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Implications of New Accounting Standards for the Bank of Canada's Balance Sheet

by Grahame Johnson and Mark Zelmer

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Abstract

The Canadian Institute of Chartered Accountants (CICA) has implemented new accounting standards for the valuation and reporting of financial instruments. They are effective for the Bank of Canada in 2007. As a result of these changes, the Bank has begun valuing its holdings of Government of Canada treasury bills on a fair value basis and is carrying any unrealized valuation gains or losses on these investments in a new account (Accumulated Other Comprehensive Income) that forms part of its capital base. The Bank's capital base is likely to experience some volatility over time as the treasury bill portfolio records unrealized valuation gains or losses in response to movements in short-term interest rates. The Bank of Canada Act has been amended to allow the Bank's Board of Directors the right to establish a new special reserve fund that will form part of the Bank's capital base.

JEL classification: E58, M4

Bank classification: Monetary policy framework; Financial institutions

Résumé

L'Institut Canadien des Comptables Agréés (ICCA) a instauré de nouvelles normes comptables relatives à l'évaluation et à la présentation des instruments financiers. Ces normes s'appliquent à la Banque du Canada à compter de 2007. Par suite de ce remaniement, la Banque a entrepris d'évaluer à la juste valeur son portefeuille de bons du Trésor du gouvernement canadien, et elle comptabilise les gains et les pertes de réévaluation non réalisés sur ces placements dans un nouveau compte (le cumul des autres éléments du résultat étendu) qui fait partie de son capital de base. Celui-ci risque d'afficher une certaine volatilité au fil du temps, au gré de la comptabilisation des gains et des pertes de réévaluation non réalisés du portefeuille de bons du Trésor en réaction à la fluctuation des taux d'intérêt à court terme. La *Loi sur la Banque du Canada* a été modifiée de façon à accorder au Conseil d'administration de l'institution le droit de constituer un nouveau fonds de réserve spécial qui fera partie du capital de base de cette dernière.

Classification JEL : E58, M4

Classification de la Banque : Cadre de la politique monétaire; Institutions financières

1 Introduction

The Bank of Canada (the Bank) has a fairly simple balance sheet structure compared to other major financial institutions. Most of the Bank's assets are Government of Canada securities. These securities are generally purchased at auction and held to maturity. The issuance of bank notes creates by far the largest liability on the Bank's balance sheet, representing close to 95 per cent of total liabilities. These liabilities carry no maturity date (although they are effectively redeemable at any time) and carry no interest cost. This structure has allowed the Bank to be able to operate with a very small capital base, with all surplus revenue being remitted to the federal government.

While the structure of the Bank's balance sheet is relatively straightforward, the links to the Bank's various mandates and interest are not immediately obvious. Section 2 of this paper reviews the Bank's balance sheet, compares it to the balance sheet of other central banks, and explains how it is affected by the way the Bank carries out its mandates.

While this financial structure has been robust over many decades, accounting standards in Canada and other countries are evolving to reflect best practices in financial reporting and governance. Changes to these standards include new rules for the valuation and reporting of financial instruments that became effective for the Bank at the beginning of 2007. These new standards affect the way the investment portfolio is valued, and consequently the way the capital base is reported. Section 3 of this paper examines these new standards, while Section 4 looks at their implications for the Bank's capital base. Concluding remarks are provided in Section 5.

2 A Primer on the Bank of Canada Balance Sheet

Table 1 summarizes the Bank's balance sheet at the end of 2006. Most items are self-explanatory. *Government of Canada treasury bills and bonds* constitute the main assets held by the Bank, while *bank notes* represent the main liability. Investments on the balance sheet are recorded at cost and adjusted for amortization of purchase discounts and premiums. This basis of presentation is consistent with accounting standards used by the Bank prior to 1 January 2007.

Turning to some items on the asset side that are less obvious, *deposits in foreign currencies* consist of some working balances in foreign currencies; *securities purchased under resale agreements* are a form of lending collateralized by Government of Canada securities; and *other assets* mainly consist of Bank premises, accrued interest, and the pension accrued benefit asset.

Table 1
Bank of Canada Balance Sheet
UNAUDITED
For illustrative purposes only
(millions of dollars)

Assets	2006	2005	Liabilities and Capital	2006	2005
Deposits in foreign currencies	3	88	Bank notes in circulation	48,762	46,078
Advances to members of the Canadian Payments Association	12	0	Government of Canada deposits	2,228	911
Government of Canada treasury bills	18,121	16,385	Members of Canadian Payments Association deposits	12	50
Government of Canada bonds	30,147	30,026	Other deposits	444	422
BIS shares	38	38	Securities sold under repurchase agreements	0	684
Securities purchased under resale agreements	2,854	1,297	Other liabilities	150	145
Other Assets	451	486	Capital	30	30
Total	51,626	48,320	Total	51,626	48,320

On the liability side, *other deposits* include unclaimed bank balances that have been transferred by the chartered banks to the Bank, and deposits placed with the Bank by other central banks and some international financial institutions like the IMF. *Securities sold under repurchase agreements* are a liquidity-draining operation, whereby the Bank temporarily withdraws liquidity from the financial system by extending government securities from its balance sheet to financial institutions in exchange for cash. *Other liabilities* mainly consist of amounts owing for deferred employee benefits other than pension. *Capital* includes the Bank's \$5 million in share capital (the shares are held by the Minister of Finance on behalf of the Government of Canada) and the Bank's statutory reserve of \$25 million.

2.1 Links between the balance sheet and Bank mandates

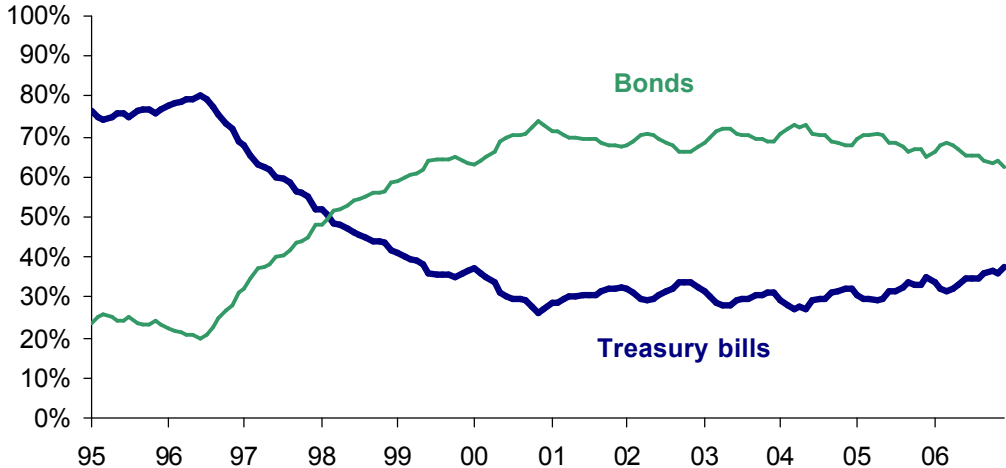
Let us now turn to the issue of how the balance sheet interacts with the Bank's business mandates and interests.

Currency: The issuance of bank notes creates liabilities that grow over time. The assets backing these liabilities (government securities) are typically held to maturity. However, bank note demand is seasonal; for example, demand for cash tends to be high during the December holiday season. The Bank needs to be able to adjust its assets accordingly. In practice, this is done by acquiring treasury bills and other short-term assets, such as term repos (repurchase agreements) that mature when the seasonal demand for bank notes is expected to abate.

Monetary policy: The investment portfolio should support the operational independence of the Bank in conducting monetary policy. This is accomplished in two ways. First, by providing a source of revenue that ensures the Bank is not dependent on government appropriations, and second, by avoiding investments that infringe upon the process by which the federal government allocates funds or credit to the private sector or other levels of government. The Bank’s financial assets should also support (and be seen to be able to support) the execution of the rest of the Bank’s mandates and interests—not only in ordinary times, but also in exceptional circumstances. The Bank’s large holdings of government securities meet all of these tests.

Before the mid-1990s, monetary policy sought to influence the 3-month treasury bill rate. Not surprisingly, treasury bills made up three quarters of the investment portfolio at that time (Chart 1), since they were often used in open market operations.

Chart 1
Bank of Canada Investment Portfolio
January 1995 – December 2006



Under the present system for implementing monetary policy, introduced in the mid-1990s, the focus is now on the overnight rate. The operating range for the overnight rate is bounded by the fact that directly-clearing members of the Canadian Payments Association (CPA) can hold deposits with the Bank at the target rate for the overnight rate less 25 basis points, or they can take collateralized advances from the Bank at the target rate plus 25 basis points. Thus, they do not have any reason to transact with each other outside of these limits. The Bank also offers special purchase and resale agreements and sale and repurchase agreements as required to further reinforce the target for the overnight rate.

As a result, the way the Bank now implements monetary policy makes little use of the investment portfolio, requiring only a small portion of assets to be available for use as collateral in sale and repurchase agreements. In 1996, the Bank decided, after consulting with market participants, to shift the composition of the investment portfolio in favour of more bonds so that it broadly resembles the government's domestic debt stock. As a result, treasury bills now constitute only about one third of the portfolio (Chart 1), and the Bank's net revenue generally moves in tandem with government debt service costs. This makes the Bank's balance sheet a neutral factor in the government's debt management and fiscal planning activities.

Financial system: Routine daily advances to CPA members under the Bank's standing liquidity facility are usually fairly small. Canadian money markets function well, so most of the time financial intermediaries are able to allocate liquidity among themselves without having to make much use of the Bank's collateralized advance and deposit facilities. But in exceptional circumstances, advances could balloon if the Bank needed to provide support to solvent, but liquidity-challenged, financial institutions in the form of emergency lending assistance. In principle, such advances could be funded by repos of government securities, outright sales of treasury bills, or the issuance of interest-bearing liabilities. The asset base need not be restricted to assets that can be quickly and easily sold. Fortunately, these events do not happen very often. The last one was in 1986, when the Bank sold government securities to help make room for advances to some small banks following the failure of the Canadian Commercial Bank and Northland Bank.

The Bank also operates a securities lending program to support the efficiency of the Government of Canada securities market. The program provides a secondary and temporary source of securities to the market. When a specific Government of Canada treasury bill or bond is in short supply in the secondary market and is trading below a predetermined threshold rate in the repo

market, the Bank can lend up to 50 per cent of its holdings in that security to the repo market overnight in exchange for other securities.

Fiscal agent: The Bank’s role as fiscal agent for the government does not lead it to use the balance sheet for debt or foreign reserve management purposes. These transactions are carried out by the Bank acting as agent for the account of the government.

2.2 Comparing the Bank to its peers

It is useful to compare the Bank’s balance sheet to those of its peers. Table 2 summarizes selected balance sheet items for the Bank and a peer group of four central banks that operate within similar monetary policy frameworks, meaning that they have floating exchange rates and either inflation targets or, as in the case of the U.S. Federal Reserve, an informal inflation objective.

Table 2
Selected Central Bank Balance Sheet Statistics

Financial year ending 2005, per cent of total assets¹

	Foreign assets	Claims on financial institutions	Government securities	Bank notes	Capital & reserves
Australia	73.5	20.2	2.9	41.9	11.3
Canada	0.2	2.7	96.0	95.4	0.1
Sweden	88.9	9.3	–	59.6	34.7
United Kingdom	28.4	41.3	27.6	61.5	2.8
United States	4.3	4.8	89.5	88.7	2.9

1. The information in this table is compiled from the annual reports of the central banks. In the case of the Bank of England, the data consolidate the balance sheets of the Banking Department and the Issue Department.

While balance sheet structures vary across central banks, there are two points that stand out. First is the absence of foreign reserves on the Bank’s balance sheet; second is its small capital base. The two are related.

Foreign reserves: There are many reasons why other central banks hold foreign reserves on their balance sheets. In some cases it represents a legacy from fixed exchange rate regimes, where holding foreign reserves on a central bank’s books helped to demonstrate its ability to

intervene in support of the exchange rate without having to consult the government. This has not been an issue for the Bank, as Canada has had a floating exchange rate regime since 1970.

Some other central banks hold foreign reserves because there is a limited supply of appropriate domestic assets (perhaps due in part to underdeveloped domestic debt markets). Again this has not been an issue for the Bank because of Canada's large government securities market, which has been in place since the 1950s.

There are cases where central banks believe that holding reserves makes it possible for them to provide foreign currency liquidity support to their banks in times of stress (e.g., 9/11-type events). This is less relevant for the Bank because Canadian chartered banks are encouraged to manage their foreign currency liquidity requirements themselves by making arrangements with central banks in the countries where they operate.

In Canada, the foreign reserve portfolio is owned by the federal government. The result of this arrangement is that the financial costs and risks associated with the reserves are borne directly by the government, not by the Bank. This has considerably simplified the management of the Bank's balance sheet and its inherent risks. It also makes it easier to hedge the risks associated with foreign reserves through the government's own borrowing programs.

Capital: The Bank's capital structure has not changed since it was founded in 1935. The Bank was established with \$5 million in share capital and the statutory reserve was accumulated out of net revenue until it reached the stipulated maximum of \$25 million in 1955. It has remained there ever since. While it is low both in absolute terms and in comparison to other central banks, there are a couple of reasons why it does not give a full sense of the Bank's financial condition in economic terms.

First, the capital base does not reflect the large net revenues that the Bank earns from its monopoly over the issuance of bank notes. While those net revenues are fully remitted to the government each year, the Bank has first claim on them within a year to cover any losses. Moreover, Section 27 of the Bank of Canada Act gives the Bank the statutory right to withhold a portion of revenues in each subsequent year to rebuild its rest fund in the event that losses exceed current year revenues. This right has not been exercised because, under current accounting rules, the Bank's annual net revenues far exceed its annual expenses (revenue exceeded expenses by almost \$1.9 billion in 2006). Other central banks tend to have greater freedom to retain some of their income to build up capital over time. However, many of them do not have a recapitalization

scheme built into their governing legislation, so in the event of major losses, they would have to negotiate a recapitalization with their shareholder-governments, which poses risks to their independence. This is one reason why they hold more capital.

Second, prior to 1 January 2007 the Bank's assets were valued on the balance sheet at their historical cost rather than at fair market value. At the end of 2006, the fair market value of assets was \$2.5 billion larger than the historical cost values presented in the balance sheet, reflecting the decline in bond yields of recent years. One should bear in mind, however, that this notional unrecorded additional surplus will decline over time as the Bank's investments approach maturity and roll off the balance sheet.

Finally, there is the link between foreign reserves and central bank capital referred to above. Exchange rate risk associated with foreign reserves is usually by far the most material risk faced by central banks that hold foreign reserves on their balance sheets. It is not surprising, then, that they tend to have the largest capital positions. They need a buffer to protect themselves against the risk of adverse exchange rate movements. By not holding foreign reserves on its balance sheet, the Bank is not exposed to this risk. As a result, it does not need to hold as much capital.

2.3 Conclusion

The existing structure of the balance sheet and the way it is managed have served the Bank well, and have not given rise to any adverse comments from the financial community or other stakeholders. By acquiring government securities at auction on a non-competitive basis and paying the average yield, the Bank is able to obtain the assets it needs cost-effectively and with certainty. Moreover, this approach avoids any potential conflict with monetary policy, since transactions are unlikely to be misconstrued as being tied to policy actions. And the securities held by the Bank can be readily accessed if the Bank needs to use them to raise funds for emergency lending assistance.

The Bank's financial structure has proven to be self-sustaining over many years. It has not needed to retain income to build up capital over time as its balance sheet expanded, nor has it needed to ask for capital injections from the government to cover any losses. To a large extent, this reflects the absence of foreign reserves on its balance sheet. This has absolved the Bank from the need to manage exchange rate risk on its balance sheet, an important source of volatility in the financial condition of many other central banks. In this way, it has been able to operate with minimum capital and remit all surplus revenue to the government each year, thereby

contributing a significant source of revenue to the government as it pursues its fiscal priorities in the service of Canadians. The Bank has been able to do this knowing that in the event of any realized losses, the Bank of Canada Act enables it to rebuild capital out of current and future revenues.

3 New Accounting Standards

While the Bank's financial structure has been robust over many decades, accounting standards are evolving to reflect improved governance and accounting principles that have been widely accepted both in Canada and abroad. The Canadian Institute of Chartered Accountants (CICA) has introduced new standards for the valuation of financial instruments (CICA Section 3855) that took effect for the Bank at the beginning of 2007.¹ These new standards affect the way the investment portfolio is valued, and consequently the way the capital base is reported.

3.1 Accounting treatment prior to 2007

Before 2007, the Bank's holdings of government securities and BIS (Bank for International Settlements) shares were recorded at cost. The cost numbers for the former were adjusted for amortization of purchase discounts and premiums using the constant-yield method for treasury bills and the straight-line method for bonds, in accordance with current accounting rules. The amortization, along with gains or losses on disposition, was included each year in the Statement of Revenue and Expense.

Considering that the Bank's holdings of government securities are almost always held to maturity, this accounting method resulted in a stream of interest income from the time they were acquired until the time they matured. The size of this revenue flow was mainly affected by the size of the portfolio (which is mostly driven by the value of bank notes in circulation) and by interest rate changes (the coupon or discount rate on newly acquired assets). Each year, the Bank's revenue from investments net of expenses incurred by the Bank is paid to the Receiver General and forms part of the federal government's Consolidated Revenue Fund. The amount earned (\$1.9 billion in 2006) is a significant source of funds for the government.

1. International accounting standards adopted fair market valuation principles for financial instruments with the introduction of *IAS 39: Financial Instruments: Recognition and Measurement*. It was issued by the International Accounting Standards Board in 2001, and took effect in the European Union in 2005.

The fair values (i.e., the value of investments on a mark-to-market basis) of the Bank's investments are presented, for information purposes only, in the notes to the financial statements. At the end of 2006, the fair value of the investment portfolio exceeded its reported book value by \$2.5 billion. These unrealized gains mainly reflect the decline in bond yields over the past few years.

3.2 Accounting for investments starting in 2007

The CICA, through its Accounting Standards Board (AcSB), is implementing new standards for reporting financial instruments in financial statements. These new standards are effective for financial years beginning after October 2006 (thus affecting the Bank in 2007). These changes have been introduced to reflect international best practices, to more closely align Canadian GAAP (Generally Accepted Accounting Practices) with international accounting standards (IAS) and U.S. GAAP, and to help provide more transparent and reliable financial statements. The most relevant new CICA section for the Bank is Section 3855, *Financial Instruments – Recognition and Measurement*. It sets out categorization and reporting standards for all financial instruments, including derivatives. It prescribes the recognition of financial instruments on the balance sheet and stipulates whether to use fair value, or in other situations, cost-based measures. It also specifies how to present gains and losses on financial instruments.

3.2.1 Financial instruments (CICA Section 3855)

The new standard requires all financial assets to be measured at fair value, with the exception of loans, receivables, investments in equity instruments that do not have a quoted market price in an active market, and investments held to maturity, which should be recorded at amortized cost.

All investments must be classified in one of three categories: *Held for Trading*, *Held to Maturity*, or *Available for Sale*.

Held for Trading

Trading generally reflects active and frequent buying and selling of financial instruments, typically to generate a profit from expected fluctuations in prices. This is clearly not consistent with the investment practices of the Bank, since it normally holds its investments to maturity.

Under the new accounting rules, investments held for trading are measured at fair value. Gains and losses (both realized and unrealized) are recognized in net income for the period in which they arise.

Held to Maturity

This category includes financial instruments with fixed or determinable cash flows and fixed maturity dates that an entity has the ability and intention to hold until maturity.

For most financial assets, AcSB considers fair value to be a more appropriate measure than amortized cost. In this context, the Held to Maturity classification is an exception. This category may only be used for investments if the Bank is virtually certain that it will hold them to maturity. If there are any sales of these assets prior to maturity, all securities in the portfolio must be reclassified as Available for Sale under the rigid tainting provisions of the new accounting rules, unless the reason for the sale is beyond the Bank's control. In general, any action that casts doubt on the Bank's ability and intention to hold such investments to maturity would require a reclassification of the investments.

Investments cannot be classified as Held to Maturity when the Bank has, during the current fiscal year or the two previous fiscal years, sold or reclassified more than an insignificant amount of such investments before maturity, other than sales or reclassifications that:

- are so close to maturity that changes in the market rate of interest would not have a significant effect on the asset's market value; or
- are attributable to an isolated event that is beyond the Bank's control, is non-recurring, and could not have been reasonably anticipated by the Bank.

The ability and intention to hold these assets to maturity must be assessed when they are initially recognized, and at each subsequent reporting date. After initial recognition, Held to Maturity investments should be measured at amortized cost using the effective interest method. Gains or losses are only recognized in net income in the period in which they are realized.

Available for Sale

Investments in this category are those that are not classified as Held for Trading or Held to Maturity. Assets in this category are measured at fair value, with unrealized gains and losses recognized in a new account (Accumulated Other Comprehensive Income) in the equity section of the balance sheet until the financial asset is removed from the balance sheet or becomes impaired. Unrealized valuation gains or losses are not reported in net income until they are actually realized.

Investments in equity instruments that do not have a quoted market price in an active market (such as the Bank's holdings of BIS shares) are also classified as Available for Sale, although under Section 3855, these assets must be carried at historical cost.

3.2.2 Valuing the Bank's investment portfolio

The Bank's current investment practice has evolved following practices adopted over time in accordance with its governing legislation, the Bank of Canada Act. As indicated above, the Bank's investment portfolio consists mainly of Government of Canada treasury bills and bonds that are normally held to maturity. The last open-market operation conducted for monetary policy purposes was in July 1995. Since then, virtually all of the Bank's investment assets have been held to maturity. Further information on the management of the Bank of Canada's financial assets can be found in the *Statement of Policy Governing the Acquisition and Management of Financial Assets for the Bank of Canada's Balance Sheet*.²

While the present method of implementing monetary policy no longer makes use of open market operations involving outright sales or purchases of government securities, the Bank's investment assets are available to support its various mandates. While selling securities in support of these mandates would be infrequent events, they could potentially lead to notable departures from the practice described above. The following are some examples.

- **Financial System:** The ability to fund Emergency Lending Assistance (ELA) loans could be supported by asset sales, repos of securities, or the issuance of liabilities.

Although a large-scale ELA loan could potentially exceed the level of assets held by the Bank, and therefore would have to be funded at least in part by the issuance of liabilities, the Bank requires the flexibility to be able to repo or sell some of its government securities if it wants to prevent the balance sheet from expanding by the full amount of the loan.

- **Fiscal Agent:** The securities lending program is structured as a loan of securities, and therefore does not represent a sale of assets from the balance sheet. However, the Bank has retained the right to sell, switch, or purchase assets as required to support its role as fiscal agent and to promote the efficiency of the financial system.

2. Available at <http://www.bankofcanada.ca/en/about/corp.html>.

While a strict Hold to Maturity policy would be consistent with recent practice, the Bank has sold some investments prior to maturity in the past, and may need to do so in the future in support of its mandates. So it should not adopt a valuation policy that would preclude it from considering any such sales. It would be difficult to argue that it has the positive ability and intention of holding all of its government securities to maturity, since it would be willing to dispose of some of them to fulfill its policy mandates if the need arose.

The restrictions placed on assets held to maturity by the new accounting standards are quite rigid. For assets to qualify there should not be any expectation of a breach in the future, even a minor one. The Bank's existing practices would not surmount the hurdles necessary for the entire investment portfolio to be valued on a Held to Maturity basis under the new accounting standards.

As a result, the Bank has decided to segregate its government securities portfolio into two components: its bond holdings will be classified as Held to Maturity and will continue to be valued on an amortized cost basis; while its holdings of treasury bills will be classified as Available for Sale and valued on the balance sheet at fair value. The fair values and amortized costs of the Bank's investments will continue to be disclosed in notes to the financial statements.

It is important to note that under this approach, no part of the bond portfolio (irrespective of individual maturity dates) can be sold prior to maturity, since as noted above any such sale could taint the valuation of the whole portfolio and cause it to be immediately reclassified to a fair market value basis. However, the bond portfolio can still be used for repo and securities lending operations without triggering the tainting rules. This is an important consideration because it means the Bank will still be able to conduct securities lending operations and fund ELA activity using bond repos if it wishes.³ Instead of selling bonds outright to raise cash, the Bank could repo them to the market in exchange for cash, which could then be used for ELA purposes.⁴

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3. Bond switch operations would no longer be possible, but this is not an important constraint because the introduction of the securities lending facility has removed the need to entertain these operations.
 4. Under this approach, ELA activity could be funded in several ways: (i) through outright sales or repos of Treasury bills; (ii) through bond repos; or (iii) by having the Bank issue its own interest-bearing liabilities. In practice, the Bank would likely entertain all three approaches; however, the relative weights assigned to each would be a judgment call made on the basis of the circumstances surrounding the ELA event and prevailing market conditions.

As for the Bank's BIS shares, they will continue to be valued at cost under the new rules. This stands in contrast to the practice of central banks that adhere to International Accounting Standards (IAS), which value their BIS investments on a fair value basis. Current Canadian accounting rules differ from IAS in that they do not allow the use of fair values for equity shares when there is no publicly quoted price for those shares.⁵ So the Bank will not be able to include the current \$216 million unrealized valuation gains on these shares directly in its financial statements, although this information will continue to be disclosed in the notes to those statements.

Any advance provided by the Bank to financial institutions under the Standing Liquidity (SL) or ELA facilities would be classified as "loans and receivables" under the new standards. They will continue to be valued at cost rather than at fair value. The same is true for any Special Purchase and Resale Agreement or Sale and Repurchase Agreement transactions conducted by the Bank with financial market participants.

Valuing the Bank's treasury bills on a fair value basis has a small impact on the overall size of the balance sheet. See Table 3 for a restated version of the balance sheet at the end of 2005 and 2006 under the new accounting standards. These figures are for illustrative purposes only and assume adoption of the new standards prior to 1 January 2005. As indicated in Table 4, this will not change the Bank's reported net revenue, since gains and losses arising from unrealized valuation changes will only be recorded in the Accumulated Other Comprehensive Income account in the capital section of the balance sheet. Thus the change in accounting standards will not affect the amount of net revenue that the Bank remits to the federal government each year. Reported net revenue would only be affected if the Bank sold a security prior to maturity and reported a realized gain or loss on the transaction. But that has always been the case under current accounting standards, so the new rules will not lead to any changes on this front.

5. Canadian standards are to converge with IAS by 2011.

Table 3
Bank of Canada Balance Sheet – Restated¹
UNAUDITED
For illustrative purposes only
(millions of dollars)

Assets	2006	2005	Liabilities	2006	2005
Deposits in foreign currencies	3	88	Bank notes in circulation	48,762	46,078
Advances to members of the Canadian Payments Association	12	0	Government of Canada deposits	2,228	911
Government of Canada treasury bills	18,123	16,365	Bank deposits	9	33
Government of Canada bonds ²	30,356	30,253	Other deposits	447	439
BIS shares	38	38	Securities sold under repurchase agreements	0	684
Securities purchased under resale agreements	2,854	1,297	Other liabilities	150	145
Other assets ²	242	259			
			Capital		
			Share capital	5	5
			Statutory reserve	25	25
			Special reserve fund	0	0
			Accumulated other comprehensive income	2	-20
Total	51,628	48,300	Total	51,628	48,300

1. Financial statement figures have been restated to reflect the change in accounting policies for Financial Instruments and Comprehensive Income. This restatement has been simplified for the purpose of this discussion paper and does not factor in the impact of the change in accrued interest methodology adopted by the Bank.
2. Accrued interest receivable reclassified to reflect the change in accounting policy (2006 – \$209.5, 2005 – \$227.5)

Table 4
Bank of Canada Statement of Revenue and Expenses — Restated
UNAUDITED
For illustrative purposes only
(millions of dollars)

	<u>2006</u>	<u>2005</u>
Revenue		
Revenue from investments	2,159.6	1,978.3
Expense by Function		
Monetary policy	65.6	60.6
Currency	122.9	113.7
Financial system	35.5	34.1
Funds management net of retail debt recovery	39.5	37.5
	<u>263.5</u>	<u>245.9</u>
Net Revenue	<u>1,896.1</u>	<u>1,732.4</u>
Other Comprehensive Income		
Changes in unrealized gains or losses on Available for Sale investments	22.0	(20.0)
Comprehensive Income	<u>1,918.1</u>	<u>1,712.4</u>

4 New Accounting Rules and the Capital Base

As indicated previously, the Bank of Canada has operated successfully with an extremely modest capital base of \$30 million for many years. However, as indicated in Table 3, changing the accounting policy to record some of the Bank's investments at fair value will affect the amount of capital reported in its financial statements.

Valuing treasury bills on a fair value basis would have resulted in a net unrealized gain of \$2.0 million at the end of 2006. Under the new accounting rules this net gain would be disclosed in a new account in the Capital section of the balance sheet (Accumulated Other Comprehensive Income), where unrealized gains and losses on revaluation would be recorded and tracked.

While a shift to fair market value will initially create a small net unrealized gain in the Accumulated Other Comprehensive Income account, the size of this account will fluctuate over time as the value of the Bank's treasury bill portfolio responds to movements in short-term interest rates and as the current stock of treasury bills matures and is replaced with new securities at prevailing interest rates. There is a risk that net unrealized losses in this account could exceed the Bank's current \$30 million capital base, causing the Bank to report a negative capital position for short periods of time.

4.1 Implications of a negative capital position

There are two main reasons why a negative capital position should not represent a significant operational problem for the Bank. First, external parties cannot disrupt the Bank's activities by initiating bankruptcy proceedings against it. The Bank is immune from corporate bankruptcy proceedings because Section 34 of the Bank of Canada Act states that only Parliament can wind up the Bank. Second, at an operational level, any unrealized losses on the Bank's treasury bill portfolio would be temporary in nature, simply representing a transfer of revenues across time. Assuming the securities are held to maturity, unrealized valuation losses in the Accumulated Other Comprehensive Income account would be eroded away by a series of unrealized gains going forward as the prices of the securities iterate towards par. Thus these losses would not represent a permanent impairment of capital.⁶

There is, however, a risk that a negative capital position might pose some risks to the credibility of monetary policy. A negative capital position may raise questions about the Bank's commitment to the inflation target. While the Bank could always honour its obligations because it can theoretically print unlimited amounts of Canadian dollars, such an action would be contrary to its inflation target objectives. People would not want to be repaid in money that has depreciated in purchasing power. Furthermore, unrealized valuation losses on the treasury bill portfolio will arise in periods of rising interest rates—a time when central banks are often exposed to public criticism about the effects of monetary policy on various sectors of the economy and when the financial system is most likely to encounter stress. In such situations,

6. In the rare event that some treasury bills were sold prior to maturity (thereby crystallizing any unrealized valuation losses and moving them to the income statement), the Bank has a very high level of annual revenue relative to its operating costs that would absorb these losses. In the unlikely event that realized losses exceed current year income, Section 27 of the Bank of Canada Act allows the Bank's Board of Directors to retain a portion of future revenues to rebuild the statutory reserve. Thus, the treatment of realized losses and their capital implications are not affected by the new accounting standards.

there is a risk that some observers might be tempted to try to use a negative capital position as a lever to question the leadership of the Bank, and through that its conduct of monetary policy more generally.

Similarly, confidence in the financial system could be undermined if a negative capital position at the Bank led to doubt about its ability to perform its lender-of-last-resort functions. These two factors could, in turn, potentially impede the effectiveness of policy actions. The end result might be that more stringent monetary policy and financial stability actions were required to demonstrate the Bank's ability to achieve its policy objectives—an undesirable outcome that could depress economic output and increase unemployment in the short run, until credibility was rebuilt.

4.2 Minimizing the risk of a negative capital situation

The concerns surrounding a negative capital situation beg the question of how much capital the Bank needs to cover potential unrealized valuation losses in its treasury bill portfolio. One way of estimating this amount is to examine past episodes where short-term interest rates rose sharply in response to unsettled conditions in financial markets. A good example in this regard is the autumn of 1992, when treasury bill rates jumped more than four percentage points in less than two months. Applying this interest rate shock to the treasury bill portfolio implies the need for a capital base of \$270 million. This need could grow to more than \$400 million after ten years, if we assume the treasury bill portfolio will continue to expand by 5 per cent per annum.

While interest rate shocks of this magnitude are very rare occurrences, it is important for the Bank to be ready to cope with them when they happen. The Bank of Canada Act has been amended to give the Bank's Board of Directors the right to retain a cumulative total of up to \$400 million from net revenues in a new special reserve fund to offset future net unrealized valuation losses in the treasury bill portfolio. It is envisioned that the right would be exercised as needed, and that the full \$400 million would only be drawn if the treasury bill portfolio experienced an unusually large jump in interest rates.

The establishment of the special reserve fund will not affect the government's fiscal situation. As with other Crown corporations, all of the Bank's net revenue is included in the government's consolidated revenue, regardless of whether it has been remitted to the government.

5 Conclusion

As noted at the outset, the Bank of Canada has a fairly simple balance sheet structure compared to most financial institutions, and has been able to operate successfully with a small capital base of \$30 million for many years. As a result, it has been able to remit all surplus revenues to the federal government each year, and has not needed to retain any income, or to request capital injections from the government to replenish the capital base.

While this financial structure has been robust over many decades, accounting standards in Canada and other countries are evolving to reflect best practices in financial reporting and governance. They include new standards for the valuation and reporting of financial instruments that became effective for the Bank at the start of 2007. Since the beginning of 2007, the Bank has valued its treasury bill portfolio on a fair value basis in its financial statements. Any unrealized gains or losses will be reflected as a change to its capital base.

The Bank's capital base will fluctuate over time as these unrealized valuation gains or losses flow through the balance sheet. If no action is taken, unrealized valuation losses could exceed the Bank's current \$30 million capital base on occasion for short periods of time. While a temporary negative capital position should not pose any operational concerns for the Bank, it might pose some risks to the credibility of monetary policy and raise some perception issues about the Bank's ability to support the financial system in a crisis. The Bank of Canada Act has been amended to give the Bank's Board of Directors the right to establish a new special reserve fund, as needed, that will form part of the Bank's capital base.