

## Note 6: Risk Management

We have an enterprise-wide approach to the identification, measurement, monitoring and management of risks faced across the organization. The key financial instrument risks are classified as credit and counterparty, market, and liquidity and funding risk.

### Credit and Counterparty Risk

We are exposed to credit risk from the possibility that counterparties may default on their financial obligations to us. Credit risk arises predominantly with respect to loans, over-the-counter derivatives and other credit instruments. This is the most significant measurable risk that we face. Our risk management practices and key measures are disclosed in the text and tables identified in a blue-tinted font in Management's Discussion and Analysis on pages 76 to 77 of this report. Additional information on loans and derivative-related credit risk is disclosed in Notes 4 and 10, respectively.

### Concentrations of Credit and Counterparty Risk

Concentrations of credit risk exist if a number of clients are engaged in similar activities, are located in the same geographic region or have similar economic characteristics such that their ability to meet contractual obligations could be similarly affected by changes in economic, political or other conditions. Concentrations of credit risk indicate a related sensitivity of our performance to developments affecting a particular counterparty, industry or geographic location. At year-end, our credit assets consisted of a well-diversified portfolio comprised of millions of clients, the majority of them consumers and small to medium-sized businesses.

From an industry viewpoint, our most significant exposure as at year-end was to the financial institutions sector, comprising \$128 billion, of which 50% was represented by secured, short-term repo transactions.

### Basel II Framework

We adopted a new capital management framework, the Basel II Framework, effective November 1, 2007, replacing Basel I, the framework utilized for the past 20 years. The new framework promotes the adoption of stronger risk management practices. Under this framework, exposure at default is used to assess credit and counterparty risk.

Exposures are classified as follows:

- Drawn loans include loans, acceptances, deposits with regulated financial institutions, and certain securities. Exposure at default represents the amount drawn, adding back any specific provisions and write-offs.
- Undrawn commitments cover all unutilized authorizations, including those which are unconditionally cancellable. Exposure at default for undrawn commitments is based on management's best estimate.
- Over-the-counter ("OTC") derivatives are those, in the banking book only, that attract credit risk in addition to market risk. Exposure at default for over-the-counter derivatives is equal to the net gross replacement cost plus any potential credit exposure amount.
- Other off-balance sheet exposures include items such as guarantees and standby letters of credit and documentary credits. Exposure at default for other off-balance sheet items is based on management's best estimate.
- Repo style transactions include repos, reverse repos and securities lending transactions, which represent both asset and liability exposures. Exposure at default for repo style transactions is the amount drawn, adding back any write-offs.
- Adjusted exposure at default represents exposure at default that has been redistributed to a more favourable probability of default band or a different Basel asset class as a result of collateral.

Our total non-trading exposure at default by industry, as at October 31, 2008, based on the Basel II classification is as follows:

### Credit Exposure by Industry

(Canadian \$ in millions)	Drawn	Commitments (undrawn)	OTC derivatives	Other off-balance sheet items	Repo style transactions	Total
Financial institutions	\$ 41,808	\$ 16,024	\$ 133	\$ 5,348	\$ 64,282	\$ 127,595
Government	11,142	1,458	–	301	5,159	18,060
Manufacturing	10,186	6,787	–	2,045	–	19,018
Real estate	14,613	1,561	–	1,508	–	17,682
Retail trade	5,302	2,432	–	588	–	8,322
Service industries	17,282	3,565	–	2,424	453	23,724
Wholesale trade	4,462	2,005	–	343	–	6,810
Oil and gas	6,207	4,600	–	692	–	11,499
Individual	91,602	26,936	–	2	–	118,540
Others (1)	31,640	8,570	67	3,924	–	44,201
<b>Total exposure at default</b>	<b>\$ 234,244</b>	<b>\$ 73,938</b>	<b>\$ 200</b>	<b>\$ 17,175</b>	<b>\$ 69,894</b>	<b>\$ 395,451</b>

(1) Includes industries having a total exposure of less than 2%.

Additional information about our credit risk exposure for loans by geographic region and counterparty is provided in Note 4.

### Credit Quality

We assign risk ratings based on probabilities as to whether counterparties will default on their financial obligations to us. Our process for assigning risk ratings is discussed in the text identified in a blue-tinted font in Management's Discussion and Analysis on page 76 of this report.

Based on Basel II classifications, the following tables present our retail and wholesale credit exposure by risk rating on an adjusted exposure at default basis as at October 31, 2008. Wholesale includes all loans that are not classified as retail.

### Wholesale Credit Exposure by Risk Rating

(Canadian \$ in millions)	Drawn	Undrawn (1)	Total exposure
Investment grade	\$ 96,354	\$ 34,536	\$ 130,890
Non-investment grade	35,794	7,898	43,692
Watchlist	1,735	495	2,230
Default	1,503	72	1,575
<b>Total</b>	<b>\$ 135,386</b>	<b>\$ 43,001</b>	<b>\$ 178,387</b>

(1) Included in the undrawn amounts are uncommitted exposures of \$16,329 million.

### Retail Credit Drawn Exposure by Portfolio and Risk Rating

(Canadian \$ in millions)	Residential mortgages and home equity lines of credit	Qualifying revolving retail (1)	Other retail and retail small and medium-sized enterprises
Risk profile (probability of default):			
Low (> 0% to 0.75%)	\$ 23,681	\$ 5,321	\$ 9,601
Medium (> 0.75% to 7.00%)	1,782	1,170	2,410
High (> 7.00% to 99.99%)	664	190	135
Default (100%)	92	27	41
<b>Total</b>	<b>\$ 26,219</b>	<b>\$ 6,708</b>	<b>\$ 12,187</b>

(1) Qualifying revolving retail includes exposures to individuals that are revolving, unsecured and uncommitted up to a maximum amount of \$125,000 to a single individual.

### Loans Past Due Not Impaired

Loans that are past due but not classified as impaired are loans where our customers have failed to make payments when contractually due,

but for which management expects that the full amount of principal and interest payments will be collected. The following table presents loans that are past due not impaired as at October 31, 2008:

### Loans Past Due Not Impaired

(Canadian \$ in millions)	1 to 29 days	30 to 89 days	90 days or more	Total
Residential mortgages	\$ 396	\$ 319	\$ 48	\$ 763
Credit card, consumer instalment and other personal loans	1,454	284	65	1,803
Business and government loans	1,869	1,162	50	3,081
Customers' liability under acceptances	–	151	–	151
<b>Total</b>	<b>\$ 3,719</b>	<b>\$ 1,916</b>	<b>\$ 163</b>	<b>\$ 5,798</b>

### Loan Maturities and Rate Sensitivity

The following table provides gross loans and acceptances by contractual maturity and by country of ultimate risk:

(Canadian \$ in millions)	Due in one year or less	Due in one to five years	Due after five years	2008 Total	2007 Total
Canada					
Consumer	\$ 19,044	\$ 44,924	\$ 6,175	\$ 70,143	\$ 72,533
Commercial and corporate (excluding real estate)	29,602	14,946	1,929	46,477	63,277
Commercial real estate	18,753	3,021	1,455	23,229	9,955
United States	17,590	27,677	19,708	64,975	51,634
Other countries	5,469	6,217	232	11,918	4,844
<b>Total</b>	<b>\$ 90,458</b>	<b>\$ 96,785</b>	<b>\$ 29,499</b>	<b>\$ 216,742</b>	<b>\$ 202,243</b>

The following table categorizes net loans and acceptances based on sensitivity to changes in interest rates:

(Canadian \$ in millions)	2008	2007
Fixed rate	\$ 66,257	\$ 66,117
Floating rate	137,445	121,530
Non-interest sensitive (1)	11,293	13,541
<b>Total</b>	<b>\$ 214,995</b>	<b>\$ 201,188</b>

(1) Non-interest sensitive loans and acceptances represent customers' liability under acceptances.

## Market Risk

Market risk is the potential for a negative impact on the balance sheet and/or income statement resulting from adverse changes in the value of financial instruments as a result of changes in certain market variables. These variables include interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, as well as credit spreads, credit migration and default. We incur market risk in our trading and underwriting activities and structural banking activities.

Our market risk management practices and key measures are outlined in the text and tables identified in a blue-tinted font in the Risk Management section of Management's Discussion and Analysis on pages 77 to 80 of this report.

## Liquidity and Funding Risk

Liquidity and funding risk is the potential for loss if we are unable to meet financial commitments in a timely manner at reasonable prices as they fall due. It is our policy to ensure that sufficient liquid assets and funding capacity are available to meet financial commitments, including liabilities to depositors and suppliers, and lending, investment and pledging commitments, even in times of stress. Managing liquidity and funding risk is essential to maintaining both depositor confidence and stability in earnings.

Our liquidity and funding risk management framework includes:

- oversight by senior governance committees, including the Balance Sheet Management Committee, Risk Management Committee and Risk Review Committee ("RRC");
- an independent oversight group within Corporate Treasury;
- an RRC-approved limit structure to support the maintenance of a strong liquidity position;
- effective processes and models to monitor and manage risk;
- strong controls over processes and models and their uses;
- a framework of scenario tests for stressed operating conditions; and
- contingency plans to facilitate managing through a disruption.

We actively manage liquidity and funding risk globally by holding liquid assets in excess of an established minimum level at all times.

Contractual maturities of non-trading financial liabilities as at October 31, 2008 were as follows:

(Canadian \$ in millions)	Less than 1 year	1 to 3 years	4 to 5 years	Over 5 years	No fixed maturity	Total
<b>On-Balance Sheet Financial Instruments</b>						
Deposits (1)	\$ 116,297	\$ 26,146	\$ 8,942	\$ 5,767	\$ 99,448	\$ 256,600
Derivative obligations	345	603	320	294	–	1,562
Subordinated debt	368	693	434	5,408	–	6,903
Capital trust securities	78	868	413	–	–	1,359
Preferred share liability	253	–	–	–	–	253
Other financial liabilities	41,167	228	265	3,560	42	45,262
	158,508	28,538	10,374	15,029	99,490	311,939
<b>Off-Balance Sheet Obligations</b>						
Commitments to extend credit	41,113	21,270	16,953	1,772	–	81,108
Operating leases	211	337	233	629	–	1,410
Purchase obligations (2)	296	589	491	266	–	1,642
	41,620	22,196	17,677	2,667	–	84,160
<b>Total</b>	<b>\$ 200,128</b>	<b>\$ 50,734</b>	<b>\$ 28,051</b>	<b>\$ 17,696</b>	<b>\$ 99,490</b>	<b>\$ 396,099</b>

(1) Excludes interest payments.

(2) We have entered into five outsourcing contracts. In 2008, we entered into a five-year contract with optional five-year renewals with an external service provider which grants us the right to issue Air Miles in Canada to our customers. In 2007, we entered into a five-year contract with the option to extend for an additional two-year term with an external service provider that provides facility management services to our Canadian branches. In 2006, we entered into a six-year contract with an external service provider to provide application system maintenance and development services. In 2003, we entered into a ten-year contract with an external service provider to provide human resource transactional business processing. In 2000, we entered into a five-year contract with two optional five-year renewals with an external service provider to manage our cheque and bill payment processing, including associated statement and report printing activities. All outsourcing contracts are cancellable with notice.

The balances for on-balance sheet financial instruments in the table above will not agree with those in our consolidated financial statements as this table incorporates all cash flows, on an undiscounted basis, including both principal and interest.

Liquid assets include unencumbered, high credit-quality assets that are marketable, can be pledged as security for borrowings, and could be converted to cash in a time frame that meets our liquidity and funding requirements. Liquid assets are held both in our trading businesses and in supplemental liquidity pools that are maintained for contingency purposes. Liquidity and funding requirements consist of expected and potential cash outflows. These arise from obligations to repay deposits that are withdrawn or not renewed, and from the need to fund asset growth, strategic investments, drawdowns on off-balance sheet arrangements and other credit instruments and purchases of collateral for pledging. Liquidity and funding requirements are assessed under expected and stressed economic, market, political and enterprise-specific environments, which determines the minimum amount of liquid assets to be held at all times.

Three of the measures we use to evaluate liquidity and funding risk are the liquidity ratio, the level of core deposits, and the customer deposits and capital to loans ratio.

The liquidity ratio represents the sum of cash resources and securities as a percentage of total assets. Our liquidity ratio as at October 31, 2008 was 29.1% (33.1% in 2007).

Core deposits are comprised of customer operating and savings deposits and smaller fixed-date deposits (less than or equal to \$100,000). Canadian dollar core deposits totalled \$85.8 billion at the end of the year (\$75.9 billion in 2007), and U.S. dollar and other currency core deposits totalled US\$32.8 billion at the end of the year (US\$25.1 billion in 2007).

Our large base of customer deposits, along with our strong capital base, reduces our requirements for wholesale funding. Customer deposits and capital equalled 94.2% of loans (excluding securities borrowed or purchased under resale agreements) at the end of the year (93.3% in 2007).

Our funding philosophy is that wholesale funding used to support loans is longer-term (typically two to ten years in maturity) to better match the terms to maturity of loans. Wholesale funding that supports liquid trading and underwriting assets and available-for-sale securities is generally shorter-term (maturing in under two years) in nature. Diversification of our wholesale funding sources is an important part of our overall liquidity management strategy. In accordance with internal guidelines, our wholesale funding is diversified by customer, type, market, maturity term, currency and geographic region.

## Contractual Maturities of Financial Liabilities

Financial liabilities are comprised of trading and non-trading liabilities. As liabilities in trading portfolios are typically held for short periods of time, they are not included in the table below.