective linkages between stress testing results and our risk appetite. With the technology enhancements we are currently implementing, we will be able to more readily aggregate stress testing results across all risk types, thereby generating a more holistic view of potential vulnerabilities and opportunities.
Credit and Counterparty Risk

Credit and counterparty risk is the potential for loss due to the failure of a borrower, endorser, guarantor or counterparty to repay a loan or honour another predetermined financial obligation. This is the most significant measurable risk that BMO faces.

Credit and counterparty risk exists in every lending activity that BMO enters into, as well as in the sale of treasury and other capital markets products, the holding of investment securities and securitization activities. BMO’s robust credit risk management framework is aligned with the three-lines-of-defence approach to managing risk. As the first line of defence, operating groups are accountable for recommending credit decisions based on the completion of appropriate due diligence, and they assume ownership of the risk. As the second line of defence, ER&PM approves credit decisions and is accountable for providing independent oversight of the risks assumed by the operating groups. These experienced and skilled individuals are subject to a rigorous lending qualification process and operate in a disciplined environment with clear delegation of decision-making authority, including individually delegated lending limits. Credit decision-making is conducted at the management level appropriate to the size and risk of each transaction in accordance with comprehensive corporate policies, standards and procedures governing the conduct of credit risk activities.

Credit risk is assessed and measured using risk-based parameters:

**Exposure at Default (EAD)** represents an estimate of the outstanding amount of a credit exposure at the time a default may occur. For off-balance sheet amounts and undrawn amounts, EAD includes an estimate of any further amounts that may be drawn at the time of default.

**Loss Given Default (LGD)** is the amount that may not be recovered in the event of a default, presented as a proportion of the exposure at default. LGD takes into consideration the amount and quality of any collateral held.

**Probability of Default (PD)** represents the likelihood that a credit obligation (loan) will not be repaid and will go into default. A PD is assigned to each account, based on the type of facility, the product type and customer characteristics. The credit history of the counterparty/portfolio and the nature of the exposure are taken into account in the determination of a PD.

**Expected Loss (EL)** is a measure representing the loss that is expected to occur in the normal course of business in a given period of time. EL is calculated as a function of EAD, LGD and PD.

Under Basel II, there are three approaches available for the measurement of credit risk: Standardized, Foundation Internal Ratings Based and Advanced Internal Ratings Based (AIRB). Subject to a transitional floor based on the Standardized Approach, we apply the AIRB Approach for calculations of credit risk in our portfolios, including portfolios of our subsidiary BMO Bankcorp, Inc. (now part of BMO Financial Corp.). The Standardized Approach is currently being used in the acquired M&I business, and plans to transition to the AIRB Approach have been submitted to OSFI and are pending approval.

### Risk Rating Systems

BMO’s risk rating systems are designed to assess and measure the risk of any exposure. The rating systems differ for the consumer and small business portfolios and the commercial and corporate portfolios.

#### Consumer and Small Business

The consumer and small business portfolios are made up of a diversified group of individual customer accounts and include residential mortgages, personal loans, and credit card and small business loans. These loans are managed in pools of homogeneous risk exposures. For these pools, credit risk models and decision support systems are developed using established statistical techniques and expert systems for underwriting and monitoring purposes. Adjudication models, behavioural scorecards, decision trees and expert knowledge are combined to produce optimal credit decisions in a centralized and automated environment. The characteristics of both the borrower and the credit obligation, along with past portfolio experience, are used to predict the credit performance of new accounts. These metrics are used to define the overall credit risk profile of the portfolio, predict future performance of existing accounts for ongoing credit risk management and determine both Economic Capital and Basel II regulatory capital. The exposure of each pool is assigned risk parameters (PD, LGD and EAD) based on the performance of the pool, and these assignments are reviewed and updated monthly for changes. The PD risk profile of the AIRB Retail portfolio at October 31, 2012, was as follows:

<table>
<thead>
<tr>
<th>PD risk profile</th>
<th>PD range</th>
<th>% of retail EAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptionally low</td>
<td>≤ 0.05%</td>
<td>16.7</td>
</tr>
<tr>
<td>Very low</td>
<td>&gt; 0.05%  to 0.20%</td>
<td>44.7</td>
</tr>
<tr>
<td>Low</td>
<td>&gt; 0.20%  to 0.75%</td>
<td>21.0</td>
</tr>
<tr>
<td>Medium</td>
<td>&gt; 0.75%  to 7.0%</td>
<td>15.5</td>
</tr>
<tr>
<td>High</td>
<td>&gt; 7.0%   to 99.9%</td>
<td>1.5</td>
</tr>
<tr>
<td>Default</td>
<td>100%</td>
<td>0.6</td>
</tr>
</tbody>
</table>

#### Commercial and Corporate Lending

Within the commercial and corporate portfolios, we utilize an enterprise-wide risk rating framework that is applied to all of our sovereign, bank, corporate and commercial counterparties. This framework is consistent with the principles of Basel II, under which minimum regulatory capital requirements for credit risk are determined. One key element of this framework is the assignment of appropriate borrower risk ratings to help quantify potential credit risk. BMO’s risk rating framework establishes counterparty risk ratings using methodologies and rating criteria based on the specific risk characteristics of each counterparty. The resulting rating is then mapped to a probability of default over a one-year time horizon. As counterparties migrate between risk ratings, the probability of default associated with the counterparty changes.
As demonstrated in the table below, our internal risk rating system corresponds in a logical manner to those of the external rating agencies.

### Borrower Risk Rating Scale

<table>
<thead>
<tr>
<th>BMO rating</th>
<th>Description of risk</th>
<th>Moody’s Investors Service implied equivalent</th>
<th>Standard &amp; Poor’s implied equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-1 to I-3</td>
<td>Undoubtedly to minimal</td>
<td>Aaa to Aa3</td>
<td>AAA to AA-</td>
</tr>
<tr>
<td>I-4 to I-5</td>
<td>Modest</td>
<td>A1 to Baa1</td>
<td>A+ to BBB+</td>
</tr>
<tr>
<td>I-6 to I-7</td>
<td>Average</td>
<td>Baa2 to Baa3</td>
<td>BBB to BBB-</td>
</tr>
<tr>
<td>Non-investment grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-1 to S-2</td>
<td>Acceptable</td>
<td>Ba1 to Ba2</td>
<td>BB+ to BB</td>
</tr>
<tr>
<td>S-3 to S-4</td>
<td>Marginal</td>
<td>Ba3 to B1</td>
<td>BB- to B+</td>
</tr>
<tr>
<td>Watchlist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-1</td>
<td>Deteriorating</td>
<td>B2</td>
<td>B</td>
</tr>
<tr>
<td>P-2 to P-3</td>
<td>Watchlist</td>
<td>B3 to Ca</td>
<td>B- to CC</td>
</tr>
<tr>
<td>Default and impaired</td>
<td></td>
<td>Default/default and impaired</td>
<td>C</td>
</tr>
</tbody>
</table>

### Policies and Standards

BMO’s credit risk management framework is built on governing principles defined in a series of corporate policies and standards, which flow through to more specific guidelines and procedures. These are reviewed on a regular basis to keep them current and consistent with BMO’s risk appetite. The structure, limits, collateral requirements, ongoing management, monitoring and reporting of our credit exposures are all governed by these credit risk management principles.

### Credit Risk Governance

The RRC has oversight of the management of all risks faced by the enterprise, including credit risk. Operating practices include the ongoing monitoring of credit risk exposures and regular portfolio and sector reporting to the board and to senior management committees. Performing accounts are reviewed on a regular basis, with most commercial and corporate accounts reviewed at least annually. The frequency of review is increased in accordance with the likelihood and size of potential credit losses, with deteriorating-higher-risk situations referred to specialized account management groups for closer attention, when appropriate. Corporate Audit Group reviews and tests management processes and controls and samples credit transactions for adherence to credit terms and conditions, as well as to governing policies, standards and procedures. In addition, we carry out regular portfolio and sector reviews, including stress testing and scenario analysis based on current, emerging or prospective risks.

### Portfolio Management

BMO’s credit risk governance policies provide for an acceptable level of diversification. Limits are in place for several portfolio dimensions, including industry, country, product and single-name concentrations, as well as transaction-specific limits. At year end, our credit assets consisted of a well-diversified portfolio comprised of millions of clients, with a focus on our markets. Risk assessments are conducted on an ongoing basis to prevent concentration of credit risk.

### Collateral Management

Collateral is used for credit risk mitigation purposes and minimizes losses that would otherwise be incurred. Depending on the type of borrower, the assets available and the structure and term of the credit obligations, collateral can take various forms. Investment grade liquid securities are regularly pledged in support of treasury counterparty facilities. For corporate and commercial borrowers, collateral can take the form of pledges of the assets of a business, such as accounts receivable, inventory, machinery and real estate, or personal assets pledged in support of guarantees. On an ongoing basis, collateral is subject to regular valuation as prescribed in the relevant governing policies and standards, which incorporate set formulas for certain asset types in the context of current economic and market circumstances.

### Allowance for Credit Losses

Across all loan portfolios, BMO employs a disciplined approach to provisioning and loan loss evaluation, with the prompt identification of problem loans being a key risk management objective. BMO maintains both specific and collective allowances for credit losses (previously referred to as general allowances). Specific allowances reduce the aggregate carrying value of credit assets for which there is evidence of deterioration in credit quality. We also maintain a collective allowance in order to cover any impairment in the existing portfolio that cannot yet be associated with individually identified impaired loans. Our approach to establishing and maintaining the collective allowance is based on the guideline issued by our regulator, OSFI. The collective allowance is reviewed on a quarterly basis. For the purposes of calculating the collective allowance, we group loans on the basis of similar credit risk characteristics. The calculation methodology incorporates both quantitative and qualitative components to determine an appropriate level for the collective allowance. The quantitative component consists of a collective allowance model that measures long-run expected losses based on probability of default and loss given default risk parameters. For business loans, key factors that determine the expected loss include the underlying risk rating of the borrower, the industry sector, credit product and amount and quality of collateral held. For consumer loans, exposures are pooled based on similar risk characteristics and risk parameters are determined from the long-run default and loss performance of each pool. The expected loss is adjusted to reflect qualitative factors such as management’s credit judgment with respect to current macroeconomic and business conditions, portfolio-specific considerations, credit quality trends, changes in lending practices, model factors and the level of non-performing balances (impaired loans) for which a specific allowance has not yet been assessed.

---

Material in blue-tinted font above is an integral part of the 2012 annual consolidated financial statements (see page 75).
Market Risk

Market risk is the potential for adverse changes in the value of BMO’s assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads, as well as the risk of credit migration and default.

BMO incurs market risk in its trading and underwriting activities and structural banking activities.

As part of our enterprise-wide risk management framework, we apply extensive governance and management processes to our market risk-taking activities. These include:

- oversight by senior governance committees, including the Balance Sheet and Capital Management Committee, RMC and RRC;
- an Economic Capital process that incorporates market risk measures (market value exposures);
- independent valuation of trading positions and measurement of market risk;
- a broad set of policies and corporate standards;
- monitoring an extensive range of risk metrics as appropriate for the respective trading portfolios, including VaR, stress and scenario tests, risk sensitivities and operational metrics;
- a well-developed set of limits with appropriate monitoring, reporting and escalation of limit breaches; and
- a model risk management framework to control for model risk.

Primary measures for structural market risk include Earnings Volatility (EV) and Market Value Exposure (MVE). These positions are summarized in the table on page 85. The primary measure for market risk in trading and underwriting activities is MVE.

BMO’s Market Risk group provides independent oversight of trading and underwriting portfolios with the goal of ensuring:

- market risk of our trading and underwriting activities is measured and modelled in compliance with corporate policies and standards;
- risk profiles of our trading and underwriting activities are maintained within our risk appetite, and are monitored and reported to traders, management, senior executives and board committees;
- proactive identification and reporting to management, senior executives and board committees of specific exposures or other factors that expose BMO to unusual, unexpected, inappropriate or otherwise not fully identified or quantified risks associated with market or traded credit exposures; and
- all individuals authorized to execute trading and underwriting activities on behalf of BMO are appropriately informed of BMO’s risk-taking governance, authority structure and procedures and processes, and are given access to and guidance on the relevant corporate policies and standards.

Our Market Risk group also provides oversight of structural market risk, which is managed by BMO’s Corporate Treasury group and described on pages 85 and 86.

Earnings Volatility (EV) is a measure of the adverse impact of potential changes in market parameters on the projected 12-month after-tax net income of a portfolio of assets, liabilities and/or off-balance sheet positions, measured at a 99% confidence level over a specified holding period.

Market Value Exposure (MVE) is a measure of the adverse impact of potential changes in market parameters on the market value of a portfolio of assets, liabilities and off-balance sheet positions, measured at a 99% confidence level over a specified holding period. The holding period considers current market conditions and composition of the portfolio to determine how long it would take to neutralize the market risk without adversely affecting market prices. For trading and underwriting activities, MVE is comprised of Value at Risk and Issuer Risk.

Value at Risk (VaR) is measured for specific classes of risk in BMO’s trading and underwriting activities: interest rate, foreign exchange rate, equity and commodity prices and their implied volatilities. This measure calculates the maximum loss likely to be experienced in the portfolio, measured at a 99% confidence level over a specified holding period.

Issuer Risk arises in BMO’s trading and underwriting activities, and measures the adverse impact of credit spread, credit migration and default risks on the market value of fixed-income instruments and similar securities. Issuer risk is measured at a 99% confidence level over a specified holding period.

Trading and Underwriting Market Risk

To capture the multi-dimensional aspects of market risk effectively, a number of metrics are used, including VaR, stress testing, option sensitivities, position concentrations, market and notional values and revenue losses.

VaR and stress testing are estimates of portfolio risk, but have limitations. Among the limitations of VaR is the assumption that all positions can be liquidated within the assigned one-day holding period (ten-day holding period for regulatory calculations), which may not be the case in illiquid market conditions, and that historical data can be used as a proxy to predict future market events. Scenario analysis and probabilistic stress testing are performed daily to determine the impact of unusual and/or unexpected market changes on our portfolios. As well, historical and event stresses are tested on a weekly basis, including tests of scenarios such as the stock market crash of 1987 and the collapse of Lehman Brothers in 2008. Ad hoc analyses are run to examine our sensitivity to high-impact, low-probability hypothetical scenarios. Scenarios are amended, added or deleted to better reflect changes in underlying market conditions. The results are reported to the lines of business, RMC and RRC on a regular basis. Stress testing is limited by the number of scenarios that can be run, and by the fact that not all downside scenarios can be predicted and effectively modelled. Neither VaR nor stress testing is viewed as a definitive predictor of the maximum amount of losses that could occur in any one day, because both measures are computed at prescribed confidence levels and their results could be exceeded in highly volatile market conditions.

On a daily basis, exposures are aggregated by lines of business and risk type and monitored against delegated limit levels, and the results are reported to the appropriate stakeholders. BMO has a robust governance process in place to ensure adherence to delegated market risk limits. Amounts exceeding established limits are communicated to senior management on a timely basis for resolution and appropriate action.
Within the Market Risk group, the Valuation Product Control group is responsible for independent valuation of all portfolios within BMO, including trading, available-for-sale and underwriting portfolios within Capital Markets Trading Products and Corporate Treasury to ensure that they are materially accurate by:

- developing and maintaining valuation adjustment policies and procedures in accordance with regulatory requirements and IFRS;
- establishing official rate sources for valuation of all portfolios; and
- providing an independent review of portfolios where trader prices are used for valuation. This would include instruments accounted for on a trading and available-for-sale basis.

The Valuation Product Control processes include all over-the-counter and exchange-traded instruments that are booked within Capital Markets Trading Products portfolios. These include both trading and available-for-sale (AFS) securities. The Valuation Product Control group also performs an independent valuation of certain portfolios outside of Capital Markets Trading Products.

Trader valuations are reviewed to determine whether they align with an independent assessment of the market value of the portfolio. If the valuation difference exceeds the prescribed tolerance threshold, a valuation adjustment is recorded in accordance with our accounting policy and regulatory requirements. Prior to the final month-end general ledger close, meetings are held between key stakeholders from the lines of business, Market Risk, Capital Markets Finance and the Chief Accountant’s Group to review all valuation adjustments that are established by the Market Risk group.

The Valuation Steering Committee is BMO’s senior management valuation committee. It meets at least quarterly to address the more challenging material valuation issues in BMO’s portfolios and acts as a key forum for discussing positions categorized as Level 3 for financial reporting purposes and their inherent uncertainty.

At a minimum, the following are considered when determining appropriate valuation adjustments: credit valuation adjustments, closeout costs, uncertainty, administrative costs, and liquidity and model risk. Also, a fair value hierarchy is used to categorize the inputs used in the valuation of securities, liabilities, derivative assets and derivative liabilities. Level 1 inputs consist of quoted market prices, Level 2 inputs consist of models that use observable market information and Level 3 inputs consist of models without observable market information. Details of Level 1, Level 2 and Level 3 fair value measurements can be found in Note 29 on page 170 of the financial statements.

Our models are used to determine market risk Economic Capital for each of our lines of business and to determine regulatory capital. For capital calculation purposes, longer holding periods and/or higher confidence levels are used than are employed in day-to-day risk management. Prior to use, models are subject to review under the Model Risk Corporate Standard by our Model Risk and Vetting group. The Model Risk Corporate Standard outlines minimum requirements for the identification, assessment, monitoring and management of models and model risk throughout the enterprise and is described on page 90.

We use a variety of methods to verify the integrity of our risk models, including the application of backtesting against hypothetical losses. This process assumes there are no changes in the previous day’s closing positions and then isolates the effects of each day’s price movements against those closing positions. Models are validated by assessing how often the calculated hypothetical losses exceed the MVE measure over a defined period. Results of this testing confirm the reliability of our models. The correlations and volatility data that underpin our models are updated monthly, so that MVE measures reflect current levels of volatility.

Market risk exposures arising from trading and underwriting activities are summarized in the table below. The total trading and underwriting MVE yearly increase was primarily due to higher equity risk along with slightly higher interest rate risk in mark-to-market portfolios. The Interest Rate VaR (AFS) decrease over the year was mainly due to a reduction in exposures during the latter part of the year. For stressed VaR, reported in the table below, model inputs are calibrated to historical data from a period of significant financial stress, whereas model inputs for VaR are calibrated to data from a trailing one-year period. BMO is seeking regulatory approval for Debt Specific Risk (DSR) and Incremental Risk Charge (IRC) regulatory capital models. For this reason, some of the Trading and Underwriting MVE measures for 2013 will be changed to align with these measures.

### Total Trading and Underwriting MVE Summary ($ millions)\(^*\)

<table>
<thead>
<tr>
<th>For the year ended October 31, 2012</th>
<th>Year-end</th>
<th>Average</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commodity VaR</strong></td>
<td>(0.6)</td>
<td>(0.6)</td>
<td>(1.0)</td>
<td>(0.2)</td>
</tr>
<tr>
<td><strong>Equity VaR</strong></td>
<td>(6.6)</td>
<td>(5.9)</td>
<td>(8.6)</td>
<td>(4.0)</td>
</tr>
<tr>
<td><strong>Foreign exchange VaR</strong></td>
<td>(0.2)</td>
<td>(2.3)</td>
<td>(6.8)</td>
<td>(0.1)</td>
</tr>
<tr>
<td><strong>Interest rate VaR (mark-to-market)</strong></td>
<td>(6.9)</td>
<td>(8.4)</td>
<td>(13.5)</td>
<td>(6.1)</td>
</tr>
<tr>
<td><strong>Diversification</strong></td>
<td>4.1</td>
<td>7.0</td>
<td>nm</td>
<td>nm</td>
</tr>
<tr>
<td><strong>Trading market VaR</strong></td>
<td>(10.2)</td>
<td>(10.2)</td>
<td>(15.9)</td>
<td>(7.5)</td>
</tr>
<tr>
<td><strong>Trading and underwriting issuer risk</strong></td>
<td>(3.4)</td>
<td>(5.0)</td>
<td>(8.0)</td>
<td>(2.6)</td>
</tr>
<tr>
<td><strong>Total trading and underwriting MVE</strong></td>
<td>(13.6)</td>
<td>(15.2)</td>
<td>(21.3)</td>
<td>(10.8)</td>
</tr>
<tr>
<td><strong>Interest rate VaR (AFS)</strong></td>
<td>(8.2)</td>
<td>(15.0)</td>
<td>(23.1)</td>
<td>(8.2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For the year ended October 31, 2011</th>
<th>Year-end</th>
<th>Average</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commodity VaR</strong></td>
<td>(0.3)</td>
<td>(0.2)</td>
<td>(0.6)</td>
<td>(0.1)</td>
</tr>
<tr>
<td><strong>Equity VaR</strong></td>
<td>(5.4)</td>
<td>(4.7)</td>
<td>(7.6)</td>
<td>(3.4)</td>
</tr>
<tr>
<td><strong>Foreign exchange VaR</strong></td>
<td>(0.9)</td>
<td>(2.8)</td>
<td>(6.6)</td>
<td>(0.1)</td>
</tr>
<tr>
<td><strong>Interest rate VaR (mark-to-market)</strong></td>
<td>(6.3)</td>
<td>(10.0)</td>
<td>(16.0)</td>
<td>(5.8)</td>
</tr>
<tr>
<td><strong>Diversification</strong></td>
<td>4.2</td>
<td>6.6</td>
<td>nm</td>
<td>nm</td>
</tr>
<tr>
<td><strong>Trading market VaR</strong></td>
<td>(8.7)</td>
<td>(11.1)</td>
<td>(17.1)</td>
<td>(7.8)</td>
</tr>
<tr>
<td><strong>Trading and underwriting issuer risk</strong></td>
<td>(3.6)</td>
<td>(4.3)</td>
<td>(8.8)</td>
<td>(2.8)</td>
</tr>
<tr>
<td><strong>Total trading and underwriting MVE</strong></td>
<td>(12.3)</td>
<td>(15.4)</td>
<td>(22.6)</td>
<td>(11.1)</td>
</tr>
<tr>
<td><strong>Interest rate VaR (AFS)</strong></td>
<td>(11.3)</td>
<td>(13.3)</td>
<td>(19.9)</td>
<td>(6.7)</td>
</tr>
</tbody>
</table>

### Total Trading Market Stressed Value at Risk (VaR) ($ millions)\(^*\)

<table>
<thead>
<tr>
<th>For the year ended October 31, 2012</th>
<th>Year-end</th>
<th>Average</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commodity stressed VaR</strong></td>
<td>(1.4)</td>
<td>(1.0)</td>
<td>(2.5)</td>
<td>(0.3)</td>
</tr>
<tr>
<td><strong>Equity stressed VaR</strong></td>
<td>(11.1)</td>
<td>(9.6)</td>
<td>(13.4)</td>
<td>(5.6)</td>
</tr>
<tr>
<td><strong>Foreign exchange stressed VaR</strong></td>
<td>(0.2)</td>
<td>(3.6)</td>
<td>(12.0)</td>
<td>(0.1)</td>
</tr>
<tr>
<td><strong>Interest rate stressed VaR</strong></td>
<td>(10.4)</td>
<td>(14.4)</td>
<td>(21.4)</td>
<td>(9.5)</td>
</tr>
<tr>
<td><strong>Diversification</strong></td>
<td>9.0</td>
<td>11.5</td>
<td>nm</td>
<td>nm</td>
</tr>
<tr>
<td><strong>Trading market stressed VaR</strong></td>
<td>(14.1)</td>
<td>(17.1)</td>
<td>(27.4)</td>
<td>(11.0)</td>
</tr>
</tbody>
</table>

\(^*\) One-day measure using a 99% confidence level.

nm – not meaningful
Trading and Underwriting Net Revenues versus Market Value Exposure
November 1, 2011 to October 31, 2012 ($ millions)

MVE Risk Factors
November 1, 2011 to October 31, 2012 ($ millions)

(1) November 28 – $37.5 million which primarily reflects normal trading and credit valuation adjustments.
(2) December 8 – ($20.8) million which primarily reflects normal trading and credit valuation adjustments.
(3) January 31 – $39.7 million which primarily reflects normal trading, valuation adjustments and underwriting.
(4) February 29 – $43.7 million which reflects normal trading, valuation adjustments including credit and underwriting.
(5) June 29 – $36.5 million which primarily reflects normal trading and underwriting.
(6) October 23 – $37.8 million which primarily reflects normal trading activity.
Structural Market Risk

Structural market risk is comprised of interest rate risk arising from our banking activities (loans and deposits) and foreign exchange risk arising from our foreign currency operations. Structural market risk is managed in support of high-quality earnings and maximization of sustainable product spreads. The RRC approves the market risk policy limits governing structural market risk and regularly reviews structural market risk positions. The Balance Sheet and Capital Management Committee and the RMC provide senior management oversight. BMO’s Corporate Treasury group is responsible for the ongoing management of structural market risk across the enterprise, with independent oversight provided by the Market Risk group.

Structural interest rate risk arises primarily from interest rate mismatches and product embedded options. Interest rate mismatch risk results from differences in the scheduled maturity, repricing dates or reference rates of assets, liabilities and derivatives. Product embedded option risk results from product features that allow customers to alter scheduled maturity or repricing dates. Product embedded options include loan prepayment and deposit redemption privileges and committed rates on unadvanced mortgages. The net interest rate mismatch, representing residual assets funded by common shareholders’ equity, is managed to a target duration, while product embedded options are managed to low risk levels. The net interest rate mismatch risk is primarily managed with interest rate swaps and securities. Product embedded option risk exposures are primarily managed through a dynamic hedging process.

Structural foreign exchange risk arises primarily from translation risk related to the net investment in our U.S. operations and from transaction risk associated with our U.S.-dollar-denominated net income.

Translation risk represents the impact changes in foreign exchange rates can have on the bank’s reported shareholders’ equity and capital ratios. When the Canadian dollar appreciates relative to the U.S. dollar, unrealized translation losses on our net investment in foreign operations, net of related hedging activities, are reported in other comprehensive income in shareholders’ equity. In addition, the Canadian dollar equivalent of U.S.-dollar-denominated RWA decreases. The reverse is true when the Canadian dollar depreciates relative to the U.S. dollar. Consequently, we may hedge our net investment in foreign operations to ensure translation risk does not materially impact our capital ratios.

Transaction risk is managed by assessing at the start of each quarter whether to enter into foreign exchange forward contract hedges that are expected to partially offset the pre-tax effects of Canadian/U.S. dollar exchange rate fluctuations in the quarter on the expected U.S. dollar net income for the quarter. The Canadian dollar equivalent of BMO’s U.S.-dollar-denominated results is affected, favourably or unfavourably, by movements in the Canadian/U.S. dollar exchange rate.

Rate movements will affect future results measured in Canadian dollars and the impact on those results is a function of the periods in which revenues, expenses and provisions for credit losses arise. If future results are consistent with results in 2012, each one cent increase (decrease) in the Canadian/U.S. dollar exchange rate would be expected to increase (decrease) reported net income before income taxes for the year by $18 million.

Structural MVE and EV measures both reflect holding periods of between one month and three months and incorporate the impact of correlation between market variables. Structural MVE and EV are summarized in the following table. Structural MVE declined from the prior year primarily due to higher modelled U.S. mortgage and securities prepayments in the low interest rate environment, and lower modelled interest rate volatility. Structural EV continues to be managed to low levels.

### Structural Balance Sheet Market Value Exposure and Earnings Volatility ($ millions)

<table>
<thead>
<tr>
<th>Description</th>
<th>2012 (Canadian equivalent)</th>
<th>2011 (Canadian equivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Value Exposure (pre-tax)</td>
<td>(590.6)</td>
<td>(685.9)</td>
</tr>
<tr>
<td>12-month Earnings Volatility (after tax)</td>
<td>(74.0)</td>
<td>(95.0)</td>
</tr>
</tbody>
</table>

*Measured at a 99% confidence interval.

In addition to MVE and EV, we use simulations, sensitivity analysis, stress testing and gap analysis to measure and manage interest rate risk. The interest rate gap position is disclosed in Note 19 on page 154 of the financial statements.

Structural interest rate sensitivity to an immediate parallel increase or decrease of 100 and 200 basis points in the yield curve is disclosed in the table below. This sensitivity analysis is performed and disclosed by many financial institutions and facilitates comparison with our peer group. Economic value exposure declined from the prior year primarily due to higher modelled U.S. mortgage and securities prepayments in the low interest rate environment. Earnings sensitivities continue to be managed to low levels. The asset-liability profile at the end of the year results in a structural earnings benefit from interest rate increases and structural earnings exposure to interest rate decreases.

### Structural Balance Sheet Interest Rate Sensitivity ($ millions)

<table>
<thead>
<tr>
<th>Description</th>
<th>As at October 31, 2012</th>
<th>As at October 31, 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Economic value sensitivity</td>
<td>12-month earnings sensitivity</td>
</tr>
<tr>
<td></td>
<td>(pre-tax)</td>
<td>after tax</td>
</tr>
<tr>
<td>100 basis point increase</td>
<td>(537.6)</td>
<td>20.1</td>
</tr>
<tr>
<td>100 basis point decrease</td>
<td>402.9</td>
<td>74.6</td>
</tr>
<tr>
<td>200 basis point increase</td>
<td>(1,223.1)</td>
<td>27.2</td>
</tr>
<tr>
<td>200 basis point decrease</td>
<td>783.6</td>
<td>75.1</td>
</tr>
</tbody>
</table>

*Exposures are in brackets and benefits are represented by positive amounts.

(1) Interest rate sensitivities associated with BMO’s insurance business are not reflected in the table above. For our insurance business, a 100 basis point increase in interest rates results in an increase in earnings after tax of $54 million and an increase in economic value before tax of $560 million ($38 million and $436 million, respectively, at October 31, 2011). A 100 basis point decrease in interest rates results in a decrease in earnings after tax of $74 million and a decrease in economic value before tax of $634 million ($82 million and $494 million, respectively, at October 31, 2011). The change in interest rate sensitivities from the prior year reflects the growth in the insurance business, lower interest rates and changes in investment mix.

Models used to measure structural market risk project changes in interest and foreign exchange rates and predict how customers would likely react to the changes. For customer loans and deposits with scheduled maturity and repricing dates (such as mortgages and term deposits), our models measure how customers are likely to use embedded options to alter those scheduled terms. For customer loans and deposits without scheduled maturity and repricing dates (such as credit card loans and chequing accounts), our models assume a maturity
profile that considers historical and forecasted trends in changes in the balances due. These models have been developed using statistical analysis and are validated through regular model vetting, backtesting processes and ongoing dialogue with staff in the lines of business. Models used to predict customer behaviour are also used in support of product pricing and performance measurement.

Liquidity and Funding Risk

Liquidity and funding risk is the potential for loss if BMO is unable to meet financial commitments in a timely manner at reasonable prices as they fall due. Financial commitments include liabilities to depositors and suppliers, and lending, investment and pledging commitments.

Management Framework Overview

Managing liquidity and funding risk is essential to maintaining the safety and soundness of the organization, depositor confidence and stability in earnings. It is BMO’s policy to ensure that sufficient liquid assets and funding capacity are available to meet financial commitments, even in times of stress.

BMO’s Liquidity and Funding Risk Management Framework is defined and managed under the appropriate corporate policies and standards. These policies and standards outline key management principles, liquidity and funding management metrics and related limits and guidelines, as well as roles and responsibilities for the management of liquidity and funding risk across the enterprise. BMO has robust limits and guidelines in place to manage liquidity and funding risk. These limits and guidelines establish the secured and unsecured funding appetite for both trading and structural activities, maturity concentration tolerances, counterparty liability diversification requirements, and pledging activity. Guidelines are also established for the size and type of uncommitted and committed credit and liquidity facilities that may be outstanding to ensure liquidity and funding risk is appropriately managed. An enterprise-wide contingency plan that will facilitate effective management through a disruption is also in place. Early warning indicators identified in the contingency plan are regularly monitored to identify early signs of liquidity risk in the market or specific to BMO.

The RRC oversees liquidity and funding risk and annually approves applicable policies, limits and the contingency plan and regularly reviews liquidity and funding positions. The RMC and Balance Sheet and Capital Management Committee provide senior management oversight and also review and discuss significant liquidity and funding policies, issues and action items that arise in the execution of our strategy. The Corporate Treasury group recommends the framework, risk appetite, limits and guidelines, monitors compliance with policy requirements and assesses the impact of market events on liquidity requirements on an ongoing basis.

BMO subsidiaries include regulated and foreign entities, and therefore movements of funds between companies in the corporate group are subject to the liquidity, funding and capital adequacy considerations of the subsidiaries, as well as tax and regulatory considerations. As such, liquidity and funding positions are managed on both a consolidated and key legal entity basis. Liquidity and funding risk management policies and limits are in place for key legal entities that are informed by legal and regulatory requirements for each entity, and positions are regularly reviewed at the legal entity level to ensure compliance with applicable requirements.

BMO employs fund transfer pricing and liquidity transfer pricing practices to ensure the appropriate economic signals are provided to the lines of business on the pricing of products for customers and to assess the performance of each business. These practices capture both the cost of funding assets and the value of deposits under normal operating conditions, as well as the cost of supplemental liquid assets held to support contingent liquidity requirements.

Liquidity and Funding Position Review

Our large and stable base of customer deposits, along with our strong capital base, is a source of strength. It supports the maintenance of a sound liquidity position and reduces our reliance on wholesale funding. The ratio of customer deposits and capital to loans equalled 93.6% at the end of the fiscal year, modestly lower than 96.5% in the prior fiscal year due to growth in loans that was higher than growth in customer deposits.

Customer deposits include core deposits and larger fixed-rate customer deposits. Customer deposits totalled $203.5 billion at the end of the year, up from $194.4 billion in 2011. Core deposits are comprised of customer operating and savings account deposits and smaller fixed-date deposits (less than or equal to $100,000). Canadian dollar core deposits totalled $114.3 billion at the end of the year, up from $103.5 billion in 2011, and U.S. dollar and other currency core deposits totalled US$76.0 billion at the end of the year, up from US$73.8 billion in 2011. The increase in our core deposits reflects the current investor preference for bank deposits. Larger fixed-date customer deposits totalled $13.3 billion at the end of the year, compared with $17.1 billion in 2011. Total deposits, which include both customer deposits and wholesale deposits, increased $21.3 billion during 2012 to $323.7 billion at the end of the year. The increase in total deposits primarily reflects an increase in core deposits from organic business growth that was used to fund loan growth, and an increase in wholesale deposits used to fund loan and securities growth.

Our funding philosophy requires that secured and unsecured wholesale funding used to support loans and less liquid assets is longer term (typically maturing in two to ten years) to better match the term to maturity of these assets. Wholesale secured and unsecured funding for liquid trading assets is generally shorter term (maturing in less than one year) and is aligned with the liquidity of the assets being funded, subject to haircuts in order to reflect lower market values during times of market stress. Supplemental liquidity pools are funded with wholesale term funding to prudently balance the benefits of holding supplemental liquid assets against the costs of funding.

Diversification of our wholesale funding sources is an important part of our overall liquidity management strategy. BMO has the ability to raise long-term funding through various platforms, including a European Note Issuance Program, Canadian and U.S. Medium-Term Note Programs, Canadian and U.S. mortgage securitizations, Canadian credit card securitizations, covered bonds and Canadian and U.S. senior (unsecured) deposits. During 2012, BMO issued US$15.8 billion of wholesale term funding in Canada and internationally. Total wholesale term funding outstanding was $72.1 billion at October 31, 2012. The mix and maturities of BMO’s wholesale term funding are outlined in the tables below. Additional information on deposit maturities can be found in Table 23 on page 113.

Material in blue-tinted font above is an integral part of the 2012 annual consolidated financial statements (see page 75).
BMO uses the Net Liquidity Position (NLP) as a key measure of liquidity. The NLP represents the amount by which liquid assets exceed potential funding needs under a severe combined enterprise-specific and systemic stress scenario. Potential funding needs may arise from obligations to repay retail, commercial and wholesale deposits that are withdrawn or not renewed, fund drawdowns on available credit and liquidity lines, purchase collateral for pledging due to ratings downgrades or as a result of market volatility, and fund asset growth and strategic investments. Potential funding needs are quantified by applying run-off factors to various business activities based on management’s view of the relative liquidity risk of each activity. These factors vary depending on debtor classification (e.g., retail, small business, non-financial corporate and wholesale counterparties) and deposit type (e.g., insured, uninsured, operational and non-operational deposits) and by commitment type (e.g., uncommitted and committed credit or liquidity facilities by counterparty type). These funding needs are assessed under severely stressed market-wide and enterprise specific scenarios and a combination thereof. BMO targets to maintain a net liquidity position sufficient to withstand each scenario. Stress testing results are compared against BMO’s stated risk tolerance, considered in management decisions on limit or guideline setting and internal liquidity transfer pricing, and help to shape the design of management plans and contingency plans. The liquidity and funding risk framework is also linked with enterprise-wide stress testing, including the Internal Capital Adequacy Assessment Process.

Liquid assets include unencumbered, high-quality assets that are marketable, can be pledged as security for borrowings, and can be converted to cash in a time frame that meets our liquidity and funding requirements. Liquid assets are primarily held in our trading businesses, and in supplemental liquidity pools that are maintained for contingent liquidity risk management purposes. The amount of liquidity recognized for different asset classes under our management framework is subject to reductions reflecting management’s view of the liquidity value of those assets in a stress scenario. Liquid assets in the trading business include cash on deposit with the Federal Reserve and short-term deposits with other financial institutions, highly-rated debt and equity securities and short-term reverse repurchase agreements. With the exception of equities, a large majority of trading assets qualify as liquid assets under Baseline III. BMO’s equity security holdings are largely hedged and can be liquidated in a crisis. Supplemental liquidity pool assets are predominantly comprised of cash on deposit with the Federal Reserve and securities and short-term reverse repurchase agreements of highly rated Canadian federal and provincial and U.S. federal government and agency debt. The vast majority of supplemental liquidity pool assets meet the definition of liquid assets under Baseline III. Trading liquid assets are held in the parent bank, BMO Harris Bank and BMO’s broker/dealer operations in Canada and internationally. Approximately 75% of the supplemental liquidity pool is held at the parent bank level in Canadian- and U.S.-dollar-denominated assets, with the residual supplemental liquidity pool contained in BMO Harris Bank in U.S.-dollar-denominated assets. The size of the supplemental liquidity pool is calibrated to meet the potential funding needs outside of our trading businesses in each of the parent bank and BMO Harris Bank and achieve BMO’s target NLP in each entity. To meet local regulatory requirements, certain of our legal entities maintain their own minimum liquidity positions that meet overall regulatory requirements. There may be legal and regulatory restrictions on our ability to use liquid assets from one legal entity to support liquidity requirements in another legal entity.

Table 5 on page 103 provides further information on BMO’s liquid assets. Additional information on cash and securities can be found in notes 2 and 3 on page 127 to the financial statements. Liquid assets do not include potential liquidity that could be realized under borrowing programs with central banks or other market sources. BMO’s cash and securities as a percentage of total assets was 29.4% at October 31, 2012, compared with 29.5% at October 31, 2011.

In the ordinary course of business, a portion of cash, securities and securities borrowed or purchased under resale agreements is pledged as collateral to support trading activities and participation in clearing and payment systems in Canada and abroad. BMO may also pledge assets to raise secured funding or to secure deposits received from select counterparties. As part of the Liquidity and Funding Risk Management Framework, a Pledging of Assets corporate policy is in place that sets out the framework and pledging limits for financial and non-financial assets. Pledged assets are considered encumbered for liquidity purposes. At October 31, 2012, $46.6 billion of cash and securities and $18.8 billion of securities borrowed or purchased under resale agreements had been pledged, compared with $39.8 billion and $16.9 billion, respectively, in 2011. These changes were driven by trading activities. In addition, $43.2 billion of assets had been pledged to raise long-term secured funding and to secure deposits from select counterparties, a decrease from $45.5 billion last year. Pledged assets totalled 20.6% of total assets. See Table 5 on page 103 and Note 28 of the financial statements on page 169 for further information on pledged assets.
In December 2010, the Basel Committee on Banking Supervision published its international framework for liquidity measurement, standards and monitoring. The framework contains two new liquidity measures, the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), and five monitoring tools (contractual maturity mismatch, concentration of funding, available unencumbered assets, LCR by significant currency and market-related monitoring). The LCR is the ratio of the stock of high-quality liquid assets to stressed net cash outflows over a 30-day time period. The NSFR is the ratio of the available amount of stable funding (one-year or greater) to the required amount of stable funding. The LCR and NSFR measures are not yet finalized. An observation period for the LCR and NSFR commenced on January 1, 2012, and implementation of the LCR and NSFR is scheduled for January 1, 2015, and January 1, 2018, respectively. BMO is well positioned to adopt the new framework. The framework and conceptual approach BMO and the financial services industry typically use to manage liquidity and funding risk are consistent with the new regulatory approach; however, the proposed regulatory factors used to determine the amount of liquid assets that banks will be required to hold are more conservative.

Credit Ratings

The credit ratings assigned to BMO’s short-term and senior long-term debt securities by external rating agencies are important in the raising of both capital and funding to support our business operations. Maintaining strong credit ratings allows us to access the capital markets at competitive pricing levels. BMO’s ratings are indicative of high-grade, high-quality issues. Should our credit ratings materially decrease, our cost of funds would likely increase significantly and our access to funding and capital through capital markets could be reduced. A material downgrade of our ratings could have additional consequences, including those set out in Note 10 on page 140 of the financial statements.

On October 26, 2012, Moody’s Investors Service placed the senior long-term debt rating of BMO and five other Canadian financial institutions on review for downgrade. Moody’s noted that following their review, the senior long-term debt rating for the banks on review will generally be no more than one notch lower. Moody’s has also placed BMO and other Canadian bank subordinated debt ratings under review for downgrade. Moody’s affirmed BMO’s short-term rating.

<table>
<thead>
<tr>
<th>Rating agency</th>
<th>Short-term debt</th>
<th>Senior long-term debt</th>
<th>Subordinated debt</th>
<th>Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moody’s</td>
<td>P-1</td>
<td>Aa2</td>
<td>Aa3</td>
<td>Under review for downgrade</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>A-1</td>
<td>A+</td>
<td>A-</td>
<td>Stable</td>
</tr>
<tr>
<td>Fitch</td>
<td>F1+</td>
<td>AA-</td>
<td>A+</td>
<td>Stable</td>
</tr>
<tr>
<td>DBRS</td>
<td>R-1 (high)</td>
<td>AA</td>
<td>AA (low)</td>
<td>Stable</td>
</tr>
</tbody>
</table>

Operational Risk

Operational risk is the potential for loss resulting from inadequate or failed internal processes or systems, human interactions or external events, but excludes business risk.

BMO is exposed to potential losses arising from a variety of operational risks, including process failure, theft and fraud, regulatory non-compliance, business disruption, information security breaches and exposure related to outsourcing, as well as damage to physical assets. Operational risk is inherent in all our business activities, including the processes and controls used to manage credit risk, market risk and all other risks we face. While operational risk can never be fully eliminated, it can be managed to reduce exposure to financial loss, reputational harm or regulatory sanctions.

The three-lines-of-defence operating model establishes appropriate accountability for operational risk management. The operating groups are responsible for the day-to-day management of operational risk in a manner consistent with our enterprise-wide principles. Independent risk management oversight is provided by operating group CROs, group Operational Risk Officers, Corporate Support areas and Enterprise Operational Risk Management. Operating group CROs and Operational Risk Officers independently assess group operational risk profiles, identifying material exposures and potential weaknesses in controls, and recommending appropriate mitigation strategies and actions. Corporate Support areas develop the tools and processes to directly manage specialized operational risks across the organization. Enterprise Operational Risk Management establishes the Operational Risk Management Framework and the necessary governance framework.

Operational Risk Management Framework (ORMF)

The ORMF defines the processes we use to identify, measure, manage, mitigate, monitor and report key operational risk exposures. A primary objective of the ORMF is to ensure that our operational risk profile is consistent with our risk appetite and supported by adequate capital. The key programs, methodologies and processes developed to support the framework are highlighted below. Executing our ORMF strategy also involves a focus on change management and working to achieve a cultural shift toward greater awareness and understanding of operational risk.

Governance

Operational risk management is governed by a robust committee structure supported by a comprehensive set of policies, standards and operating guidelines. Operational Risk Committee (ORC), a sub-committee of the RMC, is the main decision-making committee for all operational risk management matters and has oversight responsibility for operational risk strategy, management and governance. ORC provides advice and guidance to the lines of business on operational risk assessments, measurement and mitigation, and related monitoring and change initiatives. ORC also oversees the development of policies, standards and operating guidelines that give effect to the governing principles of the ORMF. These governance documents incorporate industry best practices and are reviewed on a regular basis to ensure they are current and consistent with our risk appetite. We continue to enhance governance by increasing the number of Corporate Support areas that have oversight over specific operational sub-risks.

Risk and Control Assessment (RCA)

RCA is an established process used by our operating groups to identify the key risks associated with their businesses and the controls required for risk mitigation. The RCA process provides a forward-looking view of the impact of the business environment and internal controls on operating group risk profiles, enabling the proactive management, mitigation and prevention of risk. On an aggregate basis, RCA results also provide a consolidated view of operational risks relative to risk appetite.

Key Risk Indicators (KRIs)

Operating groups and Corporate Support areas identify KRIs related to their material risks. KRIs are used to monitor operational risk profiles and are linked to thresholds that trigger management action. KRIs provide an early indication of adverse changes in risk exposure.
Insurance Risk

**Insurance risk** is the risk of loss due to actual experience being different from that assumed when an insurance product was designed and priced. It generally entails inherent unpredictability that can arise from assuming long-term policy liabilities or from the uncertainty of future events. Insurance risk exists in all our insurance businesses, including annuities and life, accident and sickness, and creditor insurance, as well as our reinsurance business.

Insurance risk consists of:

- **Claims risk** – The risk that the actual magnitude or frequency of claims will differ from the levels assumed in the pricing or underwriting process. Claims risk includes mortality risk, morbidity risk, longevity risk and catastrophe risk;
- **Policyholder behaviour risk** – The risk that the behaviour of policyholders relating to premium payments, withdrawals or loans, policy lapses and surrenders and other voluntary terminations will differ from the behaviour assumed in the pricing calculations; and
- **Expense risk** – The risk that actual expenses associated with acquiring and administering policies and claims processing will exceed the expected expenses assumed in pricing calculations.

Insurance risk approval authority is delegated by BMO’s Board of Directors to senior management. A robust product approval process is a cornerstone for identifying, assessing and mitigating risks associated with new insurance products or changes to existing products. This process, combined with guidelines and practices for underwriting and claims management, promotes the effective identification, measurement and management of insurance risk. Reinsurance, which involves transactions that transfer insurance risk to independent reinsurance companies, is also used to manage our exposure to insurance risk by diversifying risk and limiting claims.

Insurance risk is monitored on a regular basis. Actuarial liabilities are estimates of the amounts required to meet insurance obligations. Liabilities are established in accordance with the standards of practice of the Canadian Institute of Actuaries and the Canadian Institute of Chartered Accountants. The liabilities are validated through extensive internal and external reviews and audits. Assumptions underlying actuarial liabilities are regularly updated to reflect emerging actual experience. The Appointed Actuaries of our insurance subsidiaries are appointed by those subsidiaries’ boards of directors and have statutory responsibility for providing opinions on the adequacy of provisions for the policyholder liabilities, the solvency of the insurance companies and fairness of treatment of participating policyholders. In addition, the work of each Appointed Actuary is subject to an external, independent review by a qualified actuary every three years, in accordance with OSFI Guideline E-15.

BMO’s Board of Directors establishes approval authorities and limits and delegates these to the management teams of the insurance subsidiaries. The boards of directors of our insurance subsidiaries are responsible for the stewardship of their respective insurance companies. Through oversight and monitoring, the boards are responsible for determining that the insurance companies are managed and function in accordance with established insurance strategies and policies. ERM&PM is responsible for providing risk management direction and independent oversight to these insurance companies. This group also has the authority to approve activities that exceed the authorities and limits delegated to the boards of the insurance subsidiaries, or that expose BMO to significant risk.

Our insurance subsidiaries provide independent evaluation and reporting of insurance risk exposures to their boards of directors and at the enterprise level, including reporting to both Private Client Group management and the RRC. Reporting involves an assessment of all risks facing the insurance subsidiaries, which include top-line and emerging risks.
Legal and Regulatory Risk

**Legal and regulatory risk** is the risk of not complying with laws, contractual agreements or other legal requirements, as well as regulatory requirements and regulators’ expectations. Failure to properly manage legal and regulatory risk may result in litigation claims, financial losses, regulatory sanctions, an inability to execute our business strategies, and potential harm to our reputation.

Legal and regulatory risk is inherent in almost everything we do, and we are held to strict compliance standards by government, regulators and other authorities. The financial services industry is highly regulated, and continues to receive heightened attention as new rules are proposed and enacted as part of worldwide regulatory reform initiatives.

Legal, Corporate and Compliance Group (LCCG) maintains enterprise-wide risk management frameworks to identify, measure, manage, monitor and report on legal and regulatory risk. The frameworks reflect the three-lines-of-defence operating model described previously. The operating groups and Corporate Support areas are responsible for the day-to-day management of their legal and regulatory risk in accordance with enterprise-wide policies. LCCG provides advice and independent risk management oversight through legal and compliance teams with designated operating group and corporate area responsibility. LCCG also works closely with the operating groups and Corporate Support areas to identify legal and regulatory requirements and potential risks, recommend mitigation strategies and actions, and oversee litigation involving BMO.

A Legislative Compliance Management (LCM) Framework has been established to identify, assess and properly manage legal and regulatory requirements, using a risk-based approach. Under the LCM Framework, management in operating groups and Corporate Support areas maintains a system of compliance policies, procedures and controls. Separate monitoring activities are carried out under the direction of the Chief Compliance Officer (CCO), including the tracking of action plans that address identified gaps or deficiencies.

The General Counsel and the CCO report periodically on the effectiveness of legal and regulatory risk management to the Audit and Conduct Review Committee of the board and to senior management.

BMO’s code of conduct, *First Principles*, outlines our commitment to high standards of ethics and integrity and is updated on an annual basis. One of the seven defining principles in the code is a commitment to follow both the letter and the spirit of the law. All directors and employees are required to complete annual training that tests their knowledge and understanding of their obligations under the code, and also covers topics such as anti-money laundering, privacy and anti-corruption practices.

Business Risk

**Business risk** arises from the specific business activities of a company and the effects these could have on its earnings.

Business risk encompasses the potential causes of earnings volatility that are distinct from credit, market or operational risk factors. The management of business risk identifies and addresses factors related to the risk that volumes will decrease or margins will shrink without the company having the ability to compensate for this decline by cutting costs.

Model Risk

**Model risk** is the potential for loss due to the risk of a model not performing or capturing risk as designed. It also arises from the possibility of the use of an inappropriate model or the inappropriate use of a model.

BMO uses models that range from the very simple to those that value complex transactions or involve sophisticated portfolio and capital management methodologies. These models are used to inform strategic decision-making and to assist in making daily lending, trading, underwriting, funding, investment and operational decisions. Models have also been developed to measure exposure to specific risks and to measure total risk on an integrated basis, using Economic Capital. We have strong controls over the development, implementation and application of these models.

BMO uses a variety of models, which can be grouped within six categories:

- valuation models for the valuation of assets, liabilities or reserves;
- risk exposure models for measuring credit risk, market risk, liquidity risk and operational risk, which also address expected loss and its applications;
- capital and stress testing models for measuring capital, allocating capital and managing regulatory capital and Economic Capital;
- fiduciary models for asset allocation, asset optimization and portfolio management;
- major business strategy models to forecast the possible outcomes of new strategies in support of our business decision-making process; and
- models driven by regulatory and other stakeholder requirements.

Model Risk is governed by the enterprise-wide Model Risk Management Framework, which sets out end-to-end risk governance across the model activity cycle and ensures consistency between model risk and enterprise-wide risk appetite. The framework outlines explicit principles for managing model risk, describes processes and clearly defines roles and responsibilities. The Model Risk Corporate Standard, which was enhanced in 2012, outlines the requirements for the oversight, identification, development, independent validation, implementation, use,
monitoring and reporting of models and model risk throughout the enterprise. Prior to use, all models must receive approval and an assessment of their model risk by the Model Risk and Vetting (MRV) group. All models are assigned a risk rating as part of the vetting process, which determines the frequency of ongoing review. In addition to regularly scheduled model validation and vetting, model risk monitoring and oversight activities are in place to confirm that models perform and are managed and used as expected, thereby increasing the likelihood of early detection of emerging issues.

The Model Risk Management Forum, a cross-functional group representing all key stakeholders (model users, model owners and the MRV group), meets regularly to provide input into the development, implementation and maintenance of the Model Risk Management Framework and the requirements governing all models that are used across the enterprise.

Strategic Risk

Strategic risk is the potential for loss due to fluctuations in the external business environment and/or failure to properly respond to these fluctuations due to inaction, ineffective strategies or poor implementation of strategies.

Strategic risk arises from external risks inherent in the business environment within which BMO operates, as well as the risk of potential loss if BMO is unable to address those external risks effectively. While external strategic risks – including economic, political, regulatory, technological, social and competitive risks – cannot be controlled, the likelihood and magnitude of their impact can be mitigated through an effective strategic risk management process.

BMO’s Office of Strategic Management (OSM) oversees our strategic planning processes and works with the lines of business, along with risk, finance and other corporate areas, to identify, monitor and mitigate strategic risk across the enterprise. A rigorous strategic management process encourages a consistent approach to the development of strategies and incorporates financial information linked to financial commitments.

The OSM works with the lines of business and key corporate stakeholders during the strategy development process to promote consistency and adherence to strategic management standards. The potential impacts of the changing business environment, such as broad industry trends and the actions of competitors, are considered as part of this process and inform strategic decisions within each of our lines of business. Enterprise and group strategies are reviewed with the Management Committee and the Board of Directors annually in interactive sessions designed to challenge assumptions and strategies in the context of current and potential future business environments.

Performance objectives established through the strategic management process are regularly monitored and are reported upon quarterly, using both leading and lagging indicators of performance, so that strategies can be reviewed and adjusted when necessary. Regular strategic and financial updates are also monitored closely to identify any significant issues.

Reputation Risk

Reputation risk is the risk of a negative impact on BMO that results from a deterioration in stakeholders’ perception of BMO’s reputation. These potential impacts include revenue loss, litigation, regulatory sanction or additional oversight, declines in client loyalty and declines in BMO’s share price.

BMO’s reputation is one of its most valuable assets. By protecting and maintaining our reputation, we can increase shareholder value, reduce our cost of capital and improve employee engagement.

Fostering a business culture in which integrity and ethical conduct are core values is key to effectively protecting and maintaining BMO’s reputation.

We believe that active, ongoing and effective management of reputation risk is best achieved by considering reputation risk issues in the course of strategy development, strategic and operational implementation and transactional or initiative decision-making. Reputation risk is also managed through our corporate governance practices, code of conduct and risk management framework.

All employees are responsible for conducting themselves in accordance with FirstPrinciples, BMO’s code of conduct, thus building and maintaining BMO’s reputation. The Reputation Risk Management Committee considers significant potential reputation risks to the enterprise, including those that may arise from complex credit and structured-finance transactions.
Environmental and Social Risk

Environmental and social risk is the risk of loss or damage to BMO’s reputation resulting from environmental and social concerns related to BMO or its customers. Environmental and social risk is often associated with credit, operational and reputation risk.

Environmental and social risk is addressed in our board-approved corporate responsibility and sustainability policy. Environmental and social risk management activities are overseen by the Environmental, Social and Governance Group and the Environmental Sustainability group, with support from our lines of business and other Corporate Support areas. BMO’s Sustainability Council, which is comprised of executives representing the various areas of the organization, provides insight and guidance for our environmental and social initiatives. Our environmental and social policies and practices are outlined in detail in our annual Sustainability Report and Public Accountability Statement and on our Corporate Responsibility website.

Environmental and social risk covers a broad spectrum of issues, such as climate change, biodiversity and ecosystem health, pollution, waste and the unsustainable use of water and resources, as well as risks to the livelihoods, health and rights of communities and their cultural heritage. We work with external stakeholders to understand the impact of our operations and financing decisions in the context of these issues, and we use this understanding to determine the consequences for our businesses.

Specific line of business guidelines outline how environmental and social risks inherent in lending activities are managed. Environmental and social risks associated with lending transactions are managed within BMO’s credit and counterparty risk framework. Enhanced due diligence is applied to transactions with clients operating in environmentally sensitive industry sectors, and we adhere to the standards set out in the Equator Principles, a framework for evaluating environmental and social risk in project finance transactions based on the World Bank’s International Finance Corporation Performance Standards. We are also a signatory to and participate in the Carbon Disclosure Project, which provides corporate disclosure on greenhouse gas emissions and climate change management.

We have developed a robust Environmental Management System (EMS) to manage the impact of our operations on the environment. Our goal is to achieve continual improvement in our overall environmental performance. Our EMS requires that we identify activities within our operations that have a potential impact on the environment, and establish objectives, targets and processes to mitigate or eliminate those impacts. It also requires that we monitor performance against stated objectives and take action to continually reduce the impact of our operational footprint on the environment.

We have achieved certification under the internationally recognized standard, ISO 14001 Environmental Management Systems, for our leased 19-floor office tower located at 55 Bloor Street West in Toronto and for the Bank of Montreal Institute for Learning facility located in Toronto. We continue to apply our EMS across all our operations as we strive to minimize our impact on the environment.

Caution
This Enterprise-Wide Risk Management section contains forward-looking statements. Please see the Caution Regarding Forward-Looking Statements on page 27.